Trends in the Supply and Distribution of the Health Workforce in Area L and Beyond

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Presentation overview

- **Data Update** – how supply of health professionals in Area L compares to the state and other AHEC regions
- **Looking to the Future** – new and emerging roles, and health workforce in a transformed health system
- **Using Workforce Data to Shape Policy**

Where do the data come from?

The North Carolina Health Professions Data System

Mission: to provide timely, objective data and analysis to inform health workforce policy in North Carolina and the United States

Based at Cecil G. Sheps Center for Health Services Research at UNC-CH but mission is statewide

Three main service lines:

1. Provide data and research
2. Conduct policy analyses
3. “Engaged scholarship” that serves state and nation

North Carolina's health workforce data are the envy of the other 49 states

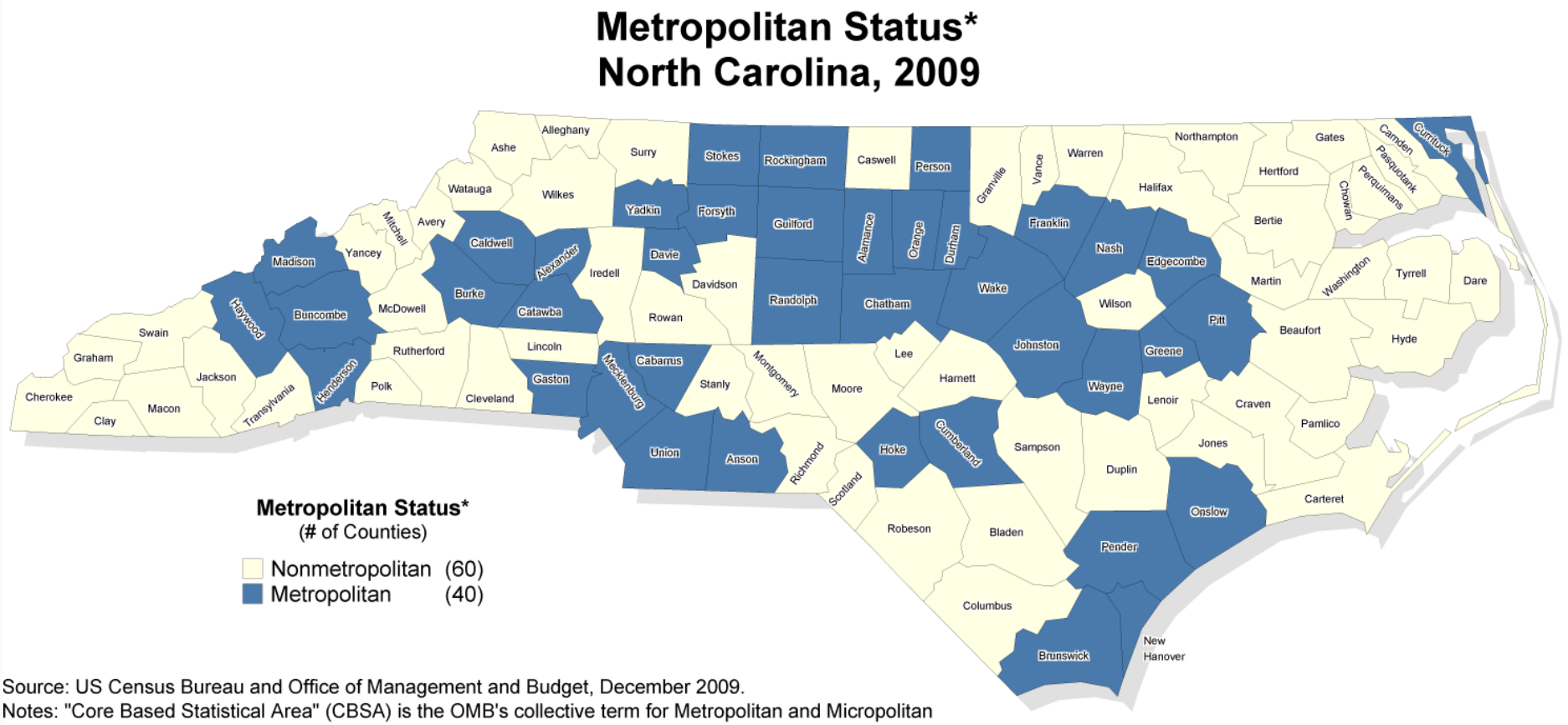
- Over 30 years of continuous, complete licensure (***not survey***) data on 19 health professions from 12 boards
- Data are provided ***voluntarily*** by the boards—there is no legislation that requires this, there is no appropriation
- Data housed at Sheps but remain property of licensing board, permission sought for each "new" use

System would not exist without data and support of licensure boards

The North Carolina HPDS is a collaborative effort

- A collaboration between the Sheps Center, NC AHEC and the health professions licensing boards
- System is independent of government and health care professionals
- Independence brings rigor and objectivity
- Funding provided by: NC AHEC Program Office, data request fees, project cross-subsidies, and the UNC-CH Office of the Provost (Health Affairs)

