The Nursing Workforce: Trends and Challenges

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Presentation overview

- Basic statistics on licensed practical nurses, registered nurses, nurse practitioners and certified nurse midwives
  - Education
  - Supply
  - Distribution
- Challenges facing NC's nursing workforce
  - Maldistribution by geography and setting
  - Lack of diversity
  - The shift to the BSN as entry degree
  - Preparing nurses for roles in a transformed health care system

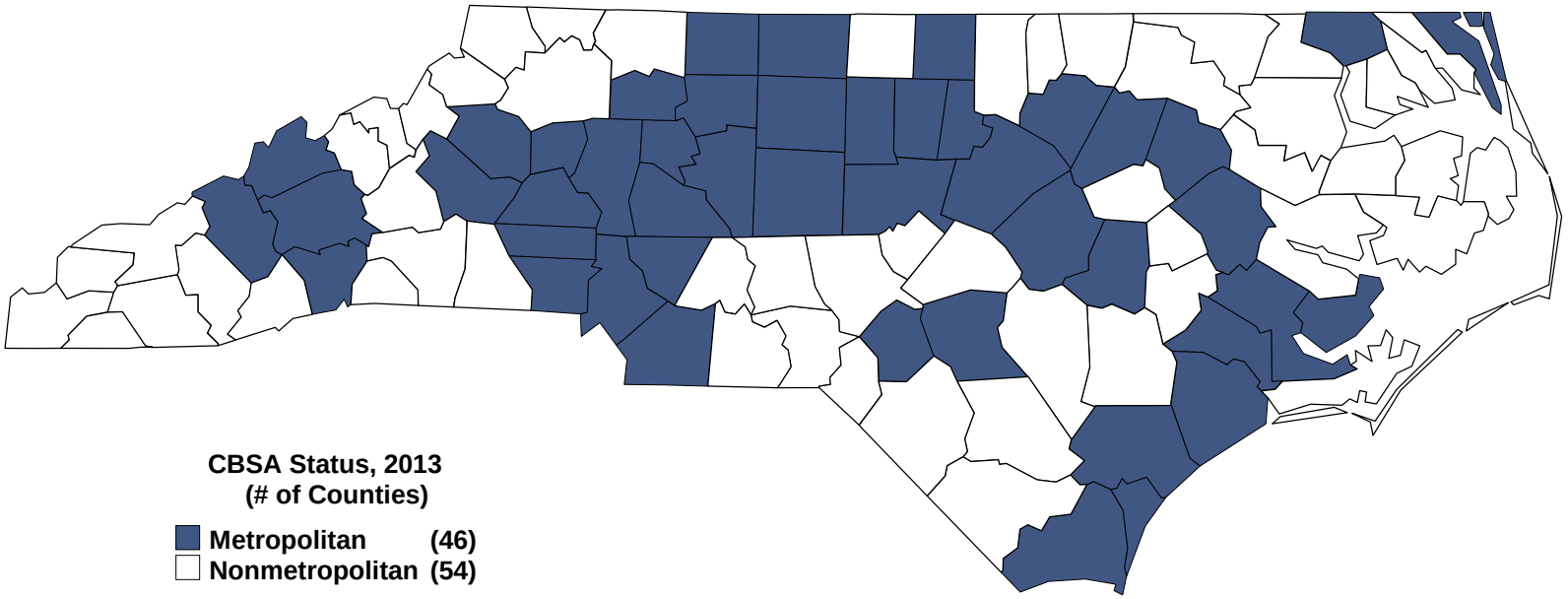
But before we dive into the deep end of the data

A short note on definitions

Image from: http://rlasharespace.pbworks.com/w/page/48788069/5612ft%20%20Norman%20Rockwell%20Story

Our rural definition: OMB's Core Based Statistical Areas

Metropolitan Status*
North Carolina, 2013



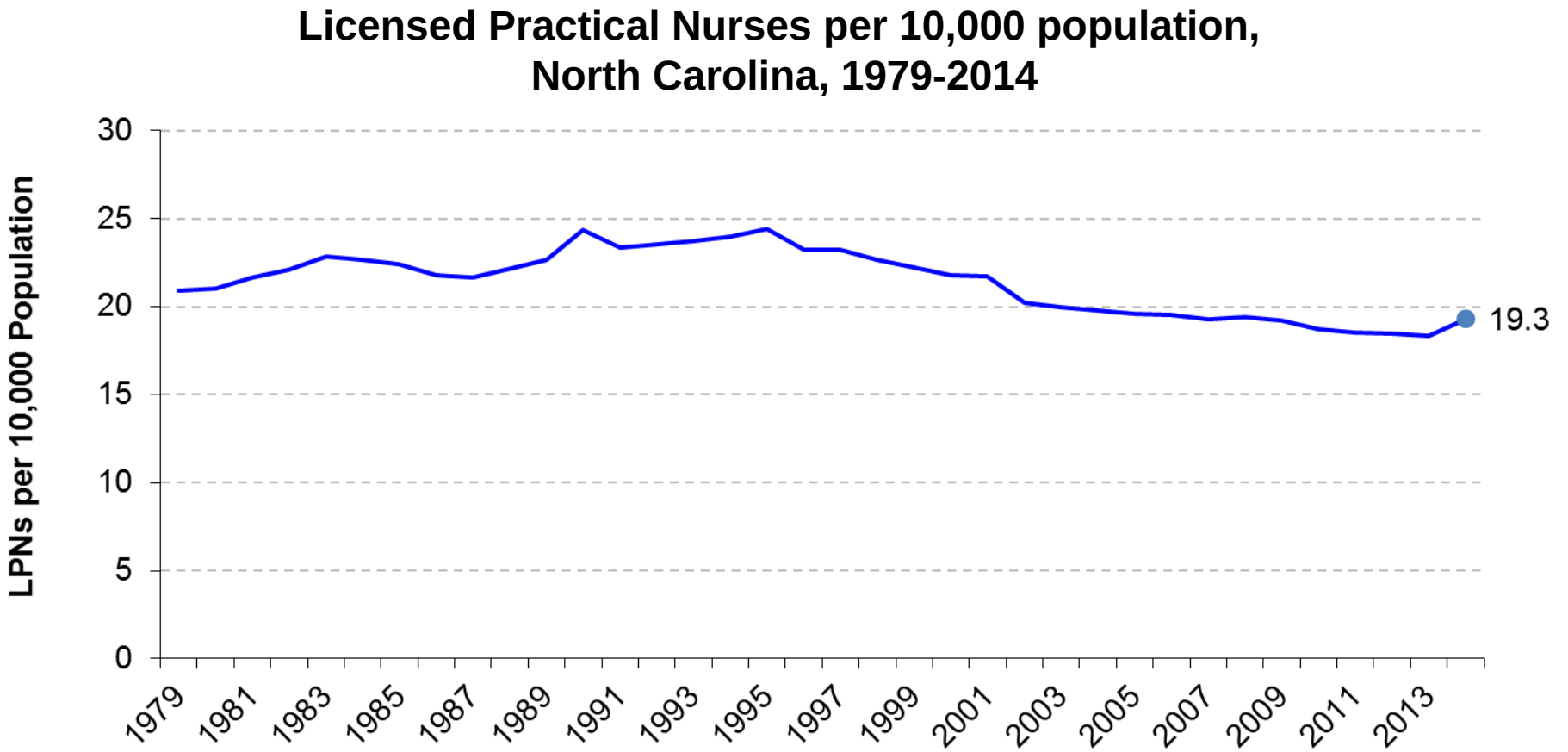
Source: US Census Bureau and Office of Management and Budget, March 2013.
*Note: "Core Based Statistical Area" (CBSA) is the OMB's collective term for Metropolitan and Micropolitan Statistical areas. Here, nonmetropolitan counties include micropolitan and counties outside of CBSAs.
Produced By: North Carolina Rural Health Research Program, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

