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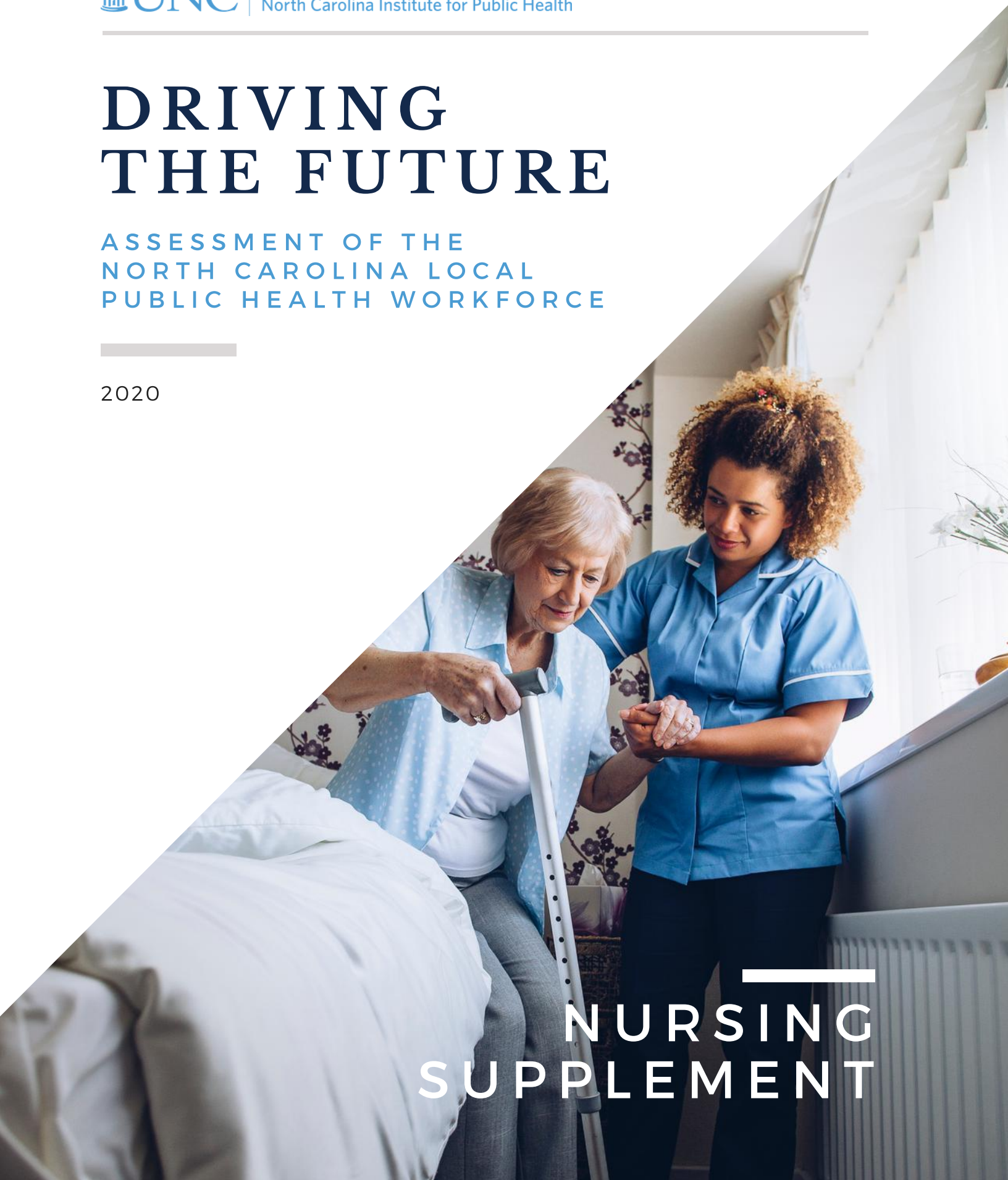
North Carolina Institute for Public Health

DRIVING THE FUTURE

ASSESSMENT OF THE NORTH CAROLINA LOCAL PUBLIC HEALTH WORKFORCE

2020



NURSING SUPPLEMENT

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INTRODUCTION

This report is a supplement to the larger assessment report, and examines the education, skills, employment, and training needs of public health nurses specifically through additional available data. Nurses are a vital component of the workforce at local health departments. They are key to providing preventative and routine care, family planning support, testing for sexually transmitted infections, responding to outbreaks, providing maternal and child health care, and administering the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

Staff from all 84 North Carolina local health departments were able to take the survey, and a total of 2,116 responses came from 82 North Carolina local health departments. For a more detailed discussion of methods and limitations, please see Appendix A: Methods and the full report Driving the Future: Assessment of the NC Local Public Health Workforce.

