

**A Kansas Policymaker's Guide to Registered Dental Practitioners:
Inspired by Global Practices, a Homegrown Solution to Kansas' Oral Health Crisis**

BY

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Abstract

Mid-level dental providers provide preventive and restorative care in more than 50 countries around the world. Their quality of care and acceptance by the public has been well-documented as a safe and effective way to improve access to dental care to underserved populations. In Kansas, children, senior citizens, people with disabilities, and Kansans living in rural communities are impacted directly by the state's dental workforce shortage. All Kansans are affected in some way, whether it is through higher costs for dental services, increased insurance premiums, a growing burden of uncompensated care on our community hospitals and clinics, longer wait times to see a dentist, longer distances to travel to see a dentist, or the inability to see a dentist at all. As the Kansas Legislature considers legislation to add Registered Dental Practitioners to the dental team, best practices in other countries can help guide and inform their oral health care decisions. This is an examination of the Kansas proposal in the global context and a review of lessons learned from three representative countries. Inspired by global practices, Registered Dental Practitioners offer a market solution to Kansas' dental workforce problem while offering associated dentists more time to focus on the complex procedures they are trained to do.

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Preface: Policy Diffusion and the Spread of Mid-Level Dental Providers

While speaking at a national convention in Lawrence, Kansas, in December 2012, David Jordan, project director for the national non-profit health advocacy organization Community Catalyst, noted that major media outlets in the United States mentioned “dental therapists” just two times in 2008. In 2012, however, dental therapists were mentioned 14,000 times – a whopping 7,000-fold increase in four years. Community Catalyst partnered with consumer and child health advocates in Kansas, Ohio, New Mexico, Washington, and Vermont in 2009 to explore the feasibility of establishing dental therapist programs. Today more than 20 states are considering mid-level dental providers. Others states, such as California and Connecticut, are pursuing pilot projects. The advocacy world where Mr. Jordan functions calls this momentum. Scholars, students, and practitioners see the phenomenon as an example of lesson-drawing, policy convergence, policy transfer, or policy diffusion.

Over the past 50 years, scholars have published more than 1,000 research articles in political science, sociology, and public administration journals about policy diffusion. In its most generic form, policy diffusion is defined as one government's policy choices being influenced by the choices of other governments (Shipan, 2012). While the growing body of literature covers topics ranging from welfare reform to women's rights, there does not appear to be a single study available on the policy diffusion of dental therapists that has taken place in the past century throughout more than 50 countries, including to the United States. Dental therapists are mid-

level providers who are part of a dentist-led team – much like the partnership nurse practitioners and physicians assistants have with doctors. Alaska and Minnesota are currently the only states where mid-level dental providers are allowed to practice. The Alaska Native tribes decided to create a dental therapy program in 2000, and Minnesota authorized the training and practice of dental therapists to care for underserved segments of its population in 2009.

As other states explore the potential of mid-level dental providers in meeting their oral health challenges, this article serves three main purposes: First, mid-level dental providers serve as an example of international policy diffusion that can be traced back to New Zealand in the 1920s. Second, as learning theorists would agree, a study of best practices in other countries can help inform oral health care directions in the United States. Finally, students and scholars may discover opportunities for future research directions as mid-level dental providers are positioned for rapid policy diffusion throughout the United States in the coming decades.

The introduction of dental therapists to the workforce, then called school dental nurses, began in New Zealand in 1921 following the discovery during World War I of the poor oral health of potential inductees into military service (Brookings, 1980). Dental therapists commonly work in the public sector in school settings, providing basic oral healthcare for children under the general supervision of a dentist. Procedures in the scope of practice include preventative therapies, the restoration of primary and young permanent teeth, pulpotomies, placement of stainless steel crowns. and extraction of primary teeth. The concept of training dental nurses was adopted by other countries as a way to address dentist shortages and improve access to care, especially for underserved populations. It is notable – although not surprising – that as the concept of using dental therapists spread throughout the world, it seemed to follow a pattern of

implementation in countries that, like New Zealand, were members of the Commonwealth of Nations; those countries had experienced an association with the British Empire. Of the 54 countries and territories employing dental therapists, 33 are members of the Commonwealth of Nations (Nash, 2012). Numerous sociological studies suggest that people draw lessons from members of their networks. (Rogers, 1995).

The Diffusion of Dental Therapists to the United States

1920s: First dental therapists in New Zealand.

1930s: Development of dental hygienist and dental hygienist curriculum.

1940s: Dental therapists begin to practice in Malaysia (1948) and Sri Lanka (1949).

1950s: Dental therapists begin to practice in Singapore (1950), Tanzania (1955) and the United Kingdom (1959).

1960s: Early attempt for mid-level dental provider in the United States failed due to resistance from organized dentistry.

1960s: Dental therapists begin to practice in Australia (1966) and Thailand (1968).

1970s: Dental therapists begin to practice in Jamaica (1970), Canada (1972), Fiji (1973), Trinidad and Tobago (1975), Suriname (1976), and Hong King (1978).

2000: Alaska Native tribes decide to create dental therapy program.

2001: Congress authorizes creation of dental therapist program through the Alaska Native Tribal Health Consortium.

2003: Alaska Native tribes send first dental therapy students to New Zealand for training.

2008: First class of dental therapists graduate from Alaska-based training program.

2009: Community Catalyst, a national non-profit health advocacy organization, partners with consumer and child health advocates in Kansas, Ohio, New Mexico, Washington, and Vermont to explore the feasibility of establishing dental therapist programs.

2009: The Kansas Dental Project forms, a team of citizens, advocates and health care professionals who are working together to address the dental workforce shortage in Kansas. The effort is spearheaded by Kansas Action for Children, the Kansas Health Consumer Coalition, and the Kansas Association for the Medically Underserved.

2009: Minnesota legislation passes allowing dental therapists to practice.

2010: Mid-level dental providers receive “most controversial topic” award from online dental magazine, Dr. Bicuspid.

2012: Approximately 20 states are considering mid-level providers. Others, such as California and Connecticut, are pursuing pilot projects.

Dental Therapy: A Policy Diffused Through Learning

While the timeline shows when and where dental therapists were adopted, understanding how the policy moved from country to country calls for a review of the four prevailing diffusion theories: constructivism, coercion, competition, and learning. Constructivists trace policy norms to epistemic communities and international organizations, which base choices on fads, revered

exemplars rather than solid evidence. Coercion theorists point to powerful nation-states and international financial institutions that threaten sanctions or promise aid in return for fiscal conservatism or free trade. Competition theorists argue that countries compete to attract investment and to sell exports by lowering the cost of doing business, reducing constraints on investment, or reducing tariff barriers in the hope of reciprocity. Learning theorists suggest that countries learn from their own experiences and from the policy experiments of their peers (Dobbin, 2007).

In the case of dental therapists, the spread of the policy occurred largely through learning. As R. Rose (1991) states, “Every country has problems...and each country thinks that its problems are unique...However, problems that are unique to one country ...are abnormal...confronted with a common problem, policy makers in cities, regional governments and nations can learn from how their counterparts elsewhere responded” (p. 3). Learning is based on changing beliefs in light of new information. The new information in this case includes a shortage of dentists, growing knowledge of the connection of oral health to overall health, a lack of affordability of or access to dental care, and increasing acceptance of other mid-level providers. A recent national survey showed that 78 percent of Americans support the use of alternative providers like dental therapists as a practical, common sense approach to increasing access to care (Kellogg, 2011).

Throughout the world, the use of dental therapists to provide primary care for children has grown in popularity, primarily because the dental workforce is unable to provide access to basic oral health care. Malaysia serves as an example of the circumstances that have motivated other countries to adopt the New Zealand dental therapy model. When Malaysia became an independent country in 1957, the seven million inhabitants faced an acute shortage in their dental

workforce and what was referred to as an appallingly high prevalence of caries. There only were approximately 20 dentists in government service and 50 in private practice – with no school of dentistry to fill the gap in the workforce shortage. The Malayan School for Dental Nurses began by training 50 to 70 dental nurses each year and graduated more than 2,000 from Malaysia and 19 from other countries who have either been sponsored by the WHO or their respective governments (Nash, 2012).

Since training for dental therapists is more focused, intensive, and requires fewer years of training than for dentists, education is far less costly. The countless visitors to New Zealand to observe this training and the practice of dental therapists have contributed significantly to the diffusion of dental therapy. Compared to policies whose effects were highly observable, those with low observability were half as likely to exhibit learning-based diffusion (Shipan, 2012). While training varies by country, dental therapists generally complete two years of school with more than 3,000 hours of training to provide specific services, including routine care like cleanings and fillings. They receive more clinical training hours than dentists do on a specific number of routine and preventive procedures, making it a policy that can be considered highly observable.

Initially, all countries sent their dental nurses/therapists to be trained in New Zealand. Many countries now have their own training schools. The Malayan School for Dental Nurses, opened in 1949, was the first training program for dental nurses outside of New Zealand. Despite the growth of training programs outside of New Zealand, the country remains a global leader in the education of dental therapists. In 2003, Alaska native tribes sent the United States' first dental therapy students to New Zealand for training. The Alaska Native Tribal Health Consortium,

working in partnership with the University of Washington, began training dental therapists in Alaska in 2007. They have now been able to reach 35,000 Alaskans who did not have access to care before. Counting only those trained on the New Zealand model, there are more than 14,000 dental therapists presently deployed worldwide. China has an estimated 25,000 “assistant dentists” who are very similar to dental therapists in training who practice independently in rural areas (Friedman, 2011).

Best Practices Help Inform Oral Health Care Directions in the United States

Policy diffusion teaches that the best and most relevant diffusion experiments may be across the country or halfway around the world. The latecomer advantage traditionally describes developing countries borrowing from developed countries. In the case of dental therapy, the obviously developed United States is uniquely positioned to benefit from the more than 90 years of experience gained a wide range of countries, including developing nations. With limited U.S. research to draw upon, a comprehensive look at dental therapists and their work in various countries became available in April 2012 when a groundbreaking study was released that reviewed 1,100 reports from around the world. Among the trends identified that can help inform oral health care directions in the United States:

Australia – To meet the demands of the broader population, Australia has moved toward greater integration of dental therapy and dental hygiene in recent years. In global policy diffusion, the players involved in learning processes differ in their perceptions of problems and their motives for policy change (Klein, 1997). Due to diversity of positions, political parties, health care providers, and educational institutions, it is expected that different countries draw different lessons from international experiences and make adaptations as necessary. The

combined skills dental auxiliary is an example. Australia's integrated model has been adopted in many proposals in the United States where mid-level providers are Registered Dental Hygienists who choose to obtain advanced training beyond their hygiene degree. While the hygienist-based model is not the norm globally, it is gaining popularity both abroad and in proposals throughout the United States.

