Retooling and Reconfiguring North Carolina's Health Workforce to Meet the Demands of a Transformed Health Care System

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Presentation Overview

- Why we need to retool and reconfigure the workforce
- Current challenges
- Future challenges
- What is needed to move toward a transformed system?
- Alignment of AHEC traditional mission with goals of health reform

Why Do We Care?
The Current Policy Context

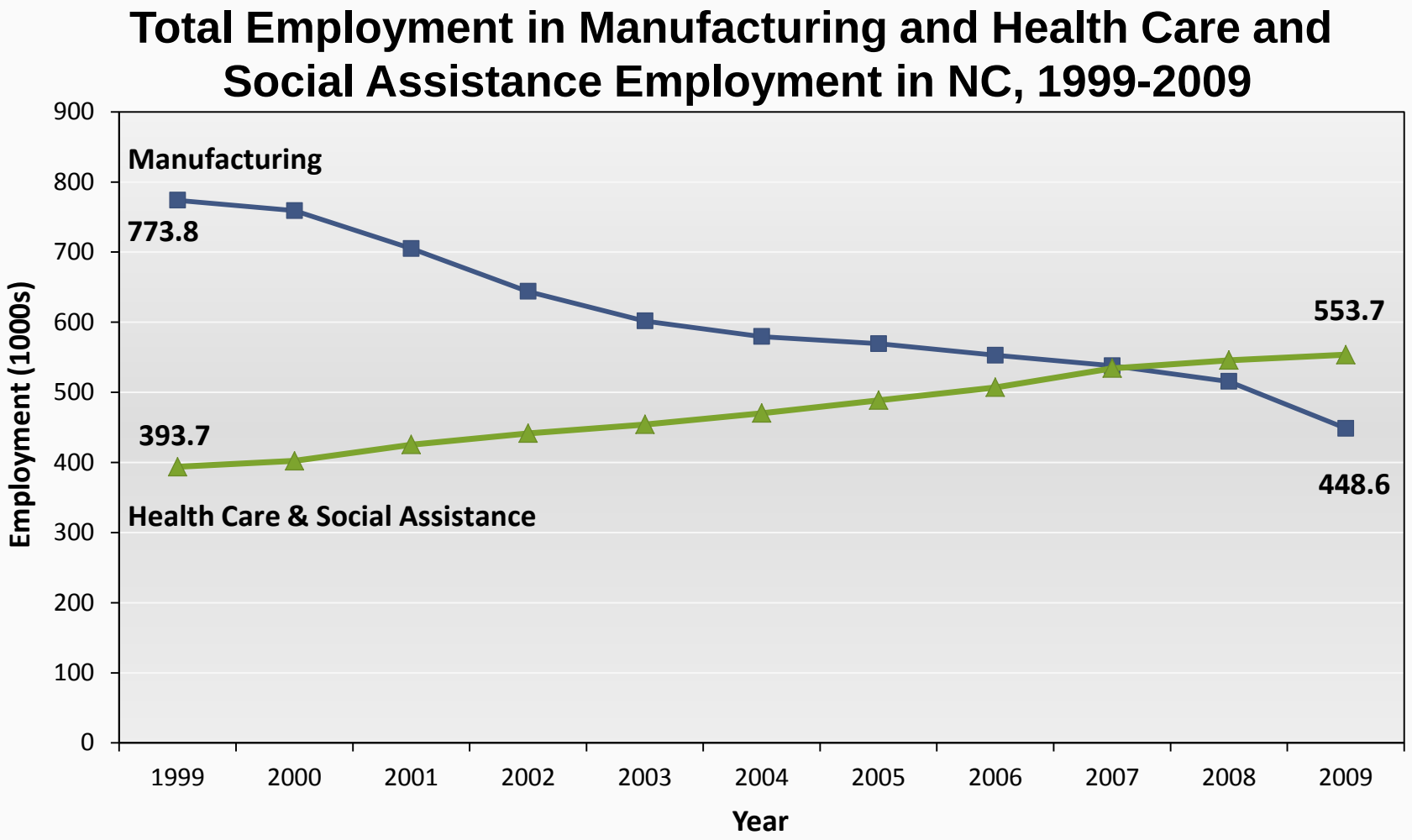
- **Demand side**: aging population, increase in chronic disease, insurance expansions, rising patient expectations
- **Supply Side**: health workforce is growing, deployment is rigid, turf wars abound, and productivity is lagging

With, or without health reform, cost and quality pressures will drive health system change

The current system is not sustainable

The State of the State:
Let's Drown (or Swim) a Bit in Some Data

North Carolina Health Care Employment is Growing Rapidly



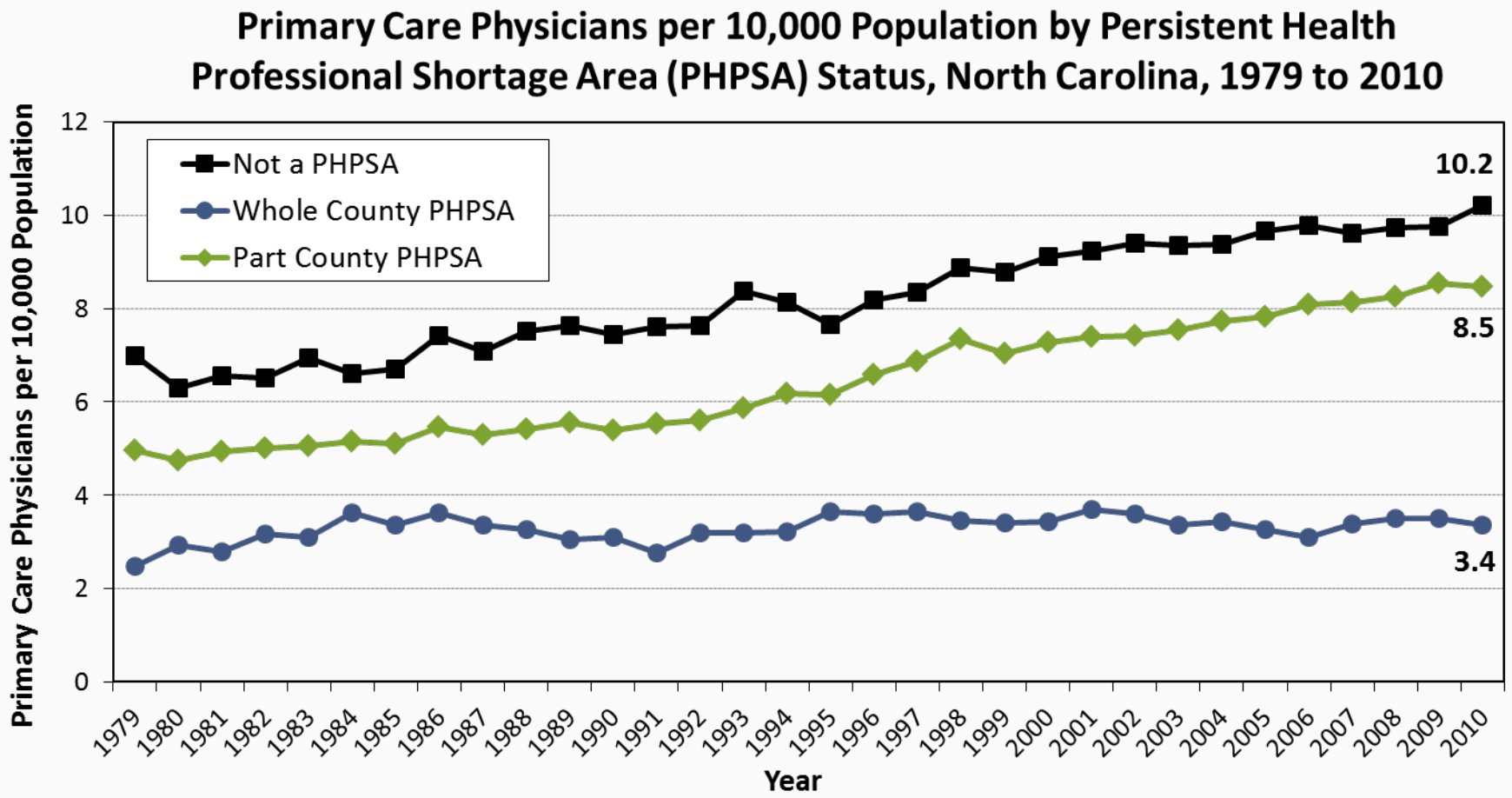
Source: North Carolina Health Professions Data System with data derived from the North Carolina Employment Security Commission, Employment and Wages by Industry, 1998-2009. http://www.ncesc1.com/lmi/industry/industryMain-NEW.asp, accessed 6/1/2010.

But More People are Doing Less

- Of $2.6 trillion spent nationally on health care, 56% is wages for health workers
- Workforce is LESS productive now than it was 20 years ago...

Kocher and Sahni, "Rethinking Health Care Labor", *NEJM*, October 13, 2011.

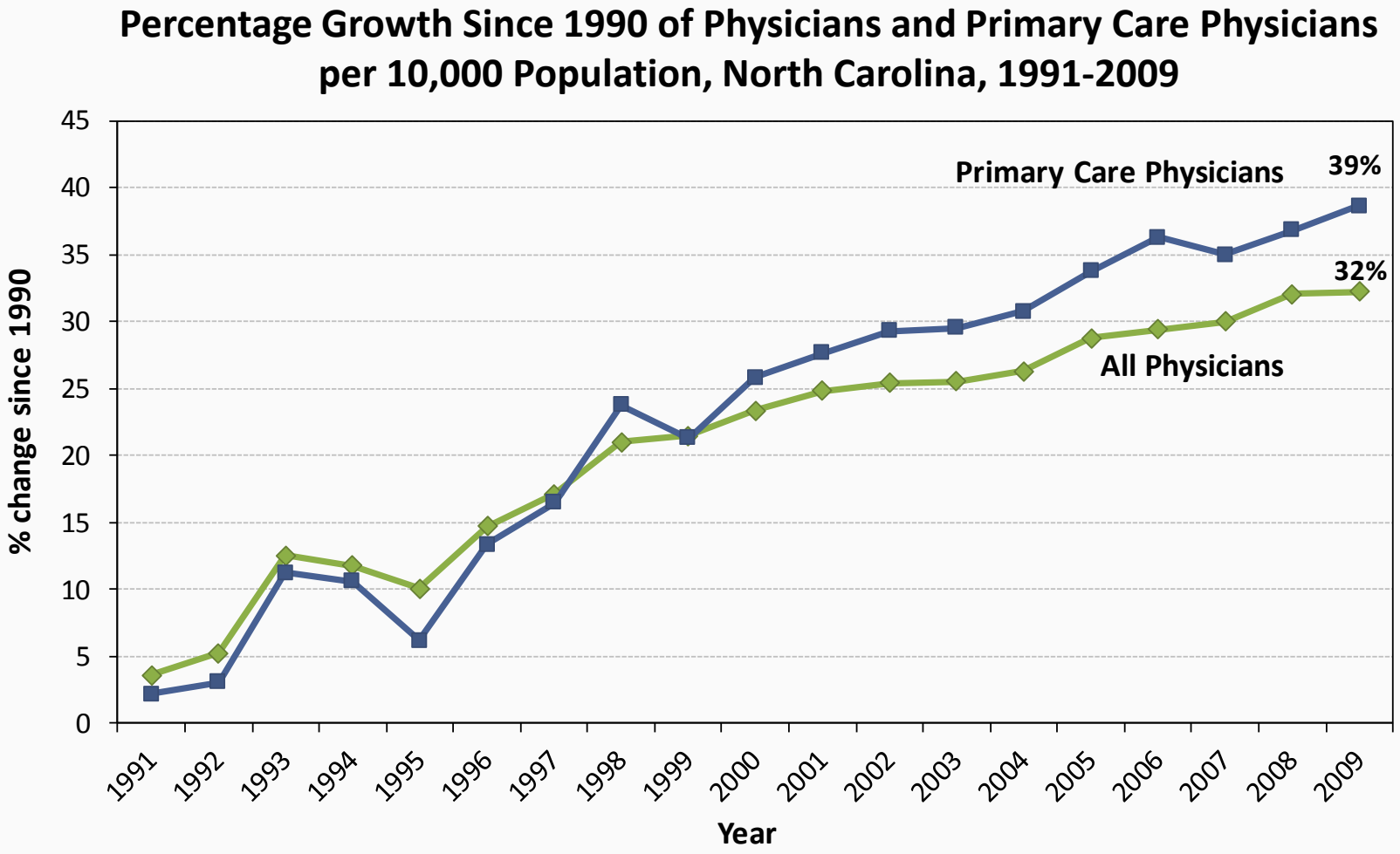
And Despite Overall Growth, Persistent Maldistribution