Driving the Future: Assessment of the NC Local Public Health Workforce was developed to identify current and future training needs of North Carolina local health department professionals. The assessment was designed to meet the following goals:

- *To identify current and future critical training needs of North Carolina local health department professionals in traditional public health skill areas and those skills needed to help address larger and complex system-level issues that extend beyond the bounds of traditional public health disciplines;*
- *To collect granular and actionable data and information to help inform the development of learning opportunities;*
- *To aid North Carolina local health departments in identifying staff developmental needs, informing agency training plans and making strategic plans to respond to evolving public health needs; and*
- *To inform professional development organizations in program and education planning.*

THANK YOU TO OUR PARTNERS

In developing *Driving the Future*, the core group of partners reached out across the state (see Appendix) to solicit input into the development of the survey as well as to pilot-test earlier versions of the survey. In addition, the distribution of *Driving the Future* was supported by numerous organizations and individuals who encouraged participation and served as local champions. We are very grateful for their engagement and efforts.

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NC Institute for Public Health
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NCPH
North Carolina Public Health

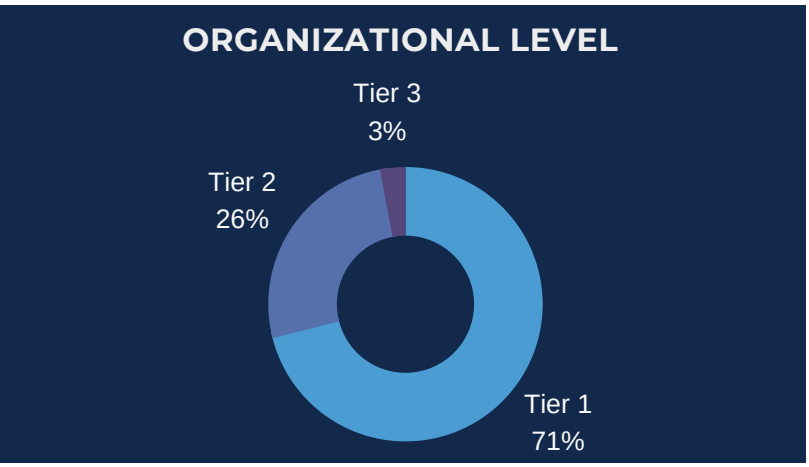
Local Technical Assistance and Training Branch
Division of Public Health
NC Department of Health and Human Services

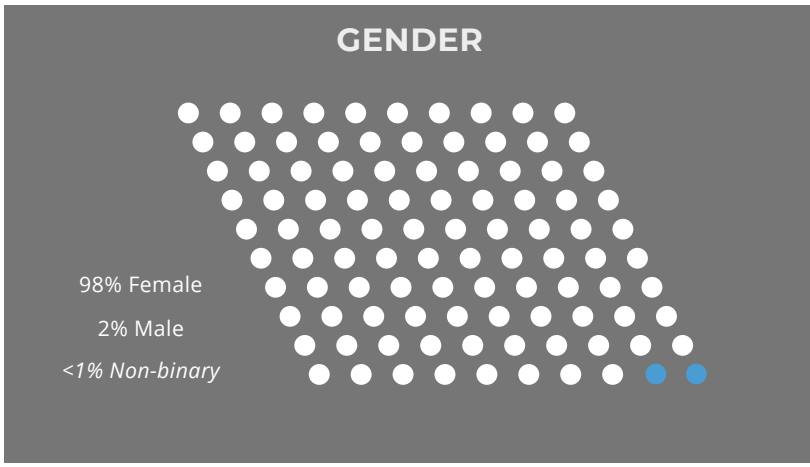
with funding and partnership from the North Carolina AHEC Program

