Presentation location

What is a dental therapist and why are they good for underserved patients and dentists?

Frank Catalanotto, DMD
Recovering pediatric dentist and current advocate for improved access to quality oral health care and dental therapy

Disclaimer

Please note that the opinions I share in this presentation are my own and do not necessarily represent the official viewpoints of any organization with which I am affiliated.

Frank Catalanotto, DMD

Desperate for Dental Care in America's Heartland

Wendell Potter Huffington Post 08/31/2017 06:21 pm ET

Imagine going online to make an appointment with your dentist and finding this message, in bold letters, at the top of the website:

-The patient parking lot will open no later than midnight.

-Numbered patient admission tickets will be given out beginning at 3 AM, one ticket per patient.

-Clinic doors will open at 6 AM. Patients will be admitted in numerical order by ticket # and a ticket is required for admission.

-Services are provided on a first-come, first-serve basis.

http://www.huffingtonpost.com/entry/59a87e48e4b0c50640cd5e25

http://www.washingtonpost.com/sf/national/2017/05/13/the-painful-truth-about-teeth/?utm_term=.1fa693f294a0

Poll points to dental insecurity among many middle-aged Americans

https://healthjournalism.org/blog/2017/09/poll-points-to-dental-insecurity-among-many-middle-aged-americans/

One in three Americans aged 50 to 64 are ashamed about the state of their teeth, and an even larger percentage (38 percent) say dental conditions have caused pain, difficulties with eating, missed work or interfered with their lives in other ways within the past two years.

For the majority of folks, cost was the main barrier to dental care," lead researcher Erica Solway, a senior project manager at the University of Michigan Institute for Healthcare Policy and Innovation

Fundamental premise:

- **The dental care delivery system in this country is broken** for approximately 190,000,000+ people who cannot access the system for a variety of reasons.

- We must examine some of the causes and look at solutions or approaches to address the problem.

- Dental Therapy is one approach that is evidence-based and appears to be working very well.

- There is no evidence base for the criticisms of dental therapy

Fundamental premise:

- Dental Therapy is consistent with the goals of health care reform as embodied in the **TRIPLE AIM**
- **1. Improve the patient care experience**
- **2. Lower the per capita costs of care**
- **3. Improve the overall health of the public**

Fundamental premise:

- **Support for dental therapy is an ethical issue** consistent with the ADA Principles of Ethics.

- Improving access to care is primarily an issue of **SOCIAL JUSTICE-** discussed later on

- Supporting dental therapy can be part of the profession's social contract with society

Definition, History & Education

What is a Dental Therapist?

An oral health professional who works on the team with dentists and dental hygienists, under the supervision of a licensed dentist.

A member of the oral health care team who is educated to provide evaluative, preventive, restorative, and minor surgical dental care within their scope of practice.

My Standard Response to Criticisms of DT

related to safety, quality and effectiveness

"Doctor, I understand how you ***feel*** about dental therapists. But, can you provide me any published evidence that demonstrates that dental therapists are not technically competent for the procedures they perform or that they are unsafe or ineffective in doing what they do in providing oral health care to patients?"

Then I stop talking and await the answer.

I am usually greeted by deafening silence or blustering babble!

Ignorance of the facts can be cured, but stupidity and misrepresentation cannot be cured!

Today's Discussion Topics

- ✓ Rationale for Dental Therapy
- ✓ History, definition & education
- ✓ CODA Accreditation – the Tipping Point
- ✓ Quality & Effectiveness
- ✓ How can dental therapists help improve access to care and also help dentists?
- ✓ Most recent evaluations of Minnesota and Alaska programs

Rationale for Dental Therapy

1. What is the number of people without regular access?

1a. Dental Health Professional Shortage Areas
1b. Dental Utilization Data
1c. ADA; Health Policy Institute Reports
1d. Medical Expenditure Panel Survey, AHRQ

2. Why is good oral health important?

2a. School performance
2b. Loss of work time
2c. Morbidity-Hospital ED data
2d. Mortality- Deaths
2e. Systemic Health

How many people are without access to oral health care?

- HRSA estimates 41% of U.S. population needs are met by existing dental workforce. Assuming this month's census figures are correct, about 191 million don't receive care.

- Another recent estimate is that 30 to 48% of U.S. population accessed care. Assuming an average of 39%(+- 5%) then approximately 198 million (+-5%) DID NOT utilize dental care, for whatever reason. (Recent report by ADA HPI Dental Care Utilization, Dental Benefits Coverage, and Cost Barriers: Update 2015 October 2015)

How many people are without access to oral health care?

- 2015 data show that only 31% of eligible kids enrolled in Medicaid received “any” dental services. Applied to the general population, that’s about 69% who did not receive any dental services in 2015. Using the population figure above, we get about 190 million without.

- Medical Expenditure Panel Survey (AHRQ)- Significantly, less than half of the public had annual dental visit (about 50% for children, 42% for seniors and only 35% for adults). Assuming an average of 42% of population (Ok, lets say 45% to be safe), that means that only 171 million saw a dentist annually.

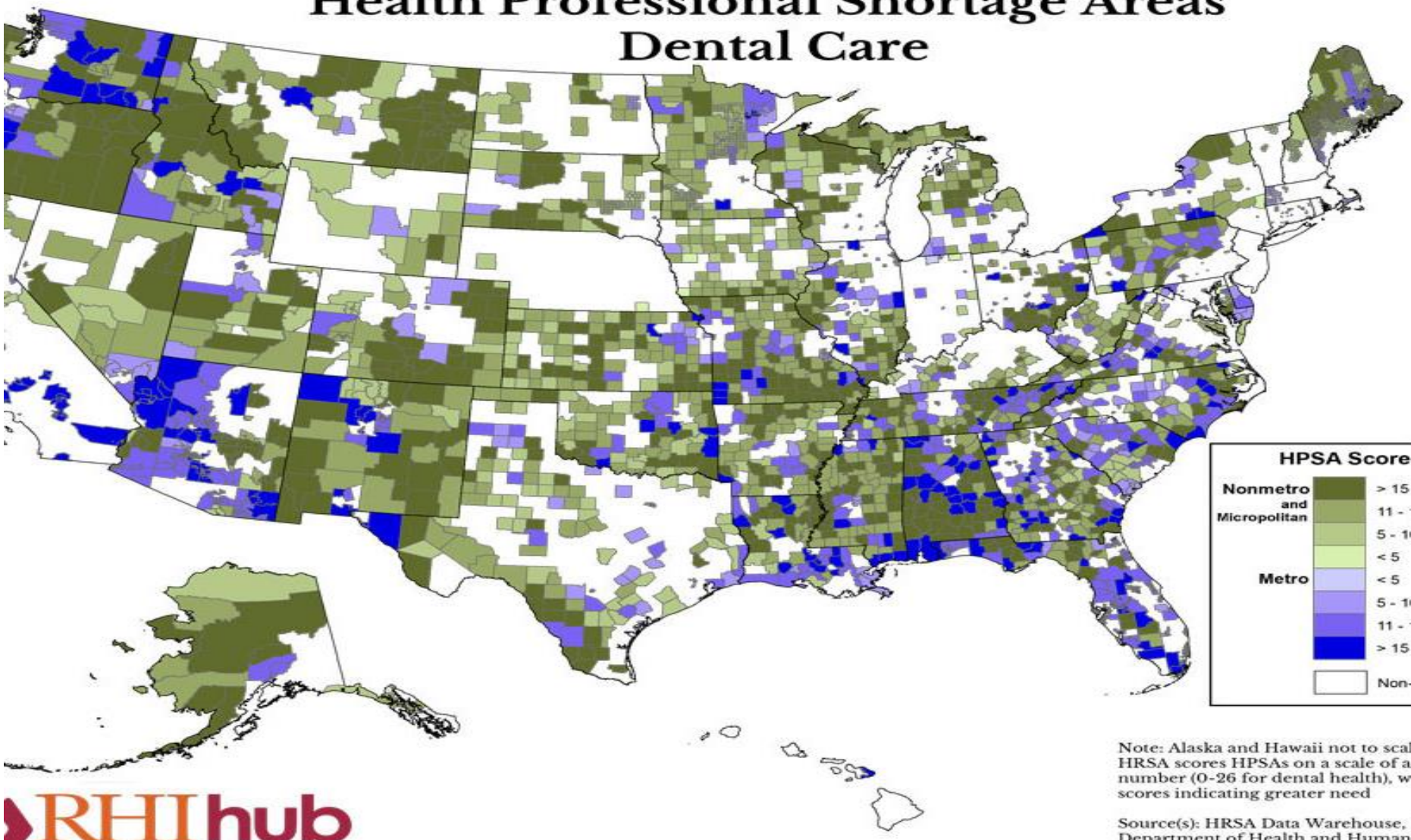
- **So, for now, I am sticking with estimate of 190 million receive no dental care.**

Dental Health Professional Shortage Areas

Location	Total Dental Care HPSA Designations	Percent of Need Met	Practitioners Needed to Remove HPSA Designation
United States	**4,878**[1]	**40.79%**[1]	**7,208**[1]
1. Florida	220	17.25%	860
2. Arizona	170	31.65%	431
3. Illinois	161	30.83%	401
4. Tennessee	140	25.79%	353
5. Texas	240	63.72%	349
6. Alabama	62	27.01%	304
7. Pennsylvania	160	40.26%	302
8. Missouri	160	24.51%	286
9. Georgia	148	27.05%	280
10. North Carolina	129	43.80%	270

UF UNIVERSITY of FLORIDA
College of Dentistry

Health Professional Shortage Areas
Dental Care



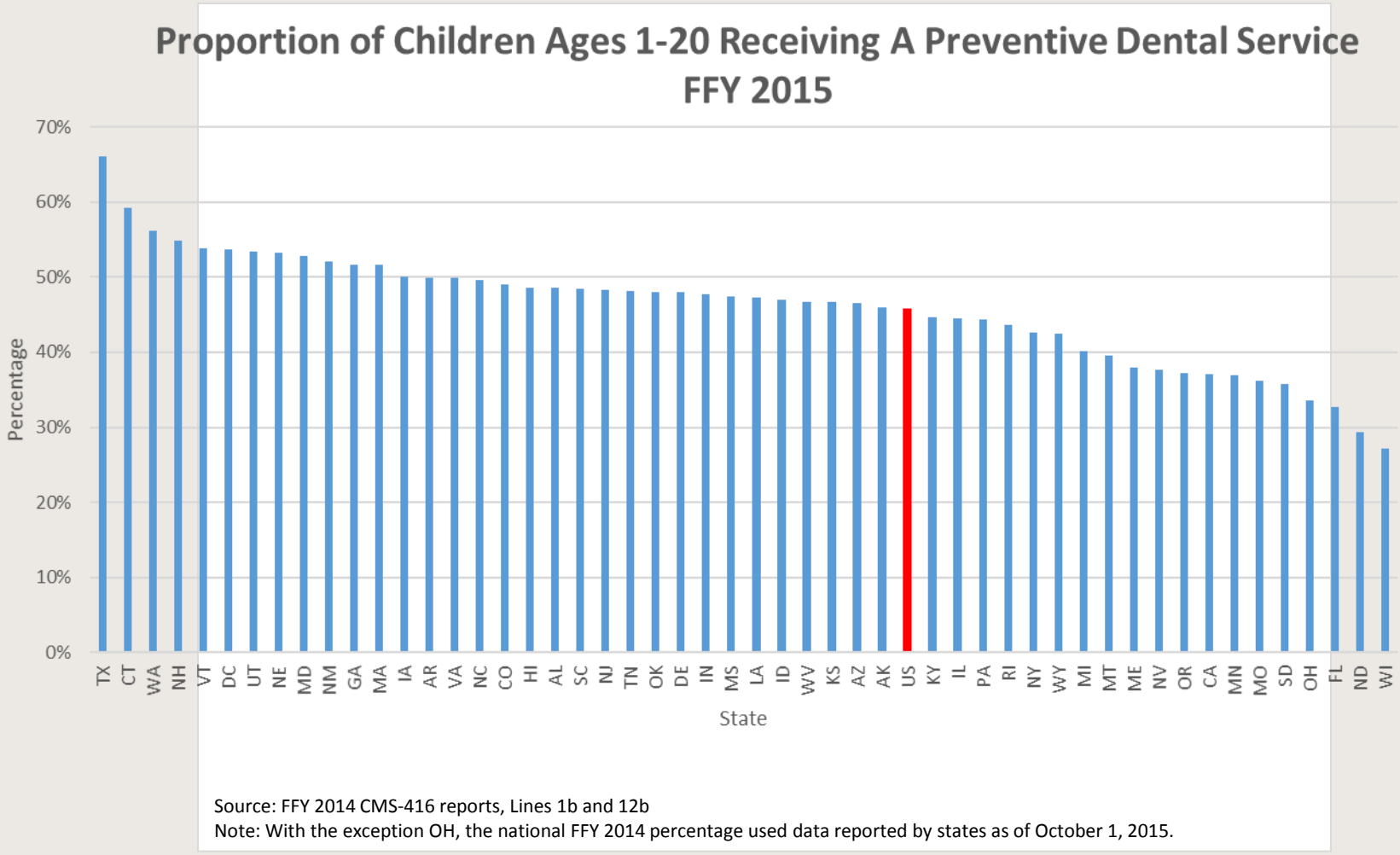
Note: Alaska and Hawaii not to scal
HRSA scores HPSAs on a scale of a
number (0-26 for dental health), w
scores indicating greater need

Source(s): HRSA Data Warehouse,
Department of Health and Human
Services, November 2016

RHIhub
Rural Health Information Hub

Dental Utilization Data

for Preventive Dental Services, Line 12b, CMS 416



Source: FFY 2014 CMS-416 reports, Lines 1b and 12b
Note: With the exception OH, the national FFY 2014 percentage used data reported by states as of October 1, 2015.

Centers for Medicare & Medicaid Services
ORAL HEALTH Initiative

Oral Health and School Readiness and Performance

Educational Achievement

- Children with poor oral health are more likely to experience oral pain, miss school, and perform poorly in school.
- Preventing and treating children's oral health problems improves functioning, educational achievement and psychosocial development. 2
- Children with poor oral and general health are more than twice as likely to perform poorly in school. 1

Developmental Delays

- Developmental delays among preschool-aged children from families with low incomes may be associated with increased decayed, missing, and filled surfaces on primary teeth. 3

School Attendance

- Among children and adolescents ages 5–18, oral pain and acute asthma similarly impact school attendance. 4
- Absences associated with oral pain or infection increase the likelihood of poor school performance, whereas absences for routine oral health care do not. 3

Oral Health and School Readiness and Performance References

- Blumenshine, SL, Vann, <WF, Gizlice, Z and Lee, JY. Children's School Performance: Impact of general and oral Health. J Public Health Dent. 2008 Spring;68(2):82-7. doi: 10.1111/j.1752-7325.2007.00062.x.
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- Guarnizo-Herreno CC, Wehby GL. 2012. Children's dental health, school performance, and psychosocial well-being. Journal of Pediatrics 161(6):1153–1159.
- Chi DL, Rossitch KC, Beeles EM. 2013. Developmental delays and dental caries in low-income preschoolers in the USA: A pilot cross-sectional study and preliminary explanatory model. BMC Oral Health 13:53.
- Thikkurissy S, Glazer K, Amini H, Casamassimo P, Rashid R. 2012. The comparative morbidities of acute dental pain and acute asthma on quality of life in children. Pediatric Dentistry 3(4):e77–e80.

