

The Diversity of North Carolina's Health Care Workforce

Victoria McGee and Erin Fraher

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North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill

Introduction

Racial and ethnic diversity among health care professionals is vital to maintaining high quality health care that is accessible, equitable, and culturally competent.^{1,2,3} The provision of culturally competent health care requires not only a health care workforce that is prepared to interact with the variety of cultures represented in North Carolina's population, but also requires a workforce that represents the population and communities they serve.^{4,5,6,7,8}

Methods

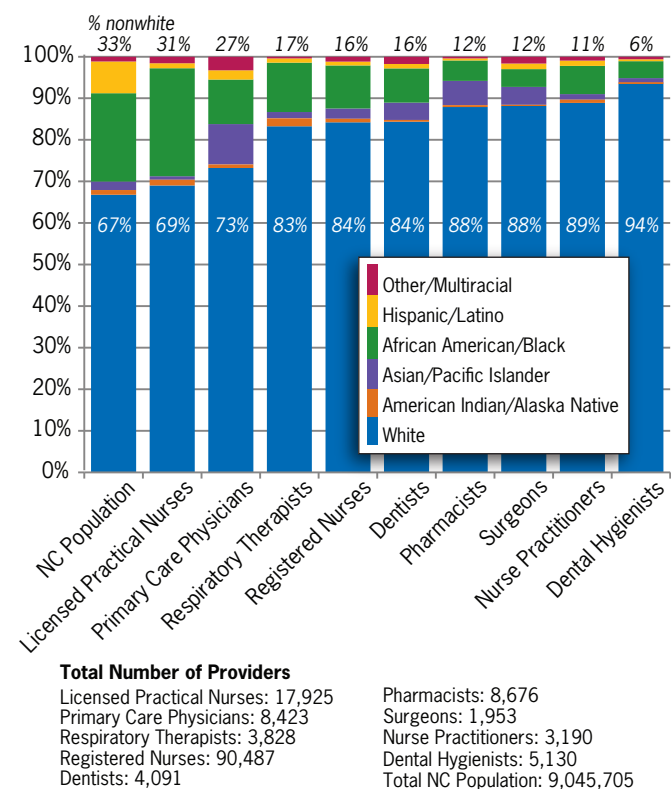
To assess North Carolina's capacity to deliver health care through a racially and ethnically diverse health care workforce, descriptive analyses were conducted using 1994-2009 North Carolina licensure data housed within the North Carolina Health Professions Data System (NC HPDS). The data used in this analysis, including race/ethnicity, were self-reported at time of initial licensure or subsequent renewal by health professionals licensed to practice in North Carolina as of October 31 of each year. Data include active, in-state, non-federal, non-resident-in-training physicians and active, in-state practitioners in the other professions. Primary care includes general practice, family practice, general internal medicine, pediatrics and obstetrics and gynecology.

Findings

The racial/ethnic diversity of North Carolina's health care professionals falls short of matching state population diversity (Figure 1).

- One in three (33%) North Carolina residents is nonwhite compared to 17% of health professionals.
- There is an overall lack of diversity among North Carolina's health professionals, and while some professions have lagged behind, licensed practical nurses (LPN) and primary care physicians (PCP) can be considered "best practice" professions.

Figure 1. Diversity of North Carolina's Population Compared to Diversity of Selected Health Professions, 2009



Note: Data include active, in-state, nonfederal health care professionals licensed as of October 31, 2009. "Nonwhite" refers to those who self-identify racially as African American/black, Asian/Pacific Islander, American Indian/Alaska Native, and ethnically as nonwhite Hispanic/Latino. **Source:** North Carolina Health Professions Data System, with data derived from the North Carolina Boards of Medicine, Nursing, Pharmacy, Dentistry, Physical Therapy, Occupational Therapy and Respiratory Therapy, 2010; US Census Bureau, American Factfinder, <http://factfinder.census.gov>, accessed August 24, 2011. **Produced by:** North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

