IMPROVING ACCESS TO ORAL HEALTH CARE:

The Success of Alaska Dental Therapists

ALASKA DENTAL THERAPIST PROGRAM EVALUATION RESULTS

The first major independent evaluation of the Alaska dental therapist program, conducted by RTI International, found that dental therapists in Alaska are providing safe, competent, appropriate dental services. The two-year, intensive evaluation is the first major independent evaluation of its scale to assess care provided by dental therapists practicing in the U.S. Dental therapists receive two years of intensive training and provide prevention, education and basic dental care services, working collaboratively with dentists while extending their reach.

Funded by the W.K. Kellogg Foundation, the Rasmuson Foundation and the Bethel Community Services Foundation, the 2010 study confirms that dental therapists are filling a vital need in Alaska, expanding the reach of dentists and allowing those in remote areas – many of whom previously had little or no access to oral health services – to receive care. Using criteria derived from standards for assessing clinical competency for board certification of U.S. dental school graduates and common health research measures, the evaluation shows:

- **Dental therapists provide safe, competent, appropriate care.** Dental therapists are technically competent to perform the procedures within their scope of work and they are operating safely and appropriately.
- **Residents say access to care has improved.** Dental therapists are successfully treating cavities and helping to relieve pain for people who in the past had to wait months or travel many hours to seek treatment.
- **Patient satisfaction is very high**. Adults overwhelmingly reported a positive experience with dental therapists, giving them an average score of 8.86 out of 10 and they are well-accepted in tribal villages.
- **Dental therapists are well respected in their communities**. Because many dental therapists return to practice in their home communities, they typically have the cultural skills and language fluency needed to educate and motivate people towards behavioral change. They are viewed as role models and serve as important oral health advocates.

NATIONAL RELEVANCE

Shortages of dental professionals and affordable dental care are hurting the health of millions of Americans. In fact, close to 50 million Americans live in federally designated dental shortage areas where there are not enough dentists to provide routine oral health care. Severe shortages of dentists and of affordable dental care means that millions of people – particularly in rural and low-income communities and communities of color - live in pain, miss school or work, or face life-threatening infections.

Simply training more dentists will not solve this problem. The Alaska model is a community-driven solution that can work in communities across the country. As individual states consider ways to expand access to much-needed oral care, this evaluation suggests that alternative workforce models like dental therapists can be part of the solution.

- Dental therapists can expand the reach of the dental team, providing critically needed access to oral health care for vulnerable children and families.
- Dental therapists can provide treatment and alleviate pain for vulnerable families and children who have not had regular access to care in the past.

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- Dental therapists often return to practice in the underserved communities where they grew up, providing an additional source of employment in remote communities, ensuring culturally appropriate care and serving as credible advocates of oral care in those communities.
- As communities across the U.S. consider options to expand access to oral health care, several states (including Kansas, Ohio, New Mexico, Washington and Vermont) are considering alternative models such as dental therapists. In 2009, Minnesota's state legislature created a dental therapist program.

DENTAL THERAPIST MODEL

Dental therapists work as part of the dental care team to perform basic dental procedures and provide prevention and education services under the general supervision of a dentist.

In Alaska, dental therapists have been providing preventive and basic dental care to families in remote Tribal villages since 2005. The Alaska program is based on a recognized and proven model that has been used internationally for over 80 years as a way to expand high-quality care to underserved children and families as part of a comprehensive system of care managed by dentists. Dental therapy is well-established in over 50 countries around the world, including industrialized countries with advanced dental care systems similar to the U.S., according to the World Health Organization.

This study confirms what numerous prior studies of dental therapists practicing in other countries have already shown: dental therapists provide safe care for underserved populations.

- Dental therapists receive rigorous training in a specific set of oral health care services. Under the general supervision of a dentist, dental therapists provide preventive services and perform cleanings, fillings and simple extractions.
- With a training emphasis on providing care for underserved populations, intensive clinical training and practice in the field, dental therapists receive at least as much hands-on training in their two-year program as dental students do in four years of dental school.
- After graduating and completing a 400-hour externship under direct supervision of a dentist, dental therapists are certified to provide a limited scope of dental services under general supervision of a dentist.
- Dental therapists' scope of practice includes a specific set of services, including cleanings, fillings, and simple extractions. The supervising dentist determines the services each dental therapist can provide while working remotely (under general supervision) based on their demonstrated skills and community needs.

COMMUNITY CATALYST

Creating Standards for Consistent, High-Quality Dental Therapy Education in the United States

As more than 20 states and tribal nations across the country actively pursue or explore expanding access to dental care by adding a mid-level dental provider, often called a dental therapist, there is a need for a core set of national standards for dental therapy education to ensure quality and promote consistency.

Currently, no formal accreditation standards exist for dental therapy education programs. However, in 2010, the American Association of Public Health Dentistry (AAPHD) published curriculum and competency guidelines for dental therapy education. In addition, the American Dental Association's Commission on Dental Accreditation (CODA) has released proposed accreditation standards for public comment; comments are due December 1, 2013.

Expert-Driven, Evidence-Based Standards

In December 2012, Community Catalyst convened a panel of academic and program experts comprising representatives from all three of the existing U.S. educational programs for dental therapists, as well as experts in dental therapy practice in the U.S. and Canada and educational standards experts. Over a two-year period, the panel met, and, building on the AAPHD guidelines, created dental therapy education standards that will guide states, tribes, policymakers, educational institutions and other stakeholders interested in dental therapy education.

