The Case For Dental Therapy

Dental Care
FOR ARIZONA

Table of Contents

Dental Therapy: The Basics 5

Why Dental Therapy?. 5

Setting the Record Straight – The Truth About Dental Therapists 7

Facts & Evidence 9

National Momentum Building for Midlevel Dental Providers 16

Support for Dental Therapy is Bipartisan 17

I am a Dental Therapist 18

Urgent Needs, Facts & Stats, Correcting the Record 19

Oral Health Needs in Tribal Country. 20

Frequently Asked Questions 23

Facts & Stats: Medicaid and Senior Oral Health in Arizona 28

The Truth about the Arizona Dental Association's Arguments against Dental Therapy. 29

Studies Cited by the ADA 34

Arizona Voices in Support of Dental Therapy 40

Dental Therapists: Good for Tribes, Good for Arizona .41

Coconino Voices: Dental Therapists Address Shortage in Rural Areas 42

The Growing Gap in Oral Healthcare for Arizona's Hispanic Children. 47

The Dental Care Crisis in our Salt River Pima-Maricopa Indian Community . .50

Frontlines of Dental Care Show Tremendous Need in Arizona 52

Continued on next page...

Table of Contents (cont.)

News Reports **54**

American Doesn't Have Enough Dentists 55

These Professionals Could Provide Dental Work, at Lower Cost. So Why Doesn't Arizona Want Them? 58

'Now I Can Restore a Smile' 63

Report Backs Dental Therapists as a Way to Increase Access to Dental Care. 66

It's Incredibly to Get Dental Care in Rural America 68

Dentsits Skip Hope Fest, Seek Better Way to Meet Tucson's 'Astronomical Need' 72

Studies Overwhelmingly Conclude that Dental Therapy is Safe, Effective and Increases Access **78**

Early Impact of Dental Therapists in Minnesota. 79

Dental Therapists: Improving Access to Oral Healthcare for Underserved Children . . 82

Dental Therapists: Evidence of Technical Competence. 87

A Review of the Global Literature on Dental Therapists 92

Expanding Dental Hygiene to Include Dental Therapy: Improving Access to Care for Children 94

A Workforce Strategy for Reducing Oral Healthcare Disparities: Dental Therapists. 97

Saskatchewan's School-Based Dental Program Staffed by Dental Therapists: A Retrospective Case Study 102

Emergency Dept. Use for Dental Conditions Continues to Increase 104

Goldwater Institute Report on the Effectiveness of Dental Therapy 105

Dental Care
FOR ARIZONA

Dental Therapy: The Basics

Why Dental Therapy?

Dental therapists currently practice in 54 countries and territories worldwide. In the U.S., these mid-level providers have been delivering care to more than 45,000 Alaska Natives in 80 remote communities since 2004. They have been authorized in Minnesota since 2009, and are authorized in Maine and Vermont; and on tribal lands in Oregon and Washington State. The demand for dental therapy is growing in the U.S. Currently at least 12 other states are actively considering dental therapy legislation.

The severe shortage of dentists, particularly in rural and tribal communities, the limited number of dentists willing to treat Medicaid patients, and the distance many Arizonans travel to access the limited care available call for a change in the delivery model of oral healthcare:

- **Approximately 2/3 of the state population—4.6 million people—live in a Dental Health Professional Shortage Area (DHPSA);**[i]
- **People living in rural areas, tribal communities, low-income families, the uninsured, people with disabilities and the elderly encounter the greatest barriers to dental care;**[ii]
- **Every county in Arizona is in part or in whole designated by the federal government as a dental professional shortage area.;**[iii]
- **Only 38% of Arizona dentists are enrolled to participate in Medicaid;**[iv]
- **There were over 26,800 visits to the emergency room for dental conditions that could have been avoided with routine dental care in 2014 alone.**[v]

Dental therapists earn lower salaries than dentists. Incorporating them into an existing dental team, dentists and healthcare providers can more effectively integrate and expand oral health services in their existing treatment models. By providing more cost-effective care, dentists can expand the number of Medicaid patients they treat, negotiate lower payments for cash paying patients, extend office/clinic hours and provide care in more locations.

Research from across the globe show that these providers provide high-quality and safe dental care and can effectively expand care for people in need.[vi] Medical malpractice insurance in Minnesota for an office employing a dental therapist is very similar to the coverage for a dental hygienist and dental assistant. For example, one company offers insurance for less than $100 per year.[vii]

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i U.S. Department of Health and Human Services, Health Services Resources Administration, "First Quarter of Fiscal Year 2018 Designated HPSA Quarterly Summary, as of December 31, 2017," accessed January 16, 2018

ii ADA, "Breaking Down Barriers to Oral Health for All Americans: Repairing the Tattered Safety Net (2011), http://www.ada.org/~/media/ADA/Public%20Programs/Files/barriers-paper_repairing-tattered-safety-net.pdf?la=en; The Pew Charitable Trusts, "Who Can't Get Dental Care?" (2017), http://www.pewtrusts.org/en/research-and-analysis/analysis/2017/05/31/who-cant-get-dental-care.

iii HRSA, data on designated health professional shortage areas in Arizona, as of August 31, 2017.

iv AHCCCS, "2017 Access Monitoring Analysis (2017), https://www.azahcccs.gov/AHCCCS/Downloads/AccesstoCare/AccessMonitoringAnalysis2017.pdf.

v Analysis by the Pew Charitable Trusts using HCUP State Inpatient Databases and State Emergency Department Databases 2014, Agency for Healthcare Research and Quality (AHRQ), based on data collected by the Arizona Department of Health Services.

vi Donald L. Chi, Dane Lenaker, Lloyd Mancl, Matthew Dunbar, and Michael Babb, "Dental Utilization for Communities Served by Dental Therapists in Alaska's Yukon Kuskokwim Delta: Findings from an Observational Quantitative Study" (2017), http://faculty. washington.edu/dchi/files/DHATFinalReport.pdf; David A. Nash et al., "A Review of the Global Literature on Dental Therapists" (2012), http://www.wkkf.org/-/media/pdfs/dental-therapy/nash-dental-therapist-literature-review.ASHX; The Minnesota Department of Health and the Minnesota Board of Dentistry, "Early Impacts of Dental Therapists in Minnesota" (2014), http://www.health.state.mn.us/divs/orhpc/workforce/dt/dtlegisrpt.pdf.

vii University of Minnesota School of Dentistry, Normandale Community College, and Metropolitan State University, "Hiring a Dental Therapist or Advanced Dental Therapist: Professional Liability," accessed September 19 2017, https://www.mchoralhealth.org/mn/dental-therapy/professional-liability.html.

With the restoration of KidsCare, it is expected that 30,000 low-income children will now have State coverage, including dental. If AHCCCS follows existing policy of reimbursing midlevel providers at a lower rate than dentists or doctors, then dental therapists could offer a more cost-effective delivery model and stretch Medicaid dollars further. Arizona must find new models to deliver care. Dental therapy can help expand the dental workforce to meet pent-up demand and deliver more cost-effective care.

Expanding the supply of dental practitioners who can provide basic dental services safely and effectively is a crucial component to bridging the gap of unmet dental services throughout the state. **Arizona needs more dental providers who can address basic preventative and restorative oral care.**

Summary of Procedures/Scope of Practice Within the Expanded Dental Team

Category of Service	Dental Assistant	Expanded Function Dental Assistant	Dental Hygienist	Affiliated Practice Dental Hygienist	Dental Therapist	Dentist
Diagnostic: Oral Evaluations					●	●
Image Capture (X-Rays)	●	●	●	●	●	●
Preventative: Dental Sealants, Fluoride Varnish	●	●	●	●	●	●
Dental Prophylaxis			●	●	●	●
Restorations: Silver & Tooth-Colored Fillings					●	●
Prefabricated Stainless Steel Crowns					●	●
Permanent Crown						●
Extractions: Primary Teeth					●	●
Extraction: Badly Diseased Permanent Teeth					●	●
Extractions: Other Permanent Teeth						●
Endodontic treatment planning and clinical services on primary and permanent teeth						●
Prosthodontics & Dentures						●
Implants and other oral surgical services						●

Setting the Record Straight—The Truth About Dental Therapists

Millions of Arizonans struggle to access the **dental care** they need to lead healthy, productive lives.[i] People **go without care** because they cannot afford it, cannot find a dentist who will take their insurance, cannot get to the dentist during weekday working hours, or live in an area where there is a shortage of dentists.[ii]

To address this problem, Arizona urgently needs to increase access to quality dental care that does not create additional government programs and cost. A proposal submitted to the Legislature would initiate legislation to authorize use of midlevel dental providers, known as dental therapists who can help expand opportunities to efficiently and effectively serve patients and increase dentists' revenue.

Dental therapists are similar to physician assistants or nurse practitioners on medical teams. They receive rigorous training in routine preventive and restorative procedures, such as filling cavities and placing stainless steel crowns. When dental therapists provide routine dental care, dentists can focus on more complicated procedures.

Current gaps in care are costly for the state. When people cannot get dental care, **they sometimes visit emergency rooms** for relief of their symptoms—an expensive and inefficient use of limited health care dollars.[iii] A **lack of access to dental care** especially affects low-income families, children covered by Medicaid, the elderly, people with disabilities, American Indians, and those living in rural communities.[iv]

TRUTH: Dental therapists will be trained to standards set by CODA, the same board that accredits dental schools.

In Minnesota, dental therapy and dental students are trained side-by-side, and the examiners are blinded as to who is a dental candidate and who is a dental therapy candidate. Dental therapists are required to meet the same competencies as dentists for the procedures they share.

CODA requires dental therapists to have at least 3 academic years of study. Three academic years to learn roughly 80 procedures. Dental school is 4 years of training. Four years to learn over 430 procedures. Dental therapists are well trained to perform the procedures allowed within their limited scope.

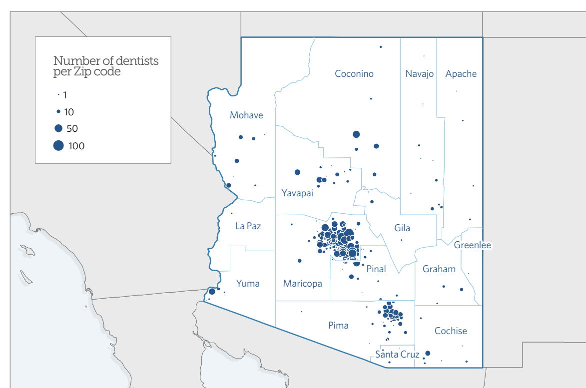
TRUTH: Arizona suffers from a critical shortage of dentists, especially in lower income urban areas, rural cities and towns, and tribal communities.

ALL of Arizona's counties contain at least some portion that is designated as a Dental Health Professional Shortage Area.

Today, 4.6 million Arizonans, approximately 2/3rds of the state population, are living in a dental shortage area.[v] You may hear that Arizona does not have an access problem. That may be true if you live in Scottsdale. Compare this to 1 dentist for all of Greenlee County, a population of over 9,000 people. (See map)

Dental therapists often work away from the traditional dental office in locations such as rural clinics, nursing homes, and schools while keeping in touch with their supervising dentists through telehealth technology. Dental therapists can extend access to people who face barriers getting to a traditional dental office. For instance, half of the dental therapists in Minnesota work in rural and remote areas of that state where dentists are scarce.[vi]

While we can't compel dentists to move from Scottsdale to Ajo, Seligman or Peach Springs, we do know that continued efforts to stall innovative, cost-effective solutions will only protect a system where people in rural and underserved areas face long wait times and long travel distances to get to a dentist.



County	Number of dentists	County	Number of dentists
Maricopa	2817	Navajo	38
Pima	565	Graham	17
Yavapai	119	Gila	14
Coconino	109	Apache	11
Mohave	79	Santa Cruz	9
Pinal	61	La Paz	2
Yuma	48	Greenlee	1
Cochise	44		

Note: These figures include dentists with primary license registration addresses in Arizona, determined using data from the Arizona State Board of Dental Examiners.

i U.S. Department of Health and Human Services, Health Services Resources Administration, "First Quarter of Fiscal Year 2018 Designated HPSA Quarterly Summary, as of December 31, 2017," accessed January 16, 2018

ii ADA HPI, "Why Adults Forgo Dental Care: Evidence from a New National Survey" (2014), http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_1114_1.ashx.

iii ADA HPI, "Why Adults Forgo Dental Care: Evidence from a New National Survey" (2014), http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_1114_1.ashx.

iv ADA, "Breaking Down Barriers to Oral Health for All Americans: Repairing the Tattered Safety Net (2011), http://www.ada.org/~/media/ADA/Public%20Programs/Files/barriers-paper_repairing-tattered-safety-net.pdf?la=en; The Pew Charitable Trusts, "Who Can't Get Dental Care?" (2017), http://www.pewtrusts.org/en/research-and-analysis/analysis/2017/05/31/who-cant-get-dental-care.

v U.S. Department of Health and Human Services, Health Services Resources Administration, "First Quarter of Fiscal Year 2018 Designated HPSA Quarterly Summary, as of December 31, 2017," accessed January 16, 2018

vi Minnesota Department of Health, "Minnesota's Dental Therapist Workforce, 2016" (2017), http://www.health.state.mn.us/divs/orhpc/workforce/oral/2016dtb.pdf.

TRUTH: Dental therapists are safe and effective.

Since 2004 dental therapists have increased access to care for **45,000 Alaska Natives** living in 80 rural communities[vii]. In Minnesota, dental therapists have been serving patients since 2011. In fact, dental therapists have been used in more than 50 countries for nearly 100 years.

A global literature review of over 1,000 studies and assessments showed that dental therapists provide technically competent, **high quality, and safe care**[viii].

"As the dean of a dental school accredited by CODA, this is the ***most significant signal*** *to me that the dental midlevel providers are safe, are meeting the needs of the public, and are sought after by dentists in the existing marketplace."*

– Bruce Donoff, MD, DMD
Dean of Harvard School of Dental Medicine

"The results of a variety of studies indicate that appropriately trained midlevel providers are ***capable of providing high-quality services****, including irreversible procedures such as restorative care and dental extractions."* [ix]

– J. Timothy Wright, past president of the American Dental Association Council on Scientific Affairs
Journal of the American Dental Association (January 2013)

TRUTH: Dental therapists are cost-effective providers.

There are no government subsidies for dental therapists—no subsidies to the therapists, to the dentists or facilities that hire them, or to the schools that train them.

Dental therapists attend accredited colleges and universities, just like dentists do. If those are public institutions, say ASU or NAU, those state institutions get state funding in addition to tuition dollars—not for training therapists, but as state schools with a legislative appropriation.

If AHCCCS follows existing policy of reimbursing midlevel providers at a lower rate than dentists or doctors, then dental therapists could offer a more cost-effective delivery model and stretch Medicaid dollars further. So, in addition to not requiring a subsidy, these professionals, like other allied health professionals, could save the state money.

In Minnesota, this type of provider makes approximately 30%-50% less than a dentist.[x] Practices that employ dental therapists lower the production costs of delivering routine care, which increases the value of Medicaid's discounted payment rates. This provides dentists with an incentive to treat more Medicaid patients.

In a time of limited resources and increased demand for dental care, Arizona must find ways to bring high quality dental care to more people, while stretching Medicaid dollars further, without creating another government-run health care program.

"A greater supply of qualified providers would enhance competition, which can yield lower prices, additional service hours, shorter wait times and innovations in care delivery, as we have seen from the increased use of advanced practice nurses and physician assistants."

– Marina Lao & Tara Isa Koslov
Director and deputy director, respectively, of the Office of Policy Planning at the Federal Trade Commission
June 1, 2016

It's time to modernize the delivery of dental care in Arizona. The health care market can benefit from additional providers, and all Arizonans need access to safe and high-quality dental care.

TRUTH: Studies show that dentists who employ dental therapists serve more patients while maintaining or improving their bottom line.

Studies show that dentists and dental practices who use dental therapists serve more patients while maintaining or improving their overall income.

Studies of private dental offices, **nonprofit** clinics, and federally qualified health centers show that dental therapists increase access and are cost-effective providers.[xi]

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vii "DHAT: Alaska and Beyond!" Presentation by Christina Peters and Pam Johnson, Native Dental Therapy Initiative, and John Stephens, Swinomish Indian Tribal Community, to the National Indian Health Board, June 8, 2017, https://www.nihb.org/docs/07182017_tphs/thursday/DHAT%27s%20Improving%20Both%20Oral%20Health%20Outcomes%20&%20Access-%20New%20Research%20from%20Alaska%20&%20New%20Policies.pdf.

viii David A. Nash et al., "A Review of the Global Literature on Dental Therapists" (2012), http://www.wkkf.org/-/media/pdfs/dental-therapy/nash-dental-therapist-literature-review.ASHX/.

xi J. Timothy Wright, "Do midlevel providers improve the population's oral health?" JADA 144, no 1. (2013) http://jada.ada.org/article/S0002-8177(14)60574-2/pdf.

x Minnesota Department of Health, "Dental Therapy Toolkit" (February 2017) http://www.health.state.mn.us/divs/orhpc/workforce/emerging/dt/2017dttool.pdf.

xi The Pew Charitable Trusts, "Expanding the Dental Team: Studies of Two Private Practices and Increasing Access to Care in Public Settings" (2014), http://www.pewtrusts.org/~/media/legacy/uploadedfiles/pcs_assets/2014/expandingdentalteamreportpdf.pdf and http://www.pewtrusts.org/~/media/assets/2014/06/27/expanding_dental_case_studies_report.pdf.

Facts & Evidence

FACT

Significant evidence shows dental therapists are cost-effective and increase access.

EVIDENCE

The evidence from both the United States and around the world suggests dental therapists provide high quality care to patients who typically have trouble accessing dental care, and lower the unit cost of care.[1] Studies of private dental offices, nonprofit clinics, and federally qualified health centers show that dental therapists increase access and are cost-effective providers.[2]

In Minnesota, half of the dental therapy workforce is employed outside of the Twin Cities area, which includes rural and remote areas of the state.[3] **A 2014 report on the early impacts of dental therapy in Minnesota showed that, on average, 84% of new patients seen by the dental therapists were enrolled in public programs.**[4] Patients in practices served by dental therapists also experienced reductions in travel and wait times since the dental therapist was employed, especially in rural areas.[5] The clinics that employed dental therapists reported that hiring dental therapists increased dental team productivity and improved patient satisfaction.[6] Furthermore, the personnel cost savings allowed the clinics to expand capacity and care for more underserved patients.[7] The report showed that seven full-time equivalent dental therapists served 6,338 new patients in the first two years dental therapists practiced.[8]

Alaska Native children are seeing significant oral health improvements since the start of their dental therapy program.[9] The Yukon Kuskokwim Health Corporation (YKHC), a part of the Alaska Tribal Health System, serves 25,000 Alaska Natives representing 58 federally recognized tribes. An analysis from 2006 to 2015 showed that high exposure to dental therapists was associated with lower rates of tooth extractions and more preventive care for children and adults.[10]

There is also evidence that dental therapists are cost-efficient providers. Main Street Dental Care, a private practice in Minnesota, made an additional $24,000 in profit and served 200 more Medicaid patients in the therapist's first year (despite, at the time, Minnesota having the lowest pediatric dental reimbursement rate in the country).[11] Similarly, private, for-profit dental clinics located in designated dental health professional shortage areas in Minnesota significantly increased cost efficiency with the addition of dental therapists.[12] The net benefit for Grand Marais Family Dentistry was 13% of its average monthly revenue, and for Midwest Dental it was 2.4 times the average monthly revenue.[13] People's Center Health Services, a federally qualified health center (FQHC) in Minnesota, found that after the first year (2012) the dental therapist generated more than $30,000 in net revenue.[14] Apple Tree Dental Clinic, a non-profit organization in Minnesota, sends a dental team, including a dental therapist, to provide on-site care at a nursing home for veterans. The dental therapist provided 8-10 dental visits each day for an average daily production up to $3,122.[15] The average employment costs per day for the dental therapist were $222 less than for a dentist, totaling savings of $52,000/year for Apple Tree.[16]

SUPPLEMENTS:

1. **A day-in-the-life profile of MN dental therapist Jodi Becker**
   http://magazine.pewtrusts.org/en/archive/summer-2017/this-dental-therapist-is-filling-a-gap-in-us-health-care

2. **New Study Suggests Dental Therapists Improving Oral Health In YK Delta**
   http://kyuk.org/post/new-study-suggests-dental-therapists-improving-oral-health-yk-delta

3. **9 Reasons Dental Health Aide Therapist Programs Are Good for Native Kids**
   https://indiancountrymedianetwork.com/culture/health-wellness/9-reasons-dental-health-aide-therapist-programs-good-native-kids/

4. **Report Backs Dental Therapist as a Way to Increase Access to Dental Care / As Americans age, the Gerontological Society offers roadmap to improved oral health for seniors**
   http://www.pewtrusts.org/en/research-and-analysis/analysis/2017/08/16/report-backs-dental-therapist-as-a-way-to-increase-access-to-dental-care
5. **Dental Therapy Helps Increase Revenue, Access to Oral Health Care**
   http://www.pewtrusts.org/en/research-and-analysis/analysis/2017/07/17/dental-therapy-helps-increase-revenue-access-to-oral-health-care
6. **Apple Tree Minnesota Veterans Home Case Study**
   http://www.appletreedental.org/wp-content/uploads/2017/09/ADT-LTC-Case-Study-091517.pdf

FACT

Dental therapy is safe.

EVIDENCE

Dental therapy is proven safe both in the states that have implemented it and around the world.[17]

In a global literature review on dental therapy that reviewed 1,100 assessments, the authors concluded that, ***"Dental therapists provide technically competent care" in accordance with their scope of practice, "Dental therapists improve access to care, specifically for children," and in areas where they are practicing, "The public values the role of dental therapists in the oral health workforce."*** [18]

The American Dental Association's (ADA's) Council on Scientific Affairs conducted a systematic research review of dental therapy, about which Dr. J. Timothy Wright—the past chair of the Council—stated, "The results of a variety of studies indicate that appropriately trained **midlevel providers are capable of providing high-quality services**, including irreversible procedures such as restorative care and dental extractions."[19]

According to a 2010 evaluation of dental therapists in Alaska, quality of care provided by the dental therapists was equivalent to that provided by dentists, and patient satisfaction was high.[20] In this evaluation, 125 direct restorations were evaluated; there were 19 deficiencies noted, with the relative proportion of deficient restorations smaller for therapists (12%) than for dentists (22%).[21]

In 2015, the Commission on Dental Accreditation (CODA)—the nationally recognized agency to accredit dental and allied dental education programs—implemented standards for dental therapy education programs.[22] This decision signifies that CODA, and its stakeholders within the dental community, have confidence that dental therapists provide high-quality and safe care. CODA would not have implemented standards for dental therapy training programs were there evidence to suggest that the safe practice of dental therapists was in question.

SUPPLEMENTS:

1. **A Review of the Global Literature on Dental Therapists**
   http://www.wkkf.org/-/media/pdfs/dental-therapy/nash-dental-therapist-literature-review.ASHX
2. **Evaluation of the Dental Health Aide Therapist Workforce Model in Alaska:**
   http://www.rti.org/sites/default/files/resources/alaskadhatprogramevaluationfinal102510.pdf
3. **CODA Dental Therapy Standards**
   http://www.ada.org/en/~/media/CODA/Files/dt
4. **ABC 15 TV Report: Hundreds of health board actions 'hidden' from public each year**
   http://www.abc15.com/news/local-news/investigations/hundreds-of-health-board-actions-hidden-from-public-each-year
5. **ABC 15 On going coverage: Dental Dangers**
   http://www.abc15.com/dentaldangers

FACT

Dental therapists make innovations like teledentistry much more viable.

EVIDENCE

For teledentistry to be most effective there needs to be a provider in the field who is licensed to provide the necessary treatment. If a dental hygienist working in rural areas—receiving guidance from a supervising dentist—isn't trained and licensed to perform the needed procedures, teledentistry is merely a diagnostic tool, because the patient is still required to find a dentist willing to treat them and travel to a second appointment before their needs can be met. A dental therapist is trained to provide many of the most commonly needed dental procedures, including fillings. Therefore, allowing dental therapists to utilize teledentistry to communicate with their supervising dentist and to provide needed treatment would be a much more efficient and effective use of teledentistry.

Any patients in need of procedures that are beyond a dental therapist's scope of training and practice are referred to their supervising dentists.

FACT

We have a significant access problem in Arizona.

EVIDENCE

The reality is that **every county in Arizona is in part or in whole designated by the federal government as a dental professional shortage area.**[23]

Among adults in Arizona who did not see a dentist in the past year, 22% said that they had trouble finding a dentist, and 28% cited inconvenient location or time.[24] Under the general supervision of a dentist, **dental therapists can help extend hours of operation for dental offices and clinics, and provide care in community settings in mobile dental clinics, school based clinics, community health centers, and nursing homes.**

In addition, far fewer dentists choose or prefer to work in rural areas, as seen by **the map of coverage and access in Arizona** (page 4). In it you can see that while we have almost 3,000 dentists in Maricopa County, there are only 11 in all of Apache County, home to over 70,000 people.[25] **Dental therapists, working in conjunction with dentists, can fill in these gaps to treat the most common needs and dramatically increase access to care.**

Dental therapists could increase access to dental care across Arizona, especially among vulnerable populations who are at higher risk for poor oral health and more unmet needs.

According to the Health Resources and Services Administration, as of December 2017 there were 257 designated dental health professional shortage areas, meeting less than 1/3 of the need.[i] To remove such designations, Arizona would need to add 792 full time equivalent dental practitioners to the existing workforce.[ii]

SUPPLEMENTS:

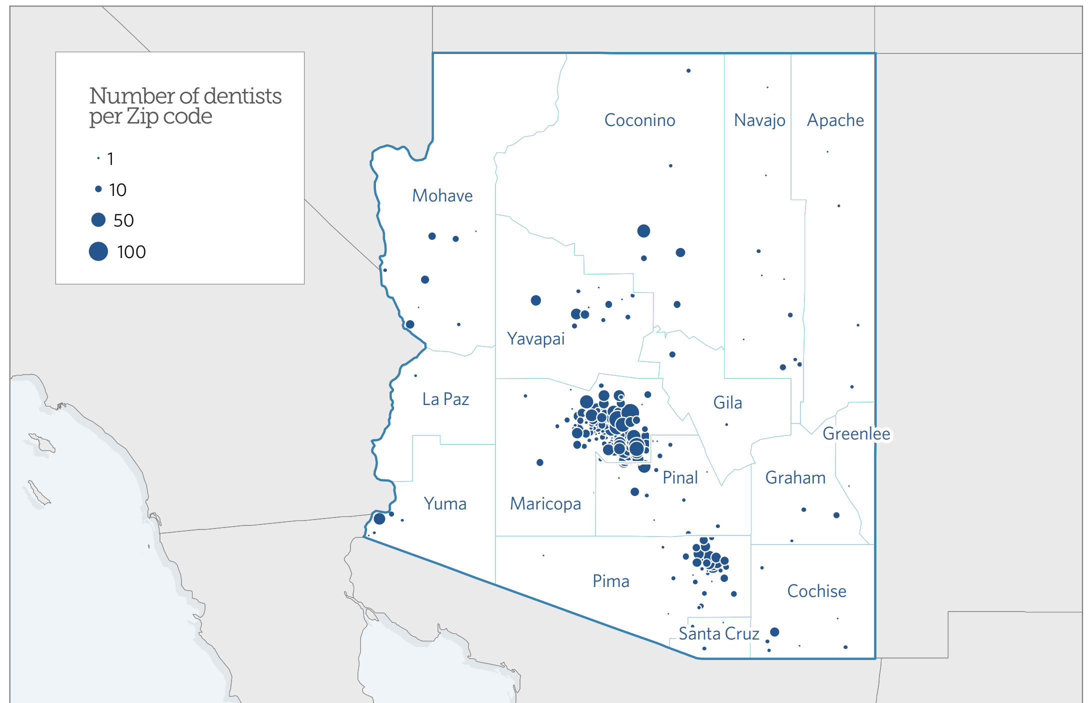
1. **Dental therapists good for tribes, good for Arizona:** Chester Antone of the Tohono O'odham Nation on why and how Dental therapy can help his people
   http://tucson.com/news/opinion/column/guest/chester-antone-dental-therapists-good-for-tribes-good-for-arizona/article_7e56e106-a705-5745-894e-49ec101264c5.html
2. **It's Incredibly Hard to Get Dental Care in Rural America** / Dental therapists could help—but many professional dentists are fighting them.
   http://www.motherjones.com/politics/2017/09/teeth-dentists-dental-therapists/
3. **ADA survey of Arizona adults**
   http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/OralHealthWell-Being-StateFacts/Arizona-Oral-Health-Well-Being.pdf

[ii] U.S. Department of Health and Human Services, Health Services Resources Administration, "First Quarter of Fiscal Year 2018 Designated HPSA Quarterly Summary, as of December 31, 2017," accessed January 16, 2018.

Dentists in Arizona by county

Professional shortages make it difficult for some Arizonans to access dental care

There are over 4.6 million Arizonans living in areas designated by the federal government as dental health professional shortage areas, which are defined as one dentist for 5,000 or more people[1]. Sizable portions of all 15 counties in Arizona are designated shortage areas, including all of Graham, Greenlee, La Paz, Santa Cruz, and Yuma counties[2].



County	Number of dentists
Maricopa	2817
Pima	565
Yavapai	119
Coconino	109
Mohave	79
Pinal	61
Yuma	48
Cochise	44

County	Number of dentists
Navajo	38
Graham	17
Gila	14
Apache	11
Santa Cruz	9
La Paz	2
Greenlee	1

Note: These figures include dentists with primary license registration addresses in Arizona, determined using data from the Arizona State Board of Dental Examiners.

1 U.S. Department of Health and Human Services, Health Services Resources Administration, "First Quarter of Fiscal Year 2018 Designated HPSA Quarterly Summary, as of December 31, 2017," accessed January 16, 2018.

2 U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Workforce, "Designated Health Professional Shortage Area Statistics" (data as of October 26, 2017).

FACT

Dental therapists are similar to physician assistants (PAs) and nurse practitioners (NPs), although there are differences.

EVIDENCE

As a health care model, NPs and PAs are an example of successful integration of allied professionals in medicine. Both NPs and PAs are required to complete training to prepare them with competencies for their specific scope of practice and perspective. NPs and PAs are most similar to dental therapists in that they are intended to extend the reach of the physician to make care delivery more efficient.

Physicians and organized medicine originally opposed allied health professionals' licensure and scopes of practice, however now NPs and PAs practice in all 50 states and in D.C.[26] They allow physicians to work at the top of their licenses, while NPs and PAs take care of the procedures they are trained and licensed to perform.

Just as NP and PA educational programs are accredited, dental therapy training and educational programs in Arizona will be required to meet standards set by the Commission on Dental Accreditation (CODA), the national organization that accredits all dental and dental-related education programs. In 2015, CODA implemented standards for dental therapy education programs.[27]

FACT

Vulnerable populations in Arizona struggle to access regular dental care.

EVIDENCE

There are many barriers to accessing dental care and low-income families, children covered by Medicaid, seniors, people with disabilities, American Indians, and those living in rural communities or dental health professional shortage areas (DHPSAs) are particularly impacted.[28] Some people cannot find a dentist who accepts public insurance while others cannot get to a dental office due to mobility or transportation challenges.[29]

In Arizona today, over 4.6 million people live in areas designated by the federal government as DHPSAs.[30] Arizona is similar to other parts of the county, where long lines are common for people seeking free dental services. People spend the night in tents hoping for the chance to receive much needed dental care—but even that doesn't guarantee that they'll get it. The demand often overwhelms the number of volunteers and resources available through these events.[31]

In a survey conducted by the ADA, a reported 99% of adults surveyed in Arizona said they value oral health.[32] However, among those who did not visit a dentist in the past year, 66% cited "cost" as the reason.[33] The other two most cited reasons were "inconvenient location or time" and "trouble finding a dentist."[34]

The fact is that far fewer dentists choose or prefer to work in rural areas, as seen by the map of coverage and access in Arizona (page 4). In it you can see that while we have almost 3,000 dentists in Maricopa County, there are only 11 in all of Apache County, home to over 70,000 people.[35] **Dental therapists, working in conjunction with dentists, can help fill these gaps to treat the most common needs and dramatically increase access to care.**

In a recent article in the Phoenix Business Journal, (September 1, 2017) Kevin Earle, Executive Director of the Arizona Dental Association (AzDA) stated "We need better incentives to deliver care in rural areas to make it economically viable …" If serving rural areas requires "incentives" to dentists, perhaps the better answer is to allow skilled providers who make less per hour than dentists to locate or travel to rural areas to provide care. This model makes economic sense without taxpayer funded incentives to dentists.

In another example, **in Scottsdale, there were 481 dentists serving a population of about 246,600 in a geographic area of 184 square miles.**[36] **In Coconino, Yavapai, Gila, and Navajo counties there are 280 dentists to serve a population of about 530,000 over an area of 41,451 square miles.**[37]

Lastly, according to the Health Resources and Services Administration, as of December 2017 there were 257 designated dental health professional shortage areas, meeting less than 1/3 of the need.[i] To remove such designations, Arizona would need to add 792 full time equivalent dental practitioners to the existing workforce.[ii]

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[i] [ii] U.S. Department of Health and Human Services, Health Services Resources Administration, "First Quarter of Fiscal Year 2018 Designated HPSA Quarterly Summary, as of December 31, 2017," accessed January 16, 2018.

FACT

Many dentists believe the answer to increasing access for the Medicaid population is to raise the Medicaid reimbursement rates.

EVIDENCE

We agree that state Medicaid reimbursement rates for dental care are woefully inadequate. The American Dental Association (ADA) Health Policy Institute (HPI) found that in 2013, Arizona Medicaid payments for children's dental services were about 55% of commercial fees.[38] However, raising Medicaid reimbursement rates is a necessary but insufficient step to in expanding dental access for Medicaid enrollees.

Here's why:

Increasing Medicaid payment rates does nothing for the 4.6 million Arizonans who live in dental professional shortage areas, where they already have trouble finding a dentist.[39] Nor can it help those—like children, people in assisted living facilities, or seniors in nursing homes—who have difficulty traveling to a dentist's office. Further, raising Medicaid payment rates to perpetuate a system where only dentists provide routine restorative care is a highly inefficient use of Medicaid dollars. It is now common practice for dentists to delegate lower-skill procedures such as cleanings and radiographs to lower-paid employees, freeing their time to do more complex and costly procedures. Allowing dentists to use dental therapists to treat decay would lower the per-unit cost of care, allowing dentists to serve more Medicaid patients with the revenues they collect.