North Carolina Health Professions Data System

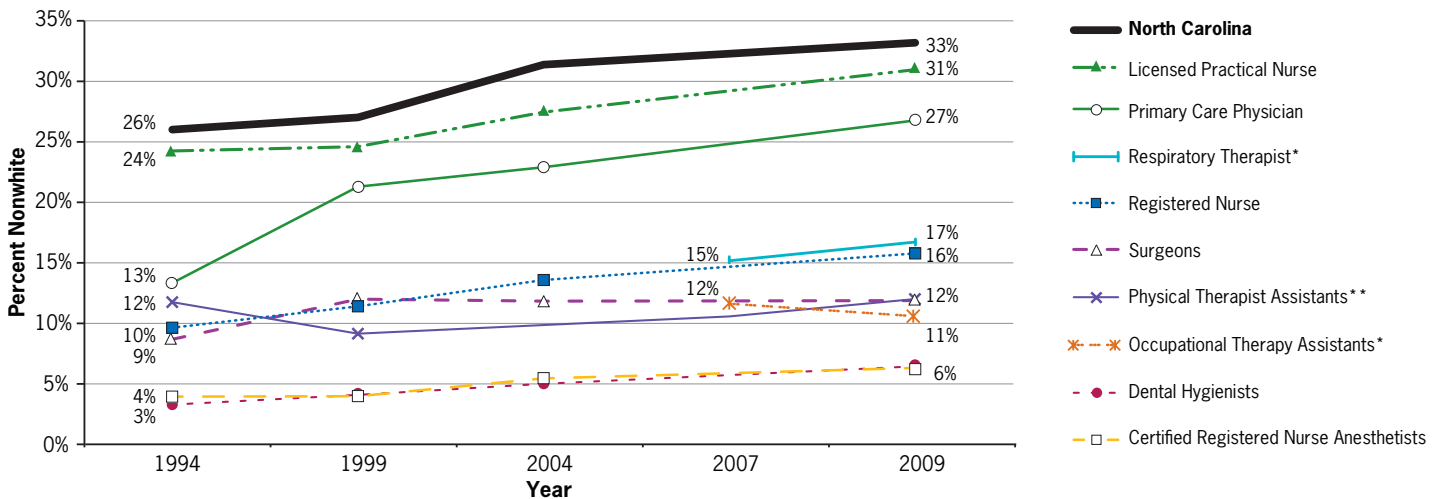
The Cecil G. Sheps Center for Health Services Research
The University of North Carolina at Chapel Hill
Campus Box 7590 • 725 Martin Luther King Jr. Blvd. • Chapel Hill, NC 27599-7590
<http://www.shepscenter.unc.edu/hp> • nchp@unc.edu • (919) 966-7112



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Figure 2. Change in Nonwhite Diversity of Selected Health Professions in North Carolina: 1994-2009



Note: Data include active, in-state, nonfederal health care professionals licensed as of October 31, 2009. *Professions added after 2004, but reliable race data not available until 2007; **2004 race data for PTAs not included due to high percentage with missing race data (31%). "Nonwhite" refers to those who self-identify racially as African American/black, Asian/Pacific Islander, American Indian/Alaska Native, and ethnically as nonwhite Hispanic/Latino. **Source:** North Carolina Health Professions Data System, with data derived from the North Carolina Boards of Medicine, Nursing, Pharmacy, Dentistry, Physical Therapy, Occupational Therapy and Respiratory Therapy, 2010; Population Estimates Program, Population Division, U.S. Census Bureau, <http://www.census.gov/popest/data/historical/index.html>. Accessed 8/2/2012. **Produced by:** North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

North Carolina’s health professions are diversifying slowly over time and at different rates

The state population has slowly been diversifying, with the percentage of nonwhite population increasing seven percentage points from 1994-2009 (Figure 2). Among the professions shown, the percentage of the workforce comprised by nonwhite practitioners increased the most among PCPs (+14 percentage points, +1630), followed by LPNs (+7 percentage points, +1542).

Among the professions with low levels of diversity, pharmacists saw the largest increase (+8 percentage points, + 796), followed by surgeons (+ 3 percentage points, +96). The percentage of nonwhite PTAs did not increase from 1994-2009, despite a drop to 9% (135) in 1999 before rebounding back to 12% (262) by 2009. The percentage of nonwhite OTAs decreased one percentage point from 2007 to 2009, from 12% (107) to 11% (112), respectively. Of the least diverse professions, the percentage of the workforce comprised of nonwhite practitioners increased the most among dental hygienists (+3 percentage points, +238), followed by CRNAs (+2 percentage points, +74).

There are differences in racial/ethnic group representation among North Carolina’s health professions (Figure 3).

- Asian/Pacific Islander practitioners are overrepresented relative to NC’s population in some professions that require a higher degree.

Figure 3. North Carolina Health Professions Diversity Scorecard, 2009

Legend	State	Licensed Practical Nurses	Primary Care Physicians	Physicians (all)	Respiratory Therapists	Dentists	Registered Nurses	Physician Assistants	Physical Therapist Assistants	Pharmacists	Surgeons	Nurse Practitioners	Occupational Therapy Assistants	Certified Nurse Midwives	CRNAs	Dental Hygienists
White	67%															
American Indian/Alaska Native	1%															
Asian/Pacific Islander	2%															
African American/Black	21%															
Hispanic/Latino	7%															
Multiracial/Other	2%															

Note: Data include active, in-state, nonfederal health care professionals licensed as of October 31, 2009. "Nonwhite" refers to those who self-identify racially as African American/black, Asian/Pacific Islander, American Indian/Alaska Native, and ethnically as nonwhite Hispanic/Latino. **Source:** North Carolina Health Professions Data System, with data derived from the North Carolina Boards of Medicine, Nursing, Pharmacy, Dentistry, Physical Therapy, Occupational Therapy and Respiratory Therapy, 2010; US Census Bureau, American Factfinder, <http://factfinder.census.gov>, accessed August 24, 2011. **Produced by:** North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

- African American/black practitioners are underrepresented in all professions except among licensed practical nurses (LPN).
- Hispanic/Latino practitioners are underrepresented in all professions.

