

# The Status of Health Professions Diversity in North Carolina

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North Carolina Health Professions Data System

*NC Health Professions Diversity Conference*  
*Greensboro, North Carolina*  
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UNC

THE CECIL G. SHEPS CENTER  
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# Presentation Overview

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- Diversity and emerging workforce shortages
- Where do the data come from and what are strengths/limitations?
- What does health workforce diversity currently look like in the state?
- How has workforce diversity changed over time?
- Where are NC's diverse practitioners educated?
- Data reflections: What does it all mean?



# Diversity and Workforce Shortages

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- Emerging workforce shortages
- Are we adequately accessing a talented pool of workers?
- Is there upward education and job mobility?
- Transformed health care system emphasizes population health, reducing health disparities, and community-based models of care. Can we do this without increasing workforce diversity?
- What is the role of AHEC and other partners?



# Data Strengths

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- **We have data!**
- Derived from licensure files—*not a survey*
- Sample=licensed, active, non-federal practitioners in NC
- 30- years of data allow us to:
  - Monitor changes over time
  - Combine data on race/ethnicity with data on education and geographic characteristics
- You, too, can access these data and have as much fun as we do crunching numbers



# Data Challenges

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- Data are self-reported
- Quality of race data variable over years, generally improved in recent years
- Race questions asked differently by different Boards
- Increasing number of health professionals fall into more than one category
- How do we know how we're doing? National data are limited but we benchmark to:
  - Previous years
  - North Carolina's population



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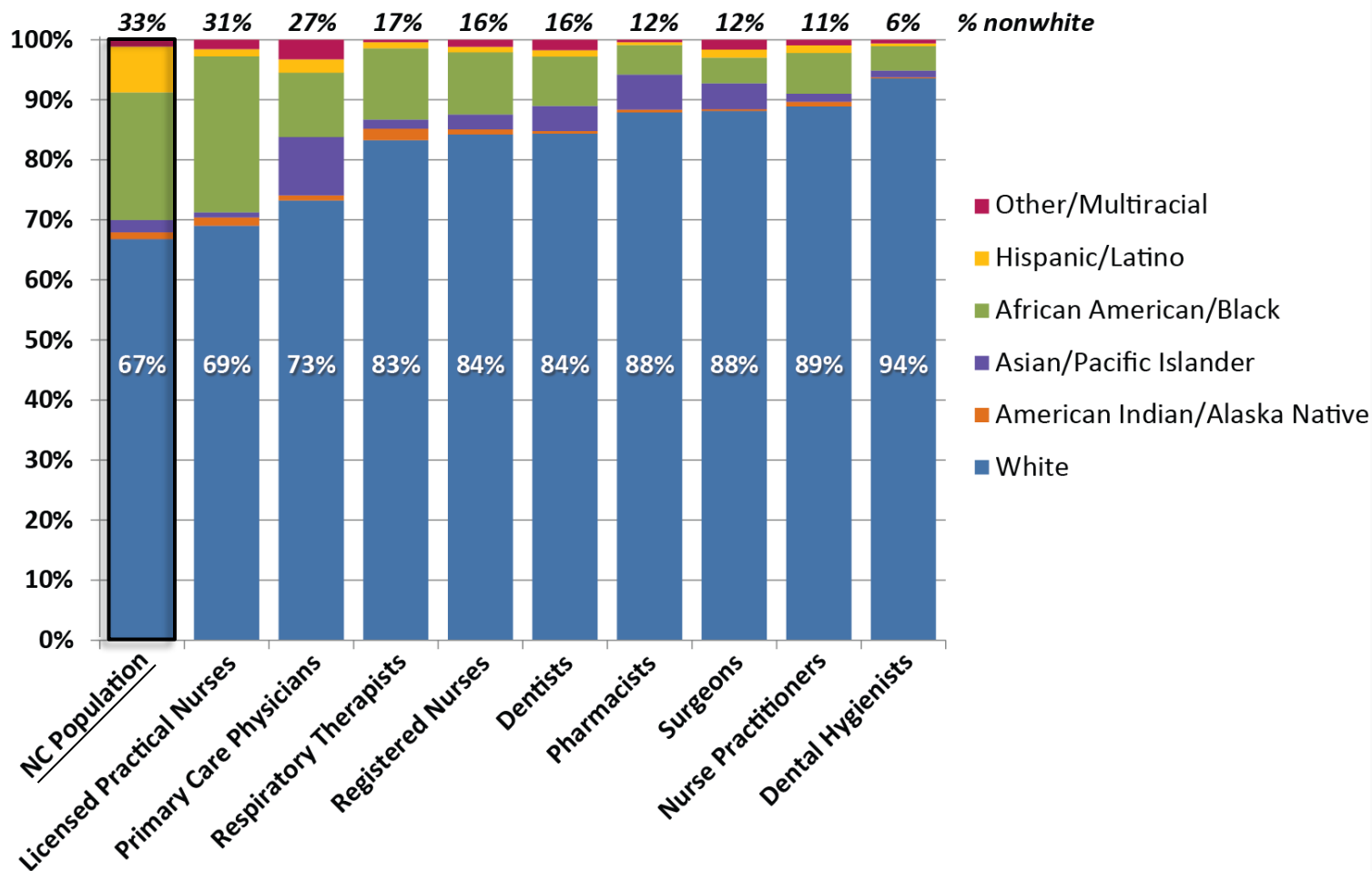
# 2009 Snapshots

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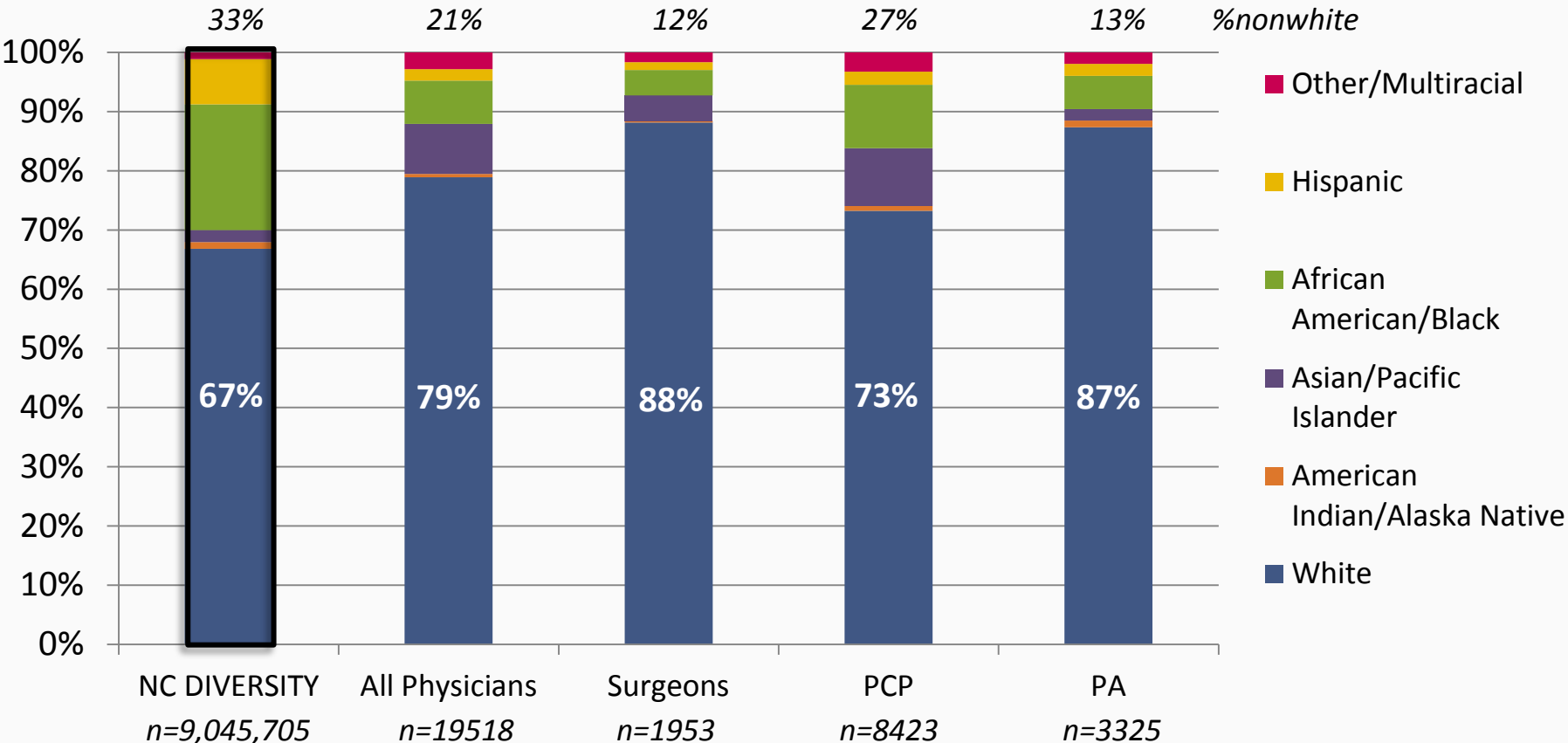
# Race/Ethnicity of Practitioners Falls Short of Matching Population Diversity

Diversity of North Carolina's Population vs. Diversity of Selected Health Professions, 2009



# Doctors More Diverse than Physician Assistants, and Primary Care Physicians More Diverse than Surgeons

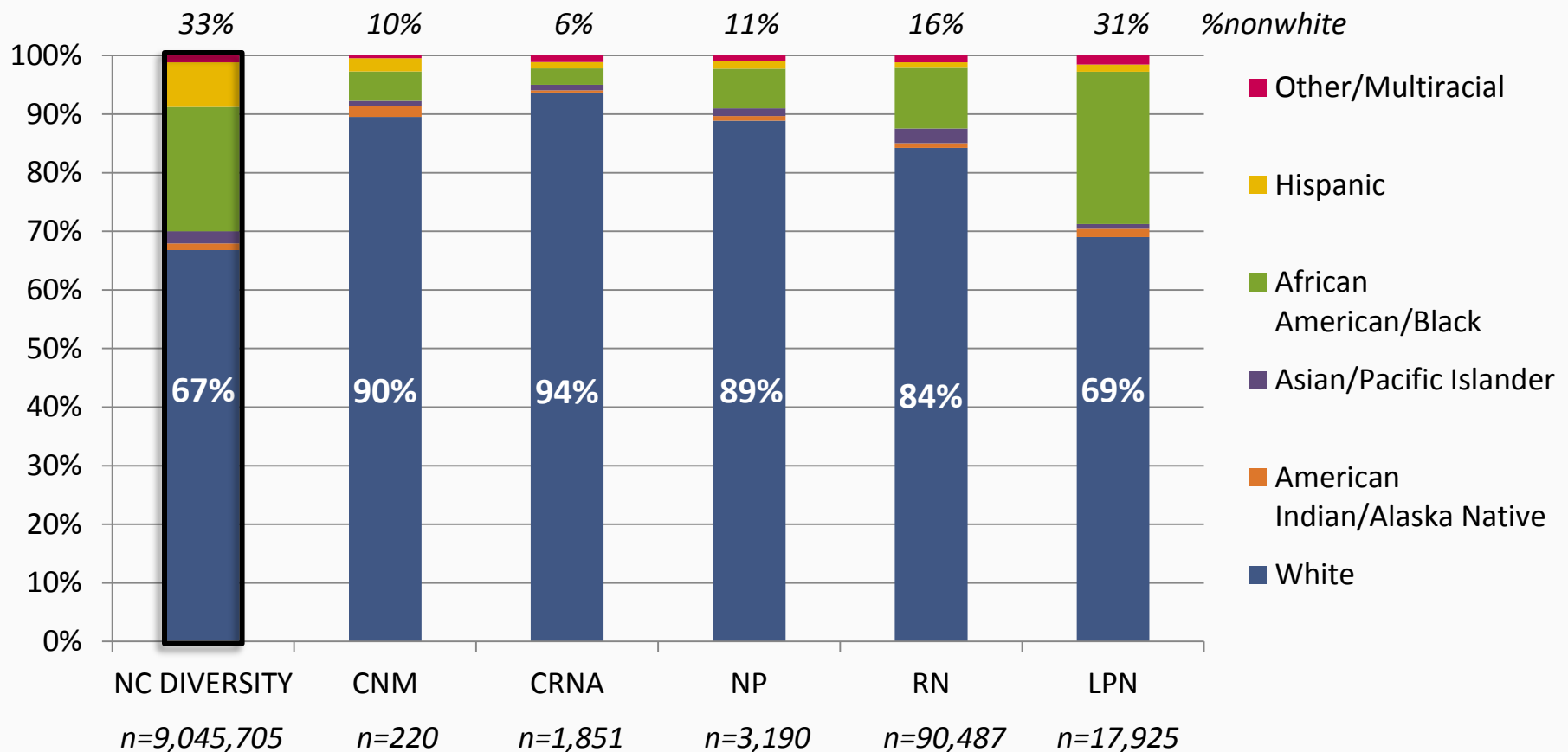
Physician & PA Diversity vs. State Diversity, North Carolina, 2009





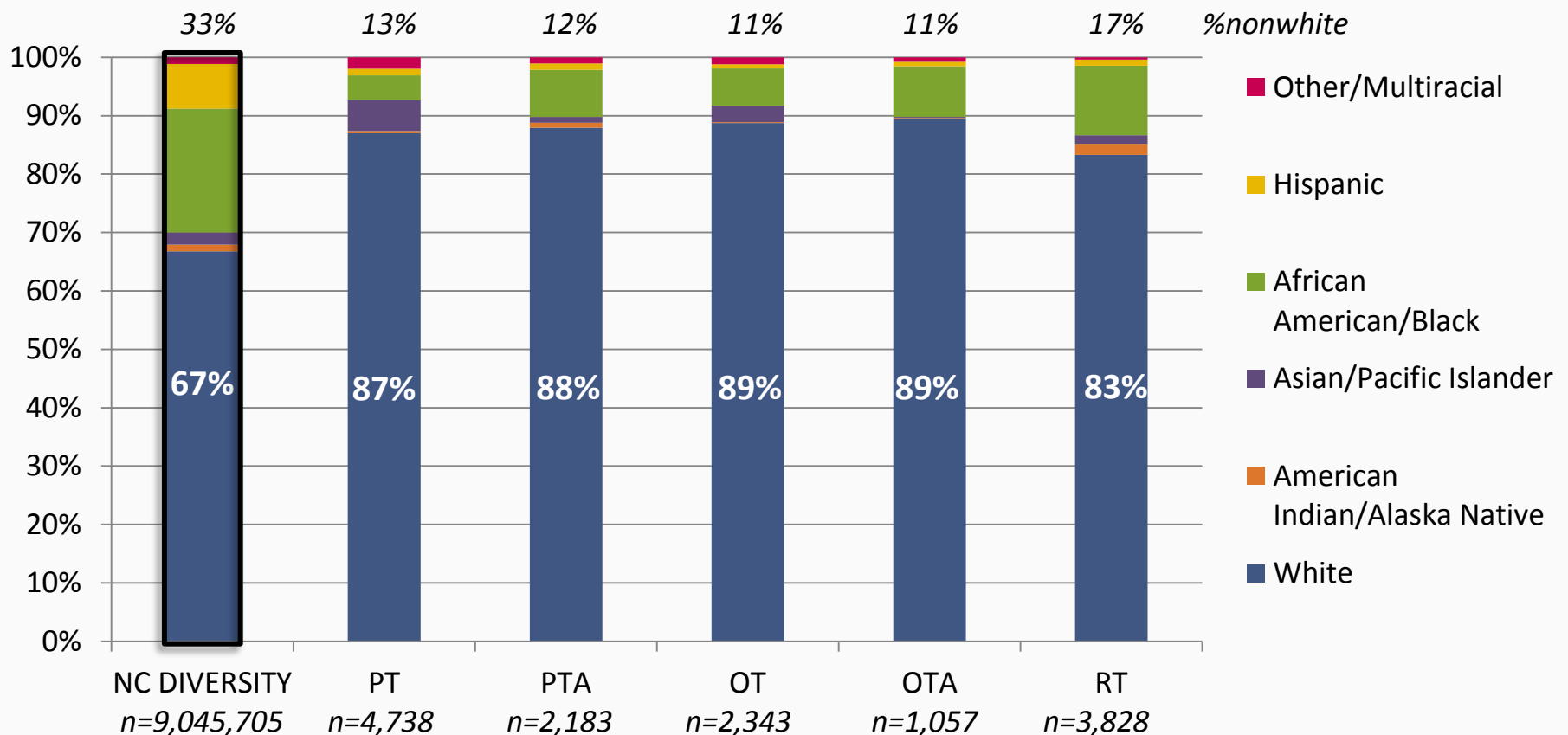
# Most Nurses Less Diverse than Physicians but Licensed Practical Nurses Nearly Match Population Diversity