We do not know what will happen with health care reform over the next few years, however **we know that it is unlikely that there's going to be big injections of new money into Medicaid, so we MUST find more cost-effective ways to deliver dental care.**

This is good for patients, as they have greater access to preventative care, and for dentists, who can expand their own practices at lower costs while retaining high quality.

FACT

In many of the countries that have had long standing dental therapists, such as New Zealand, there has been a decrease in untreated decay. Early evidence shows similar improvements in Alaska.

EVIDENCE

Reducing rates of untreated decay has always been a central goal of dentistry. Dental disease is the result of physical, biological, environmental, behavioral, and life-style related factors.[40] However, problems arise not because of the presence of dental decay, but because the decay is left untreated. In New Zealand, the untreated decay rate for 5-11 year olds in 2009 was 3% compared to 8% for a similar age group (6-11) in the U.S. (2005-2008).[41] Of particular note is that in 2009, it was rare for 12-17 year olds in New Zealand to have any missing teeth due to decay.[42] U.S. data (1999-2004) show that for every 100 12-19 year olds, seven teeth were missing due to decay.[43]

Much of the consequences of the burden of dental disease – pain, missed school and work days, lower academic achievement – are the result not of the presence of decay, but of untreated decay that has progressed to the point of causing significant harm. The ADA study on the burdensome cost of emergency room care for dental problems found that up to $1.7 billion was spent on dental conditions that could have been prevented, much of it due to untreated decay.[44]

If one is addressing untreated decay, as teams including midlevel dental providers have shown to do better than dentist-only teams, then the nation's oral health is improving by preventing future pain, root canal treatment and extensive restorations, extractions, and medical complications due to abscesses.[45] Oral health improvement is measured by our impact on preventing as well as arresting the progression of decay.

A state-wide study in Minnesota showed that seven full-time equivalent dental therapists served 6,338 new patients in the first two years dental therapists practiced.[46] The clinics that employed dental therapists reported that hiring dental therapists increased dental team productivity and improved patient satisfaction.[47]

Dental therapists have practiced in Alaska since 2004 and have increased access for over 45,000 Native Alaskans living in rural communities.[48] An analysis of 25,000 Alaska Natives from 2006 to 2015 showed that high exposure to dental therapists was associated with lower rates of tooth extractions and more preventive care for children and adults.[49]

According to a Minnesota Department of Health report, 50% of dental therapists work in the Twin Cities metro area, and 50% work throughout the rest of the state.[50] This distribution mimics the population distribution in the state, as approximately 54% of Minnesotans live in the Twin Cities metro area.[51] As of December 2016, there were 63 dental therapists with active licenses in Minnesota.[52] According to a 2014 report on the early impacts of dental therapy in Minnesota, nearly one-third of patients in practices employing dental therapists experienced reductions in travel and wait times since the start of the dental therapists' employment, especially in rural areas.[53]

In a global literature review on dental therapy that reviewed 1,100 studies and assessments, the authors concluded that, "Dental therapists provide technically competent care" in accordance with their scope of practice and "Dental therapists improve access to care, specifically for children," and in areas where they are practicing "The public values the role of dental therapists in the oral health workforce." [54]

CLAIM

Opponents argue that in other countries, therapists have only survived because they are heavily subsidized. They believe that dental therapy in Canada disappeared for this reason.

REPLY

The Saskatchewan Health Dental Plan (SHDP) was launched in 1974 to train and employ dental therapists in school-based clinics to provide free basic dental care to children. The program helped reduce the average number of required fillings by approximately 50% in the first six years.[55] SHDP was terminated in 1987 due to a change in political leadership.

While the program has ended, dental therapists still practice throughout Canada. Unlike medical care in Canada, dental care is not part of the national health care system. Government coverage is only provided to some low-income individuals and indigenous citizens. Like Americans, most Canadians must obtain private dental coverage or pay-out-of-pocket. In 2012, a study showed that two dental therapists employed by a private practice in North Battleford, Saskatchewan, accounted for approximately $226,000 (CA$217,000) in profit after adjusting for commissions and overhead.[56]

In Arizona, dental therapists would not require or seek state or federal subsidies to exist. Dentists and health clinics would have the option to hire these providers and dental therapists would have the opportunity to compete for these jobs on the open market, just like any other health care professional.

FACT

Dental therapists are highly trained dental professionals who can help expand the reach of the dental team especially to vulnerable Arizonans, including seniors, American Indians, and other vulnerable populations.

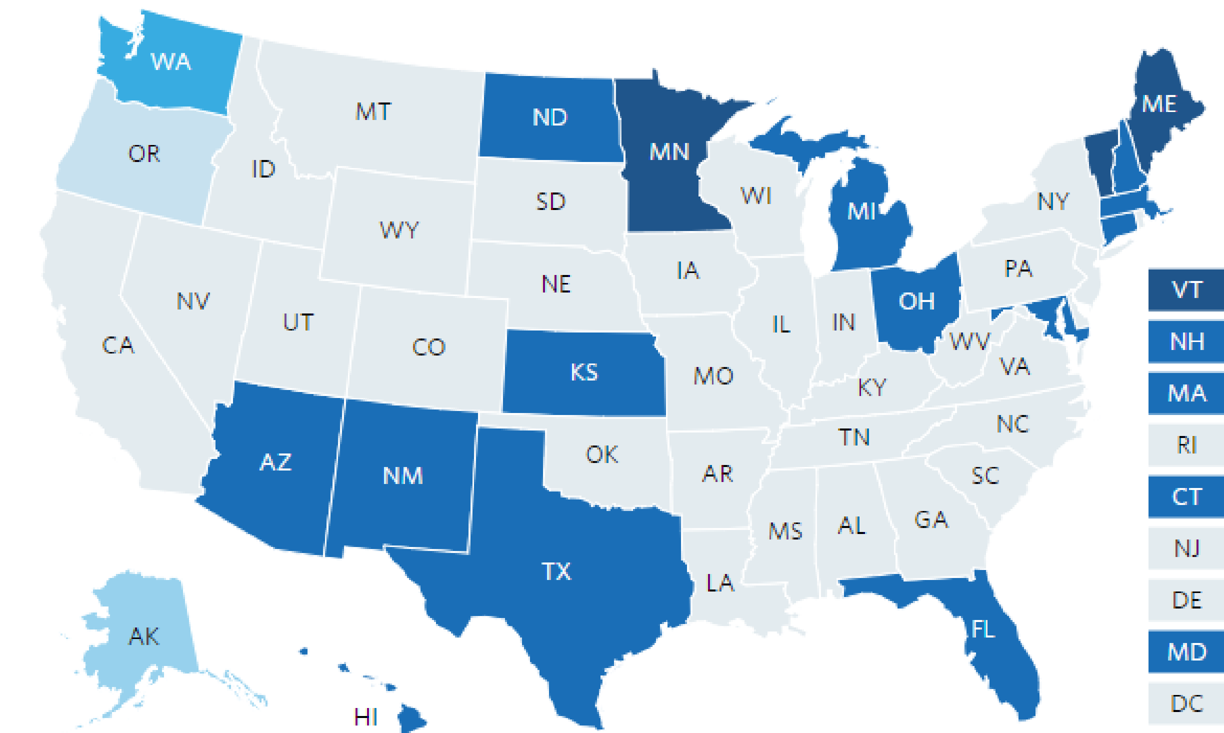
EVIDENCE

Studies consistently show that these professionals can safely and effectively expand care people in need.[57] Research from Minnesota and Alaska show that dental therapists can safely and effectively care for high need communities.[58] In fact, a case study in Minnesota found that the dental therapist could complete most of the work needed in a nursing home setting.[59] Further, it doesn't make fiscal sense to have the most expensive person on the dental team, the dentist, perform every restorative service from a filling on a primary tooth to permanent crowns and implants.

The Commission on Dental Accreditation(CODA)—the national agency that accredits all dental and dental-related education programs—adopted training standards to ensure that dental therapists are properly trained for the procedures in their scope of practice and to care for people of all ages and with special needs. CODA requires a minimum of three years of education. In Arizona, dental therapists would be required to meet the CODA educational standards, and would then be allowed to perform about 80 procedures, while dentists—who have four years of dental education—have a scope of practice that includes, for general dentists in Arizona, about 435 procedures.[60]

National Momentum Building for Midlevel Dental Providers

Dental therapy policies by state



- Does not allow dentists to hire dental therapists
- Dental therapists operating under pilot authority
- Alaska native tribes have authorized dental therapy
- Tribal access authorized and statewide use under consideration
- Actively exploring authorizing dental therapy
- Allows dentists to hire dental therapists

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Support for Dental Therapy is Bipartisan

1. The Goldwater Institute did a report in April that looks at both the evidence of safety and effectiveness of dental therapists, as well as the challenges many people in Arizona face in getting to a dentist.
   a. http://www.dentaltherapyforarizona.org/wp-content/uploads/2017/11/Goldwater-Institute-Report-Dental-Reform.pdf

2. The Huffington Post recently cited dental therapy as one of the few public policy proposals supported by both public health officials and free market proponents.
   a. https://www.huffingtonpost.com/wendell-potter/bipartisan-agreement-on-h_b_14634542.html

3. Two case studies on how the use of dental therapists in both a public clinic and private practice dental office create efficiencies that impact patient experience and add to the bottom line.
   a. The Benefits to Private Practice: http://www.dentaltherapyforarizona.org/wp-content/uploads/2017/11/Scandrett-Draft-Response-to-Green-and-Pasupathy-critiques.pdf
   b. The Benefits to Public Services: http://www.dentaltherapyforarizona.org/wp-content/uploads/2017/11/Mathu-Muju-Friedman-and-Nash-2016-Saskatchewan-Journal-of-Public-Healt....pdf

Arizona Coalition

Dental Care for AZ is a group of organizations united in support of a proposal before the state Legislature that would authorize use of dental therapists in Arizona, eliminate unnecessary government regulation of the dental delivery system, and increase access to dental care for vulnerable populations.

I am a Dental Therapist

- As a dental therapist, I am part of a dental care delivery model that started nearly **100 years ago and is used in 54 countries**.
- I am **well-trained** to provide about 80 dental procedures.
- I am educated to **meet training standards set by the national dental education accrediting board**.
- I help **decrease wait times and travel times** for appointments.
- Evaluations show my safety and effectiveness record is at or above that of dentists.
- Studies show I can fill teeth **as well as dentists**.

Learn more about what dental therapy is and the practitioners and experts that make it so effective at DentalTherapyForArizona.org.

DentalTherapyForArizona.org

Urgent Needs,Facts & Stats, Correcting the Record

Oral Health Needs in Tribal Country

NEED

1. Arizona is currently home to 22 individual sovereign tribal nations with approximately 374,000 tribal members living on and off reservations. Tribal nations have grappled for decades with a shortage of dentists willing to work for the Indian Health Service (IHS) and tribal facilities.
2. Despite research showing that dental health is an important part of overall long-term health, Arizona's current dental care delivery model fails to address chronic oral health provider shortages, geographic isolation and the long-distance travel to access specialty care. In some areas, basic oral health-care services are not available locally at all.
3. In Arizona alone, 76 percent of American Indian children have experienced tooth decay by age 5.[i]

DENTAL THERAPY IS WORKING

4. Dental therapists are a tribal solution, brought to the U.S. from tribes. The Alaska Native Tribal Health Consortium (ANTHC) first introduced dental therapists to the U.S. in 2004. Since then, dental therapists have expanded care to 45,000 Alaska Natives in 80 previously underserved communities.
5. Dental therapists have been authorized in Maine, Minnesota, and Vermont, and are also being used to care for Native American tribes in Washington and Oregon. Dental therapists trained through the Alaska Native Tribal Health Consortium began working in tribal communities in Washington State in January 2016 and in Oregon in June 2017.
   a. Several other states in addition to Arizona, including Kansas, Maryland, Massachusetts, Michigan, New Mexico, North Dakota, Florida and Ohio are all exploring the potential for authorizing dental therapy to expand access for the underserved.
6. Tribes in Arizona deserve the right to utilize dental therapy to address oral health challenges. But this shouldn't just be a tribal solution. While tribes need dental therapists so do a lot of Arizonans. Let's continue to be partners and authorize dental therapists.
7. There is evidence that dental therapists on tribal lands are working. A recent study[ii] from the University of Washington found that in just one decade, Alaska Native children and adults in communities with high access to a dental therapist experienced a significant increase in preventive dental care services. And far fewer children needed traumatic front tooth extractions. The outcomes are clear.

TRIBES HAVE ALWAYS BEEN PARTNERS

8. Since Arizona's founding, tribes have always shared resources with the broader community and have been partners with non-tribal people. Today we have an opportunity to work together to increase access to oral health care for all Arizonans by adding dental therapists to join the dental team.

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i Arizona Early Childhood Development and Health Board (First Things First), "Taking a Bite Out of School Absences: Children's Oral Health Report 2016," 2016. Accessed on September 1, 2016 from http://azftf.gov/WhoWeAre/Board/Documents/FTF_Oral_Health_Report_2016.pdf.

ii Donald L. Chi, Dane Lenaker, Lloyd Mancl, Matthew Dunbar, and Michael Babb, "Dental Utilization for Communities Served by Dental Therapists in Alaska's Yukon Kuskokwim Delta: Findings from an Observational Quantitative Study" (Aug. 11, 2017), http://faculty.washington.edu/dchi/files/DHATFinalReport.pdf.

DENTAL THERAPY STATS FOR AMERICAN INDIAN COMMUNITIES IN ARIZONA

American Indians suffer from the poorest oral health of any group of people in the United States, with staggering rates of untreated tooth decay among children and untreated decay and gum disease among adults. Dentist recruitment continues to be a challenge for tribes.[i] IHS consistently has a 20% vacancy rate in dental provider positions.[ii] As a result of limited funding, geographic challenges, policy restrictions and limited workforce models, it is extremely difficult to recruit dentists to work on tribal lands.

NATIONALLY:

- In 2014, 2.4 million American Indians/Alaska Natives lived in counties with dental shortage areas, including half of all American Indian children.[iii]
- Preschool-aged American Indian children had 4 times more cases of untreated tooth decay than white children (43% vs. 11%).[iv] They also had 4 times more decayed and filled teeth than white children (4 teeth vs. 1 tooth).[v]
- Nearly two-thirds of American Indians aged 35 to 49 have untreated decay, more than twice the rate among adults of the same age in the general U.S. population.[vi]
- American Indian adults have more untreated decay than any other racial/ethnic group in the U.S.[vii]
- American Indians are less likely than the general population to have private health insurance, and are more likely to be covered by Medicaid or remain uninsured.[viii]
- The U.S. Indian Health Service spent an average of only $99/person on dental care in 2009, compared to $272/person nationwide.[ix]

ARIZONA:

- Arizona is home to 22 individual sovereign nations with approximately 374,000 people residing on and off reservations.[x]
- Tribal lands are generally located in rural areas and comprise 26% of the state.[xi]
- In Arizona, 76% of American Indian kindergarteners have a history of tooth decay.[xii]
- American Indians comprise over 9% of the Medicaid population in Arizona.[xiii]
- 56% of American Indian children had Medicaid coverage and 19% were uninsured in 2015.[xiv] That same year, 35% of American Indian adults had Medicaid coverage and 29% were uninsured.[xv]

IMPACT OF DENTAL THERAPISTS IN NATIVE COMMUNITIES:

- Since 2004, Alaska Native tribal governments have used midlevel dental providers to address the dental care needs in their communities. Dental therapists provide preventive and routine restorative care, such as filling cavities and performing uncomplicated extractions.
- More than 45,000 Alaska Native people living in 80 previously unserved or underserved rural communities have regular access to dental care thanks to the addition of dental therapists to dentists' teams.[xvi]
- In a case study of two dental therapists in Alaska, these providers generated more than $216,000 in estimated net revenue after accounting for employment costs, including full-time dental assistants.[xvii] This frees up resources that can be reinvested in clinics and in expanded services.
- A recent study found that children and adults had lower rates of tooth extractions and more preventive care in Alaska Native communities served frequently by dental therapists than residents in communities not receiving these services, clearly demonstrating the positive health impacts of these dental providers.

[i] The Commonwealth Fund, "States in Action: Innovations in Health Policy," 2010. Accessed on September 1, 2016 from http://www.commonwealthfund.org/publications/newsletters/states-in-action/2010/mar/march-april-2010/snapshots/alaska-and-minnesota.

[ii] National Congress of American Indians letter to Dr. Sherin Tooks, Commission on Dental Accreditation, 2014. Accessed on September 1, 2016 from http://www.communitycatalyst.org/blog/text/NCAI-Coda-Comments-Final-12-1-14.pdf.
38 Mary Williard, Presentation to the National Indian Health Board 5th Annual National Tribal Public Health Summit, March 31-April 2, 2014. Accessed from
http://www.nihb.org/docs/05212014/Dental%20Health%20Aide%20Therapists%20Presentation%201.pdf September 1,2016.

[iii] Center for Native American Youth, the Aspen Institute, "Oral Health and Native American Youth" (September 2014), http://www.aspeninstitute.org/sites/default/files/content/docs/cnay/Oral-Health-and-Native-American-Youth.pdf.

[iv] Kathy R. Phipps and Timothy L. Ricks, "The Oral Health of American Indian and Alaska Native Children Aged 1-5 Years: Results of the 2014 IHS Oral Health Survey" (Rockville, MD: U.S. Department of Health and Human Services, Indian Health Service, 2015), accessed June 23, 2015, http://www.ihs.gov/doh/documents/IHS_Data_Brief_1-5_Year-Old.pdf. These figures refer to the 2014 IHS oral health survey of American Indian and Alaska Native children ages 3-5 and the National Health and Nutrition Examination Survey (NHANES), 2009-2010.

[v] Kathy R. Phipps and Timothy L. Ricks, "The Oral Health of American Indian and Alaska Native Children Aged 1-5 Years: Results of the 2014 IHS Oral Health Survey" (Rockville, MD: U.S. Department of Health and Human Services, Indian Health Service, 2015), accessed June 23, 2015, http://www.ihs.gov/doh/documents/IHS_Data_Brief_1-5_Year-Old.pdf. These figures refer to the 2014 IHS oral health survey of American Indian and Alaska Native children ages 3-5 and the National Health and Nutrition Examination Survey (NHANES), 1999-2002.

[vi] Kathy R. Phipps and Timothy L. Ricks, "The oral health of American Indian and Alaska Native adult dental patients: results of the 2015 IHS oral health survey," Indian Health Service data brief. Rockville, MD: Indian Health Service. 2016, https://www.ihs.gov/DOH/documents/IHS_Data_Brief_March_2016_Oral_Health%20Survey_35_plus.pdf.

[vii] Kathy R. Phipps and Timothy L. Ricks, "The oral health of American Indian and Alaska Native adult dental patients: results of the 2015 IHS oral health survey," Indian Health Service data brief. Rockville, MD: Indian Health Service. 2016, https://www.ihs.gov/DOH/documents/IHS_Data_Brief_March_2016_Oral_Health%20Survey_35_plus.pdf. This figure refers to the 2015 IHS data looking at adults age 35 and older.

[viii] Kaiser Family Foundation, "Health Coverage and Care for American Indians and Alaska Natives," Issue Brief, October 2013, accessed on September 1, 2016 from https://kaiserfamilyfoundation.files.wordpress.com/2013/10/8502-health-coverage-and-care-for-american-indians-andalaska-natives.pdf. These figures are for nonelderly American Indians and Alaska Natives, data is from 2009-2011.

[ix] The 2010 Indian Health Service Oral Health Survey of American Indian and Alaska Native Preschool Children (Rockville, MD: U.S. Department of Health and Human Services, Indian Health Service, 2013) These figures refer to IHS fiscal year 2011 data and Medical Expenditure Panel Survey Household Component Data, 2009.

[x] U.S. Census Bureau, Population Estimates Program (PEP), Arizona, https://www.census.gov/quickfacts/fact/table/AZ/PST045216.

[xi] College of Agriculture, University of Arizona, Arizona Land and People, Vol. 47, Number 2. Accessed from https://cals.arizona.edu/pubs/general/azlp47-2/maps on August 285, 2017.

[xii] Arizona Early Childhood Development and Health Board (First Things First), "Taking a Bite Out of School Absences: Children's Oral Health Report 2016," 2016. Accessed on September 1, 2016 from http://azftf.gov/WhoWeAre/Board/Documents/FTF_Oral_Health_Report_2016.pdf.

[xiii] Arizona Health Care Cost Containment System (AHCCCS), "AHCCCS Population Demographics," accessed November 15, 2017, https://www.azahcccs.gov/Resources/Downloads/PopulationStatistics/2017/Oct/AHCCCS_Demographics.pdf.

[xiv] Georgetown University, Health Policy Institute, Center for Children and Families, "Coverage Trends for American Indian and Alaska Native Children and Families," July 2017, https://ccf.georgetown.edu/wp-content/uploads/2017/07/Amer-Indian-Alaska-Native-Coverage-final-rev.pdf

[xv] Georgetown University, Health Policy Institute, Center for Children and Families, "Coverage Trends for American Indian and Alaska Native Children and Families," July 2017, https://ccf.georgetown.edu/wp-content/uploads/2017/07/Amer-Indian-Alaska-Native-Coverage-final-rev.pdf

[xvi] DHAT: Alaska and Beyond!" Presentation by Christina Peters and Pam Johnson, Native Dental Therapy Initiative, and John Stephens, Swinomish Indian Tribal Community, to the National Indian Health Board, June 8, 2017, https://www.nihb.org/docs/07182017_tphs/thursday/DHAT%27s%20Improving%20Both%20Oral%20Health%20Outcomes%20&%20Access-%20New%20Research%20from%20Alaska%20&%20New%20Policies.pdf.

[xvii] The Pew Charitable Trusts, Expanding the Dental Team: Increasing Access to Care in Public Settings (June 2014), http://www.pewtrusts. org/~/media/Assets/2014/06/27/Expanding_Dental_Case_Studies_Report.pdf.

Frequently Asked Questions

BACKGROUND INFO:

1. **Who is Dental Care for Arizona?**

    a. We represent and are continuing to build a broad coalition of diverse interests in support of dental therapists (DTs). Our supporters range from Tribes to the Goldwater Institute to rural business interests and the Arizona Farm Bureau, to name but a few. People across Arizona know the urgent need for increasing access to preventative care at lower costs and understand that DTs are a viable way to alleviate this crisis without the need for new government agencies or programs, and at lower costs that create new opportunities for Arizona's dentists and its workforce.

2. **How long have there been efforts in Arizona to license Dental Therapists?**

    a. The Member Tribes of the Inter-Tribal Association of Arizona (ITAA)—21 tribal governments in Arizona—have long supported the Community Health Aide Program (CHAP), a program that was developed in the 1960s to respond to a number of health concerns in Alaska. The ITAA adopted a resolution in 2007 supporting the Indian Health Care Improvement Act (IHCIA) to include dental therapists (DTs) in CHAP.[61] Unfortunately, IHCIA was amended in 2010 as part of the Affordable Care Act and it prevents the use of DTs in Tribal Communities (outside of Alaska) without approval by a state legislature.[62]

        The ITAA unanimously adopted a resolution to support the dental therapy sunrise application in November of 2016.[63] The Naabik'iyati' Committee of the Navajo Nation Council similarly adopted a resolution in support of the sunrise application in 2017.[64]

    b. There are as many as 100 different groups working to improve oral healthcare in Arizona, from both a health and workforce focus. If we are to move the needle in Arizona, we need continued focus on prevention and education, screening and coordination, and a modernized delivery mechanism for high quality oral healthcare.

    c. Dental Care for Arizona's efforts, which include the Tribes as well as other organizations actively working toward these same goals, began late this summer. The coalition was created to serve as a vehicle to bring various supporters across the political and healthcare spectrum together.

3. **Why the push for dental therapy?**

    a. During the great recession, Arizona froze enrollment in KidsCare, the state's Children's Health Insurance Program (CHIP), and eliminated the adult dental benefit from the Arizona Health Care Cost Containment System (AHCCCS) the state's Medicaid program. This past year, the legislature voted to restore KidsCare, which will provide benefits to 30,000 children statewide, and reinstate an emergency adult dental care benefit (emergency dental services and extractions up to $1,000).[65] They also voted to authorize funds to provide $1,000 per person annually for dental services, including diagnostic, therapeutic, and preventive services and dentures, to Arizona Long Term Care System (ALTCS) members, age 21 and older.[66] As we bring people back under the state's Medicaid/CHIP program, the fiscally responsible approach is to allow dentists to use midlevel dental providers to minimize the financial burden of treating more people with lower reimbursements. Dental therapists lower the per-unit cost of care, allowing dentists to serve more Medicaid patients with the revenues they collect.

b. Arizona is geographically large and diverse, with the vast majority of residents living in Maricopa and Pima counties. However, every one of Arizona's 15 counties has at least some portion designated as a dental health professional shortage area.[67] Living in a shortage area is just one of the many barriers Arizonans face to accessing dental care.[68] Often, people cannot find a dentist who accepts public insurance, while others cannot get to a dental office due to mobility or transportation challenges.[69] And many people, regardless of insurance status, are unable to afford the costly price of dental services.[70] Research shows that oral health is connected to overall health.[71] As such, it is time to start looking at mechanisms that will deliver quality care to diverse populations in a variety of settings using a variety of service delivery mechanisms.

c. In the states that utilize dental therapists, it has been demonstrated that these practitioners safely and effectively increase access to care cost-efficiently. As required by Minnesota law, the Minnesota Board of Dentistry and the Department of Health issued a report on the impacts of dental therapists in the state. This report found that clinics and offices that employed dental therapists experienced many positive outcomes including:[72]

   i. Expanded capacity to serve more underserved patients due to cost savings;
   ii. Decreases in travel times and wait times;
   iii. Decreases in no-show rates;
   iv. Increased productivity of the dental team; and
   v. High levels of patient satisfaction.

d. Nowhere in Arizona is the gap in access to dental care more acute than in tribal communities. In Arizona, 76% of American Indian children have a history of tooth decay.[73] Arizona is home to 22 individual sovereign nations with over 370,000 people living on and off tribal reservations.[74] Alaska Native communities were similarly experiencing access challenges, and the introduction of dental therapists to their dental teams in 2004 has dramatically helped. Since then, 45,000 people in 80 previously underserved communities now have access to regular dental care.[75]

4. What is the Committee or Reference (COR) and when is the hearing around the Sunrise Application happening?

a. The Committee of Reference (COR)—subsets of the House and Senate Health Committees—will hear testimony in late fall 2017 and make a recommendation to the full Arizona legislature on whether or not legislation to create scope of practice and licensure for dental therapy should be considered. This 10-member committee will have a significant say in whether or not the other 80 members of the State House and Senate will be able to consider and debate this proposal.

5. What happens if the COR approves the Sunrise Application?

a. Following the COR, legislation will be drafted and introduced in the 2018 legislative session. Together with the stakeholders, Dental Care for Arizona will coordinate the development of a bill draft that will be flexible enough to meet the needs of the various interests at the table while also increasing access to dental care and ensuring high-quality education, training, continuing education and licensure standards.

b. Because of the urgent need for this proven dental care delivery model, if the 10 members of the COR continue to prevent the full legislature from debate this issue, we will consult with stakeholders in our broad, bi-partisan coalition about our efforts during the 2018 legislative session.

c. While the COR hearing is about deciding whether or not to recommend that the full Arizona legislature should consider legislation to create a scope of practice and licensure for dental therapy, the Dental Care for Arizona coalition feels strongly that this 10-member body should allow the other 80 members of the State House and Senate to consider something that would have such an important impact on access and cost of dental care for all Arizonans.

6. **Who are the main opponents?**

   a. So far there is **one main opponent** to allowing qualified, trained dental therapists to perform the most limited, specific, and common procedures. That group has been the main trade organization for dentists, the American Dental Association and its local arm, the Arizona Dental Association.

   Outside of this trade group, we've heard directly from dozens of dentists around the country who support dental therapists, including those who have incorporated them into their practices. They have experienced many positive outcomes, including increasing their capacity to see more patients and increasing revenue without sacrificing quality of care. Because dental therapists provide preventive and basic restorative care under general supervision, dentists have the ability to extend their office hours, serve more Medicaid beneficiaries and underserved populations, provide treatment to people in the community (i.e. in nursing homes, long-term care facilities, and schools), and focus their time on the more complicated procedures (which generate higher revenue). When every member of the dental team is operating at the top of their license, quality care is delivered to more people more cost effectively.

7. **How does the Arizona proposal compare to dental therapy proposals in other states?**

   a. Each state law to implement dental therapists has included unique facets and components to meet the state's oral health needs, respond to political concerns, and ensure the educational institutions have the guidance they need to create training programs. Currently, the model proposed in Arizona is one of the most free market proposals, and includes the fewest restrictions on dental therapy practice locations of any state that has considered this model. Arizona, because of its rural and remote areas, would greatly benefit from this free enterprise solution to its dental access crisis.

8. **How receptive has the legislature been? Governor?**

   a. Thus far, policy makers have been receptive to both the free market solution dental therapists present and increasing access to quality care at lower costs via dental therapy. This is a new proposal for Arizona law makers and we are preparing to seat a new House and Senate in January. Education will be key to these efforts, as will the broad stakeholders interested in improving oral healthcare in Arizona.

IMPACT:

1. **What would the impact be if dental therapists get the go-ahead to practice?**

   a. There would be many impacts, not all of them predictable. But immediately, Tribal and Indian Health Service (IHS) facilities could bring in dental therapists from other states, as IHS already has a classification for dental therapists (in the IHS system, the term is Dental Health Aide Therapist or DHAT).

   b. Also, Arizona has eight CODA accredited dental hygiene programs that could develop training programs and apply for dental therapy program accreditation. In addition, national dental therapy experts have developed a sample open-source curriculum with the American Association

of Community Colleges to assist in the program design and implementation of dental therapy around the country.

c. Arizona's Dental Hygiene Association supports this proposal, as it will expand professional opportunities for the existing dental health workforce in Arizona.

d. But, as you know, laws alone do not make change, people make the difference, and that will take time to implement. Changing the law will empower a broad range of groups, professionals, dentists and health care providers the change to make a difference in the near and long term future for all of Arizona.

2. **How far would licensing dental therapists go in making a dent in dental health care shortage areas?**

   a. Dental therapists should go a long way to increasing access to high quality care across Arizona, but especially in rural areas. Few dentists choose or prefer to work in rural areas. Regardless of financial resources, individuals in these areas have to travel long distances to see a dentist, if one is even available. Dental therapists, working in conjunction with dentists, can fill in these gaps to treat the most common needs and increase access to preventative and basic restorative care. Dental therapists can travel to rural areas to provide services while their supervising dentist remains in the office. They utilize teledentistry when they provide services outside of the office, receiving guidance from their supervising dentist. Any procedures that dental therapists discover beyond their scope of training and practice are referred to dentists. We've attached a map to show just how concentrated most dentists are within Arizona's metro areas.

   b. Approximately half of dental therapists in Minnesota practice outside of the Twin Cities metro area, including in rural and remote areas of the state, which significantly increases the availability of dental care in areas with few dentists or in areas where dentists cannot meet the demand.[76] A 2014 Minnesota report showed that in the study clinics seven full-time equivalent dental therapists served 6,338 new patients in the first two years dental therapists practiced. Further, nearly one-third of patients in practices employing dental therapists experienced reductions in travel and wait times since the start of the dental therapists' employment, especially in rural areas.[77]

3. **What will the education and training model be for dental therapists to be certified in Arizona?**

   a. The coalition has been working with the CODA accredited dental hygiene schools to make them aware of the potential to authorize dental therapists in Arizona. We continue to ensure these programs are involved in the development of dental therapy legislation for Arizona and that their education and training recommendations are addressed.

   b. The American Association of Community Colleges recently prepared a sample curriculum and guideline for how the CODA standards can be crafted into a real licensing program. The goal with legislation is to authorize the provider to be licensed and practice. We look to our Arizona educational institutions to be the experts on what kind of program their students would be interested in, and how to structure that program to provide career ladders to former, existing and future students.

4. **In Arizona, how much would this lessen the expensive problem of people going to the emergency departments (ED) for oral health problems?**

   a. In 2014, there were over 26,800 visits to the ED for dental conditions that could have been avoided with routine dental care.[78] Using national per visit cost data, these visits represent a

total estimated cost of $20.4 million.[79] Arizona Medicaid (Arizona Health Care Cost Containment System or AHCCCS) paid for 56%—over 15,000—of these visits.[80]

b. Unfortunately, receiving dental care in the ED is not only expensive, it's also insufficient. When people visit the ED for dental problems, they are generally treated only for their acute needs, receiving pain killers and antibiotics, and then referred to a dentist. However, often patients seek dental care in the ED because they do not have regular access to a dentist.

c. Dental therapists, by focusing on the most commonly needed routine dental procedures and by providing this care in more accessible locations, can make routine dental care more attainable for people throughout the state. Dental therapists are critical providers to both see more patients for preventive and routine restorative care, and to free up dentists to absorb patients with more advanced dental care needs.