Neiderman et al, Getting the Incentives Right: Improving Oral Health Equity with Universal School-Based Caries Prevention. AJPH Published Online, June 29, 2017

- "Despite significant financial, training and program investments, US children's caries experience and inequities continued to increase over the last 20 years"
- "… we find that effective preventive interventions are either (1) consistently compensated less than ineffective interventions or (2) not compensated at all."
- "We propose universal school-based comprehensive caries prevention to address this misalignment."
- **However, my belief, based on data in this presentation, is that the current oral health workforce could not implement such a program. I think adding dental therapists to the workforce could help implement the recommendations of this paper.**

Old data that needs to be updated BUT:

- Employed adults lose more than 164 million hours of work a year related to oral health problems or dental visits.[i]

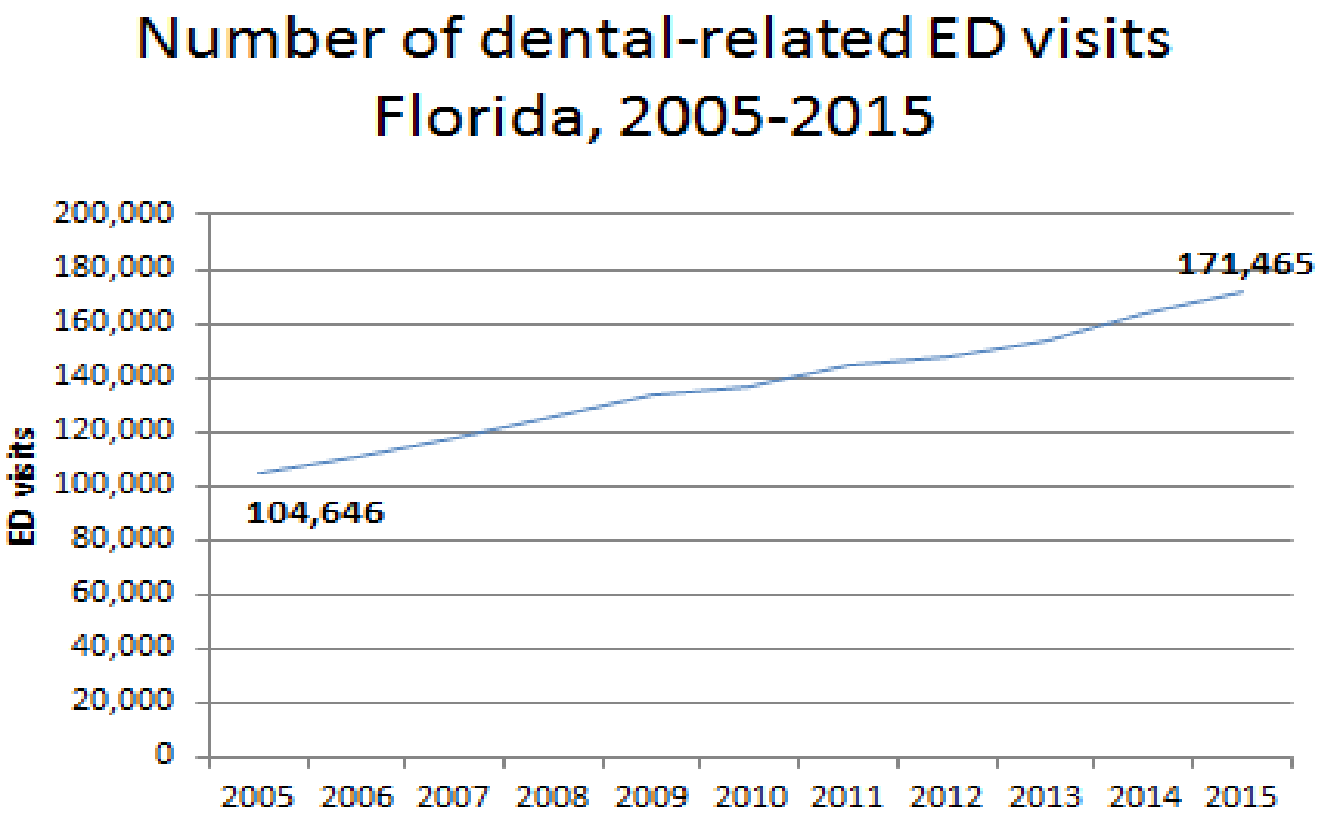
- Adults who work in lower-paying industries, such as customer service, lose two to four times more work hours due to oral health-related issues than adults who have professional positions.[ii]

[i] HC Gift, ST Reisine, DC Larach, "The social impact of dental problems and visits," (Am J Public Health 1992) 82:1663–8.

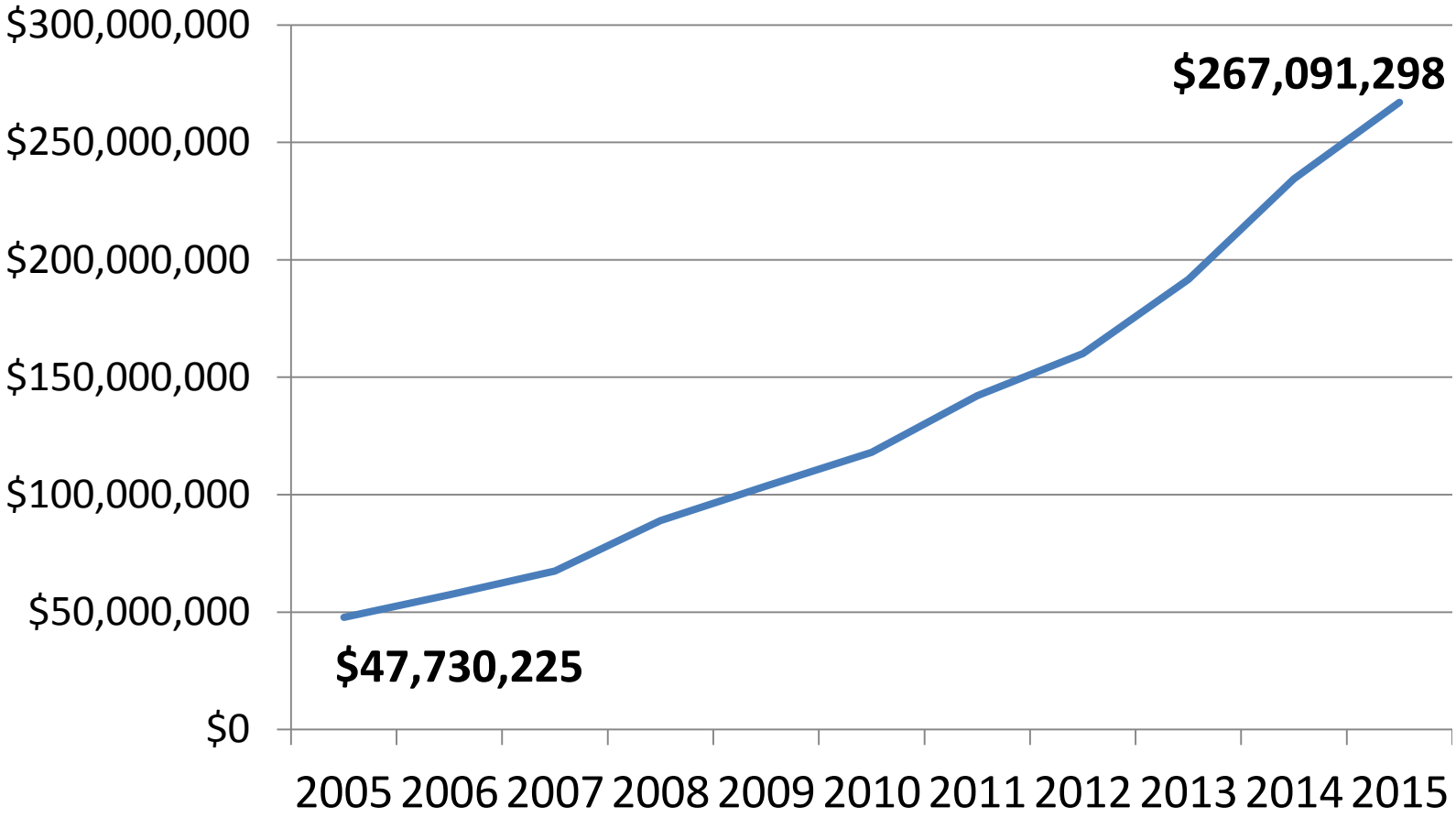
[ii] "Oral Health for Adults," Centers for Disease Control and Prevention, last modified July 10, 2013, http://www.cdc.gov/OralHealth/publications/factsheets/adult_oral_health/adults.htm.

Hospital ER Data

(tabulated by Dr. Scott Tomar)



Total charges for dental-related ED visits Florida, 2005-2015

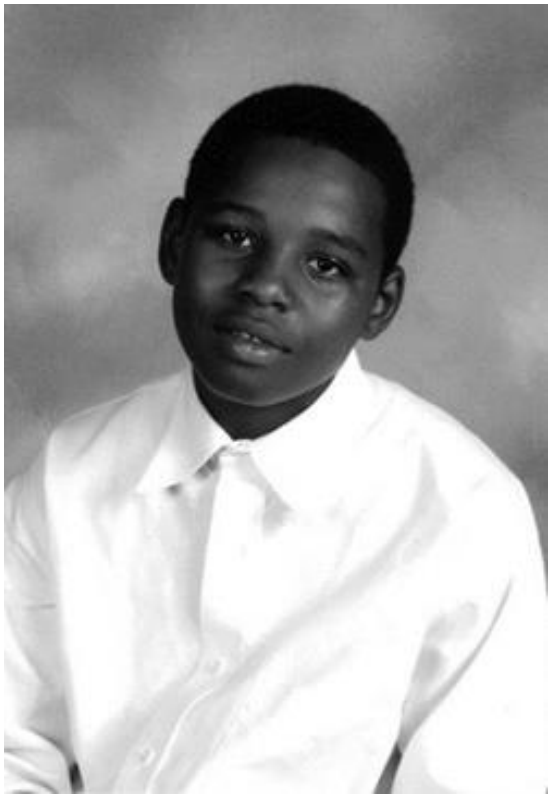


Deaths

Deamonte Driver was not an isolated tragedy!

- 66 patients died in hospitals over 9-year study. “Outcomes of hospitalizations attributed to periapical abscess from 2000 to 2008: a longitudinal trend analysis.”
- 101 people who went to ER for a dental problem ***died there***; the vast majority had no other presenting conditions.

Died from a
***preventable dental infection*.**



Updated Florida Numbers
PEW Trusts and Dr. Scott Tomar

- In 2016, total charges for nontraumatic dental conditions treated in Florida's hospitals

exceeded one-half billion dollars:

- 166,997 visits were to hospital emergency departments (EDs)
- Total charges for these ED visits **exceeded $322 million**, or more than more than $882,000 per day.
- Medicaid was the most frequent primary payer for these ED visits accounting for nearly 40% of visits.
- **4,307 people were admitted as inpatients** for nontraumatic dental conditions at total charges that **exceeded $195 million**. Private health insurance was the primary payer for about 30% of admissions, followed by Medicare (24%) and Medicaid (23%).
- Repeat visits to hospital EDs for nontraumatic dental care are common. In 2015, patients with multiple visits accounted for nearly 35% of all visits for nontraumatic dental care at total charges of more than $83 million.

Rational for Dental Therapy Oral/Systemic Interactions

30 Years of Research;
10,000 Research Papers;
Scores of Clinical Trials;
Strong Associations with:
Diabetes, Heart Disease;
Stroke; Lung Infections;
Multiple Mechanisms of Action

Slide from Dr. Mike Alfano

Enter the Insurance Studies

Oral Health and Systemic Health

- Big three under discussion are linkages between periodontal diseases and diabetes, cardiovascular diseases and low birth weight, preterm births.
- The “gold standard” double-blind, randomized clinical trials have not been very good at showing relationships.
- Nevertheless, data and business decisions from insurance companies demonstrate that they see a relationship and are willing to put their money where their mouth is. (No pun intended.)

Relationship Between Periodontal Interventions and Healthcare Costs and Utilization

- Periodontal disease has been linked to poor glycemic control among individuals with type 2 diabetes.
- Among individuals newly diagnosed with type 2 diabetes, we find that a periodontal intervention is associated with lower total healthcare costs ($1,799), lower total medical costs excluding pharmacy costs ($1,577), and lower total type 2 diabetes-related healthcare costs ($408).”

NASSEH,K, VUJICIC, M & GLICK, M, THE RELATIONSHIP BETWEEN PERIODONTAL INTERVENTIONS AND HEALTHCARE COSTS AND UTILIZATION. EVIDENCE FROM AN INTEGRATED DENTAL, MEDICAL, AND PHARMACY COMMERCIAL CLAIMS DATABASE

Health Econ. (2016) Published online in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/hec.3316

Medical Dental Integration Study

March 2013 United Health Care

Lots of data provided but bottom line:

"Overall, total average health care costs were considerably lower for individuals with chronic medical conditions who received periodontal treatment or cleanings within the timeframe of this study even when considering the costs of additional dental treatments. Savings for individuals receiving preventive dental care were observed across all chronic medical disease categories in this study. Future studies should consider tracking the average costs of members over multiple years, with additional chronic conditions as more data becomes available."

Impact of Periodontal Therapy on General Health

- Insurance claims data from 338,891 individuals with both medical and dental insurance coverage were analyzed in 2011–2013. Inclusion criteria were (1) a diagnosis of at least one of the five specified systemic conditions and (2) evidence of periodontal disease.

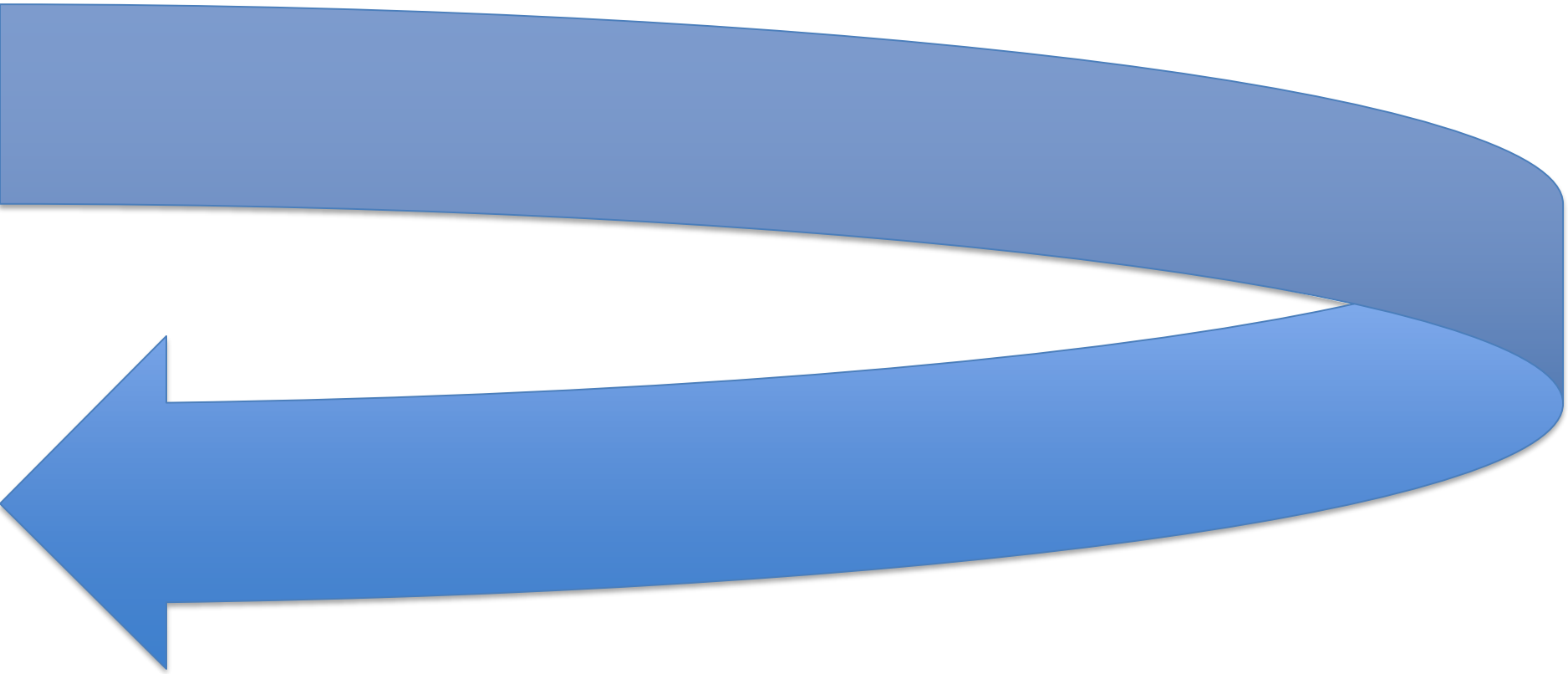
- Results: Statistically significant reductions in both outcomes (po0.05) were found for T2D, CVD, CAD, and pregnancy, for which costs were lower by 40.2%, 40.9%, 10.7%, and 73.7%, respectively; results for hospital admissions were comparable. No treatment effect was observed in the RA cohorts.

- Conclusions: These cost-based results provide new, independent, and potentially valuable evidence that simple, noninvasive periodontal therapy may improve health outcomes in pregnancy and other systemic conditions.

Evaluation of Cost Savings Associated with Periodontal Disease Treatment Benefit; Avalere Health, January 4, 2016

- Growing body of literature and studies support link between oral health, periodontal disease treatment, reduced medical costs, and improved wellbeing, especially for individuals with one of the three chronic conditions included in this evaluation.
- From these and other data sources, constructed an estimate of Medicare fee-for-service spending for individuals with periodontal disease and chronic conditions.
- Our estimate assumes that Medicare will begin paying for periodontal treatment in 2016 through a new Medicare Part B benefit, but limit coverage to individuals with one of the three conditions noted above.
- Estimate providing a periodontal disease treatment benefit will produce a savings of $63.5 billion from 2016 to 2025 and should continue long-term. Savings reflects new costs of approximately $7.2 billion from covering periodontal treatment for Medicare beneficiaries with one of the three target chronic conditions. This new spending will be offset by an estimated $70.7 billion reduction in Medicare spending, largely related to fewer hospitalizations and emergency room visits.

Retrospective Studies Cannot Show Causation!



People who get Dental Care Probably Comply Better with Medical Care

But...

United Healthcare & Compliance

Medical Dental Integration Study

March 2013

"The largest medical savings ($1,849 for just medical or $1,706 including Rx) were for members who were not medically compliant with their disease management program and received dental care after adjusting for the extra expense of the dental care. Members who were medically compliant with their disease management program and received dental care achieved an average net savings of $264."

UnitedHealthcare®

Executive summary

The study, which was a performed by Optum, the nation's leading health services company, on behalf of UnitedHealthcare evaluates the impact of various dental treatments on medical and pharmacy costs for individuals with chronic medical conditions. Results are split by chronic condition as well as by whether or not individuals were compliant managing their chronic condition; removing compliance bias from the study. An additional analysis was performed around chronic conditions that are comorbid with diabetes.