The Panel agreed on a number of core principles to guide their work, including:

- Basing the recommendations on scientific evidence that will prepare dental therapists to provide safe, competent and appropriate care.
- Ensuring that dental therapy education will be accessible to students from underserved communities and will prepare dental therapists to practice in their home communities or other underserved areas.
- Creating minimum standards that will ensure quality without limiting the ability of local communities to develop programs that meet their needs.

Key Recommendations

The Panel researched accreditation models, standards and competencies for existing health professions to address critical issues such as curricula, faculty credentials, basic program length and the level of financial support and type of setting needed to offer quality education programs.

Their key recommendations include:

- Dental therapists should be trained to practice under the supervision of a dentist and to work collaboratively as part of a dental care team.

- Dental therapy curricula must include at least two calendar years of full-time instruction or its equivalent at the post-secondary level, and graduates must receive an associate degree. If a student is to be jointly trained in dental therapy and dental hygiene, the curriculum must include at least three years of full-time instruction or its equivalent.
- Graduates from dental therapy programs must be able to competently provide care within a scope of practice that includes assessing patients' oral health needs, providing preventive care and treatment for basic oral health problems and recognizing and managing complications, while adhering to all recognized community and professional standards.
- Dental therapy education program leaders must be qualified to administer the program, but do not need to be dentists. However, if a program is not dentist-led it must employ a dental director—a licensed dentist who is continually involved in the program.

Next Steps

It is the panel's hope that those seeking to expand access to oral health care by pursuing mid-level providers for their communities will use these recommendations and core principles to inform their efforts to develop dental therapy education programs.

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Recommended Standards for Dental Therapy Education Programs in the United States

October 2013

Advisory Panel Report and Recommendations

COMMUNITY CATALYST

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Recommended Standards for Dental Therapy Education Programs in the United States

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Advisory Panel Report and Recommendations

I. Introduction

Since publication in 2000 of the U.S. Surgeon General's report on oral health in the United States,[1] a variety of workforce innovations have been proposed to improve access to oral health care,[2] including the addition of dental therapists to the oral health team. Utilization of dental therapists has been shown to improve access to dental care for underserved patients and communities,[3] and a review of literature documenting care and clinical outcomes worldwide indicates that the care dental therapists provide is competent, safe and effective.[4] Dental therapists are being considered by a number of states and tribal nations as a strategy to address the growing crisis of untreated dental disease experienced by low-income and vulnerable children and adults.

Dental therapists are oral health care professionals who are educated to perform basic clinical dental treatment and preventive services within a variety of practice settings under the supervision of dentists. As members of the oral health team, dental therapists provide restorative dental treatment services, disease prevention and oral health promotion programs to maintain and improve health. Dental therapists refer patients to other health professionals for services beyond the scope of the dental therapist's practice.

Dental therapists also advocate for the needs of clients and assist individuals and communities in overcoming obstacles to accessing care, including geographic and transportation related challenges, lack of education about oral health and its relationship to general health,[5] and cultural or language barriers that may deter individuals from seeking dental care.

Dental therapists are currently practicing in two states – Alaska and Minnesota. In Alaska, Dental Health Aide Therapists (DHATs) have been serving rural native communities since 2005, through an initiative of the

1. United States Department of Health and Human Services. (2000). Oral Health in America: A Report of the Surgeon General.
2. Committee on Oral Health Access to Services; Institute of Medicine and National Research Council. (2011). Improving Access to Oral Health Care for Vulnerable and Underserved Populations.
3. Scott Wetterhall et al, Evaluation of the Dental Health Aide Therapist Workforce Model in Alaska, Final Report. (2010). Nash, D.A. et al 2012. "A Review of the Global Literature on Dental Therapists". Community Dentistry and Oral Epidemiology. Article first published online May 3, 2013.
4. Nash, D.A. et al 2012. "A Review of the Global Literature on Dental Therapists". 'Community Dentistry and Oral Epidemiology. Article first published online May 3, 2013.
5. Among the major findings of the 2000 Surgeon General's report was that oral diseases and disorders in and of themselves affect health and well-being throughout life. Oral Health in America: A Report of the Surgeon General page 283.

Inside

Alaska Native Tribal Health Consortium, in partnership with tribal health organizations. DHATs receive two years of education followed by a 400 hour preceptorship with a supervising dentist, which prepares them to provide a limited scope of oral hygiene instruction, prevention services, and urgent and basic restorative care under the general supervision of a dentist. The first year of the educational program is held at the University of Washington DENTEX training center in Anchorage, and the second year at the Yuut Elitnaurviat Dental Training Clinic in the rural community of Bethel. DHATs are certified to practice in the Alaska Tribal Health System by the Community Health Aide Program Certification Board and must be recertified through a process of continual competency evaluation every two years. The DHAT program arose out of the federally-authorized Community Health Aide Program in Alaska.

In 2009, Minnesota became the first state to establish licensure for dental therapists (DT) and advanced dental therapists (ADT). Two educational programs exist in Minnesota, one offered by Normandale Community College/Metropolitan State University (MN), and the other offered by the University of Minnesota School of Dentistry.

Minnesota DTs and ADTs work as part of the dental team and under the supervision of a dentist. DTs graduate with either a Bachelor's or Master's degree from an approved educational program and complete a demonstration of competency and licensure exams. ADTs are licensed DTs who have completed a Master's advanced dental therapy program, 2,000 hours of clinical practice under direct and indirect supervision of a dentist, and have passed the Minnesota Board of Dentistry certification exam. Although there are some additional procedures in an ADT's scope of practice, the primary difference between DTs and ADTs is the level of supervision under which they can perform procedures. The first class of Minnesota dental therapists graduated in 2011. Minnesota dental therapists are working in a variety of safety net settings serving low-income and underserved patients and communities, including community health centers, schools, head start programs, hospitals, nonprofit dental clinics and private dental offices serving low-income patients.