Notes: Figures include all active, instate, nonfederal, non-resident-in-training physicians licensed as of October 31st of the respective year. Primary care physicians include those indicating a primary specialty of family practice, general practice, internal medicine, Ob/Gyn or pediatrics. Persistent HPSAs are those designated as HPSAs by HRSA from 1999 through 2005, or in 6 of the last 7 releases of HPSA definitions.

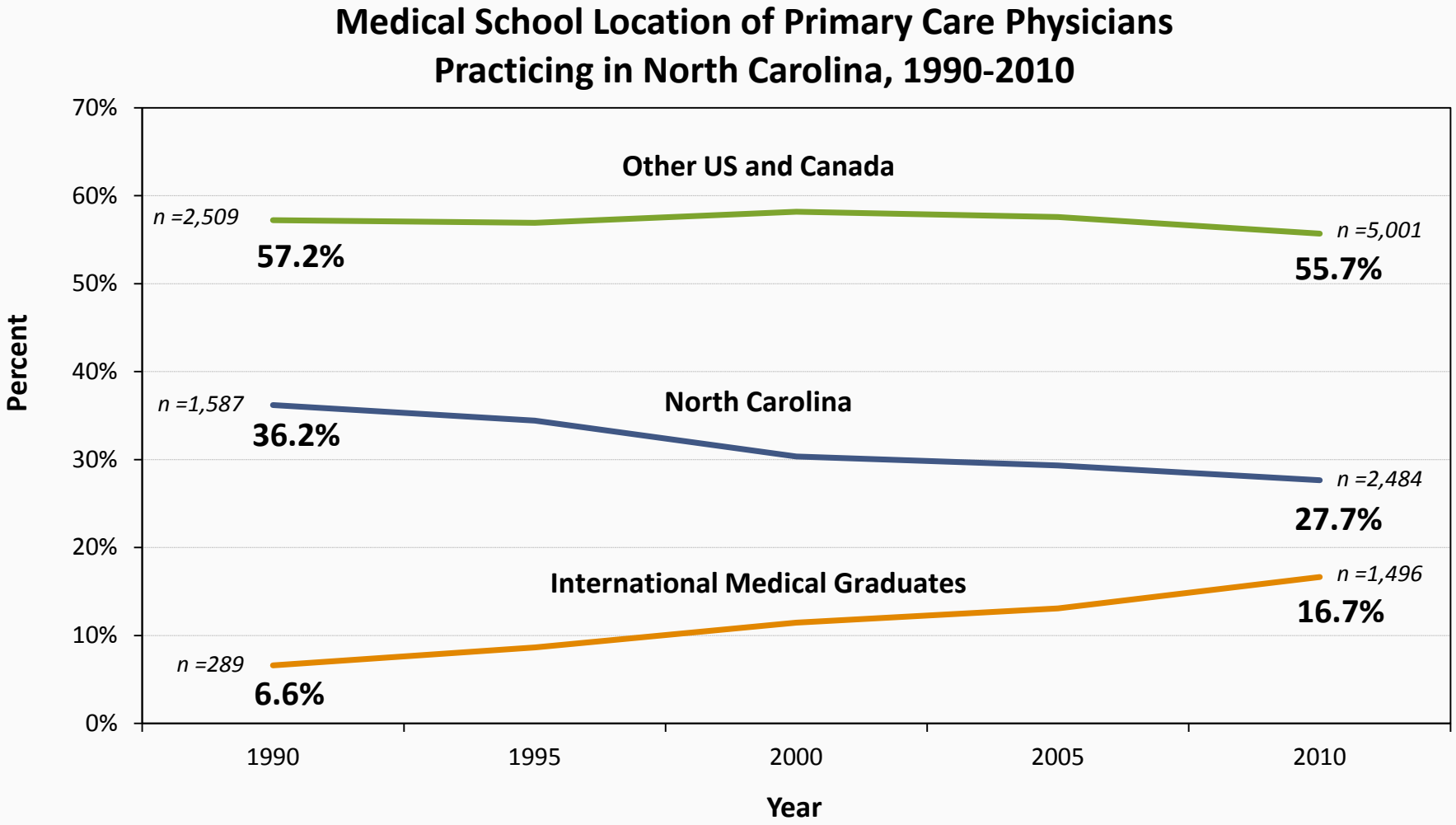
Sources: North Carolina Health Professions Data System, 1979 to 2010; HRSA, Bureau of Health Professions; Area Resource File; US Census Bureau; North Carolina Office of State Planning. Figures include all licensed, active, instate, non-federal, non-resident-in-training physicians.

NC Bucks National Trend: More Rapid Increase in Primary Care Physicians



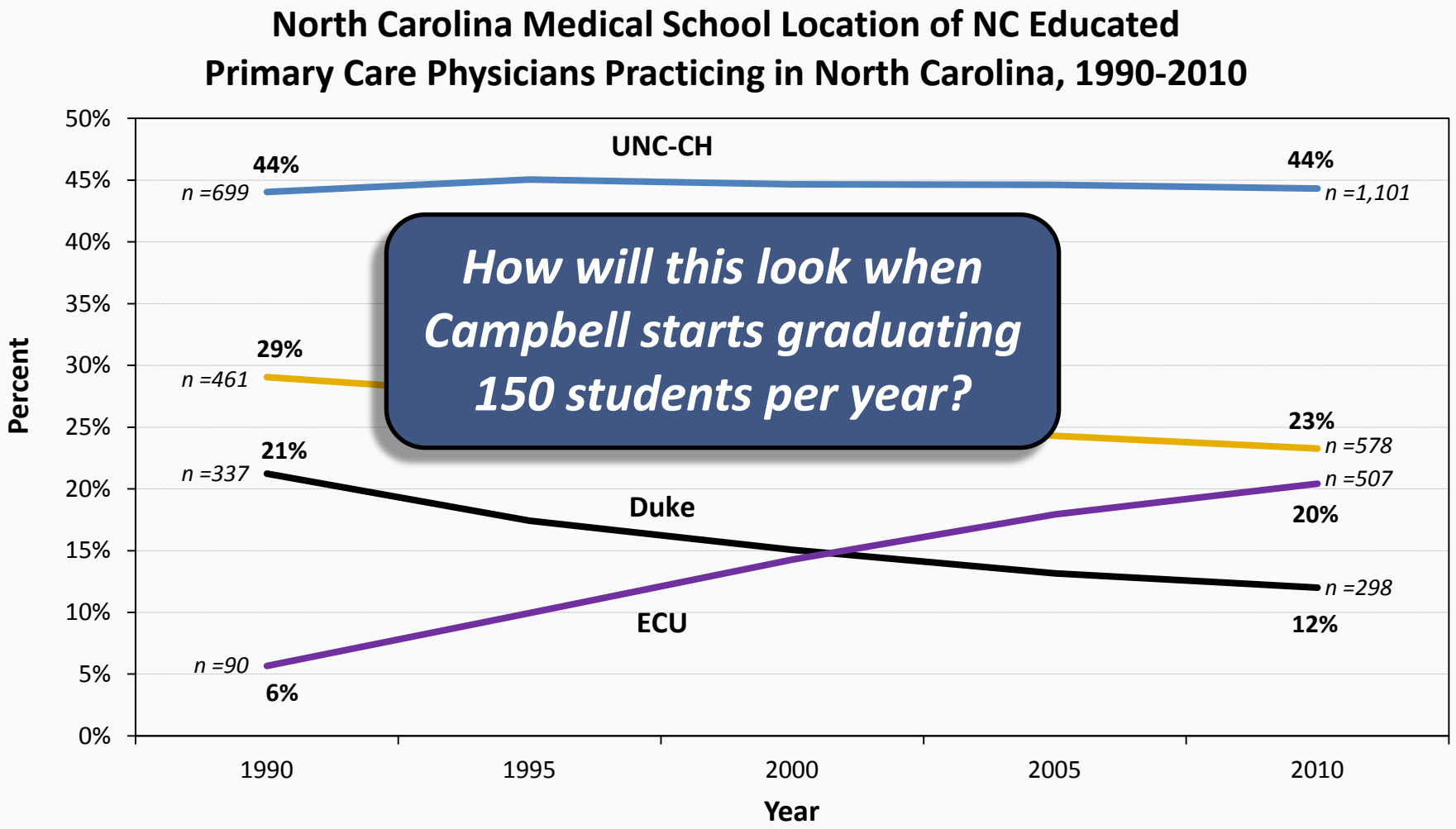
Sources: North Carolina Health Professions Data System with data derived from the North Carolina Medical Board ,1979 to 2009; North Carolina Office of State Planning. Figures include all licensed, active, instate, non-federal, non-resident-in-training physicians.

But This Growth Has Not Come From North Carolina's Medical Schools



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

Private Schools Declining, UNC-CH Steady, ECU Increasing



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

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Why Do We Care Where Physicians Trained?