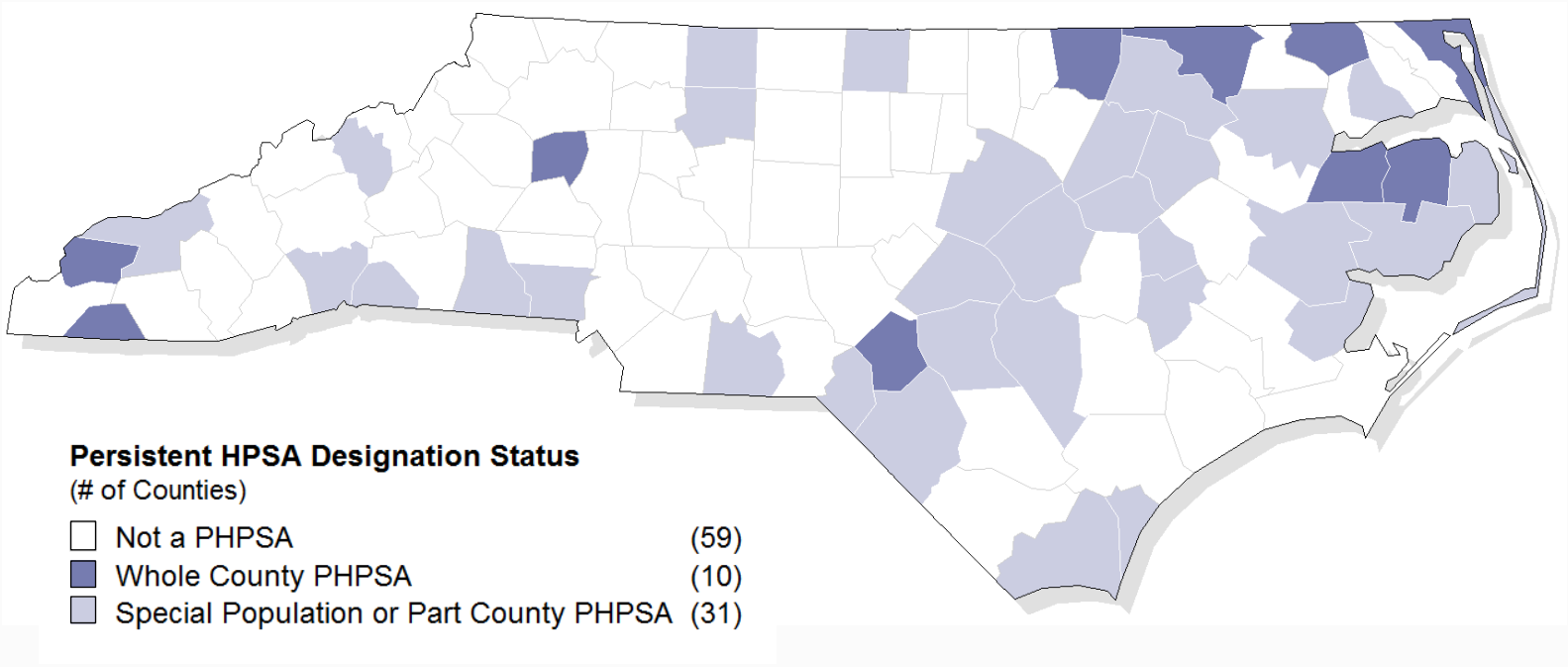
Our rural definition: based on OMB's Core Based Statistical Areas



Source: US Census Bureau and Office of Management and Budget, December 2009.
Notes: "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 the North Carolina Rural Health Research and Policy Analysis Center, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill

Persistent Primary Care Health Professional Shortage Areas* (PHPSAs), North Carolina

Persistent Primary Care Health Professional Shortage Areas* (PHPSAs), North Carolina, 2010



Source: Area Resource File, HRSA, DHHS, various years.
Note: Persistent HPSAs are those designated as HPSAs by the Health Resources and Services Administration (HRSA) from 2004-2010, or in 6 of the last 7 releases of HPSA definition.
Produced By: North Carolina Rural Health Research and Policy Analysis Center, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

The bottom line.

Good news:

- Area L has more PTAs and LPNs per 10,000 pop than the state average (ranks 2nd and 3rd respectively among AHEC regions)

Areas for improvement:

Among NC AHEC regions, per 10,000 pop., Area L ranks

- 6th in psych associates and OTAs
- 7th in Respiratory Therapists
- 8th in RNs and pharmacists
- Last for all other professions

Health Professionals per 10K Pop by NC AHEC Region, 2011

AHEC Region	Total pop (09)	Physicians per 10K pop	PC Physicians per 10K pop	PAs per 10K pop
Area L	**303,354**	**13.71**	**5.34**	**3.20**
Charlotte	1,732,010	22.89	8.45	3.37
Eastern	1,007,683	19.08	6.89	3.73
Greensboro	1,105,017	27.49	9.03	3.53
Mountain	739,965	22.76	9.23	4.07
Northwest	1,546,737	22.18	7.74	4.08
South East	464,312	19.64	7.32	5.10
Southern Regional	879,444	14.30	5.78	5.20
Wake	1,604,088	29.39	9.20	5.04
North Carolina	**9,382,610**	**22.74**	**8.01**	**4.14**

Source: NC Health Professions Data System, with data derived from the NC Medical Board, 2011.

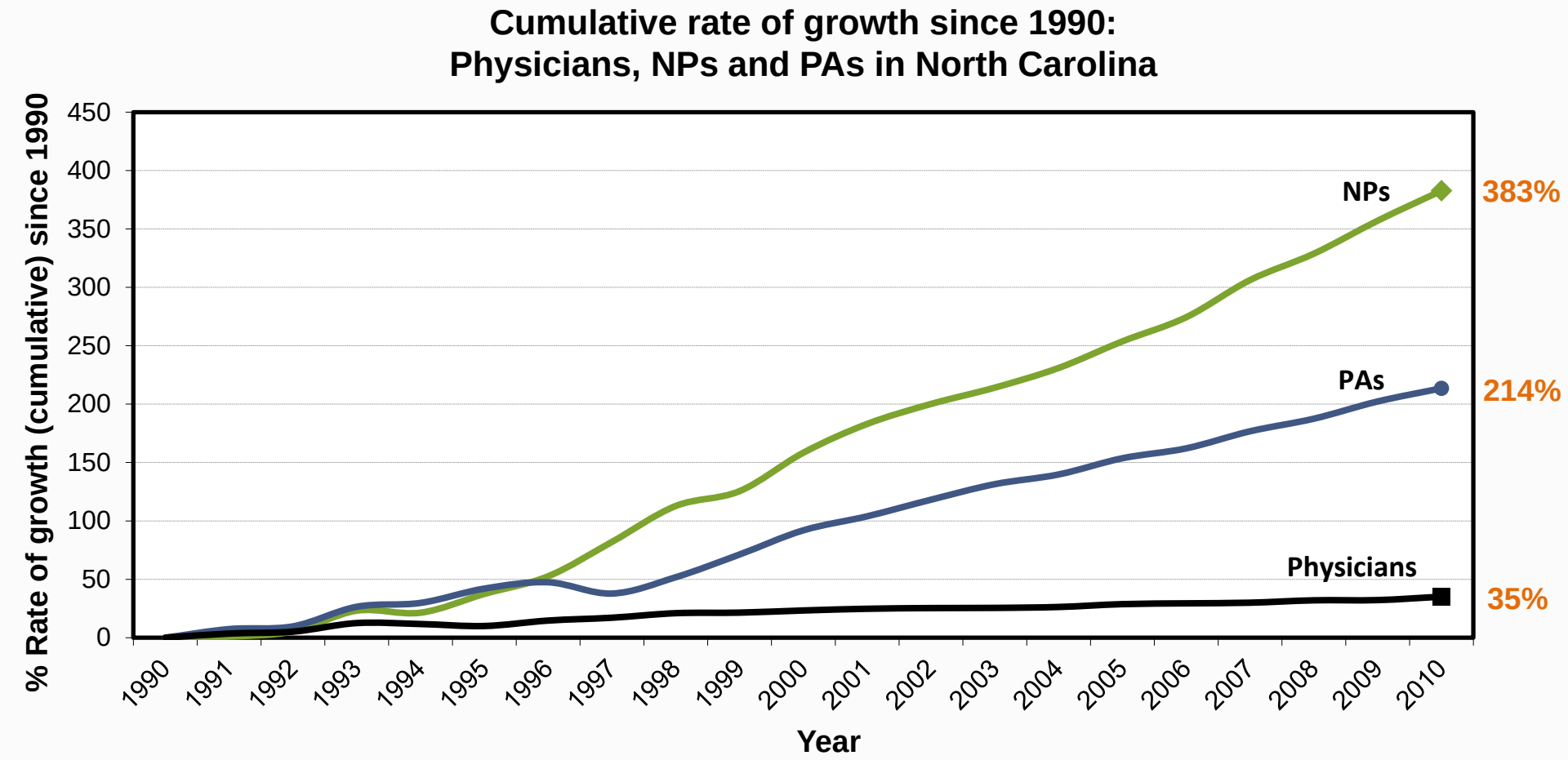
Data include active, in-state health professionals licensed in North Carolina as of October 31, 2011. Physicians are non-federal, non-resident-in-training. Primary care includes family practice, general practice, internal medicine, pediatrics and OB/GYN.