The Basics: Numbers and Education

Type of Nurse	# in NC in 2014	Education
Licensed Practical Nurses	19,222	One year in an approved LPN program at community college or other approved program.
Registered Nurses	104,996	Multiple entry degrees: Two year associate degree in nursing or four year bachelors degree in nursing
Nurse Practitioners	5,372	Masters degree in nursing or higher
Certified Nurse Midwives	251	Masters degree in nursing or higher

Licensed Practical Nurses

Number of LPNs per population was on decline but recent uptick may signal changing trend



Figures include all licensed, active, instate licensed practical nurses licensed in NC as of Octobber 31 of the respective year.
Sources: North Carolina Health Professions Data System, 1979 to 2014, with data derived from the NC Board of Nursing.

Trends in the LPN Workforce

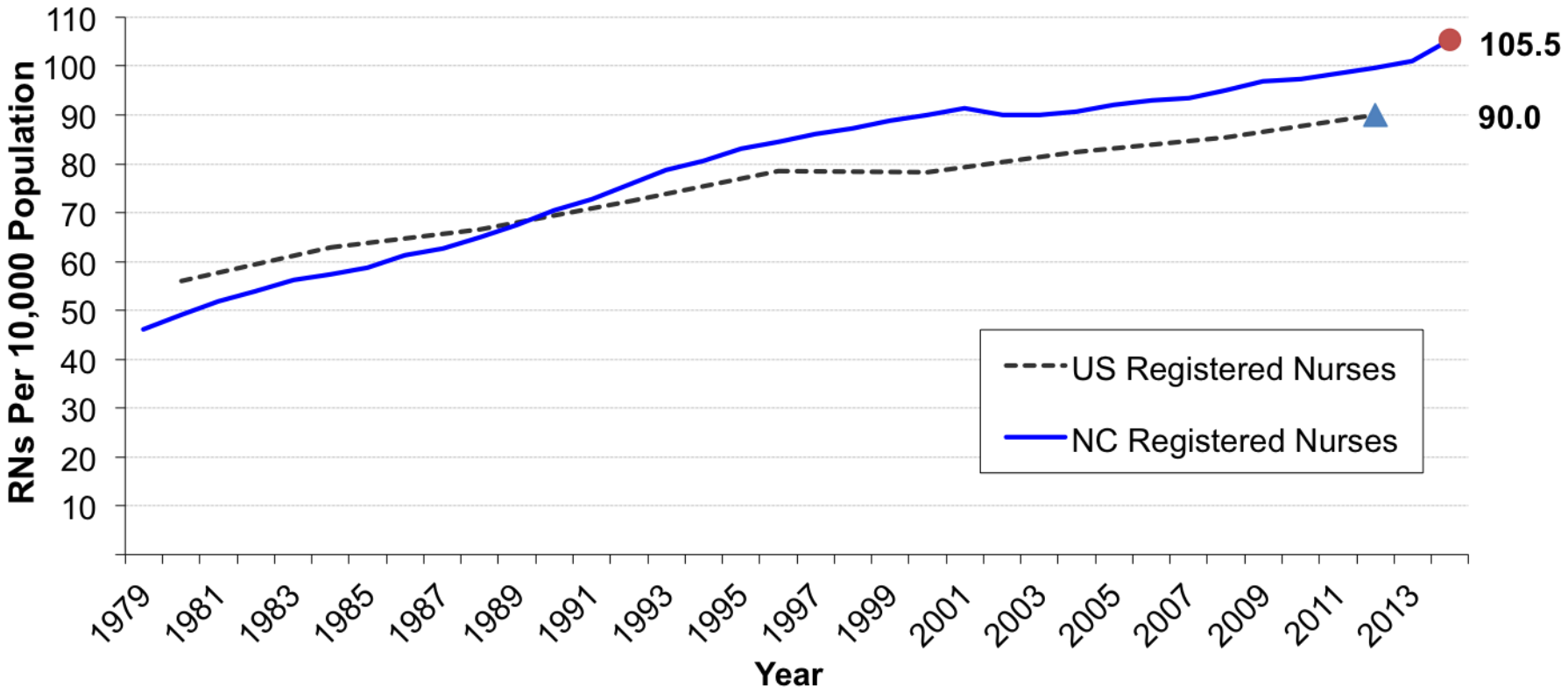
- Growth in LPN employment in assistive living, long-term care and physician practices
- Compared to other nurses:
  - LPNs are more evenly distributed between rural and urban counties
  - More racially/ethnically diverse
- LPN degree is important step on career ladder for:
  - Certified nurse assistants and medical assistants who want a nursing degree
  - LPNs to become Registered Nurses—between 2001 and 2013, 8.0% of LPN workforce transitioned to become an RN*