Canada – In a paper titled “On the Pediatric Oral Health Therapist: Lessons from Canada,” Quinonez suggested that the more than three decades history of challenges experienced by Canada in using this model would be relevant to its neighboring country to the south (Quiñonez, 2008) since it is the only country in the Western Hemisphere to have mid-level dental provider. He suggests that policy stakeholders should promote the pediatric oral health therapist in a nonpartisan way, meaning that efforts should be ensured to gain support from all members of the political spectrum. The process of avoiding the mistakes of others may be labeled negative learning (Klein, 1997). The United States has taken note with conservative groups such as Americans for Prosperity joining coalitions for mid-level providers alongside organizations dedicated to universal health care.

New Zealand – Policy diffusion is not a one-way street. One of the most significant modifications in recent history for New Zealand involves the delivery of training. Throughout the history of dental therapy, training had been delivered in different centers. That remained relatively constant until 1999 when educational responsibility was transferred to the universities (Coates, 2009). This demonstrates that while dental therapy originally diffused from New Zealand, even innovators and early adopters can benefit from the lessons of others. Training for

mid-level providers in the United States is trending toward higher education institutions with a greater emphasis on degrees as opposed to certifications.

New Research Directions in Domestic Dental Therapy Diffusion

More than 50 million Americans are living in dental shortage areas and millions more are unable to afford care when they need it (Kellogg, 2011). The momentum is building for dental therapists, with approximately 20 states considering proposals to allow mid-level dental providers. New Mexico, which currently ranks 49th in the United States in number of dentists per 1,000 residents, may soon join Alaska and Minnesota in allowing mid-level providers. The Dental Therapist-Hygienist bill has been unanimously passed by the New Mexico House Health, Government and Indian Affairs Committee and went to the House Business and Industry Committee on February 23, 2013. The question remains: What will mid-level dental providers look like in the United States? Which states will lead the way? Will training for this new workforce be two years after high school as in Alaska or follow the Minnesota model that requires practitioners graduate from an approved bachelor's or master's degree program?

Some caution against dichotomizing when considering diffusion studies. After all, public policy scholars know that policies are not mere binary choices. “Some policies are more comprehensive than others. ...Studies of policy diffusion that consider these more nuanced policy elements may dramatically advance our understanding of which governments select which policies and why (Shipan, 2012). For example, in 2012, the Kansas Legislature approved an Extended Care Permit, or ECP, Type III permit that allows trained hygienists to perform temporary fillings, adjust dentures, smooth sharp teeth, extract loose baby teeth and apply local

anesthetics in certain situations. This is not a true mid-level provider, but the bill was likely passed in response to pressure to expand the dental team. When studying diffusion of dental therapists, overall advances in oral health should be considered in addition to the adoption of mid-level providers.

A review of other types of mid-level practitioners – physician assistants, nurse practitioners, chiropractors, and dental hygienists – revealed those programs were all resisted by highly organized opposition by professional associations, initially resulting in a struggle to gain recognition and professional status. Given the momentum for dental therapy in the United States, most predict the tipping point will come soon.

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I. Introduction

We have a serious problem in Kansas. But it is a problem we can solve. Right now, 99 Kansas counties no longer have enough dentists to serve their residents. Thirteen counties have no dentists at all. All or a portion of each of these 99 counties have received a federal designation as a workforce shortage area. (Health Resources and Services Administration, 2012). A federal report determined it would take a minimum of 94 new dentists in Kansas to eliminate the shortage areas. Even in counties with enough dentists, vulnerable populations consistently have trouble finding care. With the average dentist in Kansas approaching retirement age, this problem will only get worse. Without dental care, many adults and children live in pain, miss school or work and, in extreme cases, face life-threatening emergencies. This could all be prevented if we improve access to routine dental care.

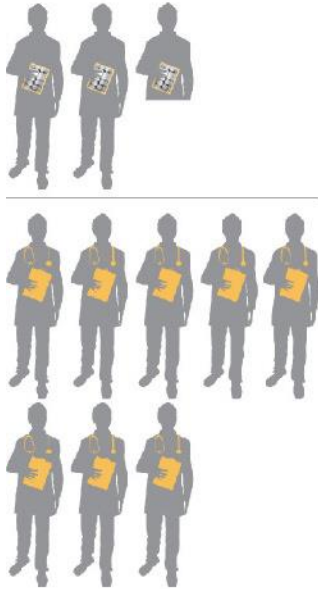
This is a problem that affects Kansans in both rural and urban communities. It affects our children, our senior citizens and our neighbors. It affects people with health insurance and those without. Unlike some of the other workforce shortage problems facing our state, the shortage of dentists is a problem we can solve – not just with a quick fix, but with a long-term solution that is proven to work.

The oral health crisis is not unique to Kansas. According to the Institute of Medicine, the U.S. dental care system fails one-third of all Americans – that is more than 100 million children and adults who can't get dental care when and where they need it. Children are affected the most. Tooth decay is the most common chronic childhood disease, even more common than asthma. Left untreated, dental decay can set the stage for a lifetime of poor health. It is linked to such

serious health problems as diabetes, stroke, and heart disease. The tragic death of 12-year-old Deamonte Driver in 2007, which resulted from untreated tooth decay that spread to his brain, was a sobering reminder for America of the tragic consequences that can result from a lack of access to dental care. Driver, a Maryland boy, spent six weeks in the hospital prior to his death, accumulating bills totaling nearly \$250,000 (Otto, 2007).

Closer to home, Dr. Dan Minnis, a private practice dentist in Pittsburg and dental director of Community Health Center of Southeast Kansas, provided testimony to the Kansas Legislature in 2011 about a mother from Chautauqua County who had to drive to his office in Pittsburg (which meant driving through five counties) because she could not find a dentist to provide emergency care to her son who had fallen off his bicycle and partially avulsed his two front teeth. The child held both private insurance and Medicaid coverage, but his mother tried unsuccessfully for three days to find a provider who would accept Medicaid, all while her child suffered. Someone finally referred her to Dr. Minnis (Minnis, 2010). The plight of the Chautauqua mother and her son happens all too often in Kansas, according to Dr. Minnis, especially for low-income families. It illustrates why something must be done to increase the dental workforce in Kansas.

More than just a shortage. In Kansas, only 25 percent of dentists accept patients insured through Medicaid. But almost 90 percent of Kansas physicians accept Medicaid patients as part of their practice. RDPs would help expand access to Medicaid patients because the profession is expected to attract public health minded individuals.



Across the country, states are grappling with how to expand affordable dental care access to avoid situations like the one Dr. Minnis describes. Along with expanded roles for physicians, dental hygienists, and dental assistants to address unmet oral health needs, many states are weighing the use of mid-level dental providers – an innovative model for closing America’s oral health care gap (W.K. Kellogg Foundation, 2011). Mid-level providers are part of a dentist-led team – much like the partnership nurse practitioners and physicians assistants have with doctors. While the most common name globally for mid-level dental providers is dental therapists, the proposal in Kansas calls them Registered Dental Practitioners or RDPs. RDPs are dental hygienists who obtain advanced education and training, pass a comprehensive clinical exam, and

work under a supervising dentist. They would be trained to provide evaluation and preventive services such as inspection, dental radiography, cleaning above the gum line, and basic restorative services. They could not provide more advanced services that dentists provide such as root canals. (Wikle, 2011). Where dentists are in short supply, RDPs can expand the reach of dentist and provide vital dental services, oral health education, prevention, and consistency of care for underserved communities.

This seemingly American problem is, in fact, an international oral health crisis. Most nations are faced with a shortage of dentists. When compared to other countries that have implemented a mid-level dental model, however, the United States is far behind in establishing this type of practitioner as a solution to the oral health disparities. Mid-level dental providers have successfully provided high-quality, routine dental care in more than 50 countries for more than 90 years. (Roder, 1978). Five of the top six countries on the Human Development Index -- the United States, Canada, New Zealand, Australia and the Netherlands -- employ dental therapists in their oral health workforce (Nash, 2012). Alaska and Minnesota are currently the only U.S. states where mid-level dental providers are allowed to practice. The Alaska Native tribes created a dental therapy program in 2000, and, in 2009, Minnesota authorized the training and practice of dental therapists to care for underserved segments of its population.

While ordinarily Kansas would look to policies in other states when crafting a solution, mid-level dental providers are one of a growing numbers of cases representing international policy diffusion, which is simply the movement of policies from one nation to another. Diffusion theorists generally share the view that the policy choices of one country are shaped by the

choices of others, whereas conventional accounts of policy decisions point mainly to domestic conditions (Dobbin, 2007). Research shows the biggest obstacle when dealing with international diffusion is the assumption that we already do things the best way in the United States. The American conceit, a result of serving as the world's greatest technological innovator, may prevent progress when the international community offers a proven solution for a basic health problem.

This international comparison can pose disconcerting questions for Kansas. First, without mid-level providers in Kansas, do children in Tanzania, for example, have better access to oral health services than children in Western Kansas? A second issue surrounds the mounting evidence that suggests mid-level dental providers offer cost-effective care. The opportunity for savings is related, in part, to the salary differential between dental therapists and dentists. An average New Zealand dental therapist earns \$30,000 to \$40,000 a year in U.S. dollars, and private practice dentists earn \$120,000 to \$150,000 a year in U.S. dollars (Nash, 2012). Given the bleak economy in Kansas and the need to stretch public and private dollars, why aren't we taking advantage of mid-level providers as a way to increase the affordability of dental care? With 90 percent of basic dental care for children being provided by dental therapists in New Zealand, it is clear that that workforce model is more cost effective than a dentist-only workforce model.