Other states and tribal nations are expected to establish dental therapy programs or demonstration projects within the next few years. Several states have put forward legislation seeking to establish dental therapy educational programs or practice acts. Other states, coalitions and tribes are pursuing pilot projects studying the feasibility of adding dental therapists to the dental team and multiple other states are seeking and sharing information on the option.

As more states consider the addition of dental therapists to the oral health care team, national standards are needed to ensure the quality and consistency of dental therapy education. While some variation is inevitable as the practice of dental therapy takes shape across the United States, a core set of consistent national standards for education is needed to provide guidance to policymakers, boards of dentistry, regulators, employers of dental therapists, accreditation organizations, educational institutions and the public.

With the goal of providing guidance to communities considering the deployment of dental therapists, Community Catalyst organized a panel of academic experts (the Advisory Panel or Panel) to develop national educational standards for programs that educate dental therapists in the United States. Community Catalyst is a national non-profit consumer advocacy organization dedicated to quality affordable health care for all. Community Catalyst works in partnership with national, state and local organizations, policymakers, and foundations, providing leadership and support to improve the health of

communities and to transform the health care system so it serves everyone. Funding for the work was provided by the W. K. Kellogg Foundation.

During the course of the Panel's work, the American Dental Association's Commission on Dental Accreditation (CODA) released proposed dental therapy accreditation standards for public comment. In announcing the release, CODA noted that it will not implement the standards until further documentation has been provided which shows that certain requirements of the Principles and Criteria Eligibility of Allied Dental Programs for Accreditation by the Commission on Dental Accreditation are met. While the CODA process continues, the Panel hopes this report will provide useful guidance to communities that are considering the addition of dental therapists to their oral health workforce.

The Advisory Panel began its deliberations in December 2012 and concluded its work in September, 2013. This report summarizes the work of the Panel and sets forth its recommendations.

II. Methods

Community Catalyst convened the Advisory Panel in December 2012 for the purpose of developing national standards for the education of dental therapists in the United States. The Advisory Panel's members included representatives from all three of the existing U.S. educational programs for dental therapists, as well as persons with expertise and experience in the practice of dental therapy in the U.S. and Canada, and in the development of educational standards. A list of the Panel members and their affiliations, along with individuals who participated as observers of the Panel's work, is set forth at the conclusion of this report.

The Panel determined that it would build upon work completed in 2010 by a group convened by the American Academy of Public Health Dentistry (AAPHD) and published in the Journal of Public Health Dentistry,[6] which recommended a dental therapy education curriculum and competencies. In developing its recommendations, the Panel then consulted a number of existing health professions' accreditation models, standards and competencies and associated materials, a list of which is attached as Appendix 1 to this report. The Panel found those existing standards and materials to be instructive and modeled many aspects of its recommended standards after language included there.

The Panel shared a draft of its recommendations with six independent reviewers, who are also listed at the conclusion of this report. These reviewers provided written comments, which the Panel reviewed in detail prior to completing its work.

6. Workforce Development in Dentistry: Addressing Access to Care. A Special Issue of the Journal of Public Health Dentistry. Volume 71, (supplement s2) 2011.

III. Summary and Discussion of Recommendations

The recommended standards are intended to be national in scope and to serve as a common foundation for various states and tribal nations considering the addition of dental therapists to their oral health workforce in the future. Section III summarizes the results of the Advisory Panel's work and highlights key issues. Section IV sets forth the Panel's recommended standards.

A. Core Principles

To guide the development of educational standards for dental therapists, the Panel began with six core principles:

- ***Access to Education and Care.*** The standards would be developed with strong consideration of the intertwined goals of making dental therapy education accessible to students from underserved communities who wish to enter the profession and preparing dental therapists to practice in their home communities or other areas where access to oral health is limited.
- ***Quality of Care.*** The recommended standards would support the development of evidence-based education programs that will prepare dental therapists who, on the date of program completion, can provide safe, competent and appropriate dental therapy services. Within their scope of practice, the quality of care provided by dental therapists must be equivalent to the quality provided by dentists performing similar types of health care services.
- ***Flexibility.*** The standards would have built-in flexibility so that they could be adapted to and support a variety of different state, national and tribal dental therapy models and prepare students to practice in a variety of practice settings.
- ***Workforce Entry and Career Pathways.*** The standards would allow multiple points of entry into the oral health workforce and a variety of career ladders and pathways for oral health professionals, including: (1) allowing an existing dental hygienist or dental assistant to be educated and authorized to practice dental therapy without repeating components of their existing education, and (2) allowing a dental therapist to obtain additional education to qualify to provide dental hygiene services in addition to dental therapy services.
- ***Cultural Competency.*** The standards would promote the development of practitioners who have adequate understanding of the meaning of cultural competency and have the skills necessary to provide culturally and linguistically accessible care.
- ***Minimum Standards.*** The Panel would recommend the minimum standards of quality that the Panel believed should be used by programs that prepare individuals to enter the dental therapy profession.

B. Discussion of Key Issues

The Panel debated many important issues during the course of its work. This section highlights some of those issues and provides background for the Panel's recommendations.

Supervision and Collaboration

The recommended standards are not intended to prepare a dental therapist for independent practice. The competencies included in the standards are to be practiced by the dental therapist under the supervision of a licensed dentist as part of a collaborative oral health team. Collaborative practice occurs when oral health care providers from different professional backgrounds pursue shared goals and outcomes and work together with patients and their families to deliver the highest quality of care. The type and definition of supervision and/or collaboration required will vary among states and tribes. The standards are intended to provide the dental therapist with the knowledge, skills and values to work toward shared goals with the dentist and other team members within a range of practice settings, supervisory structures and collaborative practice arrangements.

