Trends in Graduate Medical Education in North Carolina and the United States

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NC Hospital and Health System CEOs/AHEC Directors Meeting

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UNC
THE CECIL G. SHEPS CENTER
FOR HEALTH SERVICES RESEARCH

Presentation Overview

- GME is hot topic (and not just for policy wonks)
- North Carolina versus the United States—how do we compare?
- Residents trained in North Carolina—retention, specialty choice and distribution
- AHEC's contribution to residency training in NC
- GME costs and funding
- Time to change the GME training paradigm?

In case your office calls, here are the presentation cliff notes

- GME policy is not just about increasing overall supply
- GME as policy lever to address:
  - Distribution
  - Specialty choice
  - Practice improvement and innovation
  - Evolving population health needs
- "New and improved" approach to GME in NC needed to create more systematic, evidence-based and coordinated system for residency expansion

GME is a Hot Topic Nationally

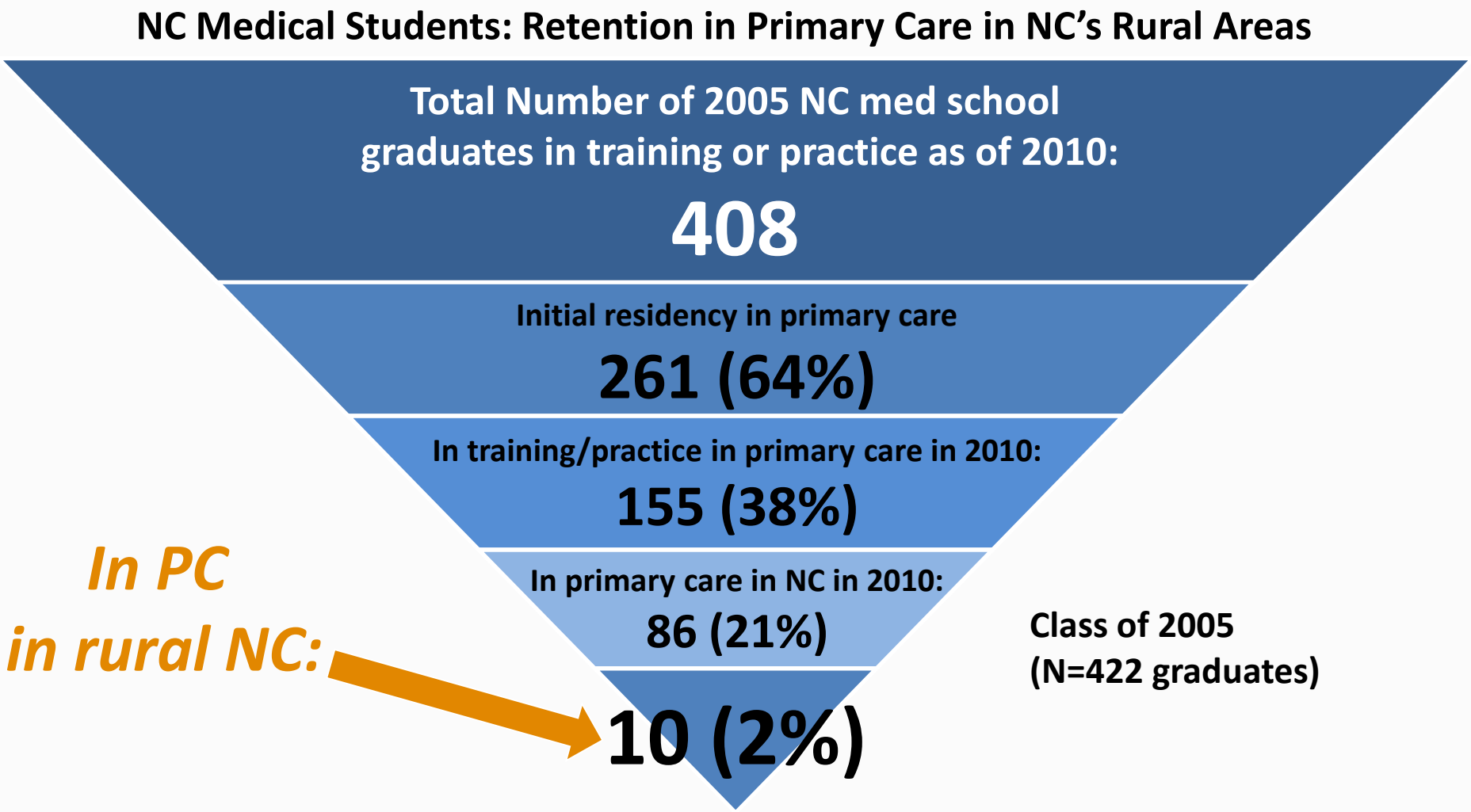
- Many groups calling for restructuring of GME financing and governance
  - Main focus on increased accountability of GME funding to meet population health needs
- In 112th Congress, four bills introduced to expand or alter GME—none moved beyond Committee review
- National IOM consensus study underway of GME governance and financing