Fortunately, best practices in other countries can now inform oral health care directions in the United States. With limited U.S. research to draw upon, a comprehensive look at "dental therapists" and their work in various countries was not available until April 2012 when a groundbreaking study was released that reviewed 1,100 reports. Despite claims by organized

dentistry that mid-levels may provide unsafe care, the report found no evidence to indicate that the public perspective of dental therapists in any country was other than positive, according to David Nash, DMD, MS, EdD, the William R. Willard Professor of Dental Education, Professor of Pediatric Dentistry at the College of Dentistry at the University of Kentucky, and the principal author of *“A Review of the Global Literature on Dental Therapists: In the Context of the Movement to Add Dental Therapists to the Oral Health Workforce”* (2012). Nash is a member of the American Dental Association and of the American Academy of Pediatric Dentistry. “There is no question that dental therapists provide care for children that is high quality and safe. None of the 1,100 documents reviewed found any evidence of compromises to children’s safety or quality of care,” said Nash. “Given these findings, the profession of dentistry should support adding dental therapists to the oral health care team.”

Kansans value innovation. We are leading the way on multiple fronts, from the biosciences to aerospace to agriculture. Kansas has an opportunity to lead the way now to shape what this mid-level dental provider will look like; to ensure that students from neighboring states come to Kansas to receive their education, and to be a leader nationally. If Kansas does not grasp this chance to be a national leader, it will have to eventually adopt what other states develop. The Kansas Legislature embraced the idea of expanding the scope of practice of dental hygienists in 2012 when it passed House Bill 2631, allowing hygienists to perform temporary fillings, denture adjustments and extractions of loose baby teeth. However, this is just a small step in the right direction. The Registered Dental Practitioner model proposed in Kansas would go even further in mitigating the dental crisis in Kansas. RDPs would work in rural areas, safety-net clinics, schools and nursing homes, providing services that help Kansans avoid costly emergency care. Although

the bill remained in committee in the 2012 session, this is recognized as a multi-year effort, and supporters are moving the proposal forward in 2013 and are committed to a long-term strategy. Inspired by lessons learned from around the globe, Kansans have created a homegrown solution to the oral health crisis.

II. Purpose and Author's Note

As Nash notes in the opening of his literature review, the introduction of dental therapists to the oral health care team in the United States is controversial. Some of the controversy relates to an inadequate understanding of the use of mid-level providers as members of the dental team. But if Nash already thoroughly reviewed the global literature on the subject, why is this document necessary?

This policy guide is unique because it views a global predicament and through a Kansas-specific lens. It builds upon the available global literature to offer ideas on how Kansas can implement a home-grown solution inspired by best practices from around the world. Few Kansas policymakers would have the time to read Nash's 460-page literature review on the subject. Therefore, the use of techniques such as lists as well as the overall brevity of this document is intentionally designed to meet the needs of Kansas policymakers. Sections were selected based on inquiries by policymakers and, in some cases, in an effort to clarify misinformation in the public realm. With roughly one-third of the Kansas Legislature estimated to consist of new policymakers in 2012, the need for independent research on how proposed public policy could potentially affect the lives of Kansans takes on increased significance. It is noted the conciseness

of the document in no way diminishes the fact public policy change of this magnitude requires careful deliberation.

While the primary purpose is to guide Kansas policymakers, it also is intended to fulfill the project-based thesis requirement for the author, Christie Appelhanz, who is seeking a M.A. in Global and International Studies from the University of Kansas. A project-based thesis is distinguished from the traditional thesis by its focus on combining academically informed conceptual frameworks with an evaluation of an applied, practical project, according to KU's Center for Global and International Studies. As vice president of public affairs for Kansas Action for Children (KAC), a nonpartisan, non-profit organization based in Topeka, Appelhanz serves a management role in the lead organization of the Kansas Dental Project. KAC joined forces with the Kansas Health Consumer Coalition and the Kansas Association for the Medically Underserved to create a team of citizens, advocates and health care professionals who are working together to address the dental workforce shortage in Kansas. The effort is funded by the Kansas Health Foundation, United Methodist Health Ministry Fund, REACH Healthcare Foundation, Health Care Foundation of Greater Kansas City, and the W.K. Kellogg Foundation.

III. Common Global Definitions of Members of the Oral Health Team

The introduction of dental therapists to the workforce, then called school dental nurses, began in New Zealand in 1921 following the discovery during World War I of the poor oral health of potential inductees into military service (Brookings, 1980). The concept of training dental nurses was adopted by other countries as a way to improve access to care, especially for children. Since that time, various names have been used to describe different oral health team members

throughout the world, which presents challenges when exploring global research. Dental therapist, for example, means different things depending on the country and is sometimes used to describe individuals who perform the duties performed by American dental hygienists. In Australia and the United Kingdom, dental nurse is equivalent to the U.S. dental assistant. The following represents the most widely accepted global definitions and the ones used throughout this publication.

Dental assistant – The dental assistant works chairside with the dentist, preparing the patient for treatment, sterilizing instruments, passing instruments during the procedure, holding a suction device, exposing dental radiographs, taking impressions, and fabricating provisional crowns. Dental assistants also may perform functions in the business office and the dental laboratory.

Dental therapist – Originally called dental nurses, they commonly work in the public sector in school settings, providing basic oral healthcare for children under the general supervision of a dentist. Procedures generally included in the scope of practice include preventative therapies, the restoration of primary and young permanent teeth, pulpotomies, placement of stainless steel crowns and extraction of primary teeth. Dental therapists are sometimes referred to as oral health practitioners, although in some countries, including Australia, an oral health practitioner is describes someone with both therapist and hygienist skills.

Dental Health Aide Therapist (DHAT) – Introduced by the Alaska Native Tribal Health Consortium, this is the moniker of dental therapists who practice in Alaska, providing care in roughly 20 rural villages. Many places served by DHATs are accessible only by air and water.

Dental therapists have provided quality care to more than 35,000 people who never had access to regular dental care before.

Dental hygienist – Traditionally, they have worked in the private sector, devoting their time to preventive periodontology, specifically oral health education and promotion and the scaling and polishing of teeth. There is an increasing tendency in the world for combining the training of dental therapists and dental hygienists in order that they may function in either or both roles – prevention and treatment of dental caries and prevention and treatment of periodontal disease.

Dental nurses – Also called expanded function chair-side assistants, work is typically associated with the dentist working in the dental operator/surgery. In some countries, individuals performing the functions associated with dental therapists are called dental nurses.

Community oral health workers/aides – These members of the dental health team are employed to work in communities to promote oral health through education, as well as screen and coordinate care. In America, these providers would help patients navigate the health care system, find dentists who accept their insurance, and help make sure patients return for their follow-up visits.

Denturists (clinical dental laboratory technicians) – Members of the oral healthcare team who fabricate removable prosthetic devices to replace missing teeth. (Nash, 2007).

Kansas specific members of the dental team

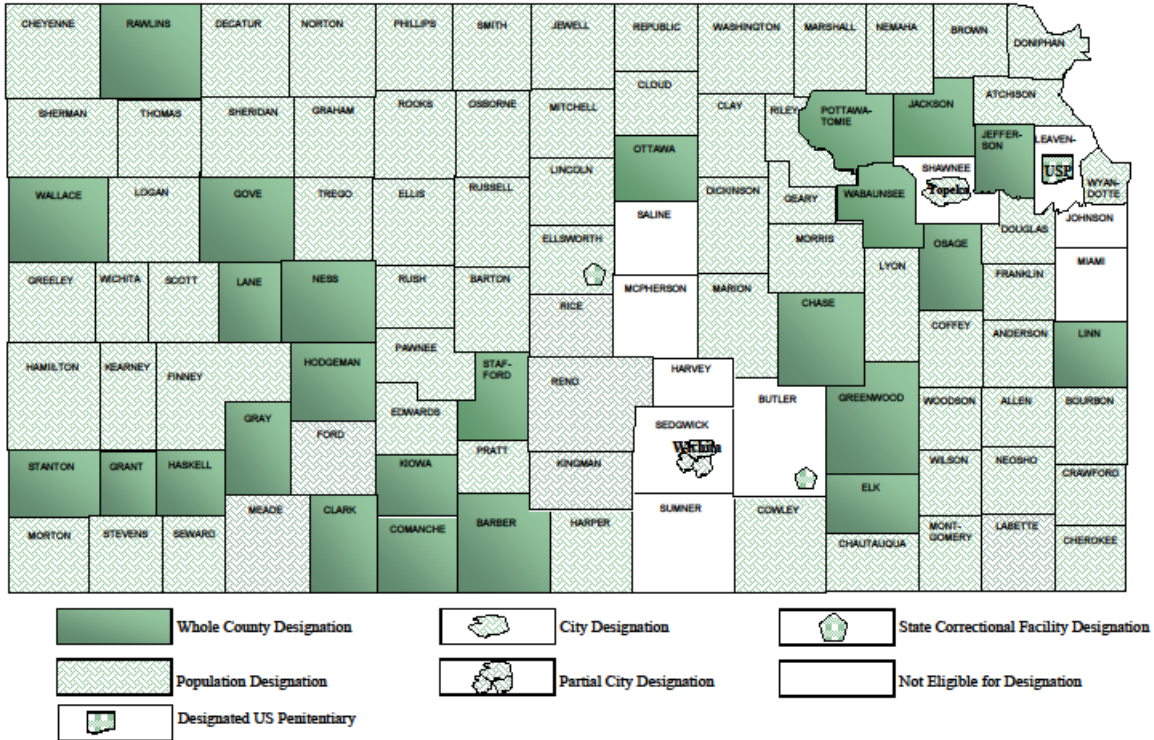
Extended Care Permit Hygienist (ECP) – In 2003, Kansas created an Extended Care Permit, which allows registered dental hygienists to provide screening, education, and preventive

dental hygiene services in certain community-based sites under the sponsorship of a dentist. The first sites included schools, local health departments, indigent health clinics, nursing homes, correctional facilities, and Head Start centers. In 2007, the Kansas Legislature broadened the law by increasing the number of community-based sites where ECP hygienists can provide services, including senior centers and senior meals sites, after school and community-based youth programs, individual and group homes for the developmentally disabled, and youth in foster care. The new law allowed ECP hygienists to apply fluoride varnish and use topical anesthetic when working in the community. In 2012, the Kansas Legislature approved an ECP Type III permit that allows trained hygienists to perform temporary fillings, adjust dentures, smooth sharp teeth, extract loose baby teeth. and apply local anesthetic in certain situations.