Health Professionals per 10K Pop by NC AHEC Region, 2011

AHEC Region	Tot pop (09)	NPs per 10K pop	CNMs* per 10K pop	RNs per 10K pop	LPNs per 10K pop
Area L	**303,354**	**2.31**	**0.17**	**85.71**	**23.70**
Charlotte	1,732,010	3.90	0.98	99.80	15.62
Eastern	1,007,683	4.12	1.94	99.61	20.74
Greensboro	1,105,017	4.78	1.89	105.67	15.78
Mountain	739,965	4.77	2.16	111.05	25.06
Northwest	1,546,737	4.20	1.04	101.67	18.24
South East	464,312	4.39	0.65	92.78	23.09
Southern Regional	879,444	2.82	1.12	77.82	24.90
Wake	1,604,088	5.17	0.88	116.20	17.08
North Carolina	**9,382,610**	**4.23**	**1.24**	**101.61**	**19.11**

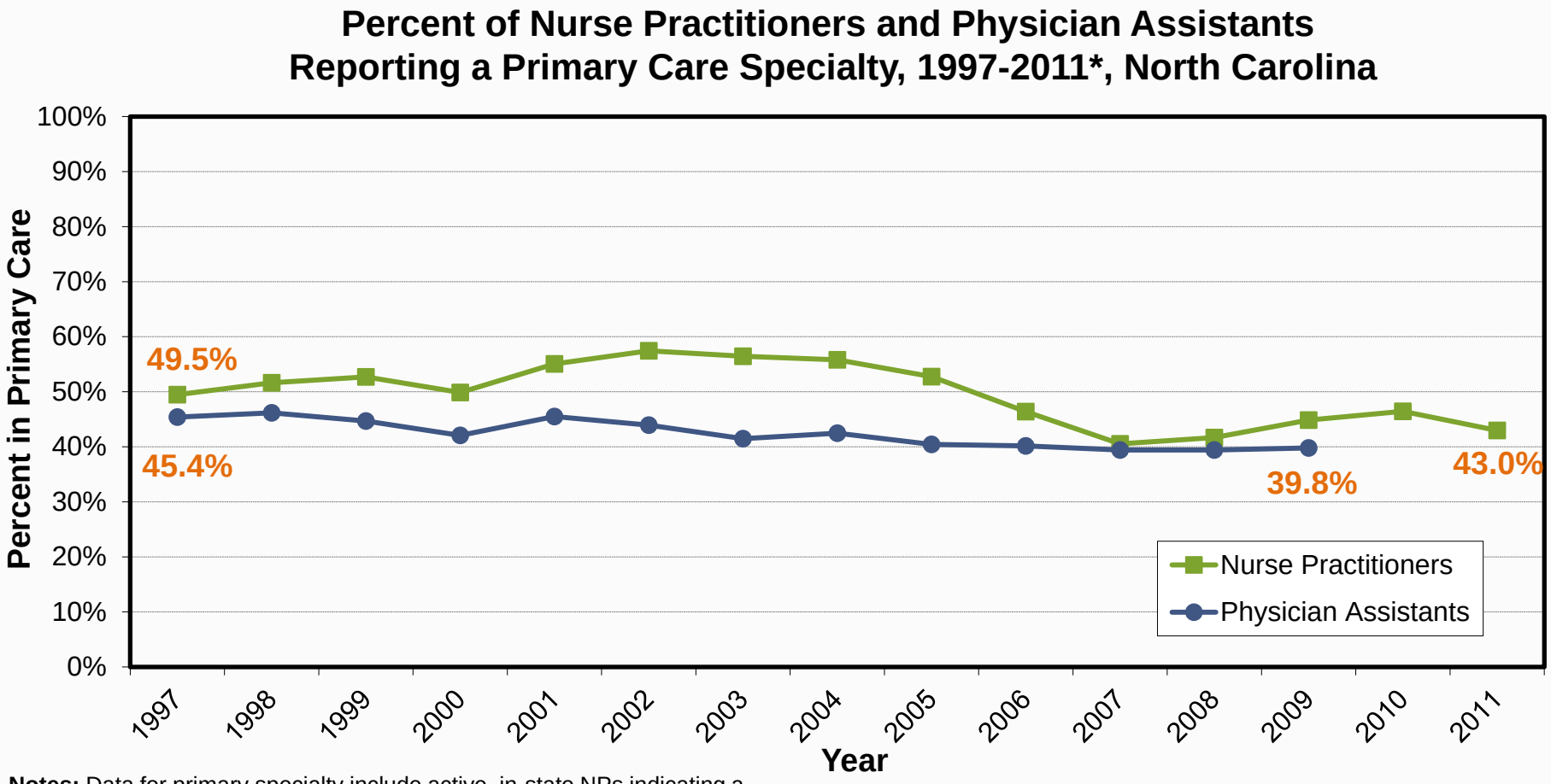
Source: NC Health Professions Data System, with data derived from the NC Board of Nursing, 2011. Data include active, in-state nurses licensed in North Carolina as of October 31, 2011. CNMs are calculated per 10,000 females ages 15-44 with 2011 pop data.