Members were classified based on their chronic condition and compliance with their disease management program as determined through UnitedHealthcare Evidence-Based Medicine (EBM) data. Medical and pharmacy costs for these members were determined using Episode Treatment Groups (ETGs). From a dental perspective, members were grouped based on their dental treatment patterns. We reviewed the total average medical, pharmacy and dental annual costs for all members.

Individuals in this study consisted of 130,546 UnitedHealthcare commercial dental and medical members between the ages of 18 and 65. Compliance and disease categorization, as determined through EBM, was based on claims data for the twelve month period ending 5/31/2011. Calendar year 2010 medical and pharmacy claim data for each member is included. Dental claims incurred between 5/1/2008 and 4/30/2011 was used to assign each member to a dental treatment pattern grouping. Cost has been normalized using age and sex factor and area factor for each ETG.

Overall, net medical costs for members who received dental care (i.e., periodontal treatment or cleanings) was on average $1,037 lower than medical costs (or $701 when including drugs) for members who received other or no dental care (i.e., extractions, root canals, restorative treatment, other dental claims or no dental claims) after adjusting for the extra expense of the dental care.

The largest medical savings ($1,849 for just medical or $1,706 including Rx) were for members who were not medically compliant with their disease management program and received dental care after adjusting for the extra expense of the dental care. Members who were medically compliant with their disease management program and received dental care achieved an average net savings of $264.

Non-medically compliant members who received more frequent oral care achieved net savings over non-medically compliant members who received less frequent oral care. Across all chronic conditions, health care costs were $1,218 lower for members receiving frequent cleanings compared with members receiving non-frequent cleanings and $1,773 lower for members receiving periodontal treatment with maintenance compared with members receiving non-surgical periodontal treatment without maintenance. This cost saving was observed in all individual chronic disease groups with the exception of Renal Disease. The most common condition observed in this study was diabetes with average medical costs $1,674 (medical only) lower for non-medically compliant members receiving dental care and $925 (medical only) lower for medically compliant members receiving dental care. The largest savings achieved was from Renal Disease with an average medical spend $13,995 lower for non-medically compliant members receiving dental care and $7,107 lower for medically compliant members receiving dental care.

For diabetics, differences in health care savings were observed based on the type of dental care offered. Those receiving periodontal treatment had the lowest medical cost ($7,838 medical only or $10,308 with Rx) of any other dental treatment group compared to medical costs ($9,588 medical only or $12,175 with Rx)) of members not receiving periodontal care. For members with diabetes, the most prevalent comorbid condition observed was coronary artery disease. While the average medical-only cost for these members was $22,338, members who received dental care achieved $3,981 medical-only savings compared to those that did not receive dental care.

Overall, total average health care costs were considerably lower for individuals with chronic medical conditions who received periodontal treatment or cleanings within the timeframe of this study even when considering the costs of additional dental treatments. Savings for individuals receiving preventive dental care were observed across all chronic medical disease categories in this study. Future studies should consider tracking the average costs of members over multiple years, with additional chronic conditions as more data becomes available.

Periodontal disease is a “contributory cause”…

OPEN ACCESS

High-risk periodontal pathogens contribute to the pathogenesis of atherosclerosis

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ABSTRACT
Periodontal disease (PD) is generated by microorganisms. These microbes can enter the general circulation causing a bacteraemia. The result can be adverse systemic effects, which could promote conditions such as cardiovascular disease. Level A evidence supports that PD is independently associated with arterial disease. PD is a common chronic condition affecting the majority of Americans 30 years of age and older. Atherosclerosis remains the largest cause of death and disability. Studies indicate that the adverse cardiovascular effects from PD are due to a few putative or high-risk bacteria: *Aggregatibacter actinomycetemcomitans*, *Porphyromonas gingivalis*, *Tannerella forsythia*, *Treponema denticola* or *Fusobacterium nucleatum*. There are three accepted essential elements in the pathogenesis of atherosclerosis: lipoprotein serum concentration, endothelial permeability and binding of lipoproteins in the arterial intima. There is scientific evidence that PD caused by the high-risk pathogens can influence the pathogenesis triad in an adverse manner. With this appreciation, it is reasonable to state PD, due to high-risk pathogens, is a contributory cause of atherosclerosis. Distinguishing this type of PD as causal provides a significant opportunity to reduce arterial disease.

BACKGROUND
Bacteraemia with germs from the oral cavity was

The most common were *Pg* and *Aa*. Sixty-four per cent of those atheromas had two or more pathogens. Only one of the atheroma from a patient without PD demonstrated any oral pathogens.[3] In 2011, 42 carotid endarterectomy specimens were analysed for oral pathogen DNA. Every atheroma had at least one pathogen, and many had multiple pathogens. Again, the most common bacteria were *Pg* and *Aa*.[4] Oral pathogens create bacteraemia, and those bacteria, especially the high-risk microbes, are frequently associated with atherosclerotic lesions.

The American Heart Association (AHA) stated after an extensive review of the literature that PD was independently associated with arteriosclerotic vascular disease (ASVD). This relationship was demonstrated with level A evidence. They discussed in their statement several plausible mechanisms by which PD could be associated with arterial disease. One explanation involves systemic inflammation, which can occur with periodontitis. This has been documented by increased levels of biomarkers such as high-sensitivity C-reactive protein, tumour necrosis factor-α (TNF-α) and interleukin 6. PD has been associated with the stimulation of the innate immune system via toll-like receptors (TLRs). TLRs can trigger the activation of nuclear factor κβ (NF-κB), which can create increased levels of adhesion molecules stimulating endothelial dysfunction as well as increased inflammatory cyto-

Bale, BF et al
Post Grad Med J
http://pmj.bmj.com
November 30, 2016

Impact of Periodontal Disease on Medical Costs: A Look Ahead to the Healthcare System

- It is inevitable that general health insurance and dental insurance will be integrated into one product
- Oral health will become much more important to consumers regardless of their age
- Current small isolated pockets of interprofessional practice will be expanded substantially
- “Big Pharma” will return to the development of drugs to control periodontal disease
- The billions of dollars saved by reduced hospitalizations driven by improved oral health will become ‘lost’ within the system

This brings us to the
NEED VERSUS DEMAND position of the ADA

Access to dental care: Solving the problem for underserved populations GUAY, AH J Am Dent Assoc 2004;135;1599-1605

"When speaking of access to dental care today, we must consider both the availability of care and the willingness of the patient to seek care."

I do not accept this perspective in light of low oral health literacy of the general public, the high costs of care and the serious effects of lack of access to care (note all evidence based factors).

It is our professional responsibility and ethical commitment to turn ***need into demand***.

Why Do People Not Obtain Dental Care?

- Costs
- Not enough Medicaid/CHIP Providers
- Maldistribution - DHPSAs
- Cultural competency & attitudes of some dentists
- Oral health literacy of the public

Not enough Medicaid/CHIP Providers

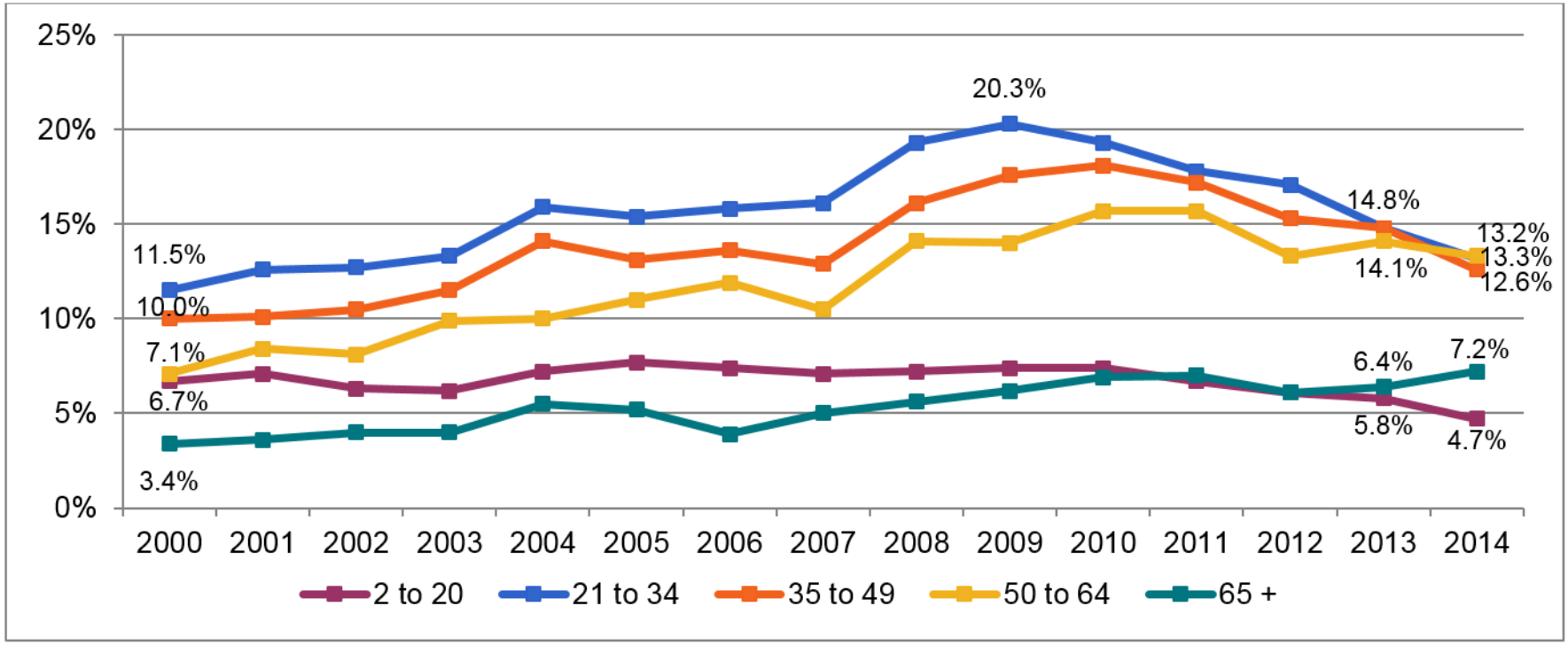
- ADA estimates that only 33% of dentists across the country participate in public assistance programs.

We applaud the efforts of the ADA Health Policy Institute for their work on these issues, but we have two concerns with the data:

- Does not reflect state or regional differences.
- According to AHCA's most recent communication with me (July, 2017), during fiscal year 2015/16 there were 10,986 licensed dentists in **Florida**. Based on encounter and fee-for-service claims data the Agency estimates that about **18% of the licensed dentists in Florida participate in the Medicaid program.** Still not great but better than I previously have stated.

Why Do People Not Access Available Care? Cost Barriers (ADA Health Policy Center)

Figure 2: Percentage of the Population Indicating Cost as a Barrier to Receiving Needed Dental Care by Age Group, 2000-2014



Source: National Health Interview Survey, National Center for Health Statistics. **Notes:** Changes from 2000 to 2010 for age groups 21-34, 35-49, 50-64 and 65 + were statistically significant at the 1% level. Changes from 2010 to 2014 for age groups 2-20, 21-34, 35-49 and 50-64 were statistically significant at the 1% level. For adults ages 21-34, the change from 2013 to 2014 was statistically significant at the 1% level. Changes from 2013 to 2014 for adults ages 35-49 and 50-64 were statistically significant at the 10% level.

Ethnic and racial diversity among dentists does not mirror that of the US population

RACE/ETHNICITY	DENTISTS	US POPULAITON
WHITE	74.2%	61.7%
HISPANIC	5.2%	17.7%
BLACK	3.8%	12.4%
ASIAN	15.7%	12.4%
OTHER	1.1%	2.9%
ADA HEALTH POLICY INSTITUTE, The Dentist Workforce- Key Facts		

Diversity, cultural competency and attitudes of the existing dental workforce?

A) Minority dentists were twice as likely as White dentists to accept Medicaid patients.

B) Dentist's sense of social responsibility is influenced by economics, professionalism, individual choice, and politics.

C) Social stigma of being a Medicaid provider.

D) Dentists who are Medicaid providers are more altruistic than non-providers

Oral Health Literacy

- HPI also developed a new, simplified measure of oral health knowledge. Nationally, only 50 percent of adults were able to respond correctly to each of the eight general knowledge questions regarding oral health facts.

- This ranges from 42 percent in New Jersey to 60 percent in Colorado and from 44 percent among low-income adults to 52 percent among high-income adults nationwide.

There is other literature supporting this concern!

Definition, History & Education

What is a Dental Therapist?

An oral health professional who works on the team with dentists and dental hygienists, under the supervision of a licensed dentist.

A member of the oral health care team who is educated to provide evaluative, preventive, restorative, and minor surgical dental care within their scope of practice.

Model began in the 1920s

- Dental therapists practice in 54 countries including the US, Canada, England, Australia, New Zealand and The Netherlands; in some countries, up to 100 years of experience.
- Under supervision of dentists, dental therapists can practice in remote settings where there is need for additional provider capacity.
- Evidence shows care provided by dental therapists is high quality, cost effective and safe.
- History of providing routine and preventive care in community settings.

Alaska Model

- Started in about 2002 under authorization of Native American Organization and modeled after their Health Aides programs (not by outside foundations).
- Eventually supported by Kellogg Foundation based somewhat on their interests in Racial Equity; then efforts to implement in other states.
- Incredibly strong resistance from ADA resulting in a major lawsuit and penalty.
- Two year FT educational model with no academic prerequisites after high school.
- Must practice under direct supervision for 400 hours/3 months after graduation.
- Can then provide care under general supervision.
- Dental therapists increased access to care for over 40,000 Alaska Natives.
- Provide culturally competent care and Produce high patient satisfaction rates.
- Reduce amount of emergency care; Increase preventive care.
- Create jobs and generate economic impact.
- Major study is underway but all early evidence supports safety, quality and effectiveness.

Minnesota Models

2009 legislation, with major opposition from organized dentistry, created two levels of a new intraprofessional team member: Licensed Dental Therapists and Certified Advanced Dental Therapists

Minnesota State Colleges and Universities System
Students are eligible to apply to this program after completing 1 year of prerequisite coursework for dental hygiene. Students can begin earning associate and bachelor degree simultaneously in dental hygiene, usually in about three additional years or less. Then students can enter the Advanced Dental Therapy partnership program between Metropolitan State and Normandale Community College**; a 16-month curriculum leading to dental therapy licensure and certification in Advanced Dental Therapy resulting in a MS:ADT.**

For graduates of both programs, "Following 2,000 hours of practice as a licensed dental therapist, graduates can apply for certification as an advanced dental therapist."

Minnesota Models

In Fall 2016, UM began offering Bachelor of Science in Dental Hygiene/Master of Dental Therapy dual degree program. Students are eligible to apply to this program after completing 1 year of prerequisite coursework for dental hygiene. The program is year round, **32 months or about 3 years.** This program reduces the educational cost to students and also reduces the length of time to earn both degrees from 6 to 4 ½ years. Dual-licensed hygienists/therapists provide flexibility in meeting the preventative and restorative needs of patients.

For graduates of both programs, "Following 2,000 hours of practice as a licensed dental therapist, graduates can apply for certification as an advanced dental therapist."

The Tipping Point
in Evolution of Dental Therapy

The Commission on Dental Accreditation serves the oral health care needs of the public through the development and administration of standards that foster continuous quality improvement of dental and dental related educational programs.

After years of discussion and debate, and with a helpful letter from the Federal Trade Commission and many others, CODA adopted Educational Accreditation Standards for Dental Therapy in 2016.

Existing educational programs are preparing for accreditation.

What are some of the key components of the CODA Standards?

The curriculum must include at least three academic years of full-time instruction or its equivalent at the postsecondary college-level. No degree requirements.

Key Issues: 3 academic years could be 2 calendar years; Advanced standing could mean dental hygiene education and more. For example, military hygienists, EFDAs, and CDAs could be eligible for advanced standing to some level.

Scope of practice (more or less than CODA required educational components) and supervision left up to states.

What are some of the key components of the CODA Standards?

Education: Didactic dental sciences content must ensure an understanding of basic dental principles, consisting of a core of information in each of the following areas within the scope of dental therapy: a long list of basic science topics

The program director must be a licensed dentist (DDS/DMD) or a licensed dental therapist possessing a master's or higher degree.

Supervision & Scope: The dental therapist provides care with supervision at a level specified by the state dental practice act. The curriculum for dental therapy programs will support the following competencies within the scope of dental therapy practice.

At a minimum, graduates must be competent in providing oral health care within the scope of dental therapy practice with supervision as defined by the state practice acts, including: a long list of procedures.