Registered Dental Practitioner – A proposed new member of the Kansas dental team, the Registered Dental Practitioner would operate as part of a team with dentists and dental hygienists - much like the partnership nurse practitioners and physician assistants have with doctors. After legislative and Kansas Board of Regents approval, Registered Dental Practitioners would be trained to provide evaluation and preventive services such as inspection, dental radiography, cleaning above the gum line, and basic restorative services. They cannot provide the more advanced services that dentists provide, such as root canals, and they can operate only under the supervision of a dentist.

A plan is needed to address the dental shortage in Kansas before it gets worse.

Kansas Department of Health and Environment
 Bureau of Community Health Systems
 Dental HPSAs as of July 2012



Map available at <http://www.kdheks.gov/olrh/download/DEhpsaMap.pdf>.

IV. Overview of the Kansas Registered Dental Practitioner in the Global Context

RDPs will bring a valuable combination of skill to the dental team. They will be able to provide the education and preventative care of hygienists and basic restorative care needed to alleviate pain and treat dental disease. The following is a summary of the legislation contained in House Bill 2280 and Senate Bill 192 during the 2011 and 2012 sessions of the Kansas Legislature. Both bills received hearings during the 2011 session and were supported by individual dentists, the Kansas Dental Hygienists' Association, safety-net clinics, and multiple advocacy organizations. In 2012, SB 192 remained in the Public Health and Welfare committee and HB 2280 in the Health and Human Services Committee. The Kansas Dental Project and its supporters are moving the proposal forward in the 2013 session with HB 2157 and SB 197.

Literature on legislation, registration, and licensure of dental therapists is sparse for most countries. Since many countries limit dental therapists to governmental service, they are not necessarily licensed or registered. Their scope of practice regulates their provision of care, with responsibility for supervision and review designated to their respective ministries of health (Nash, 2012). What is known is that legislation, registration, and licensure vary widely from country to country. National, state, or provincial legislation authorizes the practice of dental therapists. Regulation is generally by dental councils or what Americans call dental boards. In the many countries where dental therapists are public employees in school dental services, they are certified and regulated directly by the government's ministry of health or their employing service. In a few countries where more autonomy for practice is granted, dental therapists are licensed as professional practitioners – just as are dentists.

Education

Vocational training in a two-year curriculum has been the tradition in the majority of countries using dental therapists, with the awarding of a certificate or diploma on completion. In some countries, the training of dental therapists has expanded to three or four years (Nash, 2012). RDPs in Kansas, however, will be Registered Dental Hygienists who chose to obtain advanced training beyond their dental hygiene degree. The training program for RDPs will include intensive, hands-on experience to master the scope of practice. In fact, by the time they are ready to begin practicing, RDPs will have as much clinical experience in the procedures they are licensed to perform as a dentistry school graduate.

Kansas is well positioned to create training programs for this new career path. Across the state, there are five dental hygiene schools, which potentially would allow RDPs to be trained close to the communities they will serve. The Wichita State University College of Health Professions developed a training curriculum using education standards for dental education programs from the Commission on Dental Accreditation. The curriculum served as the focus of a national curriculum summit in November 2011 on the Fort Hays State University campus.

Most significantly, FHSU has agreed to train RDPs in Kansas. In a column that ran in late 2011 in newspapers across the state and around the country, FHSU President Dr. Edward H. Hammond said, “Our motto at Fort Hays State University is ‘Forward Thinking, World Ready,’ and we believe that by becoming the first four-year university in Kansas to offer a bachelor's degree program for registered dental practitioners, we're truly living up to that commitment.”

FHSU has developed a similar type of education program for medical diagnostic imaging specialists. This successful program would be the model for the Registered Dental Practitioner proposal. In addition, FHSU is exploring an option with the Kansas Board of Regents that would allow new students to complete their education with both their dental hygienist and registered dental practitioner licenses, while also offering hygienists currently in the workforce the opportunity to return to school and become registered dental practitioners. Hammond says this approach would produce the greatest benefit for patients and the state's workforce alike.

The Kansas approach is consistent with many newer mid-level programs in other countries by combining dental hygiene with dental therapy. Programs in Great Britain, Australia, and New Zealand prioritize this dual training into a three-year curriculum, while the Netherlands has expanded its dental hygienists training to include therapist skills and extended the curriculum to four years. Singapore also provides the opportunity for integrated training of dental therapists and dental hygienists. The single mid-level program in Canada continues to feature the two-year dental therapy-only approach (Edelstein, December 2009).

Excerpt from Testimony before the Joint Committee on Home & Community Based Services

Oversight

Dr. Edward Hammond, Fort Hays State University President

It's time for a solution that works for Kansas, provides Kansans with strong jobs, and strengthens our rural communities. FHSU is excited about the opportunity to provide an education program that will create a workforce to address a needed service for rural and western Kansas. The students will benefit by pursuing a career path that provides job security

and good pay. But even more importantly, the state of Kansas and its citizens stand to benefit a great deal.

Fort Hays State University is sensitive to the current budget situation in Kansas and therefore has already explored the possibility of securing private funding to start the RDP training program. We do not anticipate requesting state appropriations to start the program. The movement on the national level is clear – mid-level dental providers are being considered in many states, and they will become an integral part of the dental workforce. It's time for Kansas to adopt Registered Dental Practitioners to increase the workforce and meet the need in our communities. Fort Hays State is ready to take advantage of the opportunity to blaze this new trail and bring national more recognition to Kansas education (Hammond, October 11, 2011).

Supervision

RDPs must be supervised by a dentist. There are two types of supervision levels under which RDPs may practice: direct and general. Under direct supervision, the RDP must practice in the same setting as the dentist. Under general supervision, the RDP may practice in a different setting after receiving permission from their supervising dentist. As part of general supervision, the dentist may limit what services the RDP may provide, and through a written supervision agreement the dentist and RDP will have protocols in place for unintended complications. All RDPs must work under direct supervision for at least 500 hours before being able to work under general supervision. While mid-level dental providers in some countries operate independently – Great Britain allows independent practice with a treatment plan approved by a dentist (Nash, 2008) – no proposal in the United States allows for it.

Cost and Economy

The first reference in the literature in the United States to an individual other than a dentist providing care for children appears to be by Dr. Alfred Owre, at one time dean of the School of Dentistry at the University of Minnesota, and subsequently dean of the School of Dentistry at Columbia University. Owre's biography includes an article that had been published by Owre in the Journal of the American Association of Medical Colleges titled "Dental Education as Related to Medical Education." In it he notes: "Intraoral work should be permitted to several types of specifically trained assistants, under the responsible supervision of the specialist [dentist]... It is poor economy to insist that only the specialist's hands may work in the oral cavity." (Owre, 1931)

In addition to the availability of dental providers, cost ranks as the largest barrier to accessing dental care. RPDs can help make affordable dental care available on an everyday basis to those communities that need it most. RDPs cost less to train than dentists, and because their education debt load is also lower, they will cost less to employ as well. The opportunity for savings is related, in part, to the salary differential between dental therapists and dentists. An average New Zealand dental therapist earns \$30,000 to \$40,000 a year in U.S. dollars, and private practice dentists earn \$120,000 to \$150,000 a year in U.S. dollars (Nash, 2012). This makes it easier to afford adding them to a dental practice or a federally qualified health center. RDPs can also make the treatment of Medicaid patients financially viable. Finally, the preventive services that RDPs will provide can help prevent costly dental emergencies and trips to hospital emergency rooms for dental problems. Toothaches and other dental problems accounted for at least 17,500 emergency room visits in Kansas in 2010, according to a report released by the Pew

Center on the States (The Pew Center on the States, 2011). There likely were more visits than that given that of the 142 hospitals in Kansas at the time of the study, 30 did not report data on dental-related emergency room visits. Most of the visits involved low-income or uninsured patients who did not have other access to dental care they could afford.

Scope of Practice

The services that may be provided by an RDP include as services provided by Registered Dental Hygienists plus additional services, including fillings, cavity preparation, extractions of baby teeth, and extractions of already loose permanent teeth. The supervising dentist may limit the scope of an RDP under his or her supervision through the written supervision agreement.

- Oral health instruction and disease prevention education, including nutritional counseling and dietary analysis
- Preliminary charting of the oral cavity
- Making radiographs
- Dental prophylaxis (mechanical polishing)
- Application of topical preventative or prophylactic agents, including fluoride varnishes and pit and fissure sealants
- Pulp vitality testing
- Application of desensitizing medication or resin
- Fabrication of athletic mouthguards
- Placement of temporary restorations
- Fabrication of soft occlusal guards
- Tissue conditioning and soft reline
- Atraumatic restorative therapy
- Dressing changes

- Tooth reimplantation and stabilization
- Administration of local anesthetic
- Administration of nitrous oxide
- Diagnosis of oral disease
- The formulation of an individualized treatment plan
- Extractions of primary teeth
- Nonsurgical extractions of periodontally diseased permanent teeth with tooth mobility of +3 or +4. The registered dental practitioner shall not extract a tooth for any patient if the tooth is unerupted, impacted, fractured, or needs to be sectioned for removal.
- Emergency palliative treatment of dental pain
- The placement and removal of space maintainers
- Cavity preparation
- Restoration of primary and permanent teeth
- Placement of temporary crowns
- Preparation and placement of preformed crowns
- Pulpotomies on primary teeth
- Indirect and direct pulp capping on primary and permanent teeth
- Suture removal
- Brush biopsies
- Simple repairs and adjustments for patients with removable prosthetic appliances
- Recementing of permanent crowns
- Prevent potential orthodontic problems by early identification and appropriate referral
- Prevent, identify, and manage dental and medical emergencies and maintain current basic life support certification

Quality of Care

Mid-level dental practitioners have been practicing in 54 countries for nearly 80 years, and research shows they provide safe, high-quality care. In fact, there is no evidence to the contrary. The continued use of dental therapists in the 54 countries and territories provides tacit documentation of an acceptable quality of technical care provided.