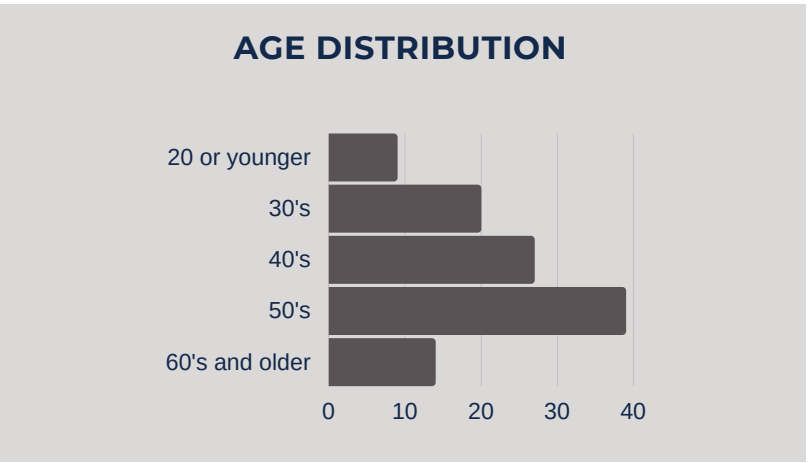
NORTH CAROLINA AHEC

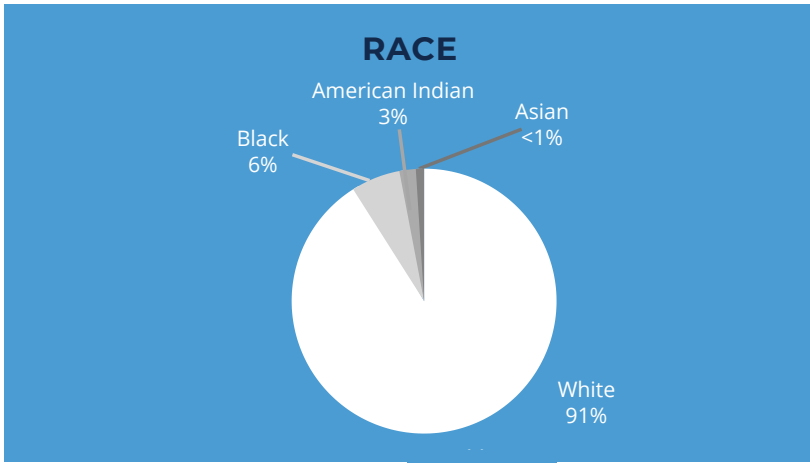
NURSES WHO TOOK THE SURVEY

A total of 643 nurses responded to the survey, with 594 answering enough questions to be included in the analysis. The responses were divided into three Tiers by organizational role: Tier 1 included non-supervisor nurses, Tier 2 was made up of supervisory or managerial nurses, and Tier 3 was senior nursing leaders.









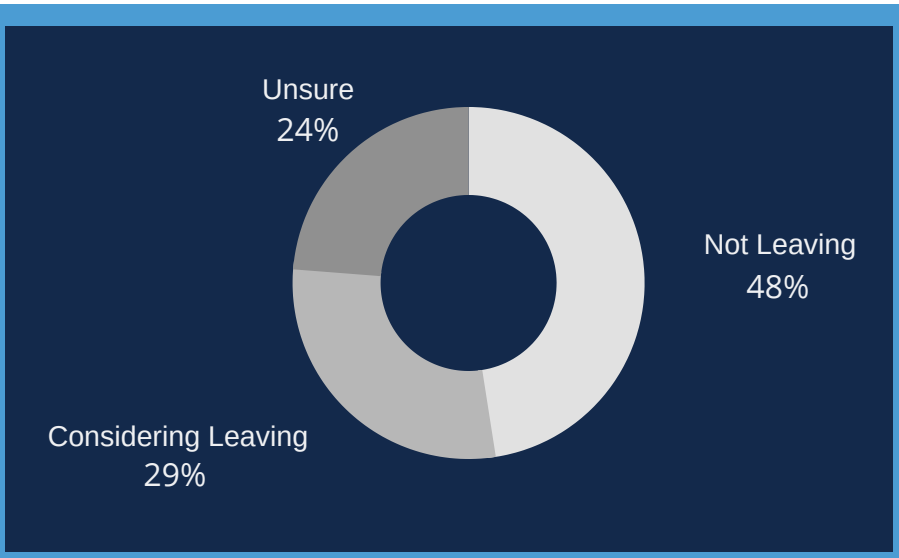
Among the nurse respondents, females made up over 98% of respondents, which was consistent across all Tiers and similar to the demographics in the full report. The only male respondents were in Tier 1. Overall, 98% of respondents reported non-Hispanic/Latinx ethnicity. Nurse respondents skewed slightly less diverse than the overall public health workforce, of which 80% identified as white.

The highest percentage of the respondents were between 45-64 years of age (63%), which is similar to the overall workforce. As might be expected, Tier 1 respondents tended to be younger than Tier 3 respondents, however the majority (60%) were still between 45-64 years of age. This finding suggests that recruitment and retention of younger nurses will be important in maintaining an adequate public health nurse workforce.

EMPLOYMENT, EXPERIENCE, AND FUTURE PLANS

Similar to the workforce as a whole, the vast majority of nurses are employed full-time at their health department (96%). Those nurses that did report part-time employment were all in Tier 1. Participants were also asked about their time in their current position as well as with their current agency and their future plans.

The average number of years in current position across all three Tiers was 6.6 years, with the average year with current agency at 10.15 years and the average years in public health practice as 12.6 years. Years with agency and years in public health practice increased with each Tier. Participants were asked about whether they were considering leaving their organization within the next 5 years and if so, why.