APRN, RN & LPN Diversity vs. State Diversity, North Carolina, 2009



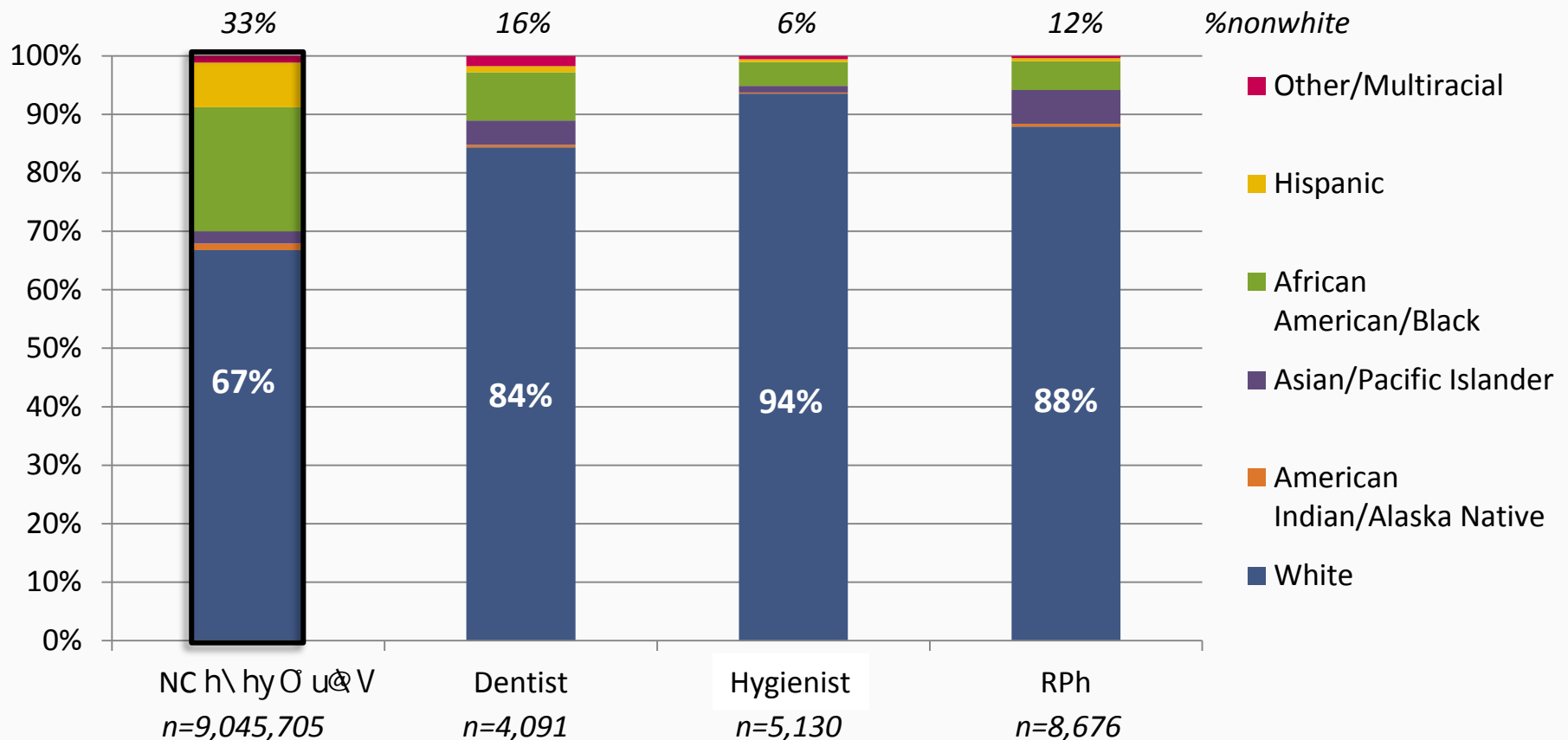
# Assistant Professions in Allied Health Surprisingly Not Diverse

Allied Health Diversity vs. State Diversity, North Carolina, 2009



# Dental Hygienists Less Diverse than Dentists or Pharmacists

Dentist, Hygienist & Pharmacist vs. State Diversity, North Carolina 2009



# NC Health Professions Diversity Scorecard, 2009

	State	<b>Legend</b> Green = above state % Orange = below state average Blue = equivalent to state average															
		PT	PTA	OT	OTA	RT	NP	CRNA	Dentists	Hygienists	RN	LPN	PA	Physicians	Surgeons	PCP	Pharmacists
<b>White</b>	67%	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
<b>American Indian/ Alaska Native</b>	1%	-	-	-	-	+	-	-	-	-	-				-		-
<b>Asian/ Pacific Islander</b>	2%	+	-	+	-	-	-	-	+	-		-		+	+	+	+
<b>African American/ Black</b>	21%	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
<b>Hispanic</b>	7%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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# Visualizing the Data in a Different Way

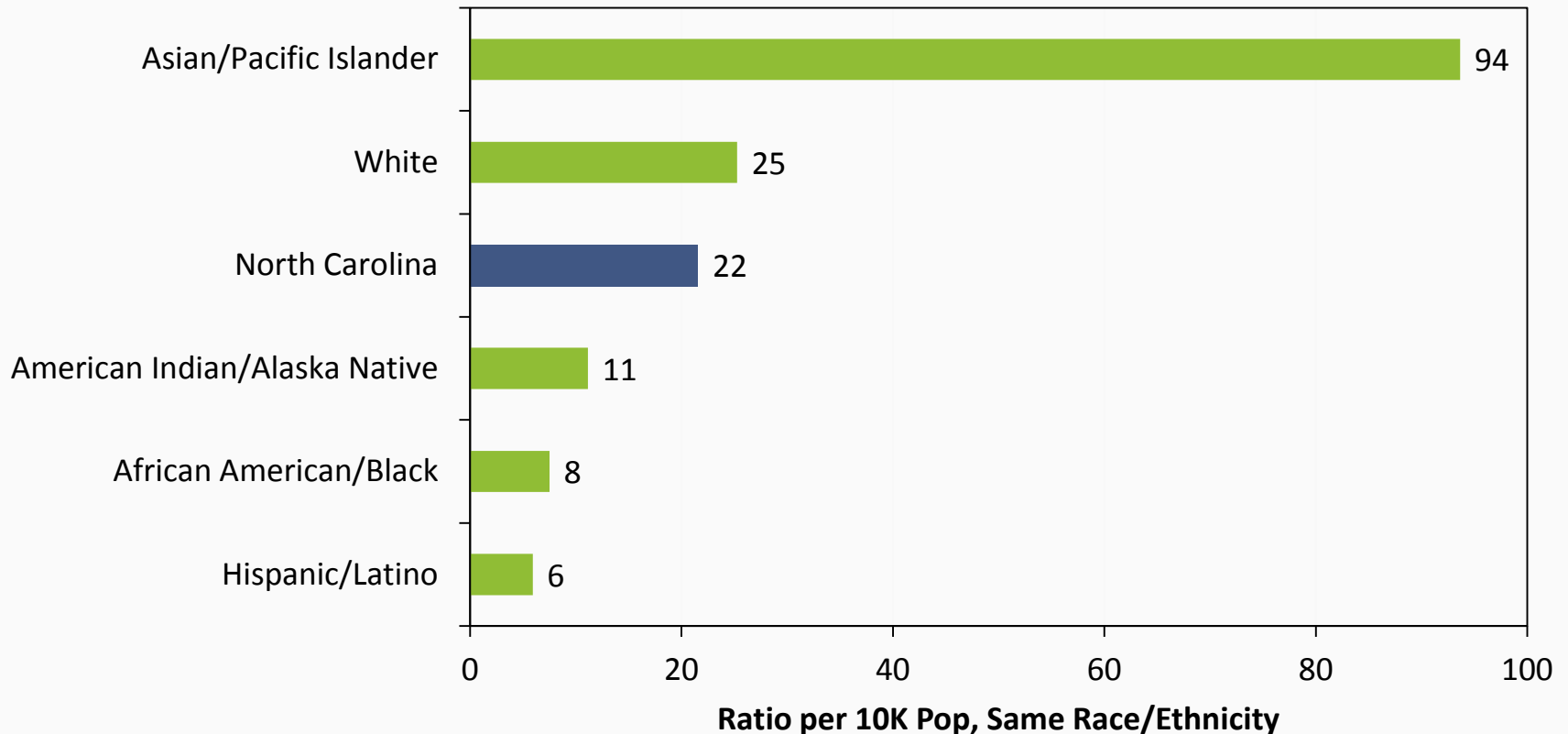
What is the ratio of practitioners by race to 10,000 population of the SAME race/ethnicity?

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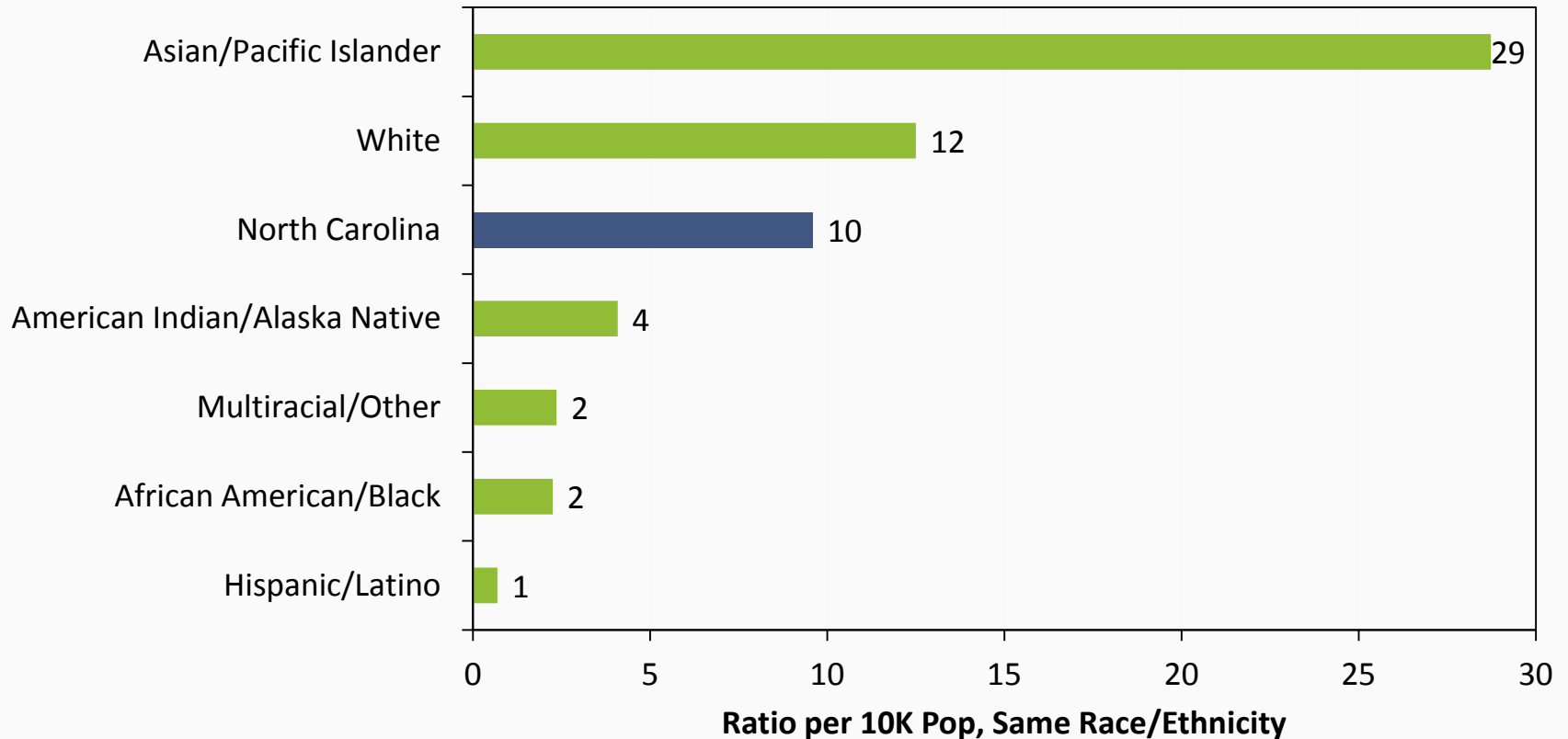
# Asians Overrepresented and African Americans, Native Americans, Hispanics Underrepresented Among Physicians

