

From the Complex to the Simple: Translating Scope of Practice Research for Policy Makers

Building Bridges and Breaking Down Barriers:
Diversity, Inclusion and the Health Workforce

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The OHWRC at CHWS

- The **Center for Health Workforce Studies (CHWS)** has more than 20 years' experience studying all aspects of the health workforce:
 - Established in 1996
 - A research center of the University at Albany School of Public Health
 - Committed to collecting and analyzing data to understand workforce dynamics and trends
 - Goal to inform public policies, the health and education sectors, and the public
 - Broad array of funders in support of health workforce research
- This study was funded under a Cooperative Agreement with the federal Health Resources and Services Administration (HRSA) for an **Oral Health Workforce Research Center (OHWRC)** based at CHWS

Acknowledgements

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The Changing Oral Health Landscape: Growing Attention to Value Based Care

- Increasing emphasis on improving oral health literacy
- Focus on prevention and early intervention in disease process
- Growing importance of risk assessment to triage patients to most appropriate level of care.
- Interest in using technology to improve access and navigate patients to appropriate providers through teledentistry
- Integration of oral health services with primary care

Workforce Impacts

- Use of **team-based models of care**
- New workforce strategies
 - Community dental health coordinator
 - Dental therapists
 - Expanded function dental assistants
 - **Public health dental hygienists**
 - Dental therapists, **dental hygiene therapists**
- Engagement of **medical professionals**
 - Training primary care clinicians to screen and refer and medical assistants and nurses in application of fluoride, especially for children
- Expansion in **scope of practice**
 - DHs - once viewed as dental extender, now **preventive oral health specialist**

Key Elements in SOP Research

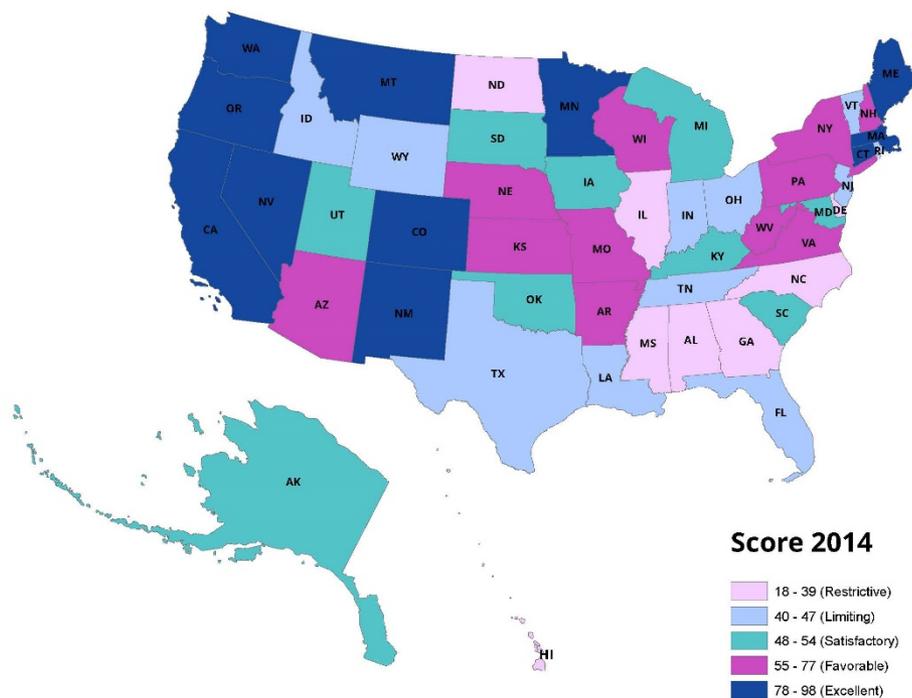
- Identify a health profession with state to state variation in SOP
- Develop a tool that can systematically measure variation
- Assess impacts of SOP variation on health outcomes
- Translate SOP research findings for policy-makers