V. Countries and Territories Using Dental Therapists in their Oral Health

Workforce

(54 Total)

Shaping the role of mid-level dental providers in the United States can be well informed by longstanding international experience. Five of the top six countries on the Human Development Index – the United States, Canada, New Zealand, Australia and the Netherlands – employ mid-level dental providers as part of their oral health workforce. Other countries employing dental therapists in the top 50 countries of the Index are Hong Kong (13), Singapore (26), United Kingdom (28), Brunei (33), and Barbados (47) (Nash, 2012).

Countries and territories with a “C” following are members of the Commonwealth of Nations.

American Samoa	Botswana/C	Fiji/C
Anguilla/C	Brunei/C	Gabon
Australia/C	Burkina Faso	Gambia/C
Bahamas/C	Canada/C	Grenada/C
Barbados/C	Cook Islands	Guyana/C
Belize/C	Costa Rica	Hong Kong/C
Benin	Federated States of Micronesia	Jamaica/C

Kiribati/C	Northern Mariana Islands	Tanzania/C
Laos	Palau-Belau	Thailand
Mali	Papua New Guinea/C	Togo
Malawi/C	Samoa/C	Tokelau/C
Malaysia/C	Seychelles/C	Tonga/C
Marshall Islands	Singapore/C	Trinidad and Tobago/C
Myanmar	Solomon Islands/C	United Kingdom/C
Mozambique/C	South Africa/C	United States
Nepal	Sri Lanka/C	Vanuatu/C
Netherlands	Suriname	Vietnam
New Zealand/C	Swaziland	Zimbabwe/C

VI. Journey to Acceptance: Mid-level Dental Provider Timeline

A global review of other mid-level practitioners – physician assistants, nurse practitioners, chiropractors, and dental hygienists – revealed those programs were all opposed by highly organized opposition by professional associations, initially resulting in a struggle to gain recognition and professional status. The dental hygienists’ journey to acceptance, in particular, echoes the current plight of mid-level dental practitioners. Other countries have overcome the opposition, in a large part due to the fact that millions would be denied access to healthcare without mid-level providers. Countries with universal health coverage are more likely to utilize mid-level health care providers.

The United States has not always lagged behind the international community in the diversity of its dental team. The use of dental therapists in the global oral health workforce began in New

Zealand in 1921. When the Ohio College of Dental Surgery offered a course for dental nurses in 1910, it was considered an innovative approach to oral health issues of the time. However, dentists were so bitterly opposed to the course that graduates were never licensed nor were they allowed to practice. At least three of the female graduates went on to become dentists.

Connecticut later became the first state to have a dental law that allowed prophylactic treatment by a specially trained and limited operator who was not a dentist graduate. Many dentists were concerned that removing this restriction – and thereby creating the first dental hygienists – would lead to “gross inroads” into dentistry. Proponents tried to quell fears by saying a man would not limit himself to this specialty, only a woman who would be “conscious and painstaking in her work, and would be honest and reliable” (Motley, 1983).

Today, hygienists of both genders are considered an integral part of the dental team. The American Dental Hygienists’ Association and the Kansas Dental Hygienists’ Association are ardent supporters of the effort to allow RDPs the opportunity to practice under the supervision of a dentist. In addition to providing underserved areas with access to the dental care they need, hygienists are attracted by the prospect of gaining new skills and advancing their careers. A global timeline to acceptance of mid-level oral health providers shows progress in the past century and offers hygienists hope they soon will have the opportunity to be a part of a new workforce for Kansas. The evidence suggests that once mid-level providers have been introduced in a country, professional support for them increases over time (Nash, 2012).

1920s: First dental therapists in New Zealand.

1930s: Development of dental hygienist and dental hygienist curriculum.

1940s: Dental therapists begin to practice in Malaysia (1948) and Sri Lanka (1949).

1950s: Dental therapists begin to practice in Singapore (1950), Tanzania (1955), and the United Kingdom (1959).

1960s: Early attempt for mid-level dental providers in the United States failed due to resistance from organized dentistry.

1960s: Dental therapists begin to practice in Australia (1966) and Thailand (1968).

1970s: Dental therapists begin to practice in Jamaica (1970), Canada (1972), Fiji (1973), Trinidad and Tobago (1975), Suriname (1976) and Hong King (1978).

2000: Alaska Native tribes decide to create dental therapy program.

2001: Congress authorizes creation of dental therapist program through the Alaska Native Tribal Health Consortium.

2003: Alaska Native tribes send first dental therapy students to New Zealand for training.

2008: First class of dental therapists graduate from AK-based training program.

2009: Community Catalyst, a national non-profit health advocacy organization, partners with consumer and child health advocates in Kansas, Ohio, New Mexico, Washington, and Vermont to explore the feasibility of establishing dental therapist programs.

2009: The Kansas Dental Project forms, representing a team of citizens, advocates and health care professionals who are working together to address the dental workforce shortage in Kansas.

The effort is spearheaded by Kansas Action for Children, the Kansas Health Consumer Coalition, and Kansas Association for the Medically Underserved.

2009: Minnesota legislation passes allowing dental therapists to practice.

2010: Mid-level dental providers receive “most controversial topic” award from online dental magazine, Dr. Bicuspid.

2012: Up to 20 states are considering mid-level providers. Others, such as California and Connecticut, are pursuing pilot projects.

VII. Research on Mid-level Oral Health Practitioners: Safe and Effective Care

Mid-level dental practitioners have a long global history, and their work has been the focus of significant research. Despite efforts to move the issue from the public debate to a scientific setting in the United States, research repeatedly has been hampered by opposition from organized dentistry. For example, the Forsyth Experiment, which took place at the Forsyth Dental Research Facility in Boston in the 1970s, explored the use of mid-level providers by providing dental hygienists with training in restorative dentistry. Participants completed the training of expanded functions in significantly less time than proposed, and blind evaluations showed procedures were performed at the same standard of quality as – or in some cases superior – to the results of practicing dentists.

In 1973, however, a group of anonymous dentists convinced the Board of Dental Examiners the project was in violation of Massachusetts’ [Dental Practice](#) Act. The Massachusetts Attorney General concurred, ruling that the drilling of teeth was deemed by the practice act to be

undertaking the practice of dentistry, and that the legislature had not exempted research from this provision. Attempts to change the practice act to allow the study were unsuccessful, something many attributed in part to the impact of the recession of 1974 on dental offices. The American Dental Association and the state's dental association officers and members ignored repeated invitations by Forsyth faculty to visit the project before it was closed. It was not until May 1977 that a new dental practice act was passed, authorizing the academic freedom to conduct research studies such as the Forsyth project. To this day, gaining access to the findings of the Forsyth Experiment proves to be a formidable task as dentists opposed to mid-level providers have worked diligently to suppress the findings. As of April 1, 2013, there was a single new copy available on Amazon for \$596.98.

While some in organized dentistry have expressed concerns that mid-level oral health practitioners may provide unsafe care, every study in the United States as well as the more than 1,000 reports reviewed by Nash from across the globe, found no evidence to indicate the public perception of dental therapists in any country was other than positive (Nash, 2012). Following is a list of major studies on the subject and their findings, including the Forsyth Experiment, divided by the subject of the findings. Such research frequently has been requested by policymakers as they debate the merits of legislation regarding mid-level oral health providers.

Dental therapists provide safe and effective care.

- Wetterhall, S., Bader, J.D., Burrus, B.B., Lee, J.Y., and Shugars, D.A. (2010). *Evaluation of the Dental Health Aide Therapist Workforce Model in Alaska*. RTI International. RTI Project Number 0211727.000.001.

- Bolin, K.A. (2008). *Assessment of treatment provided by dental health aide therapists in Alaska: a pilot study*. Journal of the American Dental Association, 139:1530-1535.
- Nash, D.A., Friedman, J.W., Kardos, T.B., Kardos, R.L., Schwarz, E., Satur, J., Berg, D.G., Nasruddin, J., Davenport, E.G., Nagel, R.J. (2008). *Dental therapists: a global perspective*. International Dental Journal, 58:61-70.
- Fiset, L. (2005). *A Report on Quality Assessment of Primary Care Provided by Dental Therapists to Alaska Natives*. Seattle, WA: University of Washington School of Dentistry.
- Lobene, R., Kerr, A. (1979). *The Forsyth Experiment: An Alternative System for Dental Care*. Cambridge, MA: Harvard University Press.
- Abrose, E.R., Hord, A.B., Simpson, W.J. (1976). *A Quality Evaluation of Specific Dental Services Provided by the Saskatchewan Dental Plan*. Regina, Canada: Province of Saskatchewan Department of Health.
- Abramowitz, J., Berg, L.E. (1973). *A four-year study of the utilization of dental assistants with expanded functions*. Journal of the American Dental Association, 87:623-635.
- Brearley, L.J., Rosenblum, F.N. (1972). *Two-year evaluation of auxiliaries trained in expanded duties*. Journal of the American Dental Association, 84:600-610.
- Hammons, P.E., Jamison, H.C., Wilson, L.L. (1971). *Quality of service provided by dental therapists in an experimental program at the University of Alabama*. Journal of the American Dental Association, 82:1060-1066
- Lotzkar, S., Johnson, D.W., Thompson, M.B. (1971). *Experimental program in expanded functions for dental assistants: Phase 3 experiment with dental teams*. Journal of the American Dental Association, 82:1067-1081.

Areas where dental therapists have practiced for decades report a sharp decline in permanent tooth loss.

• Nash, D.A., Friedman, J.W., Kardos, T.B., Kardos, R.L., Schwarz, E., Satur, J., Berg, D.G., Nasruddin, J., Davenport, E.G., Nagel, R.J. (2008). *Dental therapists: a global perspective*. International Dental Journal, 58:61-70.

• Miller, C.E. (2005). *Access to care for people with special needs: Role of alternative providers and practice settings*. Journal of the California Dental Association, 33, no.9:715-721.

• Nash, D.A., Nagel, R.J. (2005). *Confronting oral health disparities among American Indian/Alaska Native children: The pediatric oral health therapist*. American Journal of Public Health, 95, no.8: 1325-1329.

• Mertz, E., Anderson, G., Grumbach, K., O'Neil, E. (2004). *Evaluation Strategies to Recruit Oral Health Care Providers to Underserved Areas of California*. San Francisco, CA: Center for California Health Workforce Studies.