Are NPs and PAs the answer to emerging primary care workforce needs?



Sources: North Carolina Health Professions Data System with data derived from the North Carolina Medical Board and North Carolina Board of Nursing, 1990 to 2010; Figures include all licensed, active, instate, non-federal, non-resident-in-training physicians, PAs and NPs.

Maybe not. Percent reporting they are in primary care is less than half and slowly declining



Notes: Data for primary specialty include active, in-state NPs indicating a primary specialty of family practice, general practice, internal medicine, Ob/Gyn, or pediatrics, who were licensed in NC as of October 31 of the respective year. Data for physician extender type include active-instate NPs indicating a physician extender type of family nurse practitioner, adult nurse practitioner, ob/gyn nurse or pediatric nurse practitioner who were licensed as of October 31 of the respective year.

Source: North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, with data derived from the NC Medical Board. Chart prepared on 12/07/2012.

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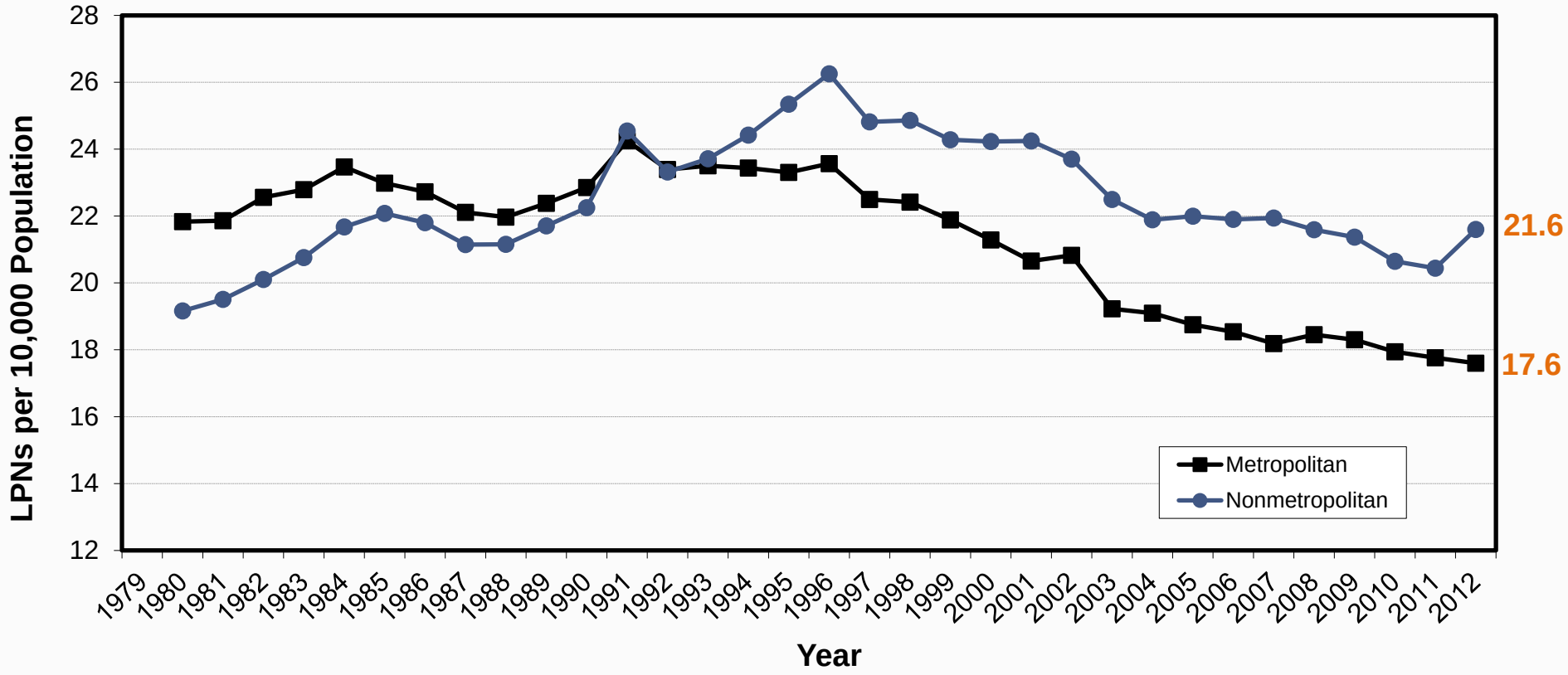
Where RNs complete education affects practice location

- Of total active workforce in 2011, 13% entered with diploma, 55% with an Associate degree and 32% with a Baccalaureate or higher
- 90% of RNs graduating with ADN from community college system are retained in North Carolina
- NCCCS ADN nurses practice close to where they were educated
- 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

Sources: NC Health Professions Data System, with data derived from the NC Board of Nursing, 2011; 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.