GME is a Hot Topic in North Carolina As Well

- Concern about emerging physician shortage
- North Carolina expanded medical school enrollment
  - UNC expanded from 160 to 180 positions with regional placements in Charlotte and Asheville for 3rd and 4th year students
  - ECU expanded from 73-80 students
  - Campbell admits first class of 150 students in September 2013
- These expansions not likely to improve workforce supply and distribution in the state

Why not?

Because Most Students Leave NC and Don't Practice in Needed Specialties and Geographies



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.

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GME Basics:
Let's Drown (or Swim) in the data

North Carolina versus the United States

Where do we stand?

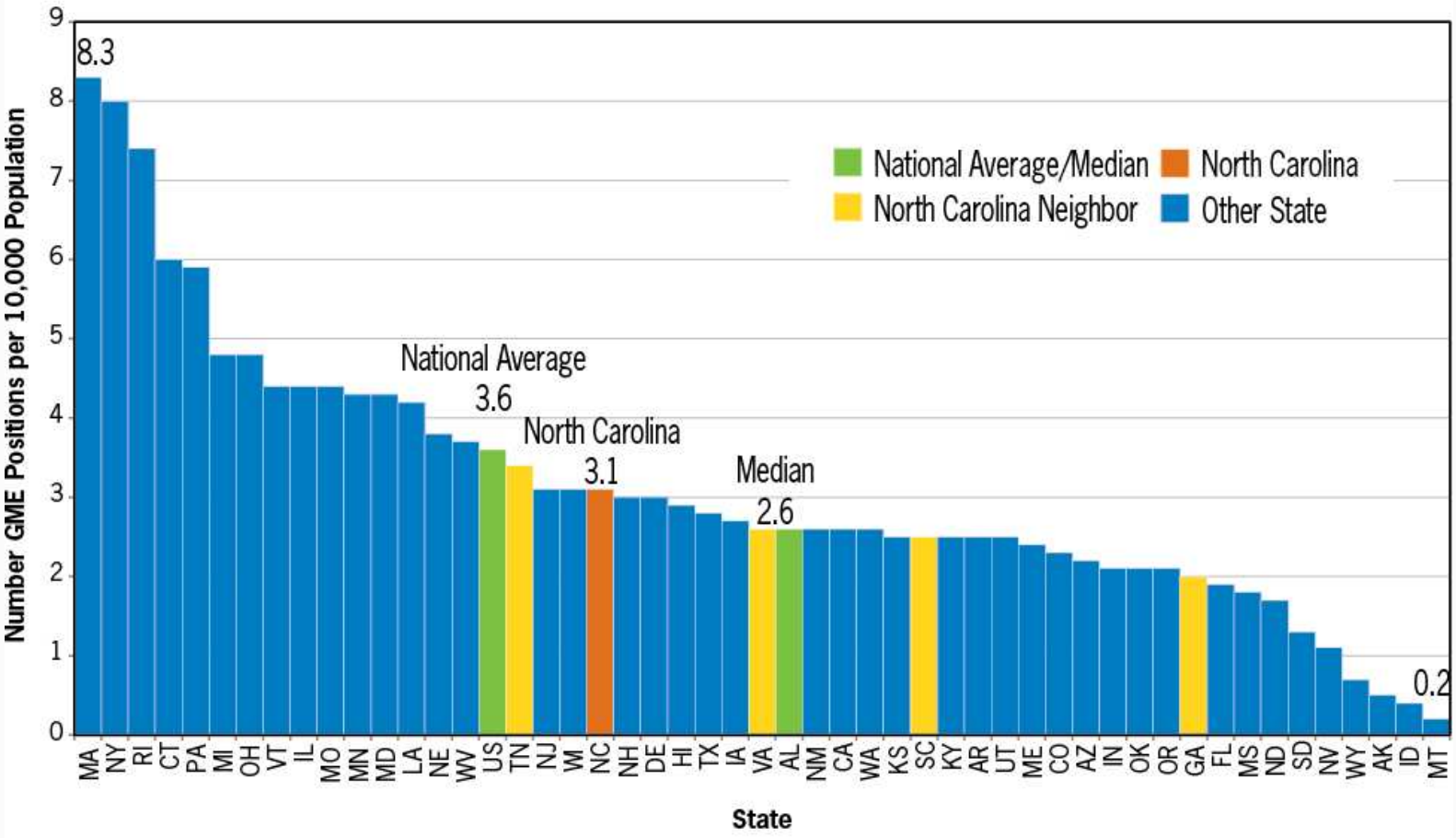
Graduate Medical Education in North Carolina