Ratio of Physicians per 10K Pop by Same Race/Ethnicity, North Carolina, 2009



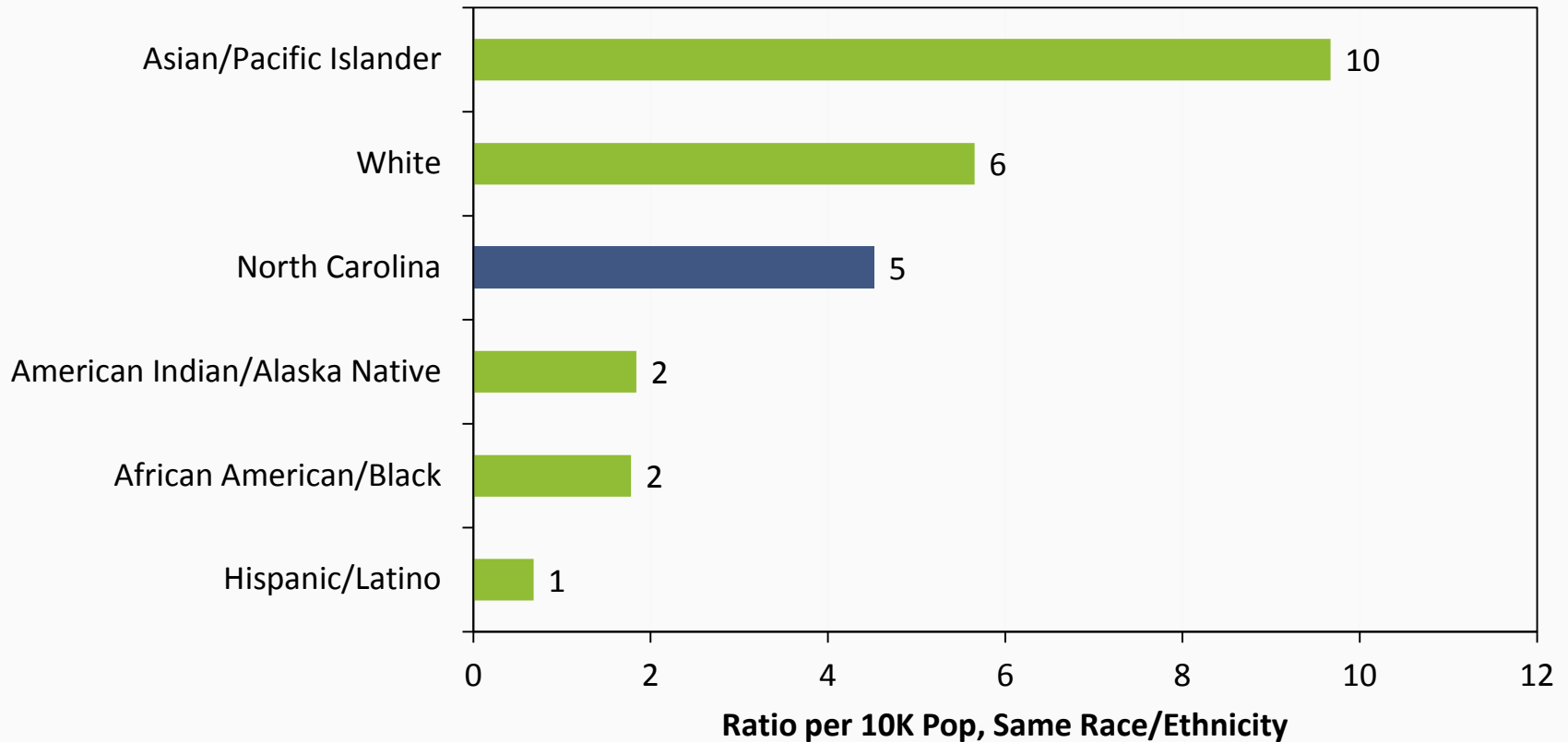
# Same Pattern for Pharmacists

**Ratio of Pharmacists per 10K Pop by Same Race/Ethnicity,  
North Carolina, 2009**



# ... and Dentists

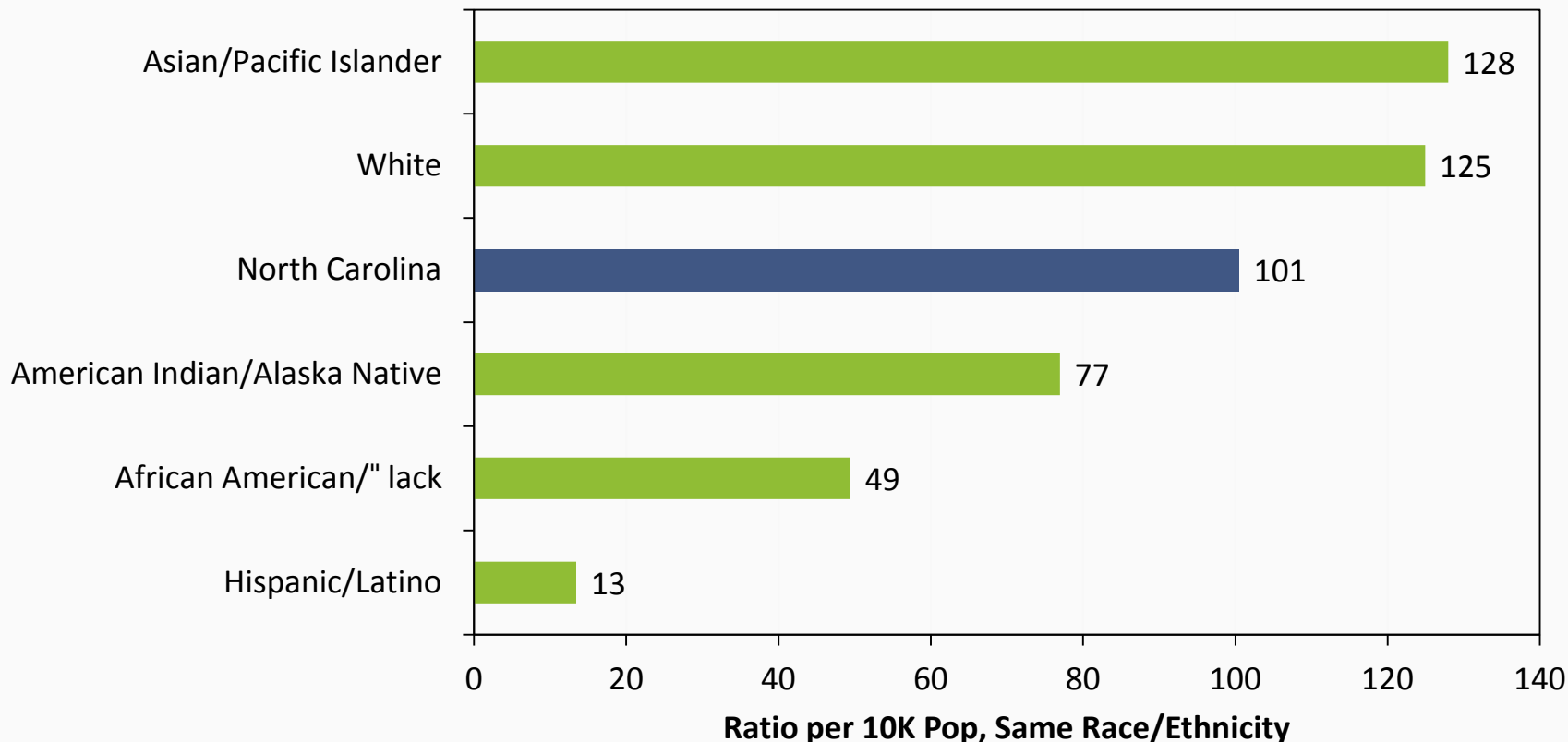
**Ratio of Dentists per 10K Pop by Same Race/Ethnicity,  
North Carolina, 2009**





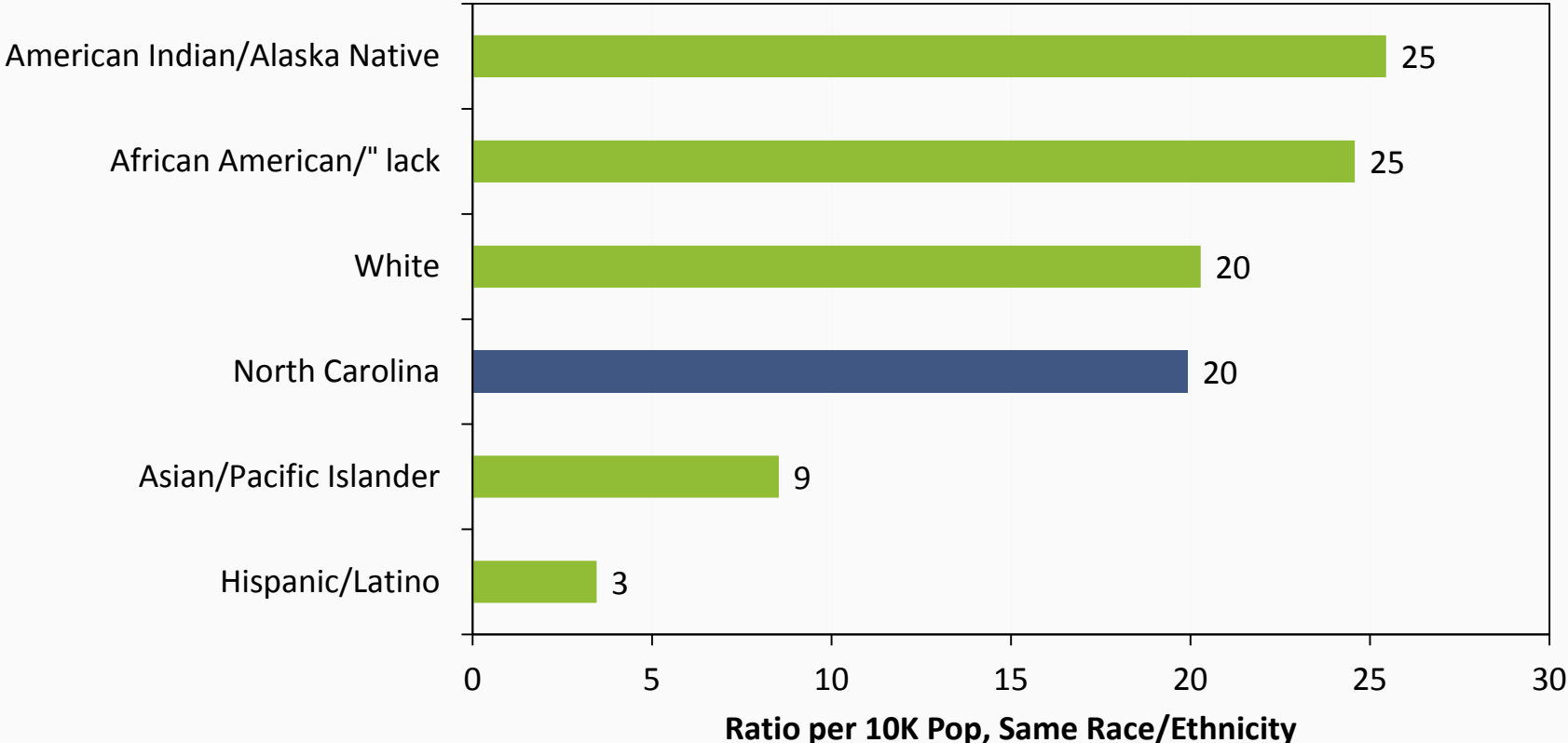
# American Indians, African Americans and Hispanics are Underrepresented Among RNs

Ratio of Registered Nurses per 10K Pop of Same Race/Ethnicity,  
North Carolina, 2009



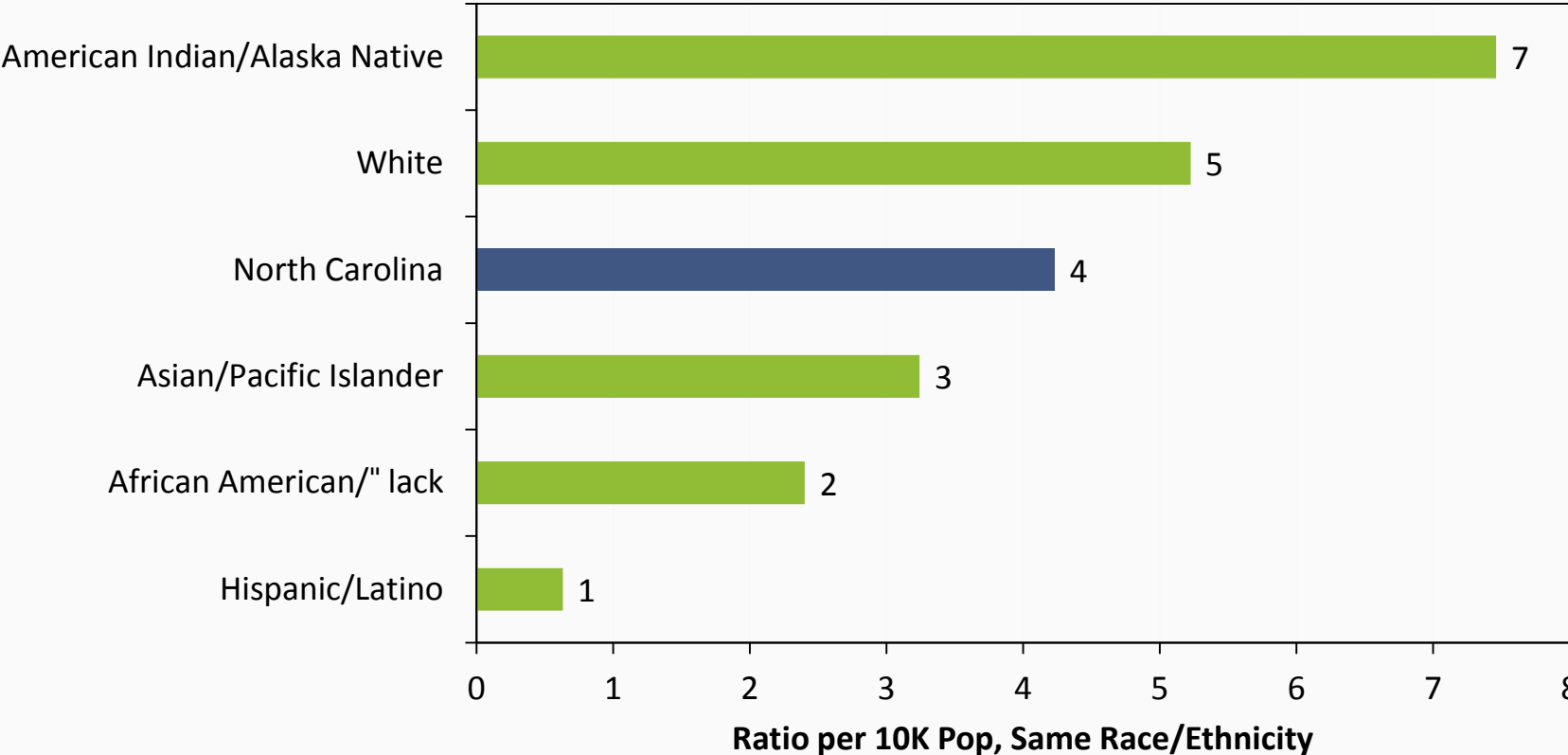
# By Contrast, LPNs Have Higher Ratios of American Indian and African Americans than Whites

Ratio of LPNs per 10K Pop of Same Race/Ethnicity, North Carolina, 2009



# Respiratory Therapists Also Have Higher Ratio of American Indians than Whites

**Respiratory Therapists per 10K Pop of Same Race/Ethnicity, North Carolina, 2009**



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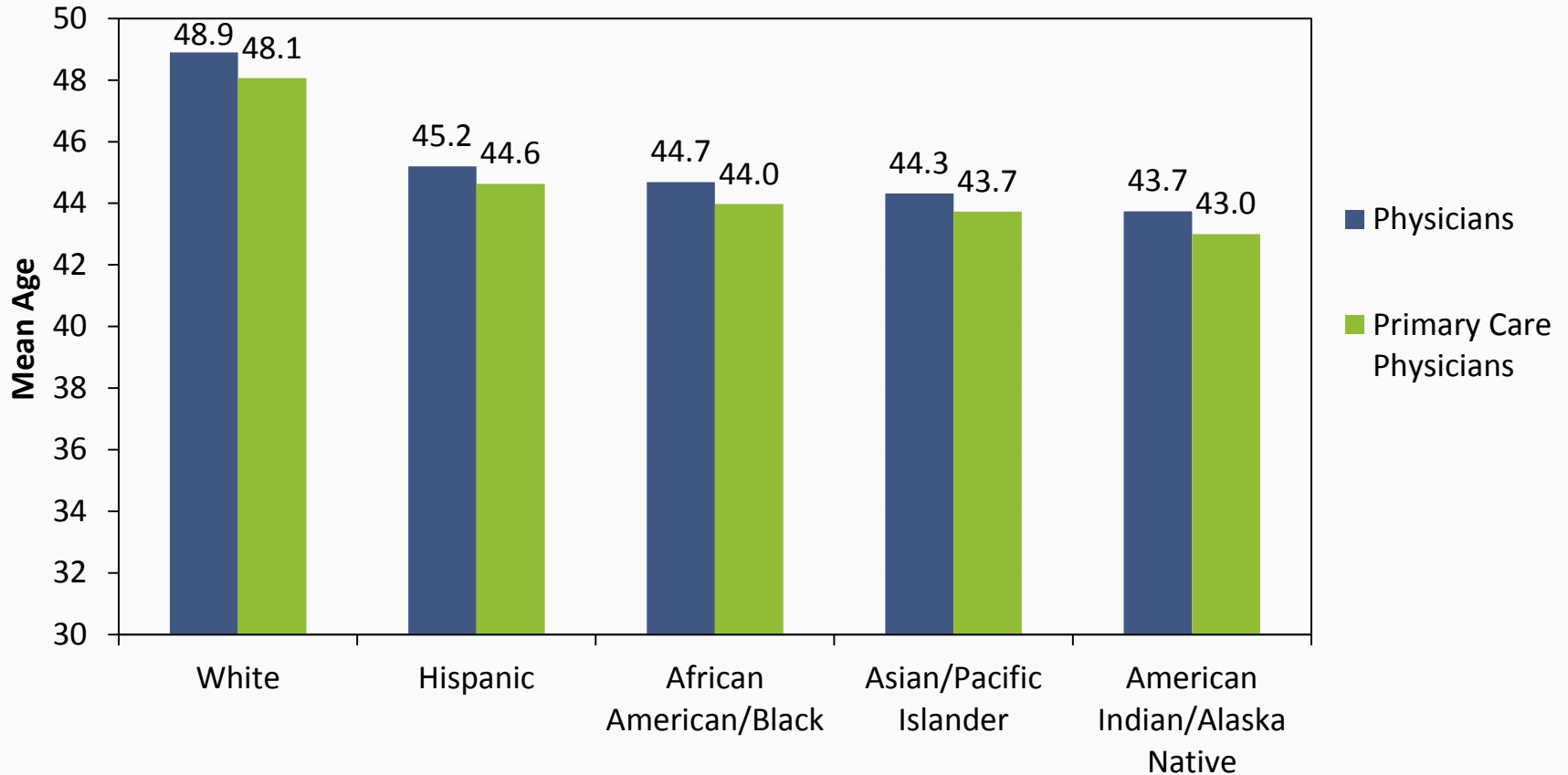
# **Age by Race/Ethnicity for Selected Professions**