OF THOSE CONSIDERING LEAVING THEIR ORGANIZATION IN THE NEXT FIVE YEARS,

~1/4 **Planned to retire**

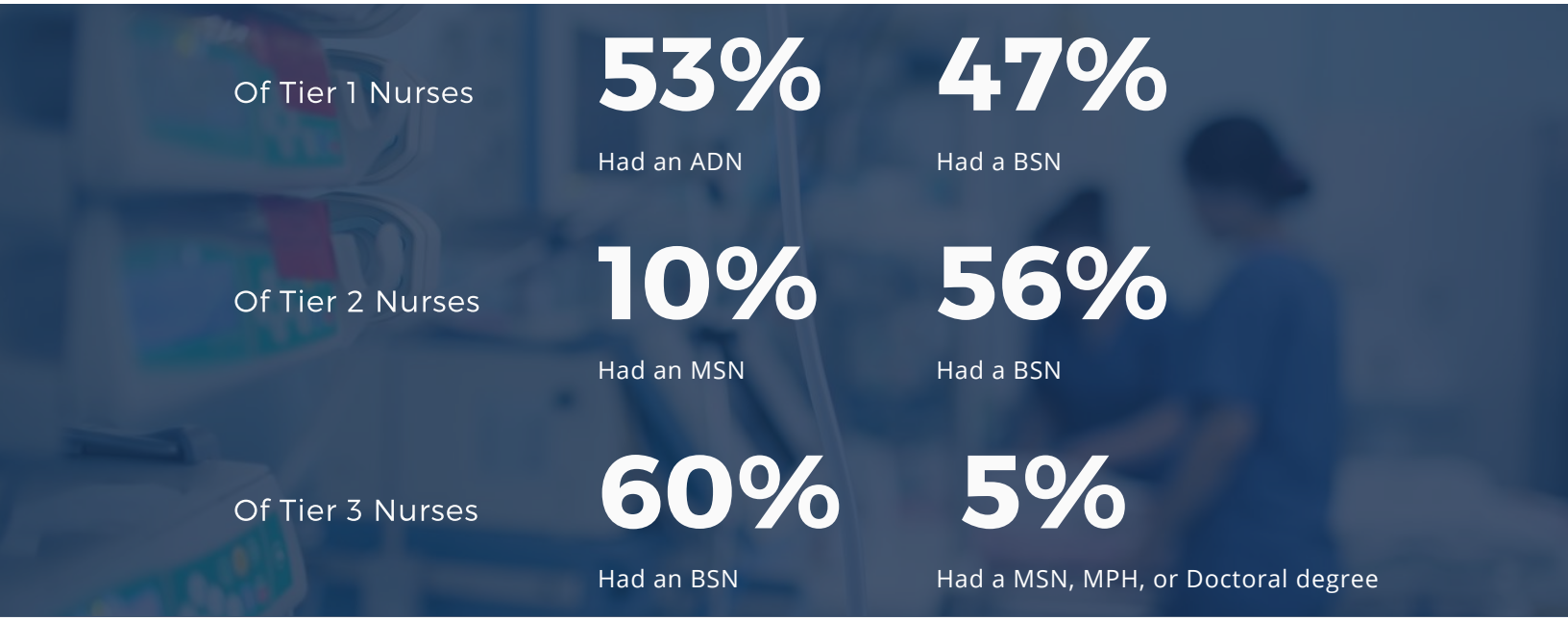
~1/4 **Planned to take another job**

Pay, work overload/burnout, lack of opportunities for advancement and stress were cited as reasons to leave.

KEY FINDINGS

EDUCATION, CERTIFICATIONS AND ROLES

Respondents answered questions related to their degrees and certifications earned, and their roles and program areas within their organization. Overall, the most common degrees were BSN (46%) and ADN (45%), with fewer obtaining a diploma (6%), MSN (6%), MPH (1%), or Doctoral degree (1%).



The nurses reported over 15 different certifications, with three quarters of the nurses holding an RN certification. The next most common nursing certification was NC Enhanced Role Nurse (13%), followed by school nursing certification (7%), certification as an Advanced-Practice Practitioner (4%), and Licensed Practical Nurse (3%). Three percent reported having Certification in Public Health, and a variety of other certifications were reported by 8% of the nurse respondents. When looking at the data by Tier, these certifications are fairly consistent, although there is a wider array of certifications among the Tier 1 nurses.