CODA Scope of Practice Specifications

Identify oral and systemic conditions requiring evaluation and/or treatment by dentists, physicians or other healthcare providers, and manage referrals

Comprehensive charting of the oral cavity--(recording of all observed conditions)

Oral health instruction and disease prevention education, including nutritional counseling and dietary analysis

Taking x-rays

Teeth cleaning including below-the-gum scaling and/or polishing procedures

CODA SCOPE OF PRACTICE SPECIFICATIONS

Dispense and administer oral / topical non-narcotic pain relief, anti-inflammatory, and antibiotic medications as prescribed by a licensed healthcare provider

Applying topical disease prevention agents including fluoride varnish, antimicrobial agents, and sealants

Pulp vitality testing (assessing need for root canal or extraction by testing whether tissue is alive or dead)

Applying desensitizing medication or resin

Fabricating athletic mouthguards

ADEA Annual Meeting, March, 2018 Orland

CODA SCOPE OF PRACTICE SPECIFICATIONS

Changing periodontal dressings

Administering local anesthetic

Simple extraction of erupted primary teeth

Emergency palliative treatment of dental pain limited to the procedures in this section

Preparation and placement of direct restoration in primary and permanent teeth

CODA SCOPE OF PRACTICE SPECIFICATIONS

Fabrication and placement of single-tooth temporary crowns

Preparation and placement of preformed crowns on primary teeth

Indirect and direct pulp capping on permanent teeth (applying medicine on deepest part of cavity before placing filling)

Indirect pulp capping on primary teeth

Suture removal

Minor adjustments and repairs on removable prostheses

Removal of space maintainers

ADEA Annual Meeting, March, 2018 Orland

Some other useful Information

1. **Scope of practice can be changed. States can add or delete some specific procedures. Some things to consider would be:**

a) **Pulpotomies on primary and permanent teeth**

b) **Interpreting radiographs**

c) **Placing space maintainers**

2. Clinical teaching ratio must be one faculty member per six students. Thus, you might note class sizes in multiples of six.

LICENSURE ISSUES (1)

MN does require that an applicant for a dental therapy license pass a "comprehensive, competency-based clinical examination that is approved by the board and administered independently of an institution providing dental therapy education."

LICENSURE ISSUES (2)

While the board acknowledges that the Canadian style OSCE would meet that requirement, MN currently accepts only the results of the CRDTS manikin and patient based dental therapy examination. I also anticipate another dental therapy manikin and patient based examination will soon be developed by a different testing agency. Note, this exam only tests for those procedures with the DT Scope of Practice.

Quality, safety and efficacy of dental therapy

Some of the evidence base

Responses to some of the criticisms

Quality, Safety and Efficacy

simply not a problem based on existing literature

"There is no question that dental therapists provide care for children that is high quality and safe. None of the 1,100 documents reviewed found any evidence of compromise to children's safety or quality of care. Given these findings, the profession of dentistry should support adding dental therapists to the oral health care team."

~ Dr. David Nash (A Review of the Global Literature on Dental Therapists, April 2012)

ADA Council Affirms Quality of Dental Therapy

"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."

American Dental Association Council on Scientific Affairs, 2013. Wright JT, Graham F, Hayes C, Ismail AI, Noraian KW, Weyant RJ, et al. A systematic review of oral health outcomes produced by dental teams incorporating midlevel providers. J Am Dent Assoc [Internet]. 2013 Jan [cited 2016 Apr 7];144(1):75–91. Available from: http://www.ncbi.nlm.nih.gov/pubmed/23283929

Do dental therapists provide quality dental care to children and adults?

(Pew Trusts Website)

More than 40,000 Alaska Native people have regular access to dental care because of the addition of dental therapists to dentists' teams.

(Alaska Native Tribal Health Consortium, "Dental Health Aide," accessed April 19, 2016, http://anthc.org/dental-health-aide.)

Since dental therapists began practicing in Minnesota and Alaska, no malpractice claims have been filed.

(Minnesota Department of Health and Minnesota Board of Dentistry, "Early Impacts of Dental Therapists in Minnesota" (February 2014), http://www.health.state.mn.us/divs/orhpc/workforce/dt/dtlegisrpt.pdf; Patrick Blahut, deputy director, U.S. Indian Health Service, Division of Oral Health, pers. comm., March 18, 2015.)

Do dental therapists provide quality dental care to children and adults?

DHATs have been providing care to Native Alaskan **adults and children since 2005.** Native American adults have untreated decay rates that are two to three times higher than other U.S. populations. A 2010 study of the Alaska DHAT program conducted by the Research Triangle Institute found that there was no difference in the quality of care delivered to adults and children by DHATs as compared to dentists.

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: final report," (Research Triangle Park: RTI International, 2010), http://www.rti.org/sites/default/files/resources/alaskadhatprogramevaluationfinal102510.pdf.

Do dental therapists provide quality dental care to children and adults?

An Australian study from 2009 addressed dental therapists care for adult patients. “Therapists’ restorative skills were already highly developed as a result of years of work with younger patients, so that the main point of this project was the transferability of existing skills to adult patients.” This study found that dental therapists had a restoration failure rate lower than that of dentists in the literature (it was not a control study), and that restorations placed by therapists were “no different to what would be expected if a dentist had placed the restorations.”

Matthew Hopcraft, Jacqueline M. Martin-Kerry, Hanny Calache. “Dental therapists’ expanded scope of practice inAustralia: a 12-month follow-up of an educational bridging program to facilitate the provision of oral health care to patients 26+ years.” Journal of Public Health Dentistry, 2015.

Do dental therapists provide quality dental care to children and adults?

A recently released case study by Apple Tree Dental found that almost 60% of the oral health needs of residents of a Veterans nursing home could be met by a dental therapist.

Barbara J Smith, Brenda Prosa, Deborah Jacobi, Mark Jurkovich, and Michael J. Helgeson, "An Advanced Dental Therapist in Long-Term Care: An Apple Tree Dental Case Study."
http://www.pewtrusts.org/en/research-and-analysis/analysis/2017/09/20/dental-therapists-could-provide-cost-efficient-care-in-veterans-nursing-homes

How Can Dental Therapists be Educated in Only 2, 3 or 4 Years When It Took Me EIGHT Years?

The answer is really very simple!

A dentist's scope of practice includes **roughly 500 billable procedures**.

The scope of practice of a dental therapist includes only about **80-90 procedures (depending on state legislation) .** And for those procedures, they learn them at the same skill and quality level as a dentist. In fact, they may do more of these procedures while in school than a dental student might do.

CRITICISM

What we are missing is good
"oral health outcomes data" for dental therapists.

- But, there is actually very little such data even for dentists.
- What we have is a lot of secondary measures or indicators, some of which I will show in the following slides and in the newest evaluation of the Minnesota program and Alaska programs.

Dental Utilization for Communities Served by Dental Therapists in Alaska's Yukon Kuskokwim Delta: Findings from an Observational Quantitative Study

Final Report, August 11, 2017

Principal Investigator- Donald L. Chi, DDS, PhD

Associate Professor, University of Washington, School of Dentistry

Co-Investigators- Dane Lenaker, DMD, MPH; Lloyd Mancl, PhD; Matthew Dunbar, PhD; Michael Babb, MA

While this study had strong internal review, it has not yet been published in a peer-reviewed journal. That is in process.

CHI STUDY 2017

A study focusing on oral health outcomes over time across Alaska Native communities with varying access to Dental Health Aide Therapists (DHATs).

Researchers identified all dental services provided by Dental Therapists in the YK Delta using electronic health record and Medicaid claims data to calculate the total number of Dental Therapist treatment days provided in each community. Based on the number of Dental Therapist treatments days, they also identified communities with no Dental Therapist treatment days and communities with the highest number of Dental Therapist treatment days.

CHI STUDY 2017

To date, U.S. studies of dental therapists have examined care quality (equal to that of dentists) and patient access (which has been found to improve with a practice's use of dental therapists). This is the first known study to look at long-term oral health outcomes of communities served by dental therapists. There are virtually no comparable studies of communities served only by dentists.

CHI STUDY 2017

- Over a ten-year period, Alaska Native communities served more intensively by DHATs saw improvements in dental care use for children and adults, in the form of lower rates of tooth extractions and greater rates of preventive care.

- Specifically, when comparing communities with the highest number of days where DHATs practiced with those where no DHATs practiced, researchers found:

  - fewer extractions of front four teeth for children under age three,
  - fewer adults with permanent tooth extraction
  - more people of all ages receiving preventive care.

CHI STUDY 2017

While the study was not designed to prove causality, the findings strongly suggest that dental therapists are having a meaningful and positive impact on the oral health of communities they serve.

Individuals living in communities with greater exposure to DHATs are having fewer invasive dental procedures than those with no exposure.

CHI STUDY 2017

ADDITIONAL OBSERVATIONS FROM THE ALASKA STUDY

Dental therapists are not only economically viable, they are job creators and revenue generators for practices and more importantly for the community.

- The dental therapist program generates 76 full-time jobs per year with a net economic effect of $9.7M (1/3 spent in rural Alaska).
- Aggregate patient travel savings amount to $40,000 per year, per dental therapist.
- Dental therapists bring in $150,000-$250,000 more than the cost to employ them and the dental assistant.

VermontWatchdog.org.

Oral health care workshop hits nerve of dentists and policymakers

By Bruce Parker/August 11, 2016/News At recent American Legislative Exchange Council (ALEC) meeting - a conservative free market oriented group.

We have over 100 years of evidence from over 54 countries, 12 years of evidence from Alaska (including new Donald Chi report) and eight years of evidence from Minnesota, plus published reports of quality and safety and effectiveness showing that dental therapists can perform cavity preparations and other procedures.

Organized Dentistry Criticism: Doing a cavity prep and filling a tooth is a surgical procedure.

My opinion: This implies that only dentists can do such work. Calling cavity preparation a surgical procedure is meant to be an inflammatory term to scare the lay public. The data says these are safe procedures for dental therapists to perform. There is no contrary data.

FACT “During its thirteen years of existence, the Saskatchewan Dental Therapy 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.”

Organized Dentistry CRITICISM: Saskatchewan's Dental Therapy program was closed because it was not working I will politely call that a misstatement of fact.

Mathu-Muju KR, Friedman JW, Nash DA. Saskatchewan's school-based dental program staffed by dental therapists: a retrospective case study. J Public Health Dent. 2017;77(1):78-85. Epub 2016/11/20. doi: 10.1111/jphd.12184. PubMed PMID: 27861917.

Dental Therapy in New Zealand

http://www.aapd.org/assets/1/7/NZImprovingChildOralHealth.pdf

Improving Child Oral Health and Reducing Child Oral Health Inequalities

Report to the Minister of Health from the Public Health Advisory Committee May, 2003

FACT: The report called for significant expansion of the program to reach more of the population. Specifically, one of the recommendations was: “requests the Ministry of Health to examine enhancing the national school-based dental service with linkages into preschool and adolescent settings.”

ORGANIZED DENTISTRY CRITICISM: New Zealand government was highly critical of their dental therapy program and wanted to close the program.

OBVIOUSLY NOT TRUE (based on prior cited report) - whoever made this statement probably only skimmed the report and did not read the recommendations

The American Dental Association provided comments about the HHS Draft Department Strategic Plan for FY 2018-2022, 82 Fed. Reg. 45032 (September 27, 2017) in a letter dated October 17, 2017. I would like to respond to some of their comments:

“The ADA recommends that the department include in its strategic plan Community Dental Health Coordinators (CDHCs),….”.

I think the concept of CDHCs makes sense for safety net organizations that provide low cost or free care to underserved clients. However, I have two concerns:

1. Other than an unpublished report of 88 case studies, there is no documentation in a peer reviewed journal of their safety, quality and efficacy.

2. I can envision how they might function in a safety net clinic and in outreach locations, but I cannot understand how they would work in a private practice with a fee structure that is unaffordable to many (ADA HPI reports document costs as the main factor keeping people from dental care).

"Regarding the proposed promotion of dental therapists as a high-quality, lower cost health care provider, there is little empirical evidence (such as longitudinal clinical assessments of health outcomes) to support such a claim."

This statement is really problematic for several reasons:

1. The ADA had access to the very recent Donald Chi et al report about dental therapists in Alaska. While not yet peer reviewed and published, this study is quite convincing as to efficacy of dental therapists.

2. The well known Nash et al review of the international literature on dental therapy concluded that safety, quality and efficacy were supported in the 1100 papers they reviewed.

3. The ADA Council on Scientific Affairs published a paper in JADA stating that quality of care by dental therapists was equal to that of dentists.

4. I could go on but there is additional evidence in the literature, certainly more than there is about CDHCs.

“Concerning potential cost savings, existing dental therapist models in the United States are subsidized by sponsoring agencies and charge the same amount to payers as dentists.”

The first half of this sentence is a popular charge by ADA but I have not seen any evidence to support it. This is simply NOT TRUE!

Second half of sentence is true but the savings accrues to the safety net setting who hires a dental therapist, enhancing their ability to provide lower cost care. Again, just a gross distortion of the truth.

“An assertion by proponents of dental therapists is that they will practice primarily in underserved and rural areas, but there is little evidence to substantiate that claim.”

The ADA obviously did not look very hard for the great existing data. All one has to do is go to the Minnesota Department of Health website to see that at least 44% of MN therapists work in underserved areas and that about 80% of their patients are on Medicaid.

What more can one want?

“Another common -- but incorrect -- assertion is that the dental workforce is aging and therefore declining in numbers, so there is a need for a new provider to help address the dental needs of a growing population. …….Finally, it is important to understand that the current dental system has underutilized capacity, as nationally about 1 in 3 dentists say they are not busy enough, so there is clearly no shortage of open chair time in many practices.”

Factually probably true BUT the ADA conveniently misses the point. We can debate forever whether there are enough dentists or not but what is clear is that there are not enough dentists to treat the underserved, those who cannot afford the high fees of private practice. That is where dental therapists can help!! The ADA also frequently says that there are enough dentists to meet DEMAND. Maybe, but when one considers the evidence about the link between oral health and systemic health**, I would argue that the existing workforce might be meeting DEMAND, but not NEEDs of the public.**

STATUS OF CODA ACCREDITATION OF DENTAL THERAPY EDUCATIONAL PROGRAMS

Fact: The CODA standards are only two years old. It takes time to prepare a self study and get accredited. The existing programs are getting ready! Second, a program will only start once the legislation passes.

Organized Dentistry Criticism: Arizona Dental Association Executive Director's Report, 2017 (accessed 9/29/17) Advice to members to fight dental therapy: "The training (of dental therapists) should follow CODA standards, but in fact, there are NO CODA accredited dental therapy training programs anywhere in the United States."

"Under the **ADA's Community Dental Health Coordinator** program, certified hygienists provide clinical preventive services to rural and low-income patients. When necessary, the coordinators connect patients with dentists who work for community health centers and social service agencies."

"The CDHC program is sustainable because we are taking people who are already trained as dental hygienists and layering another skill setting on to what they already have. They are already working," Grover said during her presentation.

My opinion: To the best of my knowledge, most CDHCs are not dental hygienists but unfortunately we have no published reports or evaluations on which to base our opinions. In addition, what good is it to evaluate and refer poor underserved patients who cannot afford a dentist's usual fees? I can understand AND I SUPPORT CDHCs working for FQHCs and Safety Net Clinics but do not understand how they can work in the private sector.

Employment of Dental Therapists by Clinic Type

Data Source: MN Board of Dentistry, April 2016, Shared by Mike Scandrett at MS Strategies

SETTING	# EMPLOLYED	CERTIFIED ADT	DUAL LICENSED
PRIVATE PRACTICE	24	7	0
NON-PROFIT	17	9	11
FQHC	7	4	3
LARGE GROUP PRACTICE	7	3	0
EDUCATIONAL INSTITUTION	4	3	1
HOSPITAL	2	2	2

ARE MINNESOTA DENTAL THERAPY PROGRAMS SELF-SUPPORTED? (1)

From a UM Dental Faculty Member: I am not aware of that either and I can share that the University of MN has not received any funding from the Board of Dentistry for dental therapy.

From a Normandale Faculty Member: I know that $30,000 was appropriated to the BOD to develop a RFP to assist with the program approval process (several years ago). The Academy of Academic Leadership was hired to (develop) dental therapy competencies and standards for programs to meet the BOD approval process until CODA developed DT Standards. We did not get any funding for the Metro/Normandale dental therapy program.

ME- To the best of my knowledge, there have not been any recent appropriations for dental therapy education in Minnesota.

Organized Dentistry Criticism: "the dental therapist model as (is) a government-subsidized program."(1)

Supporting Statement: "Mid-level programs have proven unsuccessful without significant government spending," she said, adding that Minnesota passed its law in 2009 without a fiscal note, but later appropriated $110,000 to the Board of Dentistry for the new program. An additional $25,000 was appropriated to the board to award grants for program-related education."

ARE MAINE DENTAL THERAPY PROGRAMS SELF-SUPPORTED? (1)

Michael Saxl (Paid lobbyist in support of DT in Maine): "The Board of Dental Examiners is financed by license fees from all dental practitioners. License fees supported that rule making. That analysis is a ridiculous abstraction of the truth. "

My response: Maine's program is not subsidized in any way at this point in time. Remember also that in many states, dental education is a government subsidized educational program. In addition, when dental therapists are working, they will pay fees to the Board.

Organized Dentistry Criticism: "the dental therapist model as (is) a government-subsidized program."

Supporting Statement: "….Maine's program is funded through license fees levied on other practitioners."

“ . . . dental therapists aren’t reaching the rural areas they are intended to serve — about 57 percent of Minnesota’s therapists live in urban areas.”

My answer: 43% of the early graduates of DT programs are working in rural areas. The fact is 100% of them are providing care to underserved patients- law only requires that at least 50% of patients must be underserved but actual numbers are about 70-80%. In addition, safety net clinics including FQHCs and other settings are hiring them and want more.