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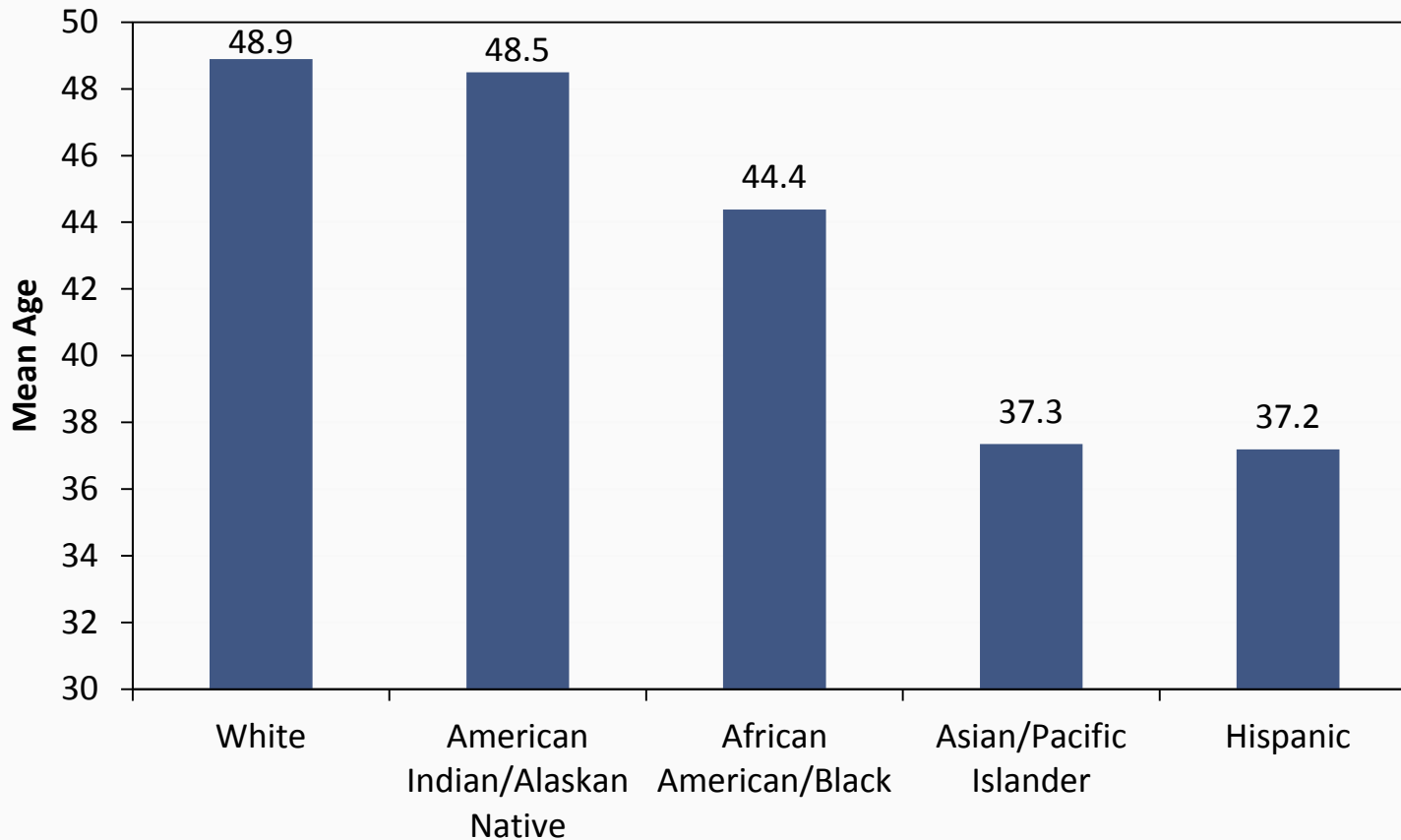
# Practitioners from Underrepresented Race/Ethnicities are Younger: Physicians and Primary Care Physicians

Mean Age by Race, North Carolina, 2009:  
All Physicians and Primary Care Physicians



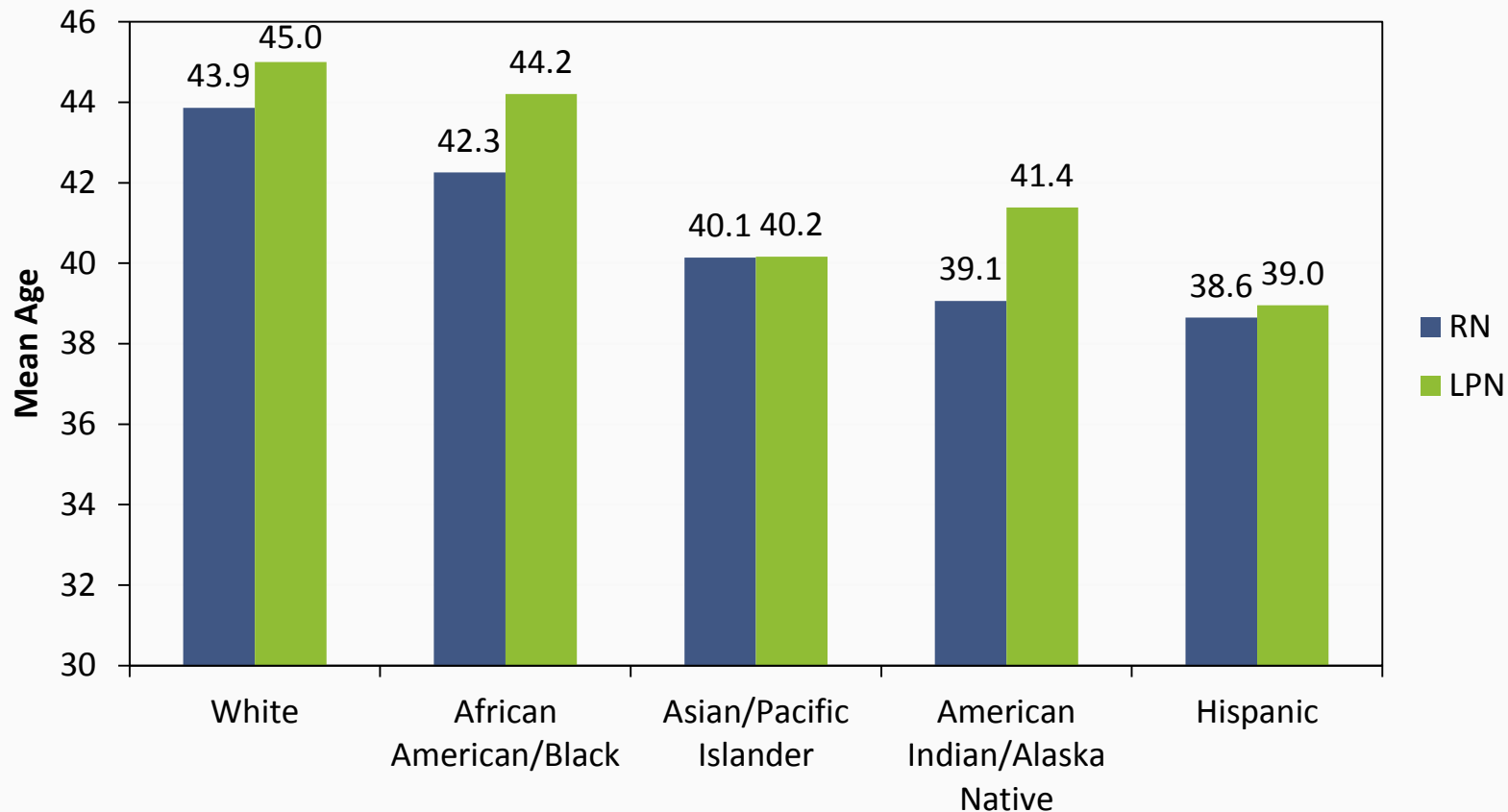
# Practitioners from Underrepresented Race/Ethnicities are Younger: Dentists

Mean Age by Race, North Carolina, 2009:  
Dentists



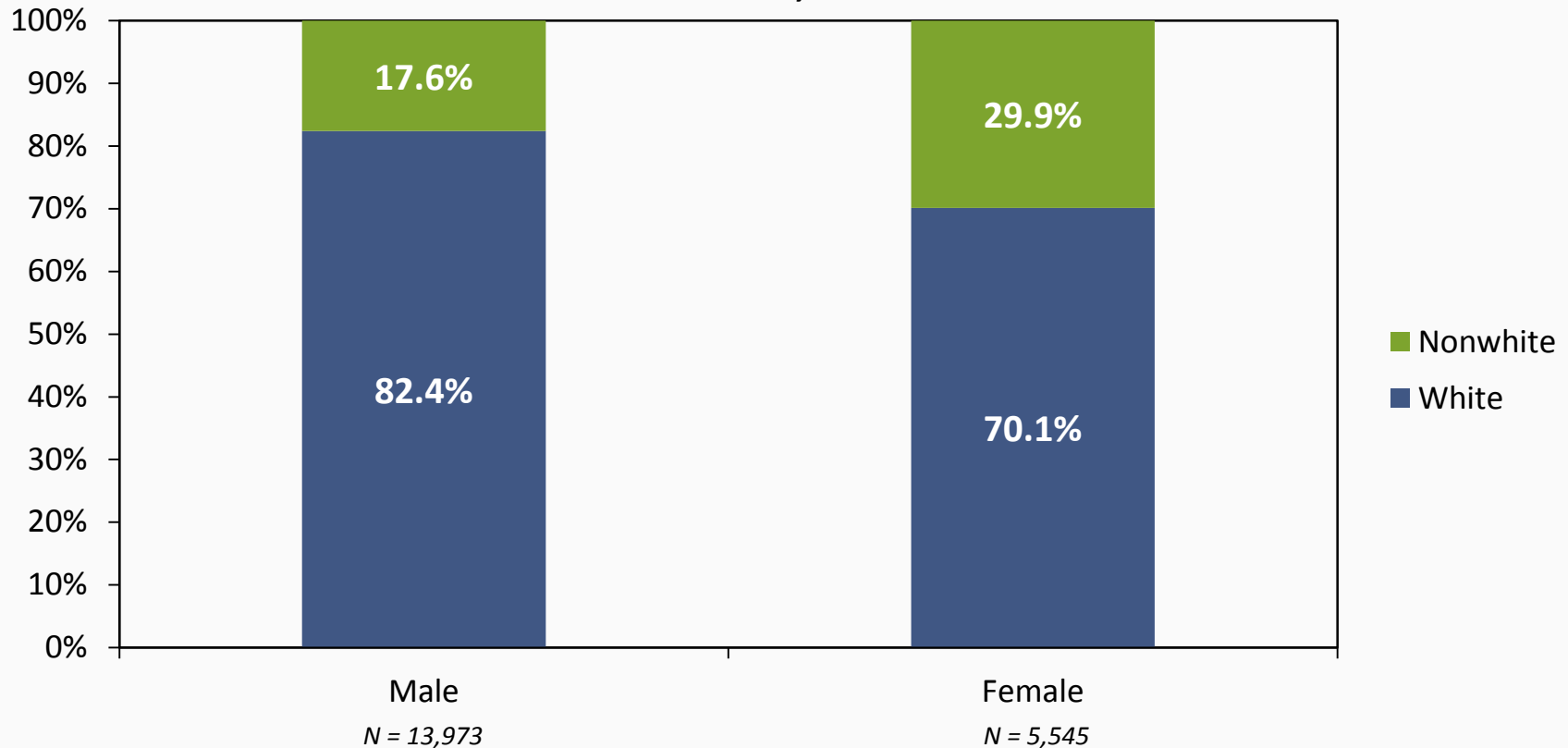
# Practitioners from Underrepresented Race/Ethnicities are Younger: RNs and LPNs

Mean Age by Race, North Carolina, 2009:  
Registered Nurses and Licensed Practical Nurses



# Female Physicians are Also More Diverse...

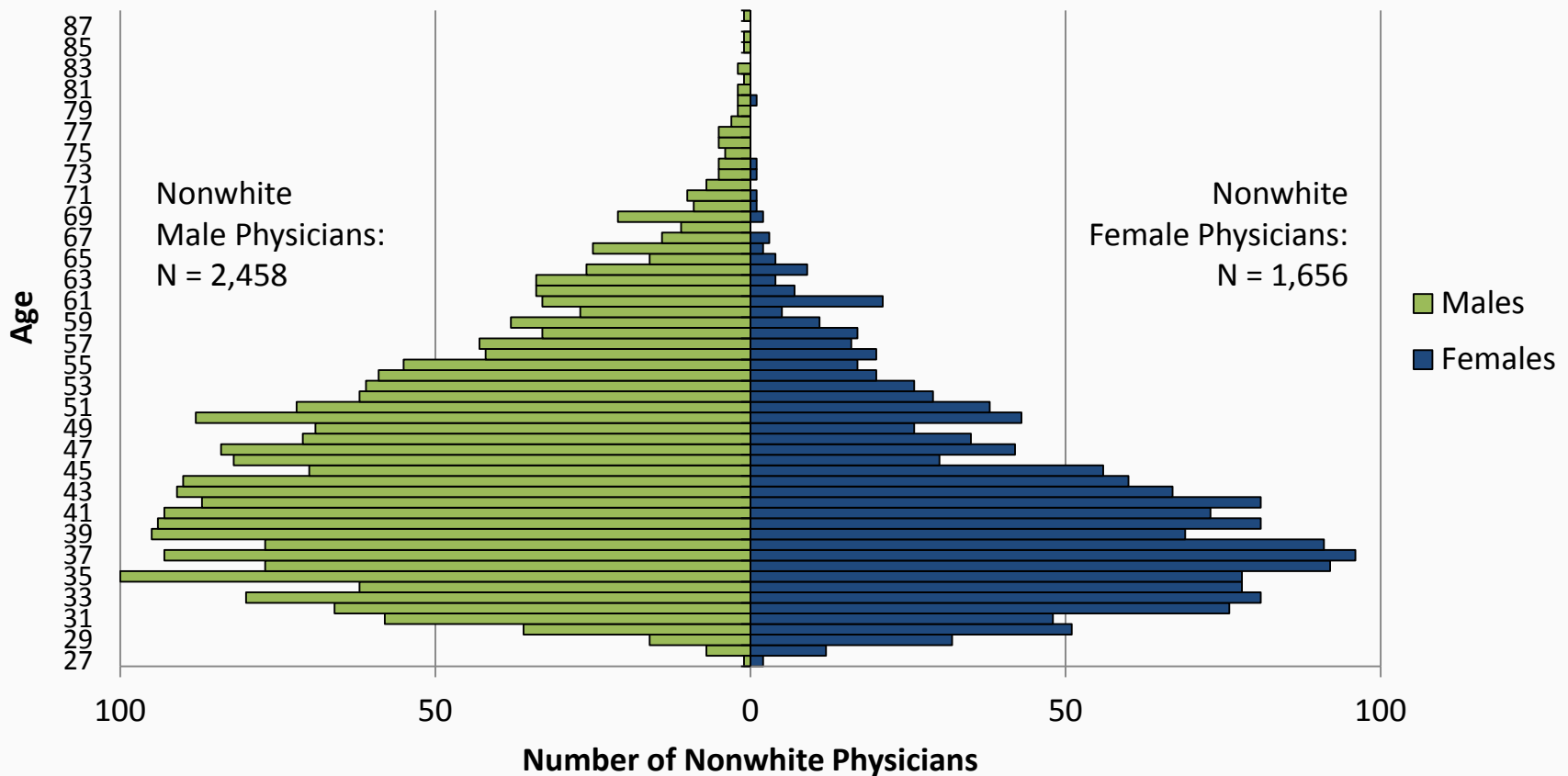
Diversity of Physicians by Sex,  
North Carolina, 2009