Because it affects specialty choice, practice location and workforce diversity

NC Medical Students: Retention of Graduates in Primary Care After Five Years

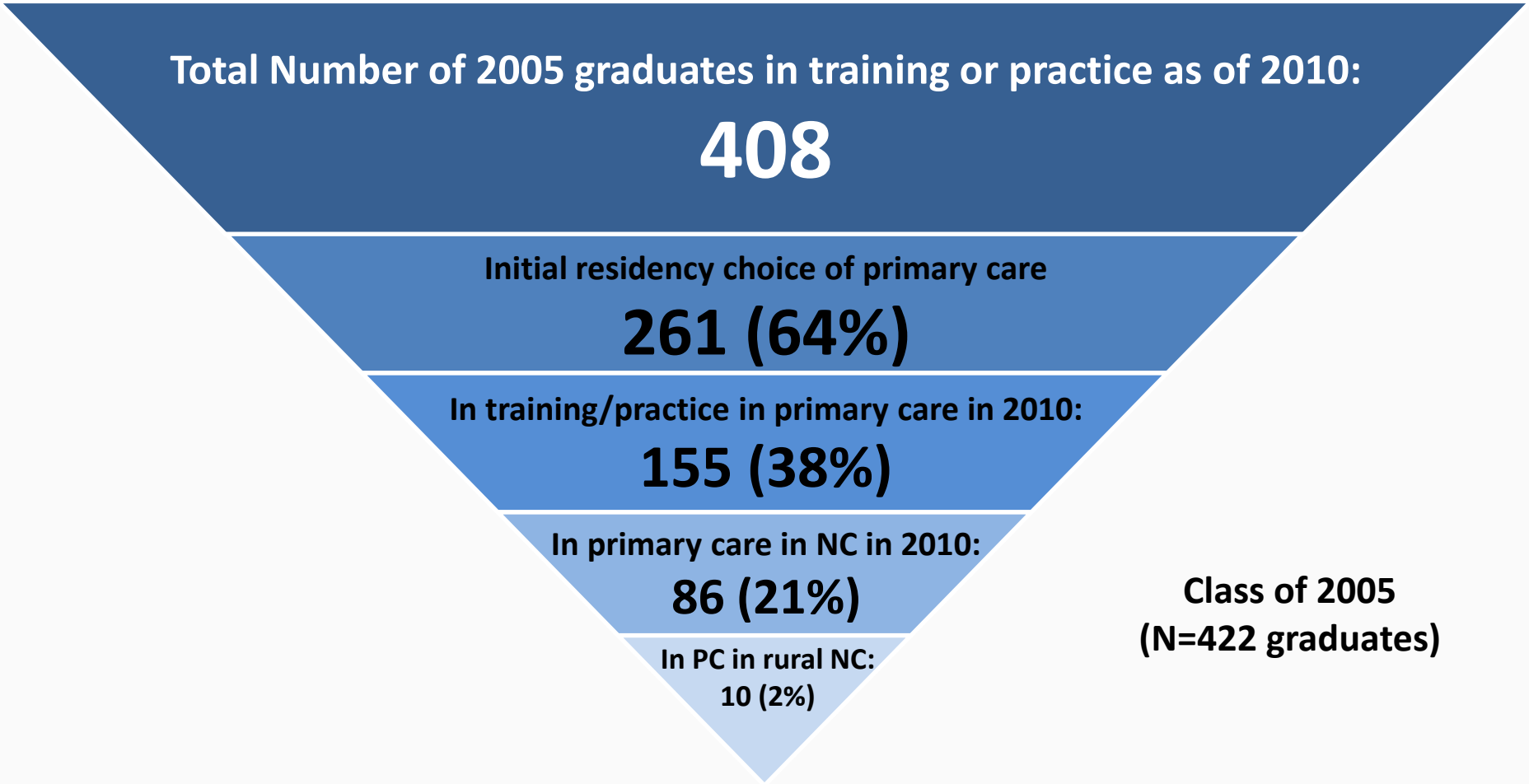
School	2005 Graduates	% Initially Selecting PC Specialty	2010: % in Primary Care (Anywhere in US)	2010: % in Primary Care (in NC)
Duke	78	60%	23%	8%
ECU	73	82%	59%	41%
UNC	152	60%	38%	21%
Wake Forest	105	60%	37%	17%
Total	**408**	**64%**	**38%**	**21%**

Prepared by the North Carolina Health Professions Data System and the North Carolina AHEC Program.

Source: Duke Office of Medical Education, UNC-CH Office of Student Affairs, ECU Office of Medical Education, Wake Forest University SOM Office of Student Affairs, Association of American Medical Colleges, and the NC Medical Board.

Retention in North Carolina of Class of 2005 in 2010: Primary Care

NC Medical Students: Retention in Primary Care in NC's Rural Areas



Class of 2005 (N=422 graduates)

Source: North Carolina Health Professions Data System with data derived from the Duke Office of Medical Education, UNC-CH Office of Student Affairs, ECU Office of Medical Education, Wake Forest University SOM Office of Student Affairs, Association of American Medical Colleges, and the NC Medical Board, 2011.

And Where Physician Completed a Residency Even More Important Predictor of Retention in NC

AHEC

- **46% of physicians who complete an NC AHEC residency stay in North Carolina to practice**

compared to

Non-AHEC

- **31% of physicians who complete a non-AHEC residency stay in North Carolina to practice**

Source: NC Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, with data derived from the American Medical Association Masterfile, 2011. "Active" includes federal, as well as non-patient care activities such as teaching, research, administration, etc.

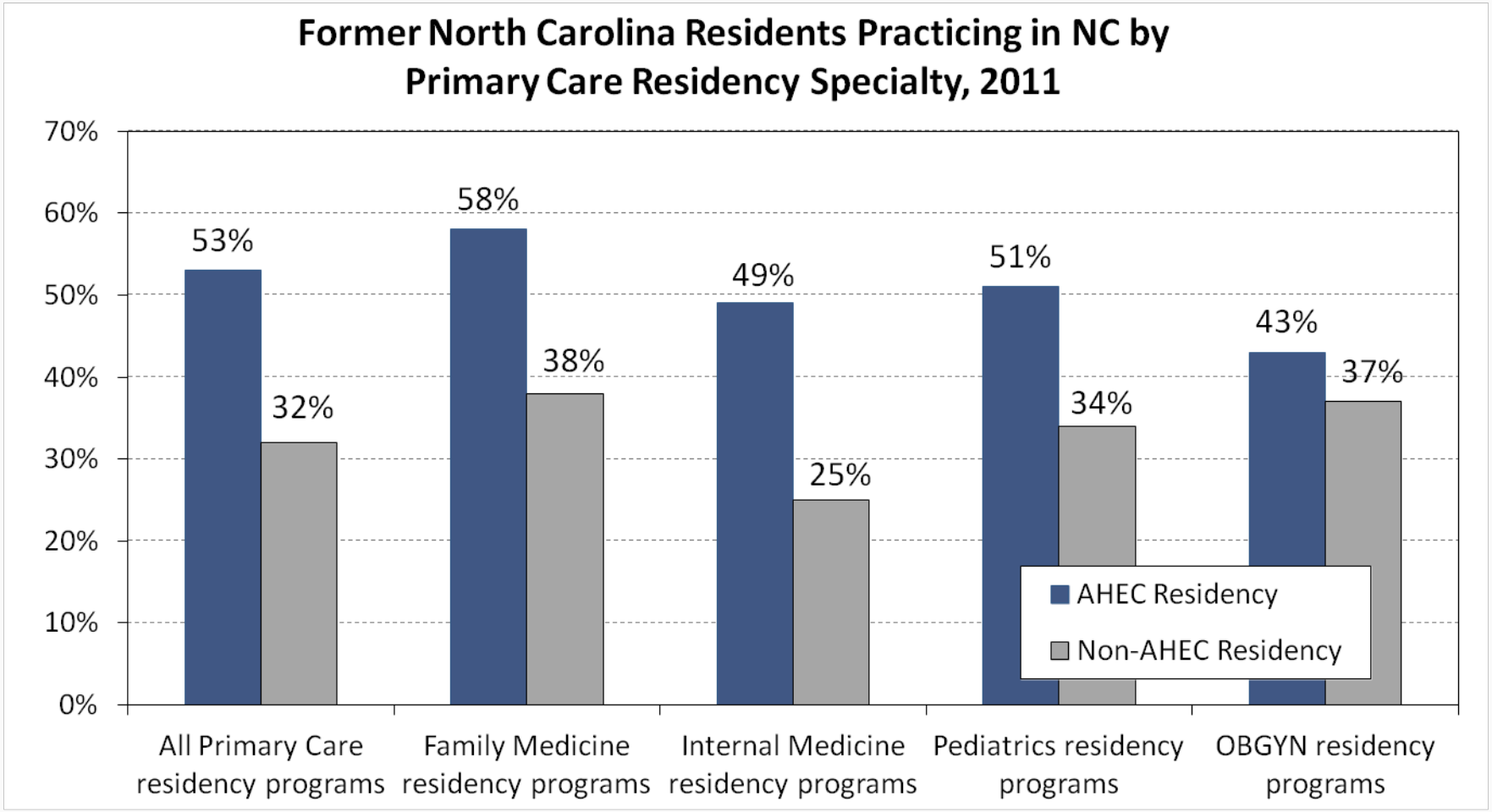
AHEC-Trained Residents More Likely to Practice in Rural Areas

Specialty	Residency Type	Practicing in NC, 2011	
		% in Metro Area	% in Nonmetro Area
ALL	AHEC	85%	15%
	Non-AHEC	88%	12%
Primary Care	AHEC	85%	15%
	Non-AHEC	85%	15%
General Surg	AHEC	70%	**30%**
	Non-AHEC	81%	**19%**

Of the active and practicing physicians who completed a NC AHEC residency, 1,491 (46%) are practicing in NC and 1,739 (54%) are practicing outside of NC.
Of the active and practicing physicians who completed a NC Non-AHEC residency, 6,092 (31%) are practicing in NC and 13,639 (69%) are practicing outside of NC.
Note: Primary Care includes the following specialties: Family Medicine, Internal Medicine, Obstetrics and Gynecology, and Pediatrics.

Source: NC Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, with data derived from the American Medical Association Masterfile, 2011. "Active" includes federal, as well as non-patient care activities such as teaching, research, administration, etc.