* Cheryl Jones. "An Untapped Resource in the Nursing Workforce? Licensed Practical Nurses Who Transition to Become Registered Nurses." Carolina Health Workforce Research Center, Cecil G. Sheps Center for Health Services Research. 2015

Registered Nurses

North Carolina's supply of registered nurses is outpacing US average

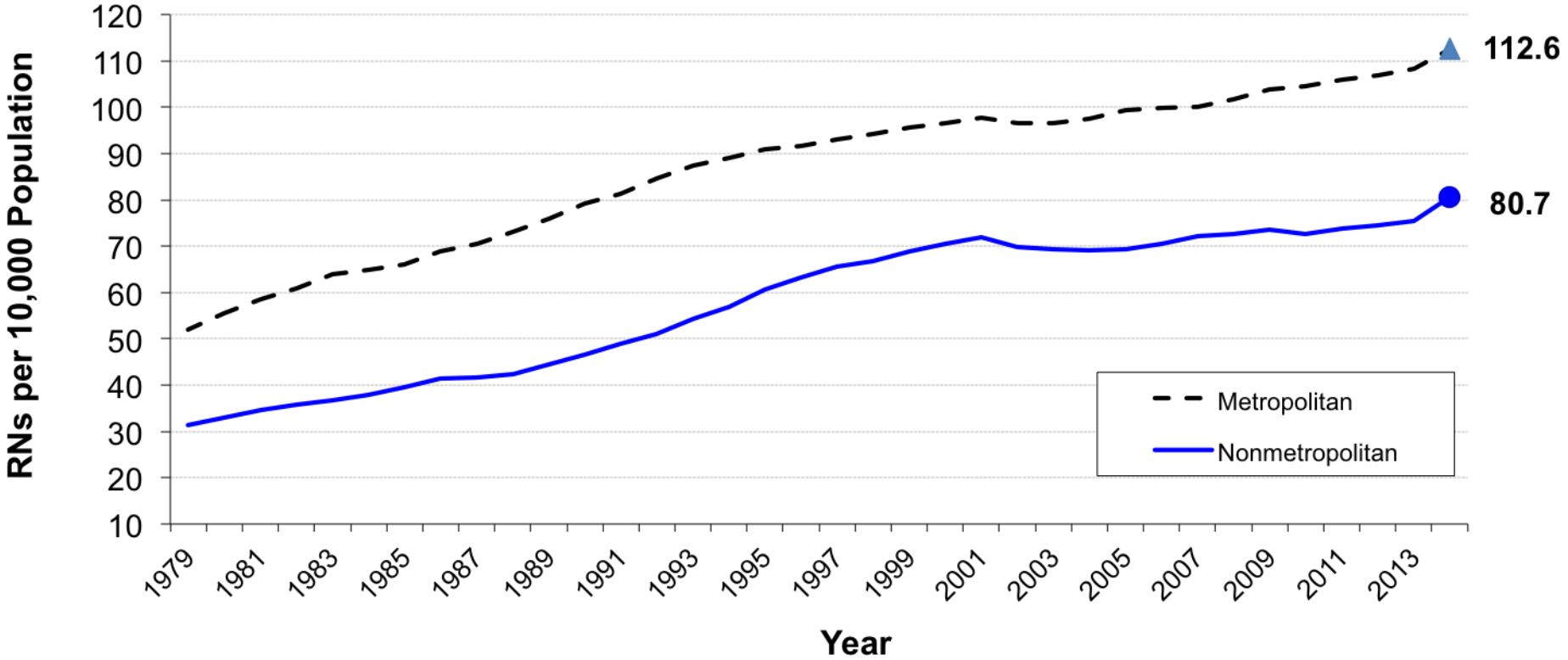
Registered Nurses per 10,000 Population, US and NC, 1979 to 2014



Figures include all licensed, active, instate registered nurses.
Sources: North Carolina Health Professions Data System, 1979 to 2014. The Registered Nurse Population- Findings from the National Sample Survey of Registered Nurses, 2008, 2004, 2000, 1996,1992, 1988, 1984, 1980; North Carolina Office of State Planning.

But North Carolina's urban areas have 32 more RNs per 10,000 people than rural areas

Registered Nurses per 10,000 Population by Metropolitan and Nonmetropolitan Counties, North Carolina, 1979 to 2014



Sources: North Carolina Health Professions Data System, 1979 to 2014; North Carolina Office of State Planning. Figures include all licensed, active, in-state registered nurses. North Carolina population data are smoothed figures based on 1980, 1990, 2000, and 2010 Censuses. Source for Metropolitan-Nonmetropolitan definition: Office of Management and Budget, 2013.

Where RNs complete education affects practice location and setting

- 90% of RNs graduating with ADN from North Carolina Community College System (NCCCS) are retained in-state
- Compared to NC BSN cohort that graduated at same time, NCCCS ADN nurses are:
  - Two times more likely to practice in rural areas
  - Three times more likely to practice in NC's most underserved communities
- ADN nurses practice in needed workforce settings:
  - 2x more likely to practice in home care/hospice
  - 3x more likely to practice in long-term care than BSN nurses

Source: Fraher EP, Belsky DW, Carpenter JM, and Gaul K. *A Study of Associate Degree Nursing Program Success: Evidence from the 2002 Cohort*. Cecil G. Sheps Center for Health Services Research. October 2008.

What happens when ADN nurses go onto pursue a BSN or higher?

