

# New Oral Health Careers: It's Not Just About the Training

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## Introduction: Why We Care!

The U.S. dental therapist movement is a response to major concerns about oral health including high rates of oral disease, oral health disparities, shortages and maldistribution of the dental workforce, the extreme costs of dental education, and the absence of a public health preventive model for oral health care. For those without pre-paid oral health coverage (dental “insurance”), dental care is often inaccessible in the U.S. Dentists are generally unwilling to see patients unless they are either “insured” or able to prepay for their care.

The pioneering implementation of the Alaska Dental Health Therapist model (DHAT) dramatically directed the eyes of the American public to issues of dental care access and the negative impact that dental disease can have on the lives of individuals. Against the backdrop of Alaska’s extreme climates and geographically remote villages, the introduction of dental therapists demonstrated that there are places where dentists will not go—but, if they do go, they will not stay! Underserved and geographically isolated populations in the lower 48 were quick to see the parallels in their own communities where most dentists were unwilling to provide care in remote communities or to populations with great needs but no dental coverage. While much of the concern—and advocacy—for dental therapists has been about children’s oral health care, the same issues apply to the elderly, the disabled, and to any geographically isolated community.

The Alaska experience—and the publicity that surrounded it—also gave the message that a lack of oral health care has serious implications. These include short-term problems—such as missing school due to dental pain—as well as long-term issues such as systemic disease as a “side-effect” of poor oral health care. The idea that caries is an infectious disease—easily prevented by eliminating its transmission—is exciting news to most people who can then learn how behavior modifications can make a difference. As a result, there is an interest in new models of oral health care. Dental health aide therapists (sometimes referred to as “dental practitioners,” “dental therapists,” “oral health therapists,” etc) and the two other new narrower scope oral health careers being developed by the American Dental Association (ADA) can all be part of the solution.

In 2007, the highly publicized death of Deamonte Driver, an uninsured young Maryland boy—due to lack of dental care and a subsequent brain abscess—added fuel to the fire of concern about oral health disparities. Reports of his case emphasized that an inexpensive dental extraction would have prevented his death but was not available to him. A dental therapist could have provided this care.

If changes in the American health care system continue on as projected to provide health care for all, it would be ideal if this “health care” also included “oral health care for all.” In order for that to happen, there will have to be new models of oral health care as well as new types of oral health providers. The high costs of dental education make it not possible for dentists to be the only clinicians providing oral health care. In the same way that less costly PAs and NPs are trained and employed at significantly lower costs than physicians, dental therapists can fill major gaps in the dental delivery system while still allowing dentists to maintain their leadership in oral health.

### History lesson #1—Dental Therapists in New Zealand

New Zealand is widely acknowledged for the development of the Dental Health Therapist—often known as the Dental Nurse—beginning in 1921. Analogous to well-respected school nurses, dental therapists/nurses were placed in each school with a practice that was both procedural and preventive. With a goal that no child would leave school each year with even one cavity, New Zealand recognized the important role that oral health care played in overall health. This outstanding “early intervention” model spread to many other countries particularly those around the Pacific Rim. The dental nurse model was especially effective in low-resource areas where few dentists were available and those that were there often chose not to remain. The New Zealand model has been well documented and heavily researched throughout the years resulting in reassurance about the safety of the innovative career.

### History lesson #2 – “New” Health Careers in the US

Reviewing a 45 year history there are important parallels between the creation of new US health careers in the 1960’s and the development of new health roles in 2012. In both cases there has been recognition of disturbing health disparities as well as the acknowledgement that highly—and expensively—trained clinicians (e.g. physicians and dentists) may not be the only solution to meeting the health care needs of the US.

The history of physician assistants (PAs) and nurse practitioners (NPs) includes foundation and governmental support to “seed” the two new careers, the creation of individual state regulatory processes (licensing or registration), debates to define and require physician supervision, disagreements about “scope of practice,” the development of reimbursement policies, and the eventual widespread acceptance of both roles. Deployment strategies were an important concern in the early development of the PA career, with emphasis placed on recruiting individuals from medically underserved communities and returning them home for employment at the end of training.