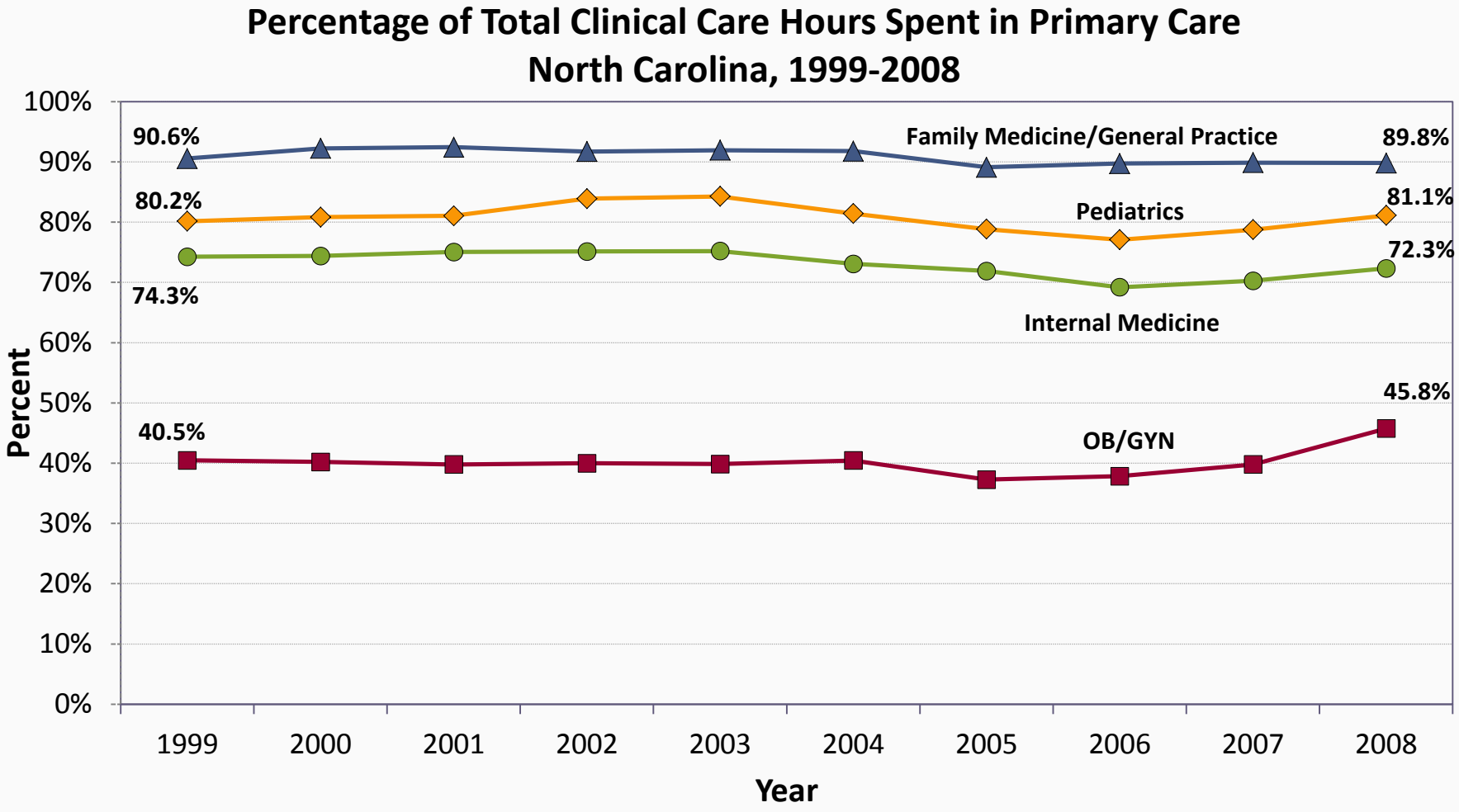
And More Likely to Choose Primary Care



Source: NC Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, with data derived from the American Medical Association Masterfile, 2011. "Active" includes federal, as well as non-patient care activities such as teaching, research, administration, etc.

But Who Counts as "Primary Care"?

Who's in PC and How Much Primary Care Do They Report Providing?



Source: NC Health Professions Data System with data derived from the North Carolina Medical Board. Data are for active, in-state, non-federal, non-resident-in-training physicians licensed by the NC Medical Board as of October of each year. Data are self-reported at time of initial licensure and subsequent renewal.

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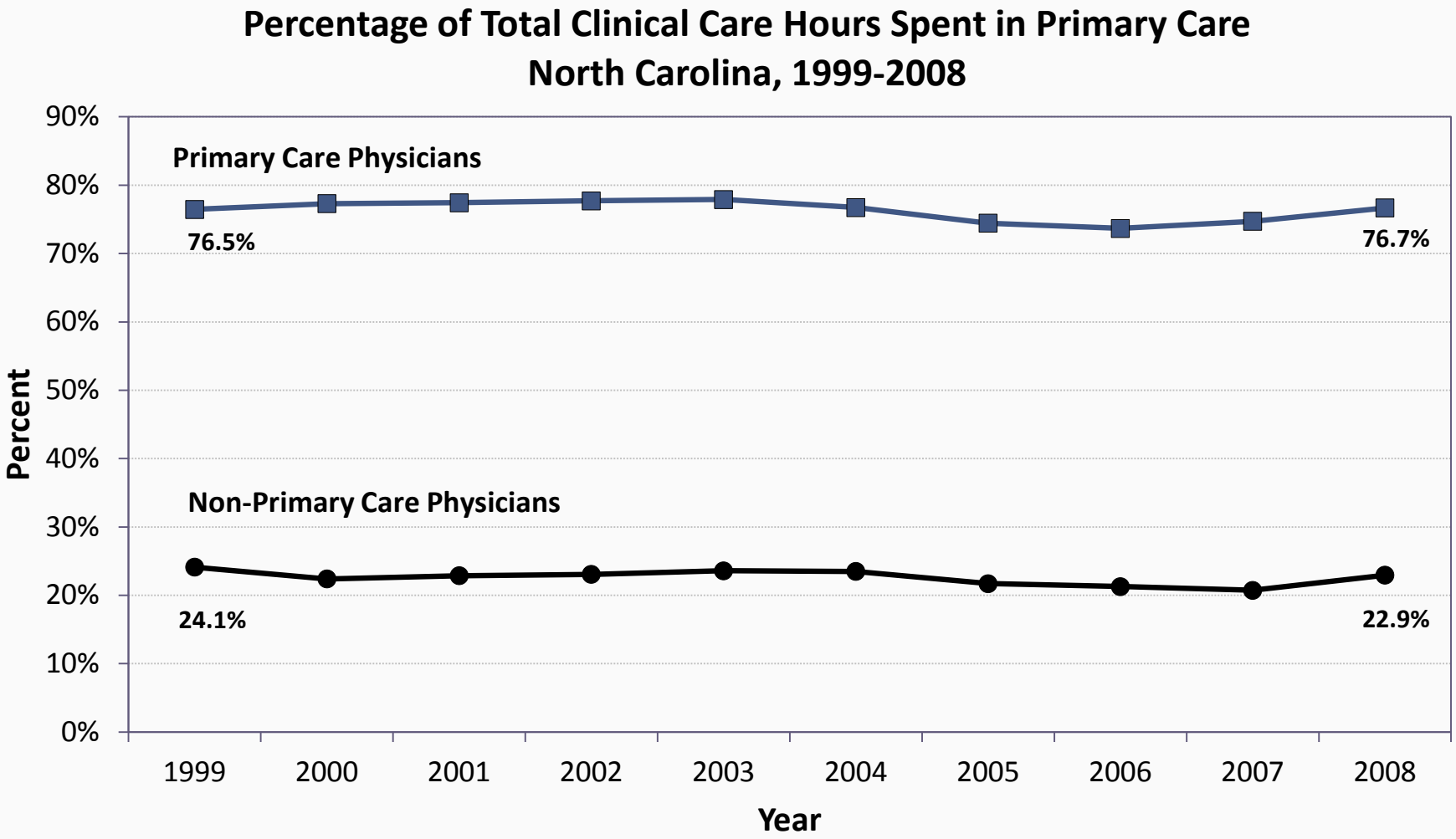
But, Specialists Also Provide Primary Care



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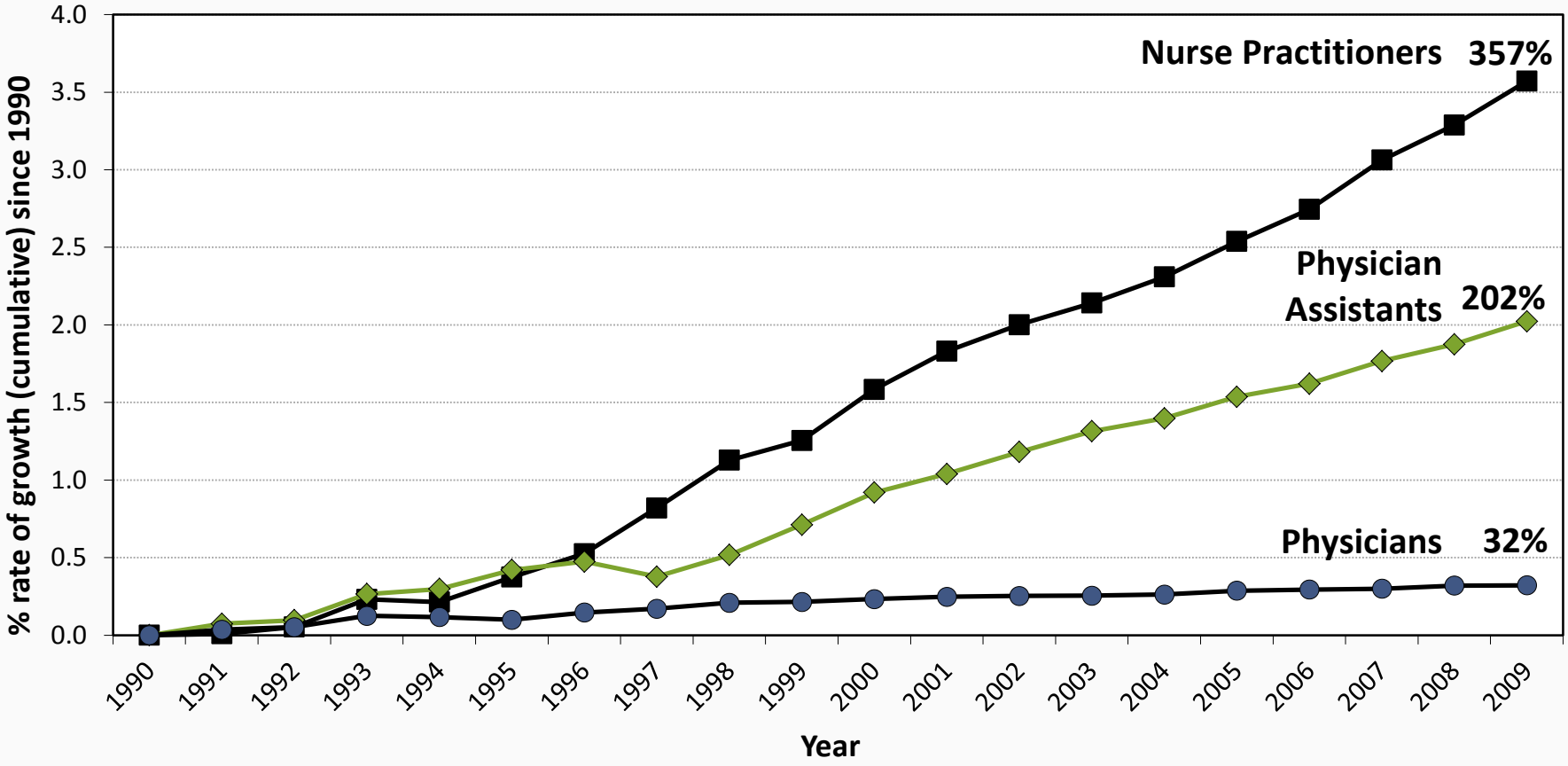
Are NPs and PAs the Answer to Physician Shortages?

