

Navigating career pathways – dental therapists in the workforce: a report of the career path subcommittee

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Abstract

Creating career pathways to facilitate current dental and other healthcare providers becoming dental therapists can be an efficient means to expand the dental workforce and reduce barriers to access to oral health services. Career pathways are proposed to facilitate dental providers building on previously learned skills to broaden their scope of practice and become even more versatile and productive providers of oral health services. Creation of a unified and integrated curriculum will enable research to document the effectiveness of this new dental provider who will work as part of dental teams and with supervision by dentists. The goal of augmenting the current dental team and reducing barriers to access to dental services for underserved populations can be enhanced by offering alternative pathways to achieve the competencies required of dental therapists.

Development of a New Dental Workforce Model

Attention is now focused on the development of a dental workforce in the United States that will include an alternative dental provider specifically designed to alleviate inequities in access to oral healthcare services (1,2). January 2010 marked the initiation of a panel under the guidance of the American Association of Public Health Dentistry (AAPHD) that began developing a two-year postsecondary curriculum for dental therapists. AAPHD received funding from the W.K. Kellogg Foundation and the Josiah Macy, Jr. Foundation to pursue this work. The project is divided into three phases: Phase I – develop the general content and approach for a 2-year postsecondary school curriculum; Phase II – develop career pathways for entry of other alternative dental providers into this workforce model; Phase III – elucidate program accreditation issues and licensure in relation to state practice acts.

This paper explores Phase II of the Kellogg/Macy Dental Therapist Curriculum Development Project. The goals of Phase II are:

- Goal 1: Explore and define how currently trained dental hygienists can obtain additional skills of dental therapists.
- Goal 2: Explore and define how 2-year postsecondary school-educated therapists can gain the additional skills to provide dental hygiene services.
- Goal 3: Outline advanced standing possibilities for dental therapists and hygienists when enrolling in the respective programs, as well as the potential for graduates to receive credit towards baccalaureate degree programs.
- Goal 4: Consider the entry point and career pathway options for other potential candidates.

There is increasing awareness in the United States of the potential benefit of developing alternative workforce dental providers to deliver oral health services to a greater proportion of the population. Basic dental clinical procedures are provided by alternative dental providers in at least 54 countries (3). Medicine in the United States has progressively diversified its workforce in recent years and Americans are now accustomed to receiving services from a variety of healthcare providers in addition to physicians. Dentistry is, likewise, moving towards a workforce with diversified scopes

of practice. The American Dental Association (ADA) and the American Dental Hygienists Association have proposed alternative workforce models. Many states have broadened their dental practice acts to enable dental hygienists to work in alternative settings without direct supervision of a dentist and to allow dental assistants to provide limited direct clinical services. Some states are exploring the development of a variety of alternative provider models. Significant change is no longer in the distant future; it is occurring now. With development of alternative dental providers occurring simultaneously in multiple venues, fragmentation of role descriptions is inevitable. It is prudent, therefore, to work towards developing a common language to describe the newly developing alternative dental providers, to carve out job descriptions that are consistent and transferrable from state to state and that can be measured for effectiveness through clinical research. It is of primary importance to define roles that have the potential for significant impact on the oral health of underserved populations.

Organized dentistry is engaged in dynamic discussions about the potential benefits, challenges, and/or threats of promoting the dental therapist role in public health and/or private practice settings. The American Academy of Pediatric Dentistry analyzed the various proposals for alternative dental providers and released this policy statement: "AAPD supports the use of mid-level providers who perform or assist in the delivery of specified reversible procedures and certain surgical procedures under the general supervision of a dentist, provided that such arrangements have been thoroughly evaluated and demonstrated to be safe, effective, and efficient and to not compromise quality of care in similar settings" (4). The proposed evaluation cannot occur without creating a common, consistent model to be evaluated.