Dental therapists can reduce costs and increase net income when incorporated into a dentist's practice.

• Pew Center on the States (2010). *It Takes A Team: How New Dental Providers Can Benefit Patients and Practices*,

http://www.pewtrusts.org/uploadedFiles/wwwpewtrustsorg/Reports/State_policy/Report_It_Takes_a_Team_final.pdf.

• Lobene, R., Kerr, A. (1979). *The Forsyth Experiment: An Alternative System for Dental Care*. Cambridge, MA: Harvard University Press.

- Abramowitz J., Berg, L.E. (1973). *A four-year study of the utilization of dental assistants with expanded functions*. Journal of the American Dental Association, 87:623-635.

VIII. Lessons Learned: New Zealand, Canada, and Australia

With legislation introduced, curriculum drafted and two four-year institutions (Fort Hays State University and Wichita State University) already committed to train RDPs pending legislative and Kansas Board of Regents approval, Kansas is poised to lead the way in shaping mid-level dental providers in the United States. There is much to be learned from 54 countries and territories with dental therapists. The United States must be careful, however, to avoid *handan xuebu*, a Chinese tale of a young man who has no confidence in himself, even his own way of walking, and decides to go to Handan to imitate its style of walking but eventually forgets how to walk. A study of other countries with mid-level dental providers should balance the opportunity to learn from others while maintaining American strengths.

The logical starting point for such consideration is Nash's groundbreaking study, which is cited frequently throughout this document. After reviewing 1,100 pieces of global literature, he makes the following conclusions:

- Dental therapists practice in 54 countries and territories, including highly developed, industrialized ones as well as developing countries.
- There are variable lengths of training for dental therapists, from two to four years, with two years being the tradition.
- There is a movement in a few countries to integrate the training, and therefore scopes of practice, of the dental therapist and dental hygienist. Typically this is in a three academic year (27 months) program.

- Dental therapists, in general, are not licensed professionals, but rather practice as registered auxiliaries.
- Dental therapists practice primarily in public clinics, typically associated with caring for schoolchildren.
- Dental therapists' scope of practice is primarily in caring for children, although several countries permit caring for adults.
- Dental therapists typically practice with general supervision by dentists.
- Dental therapists provide technically competent care.
- Dental therapists improve access to care, specifically for children.
- Dental therapists are effective in providing oral health care within their scope of practice.
- Dental therapists have a record of providing oral health care safely.
- The dental profession in a country accepts the care provided by dental therapists as valuable; however, there are some exceptions to this.
- The public values the role of dental therapists in the oral health workforce.
- Dental therapists included in the oral health workforce have the potential to decrease the cost of care, specifically for children.

IX. New Zealand: The Birthplace of Mid-level Dental Providers

“When the dental history of our time is eventually written, I believe the New Zealand Dental Nurse Program will be considered one of the landmark developments in the practice of dentistry and dental public health.” He went on to say that New Zealand has “pioneered in a very effective method for delivering dental health services to children.” He concluded, “the New Zealand experience proves that we can develop an auxiliary program – and a very advanced one

– *that is acceptable to and approved by the profession of the country involved.*” Harold Hillenbrand, executive director of the American Dental Association from 1946 to 1970 (Nash, 2012).

New Zealand has experienced considerable changes since it pioneered the development of dental therapists 90 years ago. The United States can benefit by taking into account where the country is now – and where it is heading. For example, one of the most significant modifications in recent history involves training courses, which although had been delivered in different centers, managed to remain relatively constant until 1999 when educational responsibility was transferred to the universities (Coates, 2009). The Kansas model also proposes a higher education system of training.

Various entities have offered visions and recommendations for New Zealand’s oral health in the past decade. The most relevant in light of the challenges facing the United States may be “Good Oral Health for All, for Life,” the strategic vision for published by the New Zealand Ministry of Health in 2006. The vision stated that over the next 10 years the ministry would work with the Dental Health Boards (DHBs) and other providers of oral health services toward:

- An environment that promotes oral health.
- Oral health services that promote, improve, maintain, and restore oral health throughout the life course.
- Publicly funded services that are accessible and appropriate and proactively address the needs of those at greatest risk for poor oral health.
- Publicly funded oral health services that are part of the community.

Now	Future
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An emphasis on treatment	An emphasis on prevention and early intervention
A division between oral health and general health	Oral health is integrated into general health framework
District Health Boards (DHBs) provide service	Mix of service providers
School-based dental services for children	Community-based dental services for children, with the potential to expand to adolescents and low-income adults
Separate funding for child and adolescent oral health services	Funding that allows flexibility of service program design
An emphasis on primary school years	An emphasis on preschool and early primary years
Clinicians work in isolation	A team-based approach to oral health – dentists, dental therapists and dental assistants work together
A small Maori and Pacific oral health workforce	A workforce more representative of ethnic diversity of New Zealand
Pressure on secondary services	Greater capability at the primary care level, with secondary services focused on patients who cannot be managed by primary care

Given the tremendous discrepancies in the health delivery systems of New Zealand and the United States, it is not always possible to make appropriate comparisons. But much like the future outlined by the New Zealand Ministry of Health, the vision for RDPs in Kansas focuses on prevention and early intervention with a mix of oral health service providers. It is a team-based approach where dentists, RDPs, hygienists, and dental assistants would work together to improve access and quality of care. It is noted that the RDP model would not be publically funded as it is in New Zealand. Instead, it is a work force solution to a market problem.

X. **Canada: A Western Hemisphere Country with a Mid-level Dental Provider**

“It is clear that the pediatric oral health therapist provides a long-term, sustainable option to responsibly meeting the needs of America's socially marginalized groups.” Carlos R. Quiñonez, DMD, MSc, and David Locker, DDS, PhD, DSc, FCAH of the Community Dental Health Services Research Unit, Faculty of Dentistry, University of Toronto

An exploration of dental therapy in Canada in the context of international policy diffusion proves fruitful given the similarities of the two nations. Dental care is not included in the Canada Health Act. Therefore, like most Americans, the majority of Canadians receive dental care in private dental practices and either have some form of private or public dental insurance or pay the entire cost themselves. The tragic case of America’s 12-year-old Deamonte Driver is echoed in Canada by Moses Han, a 45-year-old Korean immigrant who was blinded by a tooth abscess; he was too embarrassed to tell his dentist he could not afford the \$1,300 recommended treatment (Welsh, 2007).

Canada has a history of two separate and distinct dental therapy programs. The province of Saskatchewan operated a dental therapy program in the 1970s and 1980s in order to provide oral health care to all of the province's schoolchildren. The federal government also initiated a dental therapy program in 1972 to provide access to dental care for Canada's aboriginal peoples (Nash, 2012).

One does not have to search long to find concrete suggestions from Canadians for implementing a mid-level dental provider in the United States. In a paper titled "On the Pediatric Oral Health Therapist: Lessons from Canada," Quinonez suggests that the more than three-decade history of challenges experienced by Canada in using this model would be relevant to the U.S. (Quiñonez, 2008). Canada is the only country in the Western hemisphere to have such a provider. Both Canada and the United States face specific challenges in the delivery of dental services within indigenous populations. Finally, in the two countries, "the private profession has tended to discourage significant public involvement in service delivery." Quinonez offers three suggestions for Americans to "safeguard the long-term success" of a mid-level provider:

- 1. As a model of care, policy stakeholders should promote the pediatric oral health therapist in a nonpartisan way, meaning that efforts should be ensured to gain support from all members of the political spectrum. As observed in Canada, there now exists both public and private economic arguments for the presence of this form of service provision.*
- 2. As an institution, the pediatric oral health therapist should be organized in such a way as to be cognizant of indigenous efforts at self-determination, but should not be put at risk by the complexities of such efforts. In effect, the pediatric oral health therapist should principally be conceived as a primary health care provider, who secondarily is part of*

state/indigenous relations and their service delivery milieu... this will safeguard the pediatric oral health therapist as a service delivery concept outside of indigenous care, and strengthen the idea of this form of provision in other public service environments.

- 3. The training of pediatric oral health therapists should be prepared to meet the societal need for them. This provider is valuable in different service settings. Yet their graduating numbers were not increased in order to reflect Canada's newest needs, both public and private. Given enough time, need, and competition, U.S. private markets may come to incorporate therapists, so conceiving of such potential is, at the very least, prudent in terms of dental human resources training and planning.*

Research on mid-level providers in Canada has consistently concluded they provide safe and effective care. In 1989, the Canadian federal government contracted Dr. Ralph Crawford and Dr. Bradley Holmes, both past presidents of the Canadian Dental Association, to assess and evaluate dental treatment provided by four delivery systems: private practitioner contract, McGill University contract with dental residents, dental locum, and dental therapist. They found of the dental restorations placed by dental therapists, 31.7 percent were excellent, 65.7 percent were satisfactory, and 2.5 percent were failures. Of the dental restorations placed by dentists, 8.1 percent were excellent, 80.5 percent were satisfactory, and 11.4 percent were failures. (Crawford, 1989). While the findings are now more than 20 years old, the study has widely been used as the foundation for additional research that has reached similar conclusions.

Crawford and Holmes went on to provide an evaluation of the advantages and disadvantages of the four delivery systems. The following are direct quotations:

Advantages

1. *Consistent quality – Wherever a therapist’s treatment was observed, the quality of work was good to excellent.*
2. *Therapist is a resident in a community, becomes known in the community and often is married and raises a family in the area.*
3. *Essentially is trained to treat children of all ages, which is where the success of the overall treatment strategy must begin.*
4. *Therapists are not motivated by a profit margin and therefore do not mind treating children, nor taking the time to do the work well.*
5. *A moderate producer: patterns seem to indicate that therapists will treat about six patients a day: a patient an hour. Considering they work without an assistant, have to book their own patients, and do all the turn-arounds, a patient an hour does not seem unreasonable.*
6. *Costs are fixed: known ahead of time what it will cost to maintain in field for a year, or any specific period of time.*

Disadvantages

1. *Scope of practice is limited.*
2. *Therapists do not make dentures.*
3. *Therapists are not treating the pre-school children.*
4. *Therapists work without assistants.*
5. *Therapists are asked to work without “secure” space.*

6. *Too much “down time.” The therapist works essentially within the school year and is unproductive during most of June, all of July and August, and during Christmas and spring breaks.*

The Kansas RDP model builds upon the advantages of the Canadian model and addresses the majority of the disadvantages outlined by Crawford and Holmes. A limited scope of practice is necessary to ensure safe and effective care. It includes simple repairs and adjustments for patients with removable prosthetic appliances. RDPs will focus on providing preventive care to all populations – preschool children through senior adults. As written, the legislation places no limitations on utilizing assistants. Finally, RDPs will not be restricted to school-based service and it is anticipated that they will work year round.