LPNs buck trend in other health professions: supply declining and more LPNs in rural counties

Licensed Practical Nurses per 10,000 Population by Metropolitan and Nonmetropolitan Counties, North Carolina, 1979 to 2012



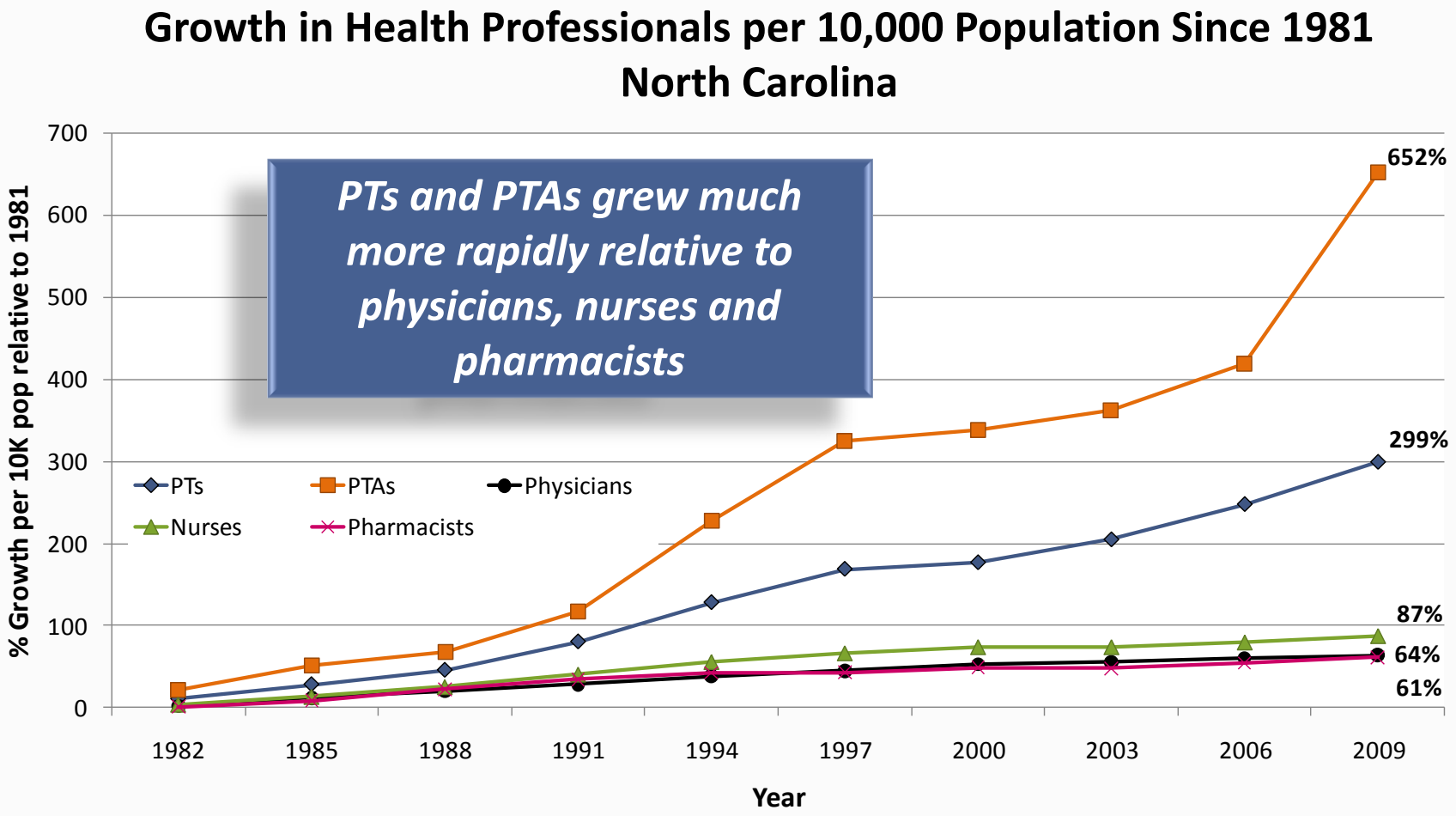
Figures include all active, instate licensed practical nurses.
Sources: North Carolina Health Professions Data System, 1979 to 2012; North Carolina Office of State Planning; US Census Bureau & Office of Management and Budget, 2009 and 2013. North Carolina population data are smoothed figures based on 1980, 1990, 2000, and 2010 Censuses.

Health Professionals per 10K Pop by NC AHEC Region, 2011

AHEC Region	Tot pop (09)	PT	PTA	OT	OTA
Area L	**303,354**	**3.30**	**4.12**	**1.45**	**1.15**
Charlotte	1,732,010	5.97	2.73	3.20	1.36
Eastern	1,007,683	4.21	2.74	2.50	1.56
Greensboro	1,105,017	5.95	1.95	3.00	1.00
Mountain	739,965	7.37	4.37	3.38	1.47
Northwest	1,546,737	4.60	2.95	2.64	1.58
South East	464,312	6.16	2.26	2.69	2.11
Southern Regional	879,444	3.74	2.58	1.66	1.15
Wake	1,604,088	7.21	1.31	3.64	0.84
North Carolina	**9,382,610**	**5.59**	**2.57**	**2.87**	**1.31**

Source: NC Health Professions Data System, with data derived from the respective licensing board, 2011.
Data include active, in-state health professionals licensed in North Carolina as of October 31, 2011.

Therapies growing fastest; within therapies, assistant jobs growing most rapidly



Sources: NC Health Professions Data System with data derived from the North Carolina Boards of Physical Therapy Examiners, Medicine, Nursing and Pharmacy.