Member of the Dental Team

Dental therapists, as envisioned by this panel, will be part of dental teams that are directed by dentists who will authorize and evaluate the services provided. There is speculation that services provided by dental therapists will be inferior to those provided by dentists. Creating a competent dental provider is the goal of the dental profession and will be demanded by the American public. Research has shown that dental therapists, within their scope of practice, can provide high-quality care that is comparable with services provided by dentists (5). A wide range of complexities of services are provided by dentists ranging from simple, routine procedures to the more complex and technically demanding. An ADA report quantifies and categorizes, by type of procedure, the average number of procedures that general and pediatric dentists perform in a year. The percentage of all procedures that could potentially be delegated to dental therapists, after diagnosis by a dentist and with general supervision of the therapist, is 75 percent for general

dentists and 79 percent for pediatric dentists. These are primarily radiographic and preventive procedures with about a tenth of procedures being basic restorative. However, these are overestimations of the proportion of procedures that could be delegated to therapists because they do not account for either patient or procedural complexity nor do they account for the proportion of procedures that are already delegated to dental assistants and dental hygienists (6). Edelstein points out that the potential for benefit can become even greater if the dental therapist also has credentials to offer services within the dental hygienists' scope of practice (7). Through this statement, Edelstein is introducing the concept of sequentially building the competencies and skill sets of already licensed dental health professionals.

Beginning in 1915, dental hygienists provided school-based preventive services and soon began direct preventive and therapeutic services for patients in dental practices. This enabled their employer dentists to use their skills for more technically demanding services. Broadening the oral health services that can legally be delegated to alternative dental providers may lower the cost of services and make more of the general dentists' time available to perform more highly skilled treatments for greater numbers of technically difficult cases including medically and mentally compromised patients. To the extent that dentists then provide more complex procedures, and increase the number of patients treated, their financial returns are likely to increase. A recent report analyzed three representative scenarios; solo pediatric dental practice and solo and small group general practice. The conclusions predicted an increase in productivity through the use of new workforce models including the dental therapist and/or hygienist/therapist(s) (8). Financial benefits are also likely to accrue for safety-net dental clinics and their patients; services may be available at lower cost because alternative workforce providers, who have incurred the cost of 2 or 3 years of education as compared with 8 years of a dentist's education, may be less costly employees. Clinic income will be enhanced by increased production due to adding personnel who are able to provide services that directly generate revenue. There will be costs associated with integrating the dental therapist into private practice or community dental clinic models, including establishment of teledentistry capabilities and procurement of equipment and materials for providing direct services; however, the income generated by services provided is expected to offset the expenses. Patients will receive the net benefit of this reconfiguration of workforce; they are expected to receive competent dental services, in an accessible location and at an affordable fee. It is now possible to use simple and inexpensive methods to assure competence among dental therapists practicing in remote locations under general supervision without the dentist being physically present on-site; the concept of general supervision no longer needs to mean that

the dentist's expertise is not readily accessible. Through the use of intraoral cameras and digital radiography, the use of technology enables the dentist to view the procedures that are being performed without being on-site. General supervision can now be augmented by transmitting high-quality images, videos, and radiographs via the Internet, thus creating a cost-effective means for dentists to supervise experienced alternative dental providers. The supervising dentist is able to diagnose, plan the treatment, consult, and evaluate during each phase of patient care. This capability, alone, significantly reduces the potential for inappropriate or inadequate treatment.

Career Pathways to Maximize Resources

Maximizing the services of alternative dental providers may encompass building upon skills already mastered by dental personnel who have experience in other dental provider roles. A dental hygienist who has experience has already achieved scientific and experiential background but may want to broaden his/her professional scope. It will be advantageous to create curricula for dental hygienists and other alternative dental providers to add new competencies to already existing skills and licensures. In addition to enhancing job satisfaction, dual training would enable an alternative dental provider to offer a broader range of services, with general supervision, in locations that cannot support sufficient numbers, or types of on-site dentists and support staff.

The curriculum for dental therapists should be structured to facilitate career paths that will allow a registered/licensed dental hygienist to fulfill the dental therapist requirements in basically one additional year; thus, the first year of dental therapy curriculum should closely adhere to the first year of the dental hygiene curriculum. When the applicant's goal is to attain licensure in both domains simultaneously, a curriculum should be available that will encompass not less than 3 years following completion of secondary school. There should be a common core curriculum in the first year followed by a second year specifically targeting the dental hygiene or dental therapy career pathway. A third year should be available for the current student or returning dental professional to pursue licensure in the other domain. The first year curriculum should closely follow the long-accepted curriculum for dental hygiene students.

Expanded function dental assistants and other alternative workforce dental providers should be given credit for equivalent courses from equivalent educational institutions. Examples of other practitioners who could join the dental therapist workforce include international dentists and expanded function dental assistants. Some educational institutions may choose to offer advanced degrees for alternative dental providers.

