

Impacts of State Level Dental Hygienist Scope of Practice on Oral Health Outcomes in the U.S. Population

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The Center for Health Workforce Studies at the University at Albany, SUNY

- Established in 1996
- A 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

Today's Presentation

- Based on findings from a federally funded research study on dental hygiene scope of practice:

A Dental Hygiene Professional Practice Index by State, 2014.

Rensselaer, NY: Oral Health Workforce Research Center, Center for Health Workforce Studies, School of Public Health, SUNY Albany; March 2016

http://www.oralhealthworkforce.org/wp-content/uploads/2016/08/DH_Professional_Practice_Index_By_State_2014.pdf

- Also published in Health Affairs:

Expanded Scopes Of Practice For Dental Hygienists Associated With Improved Oral Health Outcomes For Adults. Health Aff (Millwood). 2016 Dec 1;35(12):2207-2215.

<http://content.healthaffairs.org/content/35/12/2207>

- Research team:

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Dental Hygiene Scope of Practice in the U.S.

- Improving population oral health requires a comprehensive oral health team
- Dental hygienists (DHs) primarily focus on preventive oral health services
- DH scope of practice (SOP) varies considerably by state in the U.S.
 - Does this variation matter?
- *Research question:* Does a more expansive SOP for DHs impact on oral health outcomes in the population?

Measuring Variation in DH SOP

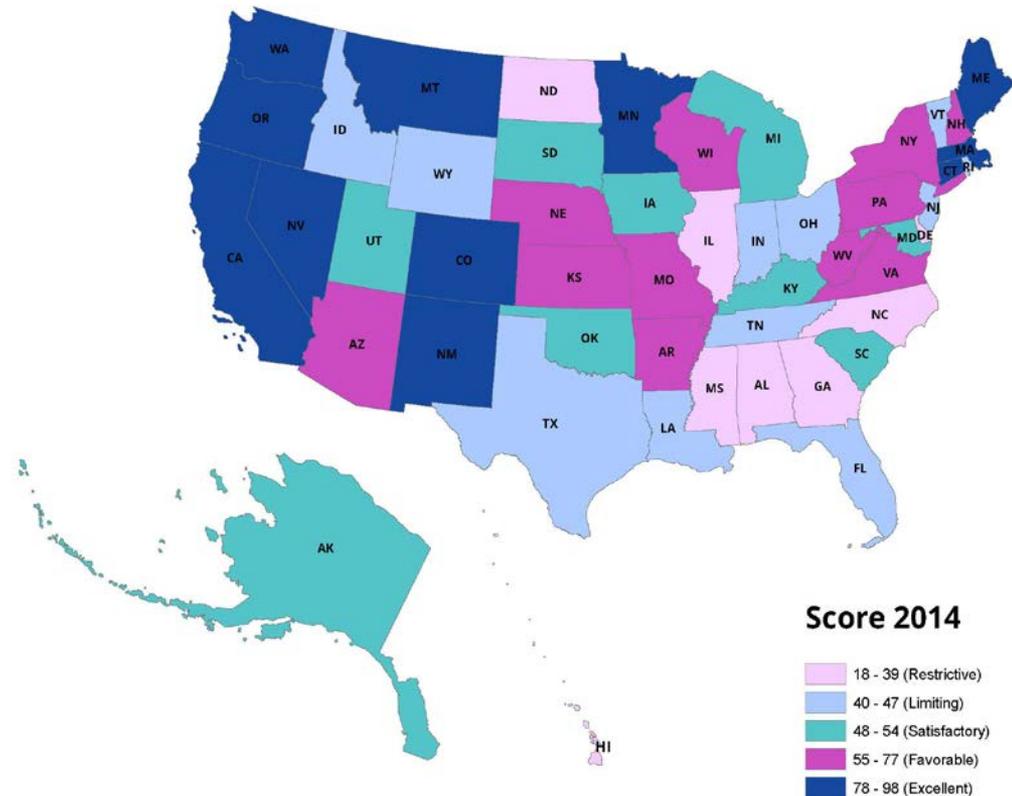
- Scope of practice (SOP) describes the legal practice environment for a health professional, including qualifications, allowable services, level of supervision, and settings where services can be provided
- The Dental Hygiene Professional Practice Index (DHPPI), a numerical scale that quantifies state-specific DH SOP, was developed in 2001
- Higher scores on the DHPPI are generally associated with a broader set of tasks, more autonomy (i.e. less direct oversight) and greater opportunity for direct reimbursement for dental hygienists
- State-specific DH SOP was scored using the DHPPI in 2001 and again in 2014

DHPPI Scale: Four Overarching Components

- Four components with multiple variables in each
- The total possible score in an “ideal” practice environment is 100
 - *Regulatory Environment* (max. 10 pts. – 4 variables)
 - *Levels of Required Supervision* (max. 47 pts. – 10 variables)
 - *Tasks Permitted* (max. 28 pts. – 13 variables)
 - *Reimbursement* (max. 15 pts. – 2 variables)
- The DHPPI scale was factor analyzed and determined to be statistically valid
- The index measures ‘possible’ not ‘actual’ practice
- Scoring involved a thorough review of statute and regulation governing dental hygiene practice in each state

Dental Hygiene Professional Practice Index (DHPPI) State Scores

- 2001 DHPPI 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 increased from 43.5 in 2001 to 57.6 in 2014



Does DH SOP Matter?

2014 Analysis

- Multilevel logistic modeling using:
 - 2014 DHPPI scores
 - Behavioral Risk Factor Surveillance System individual level data describing the oral health status of individuals in states
 - Controlled for state and individual level factors including community water fluoridation, demographic and socioeconomic factors
- *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

Does the 2001 DHPPI Work Over a Decade Later?

