

A Dental Hygiene Professional Practice Index by State, 2014

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Objective: The objectives of this study were to:

- Rescore the dental hygiene professional practice index (DHPPI) originally created in 2001 to quantify state specific dental hygiene scope of practice in 2014;
- Describe progression in permissions for dental hygienists to practice in public health settings; and
- Evaluate the impact of dental hygiene scope of practice on oral health outcomes in a state's population.

Design/Methods: Statutes and regulations governing the practice of dental hygiene in each state in 2014 were reviewed to rescore the DHPPI. Descriptive analysis was used to evaluate progression in scope of practice for dental hygienists in states between 2001 and 2014. Exploratory and confirmatory factor analyses validated that the four groupings of variables in the DHPPI were dimensions of a single overarching concept of dental hygiene scope of practice. Multilevel logistic modelling was completed to assess the impact of both state level contextual factors including dental hygiene scope of practice, the supply of dentists and dental hygienists in a state, community water fluoridation, urban/rural geography, and individual level demographics on oral health outcomes across states. The oral health outcome measure selected from the Behavioral Risk Factor Surveillance System (BRFSS) was having no teeth removed due to decay or disease.

Results: The review of the similarities and differences across states in the DHPPI scores for dental hygienists between the 2001 and 2014 DHPPIs found that:

- Scope of practice for dental hygienists broadened in many states between 2001 and 2014 but remained relatively unchanged in others.
- High-scoring states in 2001 continued to be high scoring in 2014.
- Some states made noticeable rather than incremental advances in dental hygiene scope of practice between 2001 and 2014.
- A few states lost ground in comparative ranking with other states between 2001 and 2014.
- Several lower-scoring states in 2001 showed little change in dental hygiene scope of practice in 2014.

The multi-level analyses of each of the DHPPI component categories (regulatory environment, supervision, tasks permitted, and reimbursement) and of the composite score in each state as well as individual and state level population data found that:

- The regulatory environment alone did not significantly impact oral health outcomes in 2001 but it was statistically significant in 2014.
- The supervision component exerted a positive and statistically significant effect in 2001 but not in 2014. Supervision exerted the strongest state level effect in the 2001 analysis.
- The tasks component was statistically significant in 2001 but not in 2014. Tasks exerted the strongest state level effect in the 2001 analysis.
- Reimbursement was significant in both 2001 and in 2014. Reimbursement exerted the strongest state level effect in 2014.

The patterning of results in the analysis of each state's composite score indicated that overall, the scope of practice of dental hygienists in states exerted a positive and significant effect on oral health outcomes, holding constant all other relevant factors. The effects were stronger in 2001 than in 2014.

Conclusions: The findings of this research suggest that dental hygienist scope of practice exerts an influence on oral health outcomes in a state's population. The areas of health promotion, risk assessment, and disease prevention are considered core competencies for dental hygienists who function as preventive oral health specialists and play an important role in the prevention of dental decay and disease. The DHPPI update revealed that the ideal practice environment envisioned in 2001 has nearly been achieved in some states and that dental hygiene practice has moved beyond recognized boundaries in that year. A new emphasis in states on enabling team based oral health service delivery and on expansion of allowable tasks for dental hygienists suggests the need to build a modified index to more appropriately measure emerging SOP for the profession.

Key Words: Oral Health, Dental Hygiene, Dental Hygienists

HWRC Website Link: http://www.oralhealthworkforce.org/wp-content/uploads/2016/03/DH_Professional_Practice_Index_By_State_2014.pdf