Enabling efficient career paths will be beneficial from social, economic, and health perspectives. For example, when there is a mismatch in market versus availability resulting in a surplus of dental hygienists, hygienists could broaden their marketability by enrolling in a 1-year course to add the competencies required of a dental therapist.

Practitioners with previous experience should be awarded credit for previously courses taken and previously mastered competencies. Having practitioners with previous clinical experience, such as dentists ineligible for licensure in the United States because of being trained in other countries, or dental hygienists who decide to add dental therapy to their skills to pursue training as a dental therapist will be especially beneficial. These practitioners will receive credit for previously achieved competencies and course work and will come into the workforce with enhanced previously mastered skills of technique, observation, and interpersonal communication.

Providing an efficient career pathway will facilitate more effective use of public funds that support many state and community college-based dental educational programs. One additional year, rather than 2 years of training, has obvious financial benefits for students and public alike. Likewise, an experienced dental therapist, dental health aide therapist, or other alternative dental provider may want to pursue additional training in dental hygiene to enable offering both skill sets. Cross-training will be beneficial for the public and therefore is a goal of the curriculum planning and career pathway processes.

The role of clinical dental hygienists is primarily focused on preventive and therapeutic periodontal procedures, but specific scopes of practice vary from state to state and will not be itemized here. The proposed role of dental therapists is likely to include the following procedures provided for children and adults under general supervision of a dentist in private or public health settings. General supervision means that the dentist has authorized the procedures to be performed, and the conduct of practice, but the dentist is not required to be present when the procedures are performed, and the authorized procedures may be performed at a place other than the usual place of practice of the dentist.

- Assessment: Collection and documentation of data to identify patient oral health needs
 - Medical and dental histories
 - Vital signs
 - Extra/intraoral assessment
 - Dental and periodontal assessment
 - Radiographs
 - Indices
 - Risk assessment including oral health risk assessment, medical classifications of patients, and risk associated with use of dental materials
 - Use of teledentistry for diagnosis and consultation
 - Preliminary diagnosis

- **Planning:** Establishment strategies to facilitate treatment goals
 - Provisional treatment plan
 - Informed consent
 - Case presentation
 - Adherence to legal and ethical requirements and accepted standards of care
- **Implementation:** Provision of treatment as directed by the supervising dentist
 - Infection control
 - Pain management
 - Restorative dentistry by protocol
 - Evaluation and triage of dental emergencies
 - Uncomplicated extractions
 - Application of pit and fissure sealants and caries preventive agents by protocol
 - Treatment of simple gingivitis
 - Health education, nutrition, and preventive counseling
 - Reevaluation of patients at periodic recall
 - Evaluation, triage, and treatment of special needs patients
- **Evaluation:** Measurement and documentation of the extent of success in reaching goals identified by the community dental clinic and in individual treatment plans
 - Patient satisfaction
 - Community satisfaction
 - Subsequent treatment needs
 - Adherence to continuing care
 - Adherence to referrals for general dentists' or specialists' care

Alternative provider career pathways will be available for the:

- Dental therapist
- Dental hygienist
- Foreign-trained dentists

The common core curriculum for year 1 will require competence in the following subjects which are the courses required of first year dental hygiene students:

- Fundamentals of dentistry
- Head, neck, and oral anatomy
- Microbiology, immunology, and infection control
- Embryology and histology
- Radiology
- Dental materials
- Pharmacology, therapeutics, and nutrition
- Medical/dental emergencies
- General and oral pathology
- Dental public health and dental health education
- Technical writing and communication

It is important to reexamine and modify traditional dental delivery systems in order to respond to the oral health needs of a greater proportion of the US population. Effective development of a unified dental therapist model,

with consistent requirements and accountability throughout the country will provide greater access to care for underserved populations. Forging clear pathways for already trained dental providers to gain and use new skill sets is a goal that offers significant advantages including the potential for lowered cost for dental services in the public and private sectors. The Federal government should fund pilot studies to evaluate the costs and effectiveness of services and improvements in access to care. Universities should work together to develop exemplary dental therapy programs, flexibility in career pathway options for dental professionals, and a system that does not introduce unnecessary barriers for those who are interested in serving in a variety of roles in the dental field.

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