North Carolina's nonwhite racial/ethnic health care practitioners cluster regionally.

Nonwhite racial/ethnic groups in North Carolina's health care workforce cluster regionally, and half (14,261) of all nonwhite health care practitioners are located in Mecklenburg, Wake, Durham, Guilford, Forsyth, Pitt, and Cumberland counties. About four out of five nonwhite health care practitioners (79%) are located in metropolitan counties.

About one-third (437, 32%) of North Carolina's American Indian/Alaska Native health care practitioners are located in Robeson County, which also has the highest concentration of AI/AN population of any county in the state (36%) (Figure 4).

Fifty-eight percent (10,372) of African American/black practitioners are located in counties with major urban areas. However, the counties with the highest percentages of African American/black practitioners are located in the northeastern and southeast central regions of the state (Figure 5).

Fifty-four percent (984) of Hispanic/Latino practitioners are in counties with major urban areas, although the percentage of Hispanic/Latino practitioners in these areas falls well short of achieving parity with county population levels (Figure 6).

Figure 4. American Indian/Alaskan Native (AIAN) Population and Healthcare Providers, North Carolina, 2009

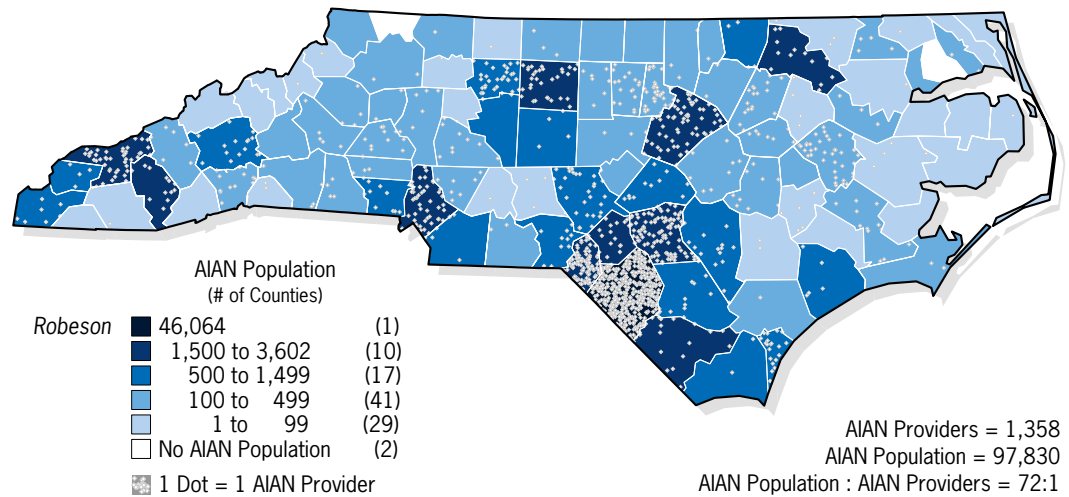


Figure 5. African American/Black Population and Healthcare Providers, North Carolina, 2009