Residency Program	Number of Residents		Percent
UNC Hospitals	746		**27%**
Duke Hospitals	710		**26%**
Wake Forest Baptist	526		**19%**
ECU – Vidant	301		**11%**
Carolinas Medical Ctr.	249		**9%**
SEAHEC	67		**2%**
MAHEC – Mission	51		**2%**
Greensboro AHEC	46	*209*	**2%**
CMC - Northeast	25		**1%**
SR AHEC – Fayetteville	20		**1%**
State Totals	**2,741**		**100%**

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 NC Medical Board and the individual residency programs, 2011.

With 3.1 Residents per 10,000 Population, NC Lags Behind US

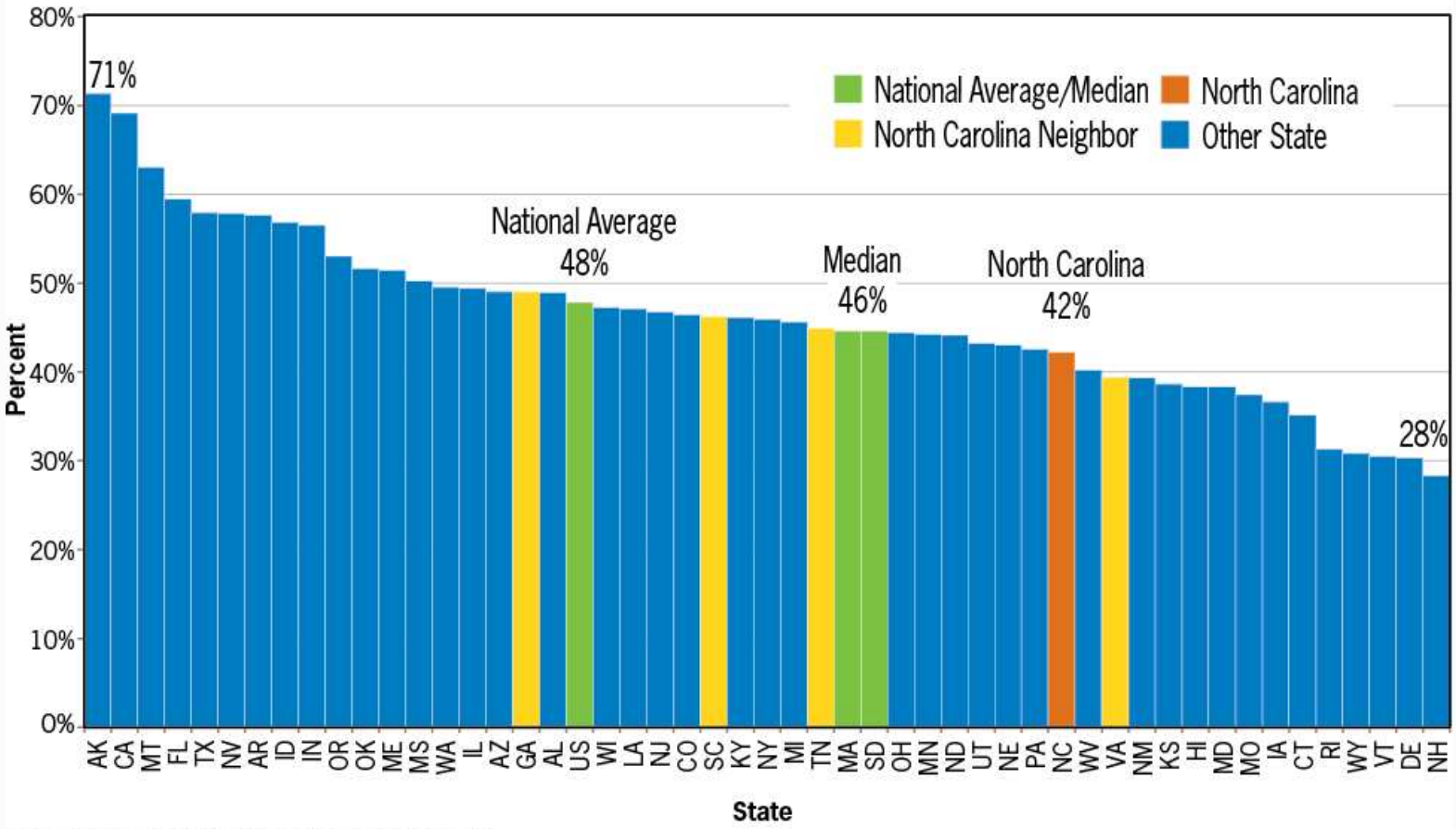
Figure 1. Average number of GME positions by state per 10,000 population, 2011



Source: Brotherton, SE, Etzel SI. (2011). Graduate Medical Education, 2010-2011, *JAMA* 306(9), 1015-1030.