5. What would you say to a dentist who opposes this because he or she worries that it will "compromising quality"?

a. The fact is dental therapists have been practicing in more than 50 countries around the world beginning in the 1920s. A global literature review of over 1,000 studies and assessments showed that dental therapists provide technically competent, high quality, and safe care.[81]

b. CODA requires dental therapists to have at least three academic years of education and training. In Arizona, the scope for dental therapists would include about 80 procedures. In contrast, dental school is four years, and general dentists can perform about 435 procedures.[82]

c. It's also important to note that dental therapists in Arizona will have to pass state exams, and exams assessing clinical competence, approved by the Dental Board, to receive their dental therapy license. In Minnesota, dental therapy and dental students are trained side-by-side, and the examiners are blinded as to who is a dental candidate and who is a dental therapy candidate. Dental therapists are required to meet the same competencies as dentists for the procedures they share.

d. Medical malpractice insurance in Minnesota for an office employing a dental therapist is very similar to the coverage for a dental hygienist and dental assistant.[83] For example, the rate from Marsh Professional Liability is less than $100 per year.[84]

Facts & Statistics:
1. Arizona's Medicaid Program
2. The Oral Health of Arizona's Seniors

ARIZONA'S MEDICAID PROGRAM

- Millions of people throughout Arizona continue to face significant challenges to accessing dental care and treatment of dental disease.
- Accessing dental care is particularly difficult for children enrolled in Medicaid (Arizona Health Care Cost Containment System (AHCCCS)). A 2017 AHCCCS report states that about 38% of Arizona dentists participate in Medicaid.[85] It is important to note that this number represents the number of enrolled dentists, not the number of dentists who are actively treating Medicaid patients.
- Almost 53% of children aged 1-20 enrolled in AHCCCS—397,000 kids—did not receive any dental care in 2016.[86]
- According to the *Healthy Smiles Healthy Bodies* survey, 62% of children enrolled in AHCCCS in 2015 had decay experience compared to 34% of children with employer or private insurance.[87]
- According to the American Dental Association, some of the main reasons adults do not go to the dentist are cost and difficulty finding a dentist that accepts Medicaid.[88] In Arizona, adults enrolled in Medicaid are only covered for emergency procedures like emergency extractions or other procedures for immediate pain relief.[89]
- In 2014, there were over 26,800 visits to the emergency department (ED) for dental conditions that could have been avoided with routine dental care.[90] Using national per visit cost data, these visits represent a total estimated cost of $20.4 million.[91] Medicaid paid for 56% of these visits.[92]

ARIZONA: SENIORS AND ORAL HEALTH

- In 2014, 35% of Arizonans over 65 had not seen a dentist in the previous year.[93]
- In 2014, 12% of Arizonans age 65 and older had lost all of their natural teeth due to tooth decay or gum disease.[94]
- In 2014, nearly 1 in 3 adults age 65 and older had lost at least six teeth due to tooth decay or gum disease.[95]
- As of 2016, nearly 17% of the state population—over 1.1 million people—was age 65 and older.[96]
- From 2010-2014, only 19 states had increases in the number of nursing homes. Arizona had the third largest increase in the country.[97]
- As of 2014, 20%—almost 285,000 people—of non-institutionalized individuals age 60 and older had mobility limitations.[98]
- As of January 2017, 5.6%—nearly 104,000 people—age 65 and older are in Arizona's Medicaid program (Arizona's Health Care Cost Containment System (AHCCCS)).[99]
- Currently, AHCCCS only covers emergency services related to acute pain, infection, or fracture of the jaw for individuals age 21 and older.[100]
- In October, the Arizona legislature voted to authorize funds to AHCCCS to provide $1,000 annually for dental services, including diagnostic, therapeutic, and preventive services and dentures, to Arizona Long Term Care System (ALTCS) members, age 21 and older.[101] ALTCS is a program through AHCCCS that provides services to AHCCCS beneficiaries who are elderly, blind, and/or have a physical or developmental disability.[102]

The Truth about the Arizona Dental Association's Arguments Against Dental Therapy

The most important thing Arizona policy makers can do to get to the truth about dental therapists is **Ask for the Evidence**. The amount of misinformation on this issue is astounding, yet the evidence is clear: Dental therapists are safe, effective providers of routine preventative and restorative care. Below is a point-by-point counter to the AzDA's talking points against dental therapists.

The AzDA Claims:

"We agree Arizonans have a number of challenges accessing to dental care, but suggesting there is an inadequate dental workforce is the wrong diagnosis. Dental therapy is the wrong prescription. In the last ten years, Arizona's dental workforce had a 10% net increase, roughly tracking our population growth."

The Truth Is:

All of Arizona's 15 counties have all, or some portion, designated as a Dental Health Professional Shortage Area(DHPSA). Over 4.6 million Arizonans live in a DHPSA. People in rural areas, low income families, the uninsured and people with disabilities encounter the greatest barriers to dental care.

For example: ***In Scottsdale, there are 481 dentists serving a population of 242,700 people in a geographic area of 184 square miles. In Coconino, Yavapai, Gila, and Navajo counties, there are 280 dentists to serve a population of about 530,000 in a geographic area of 41,451 square miles.***

The AzDA Claims:

"Pew states that there were **27,000 visits to the ER in 2014, and more than half of those were paid by AHCCCS**. AzDA has fought for seven years to get emergency dental benefits restored so that we could get these patients back into dental offices and clinics—where they belong. As of October 1, the new program will be back in place due to our advocacy efforts."

The Truth Is:

The reinstated Medicaid benefit only covers patients in the case of a dental emergency and only provides up to $1,000 worth of care. While a step in the right direction, this limited insurance coverage is not comprehensive and does not guarantee access to dental care. The benefit does not cover routine and preventive dental services, like screenings and teeth cleanings. Further, we all know that coverage doesn't equal care. In 2017, AHCCCS reported that only 38% of dentists participate in Medicaid. It is important to note that this number represents the number of ***enrolled*** *dentists, not the number of dentists who are actively treating Medicaid patients.*

According to a 2015 survey by the American Dental Association's Health Policy Institute, ***99% of adults surveyed in Arizona said they value oral health****. However, among those who did not visit a dentist in the past year,* ***66% cited cost*** *as the number one reason. The other two most cited reasons were "inconvenient location or time" and "trouble finding a dentist."*

The AzDA Claims:

"Pew peddles a map that shows large areas of Arizona with a limited number of dentists—suggesting there aren't enough dentists in the state. The fact is, most of these areas do not have a sufficient population to support a dental practice or a dental therapist."

The Truth Is:

No matter where people live in Arizona, they need access to routine dental care.

Dental therapists work under general supervision so they can travel to underserved areas and provide treatment to patients in the community (i.e. in nursing homes, schools, and long-term care facilities). They can also allow dentists the flexibility to extend their office hours so patients can access care after work and on weekends.

If it is too expensive for dentists to open practices in rural areas, perhaps the better answer is to allow skilled providers who make less per hour than dentists to locate or travel to rural areas to provide care. This is a less expensive way for dentists to serve these people, which means a dentist will earn more for the same care delivered.

In fact, a recently published study of dental therapists working in a Minnesota Veterans Home found that between 82% and 87% of all the elderly veterans' dental needs could be handled by a dental therapist. *Not only does this increase patient access to care, but it allows dentists to focus on more complicated and costly procedures that only they are trained to perform (like root canals).*

The flexibility of and mobility of dental therapists also ***removes the cost of transporting patients to traditional dental offices****—which includes staff time and use of special transportation services—which can more than double the cost of needed dental services.*

The AzDA Claims:

"Arizona has only limited incentive programs to get health providers to locate in rural and underserved areas. Last year, the State's loan forgiveness program was only funded at $875,000 (covering only 26 slots) for all types of health care providers."

Further, The AzDA's Executive Director **Kevin Earl** was quoted recently in the Phoenix Business Journal (September 1, 2017) saying **"We need better incentives to deliver care in rural areas to make it economically viable…".**

The Truth Is:

We don't need more government incentives for dentists to deliver care in rural areas, we need a cost-effective model for oral healthcare delivery. *Dental therapists are a lower cost provider who can treat the most basic, common restorative oral health care needs of patients.*

The AzDA Claims:

"The ADA Health Policy Institute studied the distribution of Medicaid dentists and the AHCCCS population in Arizona. It turns out that 91% of the Medicaid population in Arizona is within a 15-minute drive time of an AHCCCS dentist."

The Truth Is:

The ADA Health Policy Institute authored a report entitled, ***"A New Way of Measuring Geographic Access to Dental Care Services."*** *The 50-state report uses geo-mapping and draws data from a national database called Insure Kids Now (IKN) to estimate the distance between publicly insured children and dentists who participate in Medicaid. This data is flawed and is a highly unreliable source to base such estimates.*

It does not assess how many children on Medicaid the dentist sees, whether dentists are willing to see new patients on Medicaid, or even if a dentist has seen a single child on Medicaid in the past year. These questions are crucial for truly understanding access to dental care for children on Medicaid.

A previous ADA study on the reliability of IKN data found that ***nearly half (48%) of the dentists did not practice at the location listed in the IKN database****. The error rate on which HPI maps locations of Medicaid participating dentists is extremely high. Further, IKN does not report if dentists actually serve any children on Medicaid, only if they are enrolled to participate.*

The bottom line is that almost 53% of children aged 1-20 enrolled in AHCCCS—397,000 kids—did not receive any dental care in 2016.

The AzDA Claims:

"Pew proposes dental therapists receive three years of intensive training and that they should be allowed to work independently of a dentist. They also suggest that dental assistants and dental hygienists receive "advanced standing." They would be able to do "the most commonly needed routine dental procedures, including fillings, and extractions." The training should follow CODA standards, but in fact, there are NO CODA accredited dental therapy training programs anywhere in the United States."

The Truth Is:

CODA standards require ***dental therapists complete a minimum of three academic years of education to learn the roughly 80 procedures*** *within their scope of practice.* ***CODA requires General Dentists to receive four academic years of dental education to perform about 435 procedures*** *within their scope of practice. It is also CODA (not Pew) that encourages advanced standing for dental hygienists.*

Since the standards were just implemented in 2015, existing dental therapy training programs are now in the process of applying CODA accreditation. All programs will have to be accredited by CODA in the future. By establishing competency and education and training expectations for all American trained dental therapists, CODA confirmed that dental therapists provide high-quality and safe care. CODA would not have implemented standards for dental therapy training programs were there evidence to suggest that the safe practice of dental therapists was in question. In addition, national dental therapy experts have developed a sample open-source curriculum with the American Association of Community Colleges to assist in the program design and implementation of dental therapy around the country.

Further, the proposal in Arizona requires dental therapists to pass state exams and exams assessing clinical competence approved by the Dental Board to receive their dental therapy license.

The AzDA Claims:

"Low-income and rural Arizonans are not lab rats. They shouldn't be subject to a different standard of care. Pew and the Goldwater Institute may disagree, but we recognize dental patients are human beings who deserve the highest quality of care—whether or not they have large bank accounts or live in a major city."

The Truth Is:

We couldn't agree more! Dental patients are human beings—they should have access to high quality dental care regardless of whether or not they have large bank accounts or live in a major city. The problem is that low-income, rural and tribal populations, the elderly and those with developmental disabilities face the greatest barriers to dental care. ***Dental therapy can help close this gap between those who have access and those who do not, without further subsidizing dentists to provide care to these populations.***

In Arizona, ***the prevalence of tooth decay is higher among children who are on Medicaid or are uninsured, or who live in lower income households.*** *Without changes to the dental care delivery model, these children will grow up with dental pain and disease.*

Research shows that dental pain and disease leads to missed school days, difficulty concentrating in school, and lower academic achievement. These problems can persist into adulthood.

The AzDA Claims:

"Proponents tout dental therapy as a "free market" solution to address oral health needs, but Arizona probably has the "free-est" market for oral health delivery in the nation. Far from being widely supported, Arizona allows non-dentists to own a dental practice. Anyone could set up a mobile clinic and hire dentists and dental hygienists to provide dental services in rural areas (and many of them do)."

The Truth Is:

Arizona's Dental Practice Act prohibits anyone other than a dentist from providing any form of restorative dental treatment. *It further prohibits any provider other than a dentist from treatment planning. This monopoly on restorative care means that* ***the single most expensive member of the dental team must perform every procedure, from a small filling on a child's primary tooth to dental implants. This is inefficient and cost prohibitive.***

The AzDA Claims:

"Our laws have been changed to provide for the use of teledentistry technology to connect dental teams. We have made it easier to use affiliated practice dental hygienists, and expanded function dental assistants – all at AzDA's urging."

The Truth Is:

Teledentistry and the use of affiliated practice dental hygienists are critical to expanding access to preventative care (including fluoride treatment and cleanings) and can be useful for patient diagnostics—however they do not extend access to restorative dental care.

For teledentistry to be effective in serving rural Arizona, or patients who have difficulty getting into the dentist's office, the provider who is with the patient must have a scope of practice that allows them to treat the patient. *Without that, patients still need to get to a dentist to receive any restorative care.*

The AzDA Claims:

"We have watched this dental therapist experiment play out in a few different states and the results are clear: the free market has not embraced dental therapy as a solution. Wherever it exists, it is supported almost entirely by public funding."

The Truth Is:

Dental therapy is not an experiment: dental therapists have been practicing since 1921 around the world for almost a century. They have been practicing in Alaska since 2004, and in Minnesota since 2011. The free market has embraced them as a solution. Private practice dental offices as well as non-profit and public dental offices are employing dental therapists and seeing positive results without any direct support or subsidy from state budgets. More dental therapists are graduating, hired, and treating patients every year.

U.S. dental therapists are not subsidized by public funding. Neither the AzDA nor the ADA have any evidence to suggest it is. Dental therapists are not subsidized for becoming dental therapists. Dentists are not subsidized to hire dental therapists.

The AzDA Claims:

"The Goldwater Institute says patients are flocking south of the border to obtain lower cost dental care. However, dental therapists will fix this problem. Mexico has almost no regulatory structure, no dental board, and where labor costs are about a third of those in the United States. There is no evidence anywhere to support the notion that dental therapy will lower the cost of dental care in the United States."

The Truth Is:

We need to provide dentists with the tools to lower their per-unit cost of care and incentivize patients to care in Arizona. *Patients that seek care in Mexico are opting out of a delivery system entirely—dentists need to consider a broad range of reasons why that might be the case.*

If AHCCCS follows existing policy of reimbursing midlevel providers at a lower rate than dentists or doctors, then dental therapists could offer a more cost-effective delivery model and stretch Medicaid dollars further.

Dental therapists are less expensive than dentists: their scope of practice is substantially smaller and thus salaries are lower than dentists' salaries. ***Practices that employ dental therapists lower the production costs of delivering routine care, which increases the value of Medicaid's discounted payment rates. This could incentivize dentists to treat more Medicaid patients and pass along savings to patients paying out of pocket for dental care.***

The FTC has made statements in support of dental therapy. *The FTC put forth that dental therapy is a way to increase the supply of practitioners who can provide basic dental services safely and effectively. This greater supply of qualified providers would* ***enhance competition****, which can* ***yield lower prices, additional service hours, shorter wait times and innovations in care delivery.***

Studies Cited by the ADA

1. Follow this link for a study on the Saskatchewan Health Dental Plan. The ADA claims the program stopped because it wasn't working. The program was in fact quite successful, but was terminated due to a change in political leadership.
   a. http://www.dentaltherapyforarizona.org/wp-content/uploads/2017/11/Mathu-Muju-Friedman-and-Nash-2016-Saskatchewan-Journal-of-Public-Healt....pdf

2. Follow this link for a letter from Michael Scandrett, Executive Director, Minnesota Health Care Safety Net Coalition, on how statistics the ADA cite fall short:
   a. http://www.dentaltherapyforarizona.org/wp-content/uploads/2017/11/Scandrett-Draft-Response-to-Green-and-Pasupathy-critiques.pdf

Endnotes

[1] Donald L. Chi, Dane Lenaker, Lloyd Mancl, Matthew Dunbar, and Michael Babb, "Dental Utilization for Communities Served by Dental Therapists in Alaska's Yukon Kuskokwim Delta: Findings from an Observational Quantitative Study" (Aug. 11, 2017), http://faculty.washington.edu/dchi/files/DHATFinalReport.pdf; David A. Nash et al., "A Review of the Global Literature on Dental Therapists," (2012) http://www.wkkf.org/-/media/pdfs/dental-therapy/nash-dental-therapist-literature-review.ASHX; The Minnesota Department of Health and the Minnesota Board of Dentistry, "Early Impacts of Dental Therapists in Minnesota," (2014), http://www.health.state.mn.us/divs/orhpc/workforce/dt/dtlegisrpt.pdf

[2] The Pew Charitable Trusts, "Expanding the Dental Team," (Feb 2014), http://www.pewtrusts.org/~/media/legacy/uploadedfiles/pcs_assets/2014/expandingdentalteamreportpdf.pdf; The Pew Charitable Trusts, "Expanding the Dental Team: Increasing Access to Care in Public Settings," (June 2014), http://www.pewtrusts.org/~/media/Assets/2014/06/27/Expanding_Dental_Case_Studies_Report.pdf; Wilder Research and Delta Dental of Minnesota, "Grand Marais Family Dentistry: Dental Therapist Case Study," (May 2017) http://www.wilder.org/Wilder-Research/Publications/Studies/Delta%20Dental%20of%20Minnesota/Grand%20Marais%20Family%20Dentistry%20-%20Dental%20Therapist%20Case%20Study.pdf) Wilder Research and Delta Dental of Minnesota, "Midwest Dental: Dental Therapist Case Study," (May 2017) https://www.wilder.org/Wilder-Research/Publications/Studies/Delta%20Dental%20of%20Minnesota/Midwest%20Dental%20-%20Dental%20Therapist%20Case%20Study.pdf.

[3] Minnesota Department of Health, "Minnesota's Dental Therapist Workforce, 2016," (2017) http://www.health.state.mn.us/divs/orhpc/workforce/oral/2016dtb.pdf.

[4] The Minnesota Department of Health and the Minnesota Board of Dentistry, "Early Impacts of Dental Therapists in Minnesota," (2014), http://www.health.state.mn.us/divs/orhpc/workforce/dt/dtlegisrpt.pdf.

[5] The Minnesota Department of Health and the Minnesota Board of Dentistry, "Early Impacts of Dental Therapists in Minnesota," (2014), http://www.health.state.mn.us/divs/orhpc/workforce/dt/dtlegisrpt.pdf.

[6] The Minnesota Department of Health and the Minnesota Board of Dentistry, "Early Impacts of Dental Therapists in Minnesota," (2014), http://www.health.state.mn.us/divs/orhpc/workforce/dt/dtlegisrpt.pdf.

[7] The Minnesota Department of Health and the Minnesota Board of Dentistry, "Early Impacts of Dental Therapists in Minnesota," (2014), http://www.health.state.mn.us/divs/orhpc/workforce/dt/dtlegisrpt.pdf.

[8] The Minnesota Department of Health and the Minnesota Board of Dentistry, "Early Impacts of Dental Therapists in Minnesota," (2014), http://www.health.state.mn.us/divs/orhpc/workforce/dt/dtlegisrpt.pdf. The total number of new patients served by dental therapists at study clinics since the time the dental therapists were hired (first hired in August 2011) through the end of the survey period (July 2013) was 6,338. Each patient is counted once. The average hours worked by the dental therapist over the survey period ranged from 1 hour/week to 36 hours/week at multiple study sites, which equals approximately seven full-time equivalents (FTEs).

[9] Donald L. Chi, Dane Lenaker, Lloyd Mancl, Matthew Dunbar, and Michael Babb, "Dental Utilization for Communities Served by Dental Therapists in Alaska's Yukon Kuskokwim Delta: Findings from an Observational Quantitative Study" (Aug. 11, 2017), http://faculty.washington.edu/dchi/files/DHATFinalReport.pdf.

[10] Donald L. Chi, Dane Lenaker, Lloyd Mancl, Matthew Dunbar, and Michael Babb, "Dental Utilization for Communities Served by Dental Therapists in Alaska's Yukon Kuskokwim Delta: Findings from an Observational Quantitative Study" (Aug. 11, 2017), http://faculty.washington.edu/dchi/files/DHATFinalReport.pdf.

[11] The Pew Charitable Trusts, "Expanding the Dental Team," (June 2014), http://www.pewtrusts.org/~/media/legacy/uploadedfiles/pcs_assets/2014/expandingdentalteamreportpdf.pdf; Kamyar Nasseh, Marko Vujicic, and Cassandra Yarbrough, "A Ten-Year, State-by-State, Analysis of Medicaid Fee-for-Service Reimbursement Rates for Dental Care Services," The American Dental Association (October 2014), http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_1014_3.ashx. In 2013, Minnesota had the lowest Medicaid FFS reimbursement for pediatric dental care services in the country.

[12] Wilder Research and Delta Dental of Minnesota, "Grand Marais Family Dentistry: Dental Therapist Case Study," (May 2017) (http://www.wilder.org/Wilder-Research/Publications/Studies/Delta%20Dental%20of%20Minnesota/Grand%20Marais%20Family%20Dentistry%20-%20Dental%20Therapist%20Case%20Study.pdf); Wilder Research and Delta Dental of Minnesota, "Midwest Dental: Dental Therapist Case Study," (May 2017) (https://www.wilder.org/Wilder-Research/Publications/Studies/Delta%20Dental%20of%20Minnesota/Midwest%20Dental%20-%20Dental%20Therapist%20Case%20Study.pdf).

[13] Wilder Research and Delta Dental of Minnesota, "Grand Marais Family Dentistry: Dental Therapist Case Study," (May 2017) (http://www.wilder.org/Wilder-Research/Publications/Studies/Delta%20Dental%20of%20Minnesota/Grand%20Marais%20Family%20Dentistry%20-%20Dental%20Therapist%20Case%20Study.pdf); Wilder Research and Delta Dental of Minnesota, "Midwest Dental: Dental Therapist Case Study," (May 2017) (https://www.wilder.org/Wilder-Research/Publications/Studies/Delta%20Dental%20of%20Minnesota/Midwest%20Dental%20-%20Dental%20Therapist%20Case%20Study.pdf).

[14] The Pew Charitable Trusts, "Expanding the Dental Team: Increasing Access to Care in Public Settings," (June 2014), http://www.pewtrusts.org/~/media/Assets/2014/06/27/Expanding_Dental_Case_Studies_Report.pdf.

[15] Apple Tree Dental, "An Advanced Dental Therapist in Long-Term Care: An Apple Tree Dental Case Study," (2017), http://www.appletreedental.org/wp-content/uploads/2017/09/ADT-LTC-Case-Study-091517.pdf.

[16] Apple Tree Dental, "An Advanced Dental Therapist in Long-Term Care: An Apple Tree Dental Case Study," (2017), http://www.appletreedental.org/wp-content/uploads/2017/09/ADT-LTC-Case-Study-091517.pdf. Due to the difference in salaries of a DDS and an ADT, the ADT provided 234 days of care at an estimated annual cost savings of $52,000 ($222/day).

[17] Scott Wetterhall, James D. Bader, Barri B. Burrus, Jessica Y. Lee, and Daniel A. Shugars, "Evaluation of the Dental Health Aide Therapist Workforce Model in Alaska," RTI International (RTI Project Number 0211727.000.001) (October 2010), http://www.rti.org/sites/default/files/resources/alaskadhatprogramevaluationfinal102510.pdf; David A. Nash, Jay W. Friedman, Kavita R. Mathu-Muju, Peter G. Robinson, Julie Satur, Susan Moffat, Rosemary Kardos, Edward C.M. Lo, Anthony H.H. Wong, Nasruddin Jaafar, Jos van den Heuvel, Prathip Phantumvanit, Eu Oy Chu, Rahul Naidu, Lesley Naidoo, Irving McKenzie and Eshani Fernando, "A Review of the Global Literature on Dental Therapists," (2012) http://www.wkkf.org/-/media/pdfs/dental-therapy/nash-dental-therapist-literature-review.ASHX; The Minnesota Department of Health and the Minnesota Board of Dentistry, "Early Impacts of Dental Therapists in Minnesota," (2014), http://www.health.state.mn.us/divs/orhpc/workforce/dt/dtlegisrpt.pdf.

David A. Nash, Jay W. Friedman, Kavita R. Mathu-Muju, Peter G. Robinson, Julie Satur, Susan Moffat, Rosemary Kardos, Edward C.M. Lo, Anthony H.H. Wong, Nasruddin Jaafar, Jos van den Heuvel, Prathip Phantumvanit, Eu Oy Chu, Rahul Naidu, Lesley Naidoo, Irving McKenzie and Eshani Fernando, "A Review of the Global Literature on Dental Therapists," (2012) http://www.wkkf.org/-/media/pdfs/dental-therapy/nash-dental-therapist-literature-review.ASHX.

18 David A. Nash, Jay W. Friedman, Kavita R. Mathu-Muju, Peter G. Robinson, Julie Satur, Susan Moffat, Rosemary Kardos, Edward C.M. Lo, Anthony H.H. Wong, Nasruddin Jaafar, Jos van den Heuvel, Prathip Phantumvanit, Eu Oy Chu, Rahul Naidu, Lesley Naidoo, Irving McKenzie and Eshani Fernando, "A Review of the Global Literature on Dental Therapists," (2012) http://www.wkkf.org/-/media/pdfs/dental-therapy/nash-dental-therapist-literature-review.ASHX.

19 J. Timothy Wright, "Do Midlevel Providers Improve the Population's Oral Health?" The Journal of the American Dental Association 144, no 1 (Jan. 2013), http://jada.ada.org/article/S0002-8177(14)60574-2/pdf.

20 Scott Wetterhall, James D. Bader, Barri B. Burrus, Jessica Y. Lee, and Daniel A. Shugars, "Evaluation of the Dental Health Aide Therapist Workforce Model in Alaska," RTI International (RTI Project Number 0211727.000.001) (October 2010), http://www.rti.org/sites/default/files/resources/alaskadhatprogramevaluationfinal102510.pdf

21 Scott Wetterhall, James D. Bader, Barri B. Burrus, Jessica Y. Lee, and Daniel A. Shugars, "Evaluation of the Dental Health Aide Therapist Workforce Model in Alaska," RTI International (RTI Project Number 0211727.000.001) (October 2010), http://www.rti.org/sites/default/files/resources/alaskadhatprogramevaluationfinal102510.pdf

22 Commission on Dental Accreditation (CODA), "Accreditation Standards for Dental Therapy Education Programs," (2015) http://www.ada.org/en/~/media/CODA/Files/dt.

23 Health Resources & Services Administration, Data Warehouse, data on dental professional health shortage areas in Arizona as of August 23, 2017.

24 American Dental Association (ADA) Health Policy Institute (HPI), (2015), "Oral Health and Well-Being in Arizona," http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/OralHealthWell-Being-StateFacts/Arizona-Oral-Health-Well-Being.pdf.

25 The Pew Charitable Trusts, analysis using data from the Arizona State Board of Dental Examiners, 2016; United States Census Bureau, "QuickFacts: Apache County, Arizona," as of September 25, 2017, https://www.census.gov/quickfacts/AZ.

26 American Association of Nurse Practitioners, "NP Fact Sheet" (June 6, 2107) https://www.aanp.org/images/documents/about-nps/npfacts.pdf; American Academy of PAs, "America Needs PAs," (2017) https://www.aapa.org/wp-content/uploads/2017/02/50th%E2%80%93America-Needs-PAs-Brochure-ENGLISH_DIGITAL-1.pdf.

27 Commission on Dental Accreditation (CODA), "Accreditation Standards for Dental Therapy Education Programs," (2015) http://www.ada.org/en/~/media/CODA/Files/dt.

28 The American Dental Association, "Breaking Down Barriers to Oral Health for All Americans: Repairing the Tattered Safety Net, August 2011, http://www.ada.org/~/media/ADA/Public%20Programs/Files/barriers-paper_repairing-tattered-safety-net.pdf?la=en; The Pew Charitable Trusts, "Who Can't Get Dental Care?" (May, 31, 2017) http://www.pewtrusts.org/en/research-and-analysis/analysis/2017/05/31/who-cant-get-dental-care.

29 The American Dental Association, "Breaking Down Barriers to Oral Health for All Americans: Repairing the Tattered Safety Net, August 2011, http://www.ada.org/~/media/ADA/Public%20Programs/Files/barriers-paper_repairing-tattered-safety-net.pdf?la=en; The Pew Charitable Trusts, "Who Can't Get Dental Care?" (May, 31, 2017) http://www.pewtrusts.org/en/research-and-analysis/analysis/2017/05/31/who-cant-get-dental-care; Mary Jordan and Kevin Sullivan, "The Painful Truth about Teeth," The Washington Post, May 13, 2017, http://www.washingtonpost.com/sf/national/2017/05/13/the-painful-truth-about-teeth/?utm_term=.6b723989aa4b.

30 Health Resources and Services Administration, Designated Health Professional Shortage Area Statistics, as of October 26, 2017.

31 Mary Jordan and Kevin Sullivan, "The Painful Truth about Teeth," The Washington Post, May 13, 2017, http://www.washingtonpost.com/sf/national/2017/05/13/the-painful-truth-about-teeth/?utm_term=.6b723989aa4b; Colin Campbell, The Baltimore Sun, "University of Maryland, Catholic Charities offer free dental service in College Park," Sept. 19, 2017, http://www.baltimoresun.com/health/bs-md-dental-charity-20170910-story.html.

32 American Dental Association (ADA) Health Policy Institute (HPI), (2015), "Oral Health and Well-Being in Arizona," http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/OralHealthWell-Being-StateFacts/Arizona-Oral-Health-Well-Being.pdf.

33 American Dental Association (ADA) Health Policy Institute (HPI), (2015), "Oral Health and Well-Being in Arizona," http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/OralHealthWell-Being-StateFacts/Arizona-Oral-Health-Well-Being.pdf.

34 American Dental Association (ADA) Health Policy Institute (HPI), (2015), "Oral Health and Well-Being in Arizona," http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/OralHealthWell-Being-StateFacts/Arizona-Oral-Health-Well-Being.pdf.

35 Pew Charitable Trusts, analysis using data from the Arizona State Board of Dental Examiners, 2016; United States Census Bureau, "QuickFacts: Apache County, Arizona," as of September 25, 2017, https://www.census.gov/quickfacts/AZ.

36 The Pew Charitable Trusts, analysis using data from the Arizona State Board of Dental Examiners, 2016; U.S. Census Bureau, "Scottsdale City: Land Area in Square Miles, 2010," accessed Aug. 1, 2017, https://www.census.gov/quickfacts/fact/table/scottsdalecityarizona/PST045216.

37 The Pew Charitable Trusts, analysis using data from the Arizona State Board of Dental Examiners, 2016; U.S. Census Bureau, Land Area in Square Miles for Coconino, Yavapai, Gila, and Navajo Counties," accessed Aug. 1, 2017 (https://www.census.gov/quickfacts/fact/table/navajocountyarizona,gilacountyarizona,yavapaicountyarizona,coconinocountyarizona/PST045216).

38 Kamyar Nasseh, et al. "A Ten-Year, State-by-State, Analysis of Medicaid Fee-for-Service Reimbursement Rates for Dental Care Services," Health Policy Institute, American Dental Association (October 2014) http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_1014_3.ashx

39 Health Resources and Services Administration, Designated Health Professional Shortage Area Statistics, as of October 26, 2017.

40 Robert H. Selwitz, Amid I. Ismail, and Nigel B. Pitts, "Dental Caries," The Lancet 369, no. 9555 (Jan 2007): 51-59, http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(07)60031-2.pdf.

41 The Pew Charitable Trusts, "Dental Therapists in New Zealand: What the Evidence Shows," (May 2013) http://www.pewtrusts.org/~/media/legacy/uploadedfiles/pcs_assets/2013/pewnewzealanddentalbriefpdf.pdf.

42 The Pew Charitable Trusts, "Dental Therapists in New Zealand: What the Evidence Shows," (May 2013) http://www.pewtrusts.org/~/media/legacy/uploadedfiles/pcs_assets/2013/pewnewzealanddentalbriefpdf.pdf.

43 The Pew Charitable Trusts, "Dental Therapists in New Zealand: What the Evidence Shows," (May 2013) http://www.pewtrusts.org/~/media/legacy/uploadedfiles/pcs_assets/2013/pewnewzealanddentalbriefpdf.pdf.

44 Thomas Wall, Kamyar Nasseh,and Marko Vujicic, "Majority of Dental-Related Emergency Department Visits Lack Urgency and Can Be Diverted to Dental Offices," The American Dental Association Health Policy Institute (August 2014) http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_0814_1.ashx.

[45] J. Timothy Wright, Frank Graham, Catherine Hayes, Amid I. Ismail, Kirk W. Noraian,Robert J. Weyant, Sharon L. Tracy, Nicholas B. Hanson, and Julie Frantsve-Hawley, "A systematic review of oral health outcomes produced by dental teams incorporating midlevel providers," Journal of the American Dental Association 144, no. 1: 75-91, https://ac.els-cdn.com/S0002817714605730/1-s2.0-S0002817714605730-main.pdf?_tid=c0751f26-a226-11e7-8365-00000aacb35e&acdnat=1506367478_facadf4ef58c1c47cd8d75ccc8dd94db.

[46] The Minnesota Department of Health and the Minnesota Board of Dentistry, "Early Impacts of Dental Therapists in Minnesota," (2014), http://www.health.state.mn.us/divs/orhpc/workforce/dt/dtlegisrpt.pdf. The total number of new patients served by dental therapists at study clinics since the time the dental therapists were hired (first hired in August 2011) through the end of the survey period (July 2013) was 6,338. Each patient is counted once. The average hours worked by the dental therapist over the survey period ranged from 1 hour/week to 36 hours/week at multiple study sites, which equals approximately seven full-time equivalents (FTEs).

[47] The Minnesota Department of Health and the Minnesota Board of Dentistry, "Early Impacts of Dental Therapists in Minnesota," (2014), http://www.health.state.mn.us/divs/orhpc/workforce/dt/dtlegisrpt.pdf.

[48] "DHAT: Alaska and Beyond!" Presentation by Christina Peters and Pam Johnson, Native Dental Therapy Initiative, and John Stephens, Swinomish Indian Tribal Community, to the National Indian Health Board, June 8, 2017, https://www.nihb.org/docs/07182017_tphs/thursday/DHAT%27s%20Improving%20Both%20Oral%20Health%20Outcomes%20&%20Access-%20New%20Research%20from%20Alaska%20&%20New%20Policies.pdf.

[49] Donald L. Chi, Dane Lenaker, Lloyd Mancl, Matthew Dunbar, and Michael Babb, "Dental Utilization for Communities Served by Dental Therapists in Alaska's Yukon Kuskokwim Delta: Findings from an Observational Quantitative Study" (Aug. 11, 2017), http://faculty.washington.edu/dchi/files/DHATFinalReport.pdf

[50] Minnesota Department of Health, "Minnesota's Dental Therapist Workforce, 2016," (2017) http://www.health.state.mn.us/divs/orhpc/workforce/oral/2016dtb.pdf.

[51] Minnesota Department of Health, "Minnesota's Dental Therapist Workforce, 2016," (2017) http://www.health.state.mn.us/divs/orhpc/workforce/oral/2016dtb.pdf.

[52] Minnesota Department of Health, "Minnesota's Dental Therapist Workforce, 2016," (2017) http://www.health.state.mn.us/divs/orhpc/workforce/oral/2016dtb.pdf.

[53] The Minnesota Department of Health and the Minnesota Board of Dentistry, "Early Impacts of Dental Therapists in Minnesota," (2014), http://www.health.state.mn.us/divs/orhpc/workforce/dt/dtlegisrpt.pdf.