# ... and Non-White Female Physicians are Also Younger

Distribution of Physicians by Age and Sex  
North Carolina, 2009



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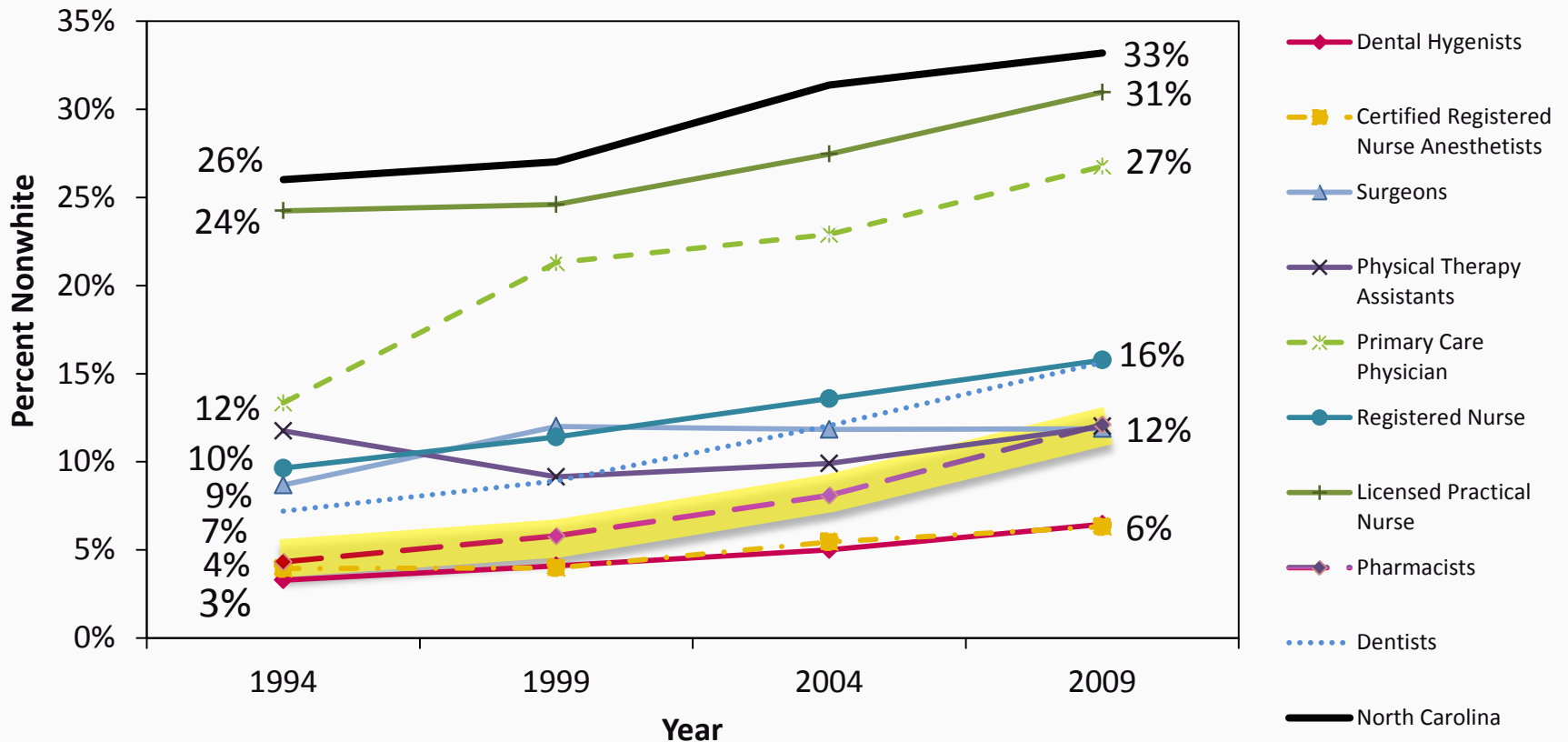
# How has Diversity Changed Over Time?

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# Health Professions are Diversifying Over Time at Different Rates

Change in Non-White Diversity of Selected Health Professions, North Carolina: 1994-2009



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# Where are NC's Diverse Health Professionals Educated?

Do we import them?

Do we grow our own?

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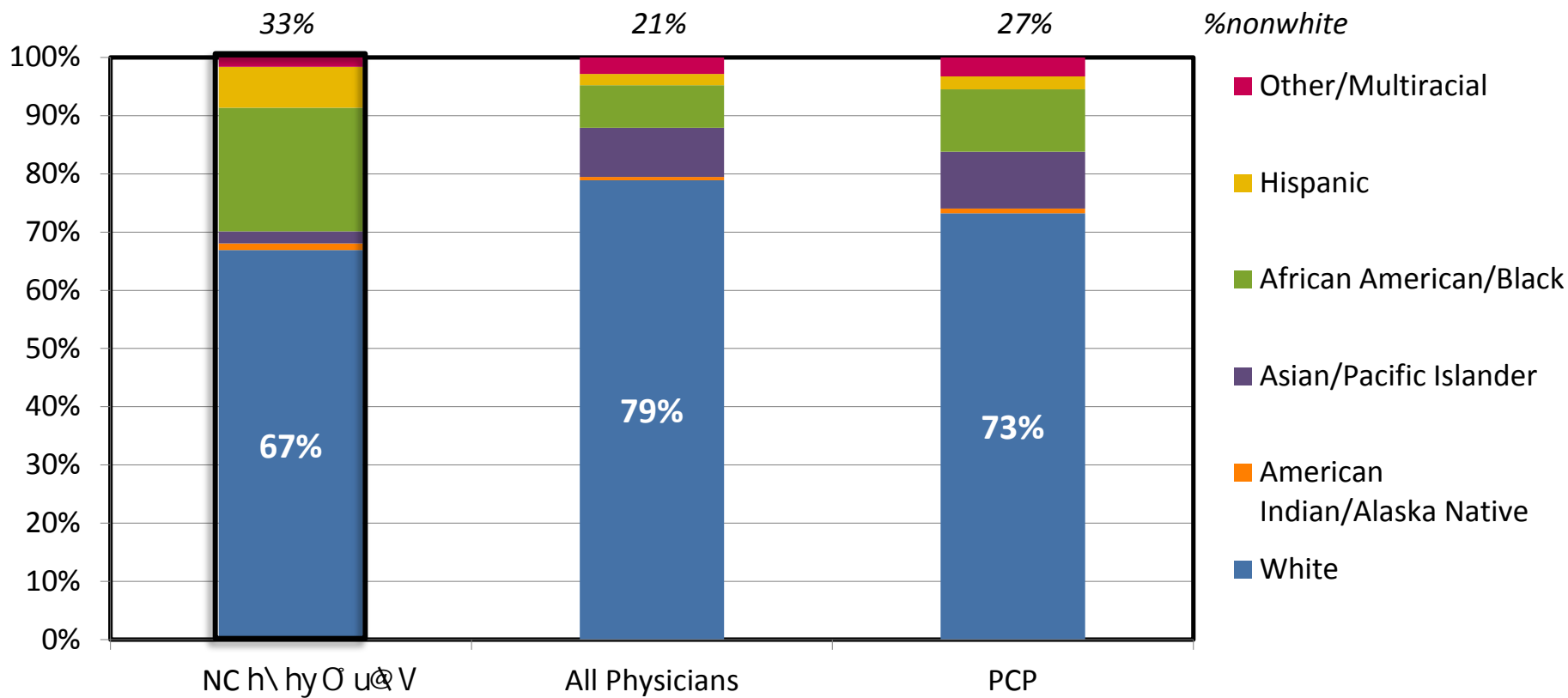
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# Physicians

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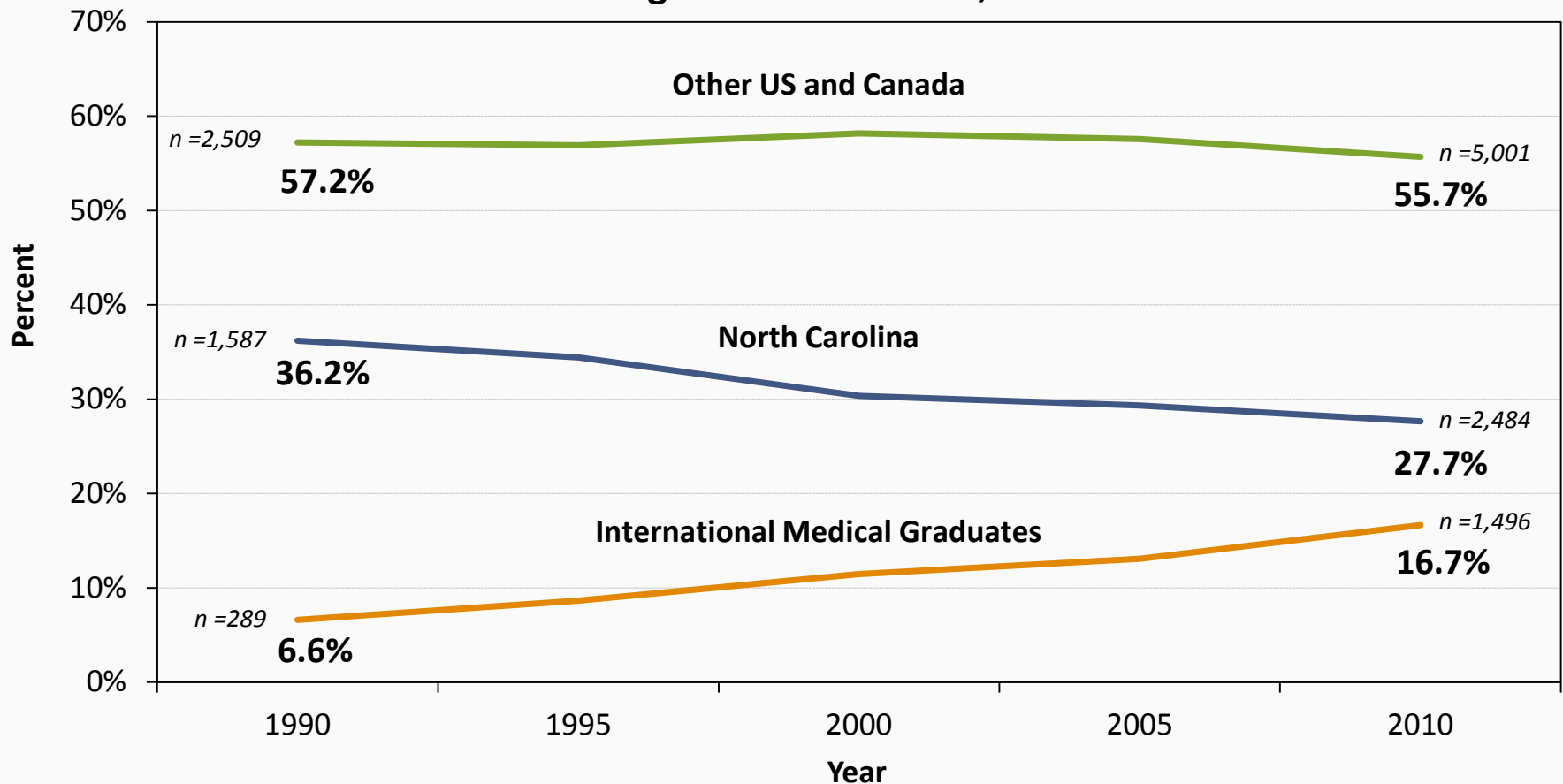
# Primary Care Physicians More Diverse Than Other Physicians

Physician & PA Diversity vs. State Diversity, North Carolina, 2009



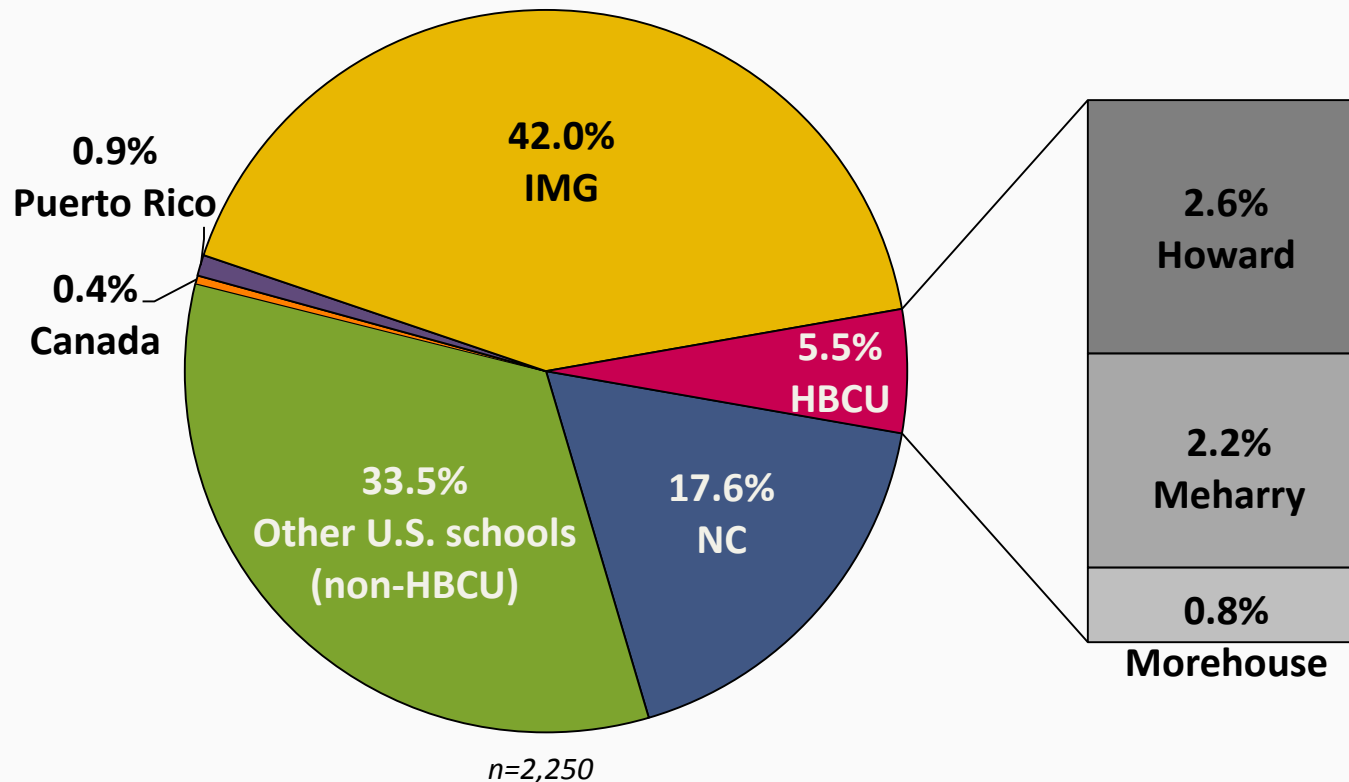
# But North Carolina Increasing Diversity by Importing it, Rapid Growth in International Medical School Graduates

