

DRIVING THE FUTURE

OF ORAL HEALTH

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GILLINGS SCHOOL OF
GLOBAL PUBLIC HEALTH

North Carolina
Institute for
Public Health



NC DEPARTMENT OF
**HEALTH AND
HUMAN SERVICES**
Division of Public Health

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ABOUT THE ASSESSMENT

The Oral Health Section (OHS) of the North Carolina Division of Public Health (NCDPH), through funding from the U.S. Health Resources & Services Administration, has a multi-year project to strengthen the oral health workforce within North Carolina's safety net system through the provision of trainings and professional development programs. In partnership with the North Carolina Institute for Public Health (NCIPH) at the UNC Gillings School of Global Public Health, this initial training needs assessment was conducted to identify training and other support needs in the areas of dental public health practice and leadership. The data from the assessment will be used to guide future professional development offerings from OHS including conferences, trainings and a planned leadership institute.

The North Carolina Institute for Public Health and the Oral Health Section of the North Carolina Division of Public Health would like to acknowledge the dentists, dental hygienists, physicians, nurses and other health care professionals who took time from their busy schedules to respond to this assessment as well as those who served in advisory roles. We appreciate the time they invested to provide information that will help drive the future of oral health care in North Carolina

The assessment instrument, conducted as an online survey, was developed by OHS and NCIPH and was piloted by a small group of oral health professionals. The survey link was distributed through multiple channels including oral health and public health associations, newsletters and academic institutions. (See Appendix 1 for a list of distribution channels.) While the focus was on professionals in safety net settings such as public health departments and community health centers, an effort was made to include private dental practices. Responses were sought from both oral health providers as well as safety net medical providers in order to gain an understanding of relationships/partnerships between these providers.



The assessment gathered information on respondents' current professional role, their role within their agency and demographic information. Respondents were also asked questions related to professional development preferences. The majority of the assessment focused on questions related to respondents' current and future training needs around broader, cross-cutting strategic skills that are needed to help address larger, complex system-level issues that extend beyond typical clinical skills. Respondents were asked to rate items in terms of their current skill level and the importance to their current work and future work.

Responses were received from 55 of the 100 counties in North Carolina. There were 266 total responses to the survey. Of these 266 respondents, approximately 60% (n=160) fully completed the survey. To ensure that the survey results included the most meaningful responses, respondents who answered at least one question beyond the initial section of the survey were included. Using this threshold, the analysis included 241 informative responses, approximately 91% of the total responses to the survey. Note: Inferences and interpretations of these data should consider the potential limitations of the data collected, in particular, the proportion of the workforce who did not respond, given that respondents represent only ~2% of the total oral health workforce in North Carolina*.

WHO TOOK THE SURVEY?

PROFESSIONAL OCCUPATIONS

A majority of respondents were either dental hygienists (27%) or dentists (26%), followed by nurses (25%) and dental assistants (7%). Among the other options specified, many were administrative positions such as medical/dental office assistant or manager.

EDUCATIONAL DEGREES

Of the 126 dentists and dental hygienists, the highest degrees earned were doctoral degree (50%), followed by associate degree (37%), baccalaureate degree (10%) and master's degree (4%). Overall, 14 of the 126 dentists and dental hygienists (11%) had earned an MPH, MSPH or other public health degree.

*2017 data from the North Carolina Health Professionals Data System at the Cecil B. Sheps Center at UNC-Chapel Hill showed active, in-state dentists (5,112) and hygienists (6,153).



EMPLOYING AGENCY

For dentists and dental hygienists, the majority of dentists worked in local health departments (LHDs) or federally qualified health centers (FQHCs) (68% cumulatively) while the majority of dental hygienists worked in private practice (44%).

For medical professionals, the majority of physicians worked in FQHCs (67%) while the majority of physician assistants (75%) and nurses (85%) worked in LHDs.

ROLE WITHIN AGENCY

Among dentists, dental hygienists and dental assistants, 93% reported having some role in clinical services, 56% reported administrative/ management/leadership roles and 47% reported a role in teaching and instruction. All oral health professionals reported serving multiple roles within their agencies.