After seeking BSN or higher, nurses who entered with an ADN, behave:

More like BSN+ nurses in terms of specialty and setting

- Less likely to practice in home care, hospice, long-term care and geriatrics

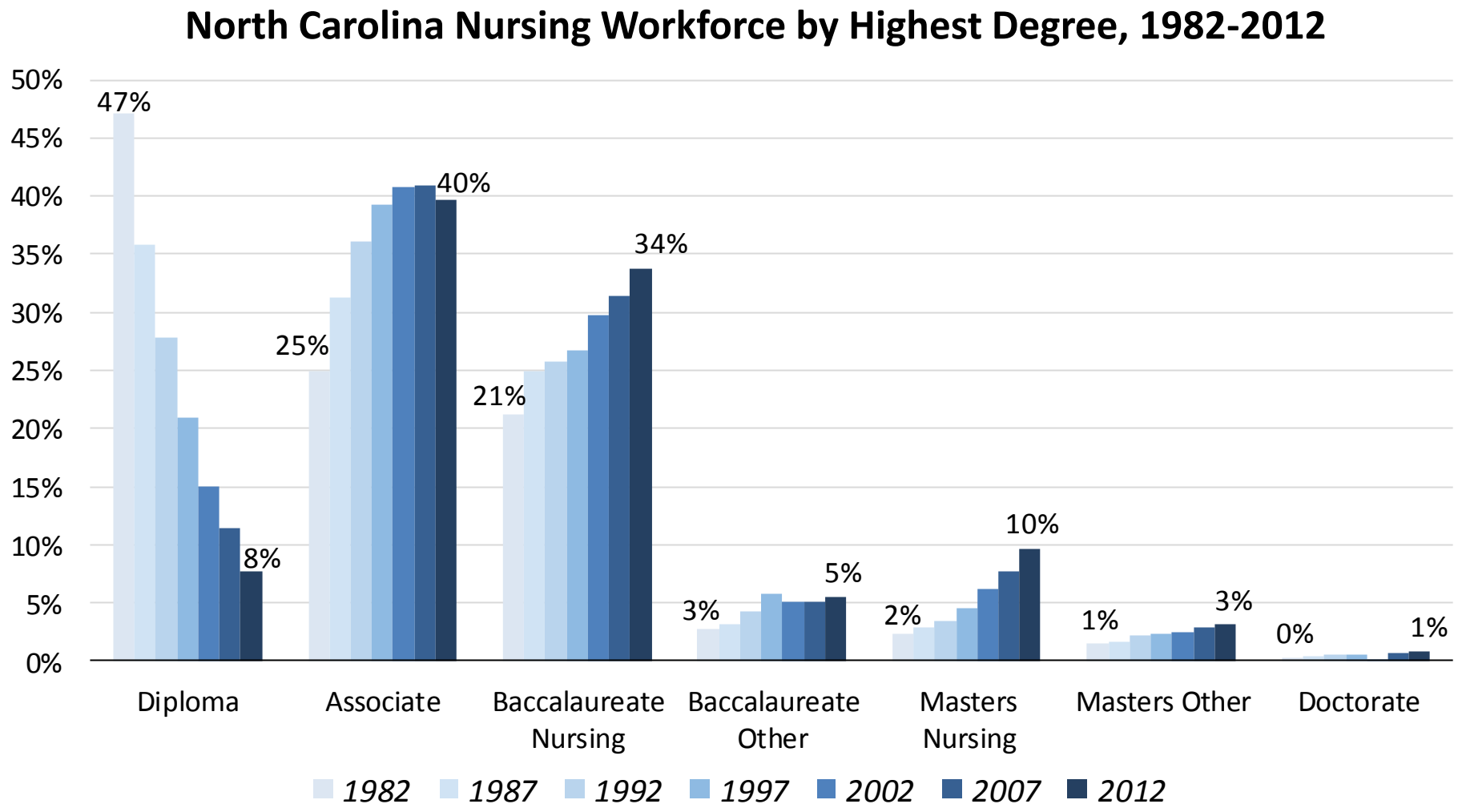
More like ADN nurses in terms of geographic dispersion. Compared to BSN entry nurses:

- Twice as likely to practice in rural
- Three times more likely to practice in NC's Tier 1 counties

But, they are:

- Less likely to be in staff/general duty positions than ADN nurses

These are important trends because the percent of RNs with Baccalaureate Degree Rising



Note: Data include RNs who were actively practicing in North Carolina as of October 31 of the respective year. **Source**: North Carolina Health Professions Data System, with data derived from the NC Board of Nursing, 2012. **Produced by**: Program on Health Workforce Research and Policy, Cecil G. Sheps Center for Health Services Research, UNC-CH.

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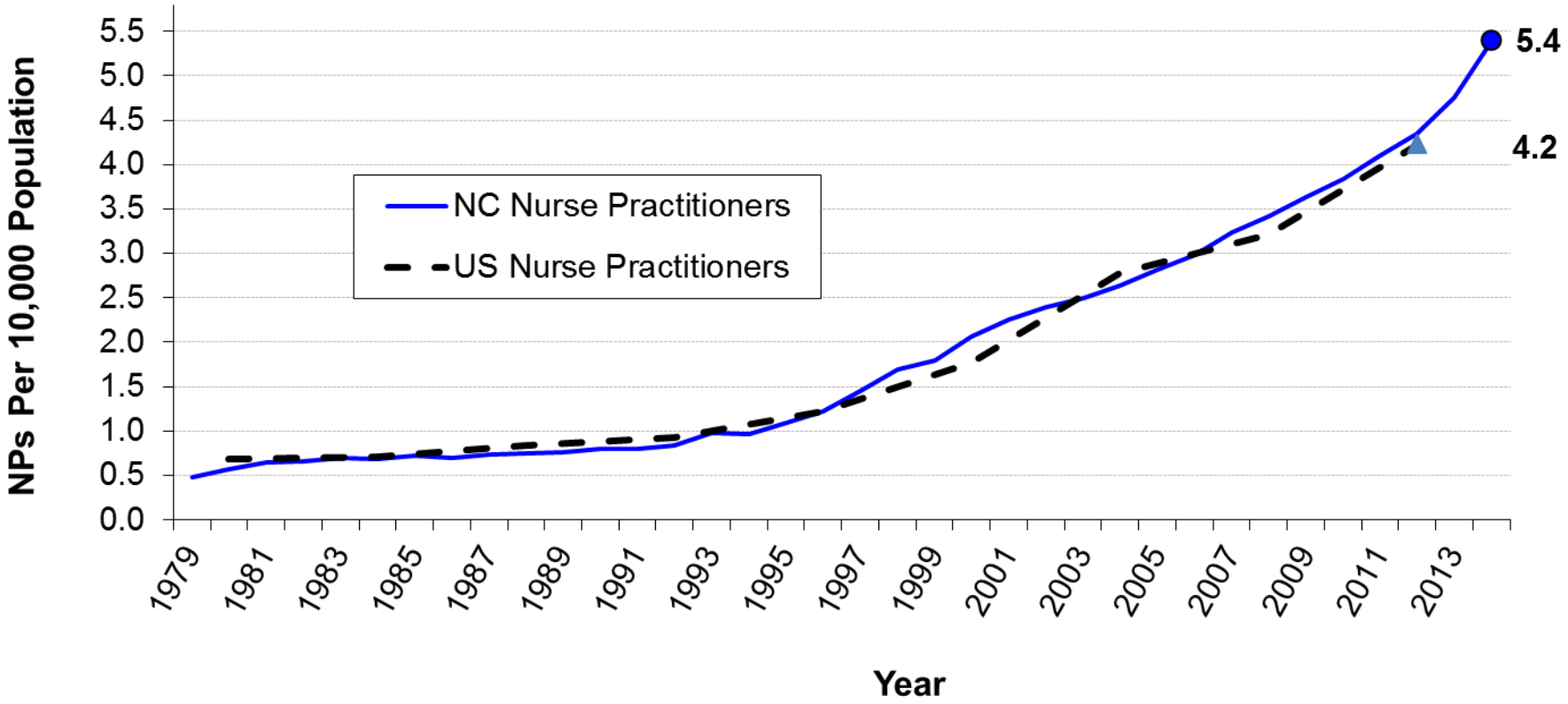
Advanced Practice Nurses: Nurse Practitioners and Certified Nurse Midwives