## Medical School Location of Primary Care Physicians Practicing in North Carolina, 1990-2010



# Majority of NC's Non-White Primary Care Physicians Educated in Other States and Countries

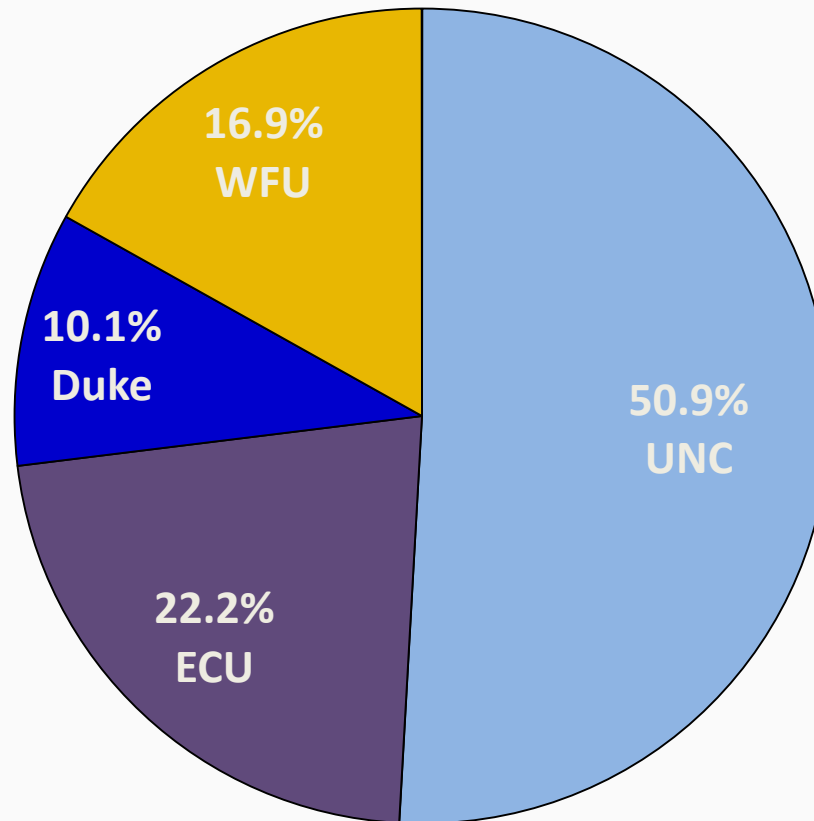
Non-White Primary Care Physicians by School  
North Carolina, 2009





# Of Non-White Primary Care Physicians Educated in NC, Half are from UNC-CH

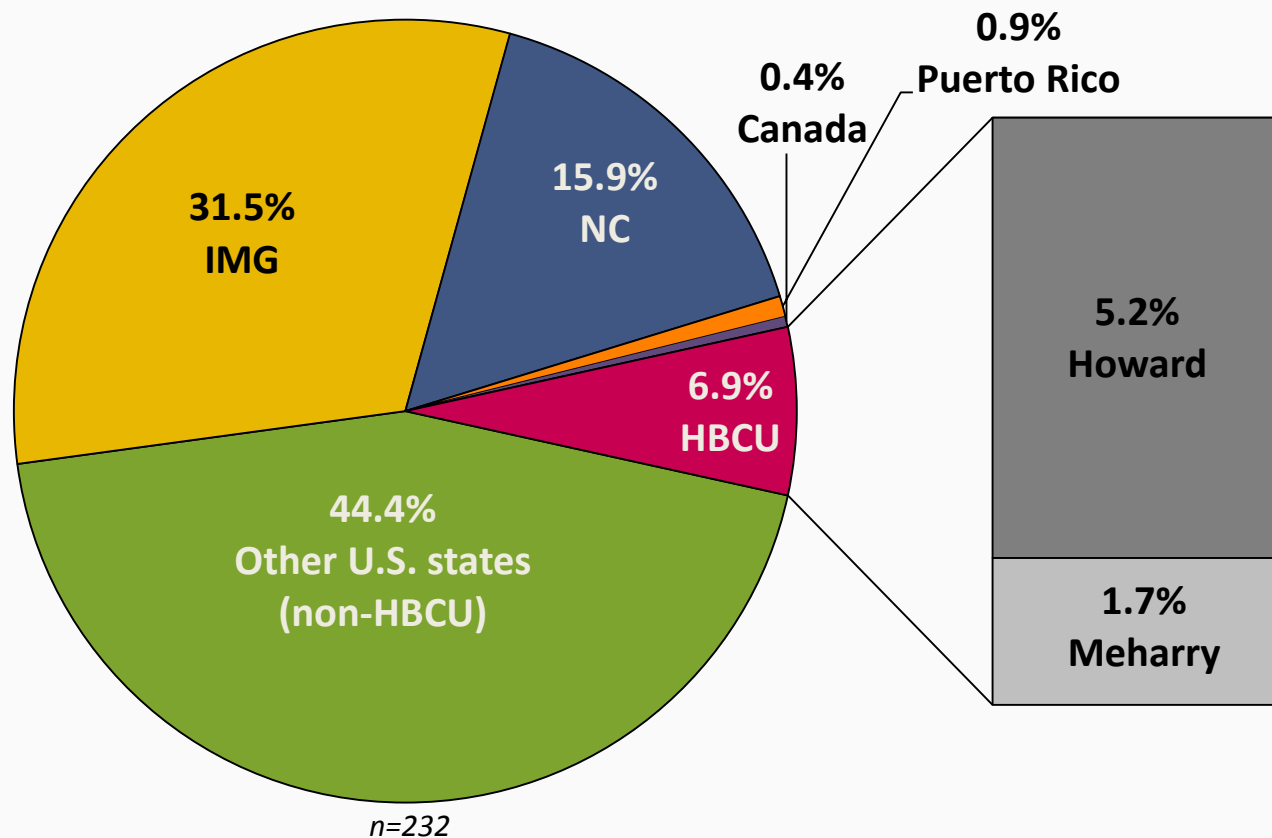
North Carolina-Educated, Non-White Primary Care Physicians by School, 2009



*n*=397

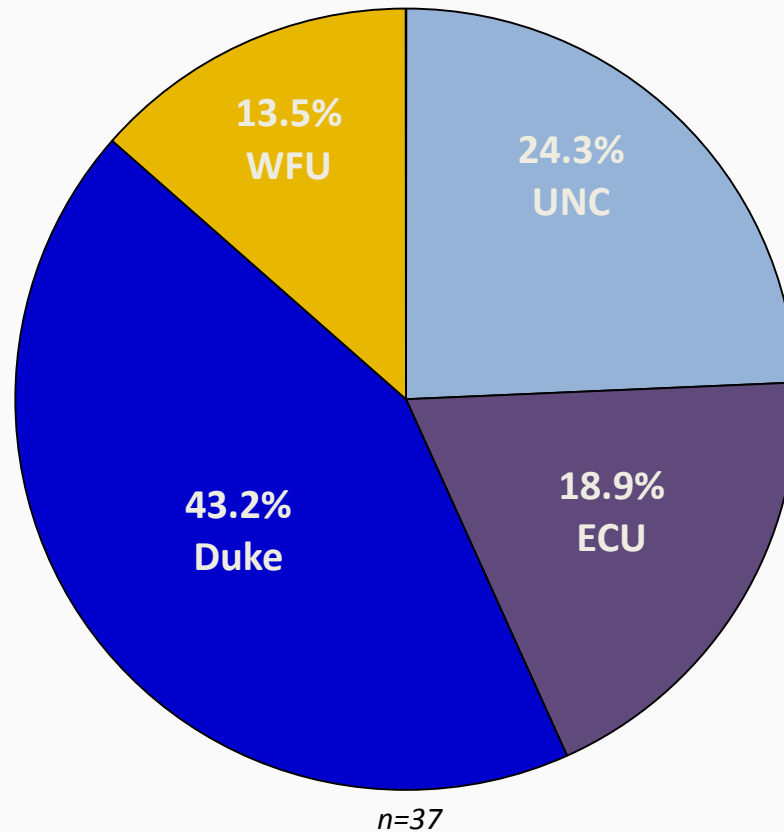
# Majority of NC's Non-White Surgeons Also Educated in Other States and Countries

Non-White Surgeons by School  
North Carolina, 2009



# Largest Percent of NC Educated, Non-White Surgeons is from Duke

North Carolina-Educated, Non-White Surgeons by School, 2009



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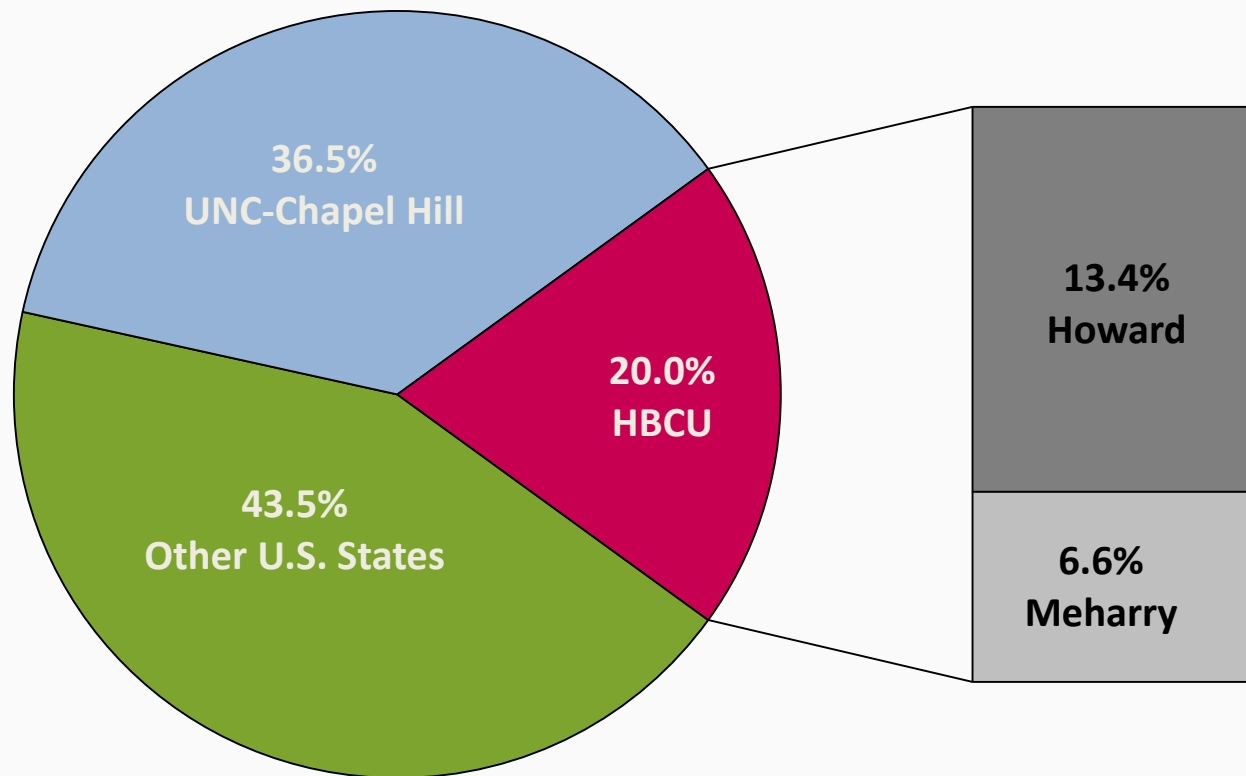
# Dentists

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# Most of NC's Non-White Dentists Were Educated Out of State

*Will this change with ECU's dental graduates?*

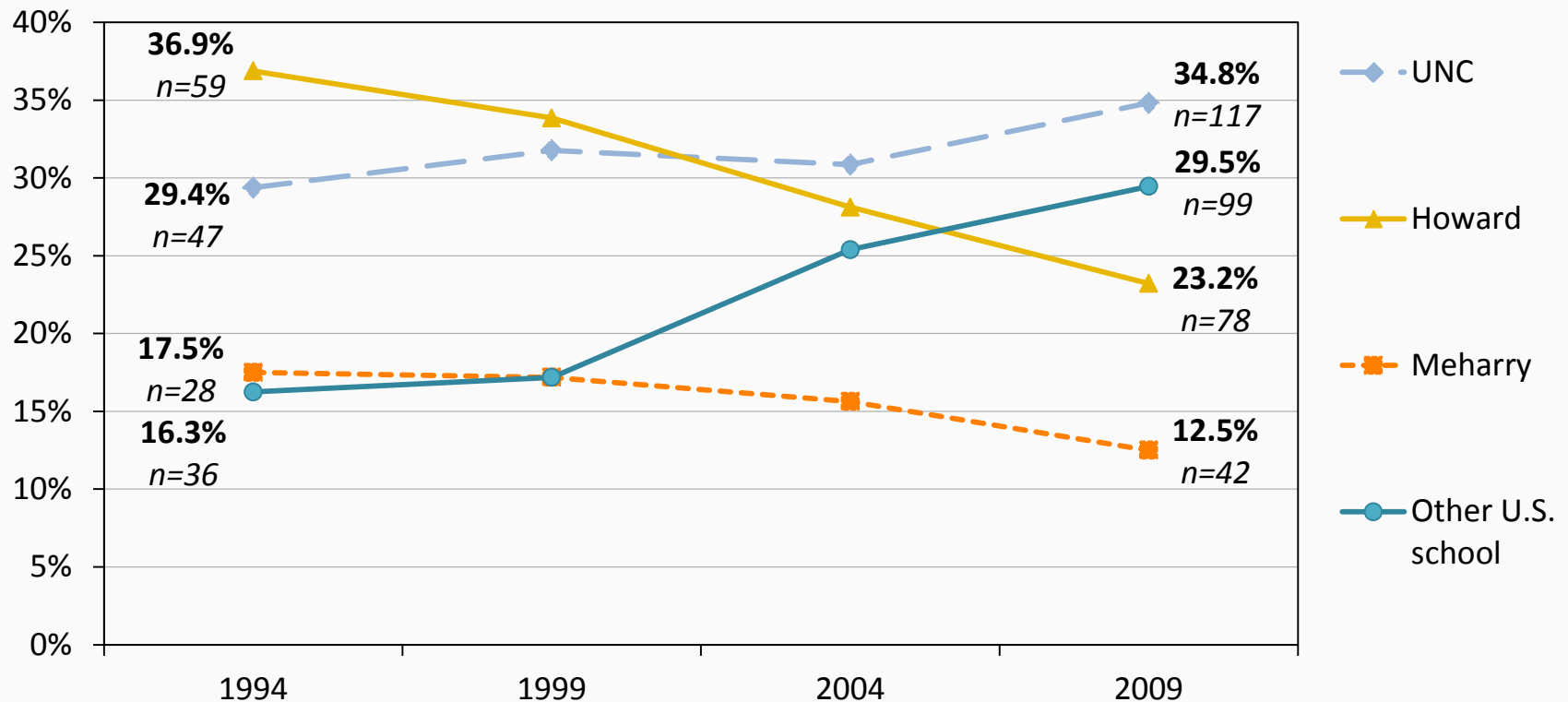
**Non-White Dentists by School  
North Carolina, 2009**



n=635

# NC Increasingly Importing African American Dentists from Other States as Contribution of HBCUs Declines

Percent of African American Dental School Graduates from UNC Chapel Hill, Selected HBCU and Other U.S. Dental Schools, 1994-2009