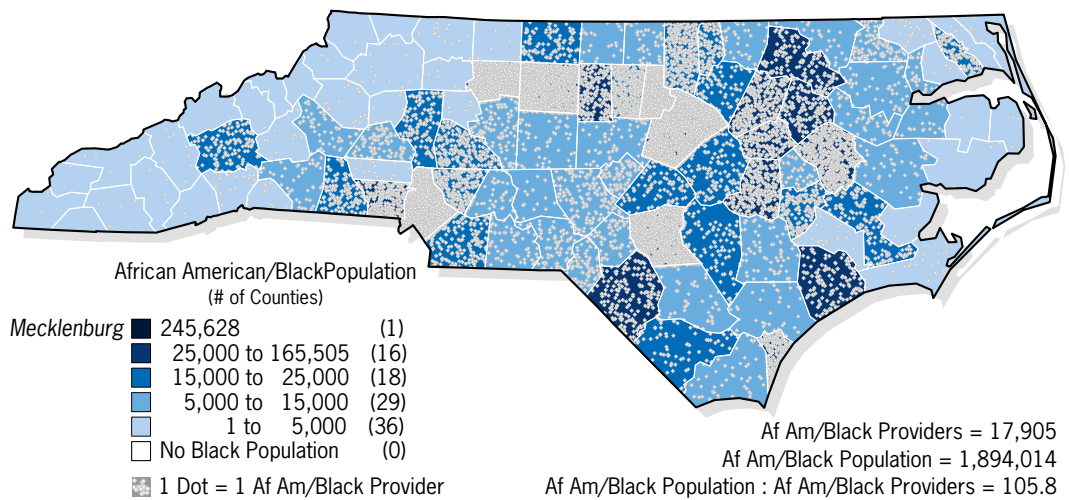
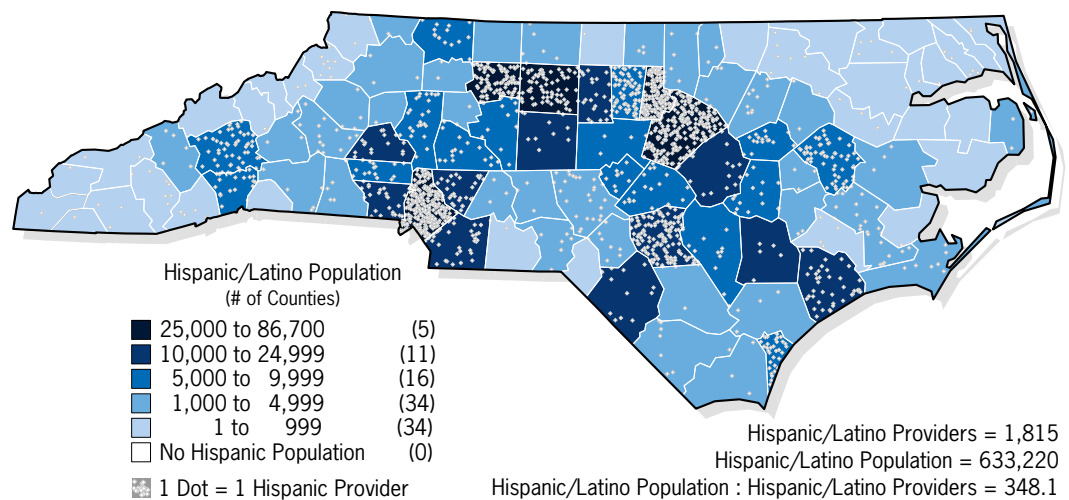


Figure 6. Hispanic/Latino Population and Healthcare Providers, North Carolina, 2009



Note: Data include active, instate, nonfederal health care professionals licensed as of October 31, 2009. Professions include physicians, NP, RN, CNM, LPN, PT, PTA, OT, OTA, respiratory therapists, dentists, dental hygienists, and pharmacists. "Nonwhite" refers to those who self-identify racially as African American/black, Asian/Pacific Islander, American Indian/Alaska Native, and ethnically as nonwhite Hispanic/Latino. Dots are distributed randomly within each county. Sources: North Carolina Health Professions Data System, with data derived from the North Carolina Boards of Medicine, Nursing, Pharmacy, Dentistry, Physical Therapy, Occupational Therapy and Respiratory Therapy, 2010; US Census Bureau, American Factfinder, <http://factfinder.census.gov>, accessed August 24, 2011. Produced by: North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

Barriers

Why has North Carolina's health care workforce been so slow to diversify?

- Limited loan repayment for more health care positions^{3,9,10};
- Low matriculation and high attrition rates in health professions educational programs among URMs;
- Low levels of racial/ethnic diversity in the fastest growing health professions (e.g., allied health professions);
- Limited knowledge about health careers (pipeline issues)^{1,2};
- Racial/ethnic disparities in K-12 preparation^{11,12};
- Lack of mentors and faculty of similar racial/ethnic backgrounds^{13,14,15};
- Lack of career ladder opportunities which could potentially limit career trajectories within certain health care professions.

Potential Solutions

Diversification of the health care workforce is a complex issue. Potential solutions include:

- Expanding loan repayment options for all levels of health care positions^{9,10};
- Expanding of programs that focus on pipeline strengthening and career awareness;
- Expanding of education at all levels that fosters cultural competence^{16,17};
- Diversifying health professions faculty; this requires an overall diversification of the health care workforce as this is the potential pool from which faculty can be hired⁹;
- Strengthening support system for full-time health professional students who work full-time (many are racial/ethnic minorities);
- Better use of existing resources (i.e., re-entry of military trained medical professionals, who tend to represent a diverse, well-prepared pipeline);

- Improving and coordinating data tracking among various groups and institutions to better monitor those entering and exiting the health care professions pipeline⁹;
- Evaluating educational programs designed to increase URM participation in the health professions to determine the relative success of programs⁹. ✨

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