The legislation: "A dental therapist licensed under this chapter is limited to primarily practicing in settings that serve low-income, uninsured, and underserved patients or in a dental health professional shortage area."

By this standard, they are not required to be in rural areas.

A Review of the Minnesota Dental Therapist Model:

Has the midlevel provider expanded access to care?

2015 MN Board of Dentistry showed 42 licensed DTs in the state. Only three practiced in underserved regions (as defined by an unspecified RWJF study) and only eight practiced in a DHPSA.

My reaction: Used older report from 2014. However more than 50% of their patients are on Medicaid. Newer report states " . . .slightly over half of dental therapists (53 percent) are practicing in the Twin Cities metro area, with another 12 percent in the Northeast region. The remainder of the state is home to smaller shares of dental therapists. For reference, the Twin Cities metro area houses approximately 54 percent of the state's population, with all other regions housing between 7 and 13 percent of Minnesotans. The data indicates the location of dental therapists is similar to the overall breakout of the Minnesota population. This is a shift to more rural areas since 2014 when 69 percent were located in the Twin Cities metro area.

Reminder from previous slide – legislation doesn't require that work to be performed in rural area.

Rural Criticism

More comment on the “RURAL Criticism” from Sarah Wovcha, CEO of Children's Dental Services (8/19/16) who employs four dental therapists.

- As of July 2014, DTs practiced in 19 MN counties, 15 of which were fully or partially designated as DPSAs (we at Children's Dental Services have since brought them into 6 additional counties)
- The distribution of dentists in MN is 74 % urban, 26 % rural. Thus, DTs are better distributed with 54 % in urban areas and 46 % in rural areas.
- Patient wait times for appointments decreased with advent of DT
- Patient travel times for appointments decreased with advent of DT
- There was a reduction in dental emergencies with advent of DT

Dental Therapists in Minnesota

Complete slide set at end of presentation

An overview and an FQHC Case Study

National Oral Health Conference April 18, 2016

Mark Schoenbaum, Director

Office of Rural Health and Primary Care

Minnesota Department of Health

MDH Minnesota Department *of* Health

Employer Findings

Excerpt, Preliminary & unpublished

- **Clinics do see an economic benefit of hiring DT/ADTs.**
  - Allow dentists to delegate duties and focus on advanced procedures
  - For the procedures within their scope, DTs are reimbursed at the same rate but are paid less when comparing to a dentist.
  - DT/ADTs can be equally as productive as dentists but do not get paid the same.
  - Very helpful to fill in when dentists are out.
  - Roughly $62,500 is saved annually per ADT employed.
- There may be a lag in time before economic benefits are realized while new hires or new graduates are training. Most saw adequate production levels after 6 months, which is comparable to hiring a new dentist.

Free Market Supporters

SLIDE COURTESY OF JANE KOPPLEMAN OF PEW CHARITABLE TRUSTS

Free Market Commentary About Dental Therapy

North Dakota Dentists Push Protectionism In Opposing Advanced Hygienist Position
SayAnythingBlog.com February 13, 2015 | by Rob Port (Leading Free Market advocate)

"This seems like good reform. One of the problems with strict occupational licensing regulations is that they very often create definitions for different occupations that force the consumers of something like dental services have to pay for someone who is overqualified to perform routine procedures.

But what these regulations also do is inflate the demand for certain professionals. The more services that are exclusively provided by dentists, per the law, the more demand there is for dentists. And more demand means dentists can justify higher prices."

Dental Therapy: A Free Market Solution to the Access to Care Problem

Get Rid of Government Regulation and Restrictive Dental Practice Acts

(Note, I support dental and other professional practice acts but not overly restrictive acts)

- No government mandate
- Taxpayer not subsidizing care (except for Medicaid Fees)
- Option for dentists to serve more patients, in and out of the office
- Market will determine demand

The business case for hiring dental therapists

Private practice experiences

Improve Care, Increase Revenue: The Case for Midlevel Providers by Leon A. Assail, DMD, and John Powers, DDS
Home > dentaltown Magazine > June 2015 > Article
The Pew Charitable Trusts. "Expanding the Dental Team: Increasing Access to Care in Public Settings." June 2014.

- First-year experience of Main Street Dental Care, a rural MN private practice, with first part-time dental therapist in 2012.
- Patient visits increased by 27%; new patients increased by 38%.
- An additional 214 Medicaid patients serviced
- After employment costs, practice profits increased by 24%.
- They have now hired additional dental therapists.
- Eight dental therapists are now in private practice in MN.
- Also note that annual Dental Therapist malpractice fee is only $93.
- Dr. Powers has hired his fourth dental therapist.
- Great business sense.
- Eight dentists in private practice now employ 24 dental therapists.

The business case for hiring dental therapists

- Improve the productivity and efficiency of dental practices.
- Free the dentist up to focus on more complicated procedures
- Make community-based care models of care economically sustainable.
- Do a social good- caring for Medicaid and other underserved patients- while actually making more income.

The business case for hiring dental therapists

- Improve the productivity and efficiency of dental practices.
- Free the dentist up to focus on more complicated procedures
- Make community-based care models of care economically sustainable.
- Do a social good- caring for Medicaid and other underserved patients- while actually making more income.

My Observations: How dental therapists can help improve access to care and help dentists

Dental therapists:

- Can help dentists provide routine services to more patients, expand their practices, and generate additional revenue.
- Dentists can oversee dental therapists without being physically present, which offers maximum flexibility regardless of the setting.
- Dental therapists earn lower salaries than dentists, which can help dentists provide more cost-effective care. By delegating some of the routine procedures to these midlevel staff members, dentists can lower their per-unit costs, treat more patients, and generate higher revenue.

The Pew Charitable Trusts. Expanding the Dental Team: Studies of two private practices. Washington DC; 2014. Available @ athttp://www.pewtrusts.org/~/media/legacy/uploadedfiles/pcs_assets/2014/expandingdentalteamreportpdf.pdf

Dental Therapists and Current Goals of Health Care Reform

Dental Therapists are consistent with the key goals of the Institute for Health Innovation Triple Aim

- Improve the patient care experience
- Improve the health of the public
- Lower the per capita costs of health care
- One key foundation of the Triple Aim Cost Goal is to use the lowest cost provider to provide services that they are trained to do safely and effectively.

Dental therapists are consistent with moving payment from volume to value

- Adopting strategies to move away from payment mechanisms that reward providers for volume (fee-for-service) rather than improving the health of the public (value).
- Dental therapists focus on prevention and the simple procedures needed by most people. Lower costs to educate and hire, saving more expensive dentists for more complex procedures.

Dental Therapists and Current Goals of Health Care Reform

A dental provider that can lower the cost of delivering basic preventive and restorative care and is associated with such positive health outcomes would be a welcome addition to every state's oral health delivery system. As most states integrate value-based purchasing into their commercial and Medicaid markets, they should know that dental therapists check every box when it comes to the Triple Aim: delivering cost-efficient, quality care that satisfies patients.

Dental Therapists Do More Than Restorative and Surgical Care

They have a large focus on PREVENTION

They use a proven technique to prevent Early Childhood Caries- MOTIVATIONAL INTERVIEWING

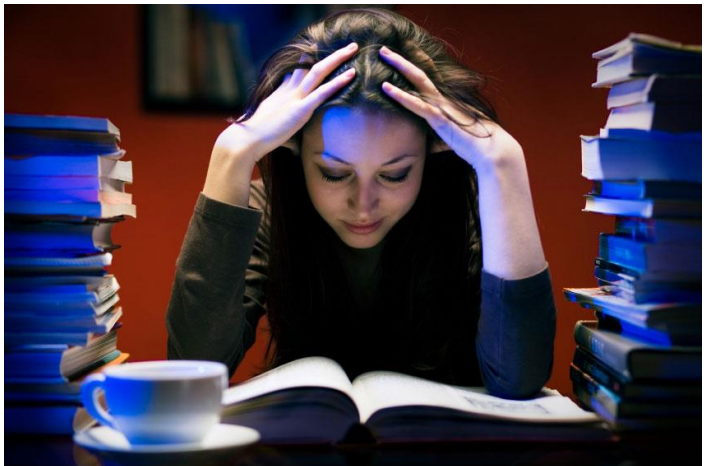
Pediatr Dent. 2015 May-Jun;37(3):254-65., Motivational Interviewing for Parent-child Health Interventions: A Systematic Review and Meta-Analysis.

Borrelli B, Tooley EM, Scott-Sheldon LA.

Our findings provide support for providing motivational interviewing to parents and children to improve pediatric oral health behaviors.

Why Do Dentists Oppose Dental Therapy?

1) Claimed lack of quality and effectiveness. (Not supported by the data.)
2) Fear: competition, loss of patients, past recessions where dentists went broke.
3) We feel insulted: we went to 8+ years of school and these therapists only have 2-4 years of education.
4) Loss of control: we currently have a monopoly on dental care.



Why Do Dentists Oppose Dental Therapy?

1) Since dentists do not have any facts (published data) on their side to oppose dental therapy, where do they get their power to convince legislators?

2) PAC MONEY and STRONG LOBBYING

3) https://www.washingtonpost.com/politics/the-unexpected-political-power-of-dentists/2017/07/01/ee946d56-54f3-11e7-a204-ad706461fa4f_story.html?utm_term=.6b0e7836c602

Dental Therapy is one of Our Challenges as a Professional

Balancing our individual needs, desires and values

Versus

Our collective responsibility to treat patients in their best interests

Ethical Questions - Raised with Washington FQHC directors

Do the practice setting regulations set forth by the dental therapy bill in Washington, pose ethical issues? Must practice in underserved areas and/or a high percentage of their patients must be on public assistance.

A. One view is that this language establishes two standards of care: one for the Medicaid/underserved population, and another or the general population.

B. Another view, is that these practice setting regulations are necessary to ensure that specific populations (outlined below) benefit from receiving services from this provider type.

Ethical Questions - Veracity

The existing data on quality of work done by dental therapists is UNEQUIVOCAL- the quality is equal to that of a dentist. Thus, there are not two standards of care.

If we consider ourselves an evidence based profession, and we read the literature about dental therapy, we must draw this conclusion. To not do so would violate the ethical principle of VERACITY.

Ethical Questions - Justice

We can also look at the principle of ***justice*** -treating patients fairly and working with allies in society to assure access to care.

The practice setting requirement will help assure that the individuals served by dental therapists have access to quality dental care. The evidence from Alaska is clear about this but Alaska has unique problems of geography, culture and weather compared to Washington.

However, the data from Minnesota, which has a requirement that at least 50% of a therapist's patients must be on Medicaid, and which is more similar to Minnesota in terms of access issues, is clear about this: ***Therapists improve access to care for underserved populations***.

Ethical Questions

What is the ethical obligation of dentists, as a group of professionals, to provide care to those residents in a community who are not receiving dental care because of the type of insurance or financial limitations they have?

One view from the committee is, what are/are there consequences to inaction (i.e. not supporting dental therapists)?

Ethical Questions – Justice again

Justice expresses the concept that the dental profession should actively seek allies throughout society on specific activities that will help improve access to care for all.

Social Justice: Winslow- "refers to the convictions of a society about what it owes its constituent members and, in turn, the responsibilities those members have to the whole society." "..questions of social justice have to do with the way social institutions, such as health care, distribute both benefits (services) and burdens (costs) throughout society."

Ethical Questions - Beneficence

- Dentist have a duty to promote the patient's welfare.
- This principle expresses the concept that professionals have a duty to act for the benefit of others. Under this principle, the dentist's primary obligation is service to the patient and the public-at-large.
- **This includes the people who can’t access our services under the current system because of costs, lack of oral health literacy and other factors.**
- Not supporting dental therapists violates the principle of Beneficence.

The Dental Profession has a SOCIAL CONTRACT with society

Welie JV.

Is dentistry a profession? Part 1. Professionalism defined. J Can Dent Assoc. 2004 Sep;70(8):529-32.

Is dentistry a profession? Part 2. The hallmarks of professionalism.; J Can Dent Assoc. 2004 Oct;70(9):599-602.

Is dentistry a profession? Part 3. Future challenges. J Can Dent Assoc. 2004 Nov;70(10):675-8.

Rationale for Dental Therapy

A Special Argument for Racial Equity and Social Justice

- Koppelman, J & Cohen, RS, Dental Health Is Worse In Communities of Color; May 2016.

It is true that dental diseases are strongly associated with poverty, BUT:

- Children of color are less likely than white children to see a dentist and receive preventive care.
- Asian, black, and Hispanic children are less likely than their white peers to have sealants.
- People of color are more likely than whites to suffer from untreated tooth decay.
- Black and Hispanic adults have more untreated dental decay.
- American Indian and Alaska Native Children have the highest rates of untreated decay.
- Adults and seniors of color are more likely than whites to lose their teeth.

Bottom Line

- Educational Programs implemented in Alaska and Minnesota.
- Legislation passed in Maine and Vermont (started educational program in August, 2017).
- Legislation pending/being discussed in Arizona, Massachusetts, Connecticut, South Carolina, **FLORIDA**, Michigan, North Dakota, Oregon, Washington, New Mexico, North Dakota, Texas, Ohio and New Hampshire.
- Organized dentistry is still fighting this but this is good for patients and dentists.

What do dentists really think about dental therapy?

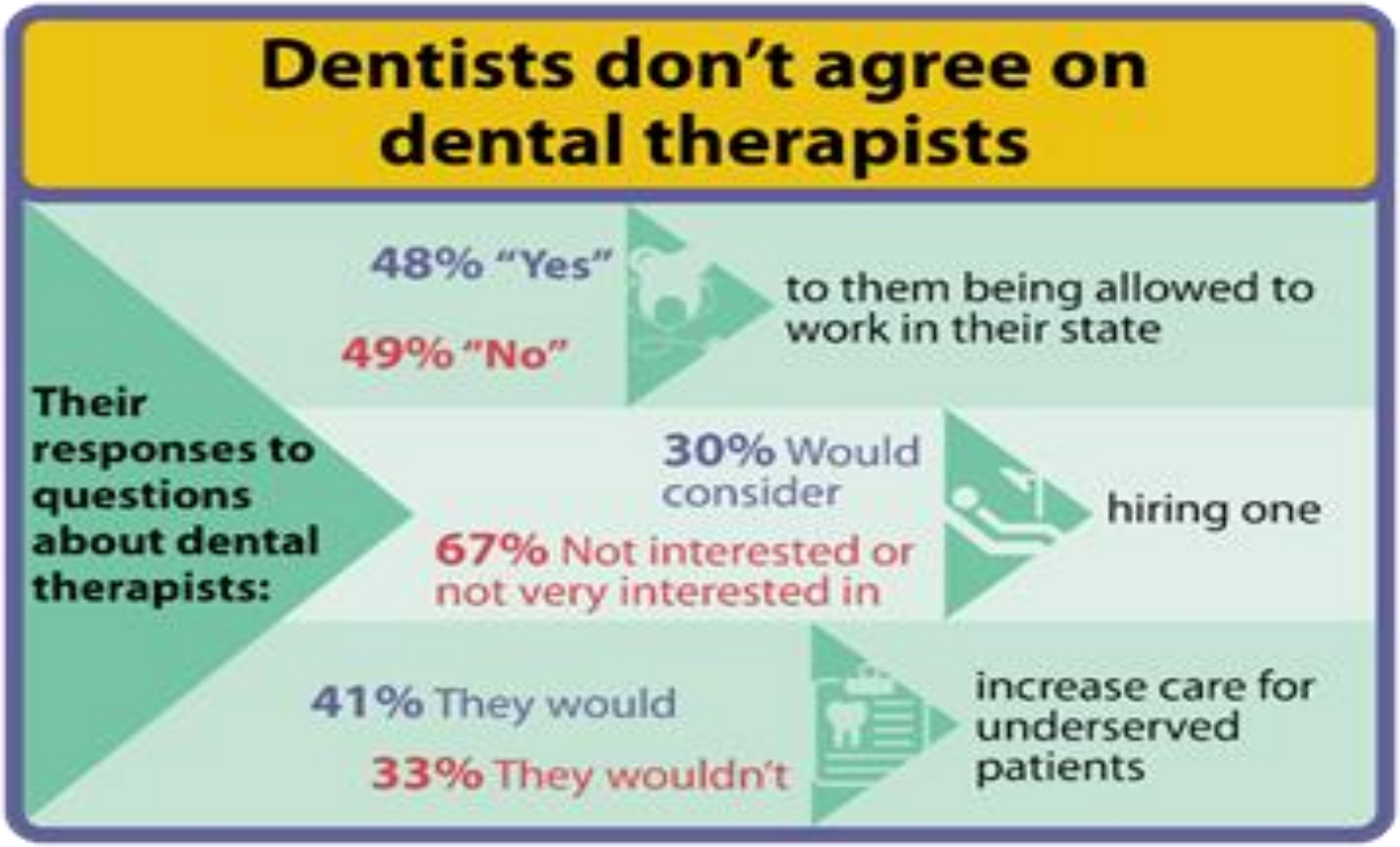
- The fight against dental therapy appears to be coming from the leadership of organized dentistry, maybe in a struggle to maintain membership and their leadership positions.

- Two examples on next slides demonstrate that this is not a uniformly held opinion.