North Carolina's supply of nurse practitioners growing rapidly and tracking with US average

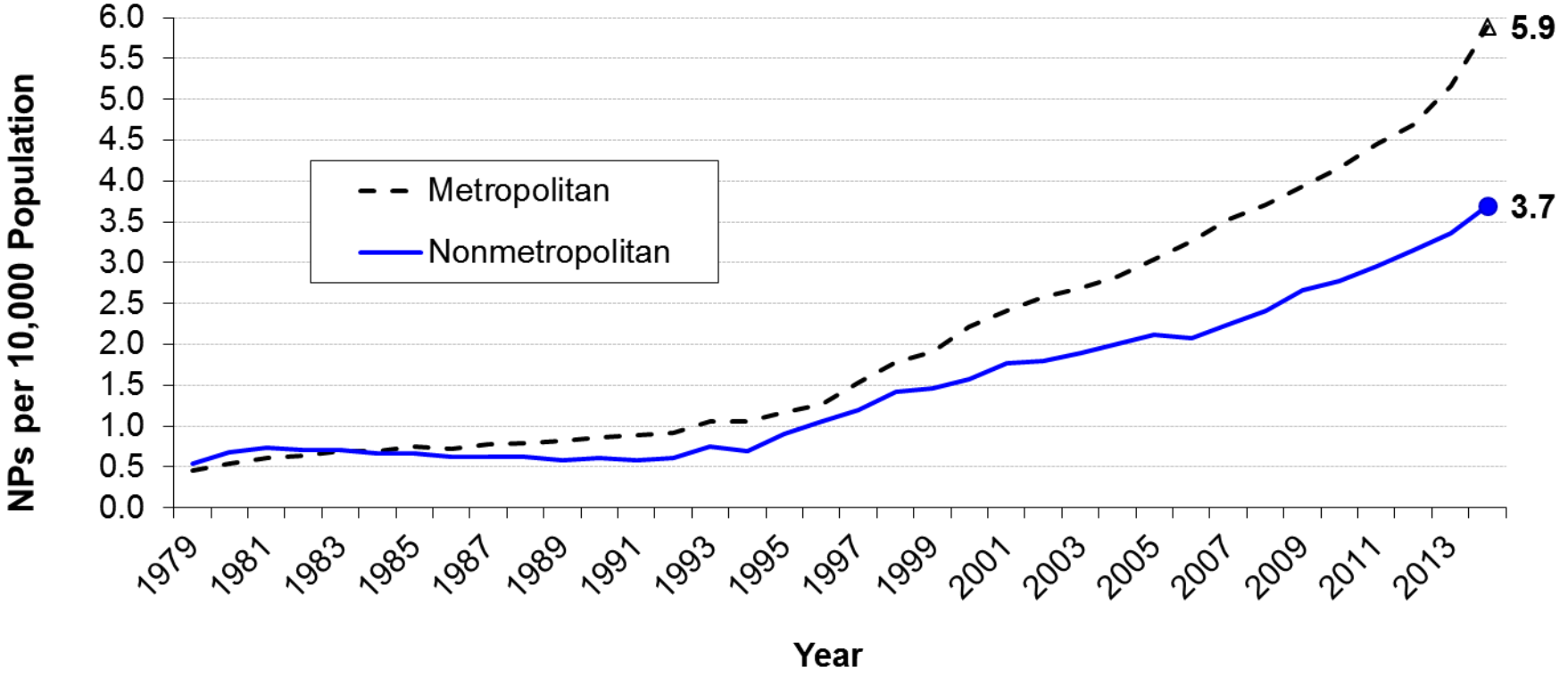
Nurse Practitioners per 10,000 Population, US and NC, 1979 to 2014



Figures include all licensed, active, instate nurse practitioners.
Sources: North Carolina Health Professions Data System, 1979 to 2014, with data derived from the NC Board of Nursing. The Registered Nurse Population-Findings from the National Sample Survey of Registered Nurses, 2008, 2004, 2000, 1996,1992, 1988, 1984, 1980; North Carolina Office of State Planning.; U.S. Bureau of the Census; North Carolina population data are smoothed figures based on 1980, 1990, 2000, and 2010 Censuses