The most common roles cited as either primary or secondary for nurses were

CLINICAL SERVICES	MATERNAL AND CHILD HEALTH	HEALTH PROMOTION/ WELLNESS EDUCATION	ADMINISTRATION IN MANAGEMENT/ LEADERSHIP
61%	40%	31%	40%

More than three-quarters of the nurses reported having at least 2 roles within the health department, as compared to ~2/3 for the overall workforce. Twenty-five percent reported four or more roles. The average number of roles by respondents was 3.7, with a range from 1-17 (all roles).

KEY FINDINGS

STRATEGIC SKILLS DOMAINS

Nurses were asked questions about strategic skills (See Appendix C: Skills) including the relevance of skills to their current and future work as well as their current level of skill. Skills were adapted from Building skills for a more strategic public health workforce: A Call to Action published by the National Consortium for Public Health Workforce Development [1]. Data were compared to identify areas with highest skill gaps – areas identified as high importance but low current skill.

HIGHEST SKILL GAP (HIGH IMPORTANCE + LOW SKILL)			
RANK	TIER 1	TIER 2	TIER 3
1	Change Management	Resource Management	Data Analytics
2	Data Analytics	Data Analytics	Policy Engagement
3	Policy Engagement	Policy Engagement	Diversity & Inclusion

Tier 1 Nurses

- At least 70% of Tier 1 nurses thought each of the 8 strategic skill domains were important to day-to-day work now and increasing in importance in the future.
- Persuasive Communication was the most important strategic skill now and in the future but has a lower skill gap. This matches with the Tier 1 workforce as a whole.
- Change Management is the area with the lowest current skill, which matches with the Tier 1 workforce as a whole. Fifty-one percent reported current skill level as beginner or lower.

Tier 2 Nurses

- At least 86% of Tier 2 nurses thought that each of the strategic skill domains were important to their day-to-day work.
- Systems Thinking was ranked as the most important skill domain for future work. Thirty-eight percent identified their current skill level as beginner or lower.
- Resource Management was the least developed skillset, which reflects the same findings from Tier 2 as a whole. Sixty percent reported a beginner or lower current skill level.

Tier 3 Nurses

- At least 67% of the Tier 3 nurses thought that each of the strategic skill domains were important to their day-to-day work.
- Systems Thinking was the most important skillset for future work but also had the highest reported skills with 91% reporting proficient or expert skill level.
- Similar to Tier 3 as a whole, Data Analytics was the least developed skillset. Twenty-nine percent of nurses reported a current skill level of beginner or lower.

INDIVIDUAL STRATEGIC SKILLS

Nurses were also asked about specific skills within each strategic domain, and again asked to rate the current importance, future importance, and current ability to perform the skills. These questions were asked to all nurses, regardless of Tier. The top 10 skills noted as highly important for current work but currently low in skill level are shown below. The highest needs draw from across all domains, not just those in the domains of highest need noted earlier.

TOP 10 SKILL GAPS ACROSS ALL STRATEGIC DOMAINS-NURSES

Rank Nurses	Rank Overall	Knowledge, Skill or Attribute	Strategic Domain
1	4	Address legal, policy, fiscal and other barriers to collaboration	SYSTEMS THINKING
2	1	Use economic evaluation methods to identify, measure and value costs, quality and outcomes of public health interventions and programs	CHANGE MANAGEMENT
3	2	Familiarity with and use of problem-solving models such as design thinking	PROBLEM SOLVING
4	9	Identify gaps in data	DATA ANALYTICS
5	23	Identify funders, including unconventional partners, whose missions match with those of your agency/partners	SYSTEMS THINKING
6	3	Assess the external drivers in your environment (e.g., physical, political, social, fiscal, etc.) that may influence public health programs and services	CHANGE MANAGEMENT
7	19	Set metrics to benchmark and track progress, including outcome and quality measures	DATA ANALYTICS
8	15	Develop and implement data collection strategies and tools (e.g., surveys) that produce valid and actionable data	DATA ANALYTICS
9	37	Establish community-level critical agencies/entities for strategic planning and funding	SYSTEMS THINKING
10	6	Monitor and evaluate results of new and ongoing interventions and strategies	PROBLEM SOLVING

It is also helpful to compare the top 10 skill gaps among nurses to those of the overall workforce. Four skills, as noted in the table above, rose to the top for nurses but not for the workforce as a whole. This may have particular relevance for the development of training programs targeted towards the nursing workforce in particular.

CROSS-CUTTING SKILLS

Additional questions related to cross-cutting public health themes, leadership skills and awareness of the Public Health 3.0 model [2] were asked irrespective of tier and/or occupation. Similar to the full Driving the Future report findings, the top two cross-cutting skills for nurses were related to NC Medicaid transformation. Filling out the list of the top 5 largest skill gaps were skills that ranked lower, but still in the top 10 cross-cutting skill gaps in the main report.