[54] David A. Nash, Jay W. Friedman, Kavita R. Mathu-Muju, Peter G. Robinson, Julie Satur, Susan Moffat, Rosemary Kardos, Edward C.M. Lo, Anthony H.H. Wong, Nasruddin Jaafar, Jos van den Heuvel, Prathip Phantumvanit, Eu Oy Chu, Rahul Naidu, Lesley Naidoo, Irving McKenzie and Eshani Fernando, "A Review of the Global Literature on Dental Therapists," (2012) http://www.wkkf.org/-/media/pdfs/dental-therapy/nash-dental-therapist-literature-review.ASHX.

[55] Kavita R. Mathu-Muju, Jay W. Friedman, and David A. Nash, "Saskatchewan's school-based dental program staffed by dental therapists: a retrospective case study," Journal of Public Health Dentistry (2016): 1-8, doi: 10.1111/jphd.12184.

[56] The Pew Charitable Trusts, "Dentists and Dental Therapists in Private Practice: Two Case Studies," (Feb. 2014) http://www.pewtrusts.org/~/media/assets/2014/02/12/dental_therapist_case_studies.pdf. In 2012, the average exchange rate for converting one Canadian dollar to one U.S. dollar was 1.040 (https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates).

[57] Donald L. Chi, Dane Lenaker, Lloyd Mancl, Matthew Dunbar, and Michael Babb, "Dental Utilization for Communities Served by Dental Therapists in Alaska's Yukon Kuskokwim Delta: Findings from an Observational Quantitative Study" (Aug. 11, 2017), http://faculty.washington.edu/dchi/files/DHATFinalReport.pdf; David A. Nash et al., "A Review of the Global Literature on Dental Therapists," (2012) http://www.wkkf.org/-/media/pdfs/dental-therapy/nash-dental-therapist-literature-review.ASHX; The Minnesota Department of Health and the Minnesota Board of Dentistry, "Early Impacts of Dental Therapists in Minnesota," (2014), http://www.health.state.mn.us/divs/orhpc/workforce/dt/dtlegisrpt.pdf.

[58] The Minnesota Department of Health and the Minnesota Board of Dentistry, "Early Impacts of Dental Therapists in Minnesota," (2014); Donald L. Chi, Dane Lenaker, Lloyd Mancl, Matthew Dunbar, and Michael Babb, "Dental Utilization for Communities Served by Dental Therapists in Alaska's Yukon Kuskokwim Delta: Findings from an Observational Quantitative Study" (Aug. 11, 2017).

[59] Apple Tree Dental, "An Advanced Dental Therapist in Long-Term Care: An Apple Tree Dental Case Study," (2017), http://www.appletreedental.org/wp-content/uploads/2017/09/ADT-LTC-Case-Study-091517.pdf.

[60] Analysis by the Pew Charitable Trusts using the 2013 Code on Dental Procedures and Nomenclature (CDT).

[61] Inter-Tribal Council of Arizona, "Resolution 1016," (Nov. 18, 2016), https://www.nihb.org/docs/03162017/ITCA%2011.18.16.pdf.

[62] 25 U.S.C. § 1616l(d), Community health aide program, Nationalization of program.

[63] Inter-Tribal Council of Arizona, "Resolution 1016," (Nov. 18, 2016), https://www.nihb.org/docs/03162017/ITCA%2011.18.16.pdf.

[64] Resolution of the Naabik'iyati' Committee of the Navajo Nation Council (2017) https://www.nihb.org/docs/03232017/Navajo%20Nation%20(Navajo)%20Resolution%20NABIMA-13-17.pdf

[65] Arizona Revised Statutes, Senate Bill 1457 (2016) https://apps.azleg.gov/BillStatus/GetDocumentPdf/442161; Arizona Revised Statutes, Senate Bill 1527 (2017) https://apps.azleg.gov/BillStatus/GetDocumentPdf/454119.

[66] AHCCCS, "Arizona's Eligibility Policy Manual for Medical, Nutrition, and Cash Assistance: 403: Arizona Long Term Care System (ALTCS)," accessed April 4, 2017, https://www.healthearizonaplus.gov/PolicyManual/eligibilitypolicymanual/index.html#page/MA/MA400/MA0403.html.

[67] Health Resources & Services Administration, Data Warehouse, data on dental professional health shortage areas in Arizona as of August 23, 2017.

[68] The American Dental Association, "Breaking Down Barriers to Oral Health for All Americans: Repairing the Tattered Safety Net, August 2011, http://www.ada.org/~/media/ADA/Public%20Programs/Files/barriers-paper_repairing-tattered-safety-net.pdf?la=en; The Pew Charitable Trusts, "Who Can't Get Dental Care?" (May, 31, 2017) http://www.pewtrusts.org/en/research-and-analysis/analysis/2017/05/31/who-cant-get-dental-care.

[69] The American Dental Association, "Breaking Down Barriers to Oral Health for All Americans: Repairing the Tattered Safety Net, August 2011, http://www.ada.org/~/media/ADA/Public%20Programs/Files/barriers-paper_repairing-tattered-safety-net.pdf?la=en; The Pew Charitable Trusts, "Who Can't Get Dental Care?" (May, 31, 2017) http://www.pewtrusts.org/en/research-and-analysis/analysis/2017/05/31/who-cant-get-dental-care; Mary Jordan and Kevin Sullivan, "The Painful Truth about Teeth," The Washington Post, May 13, 2017, http://www.washingtonpost.com/sf/national/2017/05/13/the-painful-truth-about-teeth/?utm_term=.6b723989aa4b.

[70] American Dental Association (ADA) Health Policy Institute (HPI), (2015), "Oral Health and Well-Being in Arizona," http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/OralHealthWell-Being-StateFacts/Arizona-Oral-Health-Well-Being.pdf.

[71] Regina M. Benjamin, "Oral Health: The Silent Epidemic," Public Health Reports 125, no. 2 (2010): 158–159, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2821841/pdf/phr125000158.pdf.

[72] The Minnesota Department of Health and the Minnesota Board of Dentistry, "Early Impacts of Dental Therapists in Minnesota," (2014), http://www.health.state.mn.us/divs/orhpc/workforce/dt/dtlegisrpt.pdf.

[73] Arizona Early Childhood Development and Health Board (First Things First), "Taking a Bite Out of School Absences: Children's Oral Health Report 2016," 2016. Accessed on September 1, 2016 from http://azftf.gov/WhoWeAre/Board/Documents/FTF_Oral_Health_Report_2016.pdf.

[74] U.S. Census Bureau, Population Estimates Program (PEP), as of July 1, 2016, https://www.census.gov/quickfacts/fact/table/AZ/PST045216.

[75] U.S. Census Bureau, Population Estimates Program (PEP), as of July 1, 2016, https://www.census.gov/quickfacts/fact/table/AZ/PST045216. "DHAT: Alaska and Beyond!" Presentation by Christina Peters and Pam Johnson, Native Dental Therapy Initiative, and John Stephens, Swinomish Indian Tribal Community, to the National Indian Health Board, June 8, 2017, https://www.nihb.org/docs/07182017_tphs/thursday/DHAT%27s%20Improving%20Both%20Oral%20Health%20Outcomes%20&%20Access-%20New%20Research%20from%20Alaska%20&%20New%20Policies.pdf.

[76] Minnesota Department of Health, "Minnesota's Dental Therapist Workforce, 2016," (2017) http://www.health.state.mn.us/divs/orhpc/workforce/oral/2016dtb.pdf.

[77] The Minnesota Department of Health and the Minnesota Board of Dentistry, "Early Impacts of Dental Therapists in Minnesota," (2014), http://www.health.state.mn.us/divs/orhpc/workforce/dt/dtlegisrpt.pdf. The total number of new patients served by dental therapists at study clinics since the time the dental therapists were hired (first hired in August 2011) through the end of the survey period (July 2013) was 6,338. Each patient is counted once. The average hours worked by the dental therapist over the survey period ranged from 1 hour/week to 36 hours/week at multiple study sites, which equals approximately seven full-time equivalents (FTEs).

[78] State statistics from HCUP State Inpatient Databases and State Emergency Department Databases 2014, Agency for Healthcare Research and Quality (AHRQ), based on data collected by the Arizona Department of Health Services, using ICD-9 codes: 521.00, 521.01, 521.02, 521.03, 521.04, 521.05, 521.06, 521.07, 521.08, 521.09, 522.0, 522.1, 522.2, 522.3, 522.4, 522.5, 522.6, 522.7, 522.8, 522.9, 523.00, 523.01, 523.10, 523.11, 523.20, 523.21, 523.22, 523.23, 523.24, 523.25, 523.3-523.33, 523.30, 523.31, 523.32, 523.33, 523.40, 523.41, 523.42, 523.5, 523.6, 523.8, 523.9, 528.3

[79] Veerasathpurush Allareddy, Sankeerth Rampa, Min Kyeong Lee, Veerajalandhar Allareddy, and Romesh P. Nalliah, "Hospital-based emergency department visits involving dental conditions," The Journal of the American Dental Association 145, no. 4 (2014): 331-337, doi:10.14219/jada.2014.7. This figure was calculated based on the estimated average cost of an ED dental visit, $760 per visit (adjusted for 2010 dollars) using ICD-9 codes 521.00, 521.01, 521.02, 521.03, 521.04, 521.05, 521.06, 521.07, 521.08, 521.09, 522.0, 522.1, 522.2, 522.3, 522.4, 522.5, 522.6, 522.7, 522.8, 522.9, 523.00, 523.01, 523.10, 523.11, 523.20, 523.21, 523.22, 523.23, 523.24, 523.25, 523.3, 523.30, 523.31, 523.32, 523.33, 523.40, 523.41, 523.42, 523.5, 523.6, 523.8, 523.9, and 528.3, and the Arizona state statistics from HCUP (using the same ICD-9 codes): 760*26,880=20,428,800.

[80] State statistics from HCUP State Inpatient Databases and State Emergency Department Databases 2014, Agency for Healthcare Research and Quality (AHRQ), based on data collected by the Arizona Department of Health Services, using ICD-9 codes: 521.00, 521.01, 521.02, 521.03, 521.04, 521.05, 521.06, 521.07, 521.08, 521.09, 522.0, 522.1, 522.2, 522.3, 522.4, 522.5, 522.6, 522.7, 522.8, 522.9, 523.00, 523.01, 523.10, 523.11, 523.20, 523.21, 523.22, 523.23, 523.24, 523.25, 523.3-523.33, 523.30, 523.31, 523.32, 523.33, 523.40, 523.41, 523.42, 523.5, 523.6, 523.8, 523.9, 528.3

[81] David A. Nash et al., "A Review of the Global Literature on Dental Therapists," (2012) http://www.wkkf.org/-/media/pdfs/dental-therapy/nash-dental-therapist-literature-review.ASHX

[82] Analysis by the Pew Charitable Trusts using the 2013 Code on Dental Procedures and Nomenclature (CDT).

[83] University of Minnesota School of Dentistry, Normandale Community College, and Metropolitan State University, "Hiring a Dental Therapist or Advanced Dental Therapist: Professional Liability," accessed September 19 2017, https://www.mchoralhealth.org/mn/dental-therapy/professional-liability.html.

[84] University of Minnesota School of Dentistry, Normandale Community College, and Metropolitan State University, "Hiring a Dental Therapist or Advanced Dental Therapist: Professional Liability," accessed September 19 2017, https://www.mchoralhealth.org/mn/dental-therapy/professional-liability.html.

[85] Arizona Health Care Cost Containment System (AHCCCS), "2017 Access Monitoring Analysis," (May 2017) https://www.azahcccs.gov/AHCCCS/Downloads/AccesstoCare/AccessMonitoringAnalysis2017.pdf.

[86] This figure counts children ages 1 to 20 who were eligible for the Early and Periodic Screening, Diagnostic and Treatment Benefit for 90 continuous days and received any dental service. See U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, Annual EPSDT Participation Report, Form CMS-416 (State) Fiscal Year: 2016, as of September 7, 2017, https://www.medicaid.gov/medicaid/benefits/epsdt/index.html.

[87] Kathy Phipps, "Taking a Bite Out of School Absences: Children's Oral Health Report 2016," Arizona Early Childhood Development and Health Board (First Things First) (2016), http://azftf.gov/WhoWeAre/Board/Documents/FTF_Oral_Health_Report_2016.pdf.

[88] Cassandra Yarbrough, Kamyar Nasseh, and Marko Vujicic, "Why Adults Forgo Dental Care: Evidence from a New National Survey," The American Dental Association Health Policy Institute, (2014), http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_1114_1.ashx.

[89] Arizona Revised Statutes, Senate Bill 1527 (2017) https://apps.azleg.gov/BillStatus/GetDocumentPdf/454119.

[90] Arizona state statistics from HCUP State Inpatient Databases and State Emergency Department Databases 2014, Agency for Healthcare Research and Quality (AHRQ), based on data collected by the Arizona Department of Health Services, using ICD-9 codes 521.00, 521.01, 521.02, 521.03, 521.04, 521.05, 521.06, 521.07, 521.08, 521.09, 522.0, 522.1, 522.2, 522.3, 522.4, 522.5, 522.6, 522.7, 522.8, 522.9, 523.00, 523.01, 523.10, 523.11, 523.20, 523.21, 523.22, 523.23, 523.24, 523.25, 523.3-523.33, 523.30, 523.31, 523.32, 523.33, 523.40, 523.41, 523.42, 523.5, 523.6, 523.8, 523.9, and 528.3.

[91] Veerasathpurush Allareddy, Sankeerth Rampa, Min Kyeong Lee, Veerajalandhar Allareddy, and Romesh P. Nalliah, "Hospital-based emergency department visits involving dental conditions," The Journal of the American Dental Association 145, no. 4 (2014): 331-337, doi:10.14219/jada.2014.7. This figure was calculated based on the estimated average cost of an ED dental visit, $760 per visit (adjusted for 2010 dollars) using ICD-9 codes 521.00, 521.01, 521.02, 521.03, 521.04, 521.05, 521.06, 521.07, 521.08, 521.09, 522.0, 522.1, 522.2, 522.3, 522.4, 522.5, 522.6, 522.7, 522.8, 522.9, 523.00, 523.01, 523.10, 523.11, 523.20, 523.21, 523.22, 523.23, 523.24, 523.25, 523.3, 523.30, 523.31, 523.32, 523.33, 523.40, 523.41, 523.42, 523.5, 523.6, 523.8, 523.9, and 528.3, and the Arizona state statistics from HCUP (using the same ICD-9 codes): 760*26,880=20,428,800.

[92] Arizona state statistics from HCUP State Inpatient Databases and State Emergency Department Databases 2014, Agency for Healthcare Research and Quality (AHRQ), based on data collected by the Arizona Department of Health Services, using ICD-9 codes 521.00, 521.01, 521.02, 521.03, 521.04, 521.05, 521.06, 521.07, 521.08, 521.09, 522.0, 522.1, 522.2, 522.3, 522.4, 522.5, 522.6, 522.7, 522.8, 522.9, 523.00, 523.01, 523.10, 523.11, 523.20, 523.21, 523.22, 523.23, 523.24, 523.25, 523.3-523.33, 523.30, 523.31, 523.32, 523.33, 523.40, 523.41, 523.42, 523.5, 523.6, 523.8, 523.9, and 528.3.

[93] Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion, Division of Oral Health, "Oral Health Data: Arizona," accessed September 25, 2017, https://www.cdc.gov/oralhealthdata/.

[94] Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion, Division of Oral Health, "Oral Health Data: Arizona," accessed September 25, 2017, https://www.cdc.gov/oralhealthdata/.

[95] Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion, Division of Oral Health, "Oral Health Data: Arizona," accessed September 25, 2017, https://www.cdc.gov/oralhealthdata/.

[96] U. S. Census Bureau, "QuickFacts: Arizona, persons 65 years and over, percent July 1, 2016," accessed September 25, 2017.

[97] HHS Centers for Medicare and Medicaid Services, "Nursing Home Data Compendium 2015 Edition," 2015, https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/CertificationandComplianc/Downloads/nursinghomedatacompendium_508-2015.pdf

[98] HHS ACL AGID, "Profile of State OAA Programs: Arizona," data as of 2014, https://agid.acl.gov/StateProfiles/Profile/Pre/?id=3&topic=0&years=2014.

99 Arizona Health Care Cost Containment System (AHCCCS), “AHCCCS Population Demographics, Feb. 13, 2017, https://www.azahcccs.gov/Resources/Downloads/PopulationStatistics/2017/Feb/AHCCCS_Demographics.pdf

100 AHCCCS, “AHCCCS Medical Policy Manual, 310-D1: Dental Services for Members 21 Years of Age and Older,” revised 10/01/16, https://www.azahcccs.gov/shared/Downloads/MedicalPolicyManual/310D1.pdf.

101 AHCCCS, “AHCCCS Medical Policy Manual, 310-D2: Arizona Long Term Care System Adult Dental Services,” effective 10/01/16, https://www.azahcccs.gov/shared/Downloads/MedicalPolicyManual/310D2.pdf.

102 AHCCCS, “Arizona’s Eligibility Policy Manual for Medical, Nutrition, and Cash Assistance: 403: Arizona Long Term Care System (ALTCS),” accessed April 4, 2017, https://www.healthearizonaplus.gov/PolicyManual/eligibilitypolicymanual/index.html#page/MA/MA400/MA0403.html.

Arizona Voices in Support of Dental Therapy

Arizona Daily Star

Dental therapists: good for tribes, good for Arizona

By Chester Antone Special to the Arizona Daily Star Feb 14, 2017

Millions of people throughout Arizona face significant challenges when it comes to accessing dental care and treatment of dental disease. Nowhere in Arizona is need more acute than on the American Indian reservations. There is a proven model using mid-level dental providers that can increase access to affordable, quality oral health care. However, the opposition from organized dentistry is fierce.

Arizona is home to 22 individual sovereign tribal nations with 394,196 tribal members living on and off reservations. Our tribal nations have grappled for decades with a shortage of dentists willing to work for the Indian Health Service (IHS) and tribal facilities. Despite research showing that dental health is an integral part of an individual's overall long-term health, Arizona's current dental care delivery model fails to address chronic oral health provider shortages, geographic isolation and the long-distance travel to access specialty care. In some areas, basic oral health-care services are not available locally. Because of this, 76 percent of American Indian children in Arizona have experienced tooth decay by age 5. This is an urgent need that can be eased with the help of dental therapists.

Dental therapists are mid-level dental providers who have been delivering innovative and locally accessible dental care under the supervision of dentists around the world since the 1920s. These providers are well-trained in routine procedures such as oral exams, filling cavities, stainless-steel crowns on primary teeth and, in limited cases, extractions. This gives dentists the ability to concentrate on the most complex needs of their patients. Dental therapists are also able to work outside the dental office, in rural and remote areas, bringing care directly to the people who need it.

COCONINO VOICES

Coconino Voices: Dental therapists address shortage in rural areas

By Rep. Bob Thorpe Special to the Daily Sun Sep 5, 2017 1

As the debate surrounding the Affordable Care Act continues in our nation's capital, those of us entrusted to serve the public, particularly the most vulnerable among us, are searching for ways to stretch scarce healthcare resources further. The good news is that we don't have to wait for our representatives in Washington, D.C., to address these problems, there are options available to us right here in Arizona.

As a State Representative serving Coconino, Yavapai, Gila and Navajo Counties, I understand the unique challenges facing the diverse populations in rural Arizona. From senior citizens to college students, those in our cities, widely dispersed rural populations and remote Tribal reservations, our communities need innovative approaches to ensure we have an adequate number of health

professionals to serve our community. Providing high-quality affordable care to residents is a top priority.
As in politics, all healthcare is local, and here in northern Arizona we know a thing or two about the fight to increase access to healthcare through attracting and retaining qualified healthcare professionals in our communities, while keeping costs in check.

Here's why this is important. Currently in our state, there are 2.4 million Arizonans living in areas designated by the federal government as dental health professional shortage areas, which are defined as one dentist for 5,000 or more people. Some suggest that Arizona does not have a problem and that we have enough dentists. This may be true if you live in Scottsdale where, according to the American Dental Association, there were 481 dentists serving a population of about 246,600 in a geographic area of 184 square miles.
In contrast, here in Northern Arizona, in the Coconino, Yavapai, Gila, and Navajo counties that I serve, there are 280 dentists to serve a population of about 530,000 spread out over a geographic area of 41,451 square miles. And this doesn't even factor any of those current practicing dentists who may

retire or move in a given year.
One innovative solution to containing costs, while at the same time increasing access to care, is the proposal to license dental therapists here in Arizona. Similar to advanced practice nurses and physician's assistants, highly trained midlevel dental providers are able to extend dental practices – whether public or private – and provide care to more patients.

A licensed dental therapist can perform many of the most commonly needed restorative and preventive dental procedures at a lower cost, all while working collaboratively with a supervising dentist. Arizona should join a growing list of states exploring this smart, proven solution; there are at least 10 states considering legislation that will empower these midlevel providers to increase access to quality care. That is in addition to the three states that have authorized dental therapists, three additional states where they are practicing on tribal lands and more than 50 countries around the world where they are already having a significant positive impact on the quality of oral health. These include rural Alaska, where dental therapy has been in practice on Tribal lands for more than a decade.

Moreover, this model has allowed dentists in these states to successfully practice in remote, rural parts of the state, thus expanding access where needed. It has also increased the number of chairs and client visits for these dentists – many of whom have successfully grown their practices and incomes after embracing dental therapists.

Lastly, but perhaps most important, where practicing, the mid-level technicians are demonstrating such a high level of care, that they have few, if any, malpractice claims and greatly reduced liability and insurance costs.

As an elected official, the health and well-being of our citizenry and our economy are top-of-mind for myself and my fellow legislators. It is my hope that we come together to support solutions that stretch our healthcare resources while increasing access to care to every corner of our State, all while controlling costs and encouraging choice in the marketplace. The facts show that dental therapy meets those standards and should be afforded a space within our dental care delivery system.

This is why I am eager to see innovative solutions like licensed dental therapists take hold so that we as elected officials can expand oral healthcare throughout rural Arizona and ensure all of our citizens have access to qualified dental providers,

where and when needed. After all, the freedom of choice, especially as it relates to one's health and happiness, is deeply ingrained in our American spirit.

State Representative Bob Thorpe has served District 6 in the AZ House since 2013. He is currently the Chairman of the Federalism, Property Rights and Public Policy Committee, and serves as Vice Chair of the Government Committee. He lives in Flagstaff, Arizona.

The Growing Gap in Oral Healthcare for Arizona's Hispanic Children

Guest Opinion March 23, 2017 , 4:44 pm

OPINION

As the national debate over healthcare grows and our country grapples with changes to the Affordable Care Act, let us not lose sight of our state's specific challenges in providing care for the most vulnerable among us.

At Valle del Sol, we see these challenges on a daily basis. For the past 44 years, we've worked tirelessly to fill an ever-widening gap in health services available to our Latino community. One of the most pressing community health issues today is also one that is often overlooked – early and affordable access to dental care for Hispanic children.

Arizona Children Lag Far Behind the Nation in Access to Oral Healthcare

According to a recent report from the Arizona Department of Health Services, 56 percent of Arizona's Hispanic kindergartners have a history of tooth decay. This is compared to 46 percent of Hispanic children nationally. Even more alarming is a 2011 Head Start Dental survey from the Arizona Department of Health Services that found 34 percent of our

Kurt Sheppard

state's Hispanic preschool children have tooth decay that is left untreated.

We must ask ourselves, in a state with a significant Hispanic population, "Why are we not doing more to meet the oral health needs of our children?" The reasons are varied and the system complex.

First, Hispanic children are far less likely than non-Hispanics to have dental insurance. An Arizona Department of Health Service's report shows 33 percent of the state's Hispanic children have no dental insurance—public or private, compared to just 14 percent of non-Hispanic races and 20 percent of white children.

Further, Medicaid currently covers dental services for children, but Arizona lags the nation in the percentage of dentists who accept public insurance. Forty-two percent of dentists nationwide accept public insurance, while in Arizona that number drops to 32 percent. Moreover, only 25 percent of Arizona dentists bill $10,000 or more in public insurance claims—a statistic used to identify dentists who are treating a significant number of children on Medicaid.

Second, every county in Arizona has a dental shortage area, including Maricopa. With so many areas with a shortage of dentists, is it any wonder that more than one-third of our preschoolers have untreated tooth decay?

A Sensible, Proven Solution

Given the numerous challenges our children face, a sensible, proven solution to quality oral healthcare is desperately needed. One such innovative solution is through qualified dental therapists. These highly skilled professionals provide preventive care and the most common, basic restorative procedures, such as fillings and stainless steel crowns.

This is the same approach that the medical profession has successfully employed with allied health professionals; allowing highly trained and qualified individuals to provide healthcare to patients. I'm confident that available resources could be broadened exponentially and more cost effective with capable, caring dental therapists working as part of a team with dentists.

That is why I urge our lawmakers to study this solution in great detail. I also want to encourage our elected officials to contact front-line community service organizations for first-hand insights into how we as Arizonans can do more to bridge the healthcare gap for our state's children.

Kurt Sheppard is the Chief Executive Officer of Valle del Sol.

The views expressed in guest commentaries are those of the author and are not the views of the Arizona Capitol Times.

SALT RIVER
PIMA-MARICOPA INDIAN COMMUNITY

10005 East Osborn Road/Scottsdale, Arizona 85256-9722/Phone (480) 362-7400/Fax (480) 362-7593

October 27, 2017

To Whom it Concerns:

Tribal leaders, representatives and advocates from across the country met in Scottsdale to discuss ways to improve access to oral health for their communities. As a member of the Salt River-Pima Maricopa Indian Community, the issue of dental care access is an important one for me and the people in my community.

Arizona is currently home to 22 individual sovereign tribal nations with 394,196 tribal members living on and off reservations. Our tribal nations have grappled for decades with a shortage of dentists willing to work for the Indian Health Service (IHS) and tribal facilities. Despite research showing that dental health is an important part of overall long-term health, Arizona's current dental care delivery model fails to address chronic oral health provider shortages, geographic isolation and the long-distance travel to access specialty care. In some areas, basic oral health-care services are not available locally at all. Because of this, in Arizona alone, 76 percent of American Indian children have experienced tooth decay by age 5.

However, this lack of oral health isn't just an issue for tribal communities. In fact, millions of people throughout Arizona face significant challenges when it comes to accessing dental care and treatment of dental disease. This is why it is vital our state legislators pursue policy changes that would help both our tribal communities and all Arizonans, because everyone deserves access to quality dental care.

Since Arizona's founding, tribes have always shared resources with the broader community and have been partners with non-tribal people. Today we have an opportunity to work together to increase access to oral health care for all Arizonans by adding dental therapists to join the dental team.

Dental therapists are mid-level dental providers who have been delivering innovative and locally accessible dental care under the supervision of dentists around the world since the 1920s. These providers are well-trained in routine procedures such as oral exams, filling cavities, crowns and, in limited cases, extractions. The benefit of a dental therapist is that they give dentists the ability to concentrate on the most complex needs

of their patients. Dental therapists are also able to work outside the dental office, in rural and remote areas, bringing care directly to the people who need it.

Dental therapists are a tribal solution, brought to the U.S. from tribes. The Alaska Native Tribal Health Consortium (ANTHC) first introduced dental therapists to the U.S. in 2004. Since then, dental therapists have expanded care to 40,000 Alaska Natives in 81 previously underserved communities.

They have been authorized in Maine, Minnesota, and Vermont, and are also being used to care for Native American tribes in Washington and Oregon. In June 2017, the Alaska Native Tribal Health Consortium, which trains dental therapists, graduated its first student to begin practicing under pilot authority on Native American tribal lands in Oregon. Several other states in addition to Arizona, including Kansas, Maryland, Massachusetts, Michigan, New Mexico, North Dakota, and Ohio are all exploring the potential for authorizing dental therapy to expand access for the underserved.

There is evidence that dental therapists on tribal lands are working. A recent study from the University of Washington found that in just one decade, Alaska Native children and adults in communities with high access to a dental therapist experienced a significant increase in preventive dental care services. And far fewer children needed traumatic front tooth extractions. The outcomes are clear.

Tribes in Arizona deserve the right to utilize dental therapy to address oral health challenges. But this shouldn't just be a tribal solution. While tribes need dental therapists so do a lot of Arizonans. Let's continue to be partners and authorize dental therapists.

Sincerely,

Martin Harvier, Vice-President
Salt River Pima-Maricopa Indian Community

Frontlines of Dental Care Show Tremendous Need in Arizona

By: Alicia M. Thompson, MSW, Southern Arizona Oral Health Coalition

In a recent article titled, “Dental therapist proposal to get new hearing before lawmakers,” Capitol Times readers heard from legislators that they do not believe we have a dentist shortage here in Arizona, despite overwhelming evidence, and Federal reports, to the contrary.

That same article provided data from The U.S. Department of Health and Human Services showing that we have numerous counties designated as “health professional shortage areas” with a full 435 dentists needed to fill the need throughout the state.

Even more recently, dentists and hygienists will not be participating in Hope Fest, Tucson’s annual event for low income residents to receive free hygiene and, historically, dental care. The event usually attracts more than 10,000 Arizonans from the Tucson area. Even the Arizona Dental Association agrees that this single event cannot address the systemic shortages and need in our community.

These facts don’t lie. However, while numbers certainly tell a compelling story about Arizona’s oral health crisis and the need for expanding access to care, they don’t tell the whole story. As someone who works on the frontlines of our state’s oral health delivery system, I can tell you that I see overwhelming need every single day in my position as the dental department manager for El Rio Community Health Center’s dental clinics.

True State of Oral Health in the Community

The El Rio Community Health Center in Tucson operates the largest non-profit dental program in the state. We see patients for everything from crowns and dentures to cleanings and filling cavities.

We have approximately 125 oral health professionals who care for nearly 25,000 patients with 53,000 plus visits each year. The services provided by El Rio are critical to our community, but it’s not enough. We know there are significant numbers of individuals who aren’t getting consistent dental care, and we don’t have to look very far to see this. El Rio provides medical care to 95,000 individuals, but only 25,000 of those individuals receive oral health care from our dental clinics. While we don’t know the exact percentage, we are fairly confident that the majority of people who don’t get their oral health care from us are simply going without.

In fact, according to the Arizona Department of Oral Health, 36% of children, 44% of adults and 67% of seniors lack dental health coverage to help with their oral care needs.

This is leading to long wait times for appointments at clinics like ours and tremendous turnout for singular events such as Hope Fest. In light of all of this, how can anyone claim that Arizona doesn't have a dentist shortage or has adequate resources to meet our oral health needs for all Arizonans?

Multiple Solutions Are Needed

What we need now more than ever are smart solutions to our mounting healthcare delivery challenges. That is why I am part of the Dental Care for Arizona Coalition; a diverse group of community health organizations, business leaders, research institutions and concerned citizens eager to see Arizona welcome dental therapists into our state.

Similar to a physician's assistant, dental therapists help dentists provide routine services to more patients, often in low income or rural communities, and often at a lower cost to clinics such as ours. If El Rio were allowed to utilize this proven member of the dental team we would be able to see countless more patients.

It is no wonder that multiple states have already licensed these qualified health professionals and are seeing an impact, while dozens more states are considering new legislation. Arizona deserves to be at the forefront of dental therapy as another tool that community healthcare organizations can use to address Arizona's oral healthcare crisis.

News Reports

America Doesn't Have Enough Dentists

And dentists are partially to blame.

Eric Boehm Nov. 16, 2017 10:25 am

Ingram Publishing/Newscom

When state Rep. Jason Sheppard (R-Lambertville) was a county commissioner in Monroe County, Michigan, the local community health clinic decided to start offering dental services. In one way, the effort was a success: "There was an immediate influx of patients," Sheppard recalls. The only problem? Finding dentists to treat them.

That sort of supply-side problem in health care is not unique to Michigan. According to the U.S. Department of Health and Human Services, more than 5,000 localities lack adequate access to dental care, which the department defines as having fewer than one dentist for every 5,000 residents. About 55 million Americans live in those areas. In Michigan alone, there are 270 such zones, mostly in inner cities and rural areas.

That's why Sheppard and other state lawmakers want to authorize dental therapists—mid-level health care professionals akin to physician assistants or nurse practitioners—to fill cavities and treat other basic dental problems. The goal is to get more trained dental professionals into the field. The idea is being opposed by much of the established dental industry: The American

Dental Association (ADA) and state-level trade organizations of dentists have opposed such bills, citing concerns about therapists' level of training. In Florida, the state trade association has likened dental therapy to a hurricane.

That's bunk. Dental therapists take take the same classes and exams as their colleagues who go on to become full-fledged dentists. They merely skip more advanced classes in reconstructive work and oral surgery—and the bills being considered don't authorize them to do that work. If dental therapists can assume a greater role in providing basic care, full-fledged dentists can spend more of their time focused on the more difficult and sophisticated cases.

That seems to be working in Minnesota, which became the first state to legalize dental therapists in 2009. There are now more than 70 licensed to practice, working under the supervision of dentists. The Federal Trade Commission has urged dental school accreditors to clear the way for mid-level professionals like these, arguing that they can "increase the output of basic dental services, enhance competition, reduce costs, and expand access."

As *The Washington Post* pointed out earlier this year, the ADA's opposition is a serious stumbling block in most states.

"Dentists do everything they can to protect their interests—and they have money," Maine state Rep. Richard Malaby (R-Hancock) told the *Post*.

The dental shortage is likely to get worse in the next few decades. According to the ADA's own numbers, about a third of American dentists are over the age of 55 and thus nearing retirement. The lack of dentists is a problem felt most acutely by low-income individuals and families. According to the Pew Charitable Trusts, federal Medicaid data show that about 14 million children from low-income families did not receive any professional dental care in 2011.

Subsidizing care through federal, state, or local government programs can't solve this problem. To address the shortage, you need to get more dental professionals into the field.

A bill to legalize dental therapists in Michigan cleared the state Senate earlier this year—despite objections by the Michigan Dental Association—and could be taken up by the state House when it returns to legislative session in January.

These professionals could provide dental work, at lower cost. So why doesn't Arizona want them?

Ken Alltucker
Arizona Republic
Jan. 24, 2017

Despite a promise of more access to dental care at lower costs, a push to license a new type of dental provider has stalled at the Arizona Legislature.

Similar to physician assistants, dental therapists operate under the supervision of licensed dentists and can perform minor dental procedures such as fillings, crowns and extractions.

These "midlevel providers" are allowed in Minnesota, Maine and Vermont and practice in tribal areas in Alaska, Oregon and Washington.