PBRN POLL

Many dentists support dental therapy

National Dental PBRN- December 2016 Network News



NATIONAL DENTAL ASSOCIATION RECEPTIVE TO DENTAL THERAPY

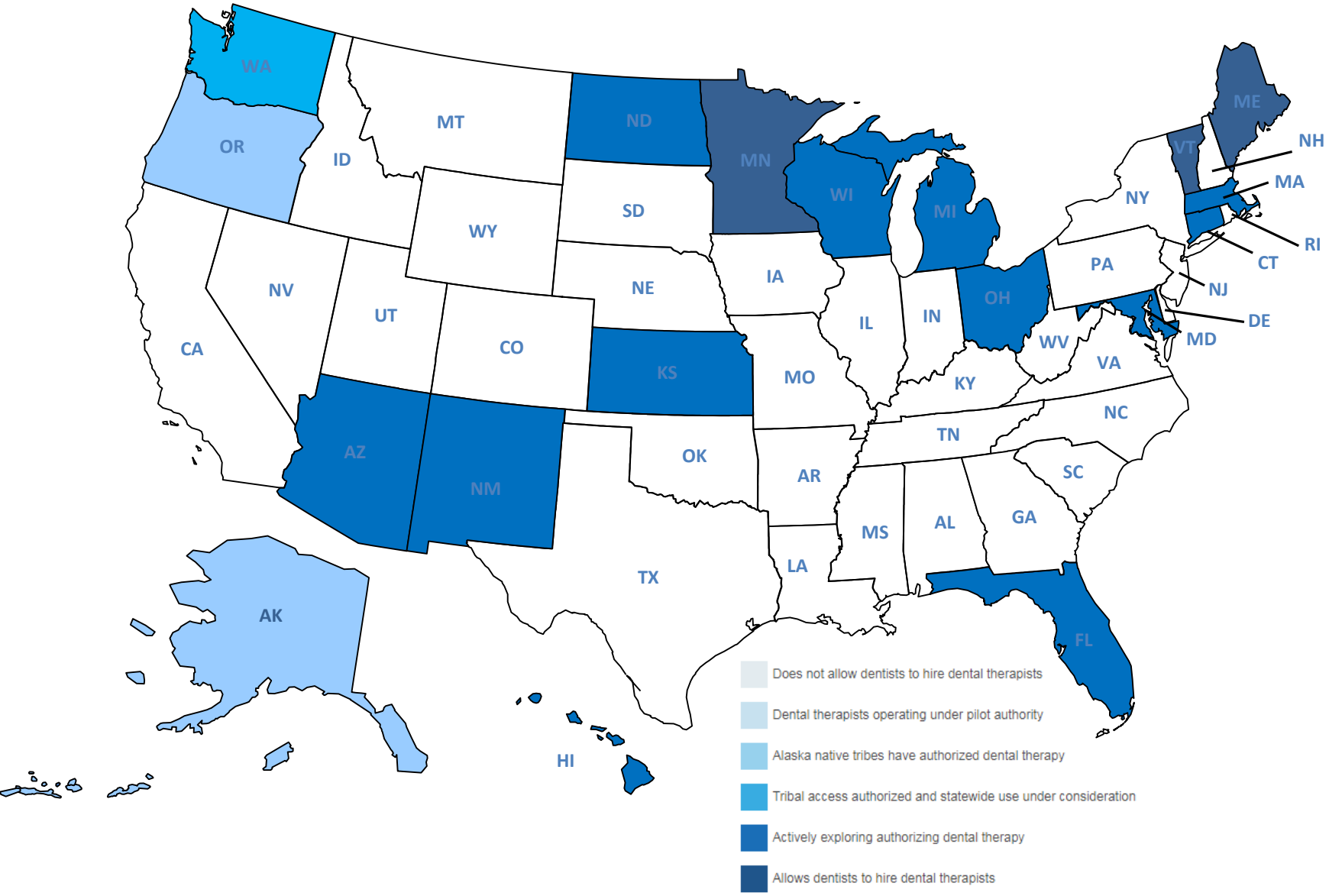
Selected statements

"The NDA views access to care as a matter of social justice."

"We support the development and continuation of demonstration projects that can demonstrate the impact and effectiveness of Emerging Workforce Models on access to care, and total health outcomes".

National Dental Association Position Statement on "Access to Care: Patients, Providers and Workforce. October 7, 2016

National Momentum Building for Dental Therapy



One Closing Comment

"When the dental history of our time is eventually written, I believe the New Zealand Dental Nurse program will be considered one of the landmark developments in the practice of dentistry and dental public health."

Harold Hillenbrand
Distinguished and esteemed Executive Director
American Dental Association, 1947-1969

GREAT NEW REFERENCES

Part of the Evidence Base

http://www.pewtrusts.org/en/research-and-analysis/analysis/2017/02/17/new-college-curriculum-teaches-dental-therapy

http://www.communitycatalyst.org/resources/publications/document/CommunityCatalyst_DT_Report.pdf.

http://www.health.state.mn.us/divs/orhpc/workforce/emerging/dt/index.html

http://www.health.state.mn.us/divs/orhpc/workforce/emerging/dt/2017dttool.pdf

GREAT NEW REFERENCES
Part of the Evidence Base

http://www.pewtrusts.org/en/research-and-analysis/q-and-a/2016/04/5-dental-therapy-faqs

https://americansforprosperity.org/afp-ks-hiring-dental-therapists-makes-economic-sense-kansas-dentists/

https://americansforprosperity.org/healthcare-reform-like-pulling-teeth/

http://www.wilder.org/Blog/Lists/Posts/Post.aspx?ID=186#.Wa_eJjWQy72

GREAT NEW REFERENCES
Part of the Evidence Base

http://www.wilder.org/WilderResearch/Publications/Studies/Forms/Study/docsethomepage.aspx?ID=1886&RootFolder=%2FWilder-Research%2FPublications%2FStudies%2FDelta%20Dental%20of%20Minnesota

http://faculty.washington.edu/dchi/files/DHATFinalReport.pdf

http://www.pewtrusts.org/en/research-and-analysis/analysis/2017/08/11/dental-therapists-mean-better-outcomes-for-alaska-native-communities-study-finds

Thanks & Questions

PEW Trusts, W. K. Kellogg Foundation and Community Catalyst for inviting me to participate in advocacy work for DENTAL THERAPY and for their perseverance and bravery in promoting this important approach to improving access to quality oral health care and for reminding us this is a social justice issue.

The many colleagues and advocates across the country who have shared stories and insight into this issue and to the University of Florida for giving me the academic freedom to do this work. Thanks to Dr. Mike Alfano for some great slides on oral health-systemic health relationships.

Dental Therapists in Minnesota

An overview and an FQHC Case Study

April 18, 2016

Mark Schoenbaum, Director

Office of Rural Health and Primary Care

Minnesota Department of Health

MDH Minnesota Department *of* Health

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Rural Health and Primary Care
PO Box 64882
St. Paul, MN 55164-0882
651-201-3838
www.health.state.mn.us

Minnesota Board of Dentistry
2829 University Avenue SE
Suite 450
Minneapolis, MN 55414-3246
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

Methods

- Dental therapist licensing data
- Survey of 1,382 dental therapist patients
- Interviews with clinics employing dental therapists
- Clinic administrative data
- Oral health-related emergency room usage data

Photo: Thedailystar.net

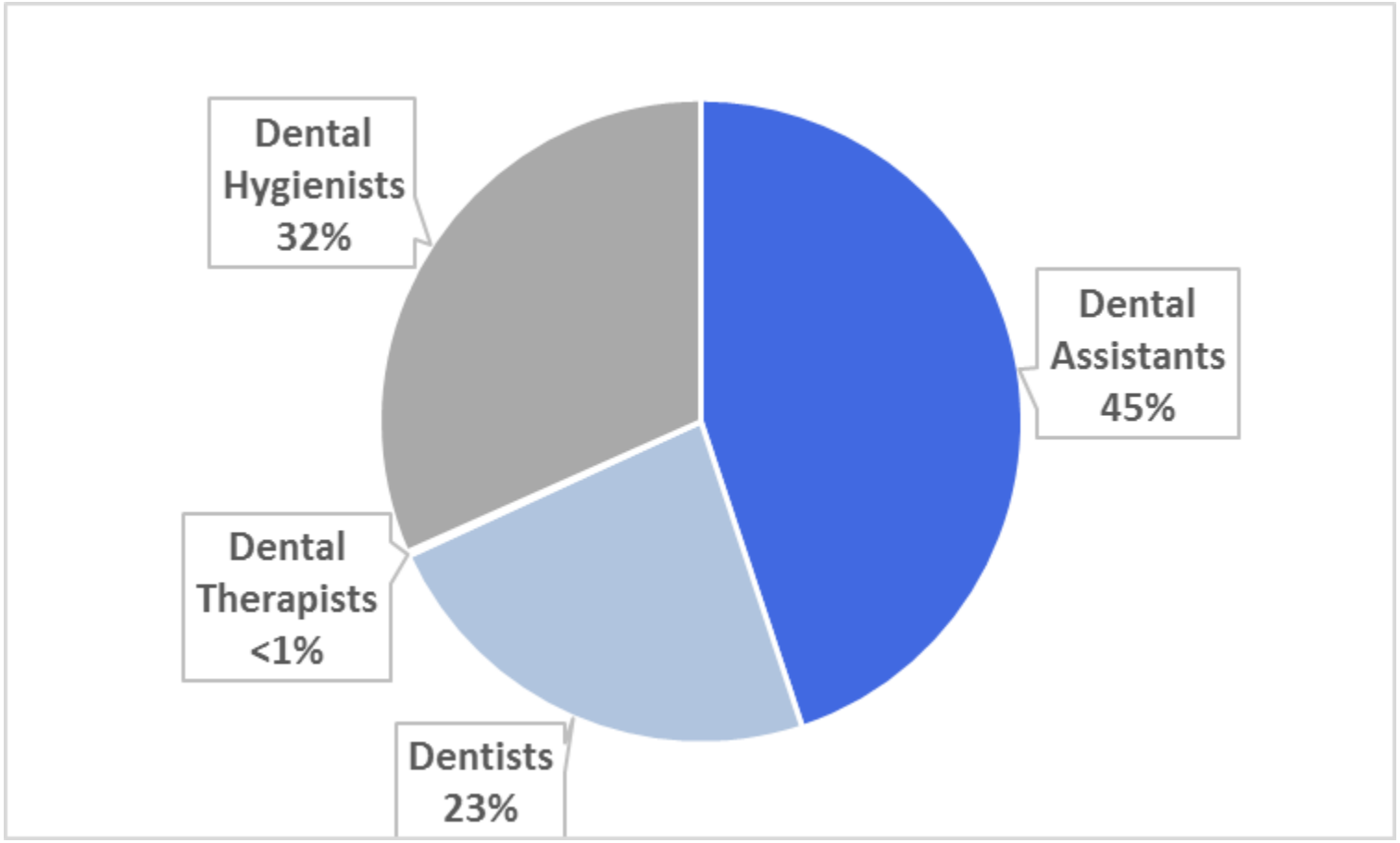
MDH Minnesota Department *of* Health

Findings

- **DT workforce is growing & appears to be serving low-income, uninsured and underserved patients.**
- **DTs appear to be practicing safely. Clinics report improved quality and high patient satisfaction.**
- **Clinics with DTs seeing more new patients, most underserved.**
- **DTs have made it possible to decrease travel time and wait times for some patients, increasing access.**
- **Benefits include direct costs savings, team productivity, improved patient satisfaction and lower fail rates.**
- **Savings making it more possible to expand capacity.**
- **Start-up is varied: employers expect continuing evolution.**
- **Most considering hiring additional DTs after 1 year.**
- **DTs have potential to reduce unnecessary ER visits.**
- **With same rates for DDS & DT, not necessarily an immediate savings to the state on each claim paid; however, differential between state rates and clinics' lower costs for DTs appears to be contributing to more patients being seen.**

2016 UPDATE

Minnesota's oral health workforce



Source: Board of Dentistry, December 2013. Includes all professionals who have an active license and report practicing in Minnesota ("Active Practice In State." N=12,961). Of these, 5,819 were dental assistants; 4,101 were dental hygienists; 3,013 were dentists, and 27 were dental therapists.

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Dental Therapy Workforce

As of 4/13/16:

- **56 Dental therapists**
- **22 Advanced dental therapists**

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MDH Minnesota Department of Health

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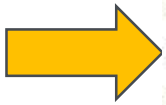
Health Care Workforce Reports

In 1993, the Minnesota Legislature mandated collection of a variety of information from many licensed or registered health care providers. Working with Minnesota's licensing boards, the Office of Rural Health and Primary Care collects practice data for health professionals in conjunction with regular licensing renewals.

Survey response rates vary between 60 percent and 90 percent, depending on the profession surveyed. Data include major professional activities; hours per week in each major professional activity; practice location and setting; specialties; race and ethnicity (added in 2005).

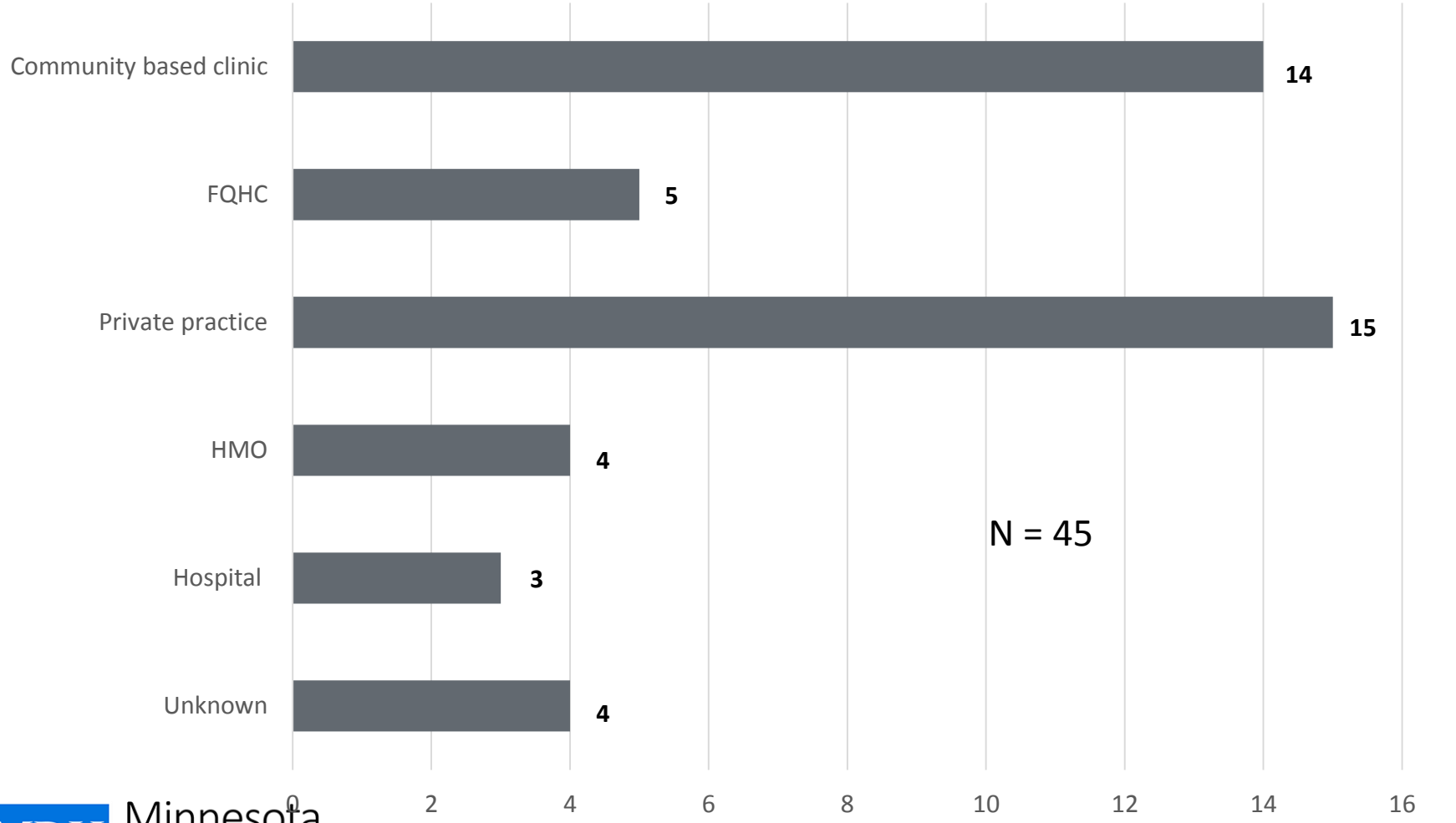
Reports



- Dental Assistants
- Dental Hygienists
- Dental Therapists
- Dentists
- Licensed Practical Nurses
- Pharmacists, Pharmacy Technicians and Pharmacies
- Physical Therapists
- Physical Therapist Assistants
- Physicians
- Physician Assistants
- Registered Nurses
- Respiratory Therapists
- Social Workers
- Workforce Demand
- Other professions and reports with multiple professions