Dentists	Dental Hygienists	Dental Assistants
1-6 roles	1-6 roles	1-3 roles
2.7 average # roles	2.8 average # roles	1.9 average # roles

DEMOGRAPHICS

Demographic information was only captured for respondents who completed the survey (n=160). Of these 160 respondents:

- 89% were female
- 43% were between 30-44 years of age and 39% were 50 years or older
- 93% were non-Hispanic/Latinx

Of the 151 respondents who chose to answer the question regarding race, 86% were white, 11% were black and 4% were Asian.

KEY FINDINGS: ORAL HEALTH PROFESSIONALS

Oral health professionals (dentists, dental hygienists, and dental assistants) were presented with a set of questions related to both strategic and technical skills and asked to rate their responses based on three questions:

1. How important is this item in your day-to-day work?
2. How important do you think this item will be for your day-to-day work in 3-5 years?
3. What is your current skill level for this item?

These data were then compared to identify areas with the highest skill gaps – areas identified as high importance but low current skill.

STRATEGIC SKILLS

The individual strategic skill questions (n=39) comprise specific knowledge, skills or attitudes that, in combination, can build toward the more complex skill sets embodied within eight overarching strategic skill domains. (A full list of all strategic domains with accompanying definitions is provided in Appendix 2.) Strategic skills can provide a clearer path toward the development of specific training or supports to address identified needs. The highest skill gaps for individual strategic skills are provided below along with the overarching domain.



Top Strategic Skill Gaps

Domain	Strategic Skill	Rank
Systems Thinking	Identify funders, including unconventional partners, whose missions match with those of your agency/partners	1
Change Management	Effectively communicate organizational change to external stakeholders	2
Change Management	Effectively communicate organizational change within your organization	3
Problem Solving	Monitor and evaluate results of new and ongoing interventions and strategies	4
Systems Thinking	Convene entities with diverse, relevant expertise to establish collective goals	5

Additional takeaways:

- Around 45%* of oral health professionals indicated that each of the individual strategic skills are very important in their day-to-day work; 11 skills were ranked as very important by >75% of respondents.
- The Policy Engagement domain had the lowest ranking of perceived current and future importance.
- The Persuasive Communication and Diversity and Inclusion domains had the highest ranking of current importance.

TECHNICAL SKILLS

Oral health professionals also responded to questions about technical skills that were tailored to their particular occupational role (e.g., dentist, dental hygienist) as well as cross-cutting skills that were asked of all professionals.

*The one exception was a skill question related to quality improvement (QI) processes which was perceived as very important by only 24% of respondents.

Top technical skill gaps

Cross-cutting Skills (Dentists, Dental Hygienists, Dental Assistants):

1. Knowledge and awareness of evidence-based dental public health interventions.
2. Developing and implementing evaluation strategies.
3. Advocate on behalf of community health concerns.

Dentists:

1. Screening/prevention strategies for substance use.
2. Practice management skills (e.g., billing, supply ordering, scheduling success).
3. Manage referrals and follow-up for non-oral health needs, including ability to communicate effectively with non-oral health professionals.

Dental Hygienists:

1. Advocate for oral health in the organization and the community, including community water fluoridation.
2. Demonstrate knowledge and understanding of agency and community resources in order to make referrals for non-oral health needs.
3. Provide oral health services in community settings (e.g., schools, residential facilities, mobile units).

Dental Assistants:

All skills were tied for importance and none were identified as low skill.

PUBLIC HEALTH 3.0

Oral health professionals were given a brief definition of Public Health 3.0 and were asked to rate their awareness and the importance of this model for their current and future work. While respondents indicated that this concept was important to both their current (75%) and future (94%) work, they also indicated a very low level of current awareness of the topic (88% unaware/somewhat aware).

Public Health 3.0, Defined*

Public Health 3.0 refers to a new era of enhanced and broadened public health practices that involves engaging multiple sectors and community partners to generate collective impact and improve social determinants of health.

*Office of the Assistant Secretary for Health, U.S. Department of Health and Human Services. Public Health 3.0: A call to action to create a 21st century public health infrastructure.

WORKING WITH VULNERABLE POPULATIONS

Dentists, dental hygienists, and dental assistants were also asked questions regarding provision of care to vulnerable populations. Of the 75 respondents:

- More than $\frac{3}{4}$ provide services to children, Medicaid beneficiaries, pregnant women and people with intellectual and/or developmental disabilities.
- One-half to $\frac{3}{4}$ provide services to individuals with behavioral health or substance abuse, individuals with HIV/AIDS and people with multiple co-morbidities.
- One-third serve elderly populations in institutional settings.