TOP 5 SKILLS GAPS - CROSS-CUTTING SKILLS		
RANK NURSES	RANK ALL	CROSS-CUTTING SKILL
1	2	Engaging clients under NC Medicaid transformation
2	1	Knowledge and awareness of changes in North Carolina Medicaid policies
3	7	Knowledge and awareness of new payer models including value-based care
4	9	Advocate for needed population health services and programs
5	6	Advocate on behalf of community health concerns

NURSING-SPECIFIC SKILLS

Nurses taking the survey also received a set of 22 questions tailored to their profession as did other occupational groups such as behavioral health and environmental health. Those nurses with management responsibilities (Tiers 2 and 3) were given additional questions (7) specific to those roles.

Many of the nurse-specific skills with the highest skills gap varied by tier as shown in the tables below. Tier 1 skills with the most need were program- and practice-specific and the skills with the most need among Tier 2 and Tier 3 nurses were oriented more towards administrative and supervisory skills.

RANK	TOP 10 NURSING (TIER 1) SKILLS GAPS
1	Prevention strategies for substance use
2	Practical strategies to better integrate mental health and behavioral health care with clinical care
3	Engaging clients under NC Medicaid transformation
4	Participate in disaster/emergency response situations
5	Practical strategies to better integrate oral health and clinical care
6	Demonstrate knowledge of particular program (e.g., BCCCP, WISEWOMAN, FP, TB, etc.) eligibility and standards
7	Demonstrate knowledge and understanding of agency and community resources in order to make referrals
8	Use appropriate [program] forms and coding
9	Use of best practice documentation guidelines
10	Chronic disease management

RANK	TOP 10 NURSING (TIER 2/3) SKILLS GAPS
1	Engaging clients under NC Medicaid transformation
2	Justify non-income producing nursing positions
3	Practical strategies to better integrate mental health and behavioral health care with clinical care
4	Appropriately understand the legal aspects of managing public health nurses in NC
5	Prevention strategies for substance use
6	Demonstrate nursing leadership in population health strategies
7	Engage in population-focused nursing interventions
8	Understand disaster nursing roles
9	Advocate for public health nursing in the organization and the community
10	Practical strategies to better integrate oral health and clinical care

LEADERSHIP SKILLS

Much like the Driving the Future full results, nurse respondents thought all of the 10 listed leadership skills were important – over 96% believed all skills were somewhat or very important – and there was high skill proficiency, with 74-89% reporting proficient or expert ability to perform these leadership skills. There were only 2 skills where >20% of the nurses indicated a proficiency level of beginner or lower and those were:

Contribute towards and communicate a vision that resonates with others

Model for others how to lead in a way that promotes common goals, garners support and motivates others to act

PUBLIC HEALTH 3.0

The majority of nurses, much like in the full Driving the Future report, were either unaware or somewhat aware of Public Health 3.0 concepts, but over 75% of the nurses believed these concepts were important. Below are the top five Public Health 3.0 related items that were listed as high in importance (in day-to-day work and in 3-5 years) yet low in awareness. These generally align with the top five skill gaps from the entire Driving the Future report.

TOP 5 PUBLIC HEALTH 3.0 SKILLS		
RANK NURSES	RANK ALL	SKILL
1	1	Utilizing timely, reliable and granular (sub-county level) data and metrics to measure success and impact
2	4	Forming structured, cross-sector partnerships to foster shared funding, services, governance and collective action
3	2	Enhancing policies, rules and standards (e.g., accreditation) to foster Public Health 3.0 principles
4	3	Utilizing innovative funding models to support core infrastructure as well as community-level work to address the social determinants of health
5	5	Serving as the community leader in change initiatives (Chief Health Strategist)

TRAINING SUPPORTS & RESOURCES

One section of the survey asked participants about why, how and where they accessed training. Respondents indicate the following:

MOTIVATION

Responses regarding training motivation were similar to the workforce as a whole with the three highest motivators to get training being personal growth/interest and staying current with new developments in their field (both 78%), maintaining licensure (75%).

OPPORTUNITY

Most nurses (73%) tended to hear about training opportunities from their supervisor, but almost two-thirds hear about training through NC DPH announcements, and over half also hear about opportunities from regional consultants.

PROVIDERS

The most familiar providers include local AHECs (95%) the North Carolina Institute for Public Health (91%), the Public Health Nursing and Professional Development Unit within NCDPH (86%) as well as other branches/sections within NCDPH (77%). Across the board nurses were more familiar with these providers than was the public health workforce as a whole.

Nurses were not only more familiar, but many had engaged in training opportunities at a greater rate than their general public health workforce counterparts.