At the risk of oversimplification, the *Alaska Model* (DHAT) can best be compared to the PA role while the *Minnesota dental hygiene therapist model* is parallel to the NP. Both careers were introduced in the US in the late 1960’s and early 1970’s as a strategy for improving access to care. One basis of comparison between these two careers is the issue of supervision. The DHAT model is built on the premise that all DHATs are formally supervised by a dentist with whom they have a supervisory relationship. The DHAT model is based on the recruitment and selection of students directly from underserved communities with the intent for them to return to that community to provide culturally appropriate oral health services. Two years in length and providing a certificate of training upon program completion, the DHAT model rapidly returns graduates to their home community.

Finally, the DHAT curriculum—like PA programs—is built on a competency based training model. After first identifying competencies for a new profession, competency based training models then focus specifically on the tasks that will be required. High volumes of supervised training experiences are then provided to assure competency.

Since DHATs have a very narrow scope of practice, the two year training model is able to include significantly higher numbers of patient encounters than is seen in a dental school model where future dentists are expected to learn a very broad scope of practice in 4 years.

The advanced dental hygiene therapy (Minnesota Model #1 at Metropolitan State) in comparison, seeks autonomy and independence based on the therapist's former dental hygiene role. (Requirements for admission include a bachelor's degree, an active dental hygiene license, a restorative functions certification, and 2,400 hours of clinical practice). This is similar to the NP profession where prior nurses receive additional education and training for a new scope of practice and aspire to practice independently based on their "composite" training and experience. A formal connection with communities is not built into the selection process. Like the NP model, the dental hygiene therapy model defines itself by degrees. A major concern with the dental hygiene model is that the total length of training (to include both a prerequisite bachelors degree followed by up to 3 years of graduate level dental hygiene training) rapidly begins to approach the 8 year educational total required of dentists. A further concern is that the long years of education/training bring with it higher debt levels and a decreasing likelihood to accept employment in underserved settings.

The second Minnesota Model #2 – at the University of Minnesota falls somewhere between the other two models. Recruiting both bachelor's degree and master's degree students with service backgrounds – but not necessarily any dental experience. The University of Minnesota students are educated within the dental school. The admissions requirements include academic prerequisites, a history of volunteering/community involvement, participation in the interview process and the potential to meet the mission of the Minnesota dental therapy legislation.

#### The American Dental Association's Alternatives

In response to the dental therapy developments, the American Dental Association (ADA) proposed and created two additional new oral health careers: the Community Dental Health Coordinator (CDHC) and the Oral Preventive Assistant (OPA).

Built on the model of community health workers, the CDHC is specifically designed to meet the needs of "dentally-underserved" areas. Recruited from the population(s) being served, CDHCs are taught dental skills focusing on prevention and education. While performing some preventive clinical services (such as applying sealants), the CDHC also has an education and social work function by connecting community members with dental practices. This is very typical of the work the community health workers do in a wide range of settings including tribal clinics and community health centers. With dental skills—taught in the CDHC training programs, the ADA says that "the CDHC .....focuses on the root causes of disease—the lack of adequate prevention and oral health literacy among underserved populations."

With the prerequisite of already being a dental assistant, the Oral Preventive Assistant (OPA) is designed to work in either private dental practices or in the community. In the office, the OPA will do simple procedures thereby freeing up dentists and/or dental hygienists for more complex tasks. The community role will be to provide oral health education. More tied to the practice than to the community, this new career is still "under construction" after approval by the House of Delegates of the ADA.

The ADA deserves recognition and credit for responding to the concerns that arose with the development of the *Alaska and Minnesota Models*. The ADA makes it clear, however, that these new members of the dental team are not “mid-level” clinicians (such as dental hygienists and dental therapists) and both will have limited scopes of practice that will not include irreversible procedures.

An important historical note to consider is that the Alaska tribal community health aide program does include a role for “dental health aides” (as compared to dental health aide therapists). When attempts were made to implement this role, however, community members were resistant to being seen by these health workers because they had no skills to fix their problem which was usually dental pain. The demand, instead, was for individuals with dental therapy skills which led to the implementation of the *Alaska Model* for dental therapy. Without access to appropriate referral networks with providers to address the existing dental treatment needs, community dental health workers will likely have difficulty making a meaningful impact.