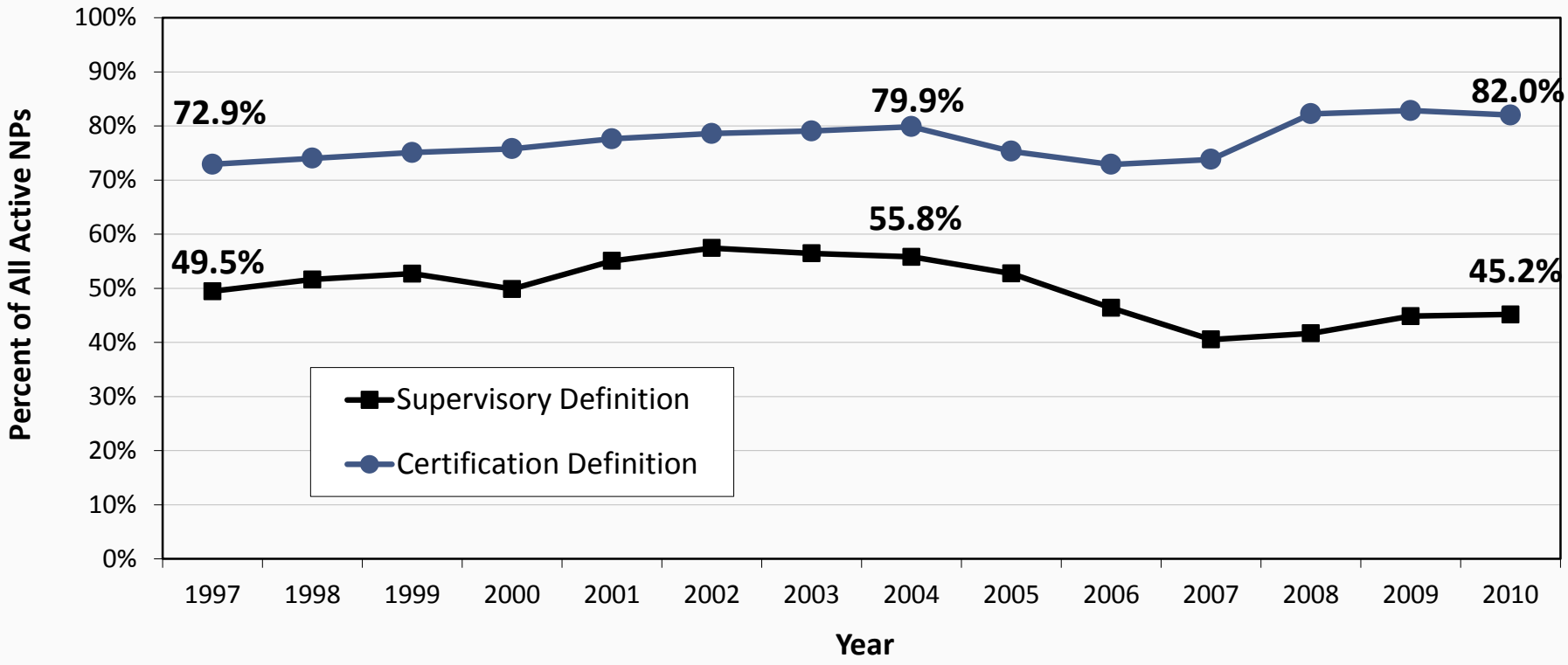
Percentage Growth Since 1990 of Physicians, PAs and NPs per 10,000 Population, North Carolina, 1991-2009



Source: NC Health Professions Data System with data derived from the North Carolina Medical Board. Data are for active, in-state, non-federal, non-resident-in-training physicians licensed by the NC Medical Board as of October of each year. Data are self-reported at time of initial licensure and subsequent renewal.

How Many NPs are in Primary Care? Depends on How You Count 'Em

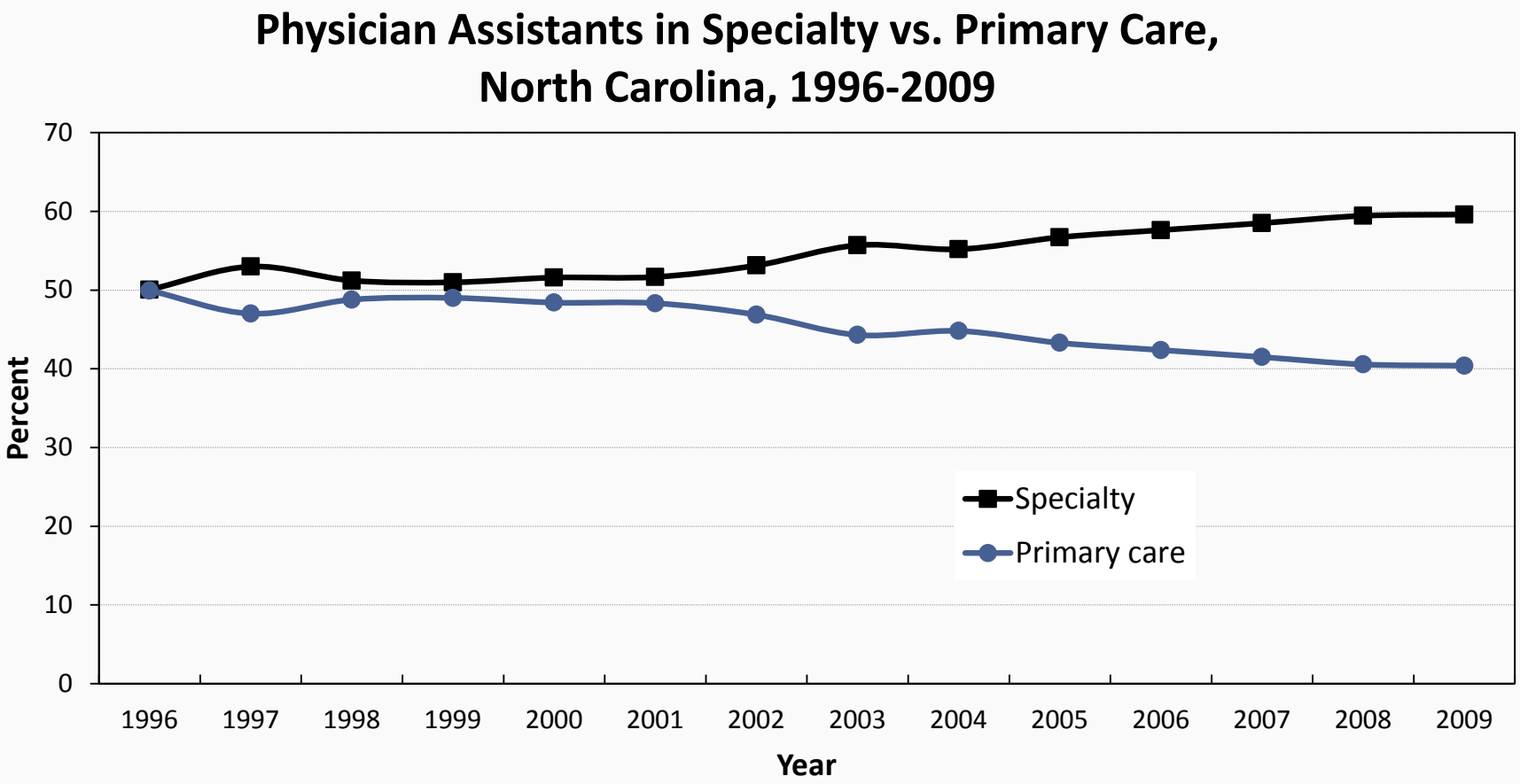
Defining Primary Care Nurse Practitioner Specialty, NC, 1997-2010: Comparison of Certification and Supervisory Definitions



Notes: Data for primary specialty ("supervisory") 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 ("certification") 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.

And PAs are Increasingly Specializing



Notes: Data include active, instate physician assistants licensed in NC as of October 31 of the respective year.
Primary care includes family practice, general practice, internal medicine, Ob/Gyn, or pediatrics.

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.

Measuring Primary Care Supply Is Not an Easy Task….

Need to:

- Move beyond “counting noses” by specialty designation to understand the content of practice
- Heterogeneity among practice of physicians in same specialty
- Overlap of scopes of services provided by physicians in different specialties
- Broaden primary care definition to include other physician specialties and non-physician providers

Old School versus New School

- ***Old school:*** relationship of numbers of primary care docs to patient outcomes
- ***New school:*** emphasis on new models of care: inter-professional and integrated systems of care

"Our findings suggest that the nation's primary care deficit won't be solved by…boosting the number of primary care physicians in an area or by ensuring that most patients have better insurance coverage. Policy should also focus on improving the actual services primary care clinicians provide and making sure their efforts are coordinated with those of other providers, including specialists, nurses and hospitals."

(Interview with David Goodman, Medical News Today, September 10, 2010 http://www.medicalnewstoday.com/articles/200599.php)

The Patient-Centered Medical Home

Defining Principles

- Defined patient population
- Patient care is:
  - Coordinated across medical specialties and settings
  - Integrated with community-based services
- Health information technology used to identify, and monitor, population health needs
- Payment incentives promote lower costs, increased quality

(Cassidy et al, *Health Affairs*, September 14, 2010)

Who is on the PCMH team?

Full implementation of PCMH model will require:

- Interdisciplinary workforce of licensed and unlicensed workers in **health and community** settings
- We don't yet know the:
  - Skills and competencies required to function in PCMHs
  - Types and numbers of providers needed
  - Where providers are needed
  - Different skill mix configurations in which they should be deployed

What Training is Required to Staff the Full Scope of PCMH Services?

Full implementation of PCMH model will require:

- Not only increasing supply of new workers but retooling/retraining existing workforce
- Identifying new health professional roles, certifications and training
- Developing new career pathways
- Increasing the racial/ethnic and linguistic diversity of the health professional workforce

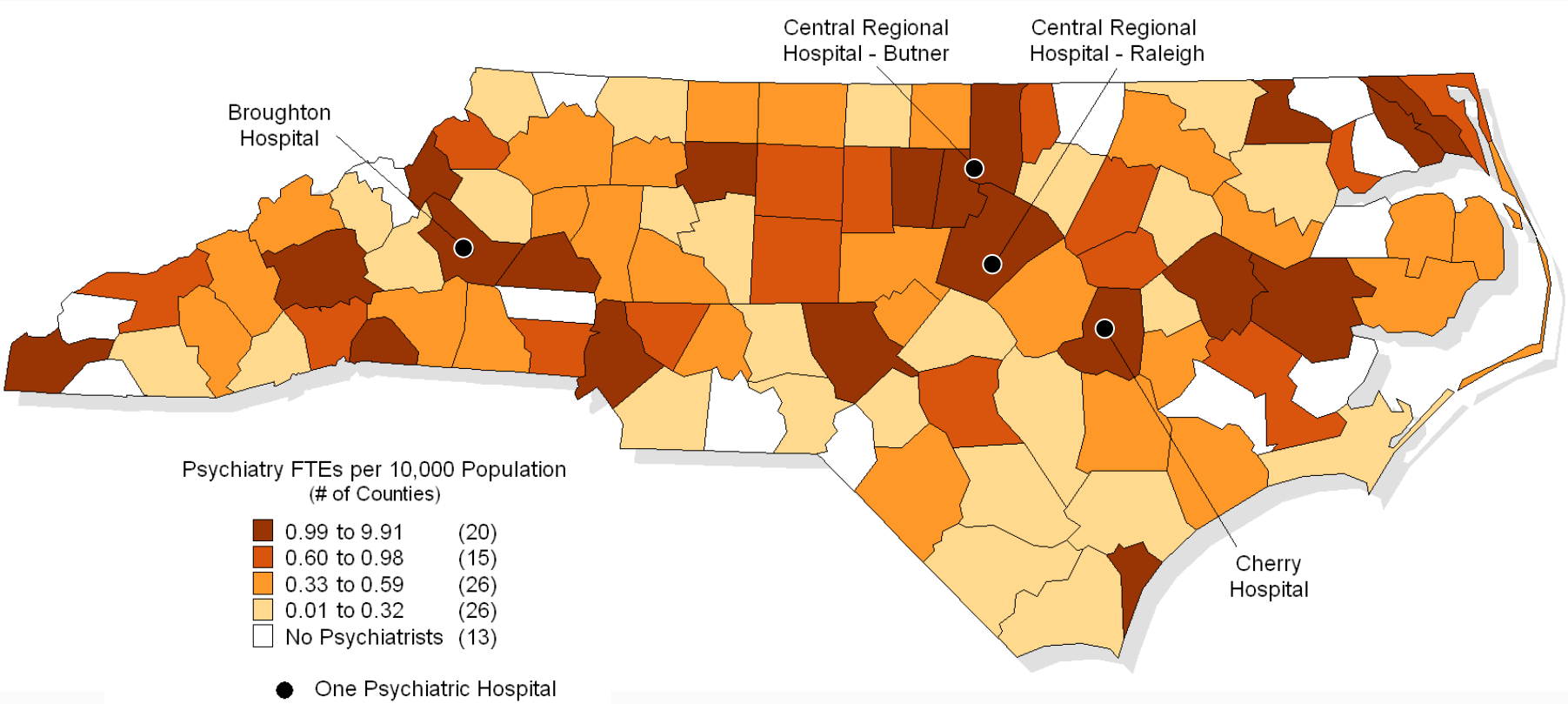
And Speaking of Integrated Models of Care….What about Mental Health?