Proponents say dental therapists can provide basic dental services at lower costs and could be a solution to regions with dentist shortages, especially rural and tribal communities.

Many state residents who can't make a dental appointment go to a hospital emergency room for care.

From 2011 through 2014, more than 41,000 Arizonans resorted to a hospital emergency rooms for oral health care.

Lawmakers raise concerns

But dentists strongly oppose the dental therapy push and Arizona

lawmakers remained unconvinced that dental therapists are the answer to provide more access and less-expensive care.

Last month, the Legislature's Committee of Reference rejected a "sunrise" application from a pro-dental therapy group called Dental Care for AZ. The Legislature requires sunrise reviews for unregulated medical or dental professions seeking approval to expand scope of practice.

The legislative subcommittee rejected the therapists' application during a testy hearing with dentists questioning therapists' training and the need for a class of new providers. Rep. Regina Cobb, R- Kingman, a subcommittee member and also a dentist, cited her concern the proposal would allow the therapists to operate under general supervision without a dentist present.

"That is the problem ... they (therapists) don't know what they don't know," Cobb said during the December hearing, adding that routine tooth extractions can lead to complicated problems such as broken root tips or perforated sinus cavities.

If "you did this to a child, you now have created a dental cripple for life," Cobb said. "The protection of children is my concern."

Sen. Nancy Barto, R-Phoenix, was the lone dissenter on the 8-1 subcommittee vote rejecting the therapists' sunrise application.

"I am disappointed that Arizona will not be on the cutting edge of access to care issues," Barto said. "The real issue is cost of care and non (Medicaid) patients who really need those services."

Need for dental options widespread

Despite the legislative defeat, supporters of the dental therapists said they plan to continue a push to bring dental therapy to Arizona.

"In other states we've worked on dental therapy, it has never been a quick debate," said Kristen Mizzi Angelone, a dental policy officer with the Pew Charitable Trusts, which has sought to expand dental therapy in several states. "This is a new issue for a lot of legislators so we'll be spending this year to educate stakeholders and policymakers about the need for dental care."

An independent report from Delta Dental of Arizona Foundation showed the widespread oral health challenges that Arizona faces. Delta Dental is Arizona's largest dental insurer as measured by premiums, according to the Arizona Department of Insurance.

The Delta Dental Oral Health Needs Assessment report found about one-third of the state's population lives in a dental provider shortage area with limited access to oral care. The report suggests Arizona has a shortage of providers with 54.5 dentists per 100,000 population, below the U.S. average of 60.5 per 100,000.

More than half of Arizona kindergartners had tooth decay, with even higher rates among Hispanic and Native American children, according to Delta Dental.

"I am disappointed that Arizona will not be on the cutting edge of access to care issues. The real issue is cost of care and non (Medicaid) patients who really need those services."

Sen. Nancy Barto, R-Phoenix

However, Arizona Dental Association officials said that the problem is not that there are too few dentists, but that dentists are not evenly distributed across the state. The organization favors other ideas such as teledentistry — linking patients and dentists remotely through computers or similar technology — as a way to bring access to rural communities.

"We think they are starting from the wrong diagnosis of the problem," said Kevin Earle, the dental association's executive director.

Earle said his organization will push for other priorities this legislative session such as restoring funding for emergency dental visits for low-income adults enrolled in the state's Medicaid program, the Arizona

Health Care Cost Containment System, known as AHCCCS.

Gov. Doug Ducey's budget calls for $14.5 million in "emergency dental" funding next fiscal year for 850,000 adults enrolled in AHCCCS. The request would cost the state's general fund about $1.6 million.

Earle said funding such dental visits — capped at $1,000 per patient each year — could prevent Medicaid patients from seeking more costly care at hospital emergency rooms.

'One more tool in the toolbox'

Still, dental therapy proponents said they will seek to lobby lawmakers during the current the legislative session with an eye toward next year. And in Arizona, the idea has the backing of the Goldwater Institute.

"It's unfortunate that this issue is not getting a full hearing" during the legislative session, said Naomi Lopez-Bauman, the Goldwater

Institute's director of health-care policy. "This is an area where state lawmakers have authority over health-care costs and access that is completely distinct from the federal government."

The three states that have passed dental therapy legislation have each tailored programs for their population, said Pew's Mizzi Angelone.

Maine's legislation passed in 2014 allows dentists to hire dental therapists. In Vermont, dental therapists must be a licensed dental hygienist and must complete an accredited dental therapy program.

In 2009, Minnesota became the first state to authorize dental therapist and began licensing the providers in 2011. A Minnesota legislative report released in February 2014 found no complaints involving patient safety among 32 licensed therapists who primarily served patients enrolled in publicly funded health programs.

About one dozen states are considering dental therapy legislation, Mizzi Angelone said.

"There is serious need in this state (Arizona) and this is one more tool in the toolbox," Mizzi Angelone said.

http://www.azcentral.com/story/money/business/health/2017/01/23/push-...ental-therapy-in-arizona-stalls-amid-legislative-resistance/96836364/

‘Now I Can Restore a Smile’

Dental therapist in rural Minnesota explains why her profession fills a need

Dental therapist Brandi Tweeter treats a young patient at Main Street Dental in Montevideo, Minnesota.

© The Pew Charitable Trusts

Note: This analysis was updated February 6, 2017 to clarify Tweeter’s role in preparing a patient’s mouth for dentures.

Patients in rural Minnesota often travel two hours and more for an appointment with Brandi Tweeter. The dental therapist practices in the city of Montevideo, population 5,400, about 45 miles from the South Dakota line. Why do patients travel so far to see her?

Simply put, they can’t get proper dental care any other way. The services

Tweeter offers—prevention and routine restorative care—are often difficult to obtain in rural communities, which tend to attract fewer dentists. The patients who live there often lack insurance or the ability to pay, as well.

But relatively recently, a new solution arrived. In 2009, Minnesota became the first state to authorize dental therapists, primarily to bring care to underserved populations. Dental therapists are midlevel providers—akin to physician assistants—who provide routine prevention and treatment services, such as filling cavities and placing temporary crowns. They work in a range of settings—public clinics, community health centers, private practices—and some are deployed to nursing homes and schools to reach populations that face challenges traveling to an office. Forty-seven percent of Minnesota's dental therapists practice outside of the Twin Cities, including rural areas.

Similar providers have worked with tribal communities in Alaska since 2004 and practice in more than 50 countries. Recently Maine and Vermont changed their laws to allow dentists in those states to hire dental therapists.

Tweeter, a former dental assistant, finds her expanded role very rewarding. "Patients come in with full-mouth decay … and need full reconstructions. I can do that now. I can restore a smile."

Dental therapists must be employed by a dentist but can see patients in remote or community settings while being supervised via telephone and accessing the same electronic health record as the dentist. The arrangement helps a dental practice build its clientele as well as provide cost-effective care. Adding dental therapists to the team has enabled Main Street Dental Care, where Tweeter works, to become more profitable, even while treating more patients on Medicaid. The practice, owned by dentist John Powers, has hired four dental therapists in the past four years and expanded its total staffing from eight to 20 people. Compared to 2012, this year the office has increased the number of patients served and increased collections by $488,788.

Tweeter keeps busy. Some of her regulars schedule appointments for every

family member when they come to Montevideo. “If I wasn’t there, they wouldn’t get their teeth checked,” she says.

Two years ago, a 45-year-old acquaintance of Tweeter’s asked via Facebook whether Tweeter’s dental practice would take her insurance. The woman had neglected her teeth because she couldn’t find a dentist who accepted patients on Medicaid. “She would cry herself to sleep because of a toothache,” Tweeter says. The woman told her she hadn’t smiled in two years.

Tweeter removed the black decay spots, so the dentist could extract some badly diseased teeth and fit her with partial dentures.

“This year is the first time she’ll be smiling for Christmas pictures,” Tweeter says. “My job isn’t only about restoring the smile. It also restores self-confidence.”

John Grant directs the dental campaign at The Pew Charitable Trusts.

Report Backs Dental Therapist as a Way to Increase Access to Dental Care

As Americans age, the Gerontological Society offers roadmap to improved oral health for seniors

Heather Luebben, a dental therapist from Apple Tree Dental performs dental treatments through their mobile clinic at Options, Inc. in Big Lake, Minn., on April 13, 2017.

© The Pew Charitable Trusts

A recent report by the Gerontological Society of America provides a plan to address the unmet need for oral health care services for older adults with

limited access to care.

Among the strategies recommended in the report, “Interprofessional Solutions for Improving Oral Health in Older Adults,” is greater use of dental therapists. Akin to a nurse practitioner in the medical field, dental therapists can provide preventative and routine restorative care, like filling cavities, in a cost-efficient way. Dental therapists are especially suited to increase care to older Americans because they can provide services outside of traditional dental offices and treat patients in community settings, such as long-term care facilities.

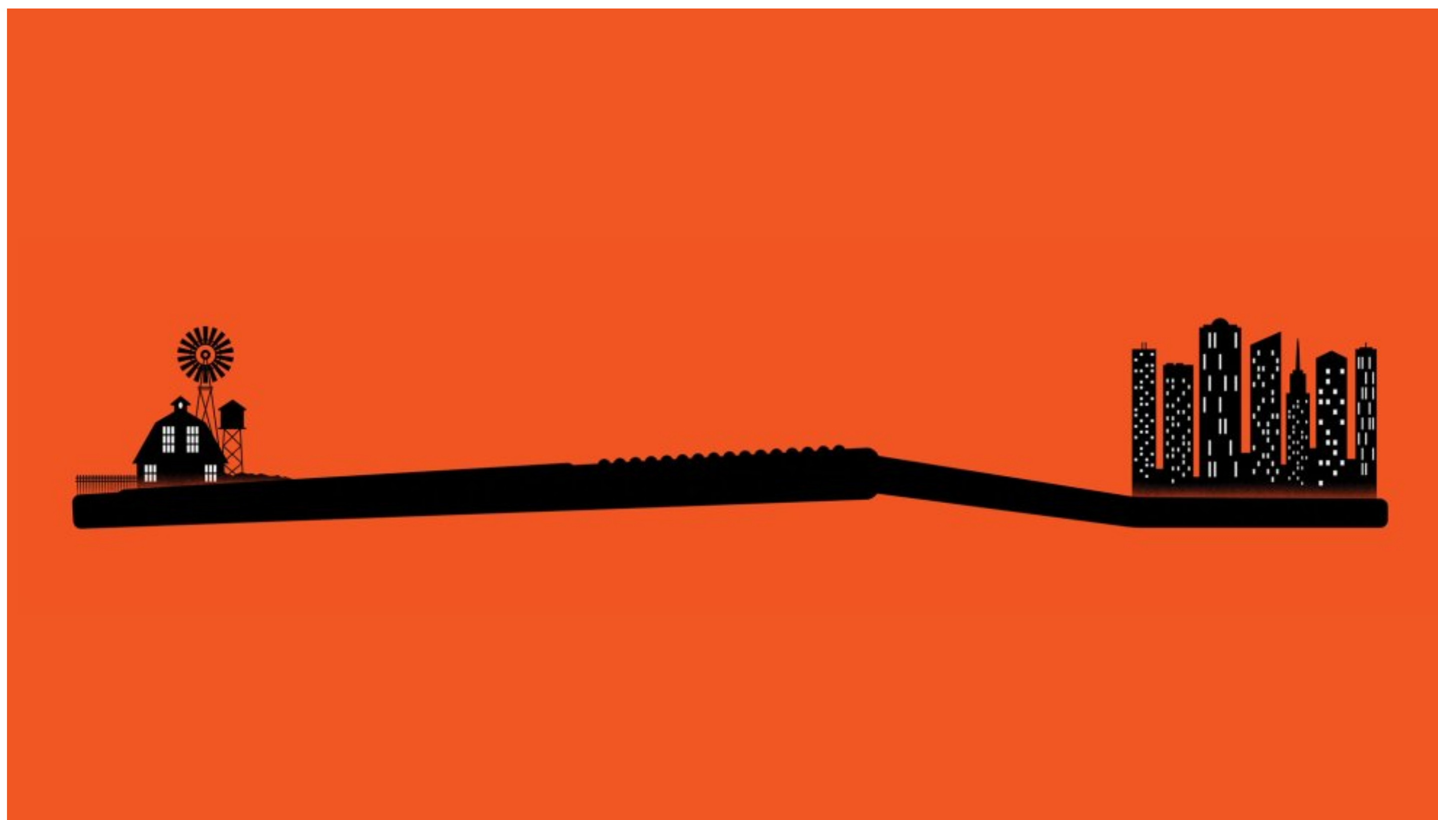
U.S. seniors are keeping their teeth longer than they did in the past, yet many are unable to access preventive dental care or treatment. Senior citizens—those 65 and older—made up 15 percent of the U.S. population in 2014, and their share of the population is expected to nearly double by 2060. As the number of older Americans increases in the coming decades, the demand for care for this age group is expected to intensify.

Jane Koppelman is the director of research for the dental campaign at The Pew Charitable Trusts.

It’s Incredibly Hard to Get Dental Care in Rural America

Dental therapists could help—but many professional dentists are fighting them.

Mary OttoSeptember/October 2017 Issue



Matt Chase

Two and a half hours west of the Twin Cities, where the Minnesota and Chippewa rivers meet, is the prairie village of Montevideo, Minnesota. Downtown consists of a post office, railroad tracks, a few storefronts, and a dentist’s office called Main Street Dental Care. From the outside, the clinic doesn’t look like much. But on the bitter February day I visited, inside it was buzzing with activity.

Down the hall from the full waiting room, bent over her dental chair, Brandi Tweeter had a full roster of patients. Some had traveled hundreds of miles to see her, she told me. That's not unusual: In Minnesota, there's about one dentist for every 1,500 people—but they're concentrated in cities. Here in Chippewa County, the ratio is 1 in about 2,400. In a neighboring county, it's 1 in more than 5,000.

Rural Minnesota isn't alone—some 49 million Americans live in places where there are not enough dentists. In those areas, it's often hard to get an appointment even if you have private insurance. But for people on Medicaid, it can be impossible: Fewer than half the nation's dentists accept Medicaid patients. Those who don't claim the paperwork is too complicated and the reimbursement rates are too low.

More than 1 in 3 low-income adults avoid smiling because they're ashamed of their teeth.

The result is a public health crisis. While writing my book, *Teeth: The Story of Beauty, Inequality, and the Struggle for Oral Health in America*, I met people who slept in their cars and waited in long lines for extractions at free clinics. I met people who had pulled out their own teeth and others who had lost loved ones to dental abscesses. I met a boy dying from complications of untreated tooth decay.

I also observed how bad teeth can lock families into a cycle of poverty. "No more people behind the counter unless they have all their teeth," Andrew Puzder, the former CEO of CKE Restaurants, told managers of Hardee's burger shops in a memo that turned up when he was nominated to be President Donald Trump's labor secretary. More than 1 in 3 low-income adults avoid smiling because they're ashamed of their teeth, according to a Harris Poll survey conducted on behalf of the American Dental Association in

2015.

And untreated dental problems tax our health care system. More than a million Americans a year show up at hospital emergency rooms with nontraumatic dental problems—costing more than $1 billion annually. In Minnesota, about 400,000 preschoolers were brought to hospital emergency rooms with severe oral conditions during a recent five-year period. The visits cost $80 million, the Minneapolis *Star Tribune* reported last year.

Which is where Brandi Tweeter comes in. She's a dental therapist—something like a nurse practitioner for teeth. Twice as fast to train as a dental surgeon and half as expensive to employ, dental therapists handle a range of common procedures: drilling and filling teeth, placing crowns, performing some extractions. Under an innovative program in Minnesota, about 60 dental therapists fill in where care is scarce.

More than a million Americans a year show up at hospital emergency rooms with nontraumatic dental problems—costing more than $1 billion annually.

Yet the therapists remain controversial in Minnesota and beyond. The American Dental Association, which spends more than $2 million a year on lobbying, has fought them tirelessly. The ADA says it's worried about patient safety, but John Powers, the owner of Main Street Dental Care, suggests the real reason is fear of competition. "Dental organizations say, 'We're concerned about our patients and their care,'" he told me. "No. You are concerned about your pocketbook."

The nation's first dental therapists started working in Alaskan tribal areas in 2005—and the ADA and the Alaska Dental Society soon sued (unsuccessfully)

to stop them. Three years later, Ann Lynch, a freshman Minnesota state senator, introduced a bill to allow dental therapists in her state. The Minnesota Dental Association launched what the *Star Tribune* called "an all-out media blitz targeting the legislation," but lawmakers passed it anyway. Since then, Maine and Vermont have passed laws allowing dental therapists, and 11 other states are considering them, as are more tribal groups.

The ADA still maintains there's no evidence that dental therapists are helping to fix Minnesota's shortage of care. But a 2014 review by the state's Department of Health and Board of Dentistry indicates that more Medicaid patients receive treatment in areas surrounding clinics that employ dental therapists. The state also documented dramatically reduced waiting times.

Here's what hasn't decreased: business at Main Street Dental Care. Quite the opposite, in fact. When Powers hired Tweeter five years ago, he was able to open his doors to Medicaid recipients. Since then, his practice has increased from 3,000 patients to 8,000. The office's annual revenue has more than tripled, from $600,000 to $1.9 million, and the staff has grown from 7 employees to 23 (including three more dental therapists). The clinic had to move to a bigger office. Powers is excited about the booming business, but he's most proud of how his team has helped people on the prairie, he told me: "The effect we've had on their oral health in this area—and in the state, for that matter—is kind of amazing."

Dentists skip Hope Fest, seek better way to meet Tucson's 'astronomical' need

By Stephanie Innes
Arizona Daily Star
Oct 28, 2017

Local dentists who for years volunteered their services at Tucson's Hope Fest are skipping this weekend's charity gathering, working instead on a way to offer free care on a more ongoing basis.

The need for free dental care here is too huge to offer it in a one-day event like Hope Fest, they say. The annual event for low income residents offers free hygiene items, haircuts and medical services, among other things, and regularly attracts upward of 10,000 people. It was set for Saturday at the Tucson Convention Center.

For the first time in at least 20 years, no dental services were to be offered.

In recent years, the dental component at Hope Fest attracted about 250 volunteers, including 75 dentists, to give free care to 400 to 600 local residents in one day. Spots for dental care at past events were limited, so people, frequently suffering from severe dental problems, often tried to camp out the night before, even though organizers prohibited it. Arguments often erupted in the line over getting one of the coveted spots.

Hope Fest organizer Lisa Chastain told the Star last week that she hopes to offer dental care in some form at Hope Fest 2018. The 25-year-old event is operated by the nonprofit Hope Network Inc.

But volunteer dentists, led by longtime Hope Fest dental director Dr.

Dean Hauseman, say the local need is simply too big to handle in one day. There has to be a better way to help, he said.

“We’re not bailing. But we were not making any progress,” said Hauseman, who is a local endodontist. “We need some sort of delivery system in Tucson to offer dentistry to the underserved that is not just a one-day event.”

Hauseman and other local oral health advocates, including leaders of the Arizona Dental Association, will be meeting next month to discuss a future where dentists will no longer volunteer at Hope Fest. Rather, they’d like to be volunteering doing something that’s more regular and effective.

“Charitable dental events like this are just like putting a Band-Aid on a big problem. Our problem is systemic,”

- Kevin Earle
Executive Director
Arizona Dental Association.

“Part of the idea is perhaps we could do things several times a year instead of once a year. That way it becomes more of an ongoing resource in the community and we can get folks engaged, and provide something more comprehensive.”
Dental problems are closely tied to poverty and at 19 percent, Pima County’s poverty rate is higher than both the national and state levels.

Left untreated, dental health problems can cause pain and tooth loss, impede productivity and job opportunities, cause problems speaking, eating, learning and complicate the detection of oral cancers.

People without dental care are vulnerable to heart and kidney disease, diabetes, high blood pressure and even premature death.

CARE DEFICIT

One in four Pima County residents — nearly 300,000 people — are covered by Medicaid, a government insurance program for low income people. Medicaid in Arizona, which is called the Arizona Health Care Cost Containment System (AHCCCS) does not cover comprehensive dental care for adults over the age of 21.

Until recently, Arizona was one of just four states in the U.S. that offered no dental care at all to people enrolled in Medicaid. The state slashed all dental coverage for adults in 2010 and it was that action that only aggravated the dental problems among attendees at Hope Fest, Earle sad.

“That’s how Hope Fest morphed. After seven years of not having any resources, they are essentially without any teeth or have a few teeth left,” he said.

Beginning Oct. 1, adults over the age of 21 who are on AHCCCS (Medicaid) have been allowed use up to $1,000 per year for emergency dental care. It’s a start, but oral health care advocates say real progress with dental health will occur when AHCCCS begins covering comprehensive dental care, including preventive visits, for adults.

“The reinstated Medicaid benefit only covers patients in the case of a dental emergency and only provides up to $1,000 worth of care. While a step in the right direction, this limited insurance coverage does not guarantee access to dental care,” said Kristen Mizzi Angelone, a dental campaign officer with the Pew Charitable Trusts.

“In Arizona, only about one third of dentists see any patients on Medicaid. And in many areas of the state, including rural communities and tribal lands, dental providers are scarce, leaving people to travel significant distances just to get to an oral health care provider.”

And the new AHCCCS dental benefit won't pay for preventive care, like screenings and teeth cleanings. It's limited to emergency care associated with pain and infection.

"The need is astronomical."

- Alicia Thompson,
Dental Health Manager
El Rio Community Health Center

"We're hoping eventually we can be a kinder, gentler state and have a comprehensive dental benefit for adults at these income levels," Earle said. "It will help build a more robust structure, a better safety net system. That is our big goal, ultimately."

Oral health isn't just a problem for people on Medicaid/AHCCCS. Medicare, a government health insurance program that predominantly covers people over the age of 65, does not pay for dental care.

And other working Arizonans are earning too much to qualify for AHCCCS, yet not enough to afford expensive dental bills, dental providers say.
Low cost clinics like El Rio Community Health Center are helping, but they cannot afford to consistently offer free care.

Some subsidies are available through the El Rio Foundation for people with no other means to pay, but there's not nearly enough money nor are there enough providers serving low income patients, said Alicia Thompson, the manager of the dental department at El Rio and also coordinator of the Southern Arizona Oral Health Coalition.

"We operate at maximum capacity with the current providers we have," Thompson said of El Rio. "We don't have the capacity and there aren't enough dentists graduating that are willing and want to work in a safety net provider facility, like a federally qualified health

center.”

El Rio serves 95,000 individual patients per year, but only 23,000 of them are getting their dental care there, officials said. Thompson said she suspects many of the remaining 72,000 El Rio patients are getting no oral health care at all.

The people who are camping overnight for Hope Fest, spending hours standing in line to get dental care, are making choices between food, rent and oral health, Thompson said.

“They are put into such a hard position. They are in pain but also have a family to feed, to keep a roof over their head. So they live with the pain,” said Thompson, whose coalition will be working with Hauseman on a post-Hope Fest plan.

The need, she said, is, “astronomical.”

DENTURE-FEST

One problem with Hope Fest was that people would get a procedure like a root canal, but couldn’t afford the next step, to then put a crown on it. There was no follow-through, Hauseman said.

Also, in recent years, Hope Fest became what Hauseman calls a “denture-fest” as word got out that a limited number of dentures were being offered. People began referring to dentures as the, “golden ticket.”

“It became a monster that got out of control,” Hauseman said. “I’ve done it for 20 years and I’ve seen the evolution of the whole project. … Dentures are wonderful and change people’s lives, but they are expensive and time-intensive.”

Demand for dentures was overwhelming other services like fillings, root canals and preventive care, Hauseman said.

“We lost what we were doing with Hope Fest, which started out with more generalized treating of fillings, cleanings and maybe root canals,” Hauseman said.

Then this year Hope Fest moved venues from Kino Memorial Veterans Stadium to the Tucson Convention Center, which was not as conducive to offering dental services, Hauseman said. It was an opportunity for the dental volunteers to reconfigure how to best meet the community’s vast oral health needs.

Any money donated to Hope Fest’s dental program is now going to the Arizona Dental Foundation, which is the state association’s charitable arm, until a new solution is found.

Moving forward, Hauseman hopes to re-direct the efforts that went into offering dental services at Hope Fest into a “better vehicle” to deliver dentistry to the underserved.

“We’ve got to use our collective brain power and find a solution to what we are doing here,” he said. “It’s got to be something where volunteer dentists go to a clinical site on a routine basis, so we can provide more comprehensive care to these people.”

Dental Care
FOR ARIZONA

Selected Studies that Prove Dental Therapy is Safe, Effective & Increases Access

Health Policy Division, Office of
Rural Health and Primary Care
PO Box 64882
St. Paul, MN 55164-0882
651-201-3838
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2829 University Avenue SE
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612-617-2250
www.dentalboard.state.mn.us

Early Impacts of Dental Therapists in Minnesota

Minnesota Department of Health
Minnesota Board of Dentistry
Report to the Minnesota Legislature 2014

February 2014

E. Costs to the public health system.

As noted above, data on payments and services billed to Minnesota public programs by dental therapists were unavailable for the current assessment. In addition, consistent all-payer standards and procedures for identifying dental therapists as treating providers are needed.

With state public program reimbursement rates for dental therapist services the same as the rates for dentist services, there is not necessarily an immediate savings to the state on each claim paid; however, the differential between DHS rates and clinics' lower personnel costs for dental therapists appears to be contributing to more patients being seen.

VIII. Additional findings

In addition to the specific measures of impact outlined in the 2009 Minnesota dental therapy law, the following are supplemental findings that emerged from the assessment. These findings offer additional information on the early impact of dental therapists on the delivery of and access to dental services in the state.

A. Clinics report additional impacts of dental therapists, including personnel cost savings, increased dental team productivity, and improved patient satisfaction.

Two thirds of the clinics interviewed noted the significant savings in personnel costs that come with employing a dental therapist compared to a dentist.[42] Several pointed out that a dental therapist costs roughly half as much as a dentist; one clinic calculated their savings at $62,000 per dental therapist when malpractice insurance and other differentials are factored in, while others estimated the savings to be $35,000-$50,000 per dental therapist.[43] All but one clinic that reported malpractice premiums for dental therapists reported premium prices significantly below dentist malpractice premiums; premiums at the outlier clinic were similar to dentist premiums.

Many of the clinic directors also observed the versatility and flexibility dental therapists have brought to their dental teams, and reported this has led to an overall increase in productivity. Clinics also reported that having a dental therapist frees up the dentist to focus on more complex procedures.[44] This has allowed for more appropriate and more accessible scheduling, brought financial benefits to the clinic, and in some cases led clinics to begin (or resume) offering more complicated services than they were able to offer without the dental therapist.

Clinics also referred to more intangible ways the dental therapist has improved the work of their teams and practices. "Dental therapists are the 'glue' that hold dental clinics together, like a nurse at a hospital does," said a director at Family Dental Care. "Dental therapists also help everyone become better professionals by providing dental education and a quality experience for

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[42] Interviews with Children's Dental Services, ADT Dental, Apple Tree Dental, Main Street Dental, HealthPartners, HCMC and St. Joseph's.

[43] Interviews with Children's Dental Services, Apple Tree Dental and Family Dental Care.

[44] Interviews with Children's Dental Services, ADT Dental, Apple Tree Dental, Main Street Dental, HealthPartners, Metropolitan State University Dental Clinic, Family Dental Care, Moorhead State Technical College, HCMC and St. Joseph's.

patients." Another clinic director stated: "Dental therapists are doing a lot toward evidence-based dentistry – a hidden benefit."

Finally, several clinics reported high levels of patient satisfaction with dental therapists, in part because they are able to spend more time with patients, and can offer chairside education and prevention information.[45] "We look carefully at patient satisfaction and the quality is wonderful with the dental therapist," a director at HealthPartners noted.

B. The savings resulting from the lower costs of dental therapists are allowing clinics to expand capacity to serve more underserved and public program patients.

Clinics have been able to use the savings made possible from a dental therapist to "add chairs" (and related equipment and supplies) to serve more patients.[46] Clinics also noted that the cost differential has made it possible for them to recoup capital expansion costs faster. In one case the clinic has hired 1.2 full-time equivalent (FTE) dental therapists to serve underserved patients, and noted it would not have been able to afford 1.2 FTE dentists.[47] Another clinic noted that the savings yielded from having the dental therapist has made the difference in terms of sustainability for the clinic overall: as recently as last year, the rural hospital-based clinic – whose clientele is nearly all enrolled in public programs – was losing significant amounts in uncompensated care, even with long waiting lists. Adding a dental therapist has doubled their capacity, erased their waiting list and allowed the clinic to begin accepting direct referrals from the nearby emergency room.[48]

C. Start-up experiences with dental therapists have varied, and employers expect continuing evolution of the profession's role and impact.

Dental therapists' ability to perform routine procedures is freeing up dentists' time for complex procedures. Because most patients first see a dental hygienist and receive a dentist's exam, most dental therapist patients have been follow-up/restorative care patients. Dental therapists give the clinics more flexibility to juggle schedules to fit patients in and to assign procedures on the fly to the most fitting and most available member of the team. This has increased flexibility and efficiency.

Time to achieve break-even employing a dental therapist has varied. Many clinics began using dental therapists on a part-time basis, increasing hours as routines were established and capacity to accept new patients grew. Clinics feel they are "writing the book" on employing dental therapists.

Many of the clinics noted that introducing a dental therapist involved a ramp-up period, as team members defined and became comfortable with the new patient flow and roles. "There is a learning curve effect," said a director at Apple Tree Dental. "The first and second year can be rocky as the team ramps up. The dentists on the team may not be referring as much as possible.

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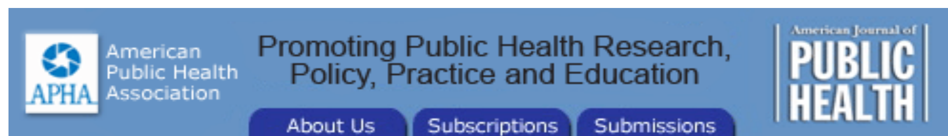
[45] Interviews with HealthPartners, Family Dental Care and St. Joseph's.
[46] Interviews with ADT Dental, Apple Tree Dental and Family Dental Care.
[47] Interview with Family Dental Care.
[48] Interview with St. Joseph's in Park Rapids.



Am J Public Health. 2014 June; 104(6): 1005–1009. PMCID: PMC4062028
Published online 2014 June. doi: 10.2105/AJPH.2014.301895

Dental Therapists: Improving Access to Oral Health Care for Underserved Children

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Contributors

J. W. Friedman wrote the original draft of the article. K. R. Mathu-Muju contributed to the history of dental therapists and their current implementation. Both authors revised the article.

Peer Reviewed

Accepted January 16, 2014.

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Abstract

Go to:

Disparities in dental health care that characterize poor populations are well known. Children suffer disproportionately and most severely from dental diseases. Many countries have school-based dental therapist programs to meet children’s primary oral health care needs.

Although dental therapists in the United States face opposition from national and state dental associations, many state governments are considering funding the training and deployment of dental therapists to care for underserved populations. Dental therapists care for American Indians/Alaska Natives in Alaska, and Minnesota became the first state to legislate dental therapist training.

Children should receive priority preference; therefore, the most effective and economical utilization of dental therapists will be as salaried employees in school-based programs, beginning in underserved rural areas and inner cities.

The 2000 report of the surgeon general *Oral Health in America* noted,

> *What amounts to “a silent epidemic” of oral diseases is affecting our most vulnerable citizens—poor children, the elderly and many members of racial and ethnic minority groups.*[1(p1)]

This persistent epidemic has not been alleviated by continuation of the present dental care delivery system. A significant factor contributing to the inability of children to obtain adequate dental care is the shortage of accessible dentists.[2] Expansion of the dental workforce to include dental therapists offers the potential for improvement.

More than 14 000 dental therapists practice in more than 54 countries throughout the world, including New Zealand, which originated the concept; Australia; Canada; the United Kingdom; and, most

recently, the United States, in Alaska and Minnesota.[3–5] High school graduates are trained in a 2-year program to provide preventive and restorative dental care, usually for children. In some countries training is being extended to 3 years to incorporate both dental therapy and dental hygiene, and to provide treatment of adults as well as children.[6,7]

Dental therapist programs have been studied extensively in a number of countries, and the quality of care, which includes preventive and restorative treatment for more than 90% of school-aged children through high school, has been consistently documented to equal care provided by dentists.[8–10] School-based dental therapists are salaried public health workers, and the overall cost of providing care to children in schools is thus significantly lower than the cost of private dental care.[11]

OPPOSITION FROM ORGANIZED DENTISTRY

Go to:

The American Dental Association and its component state associations have opposed the adoption of dental therapist training and practice in the United States, mainly by asserting that it represents a second-tier or inferior level of care.[12,13] This claim has been refuted by numerous studies.[8–10] The dental therapist's scope of practice is restricted to basic care, including cavity filling, preformed stainless steel crown fitting, primary tooth pulp therapy, and simple extractions.[7] In school-based programs, significant time is devoted to preventive treatment, such as individual and classroom dental health education and sealant and topical fluoride application. Dental therapists are endorsed by the American Public Health Association, the American Association of Public Health Dentistry, and the American Dental Hygienists' Association as a successful model for increasing access to care for underserved populations.[13]

Some private practitioners oppose dental therapists in the belief the problem is not a shortage of dentists but rather their distribution. Others are more concerned with how dental therapists might adversely affect their practices and diminish their income. However, dental therapists are not intended to compete with dentists. As part of a public health infrastructure, they are intended to treat a portion of the population, particularly poor children in rural areas and inner cities, that for various reasons cannot obtain care in the private practice delivery system. In the United States, for example, only about 20% of practicing dentists provide care to Medicaid recipients.[14] Among Medicaid-enrolled children, the prevalence of dental visits for any type of care ranges from 12% to 49%.[15] More than 43 million children are covered by Medicaid and the Children's Health Insurance programs, and most of them have limited access to dental care.

The American Dental Association contends that a major barrier to treating poor children is low Medicaid reimbursements, which do not cover the actual cost of treatment, much less yield a profit. In 1 state, increasing Medicaid dental fees increased dentist participation by 42% but utilization by only 18%.[16] Overall, raising Medicaid payments has had minimal effect on utilization.[17,18] For example, an increase in the Medicaid prophylaxis payment by 50% (from $20 to $30) resulted in only a 3.92% increase in the chance of a child or adolescent seeing a dentist.[19] The effect is further limited if too few dentists practice in underserved areas. This maldistribution of the health care workforce in relation to need could be addressed with the development of a targeted, school-based system of care.