#### The MEDEX Model for Developing New Careers/Roles

As PA programs developed, one model stood out as a dramatic catalyst for social change. MEDEX Northwest at the University of Washington was created as a joint project of the Washington State Medical Association and the University of Washington School of Medicine. Under the leadership of Dr. Richard Smith—one of the first medical directors of the Peace Corps—MEDEX grew to include a network of 8 other PA programs all developed from the same model. The MEDEX Group sought to improve health care access through close connections with communities and physicians. The MEDEX process -- used to create and strengthen a new profession 45 years ago—has equal applicability to the development of new dental careers today. The Principles of the MEDEX model are:

##### 1. Principle: The Collaborative Model

Practicing physicians—particularly those interested in problem-solving and innovation—were key players in the development of the PA model. In Washington state these physicians were leaders in the Washington State Medical Association (WSMA)—which was struggling with the plight of the rural (and burnt-out) physician. In retrospect, those physician leaders later reported that WSMA became a more effective force in the politics of health care in Washington state because of the leadership that they provided on this issue. Individual physicians who gained new political and policy expertise as the result of their involvement with the physician assistant issue and became key leaders in health care systems and the University of Washington School of Medicine.

While dental leadership on the dental therapy model has been primarily from public health dentists and those serving the underserved, the ADA’s activities in creating two new oral health professions are an example of good leadership and adaptation. The ADA’s activities provide an opportunity for the public to see dentists as community leaders and not just as businessmen who are perceived to be interested only in dominance and high levels of income.

The collaborative model also includes the involvement of training institutions and other health organizations. So far, finding homes for new oral health professions training programs has been problematic with strong opposition and pressure from organized dentistry. The support from the University of Washington for the *Alaska Model* Dental Therapist Program in Alaska in partnership with the Alaska Native Tribal Health

Consortium and the creation of the *Minnesota Model* Dental Therapist at Metropolitan State University and the University of Minnesota School of Dentistry have served as the tipping point favoring involvement of academic institutions in the development of these new careers. Similarly, a wide range of advocacy organizations—including community health centers, tribal groups, and groups supporting the needs of children, the elderly and disabled populations have joined the discussions in support of the elimination of disparities in oral health.

## 2. Principle: The Receptive Framework

One of the most overlooked steps in the creation of any new role is the preparation of the “safety net” that will allow for the optimum utilization of the new career. In order for the first cohorts to be visible and effective, issues such as the creation of non-educational policies for regulation, reimbursement, and malpractice must be created ahead of or simultaneously with the development of the training programs themselves. Given the wide range of disagreements about the development of new careers, all of these activities can be predicted to take longer than expected.

Foundation support has led to studies by national advocacy groups underscoring the need for a new dental care practitioner—the dental therapist—to help address the access to care problem. Currently, with foundation support, community based advocacy groups are working in multiple states to develop some sort of regulation for either the *Alaska Model*, or the *Minnesota Model*. The precarious financial situation in most states has made it more difficult than usual to capture the attention and time of legislators. Nevertheless, it’s reasonable to expect that there will be progress, at least in some states, and also increased visibility for the new careers.

While reimbursement policies may be refined over time, the initial support of state Medicaid agencies is an important step in the receptive framework. Similarly, reimbursement from dental insurance companies is critical and that may be problematic given the resistance of dental associations to the new mid-level providers. A key factor in this support may hinge on whether the reimbursement goes to the dental practice/clinic as in the *Alaska Model*, or to the individual provider as assumed by the Dental Hygiene Therapist Model.

An interesting component of Dr. Smith’s “receptive framework” concept is the idea of community preparation. He wanted communities to see the need for the new clinicians before they arrived and to welcome them with open arms. This led to specific strategies including the recruitment of local people for training in the new careers, presenting the “chosen” communities as visionaries and leaders in exciting health care innovations, and using them as “evaluators” of the new clinicians. Community members who became PAs and returned to their communities also became role models for others who might aspire to further health care training.

One example of this is the community of Othello, Washington—right in the middle of Washington state. This small potato-farming community (population 6750) became the site of practice for two members of the first MEDEX Class—both Viet Nam era corpsmen—who had been chosen to receive their training in Othello with Dr. Richard Bunch. There was a lot of national publicity about Othello, Dr. Bunch, John Betz, and Paul Snyder including a featured story on CBS News with Roger Mudd. As part of their introduction into Othello, John and Paul were highly visible and were introduced to

community organizations and at community events. Soon everyone knew them—and they still do! Paul has recently retired but John remains in practice. Numerous Othello residents have gone on to become PAs as well as to enter other health professions. Othello serves as a model of rural health practice and is frequently visited by national and international health care leaders as an example of a community that works. Another example of community preparation is on a little bit larger scale—Group Health Cooperative in Seattle. This pioneering consumer-governed HMO also trained and employed several members of the first MEDEX Class. All former military medics, the MEDEX students were featured in Group Health publications, introduced at many Group Health functions for their consumers and strategically placed throughout the system so they would become well known. In the long run Group Health employees (nurses, allied health workers etc.) have sought training as PAs and returned to practice within Group Health.