- 70% of all primary care visits have psychosocial drivers
- 50% of all mental health care is done by PCPs
- 67% of all psychoactive drugs prescribed by PCPs
- Depressed patients use 3 times more healthcare services
- Depressed patients have 7 times more emergency visits
- Depression is associated with longer hospital stays

Regina Dickens. "From Fragmentation to Integration: Promoting Primary Care and Mental Health Collaboration through ICARE. July 2010. http://www.icarenc.org/images/pdf/Integrated%20Care.pdf

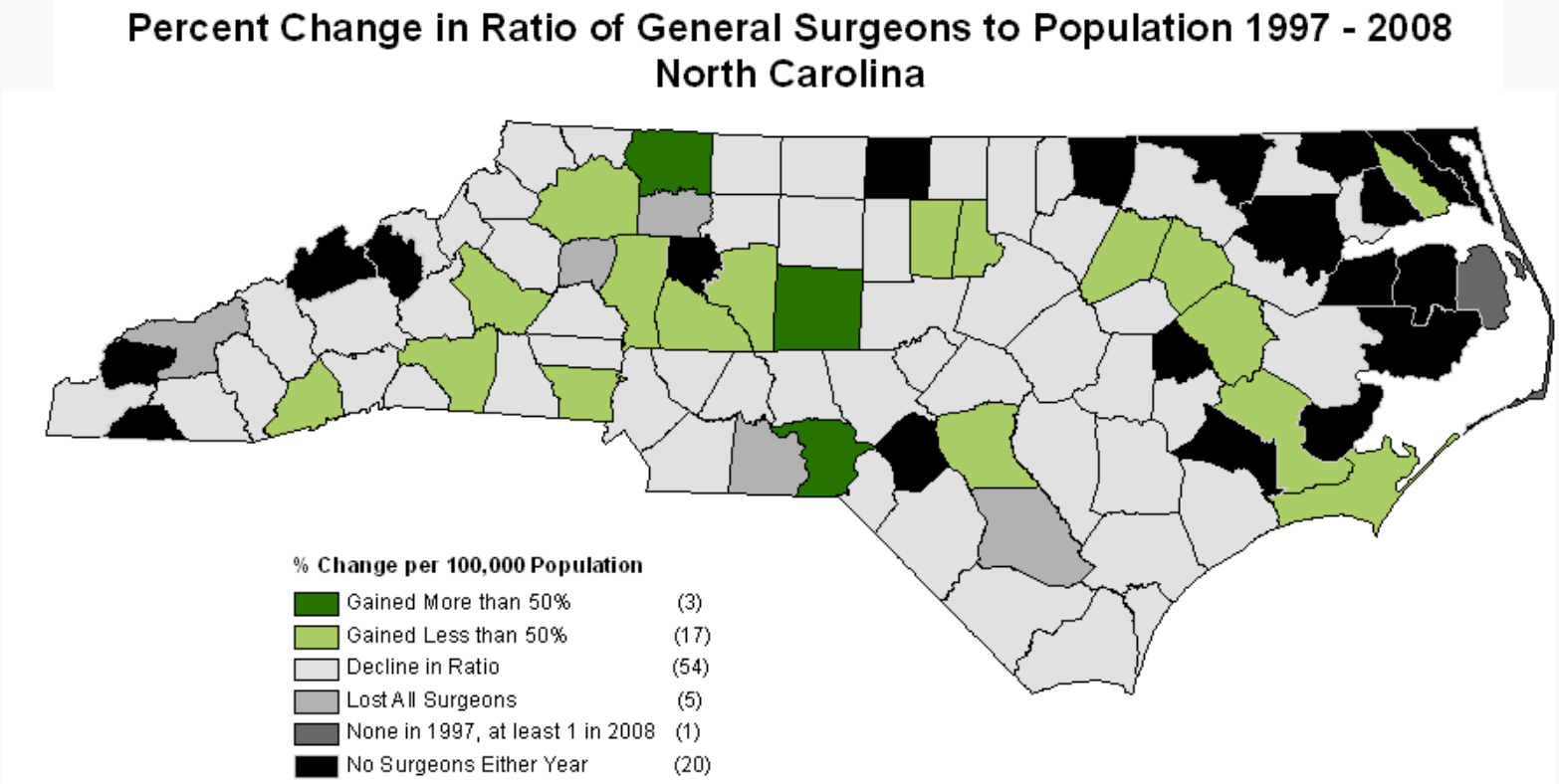
Half of NC's Counties Qualify as Mental Health Professional Shortage Areas

Psychiatrist Full-Time Equivalents per 10,000 Population North Carolina, 2008



Produced by: North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. **Source**: North Carolina Health Professions Data System, with data derived from the North Carolina Medical Board, 2008; LINC, 2010; NC DHHS, MHDDSAS, 2010. **Note**: Psychiatrists include active, instate, nonfederal, non-resident-in-training physicians who indicate a primary specialty of psychiatry, child psychiatry, psychoanalysis, psychosomatic Medicine, addiction/chemical dependency, forensic psychiatry, or geriatric psychiatry, and secondary specialties in psychiatry, child psychiatry and forensic psychiatry.

General Surgery As Primary Care?



Notes: General Surgery includes Abdominal Surgery, Bariatric Surgery, Critical Care Surgery, General Surgery, Hand Surgery, Maxillofacial Surgery, Oral Surgery, Pediatric Surgery, Oncology Surgery, Traumatic Surgery, Abdominal Organ Transplantation, Vascular Surgery, and Cardiovascular Surgery.

Source: North Carolina Medical Board physician licensure data, 1997 - 2008; and 2010 Area Resource File for population data.

Produced by the Cecil G. Sheps Center for Health Services Research, UNC-CH, August 3, 2010.

Diversity and Workforce Needs

In context of emerging workforce shortfalls and maldistribution:

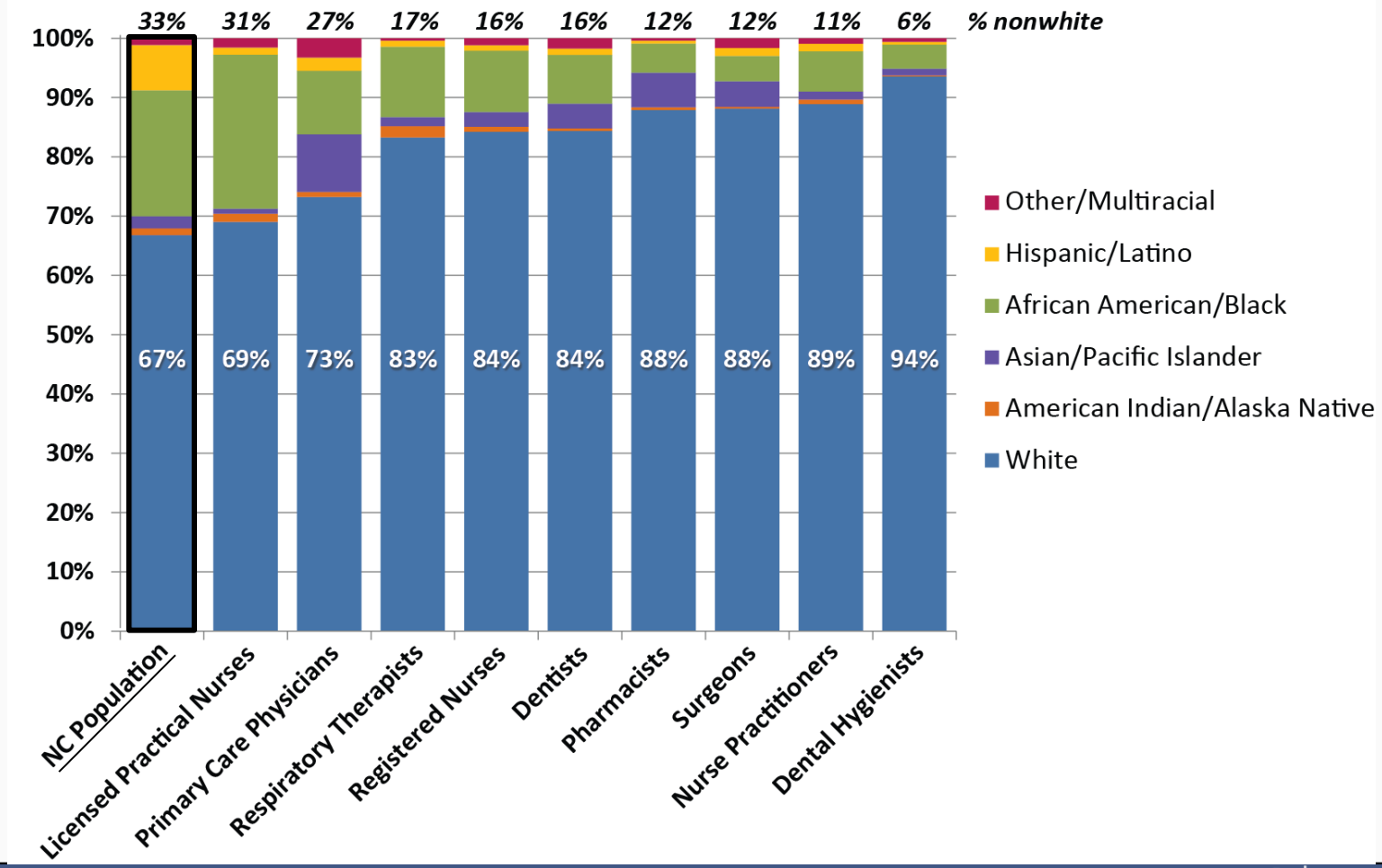
- Are we adequately accessing a talented pool of workers?
- Is there access to education and upward job mobility?

A transformed health care system will emphasize population health, reducing health disparities, and community-based models of care.

Can we accomplish this system without increasing workforce diversity?