And North Carolina Retains Fewer Residents After Completing Training

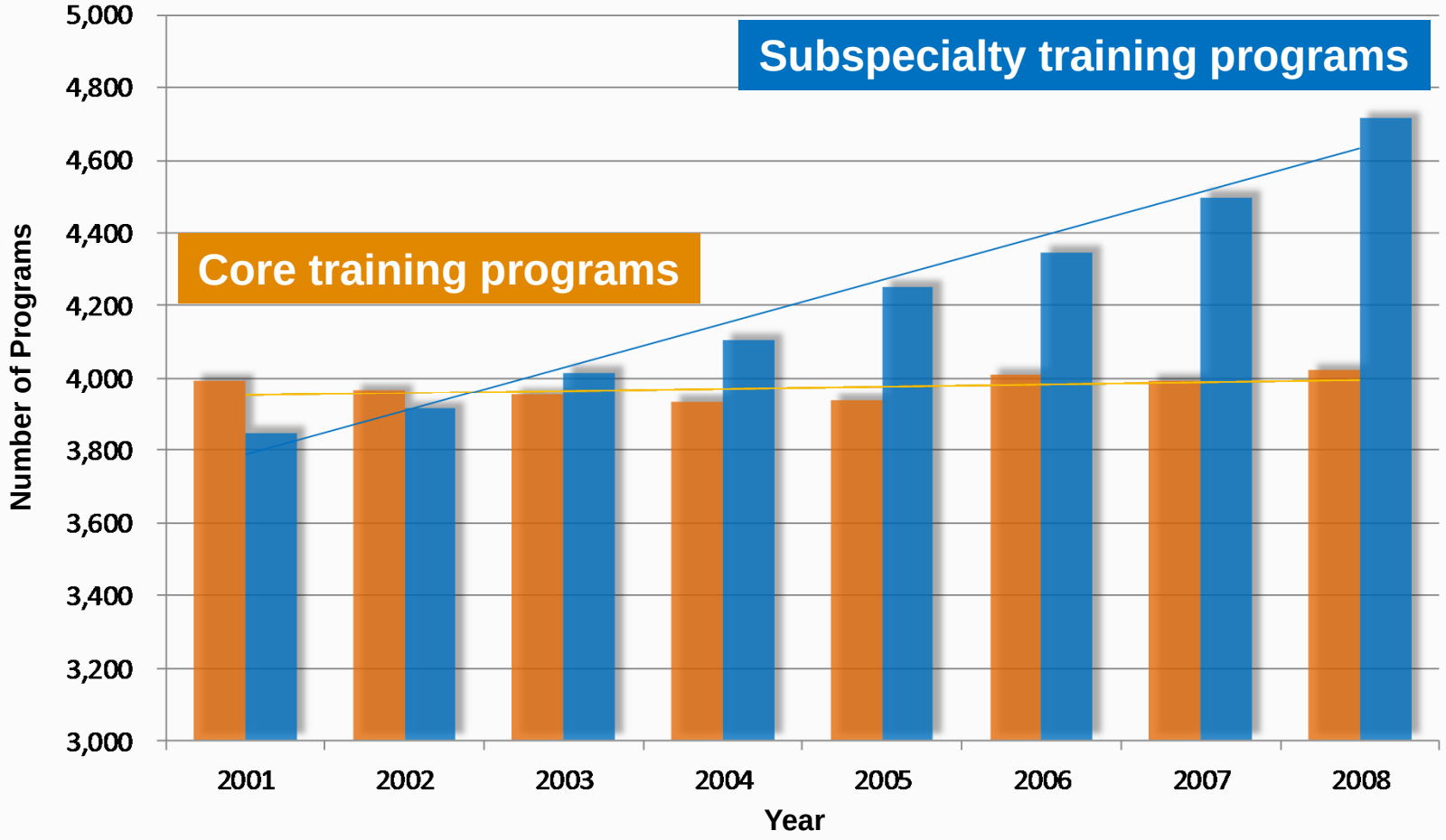
Figure 3. Percent of physicians retained in state after residency, 2010



Source: AAMC 2011 Physician Workforce Data Book:
"Physicians retained from GME, percent active physicians who completed GME in-state and are active in-state," page 52.