The final piece of the “receptive framework” is the idea of imagery. In the MEDEX situation, it was easy to “sell” the idea of returning military medics—whom everyone had seen as being highly effective and competent in the Viet Nam war. Obviously, it was important that they retain that “competent look” as they assumed their new roles but it was also important that these new PAs be differentiated from physicians. The solution, at a time when only doctors wore white coats, was that MEDEX PAs would wear blue coats to be seen as different from doctors. Obviously that same solution wouldn’t work today when clinical attire in the US is not always used to signify rank but it does raise the question of whether there should be some sort of symbol or word that sets dental therapists apart from other types of clinicians.

### 3. Principle: Deployment System:

The MEDEX view of deployment is that new clinicians should be explicitly directed toward areas of need. This is in sharp contrast to how clinicians in the USA are socialized to believe that personal choice—often based on economic factors, alone—should be the “right” of every professional. To be sure that the first MEDEX graduates were employed where they were needed, the program initially chose not only the students but also linked them up (through a complex matching process) with a preceptor who agreed not only to train them in the one-on-one clinical phase of training but also agreed to employ them afterward. This created a sense of “investment” on the part of the preceptor who was motivated to provide a high level of training for the PA. It also assured the medical association that no PAs would be trained for jobs that did not exist. This process continued through the first decade of the program when the PA career became well established and there were more PA jobs than there were PAs to fill them.

This model was also used—with slight adaptation—in the *Alaska Model* for dental therapy. With the intention of providing care in remote villages, Native health corporations nominated candidates for the program, and agreed to fund those who were chosen in exchange for a service obligation at the completion of training. In some ways this model is similar to the National Health Service Corps scholarship model with the only difference being that candidates are selected for a specific health care delivery system when they are admitted to the program. This has worked well in Alaska, where the DHATs desire to return to their home regions and provide care to the people they know.



A critical feature of the *Alaska Model*—as compared to the *Minnesota Model*—is this emphasis on focused community recruitment and retention. For defined populations the plan to recruit local people—who are culturally competent and will already have credibility in a community—is preferable to having an “outsider” with less commitment to the community and who may think nothing of relocating frequently.

There is also the concern—for master’s degree graduates of the *Minnesota Models*—that their many years of education (bachelors degree plus a masters degree) will force them to take urban jobs not in underserved communities where they will be able to see large volumes of patients and earn high salaries. For this reason the final Minnesota dental therapy law requires service in underserved settings as a condition for reimbursement.

#### 4. Principle: Competency Based Training

Most mid-level educational programs are based on the principles of “competency based training.” The idea is to determine what specific competencies (skill sets) the new provider will need and then build an integrated curriculum around those competencies. This is quite different from a traditional medical or dental model where content is delivered in specific courses with little formal integration between them. The competencies for the *Alaska Model* therapists are based on their scope of practice, which is a focused piece of the overall dental scope of practice. In addition to the dental skills, however, the *Alaska Model* therapists also have well developed additional competencies in public health and prevention. Similarly the competencies for the *Minnesota Model #1* advanced dental hygiene therapists would include their dental hygiene competencies in addition to the therapist competencies.

Once the competencies have been defined, the next step is to determine performance expectations and how they will be measured. Often competencies are approached and taught in a sequencing format. The background and experience of the students is also a critical aspect of the curriculum design. Current content is identified from the literature and detailed objectives are written to guide the student.

Competency based training integrates knowledge, skills and abilities into observable outcomes. The curriculum includes presentations, demonstrations, required practice sessions, reinforcement of newly acquired skills, and evaluation processes which focus on outcomes as observable behaviors. As a result, dental therapists may have more documented—and evaluated—clinical experiences with procedures based on their narrow scope of practice—such as silver and tooth colored filler—than dental students who are required to be exposed to the full range of dental practice during their training.