71%
OF NURSES REPORTED TAKING RECENT TRAINING FROM AHEC IN COMPARISON WITH

49%
OF THE GENERAL WORKFORCE

51%
HAD TAKEN A TRAINING WITH PUBLIC HEALTH NURSING AND PROFESSIONAL DEVELOPMENT UNIT OF NCDPH

50%
WITH NCIPH AND

36%
WITH OTHER BRANCHES IN NCDPH

DELIVERY

The majority of nurses preferred training delivered via conferences (67%), followed by webinars and webcasts (66%), online courses (45%) and short online modules (44%), findings which closely resemble those of the general workforce. However, for Tier 3 nurses, conferences were least preferred who instead most preferred webinars and webcasts (64%).

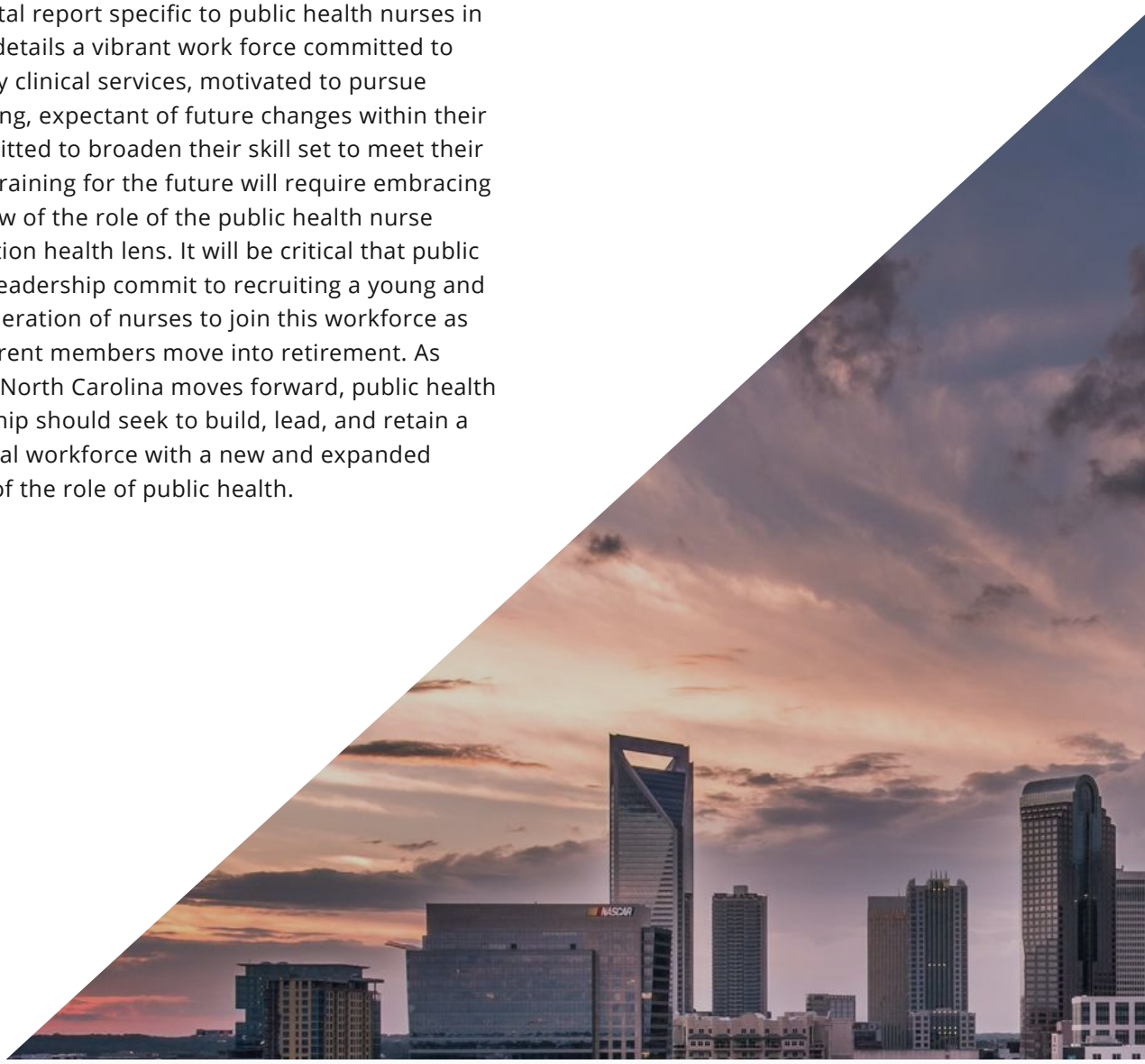
BARRIERS TO ACCESS

Similar to the general workforce, the most commonly cited barriers to accessing needed training were difficulties taking time away from work (62%), cost of training programs (59%), and lack of adequate staffing to cover an absence for training (44%). While these patterns were typically consistent across Tiers, cost of training programs was the most commonly cited barrier among Tier 1 nurses.