ALASKA AND MINNESOTA

Go to:

Many areas of the country have a shortage of dentists, which is increasing as the population continues to expand, despite the opening of 9 dental schools between 1997 and 2011, with more in development.[20,21] In fact, the number of new dentists is barely keeping up with the rate of retirement, which is why many states are considering legislation for the training of dental therapists to serve their underserved populations.[2]

This movement began in Alaska in 2005 when 6 dental health aide therapists (DHATs), trained in New Zealand, were deployed to remote Alaska villages to serve the Alaska Native population, which previously had little or no access to care. Now trained in Anchorage, DHATs gain experience after graduation in a 6-month preceptorship under the guidance of clinical dentists who certify their competency and scope of practice.[22] As of 2011, 11 of Alaska's 27 tribal health corporations employed 25 DHATs, each of whom rotates between 3 and 6 small Alaska Native villages (Mary E. Williard, personal communication, July 9, 2013). The total population covered is about 40 000, for a ratio of 1 DHAT to 1600 people. By comparison, for the US population, 9642 additional dentists would be needed for the 4639 recognized Dental Health Professional Shortage Areas to reach a dentist-to-population ratio of 1 to 3000, which is the minimal number that can be expected to alleviate the shortage situation.[20,23]

Although DHATs practice independently, they are part of an integrated health care network. They are supervised indirectly by dentists who are on call to provide consultation by telephone and video (teledentistry). The supervising dentists periodically visit the remote sites to review the quality of care provided by DHATs, as well as to care for patients requiring more extensive treatment beyond the DHATs' scope of practice. In the interim, adults as well as children requiring immediate treatment that can only be provided by a dentist, such as root canal therapy, cast crown fitting, and complex extractions, must travel by airplane or boat to a hub clinic to visit a dentist.[22]

In 2009, Minnesota passed legislation authorizing 2 types of dental therapists: a traditional dental therapist with 28 months of training and an advanced dental therapist with 2 additional years of training plus a year of direct, on-site supervised practice.[24] The dental therapist is restricted to practicing under the direct on-site supervision of a dentist, in specific areas designated as underserved; the advanced dental therapist may provide care in other facilities, such as nursing homes, with indirect supervision by a collaborating dentist, who must approve the intended treatment. As of March 2013, 25 licensed dental therapists were assigned to federally qualified health centers, elementary schools, and private practices for underserved populations. Medicaid provides dental coverage to about 390 000 low-income or disabled children in Minnesota, yet only about 42% of them receive any dental care each year. With little prospect of finding enough dentists willing to provide care for this population in community health centers, much less private practices, dental therapists are a viable alternative.

THE ECONOMICS OF DENTAL THERAPISTS

Go to:

It takes close to 8 years after high school to graduate a dentist. Dental hygienists and dental therapists can be trained in 2-year post–high school programs. Reported total expenditures for the 4 years of dental school average $312 000 for public and $233 000 for private schools.[25] These figures do not include the cost of 3 to 4 years of predental education or the opportunity cost—what the student could be earning if not attending professional school, which is an indirect but real cost to the student.[26] If these additional costs are included, the total direct and indirect cost involved in the education of a dentist is an estimated $674 000 (Table 1). The average tuition and fees for a minimal 2-year dental hygiene program is about $36 000.[27] Adding living expenses raises the out-of-pocket cost to approximately $56 000[28]; including the 2-year opportunity cost brings the total cost of dental hygienist training to about $124 000 (Table 1). Because the cost to train a dental therapist is about the same as for a dental hygienist in a 2-year program, at least 5 dental therapists could be trained in two fifths the time at the same equivalent cost as 1 dentist.

TABLE 1—

Estimate of Oral Health Care Provider Training and Education Costs Including Opportunity Costs, 2013

The cost of setting up and maintaining the physical plant—dental equipment, supplies, utilities, rent—is the same, whether for a dentist or a dental therapist. The difference in cost—the savings to the service—is in their salaries. The average net income of dentists in private practice in 2009 was nearly $213 000. Employed general dentists averaged $123 000.29 Pediatric dentists averaged $312 000. The mean annual income for dental hygienists working full time reported in a 2007 survey was $56 810.30 However, hygienists working in corporate and industrial settings averaged $65 333.

A dental therapist will likely earn at the higher rate, which is 47% less than an employed general dentist is paid, a net saving of more than $57 000 a year. But this figure is conservative. If the dental therapist's salary is compared with the average net income of a general dentist in private practice who provides the same services, the potential net savings is $148 000, or 69%.

Studies have documented the cost effectiveness of dental therapists, relative to dentists, particularly in programs for children. In New Zealand, the 2010 to 2011 per capita cost of providing care in its school-based system to 96% of children aged 5 to 12 years and 49% of preschoolers was $99; the private practice fee for examination, radiographs, and cleaning alone was $102, with the additional cost of $99 for a simple filling.31 In 1 state in Australia, the average cost per child for treatment by a private dentist was $265, but only $52 by dental therapists in the school dental service.3 In Saskatchewan, Canada, before the program was closed, the cost of providing care to 85% of children and adolescents aged 5 to 14 years between 1974 and 1986 decreased 273%, from $342 to $92 per child.3

Financial support for dental therapists will vary depending on their employment. In a school-based program, their salaries could be paid out of the school district's budget in the same manner as for school nurses. The budget could be subsidized by Medicaid, preferably on a capitated basis. For therapists employed in a federally qualified health center, Medicaid reimbursement could be a lump sum per encounter or fee for service. A private dental practice that employs a dental therapist will bill whatever source is available—commercial insurance, Medicaid, or the patient—usually as fees for service.

SCHOOL-BASED PROGRAMS

Go to:

It is customary for school dental services to obtain parental consent before enrolling children in the program. Most school programs maintain an enrollment of more than 95% of the students, which is an obvious endorsement of the service and evidence of the satisfaction with care provided by therapists, as reported for New Zealand, the United Kingdom, Australia, Canada, the Netherlands, Alaska, and Minnesota.3 In a study of 8 private dental offices in the United Kingdom, patients treated by therapists expressed more satisfaction than those attended by dentists.32

School-based health care has a long history in the United States that dates to the early 20th century. Today, more than 73 000 full- or part-time registered nurses provide health care for children in schools.33 In some schools, dental hygienists provide dental screenings and preventive dental services, with referral to dentists for children who need definitive care for fillings and other pathology. Unfortunately, there is little evidence that school screening and referral programs are effective for ensuring that poor children are ultimately seen by a dentist for treatment.34 A few schools have visiting dentists in mobile trailers who provide commendable care, but they are too few and too expensive to meet the needs of tens of millions of poor, neglected children.

Even the modest goal set by *Healthy People 2010* of increasing annual oral health care utilization among children from 20% to 57% cannot be achieved without a major change in the delivery system.35 Children, as well as those adults confined in institutions such as nursing homes, are essentially nonambulatory. They require a caretaker with the time, the means, and the money to take them to the dental office. Many economically disadvantaged children lack that caregiver. What would be more

logical than to bring the necessary care to them in public schools?36 Providing necessary dental care to children in their schools is an international practice of documented effectiveness.

THE MORAL IMPERATIVE

Go to:

Whether care is provided in schools, community health centers, or private practices, the concept of social justice demands that priority be given to those least able to care for themselves: children. The highest priority is assigned to those who are most disadvantaged.37 As Nash declared,

> *[O]ur nation's health care system, if it is to be just, must be … committed to maximally benefiting the "worst off." … Poor and minority children, the most vulnerable individuals in our nation, and the worst off, have the highest prevalence of oral disease, the poorest access to oral health care and the poorest overall oral health. Justice demands they be maximally benefited in order that they ultimately have "equal opportunity" to do well.*[38(p53)]

Ensuring that the entire population receives oral health care is a long-term goal. Because it can only be achieved incrementally, it is necessary to establish priorities and to develop evidence-based programs for implementation. The school-based oral health care program staffed by dental therapists is not the only option. It is simply the best. It need not exclude employment of dental therapists in federally qualified health centers and even private practices in underserved areas. But limited resources dictate that the highest priority should be given to oral health care for children in schools. Healthy children are, after all, the precursor to a healthy adult population.

Acknowledgments

Go to:

Special thanks to David A. Nash, DMD, EdD, whose teaching and writing on social justice and ethical practice, in addition to his support for dental therapists, are reflected in this article.

Human Participant Protection

Go to:

No protocol approval was required because no human participants were involved.

References

Go to:

1. National Institute of Dental and Craniofacial Research. Oral Health in America: A Report of the Surgeon General. Rockville, MD: US Department of Health and Human Services; 2000.

2. Pew Charitable Trusts. In search of dental care: two types of dentist shortages limit children's access to care. 2013. Available at: http://www.pewstates.org/uploadedFiles/PCS_Assets/2013/In_search_of_dental_care.pdf. Accessed November 27, 2013.

3. Nash DA, Friedman JW, Mathu-Muju KR . A Review of the Global Literature on Dental Therapists: In the Context of the Movement to Add Dental Therapists to the Oral Health Workforce in the United States. Battle Creek, M: W. K. Kellogg Foundation; 2012. Available at: http://www.wkkf.org/knowledge-center/resources/2012/04/nash-dental-therapist-literature-review.aspx. Accessed September 2, 2013.

4. van den Heuvel J, Jongbloed-Zoet C, Eaton K. The new style dental hygienist—changing oral health care professions in the Netherlands. J Dental Health. 2005;44(6):3–10.

5. Pew Charitable Trusts, Pew Center on the States. The Minnesota story. Issue brief. 2010. Available at:

DISCOVERY!

Dental Therapists: Evidence of Technical Competence

E. Phillips* and H.L. Shaefer

Abstract: *Dental therapists are members of the dental team in many countries, where they perform a limited number of irreversible restorative procedures. In the United States, they practice only in Alaska and Minnesota, though other states are considering adding them in an effort to improve access to care. While critics of this workforce model cite concern for patient safety, proponents argue that dental therapists provide treatment that is as technically competent as that provided by dentists. Though nearly 2 dozen studies from industrialized countries address this subject, this article systematically reviews all 23 of them. Of these reports, all but 2 conclude that dental therapists perform at an acceptable level. Every study that directly compared the work of dental therapists with that of dentists found that they performed at least as well. Regardless of whether dental therapists would be the most effective intervention for improving access to oral health care in the United States, the evidence clearly suggests dental therapists are clinically competent to safely perform the limited set of procedures that falls within their scope of practice.*

Key Words: mid-level provider, quality of care, review, access to care, restorative, auxiliaries.

Dental therapists are members of a workforce model that, while not common in the United States, is widely used internationally. Sometimes compared with physician assistants or nurse practitioners, dental therapists perform a limited set of restorative procedures under the supervision of a dentist. A primary goal of this workforce model is to improve access to care by reducing costs and increasing the number of providers.

In the United States, dental therapists practice only on Alaskan tribal lands and in Minnesota, though interest is increasing elsewhere. Rarely a week goes by without a reference to dental therapists somewhere in the national press, and their possible widespread introduction into the American workforce is evoking heated debate. The American Dental Association and most state dental associations oppose the concept, citing concern for patient safety and viability in the U.S. market (ADA, 2005, 2011). In contrast, several other groups, such as the American Association of Public Health Dentistry, the Kellogg Foundation, and the Pew Charitable Trusts, maintain that therapists provide safe and affordable care and have expressed interest in adding them to the U.S. dental team. Legislators at the Federal level and in many states have also expressed interest.

While there appears to be little concern internationally, a primary area of contention in the United States is the safety of the care provided by therapists. In fact, therapists' ability to provide safe, quality care has been a topic of reports dating to the early 1950s, though the results of the totality of these studies have never been presented in a single targeted review. A recent Kellogg report, *A Review of the Global Literature on Dental Therapists,* prepared by Nash *et al.* (2012), is extensive, touching on topics well beyond technical competence, but the format makes analyzing and comparing studies nearly impossible. Thus, with the goal of providing a valuable resource as this workforce model continues to be explored in the United States, the current review identifies and reviews every English-language study from an industrialized country that assesses the clinical competence of non-dentists performing irreversible restorative procedures.

Twenty-three studies have addressed this issue, as either a primary or secondary point of interest. While the large variation in methodology, as well as a lack of details in some, precluded a formal meta-analysis (effect sizes cannot be standardized), a systematic framework was developed to assess these reports. A series of tables lays out, in a concise and comparable fashion, each study's methods, sample, procedures evaluated, and findings with respect to competence. While a longer review article, including this full, detailed set of tables, can be found in the Appendix to this essay, a summary of key findings is presented here.

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A supplemental appendix to this article is published electronically only at http://jdr.sagepub.com/supplemental.

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The Table lists the 23 studies included in the review. The earliest are predominantly observational reports based on fact-finding missions to New Zealand, where, in 1921, dental therapists were first introduced. The majority of the studies, however, are empirical, and of these, 5 are true experiments. Studies are discussed by type: observational reports first, then the experiments, and then other empirical reports.

The earliest findings come from 3 visits to New Zealand in the early 1950s. Two additional fact-finding trips (one of which also included stops in Australia) were conducted in the early 1970s. In each case, the authors interviewed key informants and visited schools, clinics, and/or training facilities. The reports issued by Bradlaw *et al*. (1951) and Dunning (1972) are entirely impressionistic. In fact, in neither case did the authors attempt to evaluate any work first-hand. Both, however, came away with positive impressions of the work being done by dental nurses (as therapists were then known) in the School Dental Service (SDS). Indeed, according to Bradlaw *et al*., "[t]he dentists we met were in arms at any suggestion of clinical shortcomings which we deliberately suggested to test opinion." The other 3 observational reports, while having empirical elements, do not provide truly rigorous evaluations of technical competence. Though in each case the authors observed restorations in children, the judging criteria tended to be subjective and/or were not fully reported. Both Fulton (1951) and Friedman (1972) concluded that the quality of the work performed by school dental nurses was high. Friedman stated that "[h]aving seen the product first hand, I can attest to the adequacy of training." He also maintained that, based on a review of x-rays, he was unable to tell the difference between restorations placed by nurses and those placed by dentists.

A report by Gruebbel (1950), while ostensibly empirical, contains sufficient shortcomings, not to mention clear biases, that it must be considered observational. Gruebbel judged the amalgam restorations placed by school dental nurses to be "mediocre". In fact, he found nearly 30% to be defective. He appears, however, to have assumed that all of the restorations he examined were placed by nurses, though there is reason to believe that a large number had actually been placed by dentists (Saunders, 1951). Gruebbel also remarked repeatedly on the negative implications of New Zealand's "socialist" system for both society and the dental profession. And, in direct contrast to the contemporaneous reports of Fulton and Bradlaw *et al.,* Gruebbel stated that "a large number of dentists" had concerns about the SDS. This observation was vehemently disputed by the Director of Dental Hygiene (Saunders, 1951).

While our ability to draw firm implications from the preceding studies may be weak, randomized controlled experiments provide more convincing evidence on the effectiveness of a given treatment. Five studies from the 1970s, 4 conducted in the United States and one in the Netherlands, were designed this way. Each tested whether dental hygienists could be taught to prepare and place restorations as well as dentists. The study conducted in the Netherlands is the hardest to assess, since the only English-language article discussing it focused on examiner variability in assessing the quality of restorations, rather than on the quality of the restorations, *per se*. The data used, however, came from a study in which hygienists were trained to prepare and restore adults' teeth; their work was compared with that of both dental students and private practice dentists. Based on the data reported, the hygienists appeared to have performed at least as well as the dental students, and perhaps better than the dentists (Swallow *et al*., 1978).

At around the same time, 3 U.S. universities (Howard, Iowa, and Kentucky), as well the Forsyth Dental Center in Massachusetts, began pilot programs to train dental hygiene students (or, in the case of Forsyth, recently graduated hygienists with some practice experience) to prepare and place restorations. Their work was compared with that of dental students, or, in the case of Forsyth, with that of practicing dentists. All of the pilots had dentists pre-screen patients who were then randomly assigned to a practitioner; all used outside examiners to conduct blind evaluations, according to specific, set criteria. All 4 concluded that hygienists performed as well as dentists (Powell *et al*., 1974; Spohn *et al*., 1976; Sisty *et al*., 1978; Lobene, 1979). Nearly every individual comparison resulted in no qualitative difference between the two practitioner groups; in those few instances when statistically significant differences were observed, they were small in absolute terms, with no consistency as to which group was superior. These studies had relatively small sample sizes, but taken together they provide strong evidence that hygienists can, in a relatively short period of time, be trained to provide such irreversible procedures as Classes I, II, and III restorations at a level that is comparable with that of dentists. [Classes I, II, and III refer to the specific teeth and surfaces being restored (*i.e*., a Class II restoration is on proximal surfaces of molars or premolars).]

Of the 13 other empirical studies, 3 were early evaluations of the Alaskan Dental Health Aide Therapist (DHAT) program; 3 were conducted in Canada, where therapists practice in remote tribal areas, and in the 1970s, Saskatchewan established a short-lived school-based system; 3 studies were conducted in Australia, where therapists have practiced, with state variation, since the 1960s; 2 were conducted in the United Kingdom, where therapists have also been practicing to various degrees for some time; and the last was the result of another U.S. fact-finding trip to New Zealand. Taken as a whole, this body of work, like the set of experiments conducted in the 1970s, provides strong evidence of the ability of dental therapists, working in several settings and systems, to prepare and place restorations at an acceptable level—indeed, at a level that is at least comparable with that of dentists working in the same settings. In fact, of these reports, only one drew negative conclusions. At the behest of the (then) 2 California dental associations, a team went to New Zealand in the early 1970s to gather information, since, at the time, California was considering a school-

Table.
Report or Study Discussing the Technical Quality of Care Provided by Non-dentists Preparing and Placing Restorations

Author	Date	Country	Type of Study	Overall Conclusion
Gruebbel	1950	New Zealand	Observational	Critical of the program based on the high incidence of caries, the nurses' training, their quality of work, and the "socialist" nature of the system.
Bradlaw *et al.*	1951	New Zealand	Observational	New Zealand nurses exhibit a high standard of technical efficiency in the treatment of children.
Fulton	1951	New Zealand	Observational	New Zealand dental nurses are capable of producing amalgam restorations of high quality.
General Dental Council	1966	United Kingdom	Empirical	Dental auxiliaries are well-trained to carry out simple amalgam restorations; the quality of clinical work is high.
Dunning	1972	Australia, New Zealand	Observational	General impressions were that the quality of work in both countries was good.
Friedman	1972	New Zealand	Observational	Found the technical quality of treatment to be quite high.
Redig *et al.*	1973	New Zealand	Empirical	A New Zealand-type dental nurse would not be acceptable to Californians.
Roder	1973; 1976	Australia	Empirical	The quality of restorations placed by the school dental service was good.
Powell *et al.*	1974	United States	Experimental	If the samples of dental therapist trainees and junior dental students are representative, there is no difference in their performance on the procedures evaluated.
Spohn *et al.*	1976	United States	Experimental	Dental hygienists performed at a level comparable with that of senior dental students for specific procedures.
Ambrose *et al.*	1976	Canada	Empirical	The quality of services was at a generally high level.
Sisty *et al.*	1978	United States	Experimental	The dental hygiene students were able to perform selected operative and periodontal procedures at a level comparable with that of senior dental students.
Swallow *et al.*	1978	Netherlands	Experimental	No specific conclusions reported with regard to technical competence (it was not the main focus of the study).
Lobene	1979	United States	Experimental	The services provided by expanded-function dental hygienists can be of high quality.
Jones *et al.*	1981	United Kingdom	Empirical	No specific conclusions reported with regard to technical competence (it was not the main focus of the study).
Lewis	1981	Canada	Empirical	The economies of scale in terms of cost *per* child were not accomplished at the expense of lower quality.
Barmes	1983	Australia	Empirical	The data do not support the charges of inferior quality in the SDS. The quality of care that has been provided by the SDS can only be described as excellent, both clinically and in the social sense.
Crawford & Holmes[a]	1989	Canada	Empirical	Therapists play a very important role, and should be expanded, rather than replaced by contract dentists.
Fiset	2005	United States	Empirical	The performance of the DHATs met the standards of care established.
Bolin	2008	United States	Empirical	No significant evidence was found to indicate that irreversible dental treatment provided by DHATs differed from similar treatment provided by dentists.
Calache *et al.*	2009	Australia	Empirical	The standard of restorations provided by dental therapists newly trained to provide care to adults was at least similar to that expected of newly graduated dentists.
Bader *et al.*[b]	2011	United States	Empirical	DHATs are performing at what must be considered an acceptable level.

[a] These same data were also analyzed by Trueblood (undated).
[b] These same data were also reported in Wetterhall *et al.* (2010).

based program. The team examined a "representative" number of children, and while overall just 7% of restorations were judged unsatisfactory, they nevertheless concluded that "[a]n attempt to solve the weaknesses in the California public and private dental care systems by establishing a New Zealand dental nurse type of technician is unwarranted" (Redig *et al.,* 1973).

Though quite different methodologically, all but 2 of the 13 non-experimental empirical studies involved direct clinical evaluations; the 2 that did not (Lewis, 1981; Bolin, 2008) relied on chart reviews. In these 2 cases, as well as in a chart review conducted by Bader *et al.* (2011), random or *quasi*-random samples of therapists' patients' charts were examined for either post-procedure complications or failed restorations. In all cases, the rates of these problems were very low (less than 3%), and in the one study that directly compared therapists' complication rates with those of their supervising dentists, no significant difference was found (Bolin, 2008).

Half of the studies that involved clinical examinations also used control groups, and in most cases blinded examinations were performed. Three of these studies took place in South Australia, where children served by the SDS (the vast majority of whose restorations would have been placed by therapists) were compared with non-participants (all of whose restorations were placed by dentists). The restorations in SDS children were judged either to be no different from those in non-participants (Roder, 1976) or to be somewhat superior (Roder, 1973; Barmes, 1983). In Canada, Ambrose *et al.* (1976) compared restorations in children treated by the Saskatchewan Dental Plan (which employed therapists) with those performed by dentists, and Crawford and Holmes (1989) compared restorations in both children and adults in Baffin Island, some of whom had been treated by therapists, and some by dental residents or dentists. In both cases, the work of therapists was judged, overall, to be superior to that of dentists, though Ambrose *et al.* found no significant differences with respect to stainless steel crowns. Finally, Bader *et al.* (2011) compared the work of Alaskan DHATs with that of their supervising dentists and found that, on 2 of 3 measures, the DHATs outperformed the dentists.

The remainder of the studies involved evaluating the work of practicing therapists. Fiset (2005) performed the first evaluation of Alaskan DHATs. While he did not report figures, he stated that all of the cavity preparations and restorations he observed "met the standard of care" established. Three other studies are more rigorous. Calache *et al.* (2009) evaluated the work of therapists treating adults in New South Wales, Australia, and Jones *et al.* (1981) and The General Dental Council (1966) evaluated the work of therapists treating children in the United Kingdom. Though samples in the first 2 were small, in all 3 studies, examinations were conducted post-treatment, and in all cases less than 10% of the procedures evaluated were judged to be unsatisfactory (just 5.4%, 2.5%, and 9.2%, respectively). According to all 3, this indicated an acceptable level of work.

It is perhaps worth noting that of the nearly 2 dozen studies reviewed, all but 4 (3 of which evaluated the new Alaska DHAT program) were conducted over 20 years ago. This is largely a result of a consensus outside of the United States with regard to the clinical competence of dental therapists (*e.g.*, Jones *et al.*, 1981). The current review supports this conclusion. Of the 23 reports addressing the technical competence of dental therapists (or specially trained hygienists) performing irreversible dental procedures, all but 2 concluded that dental therapists performed the procedures assessed at an acceptable level. And all that directly compared their work with that of dentists or dental students found that they performed at least as well. Of the 2 studies drawing negative conclusions, one (Gruebbel, 1950) exhibited clear methodological shortcomings and biases. The other (Redig *et al.*, 1973), a more careful study, actually found that the New Zealand school dental nurses performed rather well, but nevertheless concluded that a similar program would not be suitable for California.

Rarely in the scientific literature, in fact, do we find such an overwhelming consensus based on empirical research. The fact that methodologies differ, and the studies span such a long time period and come from several countries, can only increase confidence in the conclusion that, rather than representing a different standard of care, dental therapists simply represent a different provider.

This review does not speak to the expected impact on access that the introduction of this provider model might have or its economic viability in the United States. However, it is clear that therapists' ability to safely and competently perform the limited set of irreversible procedures that fall within their scope of practice is no longer a point of contention, at least from an empirical standpoint. Given this, and given the strong support among various governmental and non-profit entities for introducing dental therapists to the U.S. workforce, future research efforts might be better focused on the economic feasibility/sustainability of this model within the U.S. context, the acceptability of these types of providers to the American public, and the impact such providers might have on access to care.

Acknowledgments

The authors thank Anne Gwozdek and David Nash for comments on an earlier version of this article. This research was generously supported by a grant from the Nokomis Foundation. The authors declare no potential conflicts of interest with respect to the authorship and/or publication of this article.

References

ADA (2005). Statement of the American Dental Association to the Committee on Indian Affairs and the Committee on Health, Education, Labor and Pensions, U.S. Senate, on S 1057, The Indian Health Care Improvement Act Amendments of 2005. URL accessed on 12/13/2012 at: http://www.help.senate.gov/imo/media/doc/brandjord.pdf.

ADA (2011). ADA comment on AAPHD dental therapist curriculum development. URL

accessed on 12/13/2012 at: http://www.ada.org/5939.aspx.

Ambrose ER, Hord AB, Simpson WJ (1976). A Quality Evaluation of Specific Dental Services Provided by the Saskatchewan Dental Plan: Final Report. Regina, Saskatchewan: Department of Public Health.

Bader JD, Lee JY, Shugars DA, Burrus BB, Wetterhall S (2011).Clinical technical performance of dental therapists in Alaska. *J Am Dent Assoc* 142:322-326.

Barmes DE (1983). Review of the South Australian School Dental Service. Oral Health Unit, World Health Organization.

Bolin KA (2008). Assessment of treatment provided by Dental Health Aide Therapists in Alaska: a pilot study. *J Am Dent Assoc* 139:1530-1535.

Bradlaw R, Douglas TH, Roper-Hall HT, Senior WG, Wynne AT (1951). Report of United Kingdom dental mission on New Zealand school dental nurses. *N Z Dent J* 47:62-78.

Calache H, Shaw J, Groves V, Mariño R, Morgan M, Gussy M, *et al*. (2009). The capacity of dental therapists to provide direct restorative care to adults. *Aust N Z J Public Health* 33:424-429.

Crawford PR, Holmes BW (1989). An Assessment and Evaluation of Dental Treatment in the Baffin Region. Ottawa, Canada: Medical Services Branch, Health and Welfare Canada.

Dunning JM (1972). Deployment and control of dental auxiliaries in New Zealand and Australia. *J Am Dent Assoc* 85:618-626.

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 (unpublished). URL accessed on 12/13/2012 at: http://depts.washington.edu/dentexak/wordpress/wp-content/uploads/2012/10/2005Fiset.pdf.

Friedman JW (1972). The New Zealand School Dental Service: a lesson in radical conservatism. *J Am Dent Assoc* 85:609-617.

Fulton JT (1951). Experiment in dental care: results of New Zealand's use of school dental nurses. *Bull World Health Org* 4:1-73.

General Dental Council (1966). Final Report on the Experimental Scheme for the Training and Employment of Dental Auxiliaries 1966. London, UK: General Dental Council.

Gruebbel, AO (1950). *A study of dental public health services in New Zealand*. Chicago, IL: American Dental Association.

Jones DE, Gibbons DE, Doughty JF (1981). The worth of a therapist. *Br Dent J* 151:127-128.

Lewis DW (1981). Performance of the Saskatchewan Dental Health Plan 1974-1980. Toronto, Canada: University of Toronto.

Lobene RR (1979). The Forsyth Experiment: an alternative system for dental care. Cambridge, MA: Harvard University Press.

Nash DA, Friedman JW, Mathu-Muju KR (2012). A review of the global literature on dental rherapists (in the context of the movement to add dental therapists to the oral health workforce in the United States). WK Kellogg Foundation. URL accessed on 12/13/2012 at: http://www.hwic.org/resources/details.php?id=10364.

Powell WO, Sinkford JC, Henry JL, Chen MS (1974). Comparison of clinical performance of dental therapist trainees and dental students. *J Dent Educ* 38:268-272.

Redig D, Dewhirst F, Nevitt G, Snyder M (1973). Delivery of dental services in New Zealand and California: a report to the California Dental Association and Southern California Dental Association Dental Education Councils. *J South Calif Dent Assoc* 41:318-350.

Roder DM (1973). The effect of treatment provided by dentists and therapists in the South Australian School Dental Service. *Aust Dent J* 18:311-319.

Roder DM (1976). The effect of treatment provided by dentists and therapists in the South Australian School Dental Service, the second report. *Aust Dent J* 21:147-152.

Saunders L (1951). The New Zealand School Dental Nurse: comments on recent reports. *N Z Dent J* 47:48-53.

Sisty NL, Henderson WG, Paule CL, Martin JF (1978). Evaluation of student performance in the four-year study of expanded functions for dental hygienists at the University of Iowa. *J Am Dent Assoc* 97:613-627.

Spohn EE, Chiswell LR, Davison DD (1976). Final Report of The University of Kentucky Experimental Expanded Duties Dental Hygiene Project to the Robert Wood Johnson Foundation. Grant number #1145.

Swallow JN, van Groenestijn MA, Maas-de-Waal CJ, Mileman PA (1978). Examiner variability in the assessment of dental restorations. *Community Dent Oral Epidemiol* 6:256-263.

Trueblood G (undated). A Quality Evaluation of Specific Dental Services Provided by Canadian Dental Therapists. Ottawa, Canada: Medical Services Branch, Health and Welfare Canada.

Wetterhall S, Bader JD, Burrus BB, Lee JY, Shugars DA (2010). Evaluation of the Dental Health Aide Therapist Workforce Model in Alaska: Final Report. Prepared for the WK Kellogg Foundation, Rasmuson Foundation, and Bethel Community Services Foundation, by RTI International. RTI Project number 0211727.000.001.

Community Dent Oral Epidemiol 2014; 42; 1–10
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COMMUNITY DENTISTRY AND ORAL EPIDEMIOLOGY

A review of the global literature on dental therapists

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Nash DA, Friedman JW, Mathu-Muju KR, Robinson PG, Satur J, Moffat S, Kardos R, Lo ECM, Wong AHH, Jaafar N, van den Heuvel J, Phantumvanit P, Chu E, Naidu R, Naidoo L, McKenzie I, Fernando E. A review of the global literature on dental therapists. Community Dent Oral Epidemiol 2014; 42: 1–10.
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Abstract – *Objective:* Access to adequate oral health care is deficient in many parts of the world. Many countries are now using dental therapists to increase access, particularly for children. To inform the discussion on dental therapists in the workforce, particularly in the United States, the W.K. Kellogg Foundation funded a review of the global literature to identify as many documents as possible related to the practice of dental therapists since the establishment of the School Dental Service in New Zealand in 1921. *Methods:* Consultants in each of the countries considered to have a substantive literature on dental therapists were asked to participate in the research; seventeen in total. In addition to identifying and reviewing published articles, a focus of the research was on identifying 'gray' documents. Standard databases were searched for key words associated with dental therapists. In addition, searches were conducted of the governmental and dental association websites of all countries known to have dental therapists in their oral health workforce. *Results:* Fifty-four countries, both developing and developed, were identified where dental therapists are members of the workforce. Eleven hundred documents were identified from 26 of these countries, with over 2/3 of them cited in the published monograph. Reliable evidence from the related literature and verbal communication confirmed the utilization of dental therapists in an additional 28 countries. Thirty-three of the countries were members of the Commonwealth of Nations, suggesting a mechanism of spread from New Zealand.Variable lengths of training/education existed for dental therapists with the tradition being 2 years postsecondary. In a few countries, the training of therapists and hygienists is now being combined in a three academic year program. Historically, dental therapists have been employed by government agencies caring for children, typically in school-based programs. Initiatives in some countries allow limited care for adults by dental therapists with additional training. *Conclusions:* The evidence indicates that dental therapists provide effective, quality, and safe care for children in an economical manner and are generally accepted both by the public and where their use is established, by the dental profession.

Key words: access to care; dental therapists; oral health workforce

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Submitted 20 August 2012;
accepted 8 April 2013

Access to adequate oral health care is deficient in many parts of the world. Many countries are now utilizing dental therapists to increase access, particularly for children. Oral health is poor for many Americans, with barriers to accessing care creating significant oral health disparities among America's children (1–4). In addressing this issue, efforts have focused on the capacity of the oral healthcare workforce, with calls for expanding the workforce in the United States of America to include the development and deployment of individuals with skills in caring for children traditionally associated with the school dental nurse/dental therapist in New Zealand and many other countries (5, 6). A dental therapist is a 'limited' practitioner who can provide basic dental care in the same manner as a

Foundation; Pew Charitable Trust; Rasmuson Foundation; W.K. Kellogg Foundation; and the Macy Foundation (29).

The W.K. Kellogg Foundation commissioned a national survey on the views of Americans on the issue of access to dental care. 'More than three--quarters of respondents (78%) support an effort to train a new dental provider—a licensed dental practitioner—to work under the supervision of a dentist to provide preventive, routine care to people without regular access to care'(106).

The high level of utilization of school dental services employing dental therapists in a large number of countries is strong evidence they can provide care that is acceptable to and valued by parents, who have to provide consent for their children to enroll and be treated. Numerous and detailed evaluations of these programs, summarized in this literature review, reveal strong patient and parental support for dental therapists (29).

The people of New Zealand consider the School Dental Service with its dental therapists a New Zealand '*icon*'. Another report states: 'The School Dental Service has become an integral component of the New Zealand culture. To Kiwis it is like motherhood, apple pie and the flag' (5).

Parents in Saskatchewan were '*outraged*' at the termination of the school-based plan and the transfer of the children to the private sector for their dental care (107).

No evidence could be found to indicate that the public perspective of dental therapists in any country was other than positive.