Program Director

The Panel recommends that each program must have a director who is generally qualified to administer the program; provided, that if the program director is not a licensed dentist, the program must also have a dental director who is a licensed dentist who supports the program director through continual involvement in the program. As the dental therapy profession grows and matures, a cohort of dental therapy academics will become established and available to educate, mentor and lead students in entering the profession. The recommended standard will allow programs to select such a dental therapist-academic at an appropriate future stage and, in the meantime, allows programs the flexibility to choose either a currently-licensed dentist or other qualified individual, such as a dental hygiene academic or an individual with general program administration qualifications, with support from a dentist.

Length of Curriculum and Degree Conferred

The Panel recommends that if the graduates of the program will be prepared for practice only as a dental therapist, the curriculum must include at least two calendar years of full-time instruction or its equivalent at the post-secondary level. In a two-calendar-year college curriculum, the graduates of the dental therapy program must be awarded an associate degree. If the graduates of the program will be prepared for practice in both dental therapy and dental hygiene, the curriculum must include at least three calendar years of full time instruction or its equivalent.

In the opinion of the Panel, graduates of a two-calendar-year curriculum will be competent to provide safe, competent and appropriate services, within the dental therapy scope of practice, on the date of program completion.

It is important to note that this outcome will depend on a number of success factors, including that the program must take care to ensure that students who enter the program have developed the prerequisite knowledge and skills that will be needed to achieve the mastery of content and competencies that will be expected of all program graduates.

Assuming such factors are addressed, including that the two-year curriculum is properly structured, administered and evaluated, the Panel believes programs will produce dental therapists who provide safe and competent care, and that such a curriculum will support the related goals of making dental therapy education accessible to students from underserved communities who wish to enter the profession, and preparing dental therapists to practice in their home communities or other areas where access to oral health is limited.

Like all of the Panel's recommendations, this recommendation regarding length of curriculum represents the minimum standard of quality that the Panel believes should be used by programs that prepare individuals to enter the dental therapy profession. The Panel recognizes that individual states or educational institutions may choose to design programs with a longer length of curriculum.

Competency Standards

The Panel intends that all dental therapists be trained on how to respond when they encounter various patient care situations. Currently, the different jurisdictions the Panel researched (Alaska, Minnesota and Canada) have different standards for what types of services may be performed by a dental therapist in these situations. The Panel's intent is to establish a minimum standard of competency but allow each education program the flexibility to determine which specific competencies to include in its program based on what is included in the scope of practice established by the applicable regulatory authority. The competency standards should not be interpreted to expect education programs to be educating and training students to perform services that are prohibited under the law of its jurisdiction. The proposed standards are minimum standards, but the Panel expects that each education program will educate and train students to the full scope of practice that is authorized in their jurisdiction.

Patient Care Experiences

The recommended standards include a requirement for patient care experiences within the pre-graduation clinical curriculum. The Panel noted that the terminology used to describe such an educational component will vary across educational programs and states – including community-based learning experiences, externships or internships, outreach experiences, clinical experiences, patient experiences, residency, field clinic experiences, preceptorships, and practicums. As such, the Panel elected to use the more general term "patient care experiences" in the standards. The Panel's definition of patient care experience is: a period of supervised practical application during which the dental therapy student applies previously studied theory and skills during the delivery of oral health services, either within the program's own facilities or in a community-based setting, with the goal of further developing knowledge and skills in the clinical setting and demonstrating competency in the various components of dental therapy practice.

C. Issues Beyond the Panel's Scope of Work

The recommended standards do not address what additional education might occur following completion of and/or graduation from the educational program. The Panel did not include recommendations for how dental therapists and dentists will work collaboratively within the oral health team. The Panel also did not address the state-mandated requirements that dental therapists must meet to become certified or licensed and to maintain certification or licensure. These issues were beyond the scope of the Panel's work.

IV. Recommended Educational Standards

The Advisory Panel's recommended standards follow. These recommendations represent the minimum standards of quality that the Panel believes should be used by programs that prepare individuals to enter the dental therapy profession.

Recommended Standards for U.S. Dental Therapy Education Programs

I. Institutional Effectiveness

I.a. Program Mission and Goals
The program must have a written mission statement that defines its purpose and stated goals that are based on its mission. The mission statement and goals should be communicated to faculty and students and other communities of interest.

I.b. Program Evaluation and Planning
The program must implement a formal, systematic and continuous process of self-evaluation to determine whether it is achieving its mission, goals and expected outcomes, and must use the results of the self-evaluation to improve the program.

Intent: The self-evaluation process should involve collection and analysis of data and other information concerning both educational and administrative functions and outcomes, and should be used to identify the program's strengths, weaknesses and potential for improvement or change.

I.c. Program Diversity
The program must have policies and practices to:

a. achieve appropriate levels of diversity among its students, faculty and staff;

b. engage in ongoing systematic and focused efforts to attract and retain students, faculty and staff from diverse backgrounds and underserved communities; and

c. systematically evaluate comprehensive strategies to improve the institutional climate for diversity.

Intent: The program should develop strategies to address the dimensions of diversity including structure, curriculum and institutional climate. Programs could incorporate elements of diversity in their planning that include, but are not limited to, gender, racial, ethnic, cultural and socioeconomic. Programs should establish focused, significant, and sustained initiatives to recruit and retain suitably diverse

students, faculty, and staff. An environment that fosters and promotes diversity is considered essential to preparing dental therapists to provide service to all who need care. The various insights and resources offered by a diverse student body, faculty, and staff increase the ability of dental therapist to have a positive impact on patients and the community. An environment that ensures an in-depth exchange of ideas and beliefs across gender, racial, ethnic, cultural and socioeconomic lines will enrich the educational experience for all.