> Participants were given the opportunity to share their thoughts on what would be helpful to them in their role during times of change. Respondents cited the need for clear and transparent communication from leadership in detailing the reason and evidence for the change as well as the timeline for implementation. A more gradual transition phase with adequate time for training was also suggested as the best way to allow for mastery of new roles during implementation. Some respondents indicated that there may be a disconnect between staff and management in understanding daily activities and how change may affect them. Respondents noted that having more financial and staff resources and stronger management support in general would help not only during times of change but also in the day-to-day.

CONCLUSION

This supplemental report specific to public health nurses in North Carolina details a vibrant work force committed to providing quality clinical services, motivated to pursue continued training, expectant of future changes within their field, and committed to broaden their skill set to meet their changing role. Training for the future will require embracing an extended view of the role of the public health nurse within a population health lens. It will be critical that public health nursing leadership commit to recruiting a young and diverse new generation of nurses to join this workforce as many of the current members move into retirement. As public health in North Carolina moves forward, public health nursing leadership should seek to build, lead, and retain a multigenerational workforce with a new and expanded understanding of the role of public health.



References

[1] 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/

APPENDIX A

METHODS

This report represents a subset focused on the responses of those who reported currently working as a nurse and completed at least one question in the strategic skills section (n=594). The assessment was conducted over a four-week period between February-March 2019, and the online survey was distributed electronically to local health departments through a variety of statewide public health practitioner email listservs and on social media.

The survey was comprised of four sections:

1. Organizational role – to categorize respondent role, area of focus, and supervisory level;
2. Strategic skill sets – to assess important strategic skills and needs of the public health workforce;
3. Technical skill sets by professional area – to assess technical skills for specific professions or specialties; and,
4. Demographics – to characterize respondents and their training preferences.

The Driving the Future survey received responses from roughly 25% of the local health department workforce. While the survey had substantial participation, it is important to keep in mind the non-respondents from the workforce – potentially clinical, field or other agency stay who may have had limited access to the online survey. Despite these limitations, clinical staff had some of the highest participation in the Driving the Future needs assessment.

Responses came from nurses in 83 agencies across the 100 N.C. counties. Responses were considered "informative responses" if they answered at least at least one question in the strategic skills section. There were 643 nurses who responded to the survey, but 49 of these responses did not progress to section 2 and were excluded as non-informative responses. A total of 594 nurses were included in the analysis. In comparing characteristics of informative and non-informative responses, the non-informative responses were slightly more skewed toward non-supervisors; however, the decision was made to use only the informative responses to be consistent with the analysis methods in the full Driving the Future analysis.

For the analysis of the nurse subset, results were summarized across all nurses and by specific Tiers based on supervisory status – Tier 1 (non-supervisory roles), Tier 2 (supervisors and managers), and Tier 3 (senior leaders and agency leads).

For a fuller discussion of methods and limitations, please see the full Driving the Future: Assessment of the North Carolina Local Public Health Workforce report.

APPENDIX B

With thanks to those organizations and agencies who helped formulate, pilot and distribute the Driving the Future assessment as well as to the full report authors. Please see the full report for a complete list of contributors.

In addition, special thanks and acknowledgement for those listed below who contributed to the writing and review of this Nursing Supplement.

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Thanks also to the Public Health Nursing Learning Needs Assessment Advisory Team(L-NAAT) for their contributions to this report.

APPENDIX C

SKILLS

Skills were adapted from Building skills for a more strategic public health workforce: A Call to Action published by the National Consortium for Public Health Workforce Development.

Systems thinking: Grasp patterns and relationships to understand systems contributing to public health problems and identify high-impact interventions.

Change management: Scale programs in response to the changing environments and shape core elements that sustain programs in challenge and crisis.

Persuasive communication: Convey resonant, compelling public health messages to broad audiences—the public, partners, and policymakers

Data analytics: Leverage, synthesize, and analyze multiple sources of electronic data, and use informatics to identify and act on health priorities, population impacts, evidence-based approaches, and health and cost-related outcomes.

Problem solving: Determine the nature of a problem, identify potential solutions, implement an effective solution, and monitor and evaluate results.

Diversity and inclusion: Understand and respond to the changing demographics of the US population and the public health workforce itself. Seek out, listen to, include, and promote under-represented populations in reaching effective health solutions.

Resource management: Manage recruitment and career paths of the workforce as well as acquisition, retention, and management of fiscal resources.

Policy engagement: Address and engage with public health concerns and needs of local, state, and federal policymakers and partners