If respondents indicated they did not serve particular population(s) they were asked why not. Twenty-six percent indicated that their practice was limited to children and others noted reimbursement/payment issues (14%).

These oral health professionals were asked about their comfort level in serving various vulnerable populations:

- Two-thirds or more were very comfortable providing services to pregnant women, Medicaid beneficiaries, children and people with HIV/AIDS.
- Over half indicated they were somewhat uncomfortable to somewhat comfortable providing services to individuals with intellectual and developmental disabilities, behavioral health or substance abuse issues, multiple co-morbidities or elderly populations in institutional settings.

For those that were uncomfortable providing services to a particular population (n=43), 70% indicated that understanding clinical treatment guidelines/best practices and strategies to address potential behavioral issues would make them more comfortable serving these populations. Additionally, 56% indicated connecting to an expert to ask questions would make them more comfortable serving these populations.

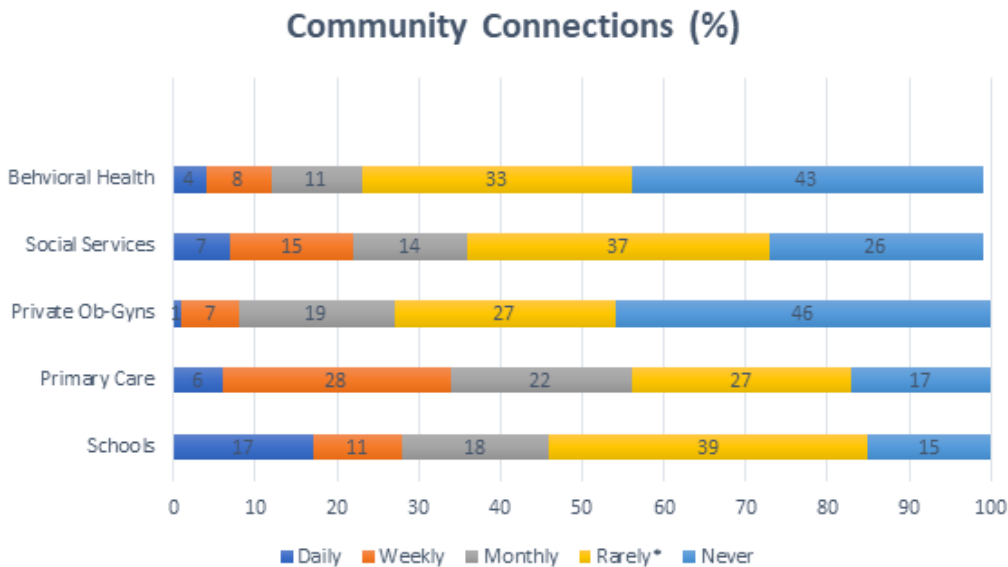
Oral health professionals were asked about their attitudes and beliefs in serving others. More than 84% strongly agreed that they were deeply motivated to improve the lives of others through their work, that their personal values were aligned with their work and career and that people in their roles had a responsibility to provide care to underserved individuals.

When asked about the impact of dental school in preparing them for dental public health practice:

- About 1/3 strongly agreed that dental school prepared them to treat patients from socioeconomically disadvantaged backgrounds and from ethnic/racial groups different than their own.
- Around half of respondents agreed that school prepared them to understand the barriers that individuals and families face in accessing dental care or the role of the safety net in providing care to underserved and vulnerable populations.

COMMUNITY CONNECTIONS

Dentists and hygienists were also asked how often they connected to other providers and agencies in their communities:



*Rarely = several times per year to once a year



KEY FINDINGS: MEDICAL PROFESSIONALS

Medical professionals were included in the survey primarily as a means of assessing basic practices around oral health issues that arise in seeing patients, knowledge and understanding of community oral health resources and advocacy around oral health.

Top Technical Skill Gaps

Technical Skill	Rank
Advocate for oral health in the organization and the community, including community water fluoridation.	1
Practical strategies to better integrate oral health with clinical care.	2
Demonstrate knowledge and understanding of agency and community resources in order to make oral health referrals.	3

TRAINING SUPPORTS AND RESOURCES

One section of the survey asked respondents about why, how and where they accessed training.