Dental Therapist Practice Settings

As of February 2015



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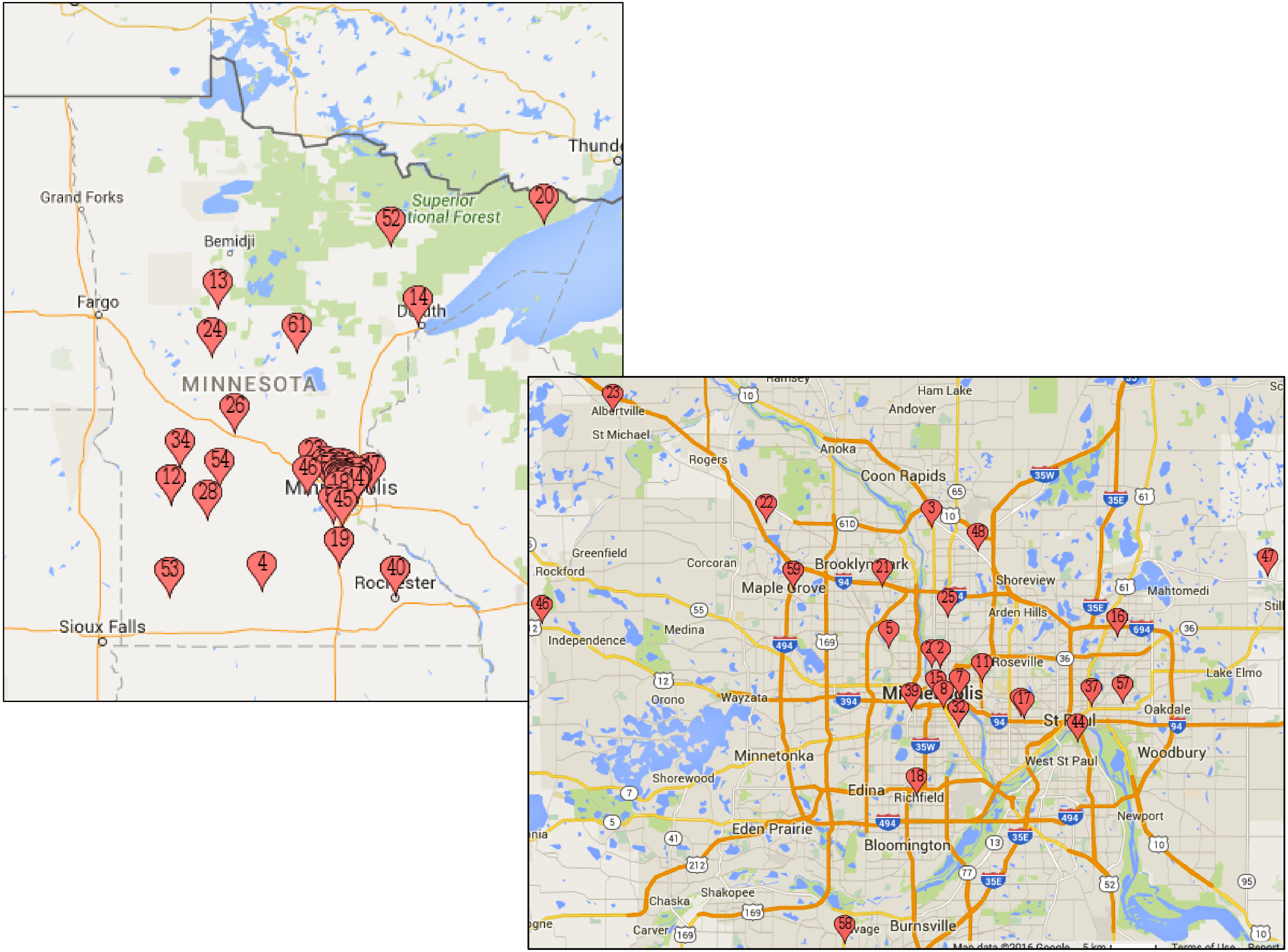
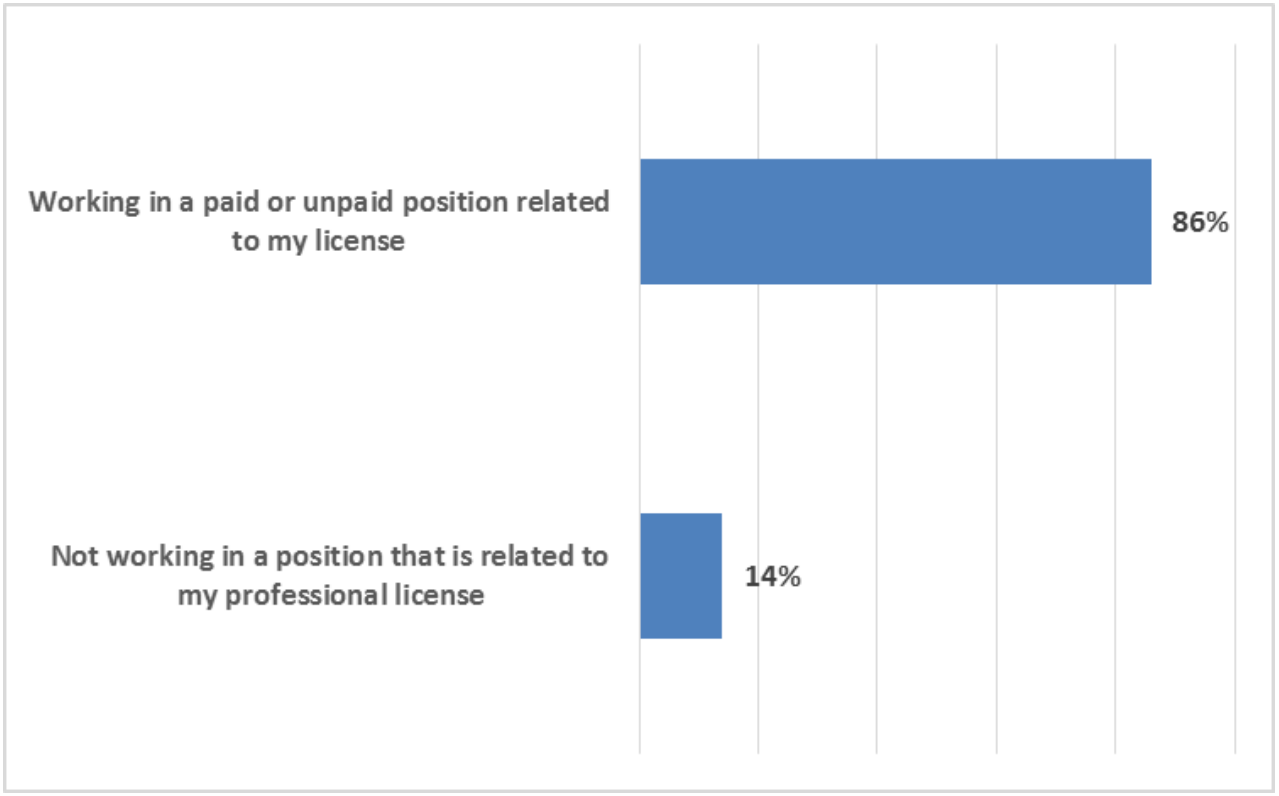
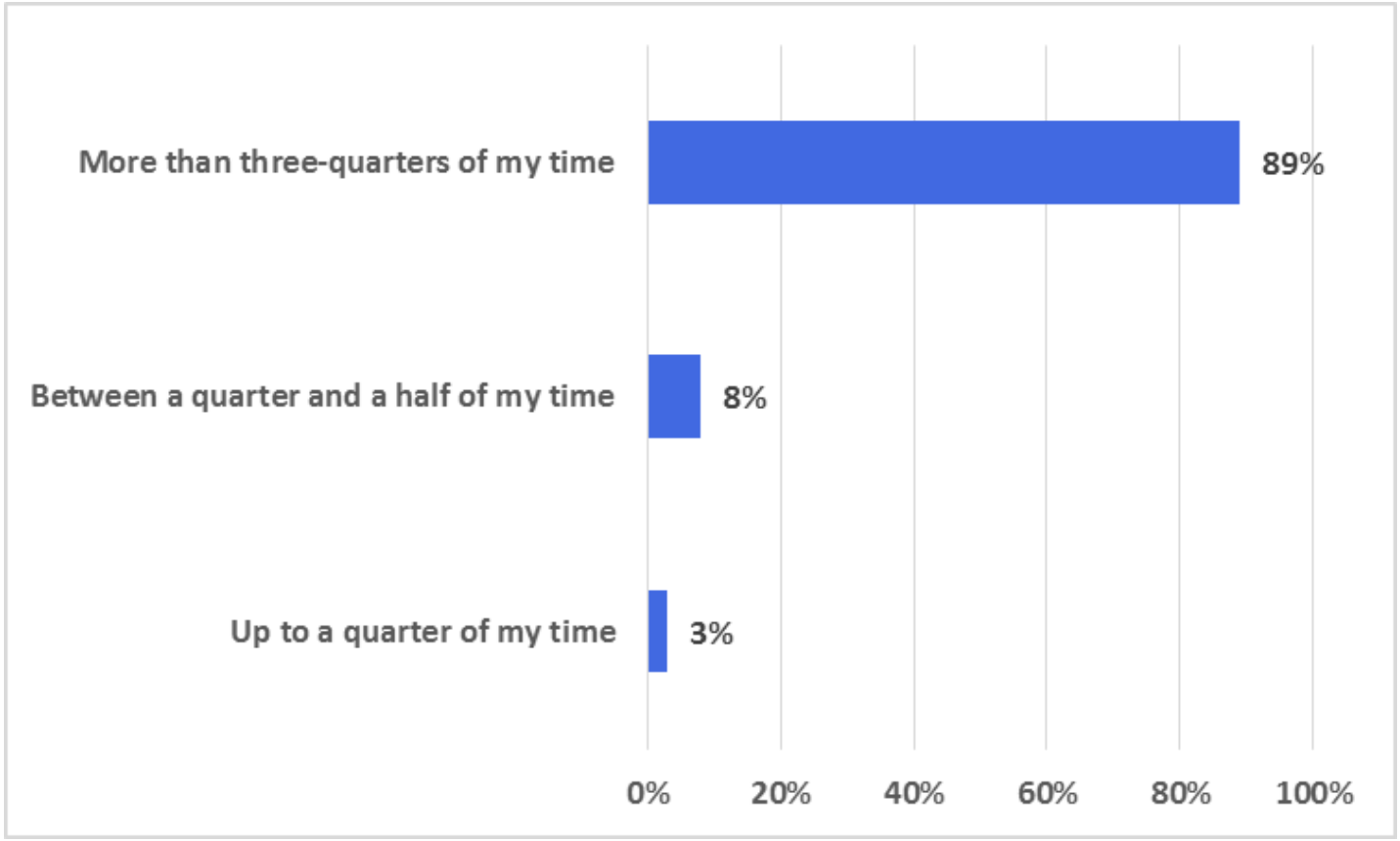

Grand Forks
Superior National Forest
Bemidji
Fargo
Duluth
MINNESOTA
Minneapolis
Rochester
Sioux Falls
Albertville
St Michael
Ham Lake
Andover
Anoka
Rogers
Coon Rapids
Greenfield
Corcoran
Rockford
Brooklyn Park
Maple Grove
Shoreview
Mahtomedi
Arden Hills
Medina
Independence
Roseville
Lake Elmo
Orono
Wayzata
Minneapolis
St Paul
Oakdale
Woodbury
Minnetonka
West St Paul
Shorewood
Edina
Richfield
Newport
Eden Prairie
Bloomington
Chaska
Shakopee
Carver
Burnsville
Map data ©2016 Google

Work Status



- **If not working, 3 are not seeking a position as DT, 1 is seeking a DT position and 1 is temporarily not working**

Time spent on patient care



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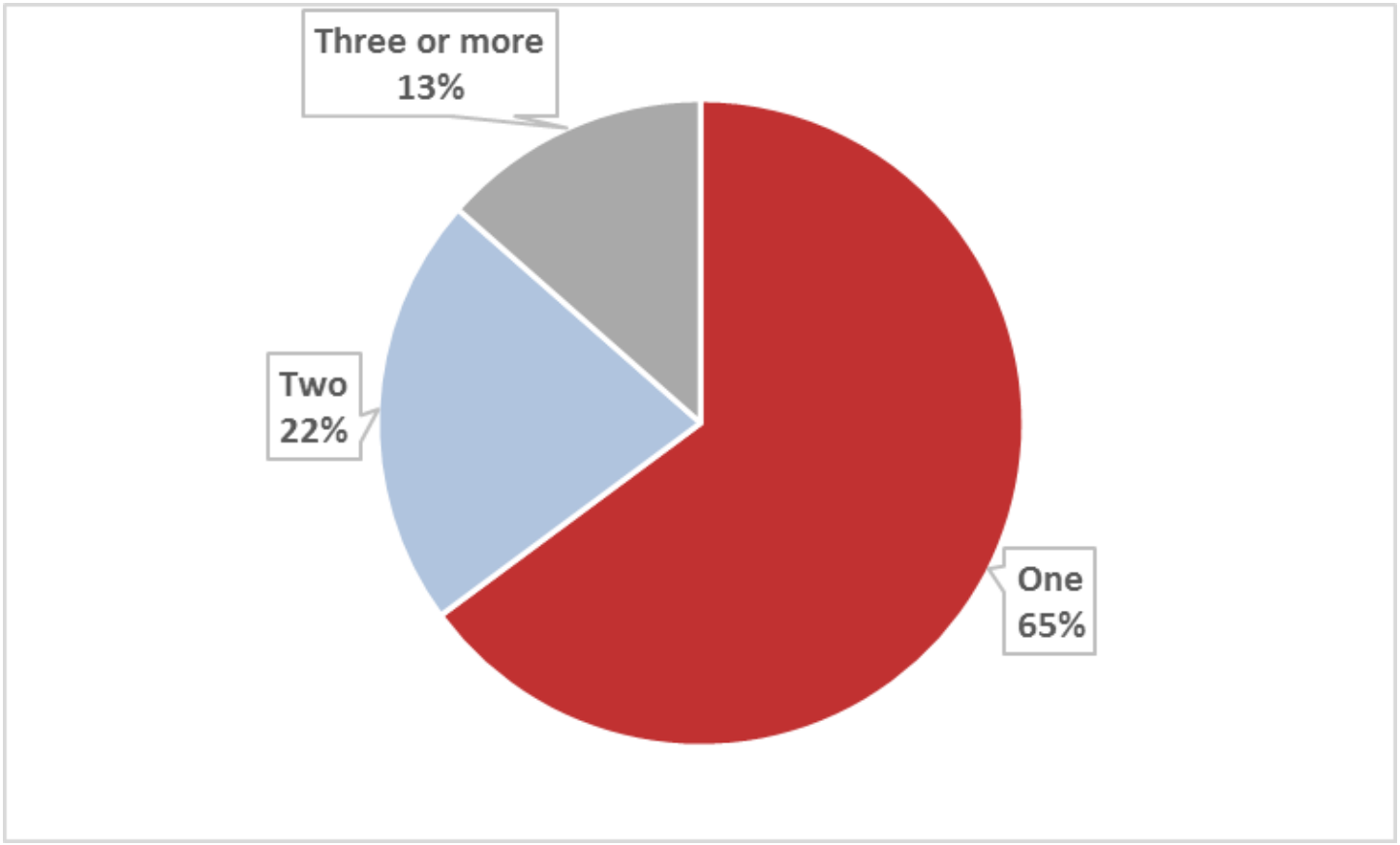
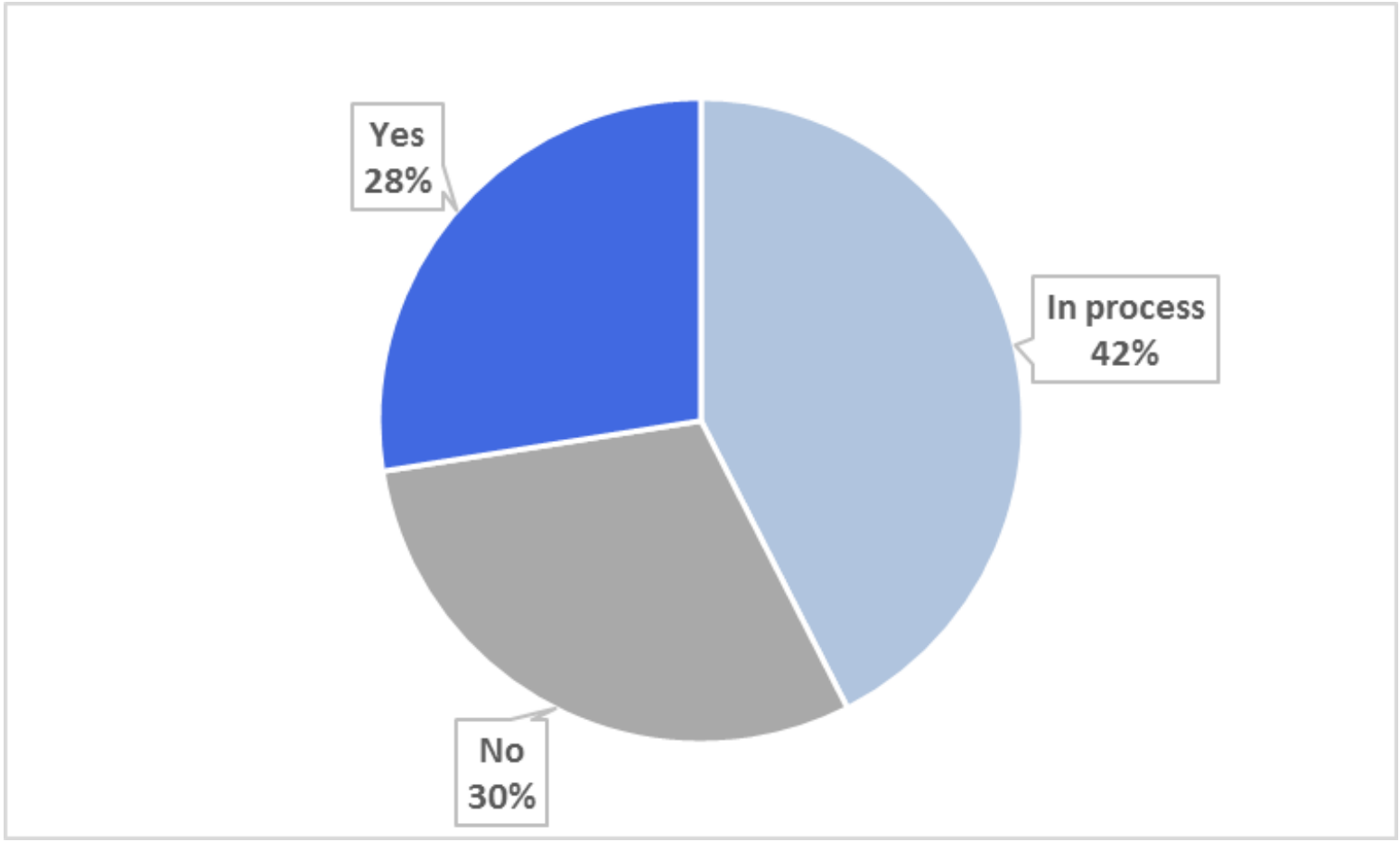
Number of practice locations