#### 5. Principle: Practitioner Involvement:

During the establishment of new careers, the practitioners they will work with can be active participants in the process. One role for them is involvement in admissions interviews (described below in the section on admissions). In addition, meetings to further develop specific needs assessments and task analyses keep clinicians engaged in the training programs. In the development of the *Alaska Model*, dental directors from the various Native health corporations were regularly included in updates about the program and had input on the tasks that were built into the curriculum. At the University of Minnesota program (Minnesota Model #2) students are educated with dental students, community dentists participate in the admissions process, and the school offers workshops for potential employers.

#### 6. Principle: Continuing Education:

Continuing education is a requirement for most health professions but it may be even more important for dental therapists because of their isolation or singular relationship with specific dental practices. The career structure for dental therapists should therefore include employer funded CME to include new knowledge and procedures but also for networking that can build career support and satisfaction

#### Other Developmental Principles

In addition to Dr. Richard Smith's MEDEX steps for developing new health careers, there are other principles to consider:

#### 7. Principle: Disseminating the Curriculum

There are now three main dental therapy curriculum models—the *Alaska Model* and the two *Minnesota Models*. Each has its advantages—and disadvantages—in terms of who is trained, the needs of the community, and how they are licensed and utilized. Based on the history of the PA and NP careers, having the several roles develop simultaneously is actually a benefit because the combined support for the new roles creates the broader understanding that there will be a new way of looking at the dental culture regardless of which specific roles are chosen by an individual state.

An important next step will be to make these models more widely understood by institutions and faculty members who are considering or may be called upon to implement dental therapy programs. While it could be left to individual institutions to develop their own training models, “reinventing the wheel” is costly and would create significant delays when timing and expediency are critical. Short 3-4 day workshops delivered by the developers of each of the two models would be an excellent way to avoid reinvention. These dissemination workshops could also create a greater understanding of the underlying principles of each of the training models and assist institutions and policy makers in determining their support of each model.

#### 8. Principle: Training the Trainers

In addition to curriculum dissemination, it is also important to develop training tools for faculty members and supervising dentists so they can understand the difference between traditional dental education and the dental therapist model. A key message to be presented in these training materials and experiences is that dental therapy education does not train mini-dentists! Instead, it is a different training model—competency based training—which relies on different assumptions than specific content-based course work.

In addition, the dental therapy model combines dentistry with public health and prevention techniques not commonly emphasized in dental school. Faculty members and trainers need specific instruction in this model and the development of new teaching techniques involving observed assessments, the development of agreed upon outcomes and the provision of feedback.

#### 9. Principle: Choosing the Right Students—Applicant Pool Development Medical School Parallels

In the same way that competency based training starts with determining what tasks

new types of clinicians will be expected to perform, creating a new role also requires consideration of the potential students to be recruited. If a major goal of the new career is expanding health care access, this concern is especially important.

As an example, a major concern in medical education is how to “solve” the rural health workforce problem. It’s difficult to recruit and retain physicians—and other health personnel—in rural communities. There are many reasons for this—including isolation, a lack of privacy, a shortage of cultural and educational opportunities for family members and the workload. Regardless of the specific state or community, though, it all comes down to the fact that physicians choose rural practice—and remain in rural practice—either because they are from a rural community, or because they married someone from a rural community. As a result, the clinician understands how rural communities work and is able to fit in—and be accepted—in a way that’s difficult for a person from a more urban background.

Cultural competency and cultural sensitivity are also important in solving health care access problems. Communities and clinics serving specific populations are more willing to accept clinicians who come from the community or the population. Patients feel reassured knowing that the clinician “knows where they’re coming from” and may even speak their same language. The level of trust that can be developed based on cultural competence and cultural sensitivity is an important component in eliminating health care disparities. Recruiting community based individuals for training and then returning them to their home for employment also has the advantage of developing new jobs within the community. In a time of economic downturn, this “grow your own” approach can be seen as “economic development.”

Ideally, recruitment strategies for dental therapy training can cast the net broadly to consider a wide range of individuals including young people already working in health care (e.g. dental assistants, head start workers) but also moms whose kids have all entered school, and unemployed individuals with a wide range of backgrounds. Funding support for community based students can—as it does in the *Alaska Model*—take the form of scholarships or direct tuition support in exchange for a job commitment after training. At the University of Minnesota, targeted rural recruitment is also a key component of the bachelor’s program design.