High use of PTAs in western and northeastern North Carolina

Physical Therapist Assistants per 10,000 Population
North Carolina, 2011

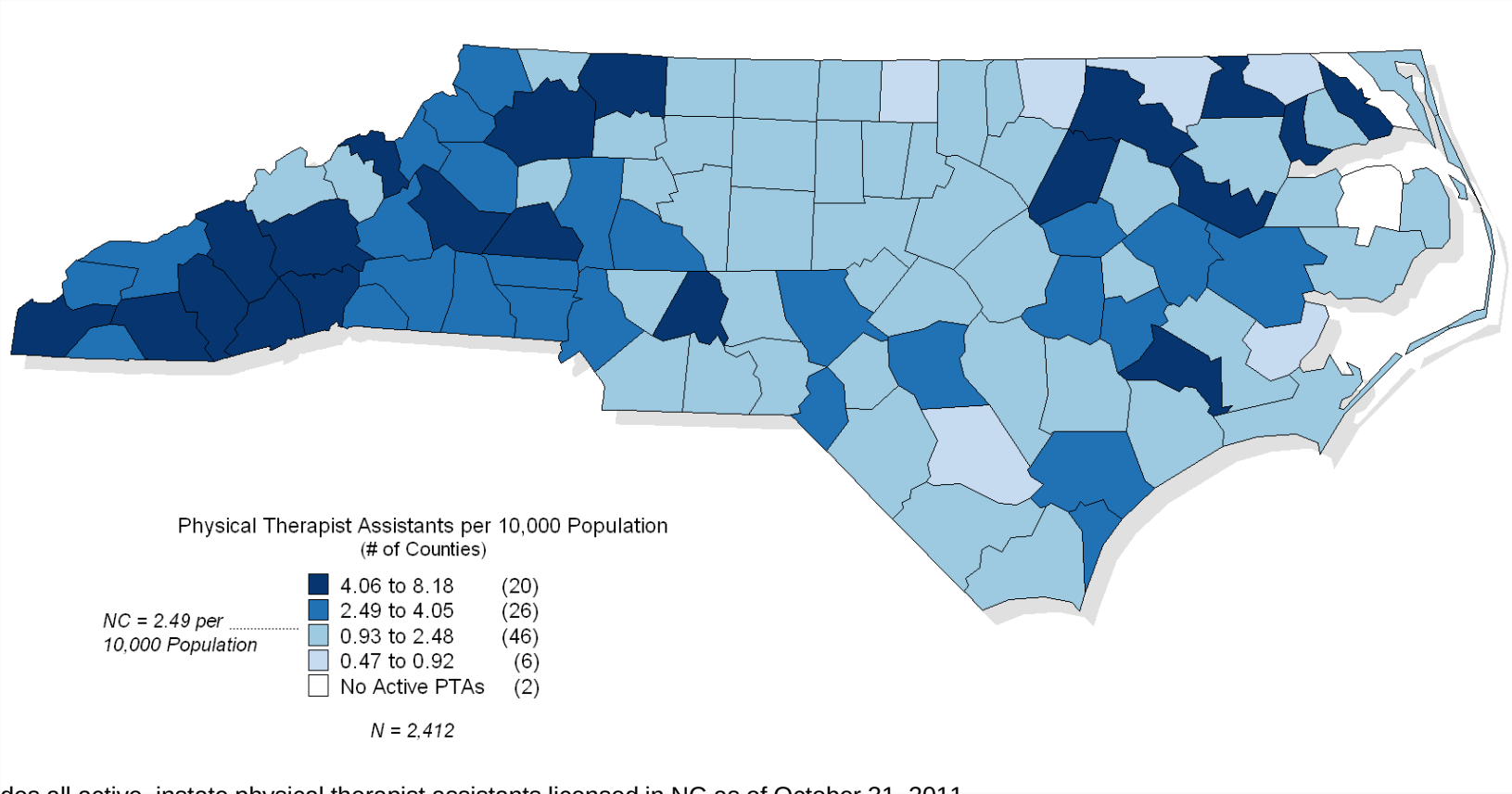


Figure includes all active, instate physical therapist assistants licensed in NC as of October 31, 2011.
Source: North Carolina Health Professions Data System, with data derived from the NC Board of Physical Therapy Examiners, 2011.

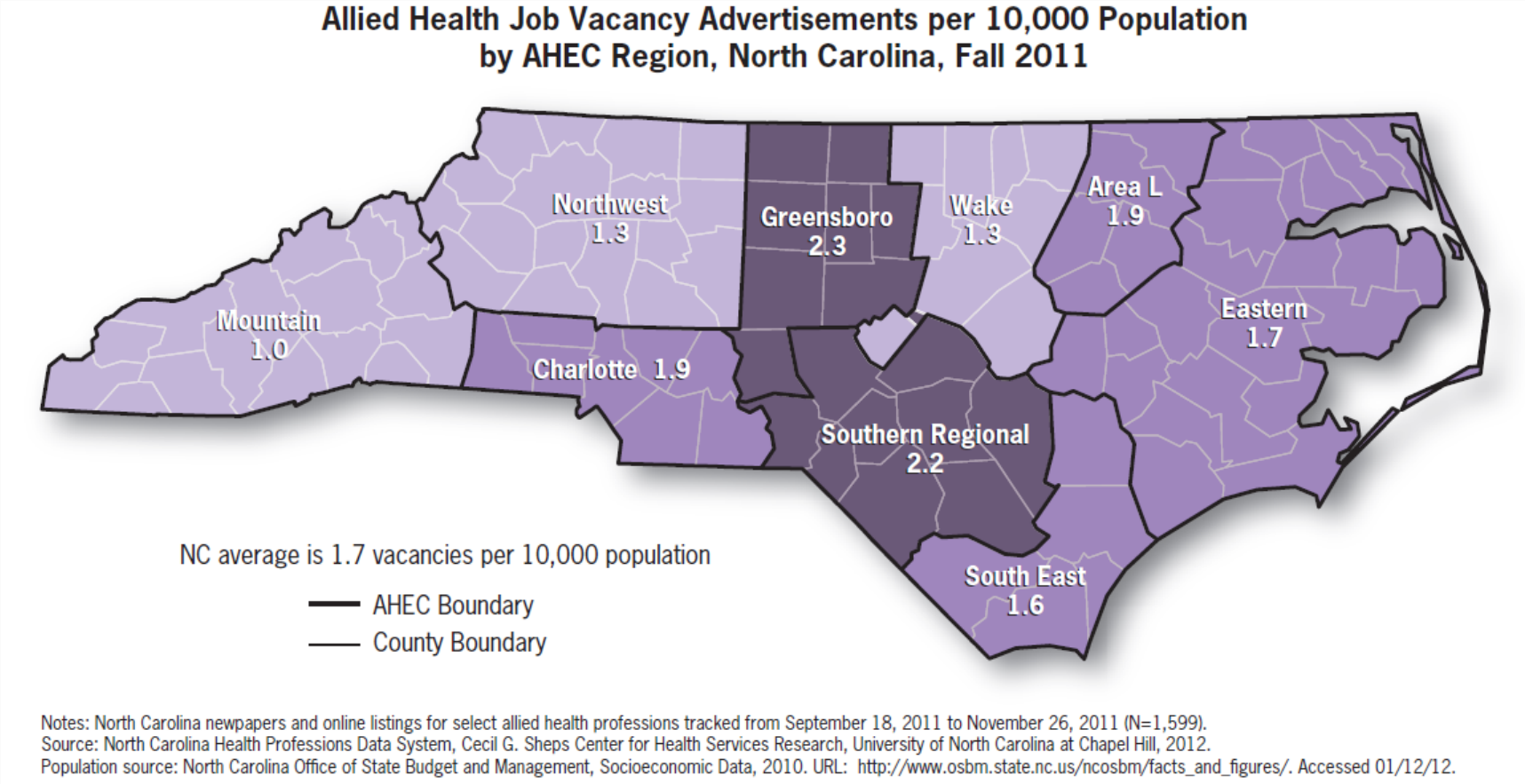
Vacancy Data Showed High Demand for Therapy Professions and HIM