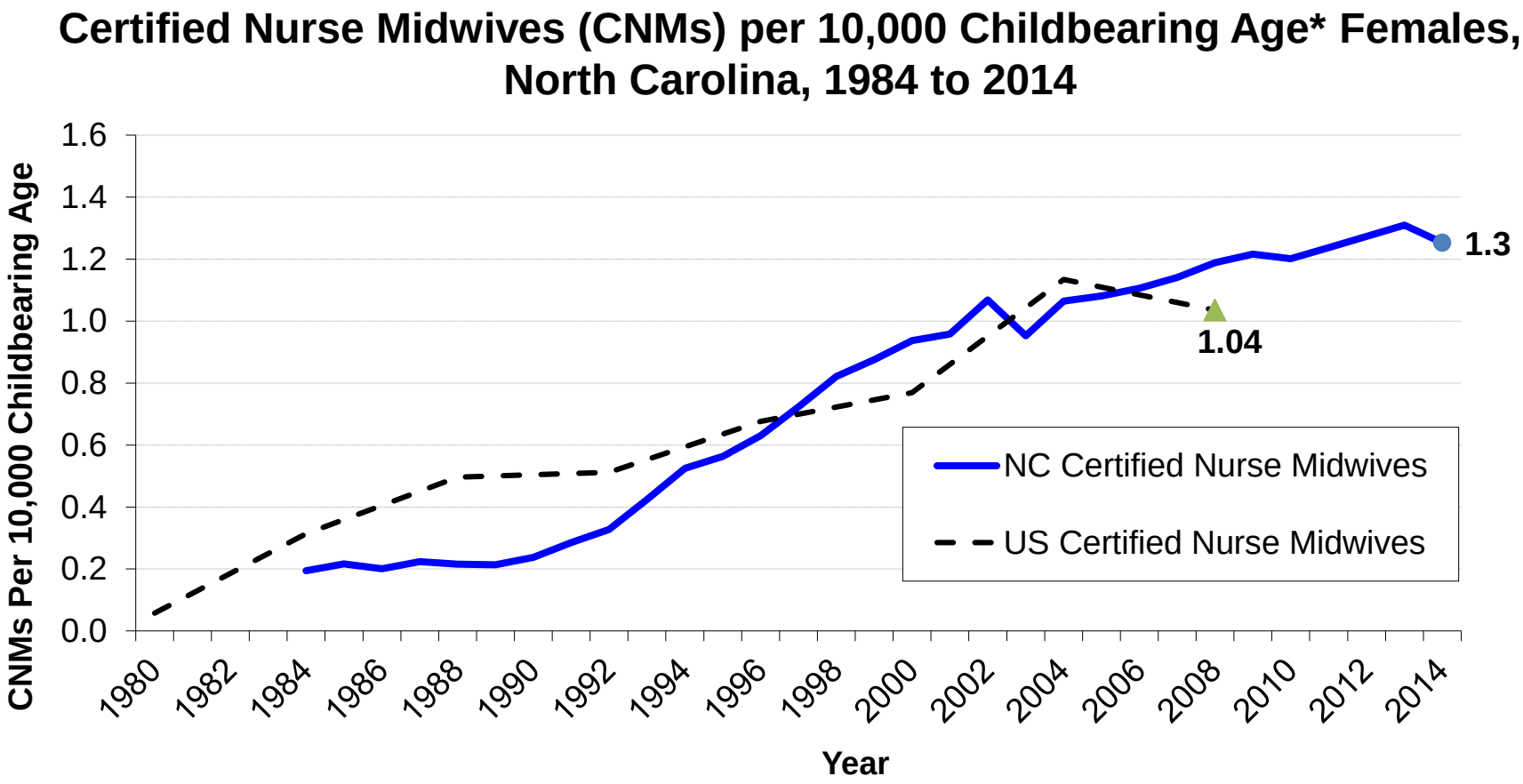
Widening gap between rural and urban counties

Nurse Practitioners per 10,000 by Metropolitan and Nonmetropolitan Counties, North Carolina, 1979 to 2014



Sources: North Carolina Health Professions Data System, 1979 to 2014, with data derived from the NC Board of Nursing; North Carolina Office of State Planning. Figures include all licensed, active, in-state nurse practitioners. North Carolina population data are smoothed figures based on 1980, 1990, 2000 and 2010 Censuses. Source for Metropolitan-Nonmetropolitan definition: Office of Management and Budget, 2013.

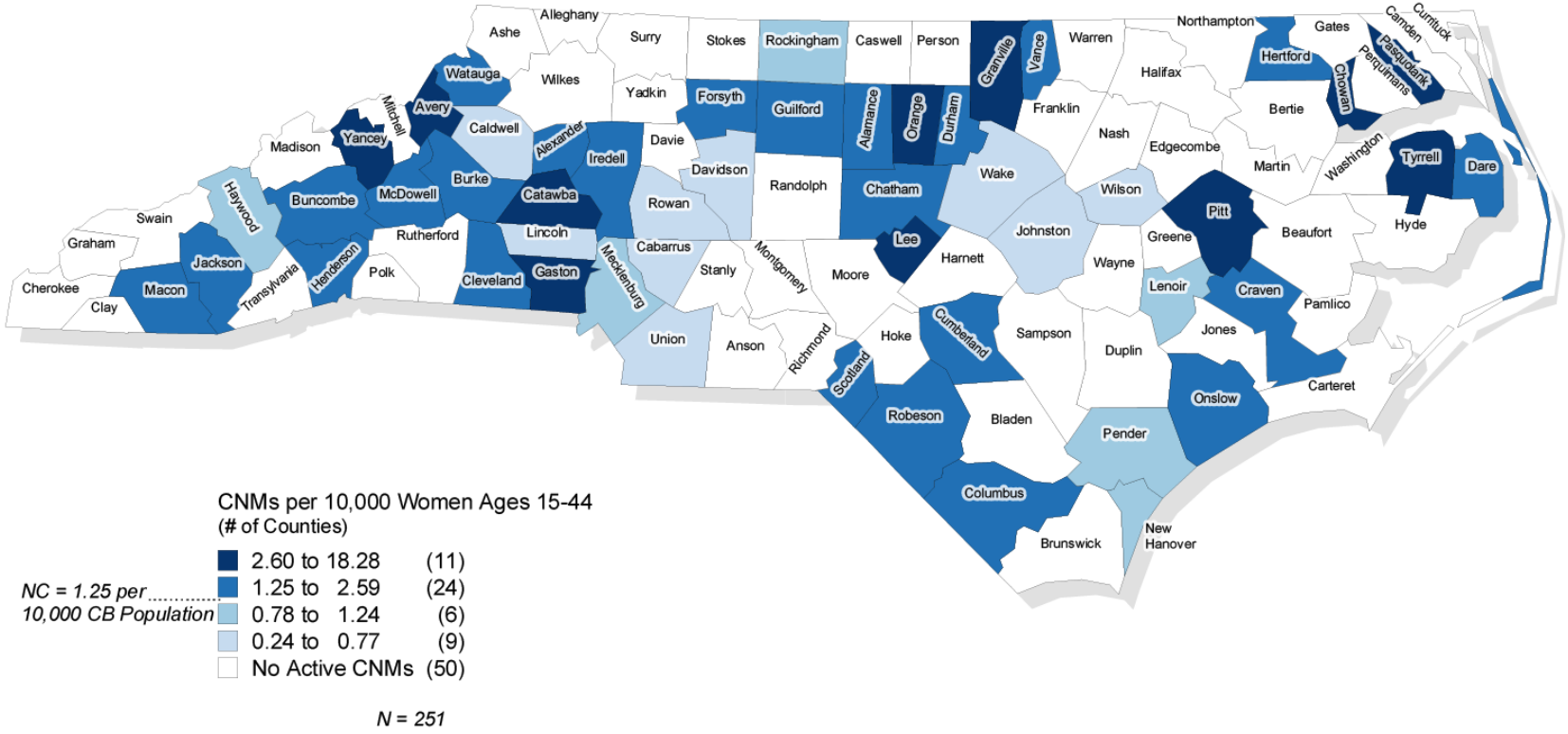
NC has about average supply of CNMs relative to other states