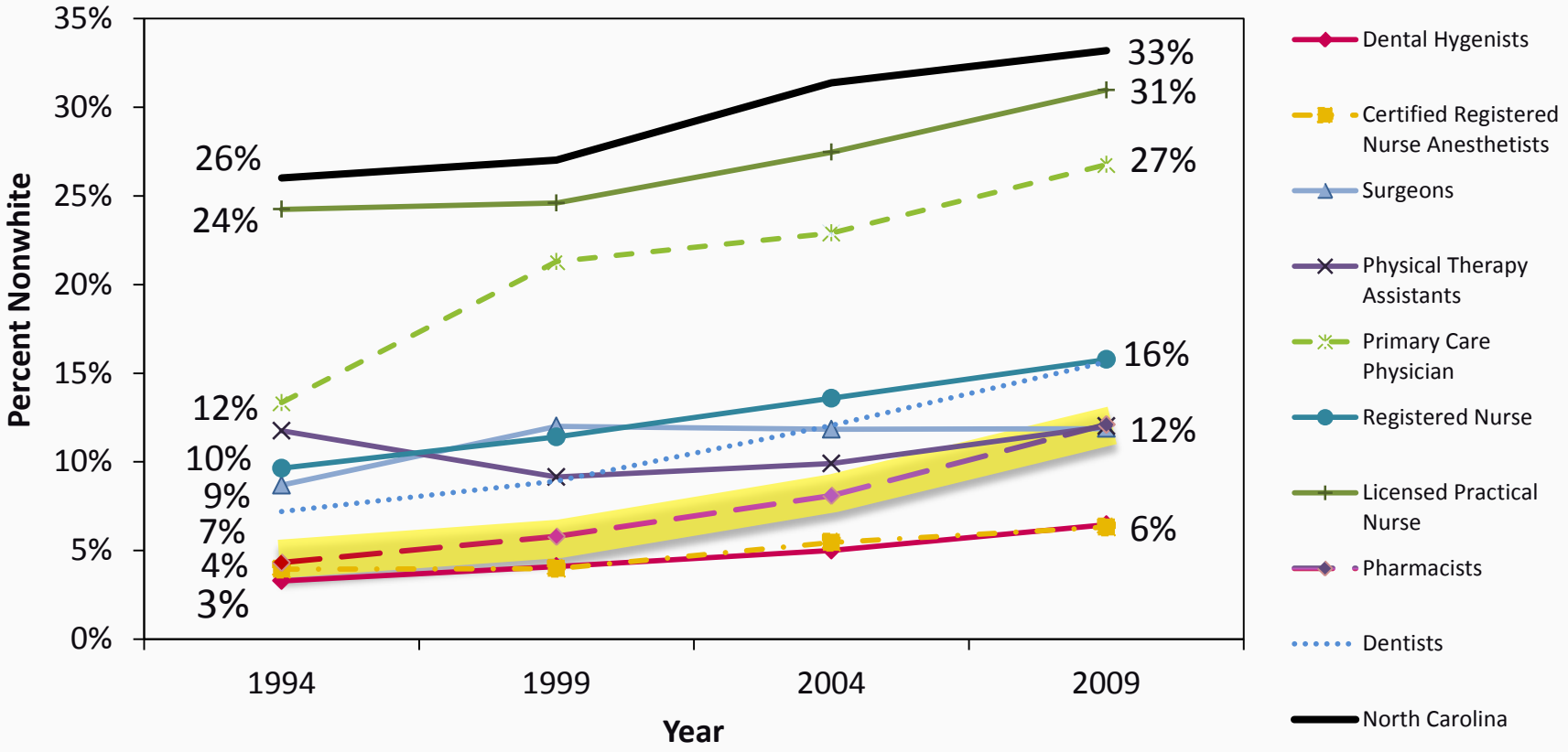
Race/Ethnicity of Practitioners Falls Short of Matching Population Diversity

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

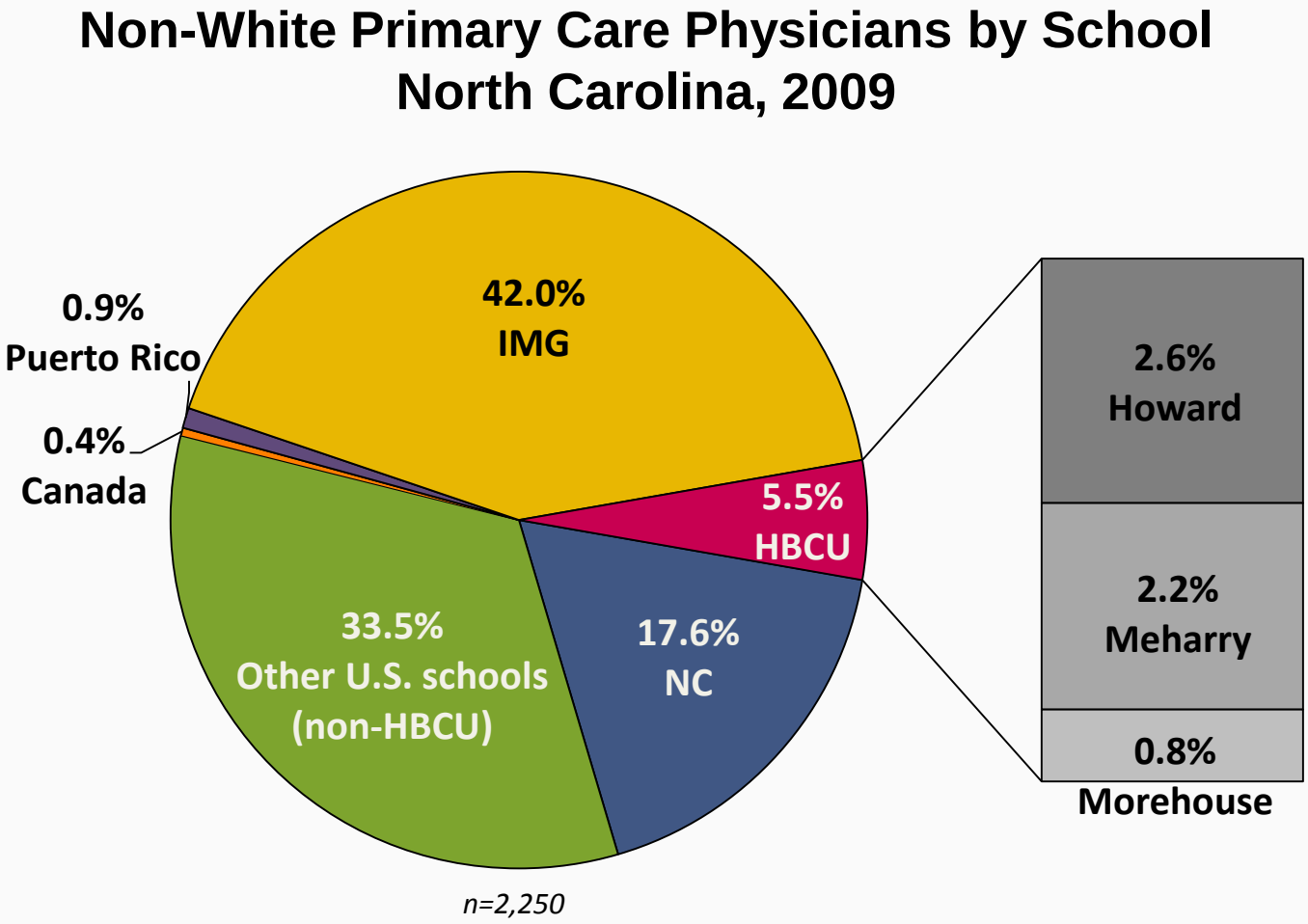


Health Professions are Diversifying Over Time at Different Rates

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



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



Future Challenges

A transformed health care system will require a transformed workforce.

The people who will support health system transformation for communities and populations will require different knowledge and skills….in prevention, care coordination, care process re-engineering, dissemination of best practices, team-based care, continuous quality improvement, and the use of data to support a transformed system

Source: Centers for Medicare and Medicaid Services, Health Care Innovation Challenge Grant, Funding Opportunity Number: CMS-1C1-12-001 , CFDA: 93.610 , November 2011. http://www.innovations.cms.gov/Files/x/Health-Care-Innovation-Challenge-Funding-Opportunity-Announcement.pdf

But How Do We Get There from Here?

Unlike the Feds, We're Not Afraid to Use the "P" Word in North Carolina

State has long history of workforce planning:

- Well-established AHEC
- Strong public community college and university system
- History of collaboration and trust
- Better data and analytical capacity than most states
- Strong base from which to move forward

North Carolina's Workforce Planning: The Critique

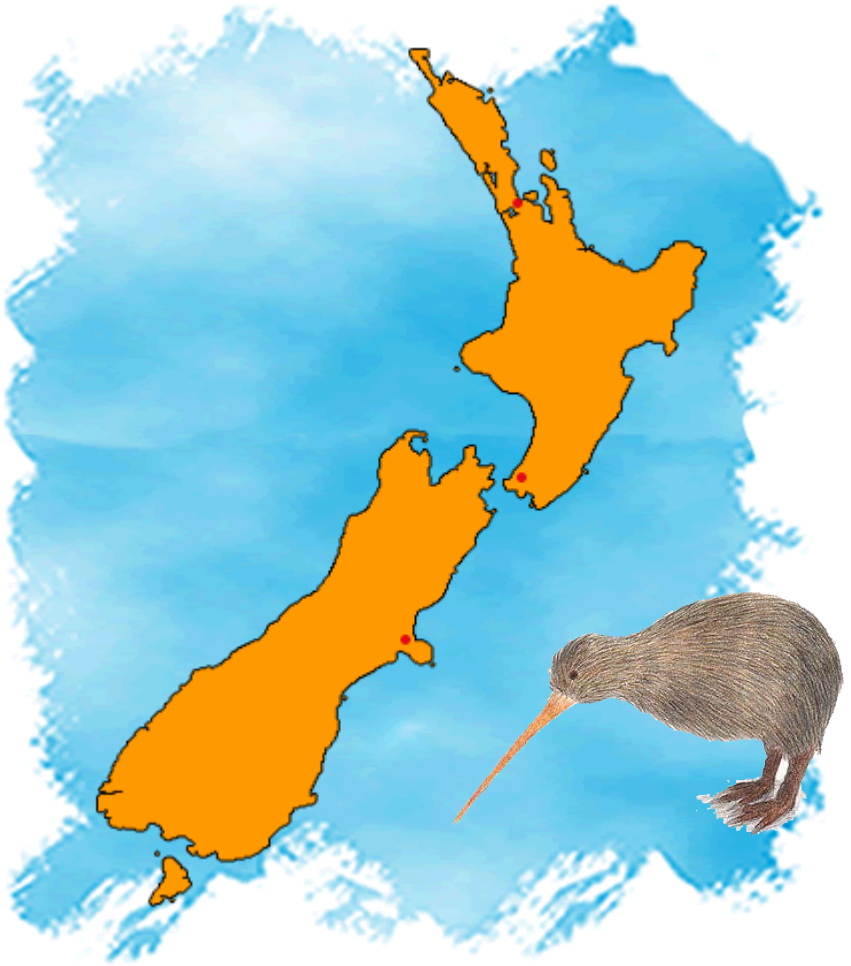
- Starts from professional, silo-based perspective
- Little accountability for matching workforce to population health needs
- Limited employer involvement
- Generally not interdisciplinary
- Reactive, heavy reliance on market
- Lacks coordination

Health Workforce Planning in North Carolina the Traditional Way

Result is a "Compromised" Workforce Planning System

- Resembles "a version of Goldilocks written by Albert Camus" with approaches that are either "too hot, or too cold, but never just right"
  (Grumbach, *Health Affairs* 2002; 21(5): 13-27)
- Often lurches from oversupply to shortage
- Generates "vigorous" disagreements about what constitutes an adequate supply, distribution and "right" mix of health providers
- Data not linked to policy action

Now Ask Yourself, "What Would the Kiwis Do?"