Rank	Profession	Workforce Size	Vacant Positions	Vacancy Index
1	Occupational Therapy Assistant	880	102	11.6
2	Occupational Therapist	2,660	232	8.7
3	Physical Therapist Assistant	2,020	170	8.4
4	Physical Therapist	4,530	274	6.0
5	Speech Language Pathologist	3,630	202	5.6
6	Health Information Management	5,110	202	4.0
7	Clinical Laboratory Sciences	9.090	139	1.5
8	Medical Assistant	11,970	164	1.4
9	Imaging	9,680	68	0.7
10	Emergency Medical Services	8,940	46	0.5

The vacancy index is calculated by dividing the number of positions advertised by the profession's total workforce size and multiplying by 100.

Sources: NC Health Professions Data System Allied Health Job Vacancy Tracking Project with funding provided by the North Carolina Department of Commerce. Job listings tracked from 9/18/11 to 11/26/11 (N=1599).

Greensboro and Southern Regional AHECs had the Greatest Regional Demand



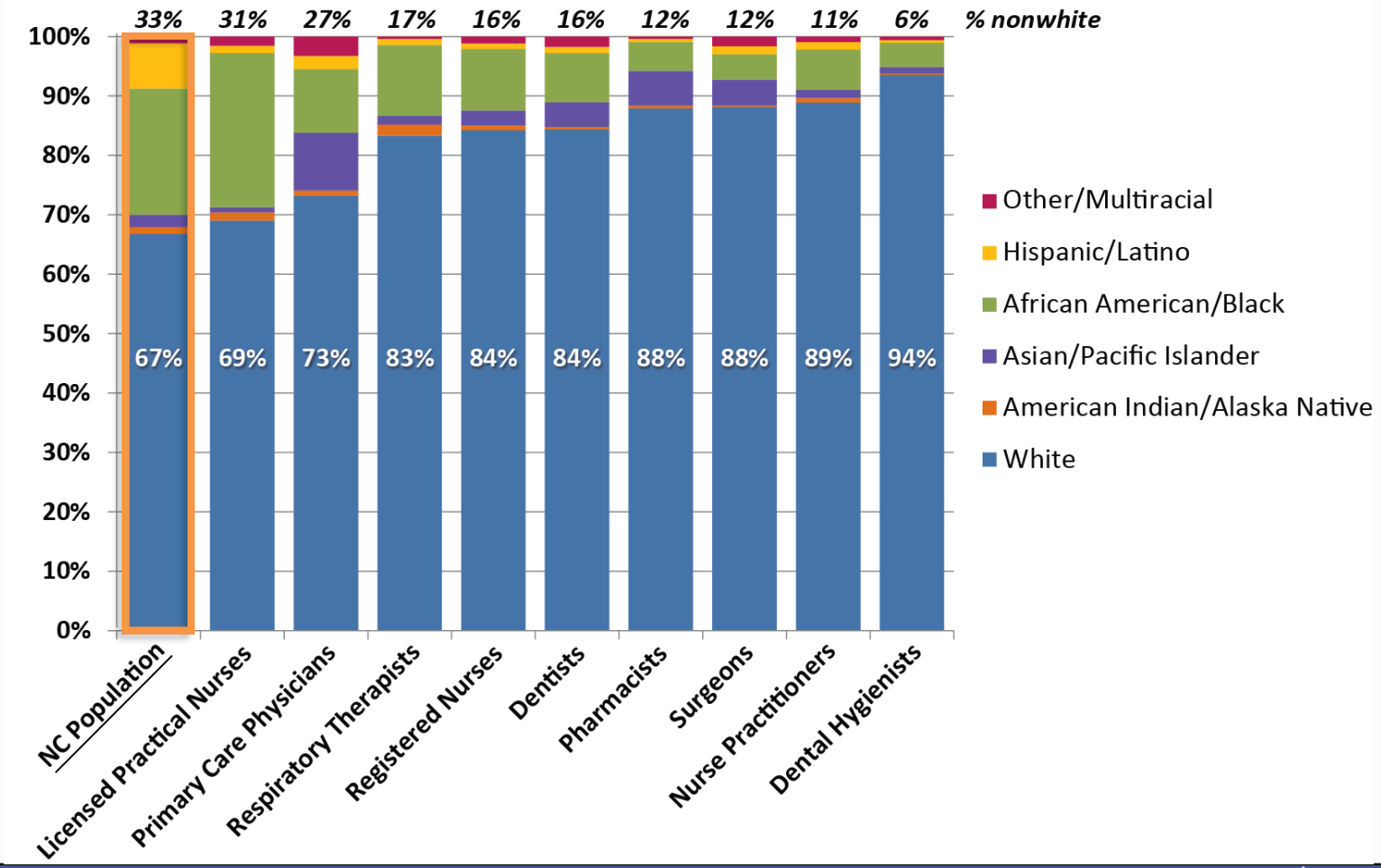
Sources: NC Health Professions Data System, with funding provided by the North Carolina Department of Commerce. Job listings tracked from 9/18/11 to 11/26/11 (N=1599). Health Workforce Solutions, Labor Market Pulse Index, http://www.labormarketpulse.com/LMPI/lmpi-q1-2012/

