# Workforce Strategies to Improve Access to Oral Health Services

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## INTRODUCTION

In 2015, the Oral Health Workforce Research Center (OHWRC) conducted multiple studies to understand workforce strategies to improve access to oral health services.

These studies reviewed:

- The integration of primary care and oral health care services in federally qualified health centers
- The literature, secondary data, and regulation of dental assistants by state, with a focus on permissions for expanded functions
- The impact of scope of practice parameters for dental hygienists by state on oral health outcomes

Finding included that oral health providers and service delivery organizations employ various workforce strategies to increase capacity and enable access including:

- Using existing oral health workforce in expanded roles
- Engaging health care professionals with oral health screening and referral, especially in primary care settings
- Enabling new oral health workforce models with overlapping clinical competencies to improve access.
- Using team based approaches to oral health service delivery

## METHODS

The methodology varied by study.

Methods included:

- Review and summary of existing literature relevant to each topical area
- Use of case studies, focus groups, and individual interviews
- Analysis of primary and secondary data using cross tabulations, factor analyses, multivariate regression, and multi-level analyses.

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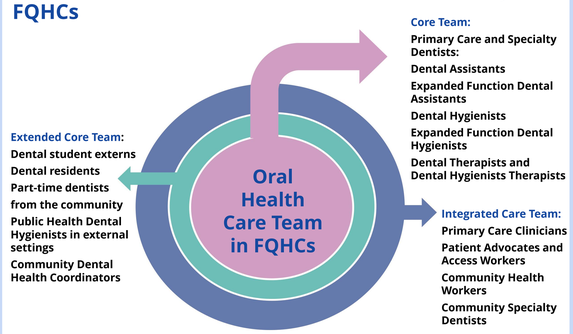
## RESULTS

### Integration of Primary Care and Oral Health Care Service Delivery in Federally Qualified Health Centers

FQHCs often use a team based approach to oral health service delivery.

- At the core are traditional providers, including dentists, dental hygienists (DHs), and dental assistants (DAs)
- Core teams are extended to include:
  - Primary care providers in the clinic, especially pediatricians,
  - Dental residents and student externs,
  - Part-time dentists from the community and
  - Affiliated DHs (many of whom carry expanded practice certifications) working in school oral health programs, mobile vans, nursing homes, or in primary care practices affiliated with the FQHC.

**Fig 1. Teams Used in Oral Health Service Delivery in FQHCs**




Oral health workforce strategies included:

- Hosting dental residents and dental student externs in clinical rotations at the FQHC
- Encouraging private-practice dentists from the local community to work on a part-time basis at the dental clinic
- Recruiting dentists through state and federal loan repayment programs
- Enabling DAs and DHs to obtain further training that supports expanded capabilities
- Employing new categories of oral health professionals recognized by the state in which the FQHC was located

### The Dental Assistant Workforce In the US, 2015

- Entry level requirements to dental assisting practice vary widely in states with on the job training still permitted in many.
- More than 40 different titles are used by states to describe the dental assistant workforce.
- All but 2 states have dental practice acts and/or regulations that either implicitly or explicitly recognize more than 1 level of dental assistant practice.
- State that permit extended functions are explicit about educational and experience requirements to perform preventive, restorative, and orthodontic services for patients..
- The most common extended functions permitted to dental assistants are coronal polishing , fluoride and sealant application, and application of topical anesthetics.
- Utilization of expanded function DAs provides dentists with the opportunity to provide more complex services while dental auxiliaries provide low to medium technology services.
- A barrier to the increased use of extended function dental assistants is the variation in pathways to practice and in allowable tasks across states.

## RESULTS (cont.)

### A Dental Hygiene Professional Practice Index by State, 2014

- In 2001, a numerical scope of practice index for the dental hygiene profession called the Dental Hygiene Professional Practice Index (DHPPI) was developed to score variation in scope of practice across states.
- The range of possible composite scores was 0 to 100.
- Higher scores on the DHPPI were associated with greater autonomy for dental hygienists to provide oral health services in public health settings in states.
- In 2014, researchers from the OHWRC rescored state-specific scope of practice for dental hygienists in 2014.
- Exploratory and confirmatory factor analyses validated that the four groupings of variables in the DHPPI were dimensions of a single overarching concept of scope of practice.
- Multilevel logistic modeling using the DHPPI scores found that scope of practice in a state is positively correlated with population oral health outcomes.
- In the multilevel modeling equations the DHPPI exerted a positive and significant impact on the oral health outcome in the population of having no teeth removed due to decay or disease, holding constant all relevant state and individual level factors in both 2001 ($p<.001$) and in 2014 ($p=.011$).