Conclusions

While the evidence base for the utilization of dental therapists is variable in quality and could be enhanced; nonetheless, the global literature indicates the following:

- Dental therapists practice in 54 countries, including highly developed, industrialized ones, as well as developing countries.
- There are variable lengths of training for dental therapists, from 2 to 4 years, existing in a variety of vocational training/academic environments.
- Dental therapists typically practice as registered auxiliaries, but in some jurisdictions practice as licensed professionals.
- Dental therapists practice primarily in public clinics, typically associated with caring for school children.
- Dental therapists' scope of practice is primarily in caring for children, although several countries permit caring for adults, and others are moving in that direction.
- Dental therapists typically practice with general supervision by dentists.
- Dental therapists provide technically competent care in accordance with their scope of practice.
- 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.
- In general, the dental profession in a country accepts the care provided by dental therapists in its country as valuable.
- The public values the role of dental therapists in the oral health workforce.
- There is a movement in a few countries to integrate the training, and therefore scopes of practice, of the dental therapist and dental hygienist.
- Dental therapists included in the oral health workforce have the potential to decrease the cost of care, specifically for children.

Acknowledgements

This research was conducted with the support of the W.K. Kellogg Foundation, Battle Creek, Michigan.

References

1. U.S. Department of Health and Human Services. Oral health in America: a report of the surgeon general. Rockville, Maryland: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health; 2000.
2. Dye BA, Tan S, Smith V, Lewis BG, Barker LK, Thornton-Evans GT, et al. Trends in oral health status: United States, 1988-1994 and 1999-2004. Washington, D.C.: National Center for Health Statistics. Vital and Health Statistics, Series 11, Number 248; 2007.
3. Gehshan S, Straw T. Access to oral health services for low income people: policy barriers and opportunities for intervention by the Robert Wood Johnson Foundation. Forum for State Health Policy Leadership, Washington, D.C.: National Conference of State Legislatures; 2002. 25 pages.

Expanding Dental Hygiene to Include Dental Therapy: Improving Access to Care for Children

David A. Nash, DMD, MS, EdD

This article is dedicated to the memory of Dr. Eric Spohn, professor, University of Kentucky; and Dr. Ralph Lobene, of the Forsyth Institute, Boston; who over 30 years ago pioneered in advocating for an expanded scope of practice for dental hygienists to provide restorative care for children.

Abstract

Oral Health in America: A Report of the Surgeon General, and the subsequent National Call to Action to Promote Oral Health contributed significantly to raising the awareness of the American public and the dental profession regarding the lack of access to oral health care by many Americans, especially minorities and low income populations, with resulting disparities in oral health. The problem is particularly acute among children.

The current workforce of dentists in the United States is inadequate to meet the oral health care needs of children in terms of numbers of dentists, as well as their distribution, ethnicity, education, and practice orientation. Dental hygienists trained in an expanded scope of practice, can help address the workforce inadequacy.

Dental therapists, educated in 2-year programs of postsecondary education, comparable to America's associate degree dental hygiene programs, have been used throughout the world to provide basic, primary oral health care for children. Research has documented that utilizing dental therapists is a cost effective method of improving access to care for children. Countries that have led the way in introducing dental therapists to care for their children are now integrating their separate 2-year curriculum in dental therapy and dental hygiene into a 3-year curriculum to prepare a clinician dually trained in both dental therapy and dental hygiene. This clinician is being designated an oral health therapist.

Expanding the education of dental hygienists in the United States to include skills of the internationally acclaimed dental therapist can produce oral health therapists, individuals capable of addressing the basic preventive, restorative, and minor surgical needs of children, but also able to continue to address the preventive and periodontal needs of adults.

Key words: dental workforce, access to care for children, dental therapist, advanced dental hygiene practitioner

Introduction

Oral Health in America: A Report of the Surgeon General, and the subsequent *National Call to Action to Promote Oral Health* contributed significantly to raising the awareness of the American public and the dental profession regarding the problems associated with gaining the benefits of oral health for all Americans.[1,2] *Oral Health in America* documented the lack of access to oral health care by many Americans, especially minorities and low income populations, with the resultant existence of significant disparities in oral health. The Surgeon General's efforts have prompted major discussions regarding how to improve access to care and reduce disparities.

While *Oral Health in America* addressed the issue of oral health for all Americans, the focus of this essay will specifically be the oral health of children. The ultimate goal in oral health is the prevention of disease; thus children are core to success. However, it would be naïve to believe preventive efforts can be completely successful. Therefore, a further goal must be ensuring that children who do experience oral disease are treated effectively and efficiently. The current workforce of dentists is inadequate to achieve these goals.

This essay will briefly review the evolution of dental hygiene in America; identify 2 models for educating an expanded oral health workforce; justify focusing an expanded scope of practice for dental hygienists on children; cite workforce barriers that exist in providing access to oral health care for children; characterize dental therapy as a recognized international approach for improving access to care for children; suggest that cur-

care to include children, should such care be able to be managed by another member of the practice's dental team. Adding an oral health therapist to the dental team could result in an increase in the numbers of dentists providing care for children, as well as expand the capacity for dentists already caring for children to see more children. Many dentists do not accept children in their practices whose care is publicly insured, ostensibly due to the inability to manage the costs of care given overhead considerations and the lower reimbursement schedule. Oral health therapists could help mitigate this issue as care could be provided in a more cost-effective manner for the practice. This situation is analogous to the economics of dental hygiene practice in a practice setting today. Few dentists would want to practice without the collaboration of dental hygienists due to their ability to enable the practice to provide more care.

It has also been suggested that oral health therapists could play a role in improving access to care for children by practicing in the offices of the nation's pediatricians. A dental hygienist in the state of Maine currently practices in the office of a group of pediatricians.[48] The results of a recent study of state, medical, and dental practice acts indicates that in many states physicians could provide dental care for children under their license to practice medicine.[49] Pediatricians and family physicians are now receiving training in oral health care in a number of settings around the country and are conducting oral exams and applying fluoride varnish to children's teeth, for which they are being remunerated. It is not unrealistic to envision physicians further expanding oral health care for children and utilizing oral health therapists as a method of doing so.

Oral health therapists could practice in the public sector in public health clinics, health departments, federally qualified health centers, and with not-for-profit organizations. Ideally, children should be engaged in environments in which they normally function, if the access problem is to be effectively addressed. As in New Zealand, the most logical place to capture this audience is in the school system. As James Dunning stated over 30 years ago, "any large-scale incremental care plan for children, if it is to succeed, must be brought to them in their schools."[50] It is reasonable to deploy oral health therapists in mobile facilities to provide primary care for children in a school; moving through the year from one school to another. Large schools could have their own clinical facility. School programs, initiated incrementally, with the youngest children (with the least carious experience and the greatest potential for implementation of preventive care), would be a cost-benefit effective way of managing the oral health needs of our poorest and neediest children. In New Zealand, the school dental therapist also provides care for preschool children from birth, thus enabling preventive therapies to be instituted among infants and toddlers to address early childhood caries.

The issue of supervision always emerges in discussions of dental hygienists having an expanded scope of practice. The international tradition for dental therapists has been one of indirect or general supervision. In New Zealand, school dental therapists care for children with general oversight by district dental officers who provide consultative services as well as visit and audit dental therapists' practices on a periodic basis. There is a similar tradition in other countries utilizing dental therapists. In New Zealand, Australia, Great Britain, and Canada recent legislation permits dental therapists (oral health therapists) to practice independently (with some variations) as long as they maintain a collaborate/consultative relationship with a dentist.[3]

The practice and supervision circumstances for oral health therapists will be varied, and will be dependent on state practice acts. However, for oral health therapists, as described herein, to be effective and have an impact on access to care for children they must have the ability to practice with general supervision, or with a consultation agreement with a dentist.

Conclusion

Inadequate access to oral health care for America's children has been documented, with resultant disparities in oral health among children. Children from low income families and minorities experience more oral disease and receive less care. The current dental workforce is inadequate in numbers, composition, location, education, and orientation to address this problem. Other countries in the world have utilized dental therapists, individuals trained in 2 year programs of post-secondary education, to provide basic, preventive, restorative, and minor surgical care for children. The care provided by dental therapists has been documented to be equivalent in quality to that of dentists, and is more economical. Recently, several of these countries have integrated the education of dental therapists and dental hygienists to create an oral health therapist. Developing and deploying oral health therapists is a viable strategy to improve access to care and reduce disparities among America's children. The American Dental Hygienists' Association can play a critical leadership role in addressing the inadequacy of the oral health care workforce, specifically for children, by endorsing a nationwide strategy to develop a 3 year curriculum to integrate dental therapy with the competencies of dental hygiene, thus creating oral health therapists for America.

Acknowledgements

The author acknowledges with appreciation the review and constructive comments of Dr. Jay W. Friedman and Dr. Kavita Mathu-Muju, in the preparation of this manuscript.

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References

1. U. S. Department of Health and Human Services. Oral health in America: a report of the surgeon general. Rockville, Maryland: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000:308 pages.
2. U. S. Department of Health and Human Services. National call to action to promote oral health: A public-private partnership under the leadership of the office of the surgeon general. Rockville, Maryland: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2003:28 pages.
3. Nash DA, Friedman JW, Kardos TB, et al. Dental therapists: a global perspective. Int Dent J. 2008;58(2):61-70.
4. American Dental Hygienists' Association, Draft Dental Competencies for the Advanced Dental Hygiene Practitioner (ADHP). June, 2007.
5. American Dental Hygienists' Association website: www.adha.org , accessed July 10, 2008.

Linking Research
continued from page 11

individuals with moderate periodontal disease.

Scaling and root planing, coupled with professional plaque removal every two weeks results in similar improvement of periodontal disease in both healthy and diabetic patients and reduced levels of TF in diabetics.

Professionally delivered periodontal care did not impact blood glucose measures in the sample diabetics with poor metabolic control.

Summary

Dental hygiene clinicians are in a unique role to assist patients in managing the chronic diseases of periodontitis and type 2 diabetes. In doing so, it is important that the clinician have realistic expectations for the role periodontitis has in type 2 diabetes, as well as the expected outcomes to dental hygiene care in this group of patients. Results from the NHANES study suggests that moderate periodontal disease may predispose individuals to increased risk of type 2 diabetes, but not in isolation of other risk factors. Therefore, comprehensive patient evaluation that includes consideration of risk factors such as age, socioeconomic level, body-mass index, blood pressure and tobacco use, along with periodontal status can provide guidance in establishing appropriate periodontal maintenance intervals. Additionally, although it is critical for individuals with type 2 diabetes to have regular and thorough periodontal maintenance, expecting maintenance alone to achieve metabolic control is unrealistic. The dental hygienist is the primary professional in general and periodontal practice charged with providing non-surgical periodontal care and evaluating the results of such care. In order to provide optimal care and assist patients in achieving best outcomes requires an understanding of current and developing evidence. Evidence on the systemic / periodontal link continues to provide clinicians with excellent information that can guide practice, but it is only when clinician appropriately apply that evidence that patient care is optimized.

Dr. Williams has been active in clinical dental hygiene for over 35 years and in clinical research for 23 years. Her areas of specialization include research design and statistics, educational methods, dental product efficacy, health outcomes research, and clinical dental hygiene. She is a research consultant for numerous dental manufacturers. Dr. Williams has presented papers and continuing education programs throughout the United States and internationally.

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Home » American Journal of Public Health (AJPH) » **June 2017**

A Workforce Strategy for Reducing Oral Health Disparities: Dental Therapists

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Accepted: February 19, 2017 Published Online: June 29, 2017

Abstract **Full Text** References Supplements PDF PDF Plus

Abstract

Section: Choose

This article seeks to chronicle how dental therapists are being used to bolster the supply of providers for the underserved and explore their potential to diversify the field of dentistry and improve public health.

Of the factors that contribute to persistent oral health disparities in the United States, an insufficient oral health workforce figures prominently.

A growing number of states are authorizing a midlevel dental provider (often called a dental therapist) to address this problem. Dental therapists work under the supervision of dentists to deliver routine preventive and restorative care, including preparing and filling cavities and performing extractions. They can serve all populations in 3 states, are caring for Native Americans in an additional 3 states under federal or state authority, and are being considered in about a dozen state houses.

It has been more than 15 years since the first surgeon general report on oral health spotlighted “a silent epidemic” of oral disease that was affecting our most vulnerable citizens: racial/ethnic minority groups, poor children, people with disabilities, and the elderly. Today, oral health disparities by race/ethnicity persist and are well documented. Rates of tooth decay, periodontal disease, oral cancers, and edentulism are far higher and dental care utilization rates considerably lower for racial/ethnic minorities than for Whites in this nation.[1]

A particularly thorny factor that contributes to oral health disparities is an oral health workforce that provides insufficient access to care for the underserved, which disproportionately comprises racial/ethnic minorities. The workforce shortage is a double-barreled problem. Although there is debate among researchers on the adequacy of the aggregate supply of dentists for the US population,[2] data demonstrate that a poorly distributed workforce leaves thousands of areas of the country with a shortage of dentists, many of them rural and inner-city regions.

In 2017, more than 53 million people lived in areas of the country that the federal government designated as having a lack of dentists.[3] The Health Resources and Services Administration projects that by 2025, the shortage of dentists in pockets around the country will double (from 7000 to 15 600), even accounting for an expected increase in the number of new dentists in the workforce.[4a] As a result, access to care is constrained for people in these communities regardless of income or insurance coverage.

Perhaps more consequential for racial/ethnic minorities is that nearly two thirds of dentists in 2013 did not accept Medicaid or other public insurance.[4b] In 2015 Medicaid and other forms of public insurance covered more than 11 million (26%) Blacks and more than 18 million (~32%) Hispanics, with

children disproportionately represented.[5] (Although state coverage of an adult dental benefit in Medicaid is optional and coverage levels are highly variable across the nation, Medicaid dental benefits are mandatory for children.) Minorities are also disproportionately represented among those who have no dental insurance.

Recently, federally qualified health centers—the nation's dental safety net providers with more than 9000 delivery sites across the country—have seen a surge in demand for dental care. Between 2006 and 2012, according to an American Dental Association analysis, although the total number of dental visits declined nationally, dental visits to federally qualified health centers rose by 74%.[6] These centers do not deny care to low-income patients because they have Medicaid; they also provide free or low-cost care to the low-income uninsured. Yet they do not meet the demand for care, serving only 20% of low-income uninsured patients and less than 15% of all Medicaid beneficiaries.[7]

The shortcomings of the dental care delivery system are apparent, and the public health crisis is persistent. Increasingly, states are considering authorizing midlevel dental providers (often called "dental therapists") as a strategy to expand access to care for the underserved. Akin to physician assistants in medicine, dental therapists are oral health practitioners who work under the supervision of a dentist to provide routine preventive and restorative care. Primarily, what distinguishes dental therapists from dental hygienists is their ability to prepare and fill cavities using a hand drill and perform nonsurgical extractions.

For the tens of millions of people in this nation with untreated tooth decay, many will need a traditional filling that under current law only dentists are allowed to provide. Without care, dental decay can worsen to cause infection and abscesses, which in rare instances have caused death. Research finds that untreated decay is the chief reason for dental-related hospital emergency department visits.[8] In 2012 such visits cost the US health care system $1.6 billion.[9]

Dentists hire and supervise dental therapists to expand routine care to more patients, grow their practices, offer evening and weekend hours, and expand care locations to underserved at-risk populations in community settings such as Title 1 schools and nursing homes. The scope of practice of a dental therapist is about one quarter that of a general dentist.[10] In the United States they currently practice in Minnesota and serve Native American tribes across Alaska and in parts of Washington and Oregon. They have been authorized in Vermont and Maine, and in the case of Washington, to serve Native Americans only. About a dozen state houses around the country are actively considering them.

We have chronicled the growth of dental therapy in the United States, how it is being used to expand care access, and its potential to diversify the oral health workforce and provide an economically sustainable source of employment for people of color interested in the health professions.

EVOLUTION OF DENTAL THERAPY

Section:

The dental therapy model began nearly 100 years ago in New Zealand as a public health intervention using government-employed therapists working in public schools to treat high rates of dental decay among children. Dental therapists now practice in 54 countries. Today dental therapists in several nations—Great Britain, New Zealand, Australia, Canada, the Netherlands, and the United States—treat people of all ages and work in public clinics as well as private practices.[11]

Dental therapists were first employed in the United States in 2004 as a way to combat tremendous oral health disease rates among Alaska Natives, who have 2 to 4 times the rates of untreated caries as do other US persons, depending on their age.[12] Dental health aide therapists (DHATs) have been deployed to be an ongoing presence in rural Alaska Native villages that previously would be visited just a few times a year by a dentist. They deliver care while a supervising dentist is in a more centrally located office providing clinical guidance. As of October 2016, 35 DHATs practice in Alaska, and they have provided care to more than 40 000 Alaska Natives in more than 80 communities. DHATs are authorized by the Indian Health Service Act as a part of Alaska's Community Health Aide Program, an initiative that trains Alaska Natives in a variety of health auxiliary occupations.

In 2009, Minnesota became the first state to pass a dental practice act that authorizes dental therapists. The law was passed in response to dental shortages in most of the state's counties—many of them rural. As of January 2017, 64 dental therapists work in public clinics and private practices to treat more of the states' underserved people.

Private practices are using dental therapists to serve more patients on Medicaid. Nationally, as the average Medicaid reimbursement for dental care is about 49% of that of commercial fees,[13] it is not surprising that dentists report low payment as a chief reason for not serving patients on Medicaid or other public insurance.[14] Dental therapists command lower salaries than do dentists (1 Minnesota public clinic reports a salary differential of $30 per hour),[15] and for practices that employ them, dental therapists lower the cost of delivering care to patients. This makes accepting Medicaid's discounted payment rates more feasible for a dental practice.

In the public sector, Minnesota public clinics and federally qualified health centers are using dental therapists as a cost-effective way to increase capacity to serve more patients on Medicaid and offer free or low-cost care to more low-income uninsured patients.

GROWING STATE AND TRIBAL INTEREST

Section: Choose

More recently, Maine in 2014 and Vermont in 2016 authorized dental therapists. Both states are in the early stages of implementing their laws. About a dozen state legislatures are considering similar proposals, including those of Arizona, Kansas, Massachusetts, Michigan, New Mexico, Ohio, and Washington (Figure A, available as a supplement to the online version of this article at http://www.ajph.org).

There has also been substantial interest in the model among Native American tribes. In early 2016 the Washington State Swinomish tribe brought an Alaska-trained DHAT to work at its clinic. Tribal leaders took this action although the Indian Health Care Improvement Act, which Congress amended in 2010, forbids DHATs from operating in Indian Country outside Alaska unless permitted by state law.[16] In 2017, the Washington legislature authorized dental therapists to serve Native Americans and be reimbursed by Medicaid. In Oregon, 2 tribal groups—the Coquille Indian Tribe and the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians—launched dental therapy programs under state pilot authority. And in June 2016 the Indian Health Service invited comments on a draft policy statement that would allow dental therapists to practice in Indian Health Service facilities across the nation.[17]

EMERGING RESEARCH ON THE BUSINESS CASE

Section: Choose

Research on the effectiveness of dental therapists that is often cited includes a synthesis of 1100 studies of dental therapists globally and a 2010 evaluation of the Alaskan DHAT program.[18] Both studies found that dental therapists provide safe and effective care at a level of quality comparable to that of dentists. In 2013, the American Dental Association published a review of studies that found that dental teams employing dental therapists reduce untreated caries rates more than do dentist-only teams.[19] In Minnesota, the first evaluation of dental therapists jointly conducted by the state health department and the board of dentistry was released in 2014. Among its findings was that therapists were practicing safely, allowing clinics to expand capacity to treat more underserved patients and reducing wait and travel times for care, with reports of high patient satisfaction.[20]

Numerous studies have also tracked the economic impact on practices—both public and private—that employ dental therapists. The Minnesota state evaluation found that two thirds of clinics employing dental therapists reported considerable personnel cost savings. One clinic saved $62 000 annually, and others estimated annual savings to be $35 000 to $50 000 per dental therapist over hiring a dentist.[21]

A 2012 economic assessment of DHATs practicing in Alaska found that, after accounting for the costs of their employment (including a dental assistant's salary), dental therapists brought in an average of

$127 000 in net collected revenues for their practices.[22]

The Pew Charitable Trusts in 2014 released 2 case studies of a rural private practice and an urban community health center that employed dental therapists. One private practice accrued an additional $24 000 in profits after the dental therapist's first year (after accounting for the therapist employment costs), while also increasing by more than 200 the number of Medicaid patients served.[23] This is notable because Minnesota has 1 of the lowest Medicaid reimbursement rates in the nation.[24] The increased revenue was accomplished in part by allowing the dentist to delegate routine restorative care to a lower-cost provider, which freed his time to perform more complex and costly procedures.

First-year findings from a Minnesota community health center employing a dental therapist demonstrated that the Medicaid revenue the dental therapist generated exceeded the cost of her employment by more than $30 000. This estimate did not account for additional income from nearly 600 visits she conducted that were not billed to Medicaid.[25]

CULTURAL DIVERSITY IN THE DENTAL WORKFORCE

Section: Choose

Because people of color have the highest burden of dental disease in this country, it is concerning that there is little racial/ethnic diversity in the oral health professions. In 2015, Blacks constituted 13% of the country but only 3% of dentists. Hispanics that year constituted 18% of the population but just 9% of dentists.[26] In 2015, the 863 Black, Hispanic or Latino, and Native Americans enrolled in dental school constituted less than 2% of the estimated nearly 54 000 minority dentists needed to achieve parity in the delivery system.[27] Ratios are out of balance for dental hygienists as well. In 2015, the proportion of Black and Hispanic dental hygienists was 4% and 5%, respectively.[28] These ratios do not bode well for a nation where by 2044, the US Census Bureau projects, more than half of all persons living in the United States will belong to a minority group (Figure B, available as a supplement to the online version of this article at http://www.ajph.org).[29] Research finds that racial/ethnic diversity among health professionals is linked to improved access to care, greater patient choice and satisfaction, and better patient–provider communication for racial/ethnic minority patients.[30] In view of this research and the severe underrepresentation of minorities in the oral health workforce, some experts hold that workforce diversity is an “essential component” of systematic efforts to reduce oral health disparities by race.[31]

Advocates for dental therapy see an opportunity for people of color to take advantage of a new field of employment—in addition to, not as a replacement for, dentistry. Dental therapy has been found to be an economically sustainable profession. Starting salaries for dental therapists in Alaska in 2013 were about $70 000 per year after a 2-year full-time post–high school program and an additional 4-month preceptorship.[32] In Minnesota, data from 3 practices in 2014 show that dental therapist hourly wages ranged approximately from $35 to $45.[33]

The length and cost of educational requirements cannot be ignored in discussions about creating a racially/ethnically diverse dental therapy workforce. Educational requirements have been a point of contention in state legislative debates to date. Currently, requirements range from a 2-year full-time requirement, as the DHAT model calls for, to masters-level training, as required for the Minnesota advanced dental therapist. Interestingly, while their scopes of practice are essentially the same, DHAT students in Alaska earn an associate's degree, while the Minnesota statute requires that dental therapists have at least a bachelor's degree.[34]

Higher costs associated with longer educational requirements will create entry barriers for people with modest resources—barriers that will disproportionately affect people of color. Dental therapists carrying a higher educational debt load may also be dissuaded from practicing in communities of color, where there are higher concentrations of Medicaid and uninsured patients. Studies find that minority dentists leave school with more debt than do their nonminority peers. Moreover, a recent survey found, unsurprisingly, that although more than half of minority dentists reported that serving patients of their own racial/ethnic group contributed to their job satisfaction, earning potential was their top priority in determining where they practiced.[35]

FUTURE DYNAMICS

Section: Choose

With numbers of dental therapists approaching 100 and increased state and tribal interest, the dental therapy profession in the United States appears to be gaining momentum. Recent events and trends in the health care marketplace may accelerate state adoption of this model and increase market demand for dental therapists, respectively.

State legislative debates on dental therapy have been contentious, with state- and national-level dental societies voicing strong opposition. Among their chief arguments are that dental therapists are ill prepared to provide fillings and extractions and that dentists with empty chair time can address the care access need with proper outreach strategies (although this latter argument does not account for low dentist participation in Medicaid or the existence of dental shortage areas).[36] The Commission on Dental Accreditation's 2015 implementation of guidelines for dental therapy training programs may help to change the tenor of these legislative debates and offer assurance to policymakers of the safety of dental therapy. The Commission on Dental Accreditation is the sole agency authorized by the US Department of Education to accredit dental education training programs in the United States. The standards the commission has set provide new and established dental therapy programs with guidelines to ensure quality and consistency and to protect public safety.[37]

In addition, Medicaid and large health systems are increasingly moving to accountable care systems that adopt benchmarks for utilization and outcomes and offer financial rewards (and penalties) on the basis of provider or system performance in meeting them. Dentistry is slowly being integrated into these systems, as evidenced by Oregon's Medicaid program, and held to accountability standards; for example, California now requires health plans on its exchange to have accountability standards. Lower-cost providers who can expand access to quality care may become more attractive.[38]

Furthermore, although the 115th Congress is considering repealing parts of the Affordable Care Act, with health care expenditures approaching 18% of gross domestic product, public and private payers of dental care will likely face continuing pressure to adopt efficiencies to lower health care costs. Because dental therapists command a substantially lower salary than do dentists, employing them is a cost-effective way to keep patients healthy and out of hospital emergency departments.

CONCLUSIONS

Section: Choose

Disparities in oral health disease rates and access to care persist despite growing national attention. A shortage of providers in thousands of US communities and for those who are publicly insured is well documented. Growing evidence shows that private and public practices can employ dental therapists to treat traditionally underserved populations—those on Medicaid, the uninsured, and those living in dentist shortage areas.

The employment of dental therapists also holds promise for creating a more culturally diverse oral health workforce and creating sustainable jobs for people of color who may not have considered a career in the oral health field. State and federal policymakers should consider how dental therapists can be used to improve public health in a market that is increasingly being held to cost, quality, and accessibility standards.

REFERENCES

Section: Choose

References

1. Centers for Disease Control and Prevention, "Disparities in Oral Health," http://www.cdc.gov/OralHealth/oral_health_disparities/index.htm (accessed November 18, 2016); B. A. Dye, G. Thornton-Evans, X. Li, and T. Iafolla, *Dental Caries and Tooth Loss in Adults in the United States, 2011–2012* (Hyattsville, MD: National Center for Health Statistics, 2015). NCHS Data Brief 197.
2. M. Vujicic, *Interpreting HRSA's Latest Dentist Workforce Projections* (Chicago, IL: American Dental Association Health Policy Institute, 2015).

Saskatchewan's school-based dental program staffed by dental therapists: a retrospective case study

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Keywords
dental therapist; dental care delivery; dental nurse; dental care for children.

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Received: 5/16/2016; accepted: 9/09/2016.

doi: 10.1111/jphd.12184

Journal of Public Health Dentistry **77** (2017) 78–85

Abstract

Objectives: The poor oral health of Saskatchewan's children, in concert with a significant shortage of dentists, prompted the province in the early 1970s to seek an alternative method of addressing the oral health care needs of children. The result was the Saskatchewan Health Dental Plan (SHDP), which trained and employed dental therapists in school-based clinics to provide basic dental care to all children. The program was initiated over the opposition of Saskatchewan's dentists. The purpose of this research was to provide information and data previously not documented in the refereed dental literature regarding the only school-based program staffed by dental therapists to ever exist in North America.
Methods: This case study reviews the program's planning, opposition, implementation, and achievements based on a comprehensive review of published articles as well as a search of the grey literature. Additionally, Saskatchewan Health provided annual reports for each year of the program's existence.
Results: During its thirteen years of existence, the school-based program proved popular with parents and achieved significant success in providing necessary dental care for children. It was terminated in 1987 by the newly elected provincial Conservative government, which was not supportive of such social programs.
Conclusions: The SHDP serves as a successful model of school-based dental care for children. However, the termination of the plan demonstrates the vulnerability of publicly funded dental health programs to conflicting political ideologies and special interest groups.

Introduction

A 1968 survey of Saskatchewan's children indicated they suffered from poor oral health. Seven year olds had an average of 5.4 decayed, restored, and extracted primary teeth. Eleven year old children had an average of 2.3 decayed permanent teeth, with 75 percent of these children needing restorations and 26 percent requiring extractions (1). The poor oral health of the province's children, coupled with a significant shortage of dentists, prompted the New Democratic Party (NDP) provincial government to seek an alternative method of meeting the oral health needs of children. The result was the Saskatchewan Health Dental Plan (SHDP), which employed dental nurses, hereinafter designated as dental therapists (the accepted designation since 1981), working in school-based clinics to provide basic dental care for the children.

The initiative was unsuccessfully challenged by Saskatchewan dentists. The program achieved significant success during the course of its existence from 1974 to 1987. However, it was terminated in 1987 by the newly elected provincial Conservative government, which was not supportive of such social programs. This case study reviews the program's planning, opposition, implementation, and achievements. The purpose of this research was to provide information and data not previously documented in the refereed dental literature regarding the only school-based program staffed by dental therapists to ever exist in North America.

Table 1 Progression of Decayed, Missing and Filled Permanent Teeth by Age 1974-75 to 1986-87

	Age in years								
School year	6	7	8	9	10	11	12	13	14
1974–75	0.94	-	-	-	-	-	-	-	-
1975–76	0.80	1.95	-	-	-	-	-	-	-
1976–77	0.72	1.81	2.71	3.1	-	-	-	-	-
1977–78	0.67	1.52	2.54	3.21	3.68	-	-	-	-
1978–79	0.57	1.46	2.26	3.01	3.65	4.42	5.23	-	-
1979–80	0.53	1.24	2.08	2.69	3.43	4.2	5.24	6.25	-
1980–81	0.38	1.17	1.8	2.47	3.07	3.94	4.96	6.26	7.32
1981–82	0.32	0.93	1.76	2.3	2.96	3.63	4.71	5.86	7.17
1982–83	0.31	0.83	1.45	2.27	2.76	3.43	4.33	5.48	7.07
1983–84	0.26	0.71	1.23	1.8	2.67	3.18	4.05	4.99	6.38
1984–85	0.23	0.61	1.08	1.55	2.14	2.94	3.67	4.61	5.78
1985–86	0.17	0.52	0.88	1.32	2.78	2.42	3.35	4.06	5.33
1986–87	0.14	0.39	0.78	1.14	1.55	2.13	2.9	3.82	4.81

This table shows the improvements in the number of decayed, missing and filled permanent teeth for individual age groups from the 1974–75 program year to the 1986-87 program year. The number of decayed, missing and filled permanent teeth per 6-year-old child declined from 0.94 in 1974–75 to 0.14 in 1986–87.

Source: Saskatchewan Health. Statistical Report on Children' Dental Program: September 1, 1986 through August 31, 1987.

Saskatchewan citizens were very happy with this program, while a minority and the Progressive Conservative government was not. The minority decided what was best for the majority." His thesis concluded that the plan was not dismantled due to costs, which were well within the predicted range. Rather, it was due to a shifting of the government, in Saskatchewan as well as other parts of the world, to a more free market ideology, with associated reduction and/or elimination of social programs.

The Canadian Centre for Health Policy Alternatives, in a 2011 monograph on dental care, asked the question: "*How much would it cost to revitalize the Saskatchewan approach to providing preventive and basic curative care to set a solid foundation of oral health for all children across Canada?*" (19) The data from the Saskatchewan Health's 1980–81 report were cited as being $77.40/child. Using Statistics Canada census data, the Centre identified 3,740,000 children aged 5–14 in Canada in 2010.

> *If 85% of them were enrolled in such a program today, based on inflation-adjusted per capita cost ($176.25) the price-tag would be $560 million, Canada wide. This represents 4.1% of the Canadian Institute of Health Information's estimate current total annual expenditures on dental services (forecast to be $13.6 billion for total private and public spending in 2010), and 0.3% of all annual expenditures for health care for 2010. An ounce of prevention is worth a pound of cure indeed.*

Conclusion

The SHDP for children, based in schools and staffed by dental therapists, was the first and, to this point in time, only such dental plan in North America. In its 13 years of existence, it demonstrated that school-based care by dental therapists:

1. Improved access to dental care for children by providing care in their local school, resulting in a 90 percent utilization rate.
2. Reduced the incidence of dental caries through effective preventive procedures;
3. Provided quality restorative care equivalent to what could be provided by dentists in private offices;
4. Resulted in more cost effective oral health care than traditional private dental office-based care;
5. Provided dental care that was accepted and appreciated by parents.

This "*bold and innovative*" (2) plan by Saskatchewan Health from 1972 to 1986, serves as a model of what can and should be done to address the dental health of today's children. The program's success raises the question as to why leaders in public health policy and the profession of dentistry are not motivated to introduce school-based, dental therapist-staffed programs throughout North America.

References

1. Lewis MH. Dental care delivery in Saskatchewan, Canada. In: Ingle JI, Blair P, editors. *International dental care delivery systems*. Cambridge, MA: Ballinger; 1977. p. 45-57.
2. Saskatchewan Department of Public Health. Proposal for a dental program for children in Saskatchewan. November, 1972. p. 91.
3. College of Dental Surgeons of Saskatchewan. *A dental care plan for the children of Saskatchewan: principles and concepts. College of Dental Surgeons of Saskatchewan;* 1973. p. 88.
4. Thomson HE, Mann JR, McPhail WB. Dentists' attitudes to prepaid dental children's dental care programs and expanded care duty dental auxiliaries in Saskatchewan. *J Can Dent Assoc*. 1973;**39**(1):47-54.
5. Barker PF. *The formulation and implementation of the Saskatchewan dental plan* [Dissertation]. Toronto: University of Toronto; 1985. p. 277.
6. Saskatchewan Department of Health. Saskatchewan dental plan report: first year of operation, September 1, 1974 to August 31, 1975. Regina, SK. p. 27.
7. Saskatchewan Department of Health. Saskatchewan Health dental plan, annual report 1980-1981. p. 34.
8. Keenan GW. The Saskatchewan dental nurse: an expanded duty auxiliary. *J Can Dent Assoc*. 1975;**41**:344-5.

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ADA American Dental Association®

Research Brief

Emergency Department Use for Dental Conditions Continues to Increase

Authors: Thomas Wall, M.A., M.B.A.; Marko Vujicic, Ph.D.