MOTIVATION

For all respondents the three highest motivators for seeking out training were personal growth/interest, staying up-to-date in their field and maintenance of licensure.

TRAINING PROVIDERS

For oral health professionals, respondents were most familiar with the American Dental Association (75%), local AHECs (58%), the Adams School of Dentistry at UNC-Chapel Hill (55%) and the N.C. Dental Society (53%) as sources of oral health training.

For medical professionals, only local AHECs were cited as very familiar resources by more than half of respondents (53%).

Around 2/5 of all respondents indicated they had taken a training from a local AHEC within the last two years.



DELIVERY METHODS

Oral health respondents preferred training delivered via conferences (65%), online courses (55%) and webinars (47%).

Medical professionals preferred training delivered via conferences (55%), one-to-two day intensive training sessions (50%), online courses (45%) and webinars (44%).

BARRIERS

All respondents cited that the top three barriers to accessing trainings were challenges with taking time off work (65%), cost (57%) and lack of adequate staffing to cover absences (39%).

TRAINING SUPPORTS

The most common training supports reported were coaching (48%) and non-monetary rewards/recognition (44%). Respondents also were given the opportunity to write in responses, and many of these included specific clinical and practice management skills.

Sixty-five percent of respondents overall and 82% of oral health respondents expressed interest in participating in a peer network defined as a learning community to share knowledge, ask questions and connect with other providers.

DISCUSSION

While the assessment touched a relatively small number of oral health and medical professionals in North Carolina, it does provide useful data to help inform future professional development opportunities in both strategic skills areas as well as technical skills areas, in particular those that address specific vulnerable populations. There are also opportunities to potentially provide information/training to medical providers that could further connections between oral health and medical providers to better support oral health care in communities.



APPENDIX 1: DISTRIBUTION CHANNELS FOR THE ASSESSMENT

- N.C. Community Health Center Association
- N.C. Local Health Directors Listserv
- Oral Health Section of the North Carolina Division of Public Health
- UNC Dental Preceptors List
- East Carolina University School of Dental Medicine
- N.C. Public Health Association full membership and young professionals list
- N.C. State Board of Dental Examiners
- N.C. Oral Health Collaborative
- N.C. Dental Society Newsletter
- N.C. Public Health Nursing Directors and Supervisors lists
- NCIPH social media outlets – LinkedIn, Facebook and Twitter

APPENDIX 2: STRATEGIC SKILL SETS

The strategic skill sets used in this assessment are adapted from *Building Skills for a More Strategic Public Health Workforce: A Call to Action*, a 2017 report issued by the National Consortium for Public Health Workforce Development*.

Change management means scaling programs up and down or changing them entirely in response to the environment and identifying core elements to help sustain programs in challenging times.

Communicating persuasively is the ability to convey a message that resonates with audiences outside of oral health. Oral health initiatives are fully effective when they engage partners, the general public, the media and policy makers.

Data analytics are the skills to leverage, synthesize and analyze multiple sources of electronic data and use informatics to identify health priorities, select appropriate evidence-based approaches to address those priorities and determine the effectiveness in reducing costs or improving health outcomes.

*de Beaumont Foundation. (2017). *Building Skills for a More Strategic Health Workforce: A Call to Action*. Retrieved from <https://www.debeaumont.org/news/2017/building-skills-for-a-more-strategic-health-workforce-a-call-to-action/>.



Diversity and inclusion go hand-in-hand. Diversity reflects the changing demographics of the U.S. population and the oral health workforce itself. Inclusion is the effort to fully incorporate workers representing diverse populations into health solutions. Together, they enable agencies to better relate to the populations they serve (including ones at higher risk of adverse health outcomes), provide a larger recruitment pool and improve employee retention.

Problem solving is a key component of the 10 essential public health services, continuous quality improvement and performance management. It includes the ability to determine the nature of a problem, identify potential solutions, implement an effective solution and monitor and evaluate results.

Resource management skills are for the acquisition, retention and management of people and fiscal resources.

Systems thinking emphasizes looking at patterns and relationships to understand the systems contributing to problems at a population level and identifying high-impact intervention options.

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