One other group of applicants to consider for dental therapy training is returning military medics—some of whom have had dental tasks and dental procedures as part of their job assignments. The original students in the first PA programs all came from military medical backgrounds and they were enthusiastic about being assigned to work with remote communities and specific populations for their employment.

With federal priorities to train veterans—especially those who have been deployed to Afghanistan and Iraq—it would be wise to consider these individuals as part of dental therapy applicant pools.

The *Minnesota Master’s Degree Advanced Dental Hygiene Model* is less community based in student recruitment and selection and relies on a more traditional academic model. In this case it is important that costs to the student be minimal—or supported by traditional financial aid programs—so that graduates are not dissuaded from working with underserved populations due to their personal debt load.

Based on community health worker principles, the ADA's Community Dental Health Coordinators are also likely to be successful in their outreach projects because they will be recruited from within specific underserved populations. The Oral Preventive Assistant's entry level criteria are silent on community connections because they are more likely to originate from specific dental practices and will all have dental assisting backgrounds.

#### 10. Principle: Choosing the Right Students—the Interview Process

There is a great opportunity in choosing the “right students” for dental therapy programs—regardless of the model. A well-designed selection process can be used—not just to choose students—but also to build support for these new careers. A structured interview process which includes interview teams composed of local dentists, community leaders and faculty will result in the selection of strong candidates who can effectively pioneer this new role.

As an example, the MEDEX Program at the University of Washington has a 45 year history of using an interview process that was originally created for the Peace Corps after an initial “paper-only” application process was ineffective in choosing the first cohorts of Peace Corps volunteers. Teams of interviewers meet with groups of three candidates at a time. Each candidate participates in three group interviews over the course of the day. The interviewers meet at the end of the day to compare their interviews and experiences with the candidates and to make the final choices about who will enter the program. This selection process has the advantage of including multiple community-based interviewers in the selection conferences. It also creates opportunities for assessment of interactive “people” skills, so critical in the introduction of new health careers.

#### Still to be Developed: An Expanded View of Supervision

A major difference between the culture of medicine and the culture of dentistry is how supervision is learned, practiced and valued. Medicine imbeds supervision into all levels of training and practice. For example, 3<sup>rd</sup> and 4<sup>th</sup> year medical students are supervised by residents as well as senior physicians. Residents are supervised by chief residents and attending physicians while at the same time they begin to supervise the medical students just entering clinical training. Within medicine, supervision is viewed as a strength of the process, time is allotted for it, and clinicians—especially educators—are evaluated on their skills in supervising others. For this reason, the introduction of physician assistants was an “easy sell” to physicians, while the introduction of nurse practitioners—who aspire to autonomy without supervision—has not always been well received by some portions of the physician community.

In contrast, the dental culture has relatively little supervision built into its training, its practice or its culture. Dental faculty members work one-on-one with dental students, but while students are evaluated themselves, they do not routinely learn the skills of supervision that could be helpful in working with—or employing—others. While this may be justified in single-dentist practices—where the only other employees may be dental assistants working directly with the dentist—it sometimes became a problem

when dental hygienists were added to a practice. Since dentists and dental hygienists are regulated at the state level, there is a wide variation in specific levels of supervision required from state to state. The ADA delineates 4 levels of supervision in its Comprehensive Policy Statement on Allied Dental Personnel” (2006:307). They are:

**Personal supervision:** A dentist is personally operating on a patient and authorizes the allied dental personnel to aid treatment by concurrently performing a supportive procedure.

**Direct supervision:** A dentist is in the dental office or treatment facility, personally diagnoses the condition to be treated, personally authorizes the procedures, and remains in the dental office or treatment facility while the procedures are being performed by the allied dental personnel and, before dismissal of the patient, evaluates the performance of the allied dental personnel.

**Indirect supervision:** A dentist is in the dental office or treatment facility, has personally diagnosed the condition to be treated, authorizes the procedures, and remains in the dental office or treatment facility while the procedures are being performed by the allied dental personnel, and will evaluate the performance of the allied dental personnel.

**General supervision:** A dentist is not required to be in the dental office or treatment facility when procedures are being performed by the allied dental personnel, but has personally diagnosed the condition to be treated, has personally authorized the procedures and will evaluate the performance of the allied dental personnel.

While helpful, these supervision definitions are primarily about supervision in the “present tense” and do not consider the prospective delegation of tasks or retrospective assessment of outcomes and other quality of care indicators which might make dentists—and patients—more comfortable with the new dental therapy roles.