Dental Hygiene Professional Practice Index

- DH scope of practice (SOP) varies considerably by state
 - Variation believed to impact access to care
- Dental Hygiene Professional Practice Index developed in 2001
 - grouped numerous variables into 1 of 4 categories:
 - Regulation, supervision, tasks, and reimbursement
- Numerical scoring based on each state's law and regulation
 - Possible composite score from 0-100
- 2001 DHPPI
 - Used to score state DH SOP in 2001 and re-scored in 2014
- 2016 DHPPI
 - Updated index (revised variables) and scored state DH SOP in 2016

State – Level DHPPI Score in 2014

- Variables grouped into one of four categories:
Regulation, supervision, tasks, and reimbursement
- Scoring based on a review of state law and regulation in each state
Possible composite score from 0-100
- Descriptive analysis
 - 2001 scores ranged from 10 in West Virginia to 97 in Colorado
 - 2014 scores ranged from 18 in Alabama and Mississippi to 98 in Maine.
 - Mean score on the DHPPI progressed from 43.5 in 2001 to 57.6 in 2014
- Statistical analysis
 - In 2001, SOP was positively correlated with the percent of the population in a state having their teeth cleaned by a dentist or dental hygienist within the past year.
 - In 2014, exploratory and confirmatory factor analysis confirmed that the component structures were all aspects of the overarching concept – in this case scope of practice



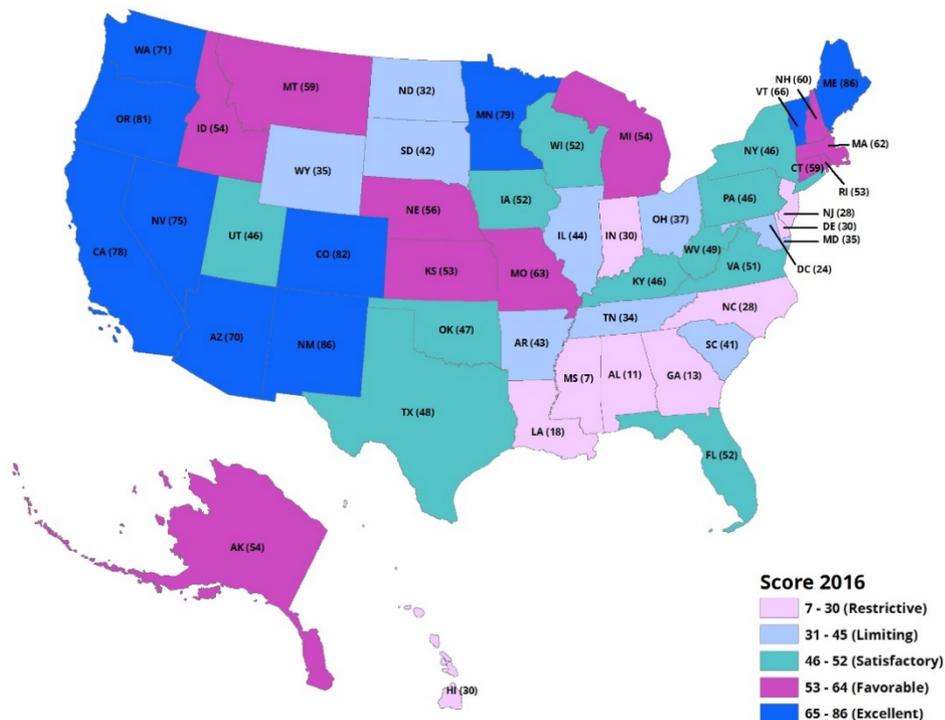
Does DH SOP Matter?

- *Research question:* Do more expansive SOPs, which allow more autonomy in preventive services delivery in public health settings, impact oral health outcomes in the population?
- In 2014, we used Multilevel logistic modeling with the DHPPI and BRFSS data controlling for state and individual level factors including community water fluoridation, demographic and socioeconomic factors
- Individual level data describing the oral health status and service utilization of individuals in states from the CDC's Behavioral Risk Factor Surveillance System (BRFSS)
- *Finding:* More expansive SOP for DHs in states was positively and significantly associated ($p < 0.05$) with having no teeth removed due to decay or disease among individuals in those states

Langelier M, Continelli T, Moore J, Baker B, Surdu S. Expanded scopes of practice for dental hygienists associated with improved oral health outcomes for adults. *Health Affairs*. 2016; 35(12); doi: 10.1377/hlthaff.2016.0807.