Key Messages

- *The number of emergency department (ED) visits for dental conditions in the United States continues to rise. In 2012, ED dental visits cost the U.S. health care system $1.6 billion, with an average cost of $749 per visit.*
- *Emergency department use for dental conditions has declined among young adults ages 19 to 25, has remained relatively flat among children and has increased for other age groups. The share of ED dental visit costs paid for by Medicaid has also increased.*
- *Looking forward, there are substantial opportunities to reduce ED visits for dental conditions through targeted referral programs and enhanced coverage for preventive dental services for adults through Medicaid.*

Introduction

Recent studies have documented an increase in emergency department (ED) visits due to dental conditions in the U.S.[1,2,3] In an earlier research brief, we reported that the number of dental visits nearly doubled from 2000 to 2010.[4] This increase was driven by a larger share of dental visits taking place in EDs rather than dental offices, especially among young adults 21 to 34 years old.[5]

Most dental ED visits are for non-traumatic dental conditions, and in most cases, patients receive prescriptions for pain or antibiotics for infections.[6,7,8] Patients who present at an ED with a non-traumatic dental condition would be better served in a dental office setting due to the availability of definitive care and the likelihood of continuity of care.[9] We estimate that up to 79 percent of dental ED visits could be diverted to community settings.[10] An analysis in Maryland, for example, estimates that the state Medicaid program could save up to $4 million each year through such diversion programs.[11]

The Health Policy Institute (HPI) is a thought leader and trusted source for policy knowledge on critical issues affecting the U.S. dental care system. HPI strives to generate, synthesize, and disseminate innovative research for policy makers, oral health advocates, and dental care providers.

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THE REFORM THAT CAN INCREASE DENTAL ACCESS AND AFFORDABILITY IN ARIZONA

BY NAOMI LOPEZ BAUMAN AND JOHN DAVIDSON[1]

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EXECUTIVE SUMMARY

Dental care is too often difficult to obtain in Arizona, especially in the state's vast rural areas and among those with the fewest financial resources. Of the state's 7 million residents, 2.4 million are living in areas designated as dental health professional shortage areas. A dental shortage area means that there one or fewer dentists per 5,000 people. One Arizona county has a single dentist serving the entire county.[1]

Today, almost a quarter (23 percent) of American children have untreated tooth decay, but in Arizona that number is dramatically higher: 40 percent of preschoolers in our state have untreated tooth decay and are in immediate need of dental care.[2] Even if a child has coverage through the state's AHCCCS program, which provides dental benefits for children in low income families, only one-third of dentists participate in the program, which is well-below the national participation average of 42 percent.[3] But the problem of access to dental care is most severe among the state's American Indian children. Among American Indian third graders in Arizona, 75 percent have a history of tooth decay.[4]

In response to a need for improved dental access and affordability, multiple states, as well as more than 50 countries around the world, license midlevel dental practitioners, called dental therapists, who can carry out routine dental procedures. In Arizona, a dentist is allowed, according to their license, to perform about 434 procedures. In Arizona, dental therapists would be able to perform approximately 80 procedures.[5]

The dental establishment has actively resisted this reform and usually cites unfounded concerns over patient safety. But the reality is that Arizonans cross the border in droves to obtain dental care that they either can't obtain in Arizona or cannot afford – care that is not subject to any Arizona regulation or patient protection. "Molar City" sits across the U.S.-Mexico border, near Yuma. The small town of Los Algodones is home to about 5,500 residents – and about 350 are dentists.

The safety and quality track record for dental therapists is long and well-documented. In addition to decades of experience in more than 50 countries around the world and in a growing number of states in the U.S., more than 1,000 studies and evaluations confirm that dental therapists provide safe and high quality care for dental patients.[6]

State scope of practice laws govern the activities that healthcare practitioners may engage in when caring for patients. These laws, when overly-restrictive as in the case of dental care, limit the availability of providers and services. Too often, those with low incomes or no dental insurance simply go without care. When dental pain becomes unbearable, these individuals seek treatment through hospital emergency rooms, where symptoms can be alleviated, but the underlying cause of the dental pain is not treated.

Limiting the supply of providers not only increases the cost of care services; it forces consumers and government payers to pay prices higher than they might otherwise. To increase dental access and affordability for Arizonans, lawmakers should allow for dental therapists.

WHY ORAL HEALTH MATTERS

According to a Harris Interactive Survey conducted on behalf of the American Dental Association in April 2013, almost half of lower-income Americans (48 percent) had not seen a dentist in the past year. Compare that to the 30 percent of middle- and higher-income Americans who had not seen one in the past year. Among adults earning less than $30,000 per year, 30 percent report not having seen one in more than five years.[7]

Dental care is an important component of an individual's overall health. Evidence of links between oral health and specific diseases has appeared in the literature for years. There is a growing body of research supporting the contribution of poor oral health to the development and severity of multiple medical conditions and diseases.[8] For example:

- "Endocarditis is an infection of the inner lining of your heart (endocardium). Endocarditis typically occurs when bacteria or other germs from another part of your body, such as your mouth, spread through your bloodstream and attach to damaged areas in your heart.
- "Some research suggests that heart disease, clogged arteries, and stroke may be linked to the inflammation and infections that oral bacteria can cause.
- "Periodontitis in pregnant women has been linked to premature birth and low birth weight."[9]

One of the most tragic examples of the dangers of poor oral health is the story of Deamonte Driver. Then 12-years-old, Deamonte died from what would have otherwise been a simple toothache.

In 2007, Deamonte's mother and a social worker couldn't find an available Medicaid dentist to perform an $80 tooth extraction. As a result of the infection from his abscessed tooth and delayed treatment, Deamonte developed an infection in his brain and underwent two

brain surgeries during several weeks spent in the hospital. Sadly, Deamonte died.[10]

Deamonte had a Medicaid card, but a card wasn't enough to obtain routine care. Arizona patients are at constant risk of facing similar obstacles to care. Too often, oral health services in Arizona are unattainable, unaffordable, or delayed.

IS THERE A DENTAL CRISIS IN ARIZONA?

Nationally, 18 percent of lower-income Americans report that "they or a household member has sought treatment for dental pain in an emergency room at some point in their lives." Compare that to the mere seven percent of middle- and higher-income Americans who say the same. Lower income Americans are also twice as likely (36 percent vs. 18 percent) to have lived with an untreated cavity.[11]

Unfortunately, Arizonans face an even wider dental divide. In 2014 alone, there were 27,000 visits to hospital emergency departments in Arizona for preventable dental conditions. Medicaid paid for 56 percent of these visits.[12] This is a costly burden on the system, and one that treats the pain and infection without addressing the underlying cause: tooth decay.

More than half of the state's children in kindergarten have a history of tooth decay and more than one-quarter have untreated tooth decay.[13] Even if a child has coverage through the state's AHCCCS program, which provides dental benefits for low income children, only one-third of Arizona dentists participate in the program, and only 25% of Arizona dentists bill the state over $10,000 per year—a common benchmark for dentists who serve a significant Medicaid population.[14] But the problem of access to dental care is most severe among the state's American Indian children; 75 percent of American Indian third graders in Arizona have a history of tooth decay.[15]

According to data from the U.S. Department of Health and Human Services, every county in Arizona has areas designated as Health Professional Shortage Areas (HPSA) for dental providers.[16] In fact, five of Arizona's 15 counties are entirely designated as a dental HPSA.

CROSSING THE BORDER FOR CARE

Medical tourism, when Americans travel to foreign countries to obtain less expensive healthcare, is rapidly growing. Estimates vary widely, but the U.S. Bureau of Economic Analysis estimates that it grew from $500 million in 2006 to $1.8 billion in 2015.[19]

While the dental establishment has actively resisted adding a dental therapy license, often citing unsubstantiated concerns over patient safety, the reality is that Arizonans cross the border in droves to obtain dental care that they can't obtain or cannot afford in Arizona. The care they get in Mexico is not subject to any Arizona regulation or patient protection, but for many Arizonans it's the only access to care that they have.[20]

"Molar City" sits just across the border, near Yuma. The small town of Los Algodones is home to about 5,500 residents – and about 350 of them are dentists, a far higher share than most communities in Arizona.[21] Nogales Mexico, south of Tucson, is also a rising dental tourism destination.[22] While hard data on medical tourism along the Arizona-Mexico border is scant, the fact is that patients will, for a variety of reasons, seek care across the border, where it is available and affordable.

And not just in Arizona. An in-depth survey of health care for Coachella Valley, California[23] found that almost 20 percent of uninsured respondents sought treatment in Mexico compared to only 8 percent of the insured.[24] That is the equivalent of one in ten adults in that area, or about 36,000 people.[25]

Furthermore, the survey found that those with the lowest levels of education and income, as well as Hispanics, reported the highest levels of seeking treatment in Mexico.

About half of the respondents who were uninsured cited cost as the reason for not having a dental cleaning in the past year compared to one-quarter of insured respondents.[26] A recent study in *Health Affairs* confirms that, over a wide range of health services, financial barriers

are highest for dental care. The cost burden holds true across age and insurance type,[27] and is exacerbated by the lack of available providers.

In Coachella Valley, four percent of uninsured reported never having had a dental cleaning compared to one percent of those insured.[28] In other words, the uninsured were four times more likely to have never seen a dental provider.

WHY NOT JUST RAISE DENTAL REIMBURSEMENT RATES?

The factors that influence access to dental care are complex. The U.S. Government Accountability Office (GAO) has been tracking and reporting on dental access for decades now.

The majority of states report difficulty in ensuring an adequate number of dental providers in their Medicaid programs, according to one GAO analysis comparing patient access under

Medicaid to private insurance. In fact, according to the study, states reported dental providers as the leading group of medical specialty that was most difficult to fulfill – even more so than specialty providers and mental health/substance abuse providers.[29] While low reimbursement is certainly an important factor in not accepting Medicaid patients, it wasn't the only one.

According to the same GAO study, a variety of other factors, such as missed appointments, the administrative burden of participating in the program, and difficulty referring to specialists are additional factors. The report also noted that these responses were consistent with the published research on this topic.[30]

For example, a 2008 study by the National Academy for State Health Policy found that, while dental provider participation increased after Medicaid rates increased, those increases were not solely sufficient to significantly improve patient access to dental care and services.[31] It should also be noted that, while Arizona's dental reimbursements have decreased in recent years, Arizona's rates remain above the national average for child dental services.[32]

It is time for state lawmakers to think outside-the-box when it comes to providing true access and affordability to needed care. Supply-side reforms in the area of nursing, as well as evidence from around the world, show that Arizona could serve its most vulnerable populations and taxpayers while giving all Arizonans more control and choice over their healthcare options.

DENTAL THERAPY

Dental therapists are midlevel providers and can be compared to nurse practitioners and physician assistants. Dental therapists work under the supervision of a licensed dentist and are highly trained to perform preventative and routine restorative care, like tooth fillings and certain extractions. Dental therapy is relatively new in the United States, but the concept is not. Beginning in the 1920s, more than 50 countries around the world began utilizing these dental providers.[33]

In 2015, the Commission on Dental Accreditation (CODA) adopted dental therapy education standards. Not only did this mark a strong endorsement of the mid-level dental provider model, but three years of intensive research and evaluation informed those standards.

CODA is an independent organization, housed within the American Dental Association, that is recognized by the U.S. Department of Education as the only national accrediting agency for dental, allied dental, and advanced dental education programs. Thirty members of organizations like the American Dental Association, American Dental Education Association, and the American Dental Hygienists' Association comprise CODA. Despite ongoing opposition to dental therapy by organized dentistry, there is wide support for CODA's assertion that mid-levels are safe and efficacious.

The Federal Trade Commission (FTC) had previously urged the commission "to finalize and adopt proposed standards without unnecessary delay, so that the development of this emerging service model can proceed, and consumers can reap the likely benefits of increased competition."[34]

Adoption of accreditation standards, wrote FTC staff:

> ***"has the potential to enhance competition by supporting state legislation for the licensure of dental therapists, and also to encourage the development of dental therapy education programs consistent with a nationwide standard, which would facilitate the mobility of dental therapists from state to state to meet consumer demand for dental services… Any further delay in the adoption of accreditation standards could discourage and delay the development of education programs, reduce the availability of these new professionals, and hinder their ability to practice in different states."***[35]

The standards themselves outline the baseline aspects of dental therapy education such as program length, which must be "at least three academic years of full-time instruction or its equivalent at the postsecondary level." Other standards deal with

advanced standing, wherein "credit may be given to dental assistants, expanded function dental assistants and dental hygienists who are moving into a dental therapy program," supervision, scope of practice, and criteria for a program director.[36]

In Arizona, a dentist is allowed, according to their license, to perform approximately 434 procedures. Under a proposal presented to the legislature's Health Care Committee of Reference in December 2016, dental therapists would be licensed to perform about 80 procedures, if approved by lawmakers.[37]

Dental therapists work under the supervision of a dentist and provide basic, preventative and restorative care such as fillings and certain tooth extractions. When working under general or remote supervision, dental therapists can expand their geographic reach by offering care in schools, nursing homes, and other community settings.

VARIOUS DENTAL THERAPY MODELS

Since first being introduced in the Alaska Native communities in 2004, dental therapy has spread throughout the United States. Dental therapists are now authorized in Minnesota, Maine, Vermont, and on tribal lands in Alaska, Washington State and Oregon.

When CODA released accreditation standards for dental therapy education programs in 2015, it provided baseline requirements for dental therapy education programs, but also provided states the flexibility to build a dental therapy model that meets their needs and the dental access challenges their residents face. Today, the practice of dental therapy varies among the states that have approved it, based on the unique political, population, geographic, and dental delivery needs of each state. While differences exist in how dental therapists work in each of these states, the reason for approving a new member of the dental team has been the same: to increase dental access for underserved groups and boost the supply of dental professionals to meet the challenges of an aging dental workforce.

ALASKA: The Alaska Native Tribal Health Corporation (ANTHC) identified dental therapy as a remedy for underserved tribal communities in rural and remote areas of the state when it established the first dental therapy program in the U.S. in 2014, which ANTHC called Dental Health Aide Therapists. Alaska's education requirements primarily include completion of a full-time two-year educational program, followed by supervised preceptorship of at least 400 hours, culminating in certification. Dental therapists work under supervision of dentists, either "in person or remotely."[38] The program will begin awarding an associate degree later this year. Because of dental therapists, 40,000 people in 81 previously underserved communities in Alaska now have regular access to dental care.[39]

MINNESOTA: In 2009, Minnesota was the first state to license dental therapists to work in any community throughout the state. Minnesota's dental therapists are allowed to perform more than 70 services and procedures, including oral evaluations and consultations with pediatricians of patients three years old and younger. Minnesota also has an "advanced dental therapist" license, which allows the practitioner to perform up to 80 different services and procedures. These two designations differ in the level of supervision required, but both allow licensed providers to perform a variety of needed preventive and routine dental procedures. The Minnesota Board of Dentistry and Department of Health reported that dental therapists have been delivering safe, high quality care in rural and underserved communities, and that clinics employing them are expanding capacity and decreasing travel and wait times for patients.[40]

The dispersion of dental therapists in Minnesota in the last eight years shows dentists will naturally opt to grow their practices with these dental providers where their services are most needed. In late 2016, Minnesota had 64 licensed dental therapists, 32 of whom were advanced dental therapists. Of the 95 percent who were employed at that time, 52 percent worked in urban areas, and 48 percent served in suburban and rural communities.[41] This pattern demonstrates dental therapists are expanding access for the underserved.

OTHER STATES: Maine passed a dental therapy law in 2014 and Vermont passed its law in 2016. In early 2017, Washington State passed a law to allow tribes throughout the state to utilize dental therapists, after the Swinomish Indian Tribal Community exercised its sovereignty in 2016 and began licensing its own dental therapist. Finally, Oregon, under its dental pilot project authority, authorized two tribes to hire dental therapists in their tribal health systems in 2016.

Today, at least ten additional states and tribes around the United States are considering dental therapy legislation to increase access to dental care for their residents, while also expanding the existing dental workforce.

DENTAL THERAPY SUPERVISION

In order to best meet the needs of Arizonans in receiving accessible and affordable dental options, lawmakers should be aware that there are variety of ways to organize the dentist and dental therapy relationship.

Dental therapists treat patients in conjunction with the dental team, which includes a supervising dentist and at least one dental hygienist and/or dental assistant. The dental therapist-dentist relationship resembles the relationship between physician assistants and supervising physicians. In states that have already authorized dental therapists, the supervising dentist determines the specific procedures the dental therapist can perform, the types of patients they can treat, and the scenarios when the dentist would need to be consulted. Dentists and dental therapists outline these requirements through "collaborative care agreements" (Alaska),[42] "written practice agreements" (Maine),[43] "collaborative management agreements" (Minnesota),[44] or "collaborative agreements" (Vermont).[45]

General supervision, where the supervising or employing physician or dentist is not in the same physical location as the practitioner being supervised, is the norm for many of the current arrangements for mid-level health care providers in Arizona, and it is also the norm for dental therapists throughout the United States and around the world.[46]

The FTC has recently reiterated the benefits to patients and the entire dental delivery system when dental therapists are authorized to work under general supervision:

> ***"Dental therapists are likely to be most effective in expanding access to cost-effective care, especially to the underserved, when they are allowed to practice under the general supervision of a remotely-located dentist. Although dental therapists generally receive lower compensation than dentists because of their more limited training and the narrower scope of services they are typically authorized to provide, the main potential for cost savings from the use of dental therapists depends 'on whether duplication in providers***

arises and whether the profit arising from care provided by lower-paid therapists accrues to dentists, insurers, or patients.' A requirement to have a supervising dentist on the premises will likely lead to unnecessary duplication of resources and thereby undercut the cost savings that otherwise might arise from the use of lower-cost providers, effectively defeating a major purpose of expanding the supply of dental therapists."[47]

Not only does greater autonomy for midlevel providers create more opportunities for patient access, as pointed out by the FTC,[48] but greater autonomy for dental hygienists resulted in a six percent increase in employment growth for those professionals.[49]

DENTAL THERAPY'S SAFETY RECORD

In 2012, a global literature review of 1,100 publications spanning 26 countries concluded that dental therapists provide safe and quality care.[50]

Even the American Dental Association's own Council on Scientific Affairs found that "The results of a variety of studies indicate that appropriately trained midlevel providers are capable of providing high-quality services, including irreversible procedures such as restorative care and dental extractions."[51] This is especially noteable because the American Dental Association itself has been an outspoken critic of dental therapy, usually on the grounds that it offers an inferior quality of care.

Dental therapy students are held to the same standards as those studying to become dentists for the procedures that both professionals provide to their patients. To receive licensure in Minnesota dental therapists are required by the Board of Dentistry to meet the same level of competency as dentists for the procedures they have in common. The University of Minnesota trains dental therapists side-by-side with dental students for such procedures. Further, in a 2010 evaluation of the dental therapy workforce in Alaska, 125 direct restorations were evaluated with the relative proportion of deficient restorations smaller for therapists (12%) than dentists (22%).[52]

CONCLUSION

For all of the healthcare discussions coming from Washington, D.C., there has been little discussion of how to reduce health care costs. Fortunately, state lawmakers wield enormous authority over state-level policies that right now are limiting the availability of healthcare providers and keeping prices high. These providers could be performing basic services and, with more available providers, offering these services at a lower cost and closer to home to consumers.

Arizona's Dental Practice Act makes it illegal for anyone other than dentists to perform restorative dental care. State scope of practice laws restrict healthcare providers from adding practitioners that can perform the more routine procedures, that would allow all practitioners to practice at the top of their education and professional training. These laws govern the precise activities healthcare practitioners may engage in when caring for patients – and often set these standards above healthcare practitioners' professional skill and medical education levels.

Arizona should address the supply-side of the healthcare equation by removing these artificial barriers that grant monopolies and restrict the availability of qualified dental professionals.

Nowhere is this more needed than in dental care.

Arizona lawmakers determine, through the state's occupational licensing system, who is allowed to provide specific dental services. Proponents of the status quo will argue that by expanding the pool of providers, patient safety will be compromised.

Taking this argument to its logical extreme, the most favorable outcomes will occur when only those with the highest qualifications perform the majority of services. Not only is this conclusion unfounded, arcane and expensive, but one must ask: why not allow only oral surgeons, who have the most education and highest professional qualifications, to provide all dental services?

The answer is obvious: one need not be an oral surgeon to perform the many procedures and services that licensed dentists perform. Likewise, one need not be a dentist to perform a limited scope of common restorative and preventative procedures and services.

The faulty logic that only dentists can safely perform routine procedures like fillings and extractions is causing harm to those who are unable to obtain basic dental services in Arizona. Some patients are traveling to Mexico for care. Others go without care for an extended period as they wait for an available provider. Some, whose conditions worsen, present in hospital emergency rooms, or worse, face additional ailments and complications that result from a lack of care. Often, the additional costs of treating preventable dental conditions in the emergency department are shared by taxpayers.

The fact is, dental scope of practice laws in Arizona are protecting the status quo at the expense of patients in need of better access to affordable care. Other states and nations have already taken steps to address the problems Arizona faces, by licensing dental therapists. This policy change has resulted in an increased supply of oral health care providers, increased access to care for the underserved, increased revenues for dentists who employ these midlevel providers, and a more efficient and effective dental delivery system.

There are many ways Arizona lawmakers could do this. As we have seen, not every state has gone about licensing dental therapists in the same way, just as states do not license dental hygienists in the same way. Several states allow hygienists to be self-employed and own a dental hygiene practice to provide specific procedures for which they are licensed, such as teeth cleanings.

The support for reform in this area can no longer be ignored. There is broad and growing recognition that addressing the supply side of health care is imperative for patient access and affordability. A 2014 letter from the Federal Trade Commission (FTC) to the Commission on Dental Accreditation (CODA) stated:

> ***"FTC staff support CODA's efforts to facilitate the creation of new dental therapy education programs and to expand the supply of dental therapists because these initiatives are likely to increase the output of basic dental services, enhance competition, reduce costs, and expand access to dental care."***[53]

Too often, our state laws protect the special interests of medical professionals rather than the interests of the public. The result is high prices and a lack of access to healthcare services. Arizona needs to begin putting patients first so that every Arizonan, especially the most vulnerable, can have access to the care they need. Arizona lawmakers can – and should – free the state from its outdated, restrictive and protectionist scope of practice laws and allow dental therapists to be part of the solution to Arizona's ongoing oral health care access problem.

ENDNOTES

[1] Bureau of Clinician Recruitment and Service, Health Resources and Services Administration (HRSA), U.S. Department of Health & Human Services, HRSA Data Warehouse: Designated Health Professional Shortage Areas Statistics, as of January 1, 2017, at https://datawarehouse.hrsa.gov/topics/shortageAreas.aspx.

[2] Newsroom Northern Arizona University, "New Research Project to Improve Oral Health of Arizona's Preschoolers," April 3, 2017, at http://www.newswise.com/articles/new-research-project-to-improve-oral-health-of-arizona-s-preschoolers.

[3] American Dental Association, Health Policy Institute, "The Oral Health Care System: A State-Level Analysis." 2015, http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/OralHealthCare-StateFacts/Oral-Health-Care-System-Full-Report.pdf.

[4] Arizona Early Childhood Development and Health Board (First Things First), "Taking a Bite Out of School Absences: Children's Oral Health Report 2016," at http://azftf.gov/WhoWeAre/Board/Documents/FTF_Oral_Health_Report_2016.pdf

[5] The Pew Charitable Trusts, Analysis using 2016 American Dental Association Codes on Dental Procedures and Nomenclature, ADA Commission on Dental Accreditation 2015 Accreditation Standards for Dental Therapy Programs, Arizona Title 32 Revised Statutes (via the Arizona State Board of Dental Examiners) current as of July 3, 2015 and the Arizona Administrative Code (via the Arizona State Board of Dental Examiners) current as of April 3.

[6] David A. Nash et al., "A Review of the Global Literature on Dental Therapists," April 2012, at http://www.wkkf.org/-/media/pdfs/dental-therapy/nash-dental-therapist-literature-review.ASHX

[7] Harris Interactive Survey for the American Dental Association and The ADA Dental Divide in America Study, April 24-29, 2013 among 1,221 U.S. adults age 18+.

[8] Mayo Clinic, "Oral health: A window to your overall health," at http://www.mayoclinic.org/healthy-lifestyle/adult-health/in-depth/dental/art-20047475.

[9] *Ibid.*

[10] Mary Otto, "For Want of a Dentist," Washington Post, February 28, 2007 at http://www.washingtonpost.com/wp-dyn/content/article/2007/02/27/AR2007022702116.html.

[11] Harris Interactive.

[12] Arizona state statistics from HCUP State Inpatient Databases and State Emergency Department Databases 2014, Agency for Healthcare Research and Quality (AHRQ), based on data collected by the Arizona Department of Health Services, using ICD-9 codes 521- 522, 523.00, 523.01, 523.10, 523.11, 523.20, 523.21, 523.22, 523.23, 523.24, 523.25, 523.3-523.33, 523.30, 523.31, 523.32, 523.33, 523.40, 523.41, 523.42, 523.5, 523.6, 523.8, 523.9, and 528.3.

[13] Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Oral Health. Oral Health Data for 2015at https://nccd.cdc.gov/oralhealthdata/.

ENDNOTES

[14] ADA Health Policy Institute, "Oral Health Care System: Arizona" at http://www.ada.org/en/science-research/health-policy-institute/oral-health-care-system/Arizona-facts.

[15] Arizona Early Childhood Development and Health Board (First Things First), "Taking a Bite Out of School Absences: Children's Oral Health Report 2016," at http://azftf.gov/WhoWeAre/Board/Documents/FTF_Oral_Health_Report_2016.pdf.

[16] Bureau of Clinician Recruitment and Service, Health Resources and Services Administration (HRSA), U.S. Department of Health & Human Services, HRSA Data Warehouse: Designated Health Professional Shortage Areas Statistics, as of January 1, 2017 at https://datawarehouse.hrsa.gov/topics/shortageAreas.aspx.

[17] The percent of need met is based on number of dentists available to serve the population of the area, group, or facility by the number of dentists that would be necessary to eliminate the dental HPSA (based on a ratio of 5,000 to 1 or 4,000 to 1 where high needs are indicated).

[18] The number of additional dentists needed to achieve a population-to-dentist ratio of 5,000 to 1 (4,000 to 1 where high needs are indicated) in all designated dental HPSAs, resulting in their removal from designation.

[19] Barrett Newkirk, "The allure of cheap doctors, drugs and dentists in Mexico: For Californians living near the border, Mexico offers what the U.S. does not: Reliable health care at a cheap price," The Desert Sun, October 21, 2016 at http://www.desertsun.com/story/news/health/2016/10/20/mexico-fills-health-needs-many-latino-americans/90497326/.

[20] Barrett Newkirk, "The allure of cheap doctors, drugs and dentists in Mexico: For Californians living near the border, Mexico offers what the U.S. does not: Reliable health care at a cheap price," The Desert Sun, October 21, 2016 at http://www.desertsun.com/story/news/health/2016/10/20/mexico-fills-health-needs-many-latino-americans/90497326/.

[21] Ted Robbins, "A Reason to Smile: Mexican Town is Destination for Dental Tourism," NPR All Things Considered, June 9, 2014 at http://www.npr.org/sections/health-shots/2014/06/09/318212444/a-reason-to-smile-mexican-town-is-a-destination-for-dental-tourism.

[22] Stephanie Innes, "Going to Mexico for dental care saved me $1,800," Arizona Daily Star, March 14, 2017 at http://tucson.com/news/local/going-to-mexico-for-dental-care-saved-me/article_a98bb282-079b-11e7-9fed-3369b1d160e3.html.

ENDNOTES

[23] The Health Assessment and Research for Communities (HARC) report analyzes the health of the Coachella Valley and is based on survey data. The region includes nine incorporated cities and a large, but sparsely populated, unincorporated area. The nine incorporated cities in the Coachella Valley are Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage. The unincorporated areas within the Coachella Valley include Bermuda Dunes, Indio Hills, Mecca, North Palm Springs, Oasis, Sky Valley, Thermal, and Thousand Palms. Indian reservations include the Cahuilla Indians in the Coachella Valley, including the Agua Caliente Indian Reservation, the Augustine Reservation, the Cabazon Indian Reservation, and the Torres-Martinez Desert Cahuilla Indian Reservation.

[24] Health Assessment and Research for Communities (HARC), A Special Report: Health of Uninsured Adults in the Coachella Valley, March 2016 at http://harcdata.org/reports-available/.

[25] Robbins.

[26] LeComte-Hinely, J. R., Leier, C.R., Segovia, T. (2015). Health of Uninsured Adults in the Coachella Valley. Palm Desert, CA: HARC, Inc.

[27] Marko Vujicic, Thomas Buchmueller, and Rachel Klein, "Dental Care Presents the Highest Level of Financial Barriers, Compared to Other Types of Health Care Services," Health Affairs, December 2016, vol. 35, no. 12, pp. 2176-2182.

[28] HARC, p. 29.

[29] U.S. General Accounting Office, "States Made Multiple Program Changes, and Beneficiaries Generally Reported Access Comparable to Private Insurance," November 2012 at http://www.gao.gov/assets/650/649788.pdf.

[30] U.S. General Accounting Office, "States Made Multiple Program Changes, and Beneficiaries Generally Reported Access Comparable to Private Insurance," November 2012 at http://www.gao.gov/assets/650/649788.pdf.

[31] Alison Borchgrevink, Andrew Snyder, and Shelly Gehshan, "The Effects of Medicaid Reimbursement Rates on Access to Dental Care," National Academy for State Health Policy, March 2008 at http://www.nashp.org/sites/default/files/CHCF_dental_rates.pdf.

[32] ADA Health Policy Institute, "Oral Health Care System: Arizona" at http://www.ada.org/en/science-research/health-policy-institute/oral-health-care-system/Arizona-facts.

[33] Jane Koppelman, Kelly Vitzthum, and Lisa Simon, "Expanding Where Dental Therapists Can Practice Could Increase Americans' Access to Cost-Efficient Care," Health Affairs, December 2016, vol. 35, no. 12, pp. 2200-2206 at http://content.healthaffairs.org/content/35/12/2200.full.pdf+html.

[34] Federal Trade Commission letter to Sherin Tooks, Ed.D., M.S. on November 21, 2014 at https://www.ftc.gov/system/files/documents/advocacy_documents/ftc-staff-comment-commission-dental-accreditation-concerning-proposed-accreditation-standards-dental/141201codacomment.pdf.

ENDNOTES

[35] *Ibid.*

[36] Commission on Dental Accreditation, "Accreditation Standards for Dental Therapy Education Programs, February 6, 2015.

[37] Pivotal Policy Consulting for Dental Care AZ, Sunrise Application: A request to provide statutory authority for the licensure of Dental Therapists in Arizona, September 1, 2016.

[38] Alaska Native Tribal Health Consortium, "DHAT Certification and Scope of Practice," 2016, http://anthc.org/dental-health-aide/dhat-certification-scope-of-practice/. Accessed January 2, 2017.

[39] "Dental Health Aide" (Alaska Native Tribal Health Consortium), https://perma.cc/A4Y6-UKBX.

[40] Minnesota Department of Health, Board of Dentistry. "Early Impacts of Dental Therapists in Minnesota." February 2014 at http://www.health.state.mn.us/divs/orhpc/workforce/dt/dtlegisrpt.pdf

[41] Presentation by Dr. Karl Self, Director, Division of Dental Therapy, University of MN, at the National Oral Health Conference, April 20, 2016,

[42] Sarah Shoffstall-Cone and Mary Willard, "Alaska Dental Health Aide Program." International Journal of Circumpolar Health 72 (2013): 21198, http://dx.doi.org/10.3402/ijch.v72i0.21198. Accessed December 30, 2016

[43] Maine Legislature, An Act To Improve Access to Oral Health Care. 126th Legislature, April 28, 2014, http://www.mainelegislature.org/legis/bills/bills_126th/billtexts/HP087001.asp.

[44] Minnesota Legislature. 2009. Minnesota Session Laws, Chapter 95, Revisor of Statutes, Senate File 2083, Article 3. 86th Legislature. https://mn.gov/boards/assets/enabling%20Legislation_tcm21-46113.pdf (January 2, 2017).

[45] Vermont General Assembly. 2016. An act relating to establishing and regulating dental therapists. 2015–2016 Session, June 2.

[46] Koppelman, et. al.

[47] Federal Trade Commission letter to Ohio State Senator Peggy Lehner, on March 3, 2017 at https://www.ftc.gov/system/files/documents/advocacy_documents/ftc-staff-comment-ohio-state-senate-regarding-competitive-effects-sb-330-increasing-access-quality/v170003_ftc_staff_comment_to_ohio_state_senate_re_ohio_sb_330_re_dental_therapists_and_hygienists.pdf

[48] Federal Trade Commission letter to Ohio State Senator Peggy Lehner, on March 3, 2017 at https://www.ftc.gov/system/files/documents/advocacy_documents/ftc-staff-comment-ohio-state-senate-regarding-competitive-effects-sb-330-increasing-access-quality/v170003_ftc_staff_comment_to_ohio_state_senate_re_ohio_sb_330_re_dental_therapists_and_hygienists.pdf

ENDNOTES

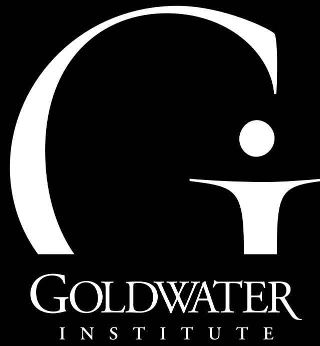
[49] Morris M. Kleiner and Kyoung Won Park, "Battles Among Licensed Occupations: Analyzing Government Regulations on Labor Market Outcomes for Dentists and Hygienists," NBER Working Paper no. 16560, November 2010 at http://www.nber.org/papers/w16560.

[50] David A. Nash et al., "A Review of the Global Literature on Dental Therapists," April 2012, at http://www.wkkf.org/-/media/pdfs/dental-therapy/nash-dental-therapist-literature-review.ASHX.

[51] Jane Koppelman, Kelly Vitzthum, and Lisa Simon, "Dental Therapists and Access to Cost-Efficient Oral Health Care," Health Affairs December 2016 Thematic Issue on Oral Health Briefing, December 7, 2016, slide 71 at http://www.healthaffairs.org/events/2016_12_07_oral_health/media/slides.pdf.

[52] Scott Wetterhall, James D. Bader, Barri B. Burrus, Jessica Y. Lee, and Daniel A. Shugars, "Evaluation of the Dental Health Aide Therapist Workforce Model in Alaska," RTI International (RTI Project Number 0211727.000.001) (October 2010), http://www.rti.org/sites/default/files/resources/alaskadhatprogramevaluationfinal102510.pdf

[53] Federal Trade Commission letter to Sherin Tooks, Ed.D., M.S. on November 21, 2014 at https://www.ftc.gov/system/files/documents/advocacy_documents/ftc-staff-comment-commission-dental-accreditation-concerning-proposed-accreditation-standards-dental/141201codacomment.pdf.



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