I.d. Sponsoring Institution

The sponsoring institution must be an institution of higher education that is:

a. authorized under applicable law or other acceptable authority to provide a program of post-secondary education; and

b. accredited for offering college-level programs by:

(i) a regional accrediting agency recognized by the US Department of Education or by the Council for Higher Education Accreditation, or

(ii) a national accrediting agency recognized by the US Department of Education or by the Council for Higher Education Accreditation.

The sponsoring institution should have experience in health professional programs or experience in educating oral healthcare providers.

I.e. Institutional Roles and Responsibilities.

If more than one institution provides education to students enrolled in the program, all of the institutions involved must be parties to an agreement that states program objectives and learning outcomes and defines the institutions' respective responsibilities.

I.f. Program Relationships

The program must maintain active relationships with:

- Other programs and departments within the sponsoring institution
- Dentists and allied dental professionals in the community
- Other health care providers in the community

Intent: Maintenance of these relationships will provide dental therapy students with an opportunity to interact with students in other health education programs to foster effective communication between disciplines, assist students in learning the principles of both intraprofessional practice (meaning integration and collaboration with other oral health professionals) and interprofessional practice (meaning integration and collaboration with other health professions and health systems), and provide the program with information that will support its planning, development and self-evaluation.

I.g. Financial Resources

The sponsoring institution must provide the program with sufficient financial resources to operate the program, support its mission, goals, and expected outcomes, and fulfill the program's obligations to entering and enrolled students.

II. Administration

II.a. Program Administration – General
The program must exist as a distinct entity within the sponsoring institution, having administrative responsibility and status similar to comparable programs.

II.b. Program Administration – Personnel
The program must have a full time director who is responsible for fulfilling the program's mission and goals, including program organization, operation, fiscal management, evaluation, and development. If the program director is not a currently licensed dentist (DDS/DMD), the program must also have a dental director who is a currently licensed dentist and who supports the program director through continual involvement in the program. The program director and, if applicable, the dental director must be actively involved in developing the program's mission and goals; designing, implementing, and evaluating curriculum; evaluating student performance; and evaluating the program as a whole.

II.c. Faculty – General
Faculty must be sufficient for the program to meet its educational objectives.

Faculty members' teaching assignments and hours should allow sufficient time for class preparation, student evaluation, course development and evaluation methods, and professional development.

II.d. Faculty – Qualifications
Program faculty must be qualified through academic preparation and/or experience to teach their assigned subjects and knowledgeable in course content and effective in teaching the assigned subjects.

II.e. Faculty Evaluation
The program must implement a formal, systematic and continuous process that evaluates the performance of all faculty members. The evaluation process must involve collection of input from students.

II.f. Faculty – Privileges, Representation and Rights
Faculty and the program director should have academic appointments and privileges comparable to other faculty and administrators with similar responsibilities in the sponsoring institution. There must be faculty representation on appropriate committees, and faculty grievances and concerns must be identified and addressed.

II.g. Professional Development
The program must provide opportunities for the continuing professional development of the faculty and staff.

II.h. Support Personnel
The program must have adequate administrative, clinical and technical support personnel to meet its mission, goals and expected outcomes.

II.i. Physical Facilities
The program's classroom facilities, laboratory facilities, clinical facilities, and office space for faculty and administration must be adequate for the program to meet its mission, goals and expected outcomes.

Intent: These physical facilities should be adequate in number and size and appropriate in design to meet their intended use. Classroom, clinic and laboratory space should be conducive to student learning.

II.j. Other Program Resources

The program's instructional materials, library system resources, equipment, technology and other resources must be adequate for the program to meet its mission, goals and expected outcomes.

III. Student Services and Policies

III.a. Student Admissions Policies and Procedures

(1) The program must make student admission decisions based on written policies and procedures that are available to all prospective and enrolled students. Applicants must be informed of the goals of the program, curricular content, course transferability and the scope of practice of and employment opportunities for dental therapists.

(2) The policies and procedures must include requirements for admission and other selection criteria, including defined criteria for admitting students with advanced standing. Admission of students with advanced standing must be based on the same standards of achievement required by students regularly enrolled in the program.

(3) Admission policies and procedures must be designed to include recruitment and admission of a diverse student population.

Intent: Admissions criteria and procedures should ensure the selection of a diverse student body with the potential for successfully completing the program. The administration and faculty, in cooperation with appropriate institutional personnel, should establish admissions procedures that are non-discriminatory and ensure the quality of the program.

(4) The number of students enrolled in the program must be proportionate to the resources available.

Intent: In determining the number of dental therapy students enrolled in a program (inclusive of distance sites), careful consideration should be given to ensure that the number of students does not exceed the program's resources, including patient supply, financial support, scheduling options, facilities, equipment, technology and faculty.

III.b. Student Services and Supports

Counseling services, academic services, career services, health services, and financial aid services must be available to all students.

III.c. Student Privileges, Representation and Rights

Dental therapy students must have the same rights and privileges as other students in other programs within the sponsoring institution. There must be specific written criteria to ensure due process and the protection of student rights, including adjudication of academic and disciplinary complaints that parallel those of the sponsoring institution.

III.d. Student Evaluation
The program must use a clearly stated, valid and reliable system of formative and summative student evaluation to determine competence, progression and graduation of all students. The system must include processes for remediation or dismissal of students that do not meet evaluation criteria.