Notes: Figures include all licensed active in-state certified nurse midwives. Childbearing age:15-44 years
Sources: North Carolina Board of Nursing; Midwifery Joint Committee, 1979-2014; The Registered Nurse Population- Findings from the National Sample Survey of Registered Nurses, 2008, 2004, 2000, 1996,1992, 1988, 1984, 1980; US Bureau of the Census; North Carolina Office of State Planning.

Half of NC's counties have a CNM, distribution in "clusters" around state

Certified Nurse Midwives (CNMs) per 10,000 Women Ages 15-44
North Carolina, 2014



CNMs per 10,000 Women Ages 15-44
(# of Counties)

	2.60 to 18.28	(11)
	1.25 to 2.59	(24)
	0.78 to 1.24	(6)
	0.24 to 0.77	(9)
	No Active CNMs	(50)

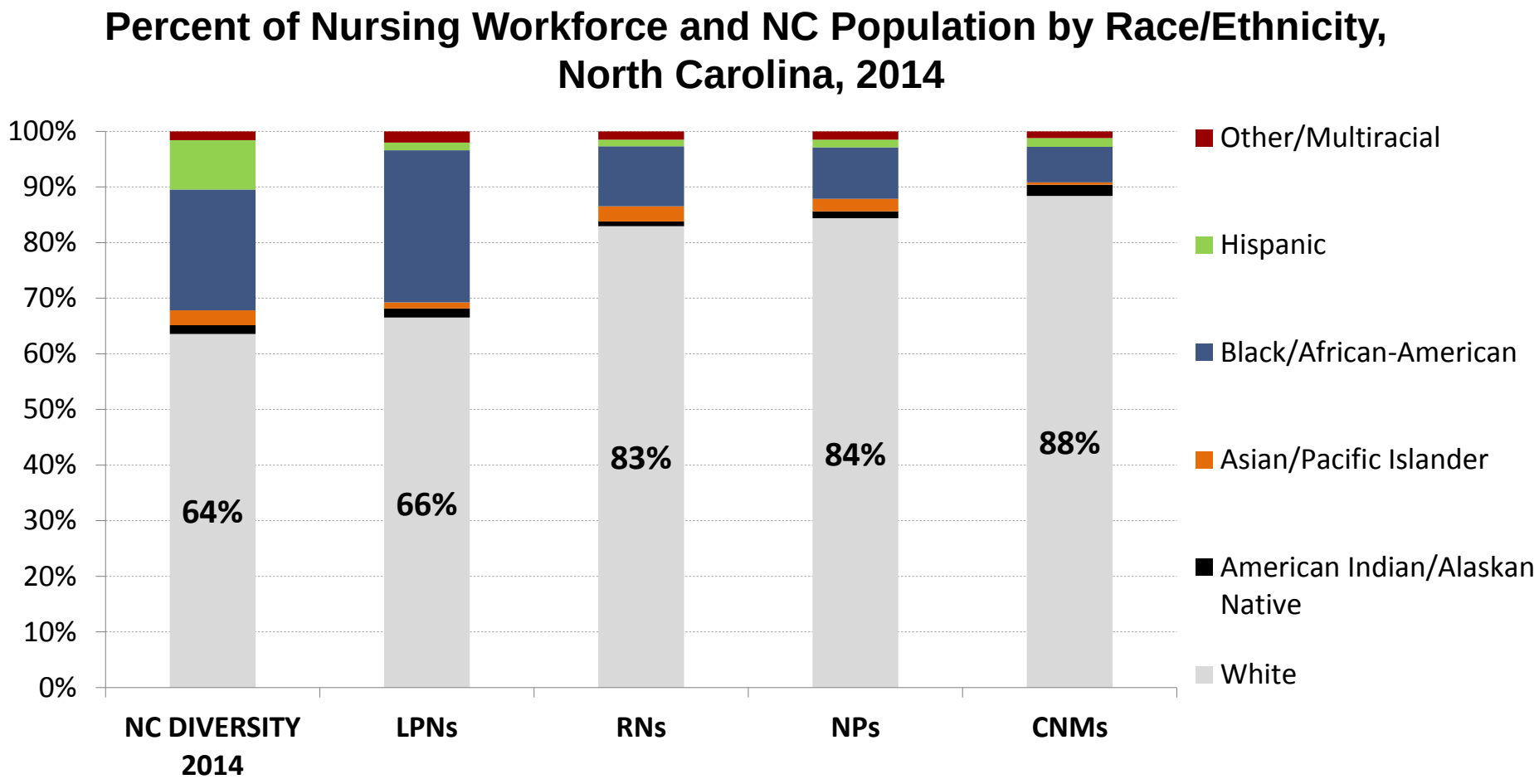
NC = 1.25 per 10,000 CB Population

N = 251

Note: Data include all active, in-state CNMs licensed in North Carolina as of October 31, 2014.
Source: NC Health Professions Data System, with data derived from the North Carolina Board of Nursing, 2015.
Produced by: Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