- Existing scale may not accurately assess **current** ideal practice for DHs
 - Historical scale based on the premise that lower levels of supervision would increase access to preventive oral health services
 - In some states the 2001 ideal has been nearly achieved
 - DH focus shifting to include expanded tasks and irremediable restorative services that require team based care and dental oversight or supervision

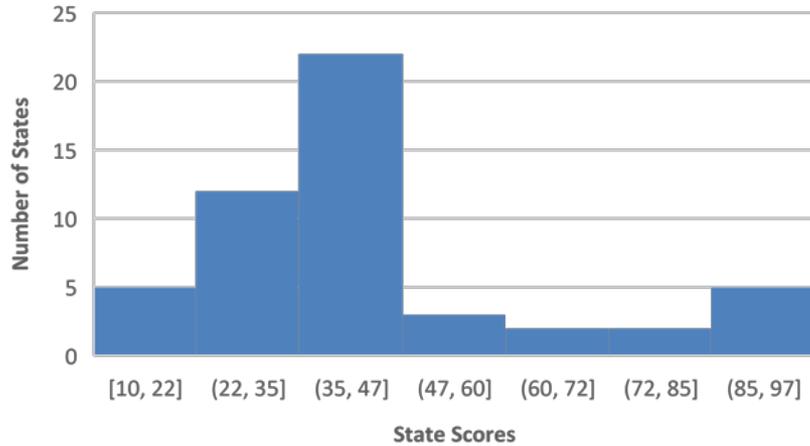
The 2016 DHPPI

- DHs now seen as oral health preventive specialists rather than only as a dental extender
 - More autonomous roles
 - Team based care
 - New technologies
 - New settings for care delivery
- Design process for the new DHPPI included a literature review and focus groups with dental hygienists
- Factor analysis again confirmed the integrity of the construct
- As expected, scores were lower on the new index
 - The variables include new workforce models including dental hygiene therapy, use of lasers, and some basic restorative tasks
- Currently in the process of analyzing the impact of SOP on outcomes using the most recent BRFSS

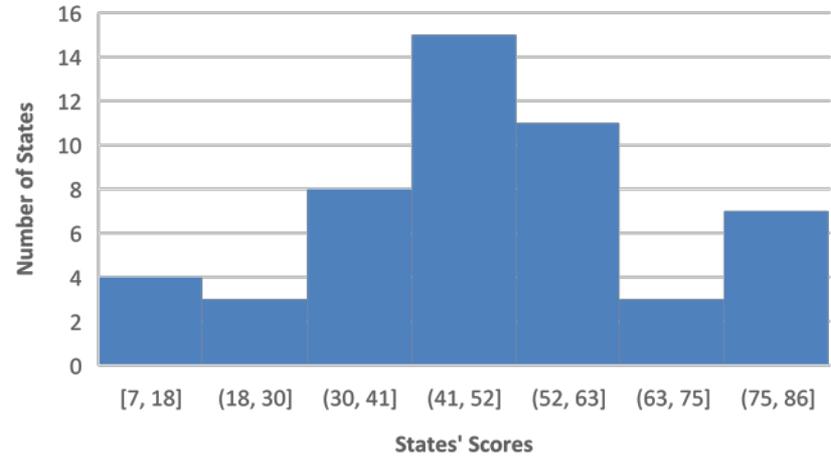
http://www.oralhealthworkforce.org/wp-content/uploads/2017/03/OHWRC_Dental_Hygiene_Scope_of_Practice_2016.pdf

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

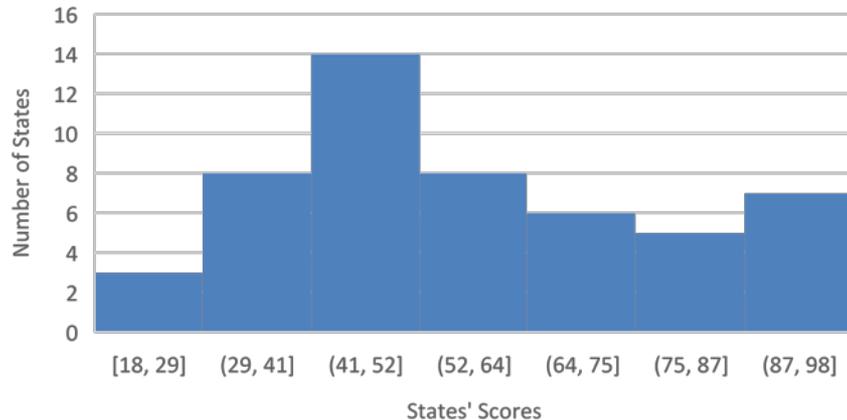
2001



2016



2014



High scoring states in 2014 tended to also be high scoring on the new index (eg ME, CO, CA, WA, NM have all been classified as excellent environments at each scoring)

Some states have been innovators in expanding practice opportunities for dental hygienists (eg VT now authorizes dental therapists who must be dental hygienists)

Others have taken an incremental approach to scope of practice (eg IA classified as satisfactory at each scoring)

Low scoring states tend to remain low scoring (eg GA, MS, NC classified as restrictive at each scoring)

Conclusion

- The DHPPI provides an objective, statistically valid measure for the professional practice environment for DHs
- Research confirms the professional practice environment of DH is linked to population oral health outcomes
- The updated DHPPI reflects the evolving roles for DHs
- Health professions regulation must be flexible enough to support innovation while still protecting patient safety and ensuring quality of care

Thank you

QUESTIONS?