III.e. Distance Education
The services and resources available to program students and faculty at geographically distant campus locations should be comparable to the services and resources available to students and faculty on the main campus.

III.f. Student Immunization
The program must have and implement a policy on immunization of students and such policy must be based on current Centers for Disease Control recommendations for health professionals.

III.g. Student Exposure to Hazards
The program must inform students of written policies addressing student exposure to infectious and environmental hazards before students undertake any educational activities that would place them at risk.

Intent: Policies related to infectious and environmental hazards are expected to address methods of prevention; procedures for care and treatment after exposure, including definition of financial responsibility; and the effects of infectious and environmental disease or disability on student learning activities.

IV. Curriculum and Competencies

IV.a. Length of Curriculum and Degree Conferred
The curriculum must include at least two calendar years of full-time instruction or its equivalent at the post-secondary level if the graduates of the program will be prepared for practice only as a dental therapist. In a two-calendar-year curriculum, the graduates of the program must be awarded an associate degree. If the graduates of the program will be prepared for practice in both dental therapy and dental hygiene, the curriculum must include at least three calendar years of full time instruction or its equivalent. It is recommended that the amount of clinical practice experience be maximized within the framework of the educational program schedule in recognition that patient-based learning provides the richest opportunity to develop clinical competence.

IV.b. Curriculum Content
The content of the curriculum must be of sufficient depth and scope to ensure achievement of the curriculum's defined competencies. Foundational knowledge should be established early in the dental therapy program. Courses included in the curriculum should be at the college level. The curriculum must include content in the following areas:

1. **Biomedical concepts** must include content in head, neck and oral anatomy, development of dentition, physiology, microbiology/immunology, general pathology, nutrition, and pharmacology.

2. **Dental sciences** content must include dentition and tooth morphology, oral function, oral pathology, radiography, periodontology, cariology, pain management, and dental materials.
3. **Dental therapy sciences** must include oral health and oral health counseling, health promotion and prevention, patient management, clinical dental therapy, infection control, community oral health, medical and dental emergencies, legal and ethical dimensions of dental therapy practice. Basic clinical education must include formal curriculum in the scientific principles of dental therapy that extends throughout the curriculum and is coordinated and integrated with clinical experience providing dental therapy care.
4. **General education** must include oral and written communications, and instruction to prepare students to deliver care with cultural competence and sensitivity.

Intent: Quality health care education involves an ongoing consideration of the constantly changing health care system and the impact of racial, ethnic and socioeconomic health disparities on health care delivery. Instruction related to diversity prepares dental therapy students to evaluate their own values and avoid stereotyping. It assists them in becoming aware of differing health beliefs, values and expectations of patients and other health care professionals that can affect communication, decision-making, compliance and health outcomes.

5. **Telehealth communication skills** include instruction and experience appropriately using electronic media to record and transmit images for the purpose of consultation and diagnosis.
6. **Laboratory and clinical practice experience** must assure that students achieve clinical competence. The program's pre-graduation clinical curriculum must include experiences in which students provide patient care under the direct supervision of a dentist. The program must have the capacity to provide an adequate number of patient experiences to ensure clinical competence, including experiences that encompass provision of care across the lifespan, exposure to practice in a variety of settings in which dental therapy may be practiced including community-based learning experiences, and opportunities for involvement in interprofessional care.

IV.c. Curriculum – Course Descriptions

The program must distribute to students a written description of each course including an outline of content, the competencies to be acquired and other instructional objectives, and the manner in which students will be evaluated, including the policy or criteria for assignment of grades.

IV.d. Curriculum – Evaluation

The program must conduct a formal, on-going evaluation of its curriculum.

Intent: The evaluation should involve collection and analysis of data and other information concerning both individual courses and the curriculum as a whole, and should be used to identify the curriculum's strengths, weaknesses and potential for improvement or change.

Note: The intent of this Section IV.E. is to establish a minimum standard of competency but allow each education program the flexibility to determine which specific competencies to include in its program based on what is included in the scope of practice established by the applicable regulatory authority. These standards

should not be interpreted to expect education programs to be educating and training students to perform services that are prohibited under the law of their jurisdiction. The proposed standards are minimum standards, but the intent is that each education program will educate and train students to the full scope of practice that is authorized in its jurisdiction.

IV.e. Competencies

Graduates must be competent in providing oral health care within the scope of dental therapy to patients across the lifespan, to include care for the child, adolescent, adult, special needs and geriatric patient. The program curriculum must support the following competencies within the scope of dental therapy practice:

1. Assessment and judgment

1.1. Identify conditions requiring consultation and treatment that the dental therapist is competent to provide

1.2. Identify conditions requiring treatment by dentists, physicians, other healthcare providers, and manage referrals

1.3. Document existing oral conditions and the care that is provided (recordkeeping)

1.4. Perform and document information from commonly used tests and procedures such as radiographs, pulp vitality tests, dental impressions, and caries and periodontal disease risk assessments

1.5. Evaluate patients' oral health knowledge and access to healthcare professionals, and identify personal, family, economic, geographic and other barriers to seeking and using care

1.6. Inform patients and recommend comprehensive oral care

1.7. Create and monitor comprehensive, customized long-term oral healthcare protocols for patients, in consultation with a collaborating dentist

1.8. Identify and use the full range of available dental, medical, and other healthcare resources available in the community

1.9. Provide treatment within the dental therapist's scope of practice and referrals, based on assessment of individuals' general and dental health and social and personal circumstances

1.10. Provide treatment and referral based on previously approved clinical protocols taking into consideration a patient's social and personal circumstances