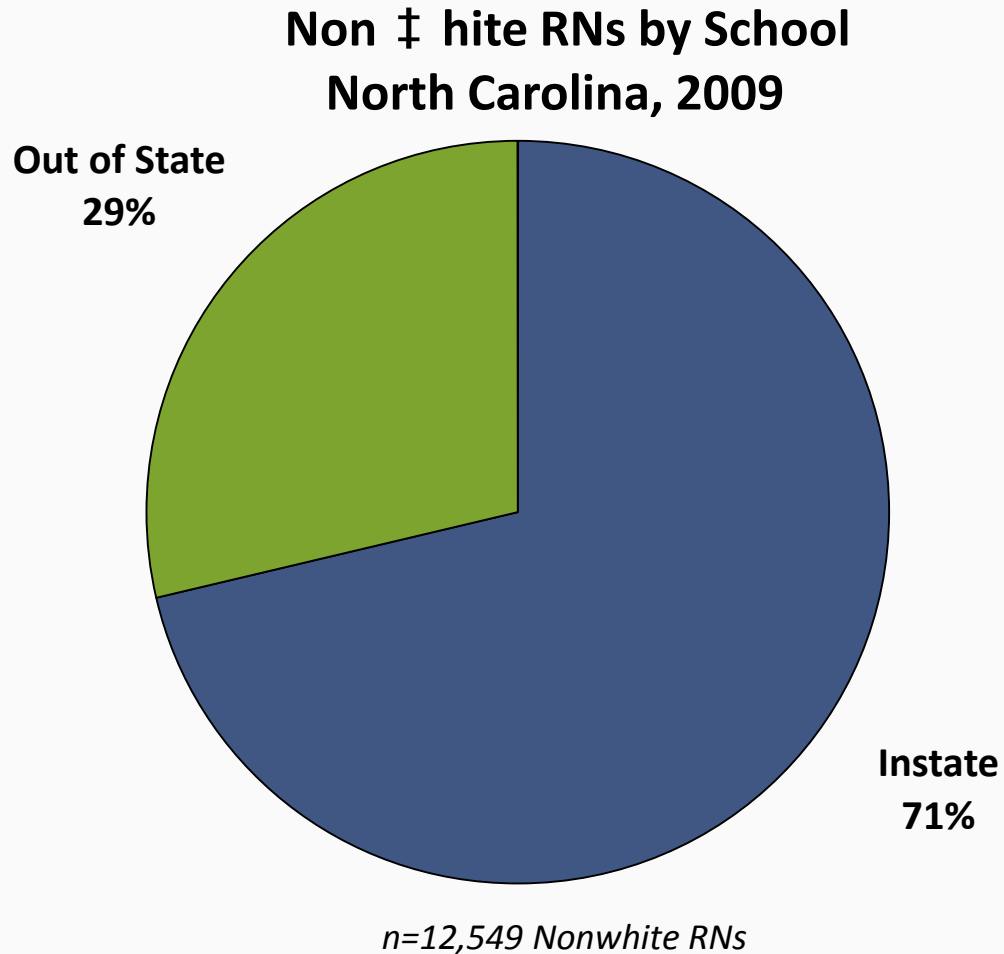


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# Nurses

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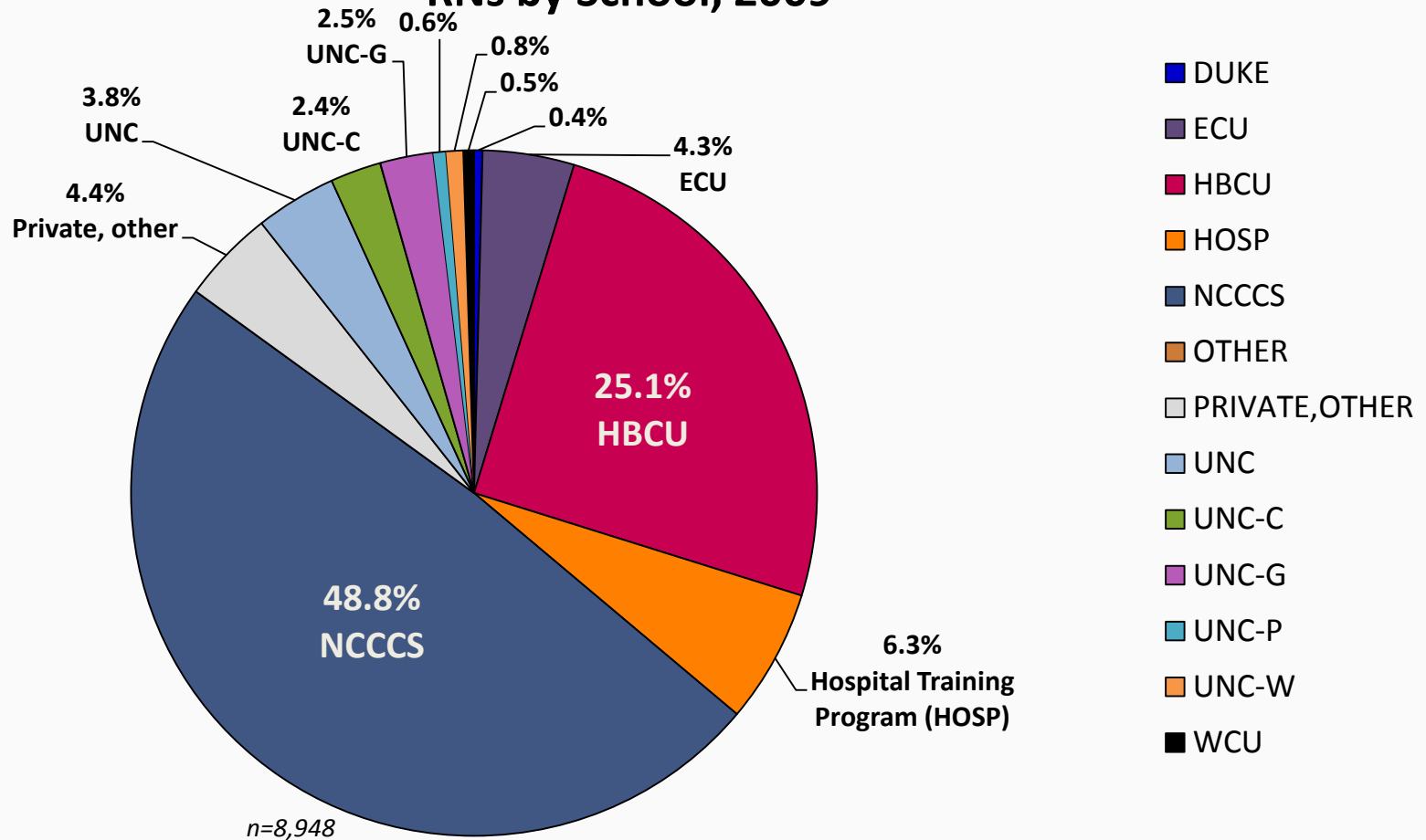
# Nearly 3 out of 4 Non-White RNs in 2009 Were Educated Instate





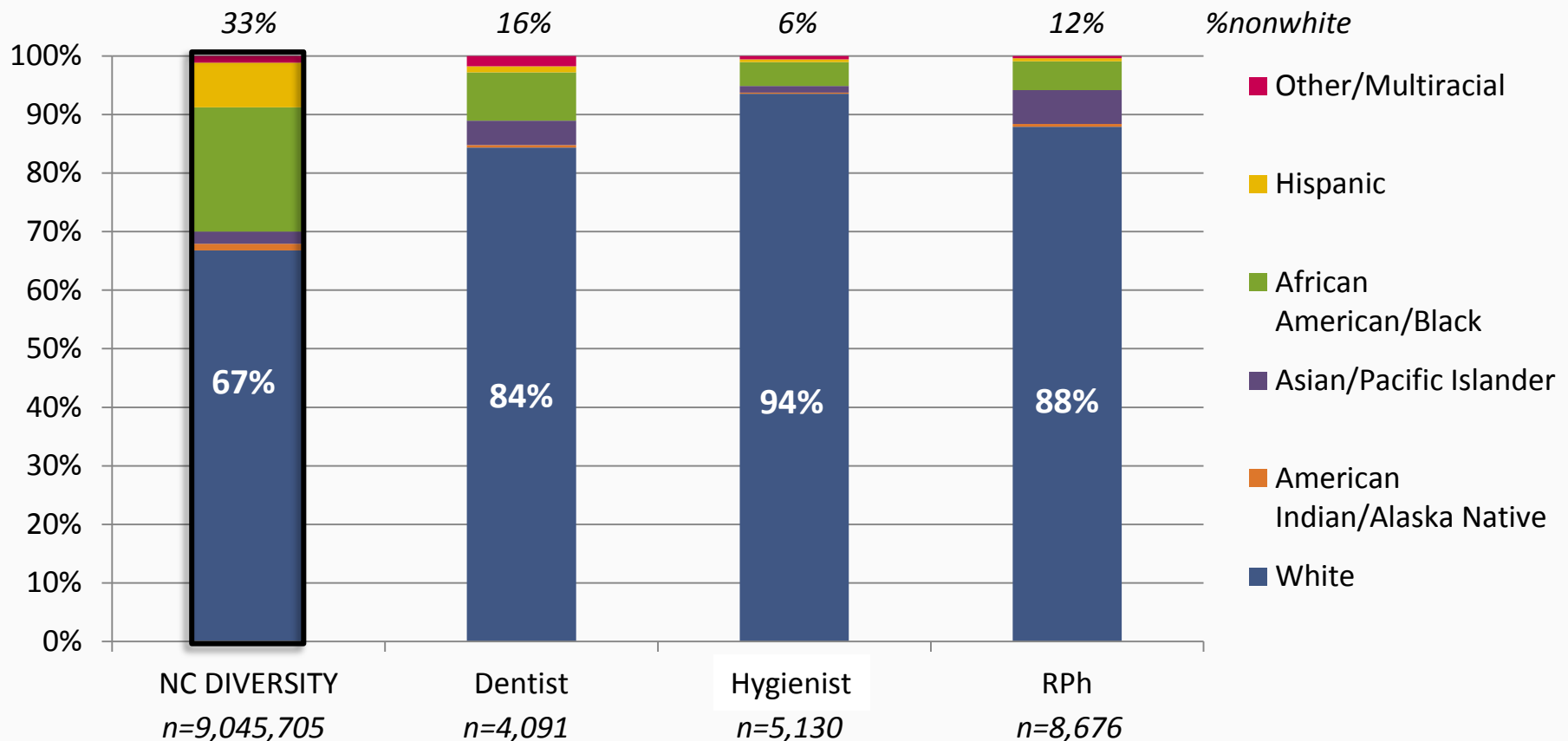
# Non-White NC Educated Registered Nurses by School, 2009

North Carolina-Educated, Non † hite  
RNs by School, 2009



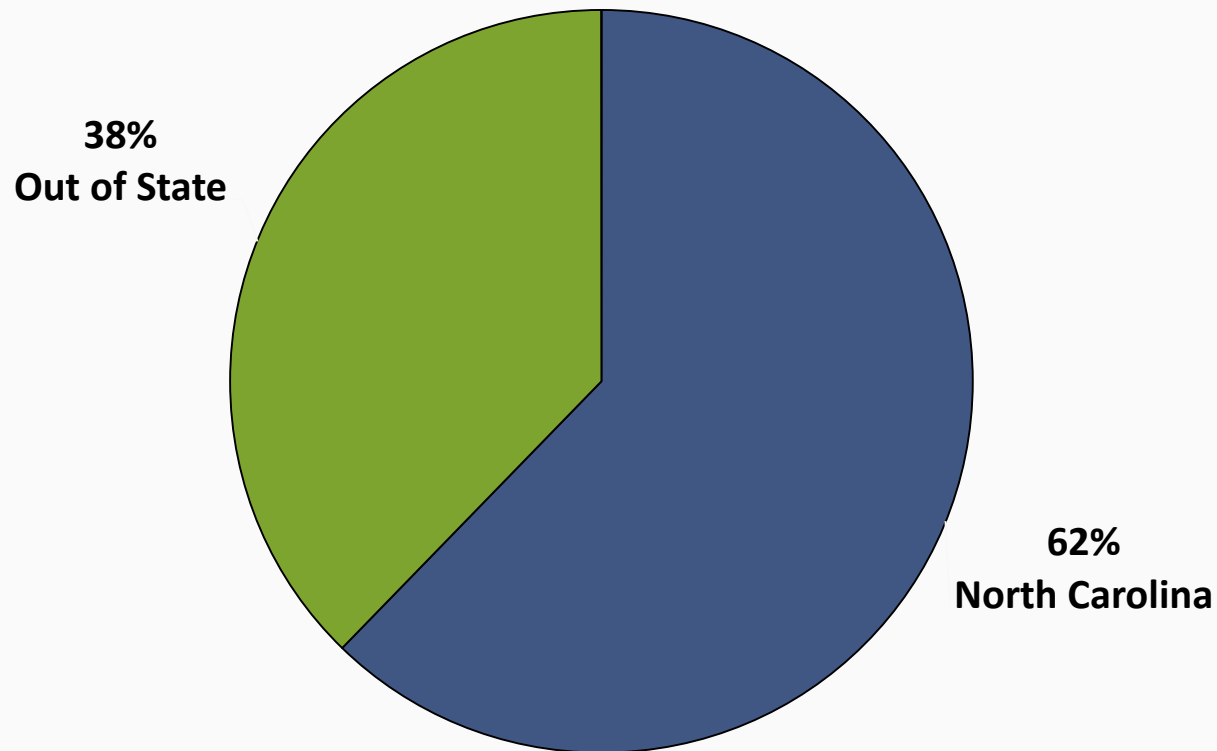
# Dental Hygienists Less Diverse than Dentists or Pharmacists

Dentist, Hygienist & Pharmacist vs. State Diversity, North Carolina 2009



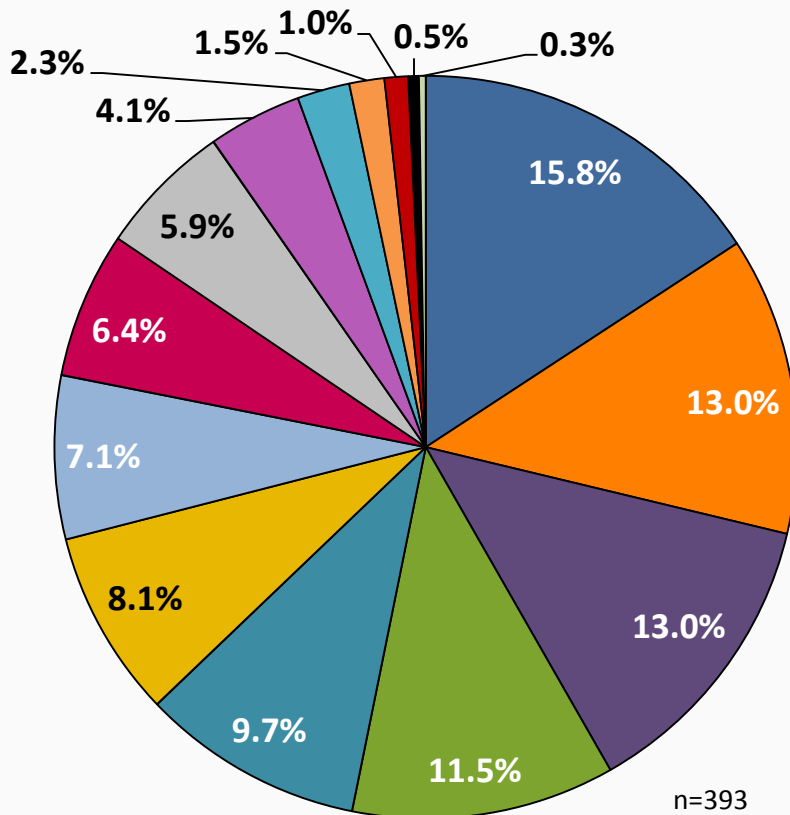
# Nearly 2 Out of 3 Non-White RTs in 2009 Were Educated Instate