What North Carolina (and the Nation) Can Learn From New Zealand

- Small, relatively poor country compared to Australian neighbor
- Publicly funded system with universal coverage
- Spend about 10% of GDP on health care
- NZ population is ~4.4 million, rural and ethnically diverse
- Despite smaller size and different financing system, NZ faces same health workforce issues as North Carolina

North Carolina and New Zealand

- Current health workforce:
  - not sustainable
  - less productive than in past
  - too many workers not practicing anywhere near top of scope of practice
  - not meeting quality outcomes
  - poorly distributed against need
  - large proportion of workforce nearing retirement
- Primary care, mental health, oral health, and rehabilitation systems “not up to scratch”

How NZ is Addressing Workforce Challenges: *Clinician-Led Change*

- Engaging clinicians in designing future health care system
- Transforming from ground up, rather than top down
- Asking clinicians to design ideal patient pathways by disease area and identify changes that enable new models of care
- Making it personal: “How should we care for Aunt Susie with dementia?”
- Engaging “coalitions of the willing” to overcome professional resistance and “tribalism”

How NZ is Addressing Workforce Challenges: *Engaging Employers*

- Are new grads ready for practice?
- Where are biggest gaps and in which professions?
- What curriculum changes are needed for future?
  (QI, HIT, care coordination, disease management, patient navigation)
- What new or retooled workforce is needed to avoid readmissions and integrate care? *More health educators, home health personnel, community health workers for better integration with primary care and community services?*
- In what professions, and for areas of patient care, is the workforce over- and under-skilled?

Under- and Over-Skilling Among Nurses and Other Professionals is BIG Issue

- Recent study in the Netherlands and US asked 34,000 nurses:

Q1: What duties do you perform that you don't need to perform?

Answer: clearing trays, cleaning rooms, clerical duties, arranging transportation for discharge, other non-nursing tasks etc.

Q2: What duties are you willing/able to perform but don't because you don't have time?

Answer: patient education, comforting and talking to patients and family, skin care, procedures and treatments, discharge prep, pain management, patient surveillance

/Walter Sermueus, "RN4CAST and possible skill (mis)match of nurses. OECD Expert group on health workforce planning and management, http://www.oecd.org/els/healthpoliciesanddata/16%20RN4CAST_OECD_WS.pdf

How NZ is Addressing Workforce Challenges: *Creating New Roles, Changing Existing Roles*

How many health professionals does it take to run a health care system?

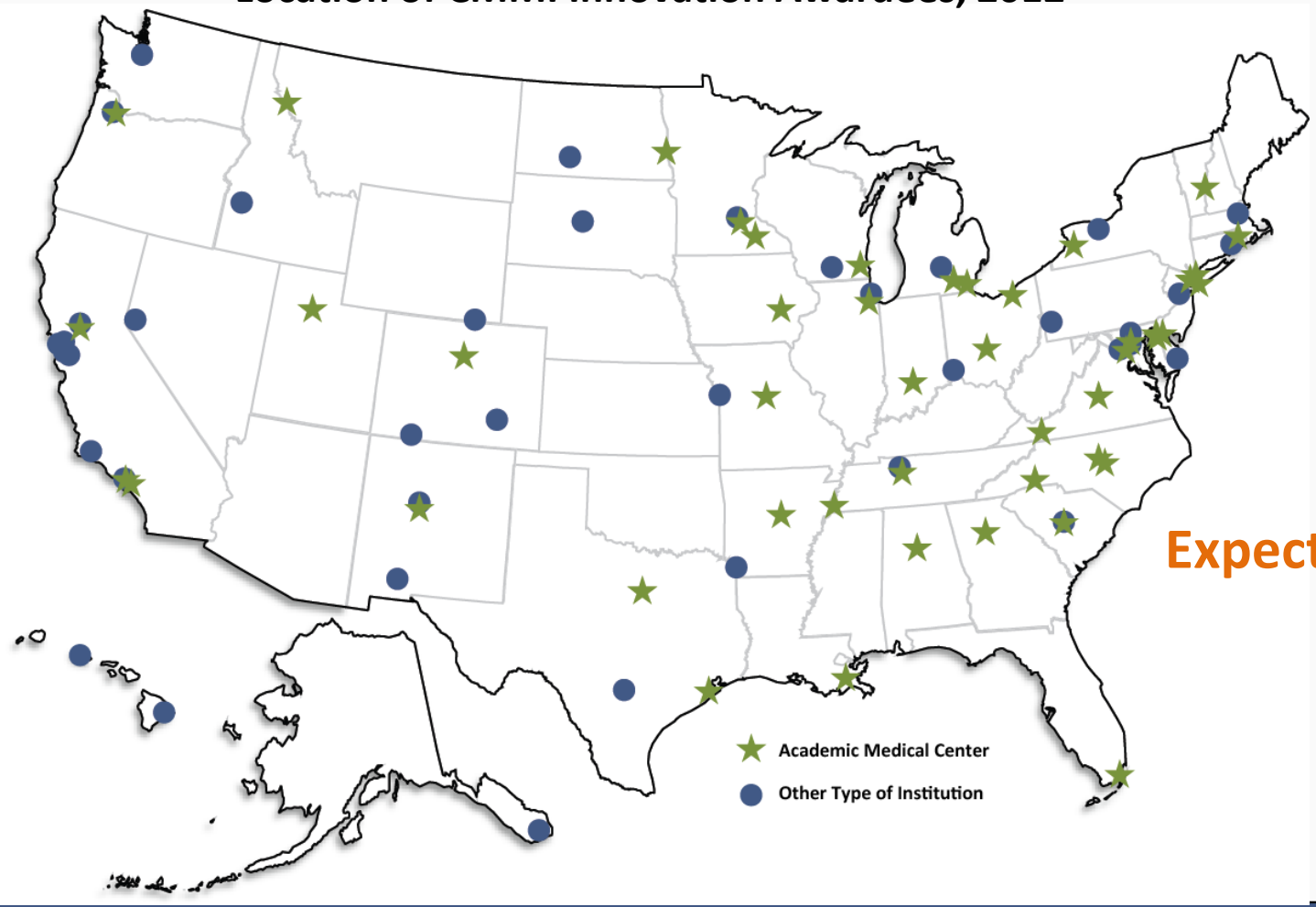
Depends on what they are doing

NZ striving to:

- "Liberate workforce with spare capacity"
- Promote more team-based models of care
- Create new roles and new professions

Sounds Similar to the CMMI Innovation Awards, 2012

Location of CMMI Innovation Awardees, 2012



Cost:
$888,320,999

Expected 3 Yr Savings:
$2 Billion

Team Members in CMMI Initiatives

- Patient navigators
- Nurse case managers
- Care coordinators
- Community health workers
- Care transition specialists
- Pharmacists
- Living skills specialists
- Patient Family Activator
- Medical Assistants
- Physicians
- Medical Directors
- Dental Hygienists
- Behavioral Health
- Social Workers
- Occupational Therapists
- Physical Therapists
- Grandaids
- Health Coaches
- Paramedics
- Home health aids
- Peer and Family Mentors

How NZ is Addressing Workforce Challenges:
Workforce Retention

- Workforce demographics mean we need to pay more attention to retention
- Higher remuneration ≠ retention
- Health workers want career progression and job satisfaction
- NZ focusing efforts on building creating meaningful, rewarding work environments and careers
- Addressing issues that “irritate people”

How NZ is Addressing Workforce Challenges:
Using Workforce Data to Shape Policy

- Health Workforce NZ created in 2009 to better integrate fragmented workforce planning efforts
- Working to build "coalitions of health workforce champions" to interpret and use data to affect change
- Building workforce models that don't give one "right" answer but allow policy makers to simulate effect of various scenarios
- Idea was to address fact that they were

"drowning in data and free of intelligence"

Never Mind New Zealand, Maybe We All Just Need to Embrace the French Model of Work-Life Balance

Translated:
(Hours of operation
of your café:
Monday through Sunday
8am to 8pm)

AHEC's Traditional Mission Well- Aligned with Health Reform Goals

- AHEC's primary mission to improve supply, distribution and diversity of health workforce is well-aligned with goals of health reform
- AHECs foster "interorganizational collaboration… a place where AHECs, community hospitals, state agencies, and other organizations put aside competitive rivalries and institutional politics and collaborate on projects of mutual interest and common benefit."

Weiner BJ, Ricketts TC, Fraher EP, Hanny D, Coccodrilli LD. Area Health Education Centers: Strengths, Challenges and Implications for Academic Health Science Center Leaders. *Health Care Management Review*. July-August 2005; 30(3):194-202.

AHEC Ahead of the Curve In: Community-Based, Socially Accountable Education

Alignment of AHEC with health reform goals

- Teaching Health Centers and primary care residencies in community health centers and other ambulatory sites
- Preceptor development and student placement in high quality sites that use EHRs and actively engage in QI activities
- Electronic library to support teaching and evidence-based clinical practice

AHEC Ahead of the Curve In: Inter-Professional Education and Practice

Alignment of AHEC with health reform goals

Creation of model teaching practices where students are:

- immersed in team-based models of care and prepared to deliver care as part of interdisciplinary health care team
- placed in practices that utilize EHRs and other technology to support high quality practice

AHEC Ahead of the Curve In: Workforce Development, Health Career Pipeline and Diversity

Alignment of AHEC with health reform goals

AHEC engaged in many programs to:

- expand pool of young people interested in health careers
- prepare a workforce more representative of the demographics of the population to better address health disparities in a reformed system

AHEC Ahead of the Curve In: Promoting Quality

Alignment of AHEC with health reform goals

- AHECs collaborate with extensive network of community-based practices with innovative care delivery models for research on quality/cost
- Collaborate in initiatives such as “Improving Performance In Practice” (IPIP) that promote practice-level quality improvement

AHEC Ahead of the Curve In: Health Workforce Data Analysis

Alignment of AHEC with health reform goals

- Sheps-AHEC-licensure board collaboration a model for other states and national efforts to improve health workforce data collection and analysis
- Leading efforts to use data to create “intelligence” that is used for policy-making
- Encouraging folks to make data-driven decisions and use data for program evaluation

AHEC Ahead of the Curve In: Continuing Education

Alignment of AHEC with health reform goals

- AHECs have traditionally focused on continuing medical education (CME) but are well-positioned to retool the workforce to meet the demands of new models of care
- AHECs have capacity to combine traditional CE/CME with web-based courses, with on site consultations, and with information resources through digital libraries

Questions?
I may or may not have answers…

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