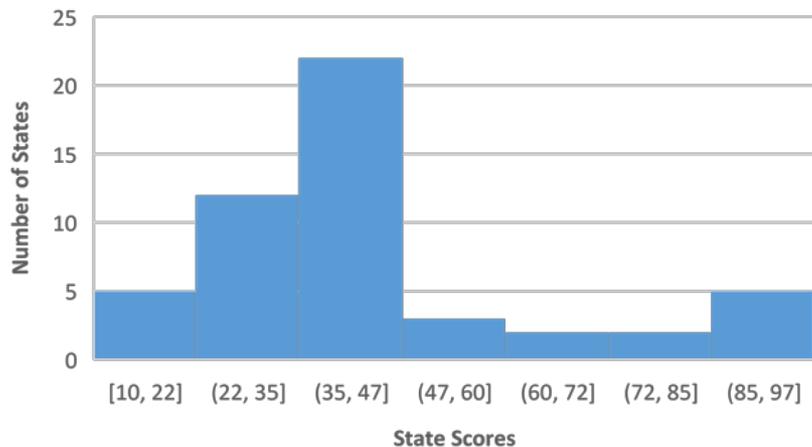
The 2016 DHPPI

- Finding from 2014 update – variables in 2001 DHPPI no longer adequately represented SOP
- Dental hygienists now seen as experts in prevention education and services
 - More autonomous roles
 - Team based care
 - New technologies
 - New settings for care delivery
 - Point of entry - case finding
 - Roles as case managers/patient navigators
- Design process for the new DHPPI included focus groups with dental hygienists
 - Some variables were retained or modified
 - New variables were added
 - Fewer variables overall
 - Scoring weights were redistributed
 - New variables e.g., dental hygiene therapy, use of lasers, and basic restorative tasks
- Factor analysis again confirmed the integrity of the construct
- As expected, scores were lower on the new index
 - Range of scores was 7 in Mississippi to 86 in Maine