Diversity in the Health Workforce

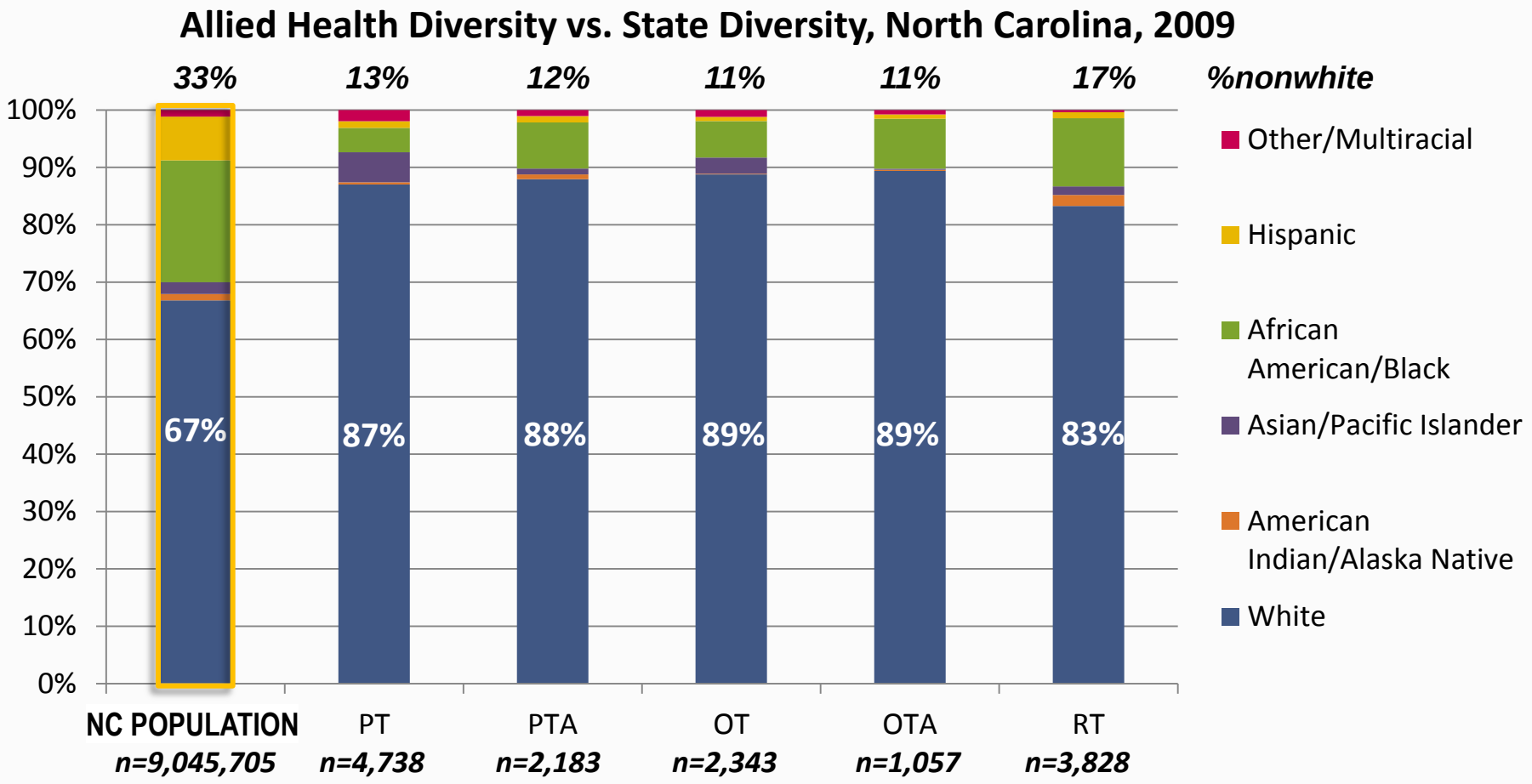
- Are we adequately accessing a talented pool of workers?
- Transformed health care system emphasizes population health, reducing health disparities, and community-based models of care.
  - Can we do this without increasing workforce diversity?

Race/Ethnicity of Practitioners Falls Short of Matching Population Diversity

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



Therapist Professions in Allied Health Surprisingly Not Diverse



Forecasting the Future Workforce

The million dollar question

People ask: **“Will North Carolina have the right number of health professionals it needs now and in the future?”**

We need to reframe question to:

1. Will NC have the right mix of health professionals in the right specialties, geographies and practice settings?
2. What new roles and skills will be needed in a transformed health system?
3. How will we get to where we need to be?

Cost and quality pressures are driving health system change

Health reform and the new world of health workforce planning

All about the redesign of ***how*** health care is delivered—less emphasis on ***who*** delivers care:

- Patient Centered Medical Home
- Accountable Care Organizations
- New Payment Models
- Technology

Shift will require more “flexible” workforce with new skills and competencies

New types of health professional roles are emerging in evolving system

- Patient navigators
- Nurse case managers
- Care coordinators
- Community health workers
- Care transition specialists
- Living skills specialists
- Patient family activator
- Grandaides
- Paramedics
- Home health aids
- Peer and family mentors

- All these professions play role in managing patient transitions between home, community, ambulatory and acute care health settings
- Evidence shows improved care transitions reduce unnecessary hospital admissions and lower costs

Need more proactive workforce planning. But how do we get there from here?

- Engage clinicians, employers, and patients in designing new models of care
- Focus on population health
- What is your role in
  - Teaching pop health to health professionals?
  - Providing the CE needed in these transformed roles?
  - Providing training in new roles?

Using Workforce Data to Shape Policy

Traditionally, workforce planning efforts in NC:

- Are reactive—we wait for educational program to ask permission to plan, rather than identifying areas of state or health professions where new programs are needed
- Lack coordination between university system, community college systems and employers
- Pay limited attention to allied health workers– one of largest segments of health workforce

Using workforce data to shape policy

The Sheps Center is available to work with UNC General Administration and Board of Governors, the North Carolina Community College System and AHEC to:

- better use data to inform health professions educational program planning
- proactively identify need for new education programs

Questions?

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http://www.shepscenter.unc.edu/hp

What do workforce stakeholders need to do to help transform workforce

1. Harvest and disseminate learning from workforce innovations
2. Reach outside for new ideas and new partners
3. Focus on the practice, hospital and health system, not just the clinician
4. Identify and codify emerging health professional roles and then train for them
5. Plan for the spread and sustainability of innovations at the time they are initiated
6. Build Evidence required to support changes in licensure, credentialing and accreditation

Fraher EP, Ricketts TC, Lefebvre A, Newton WP. The Role of Academic Health Centers and Their Partners in Reconfiguring and Retooling the Workforce Required in a Transformed Health System. Acad Med. 2013 Dec;88(12):1812-6