Respiratory Therapists in Practice in North Carolina by School, 2009



# Many Community Colleges Contribute to Non-White RTs in the State

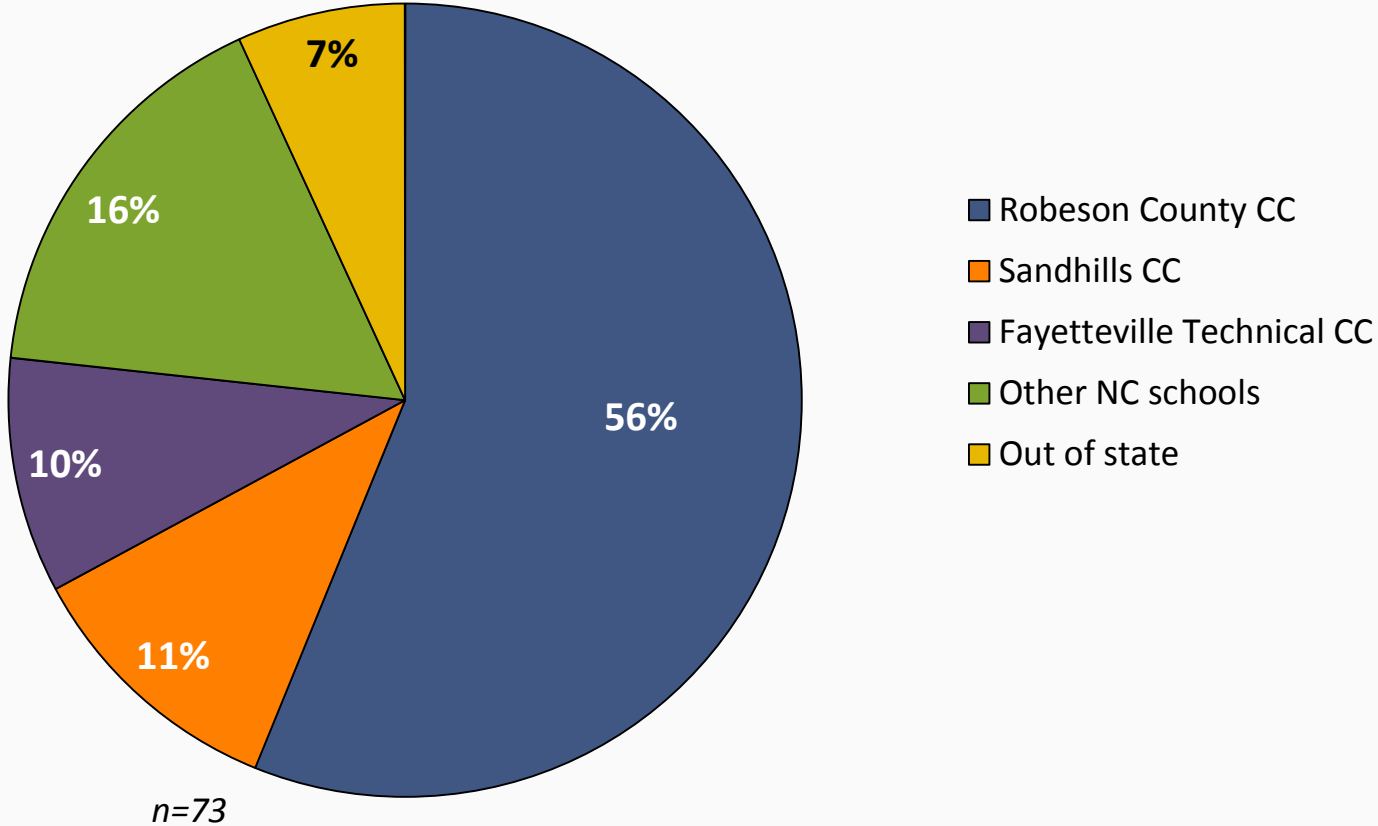
Percent Non-White Respiratory Therapists from NC Schools, 2009



- Durham Technical CC
- Central Piedmont CC
- Fayetteville Technical CC
- Robeson CC
- Sandhills CC
- Pitt CC
- Edgecombe CC
- Stanley Technical CC
- Rockingham CC
- Forsyth Technical CC
- Catawba Valley CC
- Carteret CC
- Southwestern CC
- Lenoir CC
- UNC Pembroke

# Robeson County Community College Provides More Than Half of All American Indian RTs

NC American Indian Respiratory Therapists (RT) by school, 2009



# Where Do Our Non-White Health Care Practitioners Practice?

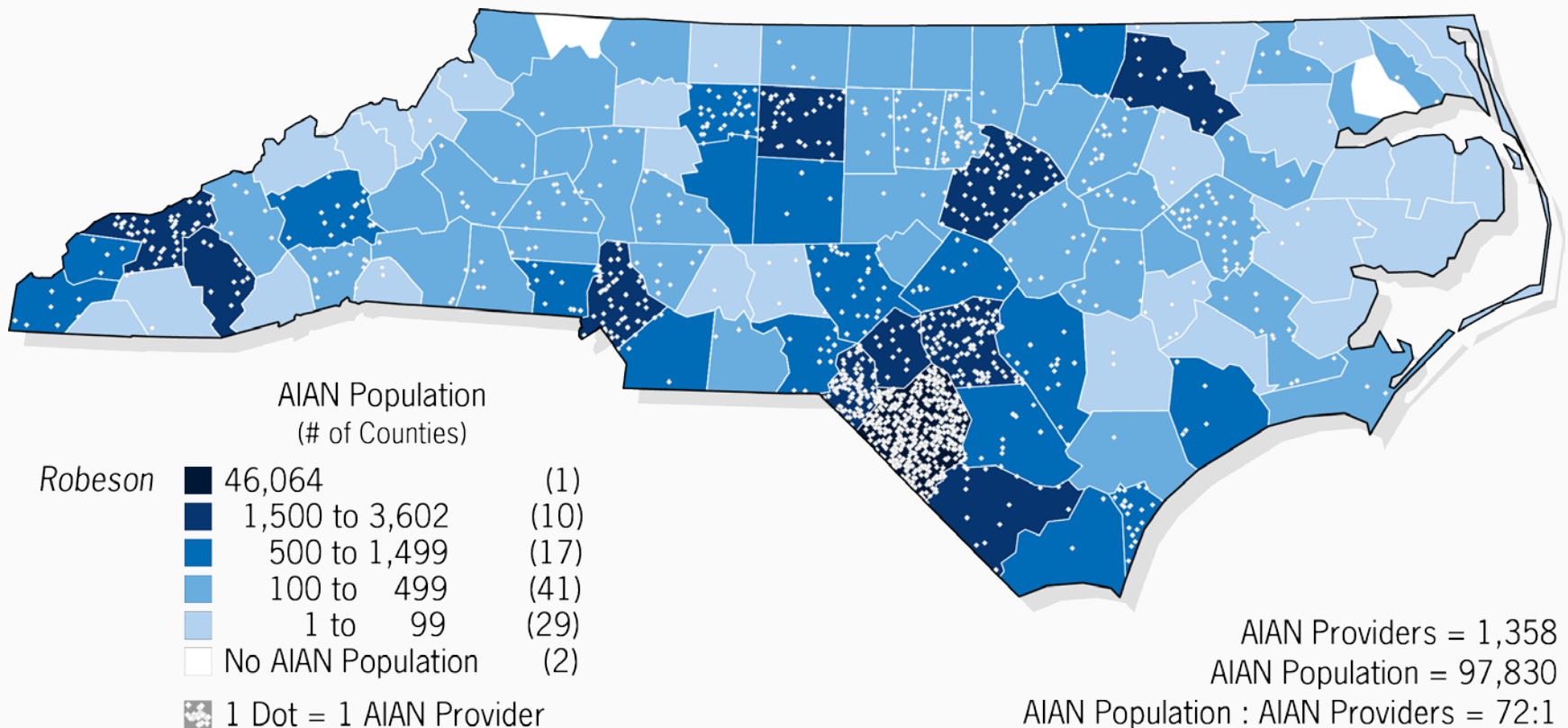
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- Geographically concentrated with nearly half located in Mecklenburg, Wake, Durham, Guilford, Forsyth, Pitt and Cumberland counties
- About four out of five (79%) are located in metropolitan counties



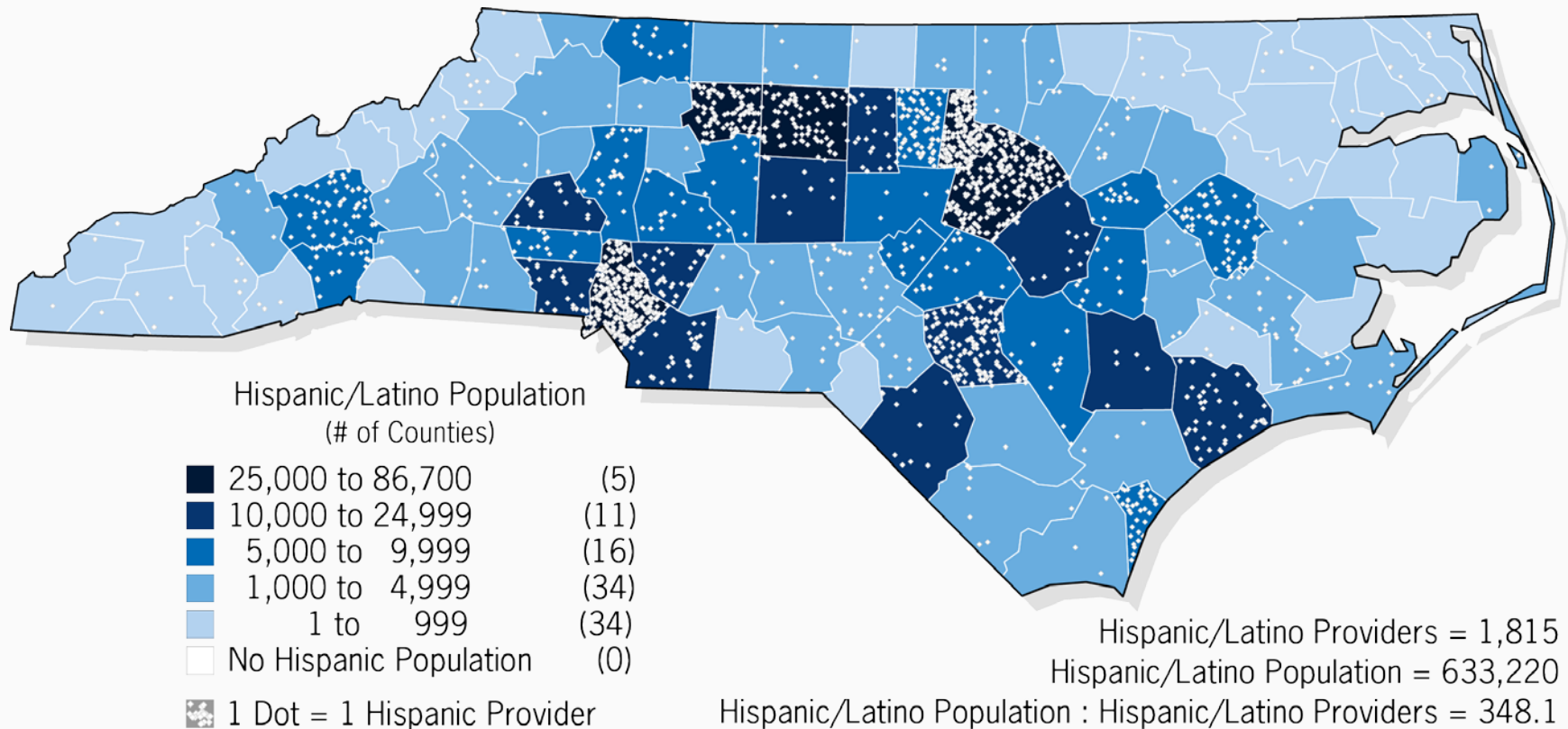
# About 1 in 3 American Indian/Alaskan Native Health Care Practitioners are in Robeson County

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



# About Half of Hispanic/Latino Practitioners are in Urban Areas but These Areas Still Fall Short of Achieving Parity with Population

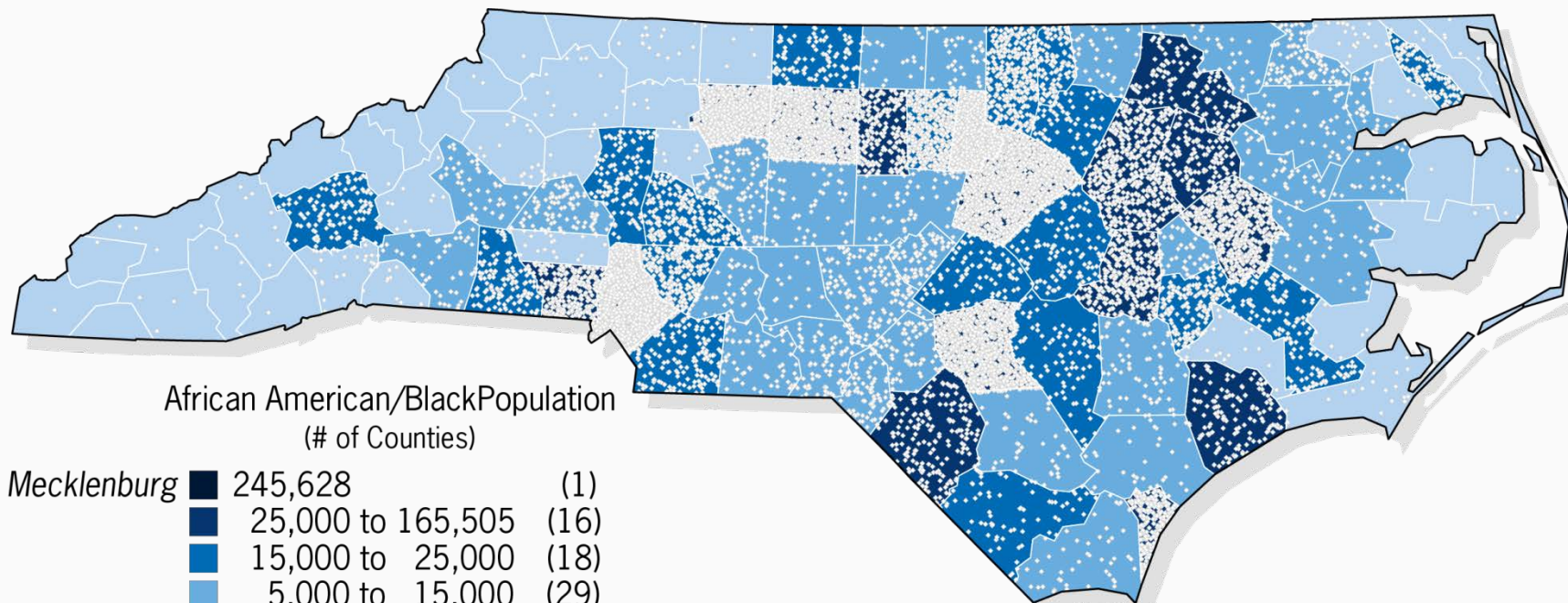
## Hispanic/Latino Population and Healthcare Providers, North Carolina, 2009





# About Half of African American Practitioners are in Urban Areas but are Largest Percent of Workforce in Northeastern and Southeastern Counties

## African American/Black Population and Healthcare Providers, North Carolina, 2009



African American/Black Population  
(# of Counties)

Mecklenburg	■ 245,628	(1)
	■ 25,000 to 165,505	(16)
	■ 15,000 to 25,000	(18)
	■ 5,000 to 15,000	(29)
	■ 1 to 5,000	(36)
	□ No Black Population	(0)
	● 1 Dot = 1 Af Am/Black Provider	

Af Am/Black Providers = 17,905

Af Am/Black Population = 1,894,014

Af Am/Black Population : Af Am/Black Providers = 105.8

# Reflections

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- Relative lack of diversity of RNs
- Lack of diversity among allied health professions, particularly among OTAs and PTAs
- Economic development issue—  
entry-level jobs on the career ladder
- Community college system and HBCUs  
contributing significantly to non-white workforce
- We are importing non-white physicians and dentists



# More reflections...

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- More diverse workforce is more female and young—how to encourage leadership and development?
- Why have health professions diversified at different rates?
  - LPNs are most diverse
  - Why haven't allied health professions diversified as quickly?
  - Slower to diversify—dental hygienists
- Should we be looking at socioeconomic status?
- Relationship of diversity to social mission?



# Barriers to Increasing Workforce Diversity

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- Limited loan repayment for some professions
- Low matriculation rates in allied health professions and other health professions
- High attrition rates—costly to system and student
- Racial/ethnic disparities in K-12
- Lack of faculty and mentors
- Broken career ladders



# Next Steps

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## Who needs to see these data?

- Legislators, philanthropic foundations, deans of health professional schools, guidance counselors, others?

## How can data be used?

- Policy making
- Education
- Service
- Research

# Questions?

I may or may not have answers...

**Erin P. Fraher, PhD MPP**

**Victoria McGee, MA**

*North Carolina  
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