1.11. Apply ethical, legal and regulatory practices and principles to the provision of oral health care to patients

1.12. Apply critical thinking and problem solving during the provision of evidence-based patient care

2. Preventive care, per protocol

2.1. Provide individualized oral health instruction and disease prevention education for patients

2.2. Provide caries prevention and therapeutic intervention based on age, risk factors, and cooperation

2.3. Deliver customized oral homecare instruction

2.4. Discuss substance abuse counseling, including tobacco cessation and offer appropriate referrals

2.5. Fabricate athletic mouth guards particularly in school settings

2.6. Place sealants and apply fluorides

3. Therapeutic care, provide treatment and referral that is based on previously approved protocols

3.1. Treatment of gingivitis

3.2. Extract primary teeth and mobile permanent teeth

3.3. Remove sutures and change dressings

3.4. Replant and stabilize teeth

3.5. Restore primary and permanent teeth with amalgam and composite restorations

3.6. Fabricate and place temporary crowns

3.7. Prepare and place preformed crowns

3.8. Manage pulp exposures and perform pulp therapy procedures

3.9. Repair defective prosthetic appliances

3.10. Re-cement permanent crowns

3.11. Perform Interim Therapeutic Restoration procedure

4. Pharmacological and emergency management, per protocol

4.1. Administer topical and local anesthetic

4.2. Administer nitrous-oxide analgesia

4.3. Dispense analgesics, anti-inflammatory agents, and antibiotics necessary for oral health under the direction of the supervising dentist

4.4. Recognize and manage complications arising during performance of dental therapy

4.5. Recognize and manage medical emergencies occurring during performance of dental therapy services

5. Professional and community responsibility

5.1. Practice consistent with all applicable legal, regulatory, and ethical standards, and within the scope of one's competence

5.2. Pursue continuous learning, including periodic reassessment of needed training and continued competency

5.3. Demonstrate knowledge of practice management principles, including state and federal regulations for occupational safety and health and privacy of patient records

5.4. Participate in professional activities

5.5. Advocate for and participate in needs assessment, oral epidemiology surveys, and establish systems to promote oral health at a community level

5.6. Work to enhance the oral health resources available in communities

5.7. Use telehealth and other technology to communicate with supervising dentists and other healthcare providers

5.8. Plan and participate in community oral health programs

5.9. Advocate for effective oral health care for underserved populations

5.10. Provide oral health care for individuals and populations in non-traditional practice settings and in communities/geographic regions with limited health care resources

V. Patient Care

V.a. Patient Care Services

The clinical education of students should be in a model setting that provides oral health services to patients that adheres to contemporary policies and procedures regarding: (a) patient safety; (b) confidentiality of patient health information and records; (c) informing patients about their treatment needs and the scope of services available at the clinic; and (d) the rights of patients who receive services at the clinic.

V. Conclusion

The Panel hopes and intends that this report and the recommended standards will provide useful guidance and a common foundation for the many communities of interest that are considering the role dental therapists can play in enhancing the public's oral health. A common foundation will support the goals of assuring the quality of educational providers and programs, promoting the knowledge, skills and professional attributes of dental therapists as a member of the oral health workforce, and helping to assure the quality of care that dental therapists provide for the benefit of the public.

Panel Members, Observers, Reviewers and Staff

Panel Members

Panel Chairperson: Frank Licari, DDS, MPH, MBA. As Professor and Associate Dean at Midwestern University's College of Dental Medicine-Illinois, Dr. Frank Licari heads the office of Academic Affairs. He is currently responsible for student admissions, research, faculty development, institutional outcomes assessment, student assessment, accreditation, and for developing the overall academic program for the College, which matriculated its inaugural class in fall 2011. Previously, Dr. Licari held positions with the Commission on Dental Accreditation for the American Dental Association and has served as a consultant to numerous dental programs on accreditation matters both nationally and internationally.

Ruth Ballweg, MPA, PA-C. Ms. Ballweg is a Professor in the Department of Family Medicine at the University of Washington School of Medicine. A Physician Assistant, she has led the MEDEX Northwest Physician Assistant Program since 1985. MEDEX has been the academic partner –along with the Alaska Native Tribal Health Consortium – for the development of the Alaska Dental Health Aide Therapist Program. Ms. Ballweg's expertise includes primary care, rural health, program development and competency based training.

Darren G. Berg, Dental Therapist, North Battleford, Saskatchewan, Canada. Mr. Berg is a licensed dental therapist with more than 30 years' experience in legislative, governance, training and practice issues of dental therapists in Canada. He was Chairperson of the National Dental Therapy Working Group that developed national Codes of Ethics, Standards of Professional Practice and Scope of Professional Practice/Competency documents for dental therapists in Canada. Mr. Berg was a co-author of the paper entitled "Dental Therapists: A Global Perspective" with Nash et al, published in the International Dental Journal in 2008. Mr. Berg was awarded an Honorary Life Membership by the Saskatchewan Dental Therapists Association for his outstanding contributions to the practice and profession of dental therapy.

Colleen Brickle, RDH, RF, EdD. Dr. Brickle is Dean of Health Sciences at Normandale Community College in Minnesota. She received her dental hygiene degree from the University of Minnesota as well as her Masters degree in Curriculum and Instructional Design. In 2000 she completed her Doctorate in Higher Education with an emphasis in Health Care Education. Before her current position, Colleen was a dental hygiene educator and serving as program chair for six of her final years in that position. Colleen was instrumental in obtaining program approval for the advanced dental hygiene practitioner within the Minnesota State Colleges and Universities system and was a passionate advocate for legislation in Minnesota that resulted in dental therapy and advanced dental therapy.