Advanced Dental Therapists



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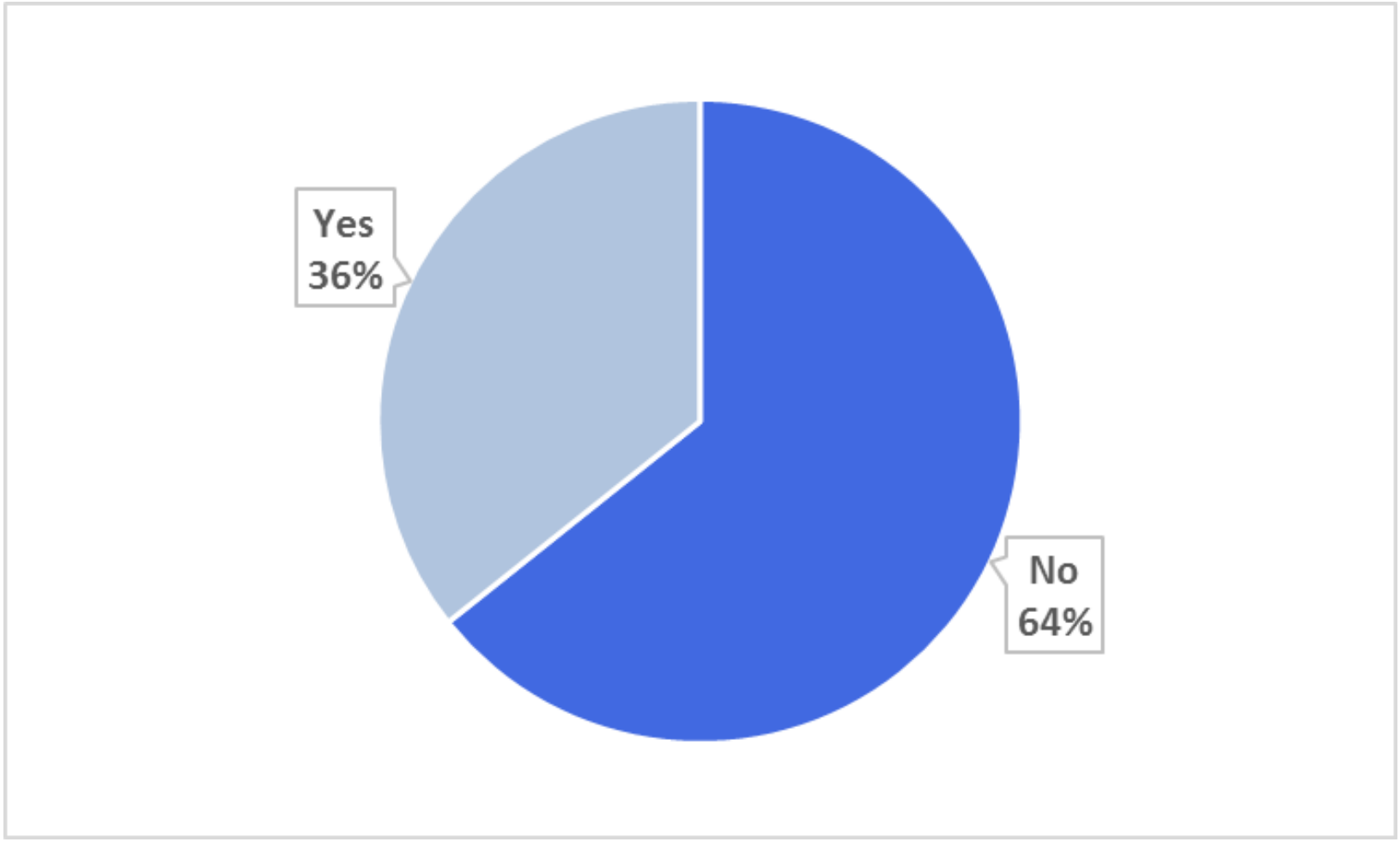
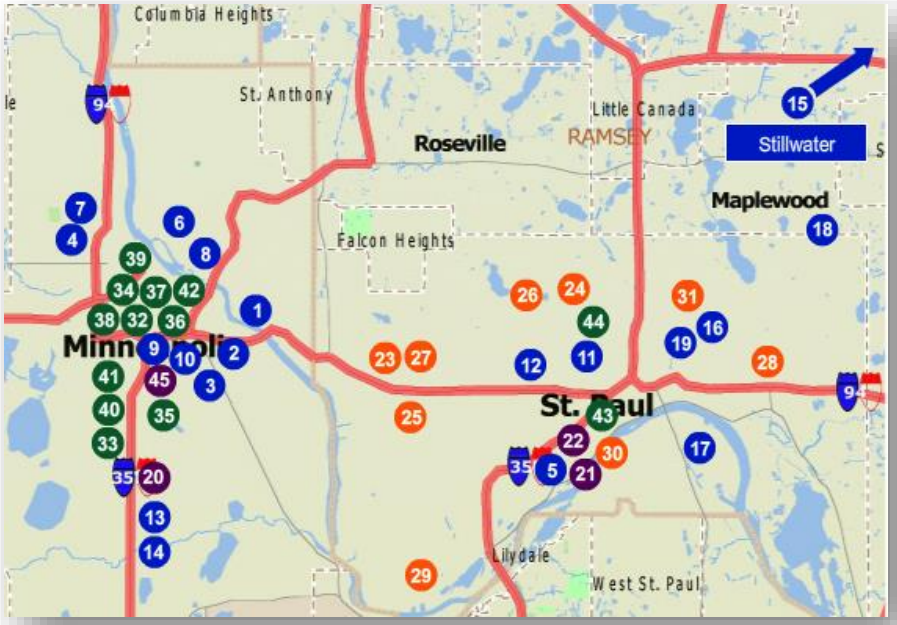
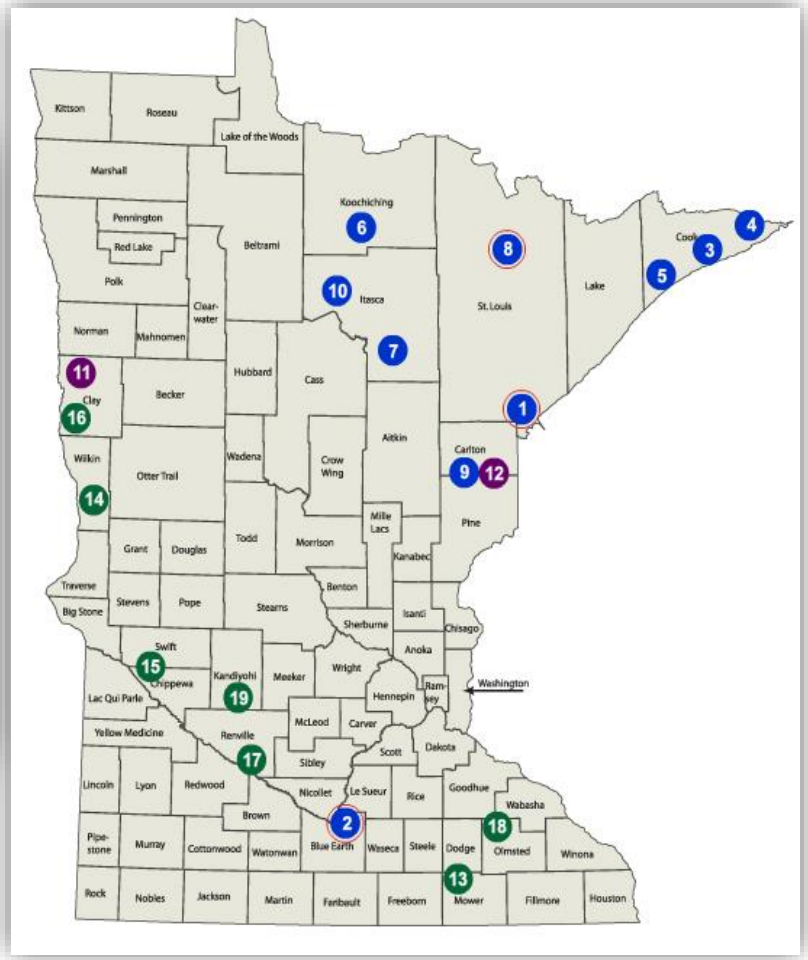
Dually licensed as dental hygienists



Minnesota FQHCs





Minnesota Department *of* Health

Medicaid Billing

- FQHCs paid via a “prospective payment system” for Medicaid & Medicare.
  - Receive a fixed, per-visit payment per patient visit.

From MN Provider Manual:

Bill all services completed using the 837D standard dental claim format

•• Appropriate group NPI as the pay-to provider

•• Individual ADT NPI as rendering provider

Reimbursement Rates

DT/ADT services must be billed using the individual DT/ADT NPI as the rendering provider to receive payment.

Reimbursement for services provided by ADTs will be made at the rate of:

•• 100% for ADT services

•• 100% for Limited Authorization Dental Hygiene services by qualified ADTs also practicing under limited authorization

•• Face to face encounter rate is reimbursed for DT/ADTs affiliated with Rural Health Clinics (RHC), Federally Qualified Health Clinics (FQHC) or Indian Health Service (IHS)

West Side Community Health Services

- **Largest FQHC in Minnesota**
- **16 locations across in St. Paul**
- **Large Hispanic and Asian population**
- **2 dental clinics, 20 state-of-the-art dental operatories**
- **Received Health Dept. Emerging Professions integration grant.**

Minnesota Department *of* Health

Dental Therapy at West Side GOALS

- **To provide greater access for dental care to patients seen at both East Side Dental Clinic and West Side Dental clinic with the utilization of a Dental Therapist.**
  - The ADT will work closely with West Side's medical staff, including those from its Health Start School-Based Clinics, Health Care for the Homeless, and public housing site clinics.
- **1) increase the number of patients receiving dental care**
- **2) increase the dentists' capacity to focus on more complex procedures while the ADT meets routine oral health care needs**
- **3) increase patient satisfaction.**

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West Side DT Services

Full series x-rays
Panoramic x-rays
Scaling and Root Planing
Sealants
Amalgams one surface
Amalgams two surface
Amalgams three surface
Resin one surface anterior
Resin two surface anterior
Resin three surface anterior
Resin 4surfaces/incisal angle
Resin one surface posterior
Resin two surface posterior
Resin three surface posterior
Resin four surface posterior
Sedative fillings
Extractions
Pulpotomy
Stainless steel crowns
Palliative treatment

West Side Outcomes

- **Adding a dental therapist to the staff at WSCHS dental clinics has both increased access to care, and**
- **allowed more time for dentists to pursue more complicated procedures, as the above numbers indicate.**
- **It educated and alleviated apprehensions of the other dental professionals that there is a place for this**
- **new dental professional to the team without encroaching on their professions in the dental field.**
- **Patients are very accepting of a dental therapist.**

West Side Outcomes

- **With the development of a DT patient base by providing preventative services, over time there was a distinct shift from preventative to restorative care.**
- **There continues to be a positive change from preventative services to restorative care and simple extractions.**
- **“I was able to provide Tammy all the restorations which were in my scope of practice and the CMA dentist completed her root canal therapy and is in the process of getting removable partial dentures to replace Tammy’s missing teeth. “**
- **“Another measure of success is that 51 treatment plans were started and completed during the quarter.”**

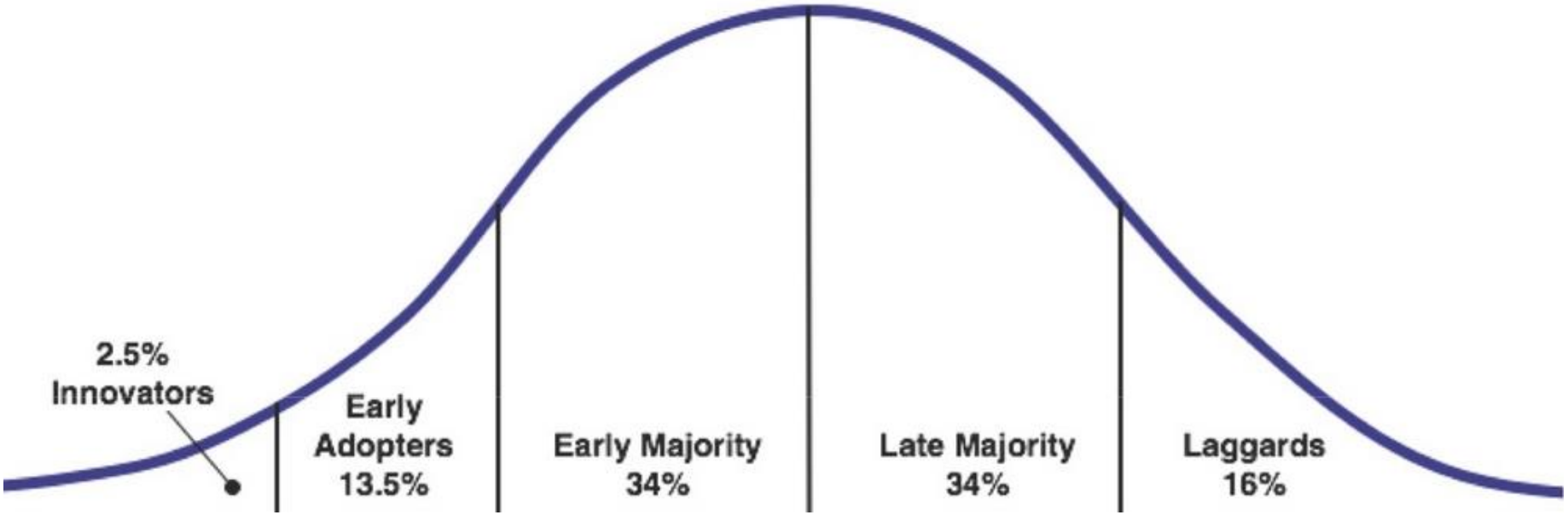
West Side Outcomes

- DTs/ADTs are a great tool in expanding access to care, but can't solve chronic underfunding of the system.
- One of the challenges facing the therapist is that of the number of patients seen, many required interpretation. This means that each appointment does require more time to complete.
- With adequate quality and pace the DT profession has the potential to improve treatment completion rates and reduce patient wait times for restorative care

MDH Workforce & Emerging Professions Research & Support

Dental Therapists

- **Employer survey – underway**
- **Routine data collection and analysis**
  - Same as dentists, hygienists, assistants
- **Grants – state and federally funded**
  - Education programs
  - Early adopter employers
  - Employer toolkit – in development


2.5%
Innovators
Early
Adopters
13.5%
Early Majority
34%
Late Majority
34%
Laggards
16%

Employer findings Excerpt

Preliminary & unpublished

- **Clinics do see an economic benefit of hiring DT/ADTs.**
  - Allow dentists to delegate duties and focus on advanced procedures
  - For the procedures within their scope, DTs are reimbursed at the same rate but are paid less when comparing to a dentist.
  - DT/ADTs can be equally as productive as dentists but do not get paid the same.
  - Very helpful to fill in when dentists are out.
  - Roughly $62,500 is saved annually per ADT employed.
- **There may be a lag in time before economic benefits are realized while new hires or new graduates are training. Most saw adequate production levels after 6 months, which is comparable to hiring a new dentist.**

Mark Schoenbaum, Director

Office of Rural Health and Primary Care

Minnesota Department of Health

mark.schoenbaum@state.mn.us , 651-201-3859