**Table 1. DHPPI Scores by State, 2001 and 2014**

| State | Total Composite Score 2001 | Total Composite Score 2014 | State | Total Composite Score 2001 | Total Composite Score 2014 | State | Total Composite Score 2001 | Total Composite Score 2014 |
|---|---|---|---|---|---|---|---|---|
| Alabama | 18 | 18 | Kentucky | 18 | 53 | North Dakota | 32 | 36 |
| Alaska | 35 | 54 | Louisiana | 41 | 40 | Ohio | 38 | 43 |
| Arizona | 45 | 75 | Maine | 56 | 98 | Oklahoma | 31 | 49 |
| Arkansas | 27 | 60 | Maryland | 36 | 49 | Oregon | 88 | 96 |
| California | 86 | 95 | Massachusetts | 34 | 82 | Pennsylvania | 42 | 71 |
| Colorado | 97 | 97 | Michigan | 35 | 54 | Rhode Island | 33 | 40 |
| Connecticut | 75 | 83 | Minnesota | 64 | 85 | South Carolina | 45 | 51 |
| Delaware | 32 | 36 | Mississippi | 15 | 18 | South Dakota | 42 | 53 |
| District of Columbia | 32 | 41 | Missouri | 74 | 74 | Tennessee | 39 | 43 |
| Florida | 33 | 41 | Montana | 41 | 89 | Texas | 41 | 42 |
| Georgia | 23 | 24 | Nebraska | 44 | 77 | Utah | 53 | 48 |
| Hawaii | 32 | 39 | Nevada | 65 | 78 | Vermont | 39 | 47 |
| Idaho | 45 | 45 | New Hampshire | 39 | 69 | Virginia | 17 | 68 |
| Illinois | 36 | 39 | New Jersey | 37 | 40 | Washington | 96 | 94 |
| Indiana | 37 | 42 | New Mexico | 86 | 87 | West Virginia | 10 | 70 |
| Iowa | 36 | 51 | New York | 50 | 57 | Wisconsin | 44 | 58 |
| Kansas | 39 | 63 | North Carolina | 29 | 33 | Wyoming | 34 | 42 |

### New and Expanded Workforce Models Permitted in Some States to Improve Access to Oral Health Services

| Type | Dental Assistants | Expanded Function Dental Assistants | Community Dental Health Coordinators | Dental Hygienists | Public Health Dental Hygienists | Dental Therapists (Intl.) | Dental Health Aide Therapists (AK) | Dental Therapists (MN) | Advanced Dental Hygiene Practitioners | Advanced Dental Therapists (MN) | Dental Hygiene Therapist (ME) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Patients Served** | All | All | Underserved | All | Underserved | Varies | Underserved | Underserved | Underserved | Underserved | Underserved |
| **Practice Settings** | All | All | Public Health | All | Public Health | Varies | Public Health | Public Health | Public Health | Public Health | Public Health |
| **Supervision** | | | | | | | | | | | |
| Personal | X | X | | | | | | | | | |
| Direct | X | X | X | X | X | | | X | | | X |
| Indirect | X | X | X | X | X | X | | X | | | |
| General | X | Rarely | X | X | X | X | X | X | | X | |
| Remote | | | X | | X | X | X | | | X | |
| Public Health/ Collaborative | | | | | X | X | | X | X | X | X |
| Unsupervised | | | | | X | | | | X | | |
| Independent | | | | | X | | | | X | | |
| **Scope** | | | | | | | | | | | |
| Preventive | Some[a] | Some[a] | Some[a] | X | X | Some[a] | Some[a] | Some[a] | X | X | X |
| Restorative | | Some Basic[b] | | Some Basic[b] | Some Basic[b] | X | Some Basic[b] | Some Basic[b] | Some Basic[b] | Some Basic[b] | Some Basic[b] |
| Educational | X | X | | X | X | X | X | X | X | X | X |
| Care Management | | | | | X | X* | X* | | X | X* | X |
| Palliative | | | | | | X | | | X | X | X |
| **Education** | | | | | | | | | | | |
| None Required | X | | | | | | | | | | |
| Continuing Education | X | X | | | | | | | | | |
| Diploma/ Certificate | X | | X | | | X | X | | | | |
| Associate | X | | | X | X | X | | | | | |
| Bachelor's | | | | X | X | X | | X | | | X |
| Master's | | | | | X | | | | X | X | |
| **Licensed** | In some states[c] | No | No | Yes | Yes | By Country | No - DTs are regulated by a Federal Program | Yes | Yes | Yes (2 licenses DH and DT) | Yes (2 licenses DH and DT) |
| **Registered** | In some states | In some states | No | Yes | Yes | | | | Yes | Yes | Yes |
| **Certified** | Optional | Optional | | | | | Yes | | | | |

[a] Some preventive services may include coronal polishing, sealant application, and fluoride varnish application.
[b] Basic restorative may include temporizing decay with GIC, pulpotomies on primary teeth, filling primary and secondary teeth, stainless steel crowns, etc.
[c] A very few states license dental assistants who are usually required to meet certification requirements to apply for licensure.

## CONCLUSIONS

- A well trained, flexible workforce is essential to increase access to oral health services, especially for the underserved.
- Local innovation in oral health service delivery is enabled by state workforce policy that allows for expanded use of allied oral health professionals.
- Using team based models for oral health service delivery appears to improve access to services and to increase capacity especially in settings where resources are limited.
- Engaging a broad range of health and oral health professionals with competencies in motivational interviewing, case management, education, and prevention, screening and treatment services is necessary to improve population oral health outcomes.