Caswell A. Evans, Jr., DDS, MPH. Dr. Evans is currently the Associate Dean of Prevention and Public Health Sciences at the University of Illinois, Chicago College of Dentistry, and a faculty member in the UIC School of Public Health. Dr. Evans previously served as the Executive Editor and Project Director of Oral Health in America: A Report of the U.S. Surgeon General, and for twelve years was Director of Public Health Programs and Services for the Los Angeles County Department of Health Services. He is a member of the Institute of Medicine and was a member of the IOM Committee on Improving Access to Oral Health Care for Vulnerable and Underserved Populations. Dr. Evans is a Past President of the American Public Health Association, the American Association of Public Health Dentistry, and the American Board of Dental Public Health.

Karl Self, DDS, MBA. Dr. Karl Self earned his DDS degree from the University of Minnesota's School of Dentistry and his MBA from the University of Minnesota's Carlson School of Management. In January of 2010, he was selected to be the Director of the University of Minnesota School of Dentistry's newly created Division of Dental Therapy. Dr. Self's prior experiences include being the executive director of a Federally Qualified Healthcare Center in Minneapolis, a consultant for the Minnesota Department of Human Services' Medical Assistance program, and the Director of Inclusivity and Diversity for the University of Minnesota School of Nursing.

Mary Williard, DDS. Dr. Williard is the Director of the Dental Health Aide Therapist Educational Program and the Department of Oral Health Promotion for the Alaska Native Tribal Health Consortium in Anchorage, Alaska. She has worked in American Indian/Alaska Native dental programs since 1996. Her experience includes clinical supervision of dental therapists and dental therapy curriculum development and instruction. She has presented and published articles on dental therapy education, practice and supervision.

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Staffing

LPaC Alliance provided staffing for the Panel. LPaC is a law, policy and consulting group based in Minneapolis, Minnesota with extensive experience working on oral health issues, including dental therapy.

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Appendix 1: Materials and Models Reviewed

- Accreditation Review Commission on Education for the Physician Assistant (ARC-PA), Accreditation Standards Physician Assistant Education, Fourth Edition. (Available at http://www.arc-pa.org/acc_standards/)
- American Dental Education Association (ADEA), Competencies for Entry into the Profession of Dental Hygiene, included in Competencies for Entry Into the Allied Dental Professionals, as approved by the 2011 ADEA House of Delegates (referred to in the table as "ADEA / Competencies for Entry into the Profession of Dental Hygiene"). (Available at http://www.adea.org/about_adea/governance/Pages/default.aspx)
- ADEA, Competencies for the New General Dentist, as approved by the 2008 ADEA House of Delegates. (Available at http://www.adea.org/about_adea/governance/Pages/default.aspx)
- American Dental Hygienists' Association (ADHA), Competencies for the Advanced Dental Hygiene Practitioner. Adopted March 10, 2008 by the ADHA Board of Trustees. (Available at http://www.adha.org/adhp/index.html)
- Alaska Community Health Aide Program Certification Board, Standards and Procedures (Amended June 19, 2008 final) (as further amended in certain respects between 2009 and 2011) (referred to in the table as AK-CHAPCB Standards and Procedures). (The base document and the compilation of amendments are available at http://www.akchap.org/html/library/chap-certification-board/dha---certification-board-documents.html)
- Australian Dental Council / Dental Council of New Zealand, Accreditation Standards: Education Programs for Dental Hygienists and Dental Therapists (June 2010). (Available at http://www.adc.org.au/index.php?id=13)
- Commission on Dental Accreditation (CODA), Accreditation Standards for Dental Hygiene Education Programs (effective January 1, 2013). (Available at http://www.ada.org/115.aspx)
- CODA, Accreditation Standards for Dental Education Programs (effective July 1, 2013). (Available at http://www.ada.org/115.aspx)
- CODA, Proposed Accreditation Standards for Dental Therapy Education (Winter 2013). (Available at http://www.ada.org/316.aspx)
- Commission on Accreditation in Physical Therapy Education (CAPTE), Evaluative Criteria for Accreditation of Education Programs for the Preparation of Physical Therapists (updated 3/1/2013). (Available at http://www.capteonline.org/AccreditationHandbook/)
- Caswell Evans (2011), The Principles, Competencies, and Curriculum for Educating Dental Therapists: A Report of the American Association of Public Health Dentistry Panel. *Journal of Public Health Dentistry*, 71 (S9-S19). (Available at http://www.aaphd.org/default.asp?page=training_dental_therapists.html)
- Interprofessional Education Collaborative Expert Panel. (2011). Core competencies for interprofessional collaborative practice: Report of an expert panel. Washington, D.C.: Interprofessional Education Collaborative. (Available at https://ipecollaborative.org/Resources.html)
- Minnesota Board of Dentistry, Guide for Submission and Review of an Initial Program Approval Application for Dental Therapy / Advanced Dental Therapy Education Programs in Minnesota (approved by the Board June 17, 2011). (Not currently available in electronic form.)

[Note: All hyperlinks listed in this Appendix 1 were last checked September 18, 2013.]

About Community Catalyst

Community Catalyst is a national, non-profit consumer advocacy organization founded in 1998 with the belief that affordable quality health care should be accessible to everyone. We work in partnership with national, state and local organizations, policymakers, and philanthropic foundations to ensure consumer interests are represented wherever important decisions about health and the health system are made: in communities, courtrooms, statehouses and on Capitol Hill. For more information, visit www.communitycatalyst.org. Read our blog at http://blog.communitycatalyst.org. Follow us on Twitter @healthpolicyhub.