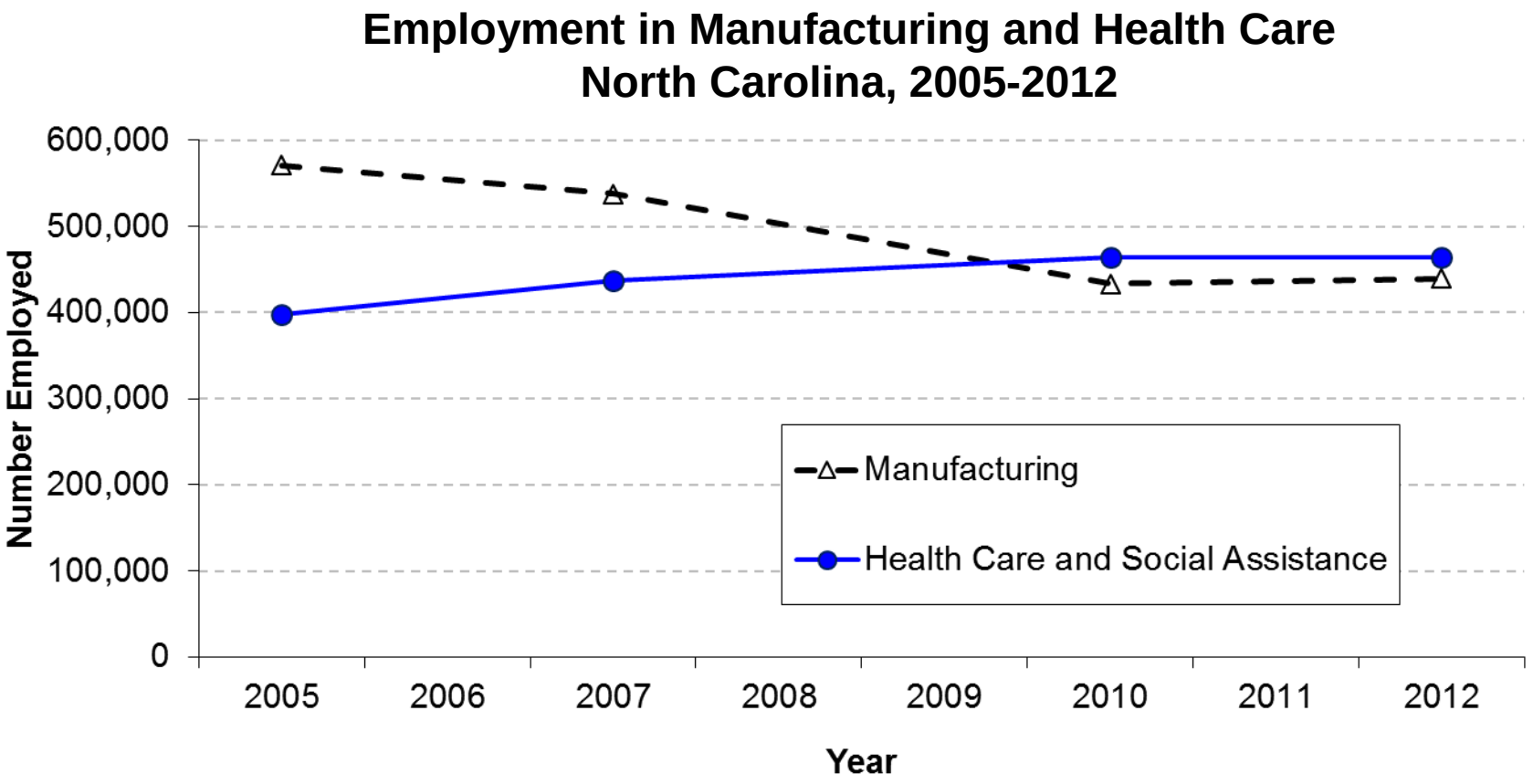
Challenges Ahead for the Nursing Workforce

With exception of LPNs, nursing workforce not as diverse as NC's population



Note: Data include all active, in-state nurses licensed in North Carolina as of October 31, 2014.
NC Health Professions Data System, with data derived from the North Carolina Board of Nursing, 2015.

Changes in NC's health care system will be similar to past economic transformations



Sources: North Carolina Department of Commerce. 2005 and 2010 data: Table 3-2
http://www.nccommerce.com/Portals/0/Research/EconIndex/2011%20Economic%20Index.pdf
2007 and 2012 data: Table 1 http://www.nccommerce.com/Portals/47/Documents/Economic%20Snapshots/Industry%20Mix%20May%2014.pdf

It won't be about just about the numbers. It will be about making sure we have a "fit" between available jobs and the workforce

- Our analyses suggest we do not face an overall nursing shortage now, nor are we likely to face one in the future
- Focusing on whether we have a nursing shortage distracts us from a more important question:

Will we have the right mix of nurses in the right locations, specialties and practice settings with the skills and competencies needed to meet the demands of a transformed health care system?

Need to redesign education, regulation and policy to develop nursing workforce needed for the future (1)

Policy action needed to:

- Address maldistribution and lack of diversity
- Continue to diffuse BSN education out to ADNs in rural and underserved areas
- There are over 8,000 ADNs practicing in rural counties who have not pursued additional education in nursing
- Encourage practice in underserved settings- mental health, long-term care and geriatrics

Need to redesign education, regulation and policy to develop nursing workforce we need for the future (2)

Policy action needed to:

- Shift education out of hospital—to home health, long-term care, hospice, public health and other community-based settings
- Design education around new roles that are emerging--care coordination, population health management, patient education, health coaching, data analytics, patient engagement, quality improvement
- Ensure regulation supports team-based models of care

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