XI. Australia: A Highly Trained Dental Care Delivery System

At the beginning of the 20th century, concerns about the nation’s fitness for war, the generational impact of health conditions and the future of society, “a collective middle class guilt over the social conditions of the working class” focused the attention of medical practitioners and dentists on the health and welfare of children. The “flood of caries in children” generated momentum for the inclusion of dentists in government health authorities relating to the welfare of children and pressure to establish school-based services for children (Robertson J. , 1989)

Dental therapists have served as core providers in the public dental services for more than 40 years, maintaining responsibility for care delivered by the School Dental Service (Nash, 2012). In fact, the overwhelming majority of dental care for children and adolescents in Australia is provided by dental therapists in the form of dental examinations, targeted preventive services

and restorations. The skills of dental therapists match the treatment needs of children. Until July 2000, dental therapists in most states of Australia were limited to public sector employment with School Dental Services, providing care in collaborative relationships with dentists.

To meet the demands of the broader population, in recent years the country has moved toward greater integration of dental therapy and dental hygiene. In many ways, the combined skills dental auxiliary parallels the RDP model proposed in Kansas, which creates a provider who starts as a Registered Dental Hygienist and chooses to obtain advanced training beyond the dental hygiene degree. While the hygienist-based model is not the norm globally, it is gaining popularity both abroad and in mid-level provider proposals throughout the United State. In Australia, the trend reflects the modernization of the practice of dentistry:

In line with developments in dentistry, contemporary oral health therapists (including dental therapists and dental hygienists) are more broadly educated professionals than their tightly regulated predecessors. Courses today require students to study across a wider range of areas, often integrated with dental students for various course components. They are educated to synthesize and apply knowledge to complex problems, understand and apply technology in more complex ways and to have well-developed research, communication and cultural sensitivity skills in keeping with the contemporary health professional role. Courses encompass clinical practice, biological, health and social sciences, ethics, and evidence-based practice necessary to contemporary health practice, and are accredited by the Australian and New Zealand Dental Councils. Today, qualification for practice in oral health therapy requires a bachelor level tertiary course of education and training over three years with applicants to most courses

requiring university level entrance and pre-requisite studies in English and biology (Nash, 2012).

Dental therapy in Australia were originally designed as two-year certificate or diploma program in non-university dental therapy schools restricted to females. The role of dental hygienists has been poorly understood in Australian dental practice. That is changing. A number of Australian universities now offer a three-year “oral health therapist” program that combines traditional dental therapy and dental hygiene (Friedman, 2011). It is expected that the graduating oral health therapists will be more likely to work in private practice settings where periodontal therapy skills are more in demand. It is noted the United States has faced the opposite problem: while hygienists have been widely accepted for decades, it is the role of dental therapist that is unfamiliar. As Kansas and other states explore extending the scope of hygienists to restorative areas, Australia is looking to expand the scope of a hygienist to include preventive periodontology for adults.

In 2011, the Australian Dental Council (ADC), which jointly with the New Zealand Dental Council accredits all Australian and New Zealand programs leading to registration as a dental practitioner, published a document describing competencies for dental therapists, dental hygienists and oral health therapists. In the report, the oral health therapist is described as “a scientifically oriented, technically skilled, socially sensitive, professionally minded practitioner who adheres to high standards of professional conduct and ethics and who can function safely and effectively as a member of the health care system on graduation and throughout their professional career” (ADC, 2011). As noted earlier, oral health therapist competencies were determined to be a sum of those of dental therapists, and dental hygienists

and this was reflected in each of the competency documents for the three professions. Each member of the dental team has a specific role with a different emphasis. Domains described where as follows:

- Professionalism
- Communication and Social Skills
- Critical Thinking
- Health Promotion and Education
- Scientific and Clinical Knowledge
- Patient Care, with sub-domains of Clinical Information Gathering and Diagnosis
- Management Planning, Clinical Treatment and Evaluation.

The competencies in the draft curriculum authored by Wichita State University for Registered Dental Practitioner graduates in Kansas are strikingly similar, providing an example of how Kansas benefits from the global experiences of mid-level dental providers around the world:

1. Critical Thinking

1.1 Utilize critical thinking and problem-solving skills.

1.2 Evaluate and integrate best research outcomes with clinical expertise and patient values for evidence-based practice.

2. Professionalism

2.1 Apply ethical and legal standards in the provision of dental care.

2.2 Practice within the scope of competence and consult with or refer to professional colleagues when indicated.

3. Communication and Interpersonal Skills

3.1 Apply appropriate interpersonal and communication skills.

3.2 Apply psychosocial and behavioral principles in patient-centered health care.

3.3 Communicate effectively with individuals from diverse populations.

4. Health Promotion

4.1 Recognize and apply oral and general health education, counseling, and promotion for individuals, families, and communities.

4.2 Design comprehensive care plans to reduce risk and promote health appropriate to age, development, culture, health history, ethnicity, and social/personal circumstances.

4.3 Recognize and appreciate the need to contribute to the improvement of oral health beyond those served in traditional practice settings.

5. Patient Care

A. Assessment

5.1 Use diagnostic information to identify treatment within scope of practice under direct or general supervision of a dentist.

5.2 Identify conditions requiring services of dentists, specialists, physicians, and other healthcare professionals.

B. Provision of Care

5.3 Provide competent care within scope of practice with a patient and under direct or general supervision of a dentist.

5.4 Collaborate with dentist to provide pharmacological management of infection and pain utilizing established protocols.

C. Case Management

5.5 Recognize and manage referrals to dentists, specialists, physicians, and other healthcare providers.

5.6 Demonstrate cultural competence in the process of care for a Registered Dental Practitioner.

5.7 Utilize technology to document, communicate, and transfer information to dentists, specialists and other professionals.

5.8 Recognize and manage oral emergencies and complications arising from oral treatment.

5.9 Recognize and manage medical emergencies and maintain CPR certification.

5.10 Coordinate evidenced based comprehensive care. (Maseman, 2011)

XII. Opposition to Mid-Level Dental Providers: Myths and Facts

John Walsh, dean of New Zealand's dental school at the University of Otago, addressed the American College of Dentists at the annual convocation in San Francisco in 1964. In his opening comments about the New Zealand dental nurse, he said that "the world over must ask itself whether it is fulfilling its responsibility of taking care of the health of the world's population." He went on to say: "Dentistry cannot expect to be regarded as a true profession until it stops expressing public concern about its own welfare. First and most important, it must start expressing an honest and serious interest in the dental health in all areas of the population" (Walsh, 1965).

While RDPs offer a way to grow dental practices, some dentists today continue to see a new provider as a threat to their profession and livelihood. As stated earlier, opponents to mid-level providers – led by the American Dental Association at the national level and the Kansas Dental Association at the state level – say RDPs would provide unsafe care by performing irreversible

procedures on people's teeth without being supervised by a dentist. There is not a single study to support the claim. Several other myths have been purported and disproved as well.

1. Myth: People just need to brush his or her teeth.

Fact: Certainly everyone has a personal responsibility to take care of their teeth, but the fact of the matter is that even people who brush every day need regular preventive care to avoid costly procedures and long-term health complications.

2. Myth: Charity care can solve the problem.

Fact: Charitable care performed by dentists is great, but it will not provide a systemic solution to a problem this large. Free dental clinics in Kansas, such as the annual Mission of Mercy, provide much needed emergency dental care, which means sometimes extracting all of someone's teeth. The truth is that this magnitude of care could be avoided if people had access to regular dental care.

3. Myth: Registered Dental Practitioners will be working independently in Kansas.

Fact: While mid-level dental providers in some countries operate independently – for example, Great Britain allows independent practice with a treatment plan approved by a dentist (Nash, 2008) – no proposal in the United States allows for it. In Kansas RDPs will work under the supervision of a dentist; they will not practice independently. When working under the supervision of an off-site dentist, the dentist determines what services the RDP may provide. Countries that permit dental therapists to practice independently usually require consultative collaboration with a supervising dentist.

4. Myth: RDPs will provide a second tier of care.

Fact: Currently there are two tiers of care: some have access, others do not. Mid-level providers, like RDPs, provide the same quality of care as dentists; the only difference is what they are allowed to do. Mid-level practitioners have a narrower scope of practice, leaving the most complex procedures to dentists and oral surgeons. Research confirms that mid-level dental providers deliver safe, high-quality and competent care. Counting only those trained on the New Zealand model, there are more than 14,000 dental therapists presently deployed worldwide. In addition, China has an estimated 25,000 “assistant dentists” who are very similar to dental therapists in training.

5. Myth: Allowing RDPs to practice in Kansas won’t solve the access problem.

Fact: The legislation has been crafted to ensure that RDPs practice in areas of the state that have a shortage of dental providers. This has been addressed through geographic restrictions and where RDPs are allowed to practice, helping to ensure that those in greatest need are served.

6. Myth: The RDP is based on New Zealand’s dental therapist program and children in New Zealand have terrible oral health outcomes.

Fact: It is not fair to compare New Zealand health delivery system with the United States. New Zealand does not have fluoridated water, which makes the comparison unfair.

And, children in New Zealand use school-based dental clinics, and therefore do not start receiving care until they are in school. In the United States, parents are encouraged to begin bringing their children to a dentist by age one, leading to greater prevention and healthier outcomes. The bottom line is that the care provided by dental therapists in New Zealand is safe

and quality care – they just do not focus as much on prevention or catch dental disease early enough. The degree to which dental caries in children has been effectively treated is a strong and reliable indicator of the accessibility and effectiveness of dental care. Epidemiological data available since 1965 document that New Zealand has been more effective in treating dental caries in its public school-based program of care provided by dental therapists than has the United States in its system of care in private offices by dentists. According to the New Zealand Ministry of Health, in 2010-2011, the number of decayed filled teeth for children 2 to 11 years old was 1.6. Of this only 0.3 was due to decay, with 1.3 being pulled teeth. Comparable numbers reflecting dental therapists' success in treating schoolchildren with dental decay exist in other countries as well (Nash, 2012).