The physician assistant supervision model can be helpful in thinking about how new types of oral health clinicians—with significant levels of responsibility—can be optimally supervised and monitored. Supervision is thought of more as a process than a “presence” (or lack of presence). Three components define PA supervision: (1) Prospective; (2) Concurrent and (3) Retrospective.

“Prospective supervision” refers to a “negotiated scope of practice” or “practice plan” that is a part of the hiring process as well as the ongoing evaluation process. The supervising clinician delegates agreed upon responsibilities to the mid-level provider and they agree—ahead of time—on what the boundaries of those responsibilities will be, including specific procedures and even types of patients. The “prospective” practice plan may change over time—as the midlevel matures in their skill set and the supervising clinician feels comfortable with the care provided. In the dental model the scope of practice for a dental therapist, for example, includes a relatively narrow scope of practice—as compared to full-scope dentistry—and the boundaries are carefully spelled out in the hiring and orientation process.

“Concurrent supervision” refers to all the types of supervision (typically included in the various levels of supervision defined by dentistry) where the supervisor is either present or available but typically will not see the patients of the mid-level provider unless it is

necessary or requested. Examples of concurrent supervision in the dental environment might include the dental hygienist's request of the supervising dentist to see a routine patient with new findings on the oral exam.

“Retrospective supervision” includes activities that occur after the patient care has occurred and may include chart review, end-of-the day case discussions, and the monitoring of patient outcomes. Some retrospective supervision activities might be considered to be structured “quality” activities, which are also not typically included or reported for dental practices. Outcome measures might include infection rate, unscheduled returns to the clinic for post-procedure concerns, compliance with scheduled return visits, or adherence to recommended preventive care schedules. This three-tiered approach to supervision creates credibility for the supervisor/mid-level relationship, reassures other clinicians that appropriate care is being provided and monitored, and supports a culture of safety and quality.

Regardless of which types of new oral health providers are trained, regulated, and employed, it is clear that there will be new models of care that utilize non-dentists. In creating both efficiencies of care as well as a safety-net for all involved, it will be important for dentistry to develop a culture of supervision which includes training for dentists and mid-levels in this important skill.

#### Still to be Developed: Licensure/Regulation

Just as regulation of PAs is different from NPs, the regulation for the *Alaska Model* therapists is different from the graduates of the *Minnesota Model* programs. In the PA model, PAs are licensed with a specific physician who is responsible for their supervision and practice. Without a practice plan—with a specific physician-- in place, a PA may be “licensed” but may not practice. Billing is done by the practice—not by the individual PA—and all reimbursement from third-party payers comes back to the practice. The practice then pays the PA as an employee. This arrangement has been key to the acceptance of the PA concept by organized medicine. All 3 of the new dental therapy models currently direct reimbursement only to the office. However when fully implemented the dental hygiene therapist model includes a plan for direct reimbursement to the dental hygiene therapist.

In contrast, the aspiration for NPs (which varies in its implementation from state to state) is that they be independent practitioners who may have a “collaborating physician” but who essentially practice autonomously and may bill independently. This creates a very different expectation from both physicians and nurse practitioners about how they work together.

As part of the “receptive framework” experience, the conversations at the policy level need to recognize this important difference which could be an advantage to either one or the other group at the state level. In PA/NP history, most states developed both models, with PAs licensed by state medical boards and NPs by state nursing boards. The Minnesota process to create regulation has been well documented and illustrates the complexity of creating initial state regulatory processes.

#### Still to Be Developed:—Accreditation/Certification

The development of accreditation of schools and certification of graduates are usually a second step in the development of new health professions. In August 2011, the

Commission on Dental Accreditation (CODA) announced that it will evaluate whether it can develop accreditation standards for dental therapy programs. At the same time, CODA also reiterated that “the ADA is already on record as firmly opposing anyone other than a dentist diagnosing oral disease or performing surgical/irreversible procedures.” Given the ADA’s opposition to the dental therapy movement, it is interesting to consider whether these activities can be accomplished under the existent dental structures or whether new agencies—or affiliations with parallel organizations for other health careers—will need to be developed.