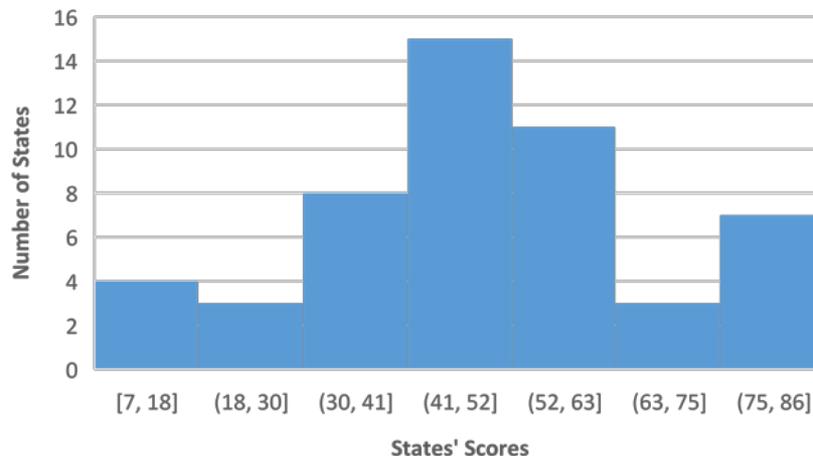


Changing Scope of Practice for Dental Hygienists 2001, 2014, and 2016

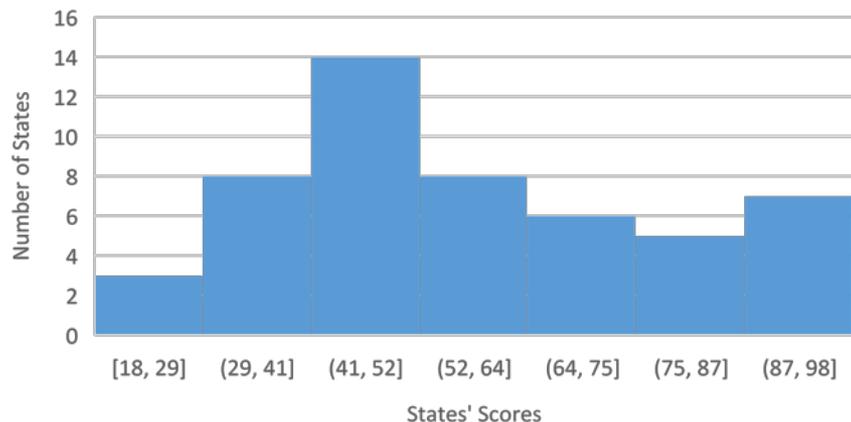
2001



2016



2014



High scoring states in 2014 were also high scoring on the new index (e.g., ME, CO, CA, WA, NM were each classified as excellent environments at each scoring)

Some states were innovators in expanding practice opportunities for dental hygienists (e.g., MN with advanced dental therapy, VT recently enabled dental therapy; the model requires professionals to also be dental hygienists)

Other states used a slower, more incremental approach to increasing scope of practice (e.g., IA classified as satisfactory at each scoring)

Some low scoring states were consistently low scoring (e.g., GA, MS, NC classified as restrictive at each scoring)

Some Examples of Impacts of Expanded DH SOP on Access to Care in Community Settings

- A dental hygienist owns an independent practice in Colorado with a fixed clinic and mobile van that provides services to residents of a municipal housing project and to seniors in rural areas
- Dental hygienists work in a Virtual Dental Home providing atraumatic restorations to children in California and Oregon using teledentistry applications.
- Advanced dental therapists provide preventive and restorative services to underserved populations in Minnesota's federally qualified health centers and other community clinics
- A public health dental hygienist with certification as a community dental health coordinator provides preventive services in primary care physician practices in Pennsylvania
- A public health dental hygienist works in nursing homes in New Hampshire providing routine preventive services and case management
- Dental hygienist entrepreneurs in Nevada and South Carolina own school linked oral health programs providing a range of preventive services to thousands of school children annually

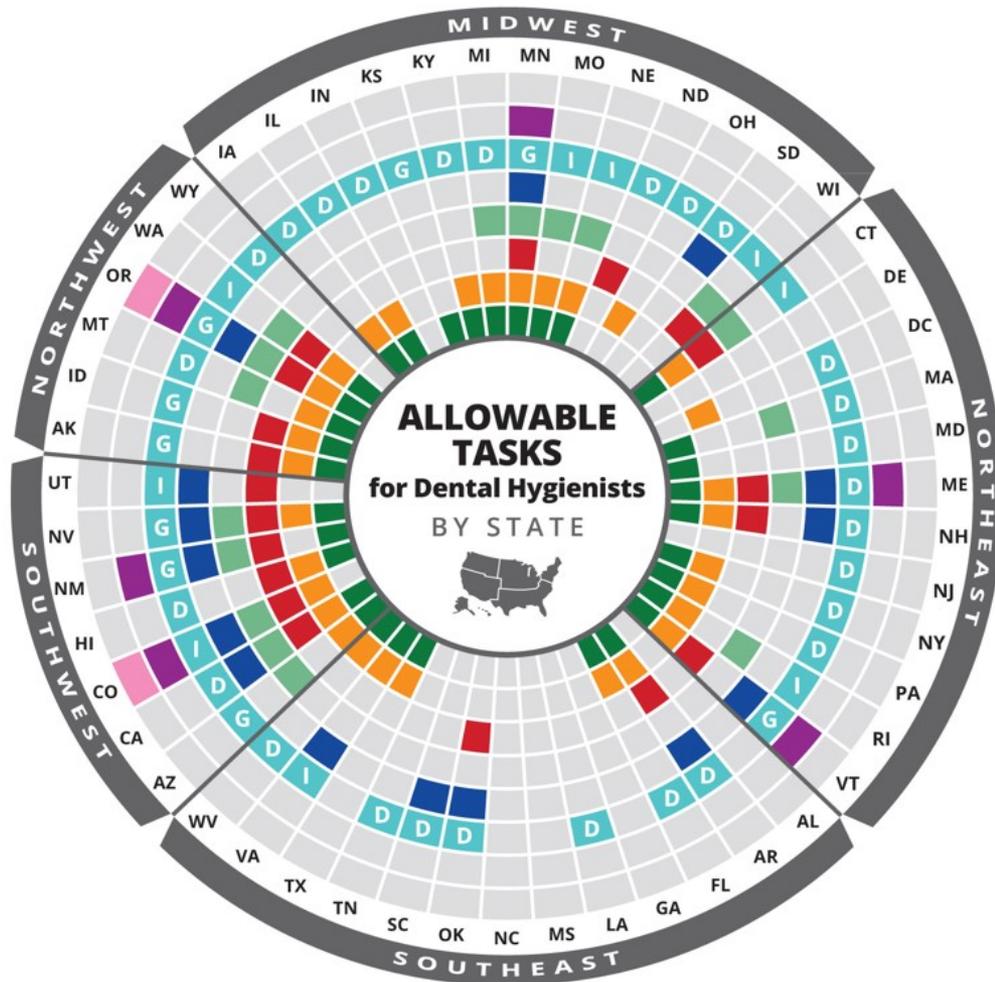
Developing a Dental Hygiene SOP Infographic: Why and How