Where oral health is a problem, mid-level dental providers can be part of the solution.

The executive director of the Kansas Dental Association, said in a column of organization's journal: "New Zealand, where the dental therapist model originates, has among the worst dental health among developed countries! A whopping forty-four percent of 5-year-olds in New Zealand have at least one decayed, missing or filled tooth. By comparison, in the U.S. 28% of children between the ages of 2 and 5 had one or more decayed, missing or filled teeth in 2004. Maybe that's a result of the simple fact that the U.S. has 2 ½ times more the number of dentists per capita than New Zealand which relies heavily on dental therapist for its dental care!?" (Robertson K. , Spring 2011). While no source was cited for the data was cited, similar findings were reported in a March 6, 2011, story in The New Zealand Herald (Gillies, 2011). In New Zealand, the dental therapy program is mainly based in school. The study captures children's oral health before they go to school as represents the findings of children at

age five. Oral health has improved since the reinvestment in the oral health and dental therapist program – although cavities have not decreased as much as anticipated.

While the oral health of young children in New Zealand is a problem, mid-level providers can be part of the solution. If bacteria in the mouths of New Zealand children are going untreated, the country needs more providers than ever. The United Kingdom and Australia also use dental therapists and are cited as having better oral health. Finally, the study referenced was done as a needs assessment that found the system needs investment because it is not perfect. As a result, the government reinvested millions of dollars into the use of dental therapists, a vote of confidence for the work of mid-level providers. The New Zealand Ministry of Health has acknowledged the need to continue to focus on prevention in the care of preschool children. The numbers are moving in the right direction. Since 2000, the number of caries-free preschoolers has increased from 52 percent to 57 percent.

XIII. In Their Own Words: Voices from Kansas to New Zealand

In an effort to gain a deeper understanding of individuals' attitudes, beliefs, motivations, opinions, and behaviors, the Kansas Dental Project has amassed a collection of more than 200 stories documenting Kansans' plight to access and provide dental care. Representatives of the Kansas Dental Project have personally interviewed consumers and oral health providers from across the state at safety net clinics, charity care events, and community events. This qualitative research offers insight into the perspectives of individual Kansans and how an RDP could improve their experiences. The following stories represent a fraction of the diverse voices that have spoken in favor of Registered Dental Practitioners. A clickable map with stories available by Kansas counties is available at kansasdental.com.

RDPs will allow Kansas dentists to grow their practices and see more patients, with the support of a skilled dental team behind them.

“The Registered Dental Practitioner model is ideal for a practice like mine. It’s hard to attract a new dentist to western Kansas and even harder to get them to stay. Properly training an RDP and working with an RDP in a team environment would be beneficial to my business, my community and my patients. Adding just one RDP would allow us to see between 2,000 and 3,000 more patients a year.” Dr. Melinda Miner, Miner Family Dentistry, Hays

With increased access to routine dental services, Kansans can prevent oral health problems before they need costly emergency care.

“So many Kansans are struggling to find affordable dental care. I’ve been there too – I once drove 50 miles to have a tooth pulled. I didn’t have dental insurance so I had to pay out of pocket. We’re lucky now to have the Rawlins County Dental Clinic to serve the uninsured, but it’s already overburdened. Registered Dental Practitioners could expand the clinic’s reach by working in local schools and neighboring cities.” Chris Sramek, Board of Directors, Rawlins County Dental Clinic, Atwood

The RDP model will allow local people to be trained right here in Kansas and work under nearby supervising dentists.

“Over the past five years, I’ve interacted with patients from a variety of backgrounds throughout northeast Kansas. Most of them need referrals for dental care, experience long wait times or simply give up seeking care. The Registered Dental Practitioner could solve these

problems. Kansans would have better access to care, and highly trained dental hygienists would have the opportunity to advance their careers and learn new skills to serve more people. Kansas should continue to support better access to dental care.” Patty Martinette, registered dental hygienist, ECP II, Oral Health Kansas regional educator, Lenexa

Dental disease is the most common chronic childhood illness. Poor oral health can lead to missed school days.

“SAFE BASE coordinates dental screenings for needy children in Allen County, but many kids still fall through the cracks. Once, I met a 5-year-old boy with cavities so bad I could see large holes in his teeth. Fortunately, we were able to arrange for his whole family to see a dentist. But so much more could be done with Registered Dental Practitioners working in schools and providing preventive care.” Angela Henry, SAFE BASE after-school program director, Iola

Safety-net clinics could utilize state dollars more effectively by hiring RDPs.

“GraceMed has an extensive oral health care outreach program in urban and rural areas in south-central Kansas. Every day, we see people, particularly children and students, who desperately need access to quality dental care. Registered Dental Practitioners will make quality dental care more accessible and more affordable for underserved patients. Under the supervision of licensed dentists, RDPs would extend quality care in underserved and rural areas to help bridge the gap between supply and demand.” Dave Sanford, CEO and Executive Director, GraceMed Health Clinic, Wichita (Miner, Sramek, Martinette, Henry, and Sanford, 2012)

While the Kansas Dental Project has not actively collected stories abroad, such testimonials are appearing in comment forums as the world watches the debate in the United States to expand care to every community.

In New Zealand, children who otherwise would not access care receive treatment from mid-level providers.

“I’m a practising dentist in New Zealand with 28 years experience. I have just employed a dual qualified hygienist/therapist for the first time and acknowledge a healthy respect for her training and skills as a hygienist, and appreciation of her knowledge of oral health as a whole. The 2009 NZ Oral Health Survey (a 20-year event) <http://www.health.govt.nz/publication/our-oral-health-key-findings-2009-new-zealand-oral-health-survey> was published in 2010 and shows the trends in oral disease and access by children in a country supported largely by mid-level providers through a government funded programme that has existed for decades. Dentists contracted by the government provide oversight of therapists working in school, mobile, or central clinics, and dentists in private practice provide support at a fixed fee for complex treatments that are beyond the scope of the therapist. On the whole, the system works well at a basic level. Children who otherwise would not access care can receive basic treatment. There is education and prevention in the service, although less focus on risk management. Like any government funded agency, everyone scratches for funding and resources for therapeutic products as adjuncts to care, and diagnostic technologies are limited.

Some private practitioners are making good use of recent law changes in NZ, allowing therapists to practice under supervision in private practices, creating a tier of high tech services that can encompass the entire family and embrace a more comprehensive risk management

approach. Families pay privately for this service, which has been delivered by the dentist/hygienist but can now be delivered by the therapist. America has an opportunity to create a sophisticated model of prevention and risk management, using therapists to identify risk and instill the concept of continuing care from a young age. Like NZ, smart dentists will catch on to the service opportunity within their practices and make the most of what appears to be an inevitable change.” Dr. Andrea Shepperson, private practice dentist in New Zealand (Shepperson, 2012).

XIV. Conclusion

More than 50 other countries are effectively addressing their dental workforce shortage with mid-level dental practitioners. In Kansas, Registered Dental Practitioners can be a critical part of the dental team, working under the supervision of a dentist to provide preventive care and routine procedures. The RDP model is a smart solution to the problems Kansans are facing when it comes to dental care.

Growing businesses

RDPs will allow dentists to grow their practices and treat more patients in an efficient and cost-effective manner. By employing just one RDP, a dental practice will be able to schedule 2,000 to 3,000 more appointments annually. Businesses struggle to attract workers if their communities lack access to medical and dental providers. Implementing RDPs will increase access to dental care and ensure that Kansas has the necessary work force to care for its employees, making Kansas communities strong contenders for new businesses. The RDP model will also benefit hygienists by giving them an opportunity to learn new skills and advance their careers. They will be trained right here in Kansas and work under supervising dentists. Allowing

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hygienists to expand their skill sets will benefit their careers, patients, and the dental practices where they work.

Ensuring healthy Kansans

Hundreds of thousands of Kansans lack access to dental care. Untreated dental problems often lead to major medical problems, such as heart disease, diabetes, and stroke.

Vulnerable Kansans – senior citizens, people with disabilities, and children – are particularly affected. For children, poor dental health leads to lifelong medical problems and can inhibit their ability to learn. Tooth decay is the No. 1 chronic childhood illness – five times more prevalent than asthma. By adding RDPs to the dental workforce, more adults and children will have reliable access to routine, preventive oral health care.

Providing cost-effective care

The dental work force shortage affects all Kansans, whether its through higher costs for dental services, increased insurance premiums or the growing burden of uncompensated care on community hospitals and clinics. In 2010, more than 17,500 emergency room visits were reported by Kansas hospitals for dental care – the No. 1 reason was cavities. Allowing RDPs to work in Kansas will help to lessen ER usage for dental care, reducing costs for patients and hospitals. RDPs will be able to provide high-quality, cost-effective routine and preventive care and will cost less to educate and employ than a dentist. This is especially beneficial for Kansas' safety-net clinics, which will be able to utilize state dollars more efficiently.

An opportunity for Kansas

Kansas has the opportunity to do something that improves the lives of the most vulnerable citizens in the state while creating jobs in our rural communities. Members and supporters of the

Kansas Dental Project will continue asking for consideration of the proposal put forth in SB 192 and HB 2280 as a means to increase access to dental care.

It has not been an easy path for other types of mid-level practitioners – physician assistants, nurse practitioners, chiropractors, and dental hygienists. All were resisted by highly organized opposition from professional associations, initially resulting in a struggle to gain recognition and professional status. Those professions managed to overcome the obstacles in the path to acceptance. The lessons learned from the 90 years of international diffusion and decade of domestic policy diffusion stand to help mid-level providers in Kansas. It is not known what mid-level dental providers eventually will look like in the United States. What is known is that Kansas is positioned to lead the way now to shape the direction; to ensure that students from neighboring states come to Kansas to receive their education, and to be a leader nationally with its model.

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