#### Collateral “Opportunities”—What Dentistry Can Gain

The dental practice of the future might use a mix of all types of dental careers—under the leadership of the dentist—to achieve high quality cost-effective care. A dentist’s income could grow significantly depending on his/her ability to effectively, and efficiently delegate appropriate tasks and provide significant supervision of other dental personnel including dental therapists, advanced dental hygiene therapists, dental hygienists, Community Dental Health Coordinators (CDHCs) and the Oral Health Prevention Assistants (OPAs). In these models, a dental practice would use the Toyota “rightsizing” principles of “the right person doing the right job at the right time” to assure that tasks are delegated and supervised appropriately.

To create these new models, dentists will need to be taught supervision and team based skills, which are built into all four of these new careers. Younger generations of health professionals—regardless of their discipline--embrace these new approaches to learning and practice. Dental schools and dental associations can take the lead by sponsoring and offering continuing education experiences designed to teach these skills.

#### Conclusion:

Health policy makers have seen the implementation of the Dental Therapist model in the US as an excellent example of a “tipping point.” While considered by many dental academics for years, the dental health aide therapist movement in Alaska (the *Alaska Model*) and the two Minnesota programs came together because of unique circumstances in each state. The health care environments in both states have historically been seen as favoring innovation. In Alaska, the Tribal health corporations created health aides (in the 1950’s) initially to consistently deliver TB medications to remote villages. Out of that grew a well-developed and internationally coveted system of community health aides (CHAs), and community health aide practitioners (CHAPs) with regionally based supervising clinicians. The CHAP program—and the federal legislation that supports it—created an opportunity to add dental therapists (as Dental Health Aide Therapists or DHATs to the mix.

Minnesota has long been recognized as fertile ground for health care delivery innovations. In a 2010 report supported by the Commonwealth Fund, the National Academy for State Health Policy reviewed unique characteristics of the Minnesota health care environment. Anne Gauthier and Ann Cullen wrote that... “Minnesota’s health care environment has numerous strengths as a starting point for reform: a small uninsured population, a strong base of employer-provided insurance, and a history of public private partnership. ...For many uninsured Minnesotans, the Medicaid program offers comprehensive benefits with some of the highest standards in the country.” Within this context it is reasonable that a new approach to oral health disparities—the two *Minnesota Models* for dental

therapy—would emerge from two dental training institutions and that legislation would be passed to allow for practice by individuals trained in these new careers.

The ADA sponsored conferences to explore oral health disparities, and consider the creation of new oral health careers led to the creation of CDHCs and OPAs. The ADA focused on their concern that the scope of practice for these two new careers would NOT include “irreversible procedures.” Specifically, the two new ADA-sponsored oral health careers are not defined as “mid-levels”—meaning that they do not provide “irreversible procedures” but instead focus on prevention and simpler reversible procedures. It is yet to be seen whether or not patients will accept these new roles and whether the services provided by the ADA-endorsed CDHCs and OPAs will be eligible for reimbursement by Medicaid and by private dental insurers.

No matter what happens with the ADA’s new careers, the fact is that the oral health workforce is now changed forever—thanks to long-coming tipping points created by dental therapists. Public debate over new oral health roles has resulted in wider spread recognition of dental disparities—not just for children but also for the elderly, the geographically isolated, and individuals with disabilities. There is also greater public recognition of how poor dental health—including dental pain and ongoing dental infections—can impact the overall health and well-being of an individual. State governments, foundations and specific population advocacy groups are moving ahead with initial steps to create new oral health roles as a strategy for improving the health of the nation. In the same way the development of PAs and NPs led to major changes in the distribution of work and improvement of care throughout the medical environment in the last 40 years, it is interesting to consider the tremendous positive impact that the dental therapy movement—and other new oral health roles—can have on America’s health as we move ahead with a plan of “oral health for all.”

Those intent on developing new oral health roles as a way to increase access and address oral health disparities are advised to consider the developmental principles addressed in this paper including:

- Engaging practitioners as mentors, preceptors and employers
- Connecting with/preparing communities
- Actively developing the applicant pool
- Creating interview processes involving stakeholders
- Considering the cost, duration, and financing of programs to make them accessible to the populations served.

Spread of these new roles and their benefits will be more rapid if effort is made to disseminate existing curricular models (AK, MN, ADA) through faculty development dissemination workshops. Dental education also needs to incorporate learning about new approaches to supervision so its graduates will be prepared to work effectively with new oral health roles. Whether the new roles will lead to improvements that will provide “oral health for all” will depend on whether and how well these principles are addressed.



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