- Research finds that broader SOPs for DHs are associated with better oral health outcomes in a state
- There is substantial variation in DH SOP across states, but no tools to help policy makers understand these differences
- OHWRC in collaboration with ADHA conducted a series of focus groups with dental hygiene leaders from across the country to identify the key DH functions and tasks to include in the infographic

DH Tasks and Functions Included in the Infographic

- Dental hygiene diagnosis
- Prescriptive authority
- Level of supervision for administering local anesthesia
- Supervision of dental assistants
- Direct Medicaid reimbursement
- Dental hygiene treatment planning
- Provision of sealants without prior examination
- Direct access to prophylaxis from a dental hygienist

Variation in Dental Hygiene Scope of Practice by State



The purpose of this graphic is to help planners, policymakers, and others see differences in legal scope of practice across states, particularly in public health settings.

Research has shown that a broader scope of practice for dental hygienists is positively and significantly associated with improved oral health outcomes in a state's population.^{1,2}

- Dental Hygiene Diagnosis
- Prescriptive Authority
- Local Anesthesia
- Direct ■ Indirect ■ General
- Supervision of Dental Assistants
- Direct Medicaid Reimbursement
- Dental Hygiene Treatment Planning
- Provision of Sealants
- Direct Access to Prophylaxis
- Not Allowed / No Law

Sources: 1. Langelier M, Baker B, Continelli T. *Development of a New Dental Hygiene Professional Practice Index by State*. 2016. Rensselaer, NY: Oral Health Workforce Research Center, Center for Health Workforce Studies, School of Public Health, SUNY Albany; November 2016. 2. Langelier M, Continelli T, Moore J, Baker B, Surdu S. Expanded Scopes of Practice for Dental Hygienists Associated With Improved Oral Health Outcomes for Adults. *Health Affairs*. 2016;35(12):2207-2215.

http://www.oralhealthworkforce.org/wp-content/uploads/2017/03/OHWRC_Dental_Hygiene_Scope_of_Practice_2016.pdf

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This graphic is for informational purposes only and scope of practice is subject to change. Contact the applicable dental board or your attorney for specific legal advice.



Last Updated July 2016.

Conclusions and Next Steps

- SOP is an important consideration when designing workforce strategies to increase access to and utilization of preventive oral health services
- Placing DHs in community settings and enabling service delivery with autonomy within professional competencies may improve outcomes
- Currently analyzing data to determine the impact of scope of practice on access to oral health services and on oral health outcomes for children
- Infographic is a work in progress, i.e., requires routine updating as states modify DH practice requirements