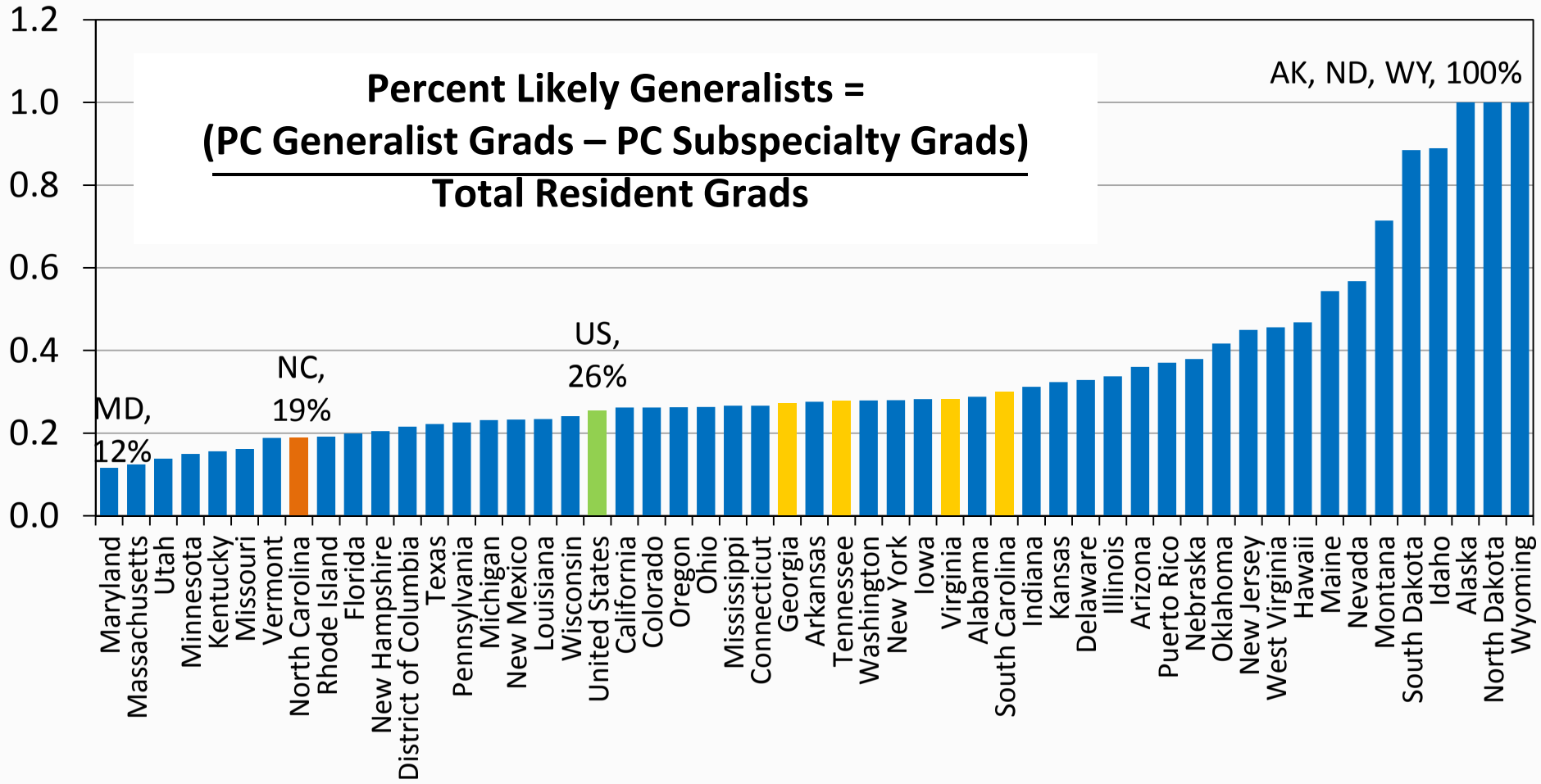
Nationally, Rapid Growth in Subspecialty Training Programs, Growth in Core Programs is Flat

ACGME Accredited Program Growth: Number of Programs, 2001 - 2008



Source: Paul Rockey, Scholar-in-Residence, ACGME.

North Carolina Residents Less Likely to Remain Generalists



Source: Data derived from Sarah Brotherton, AMA, with data derived from the AMA Masterfile.

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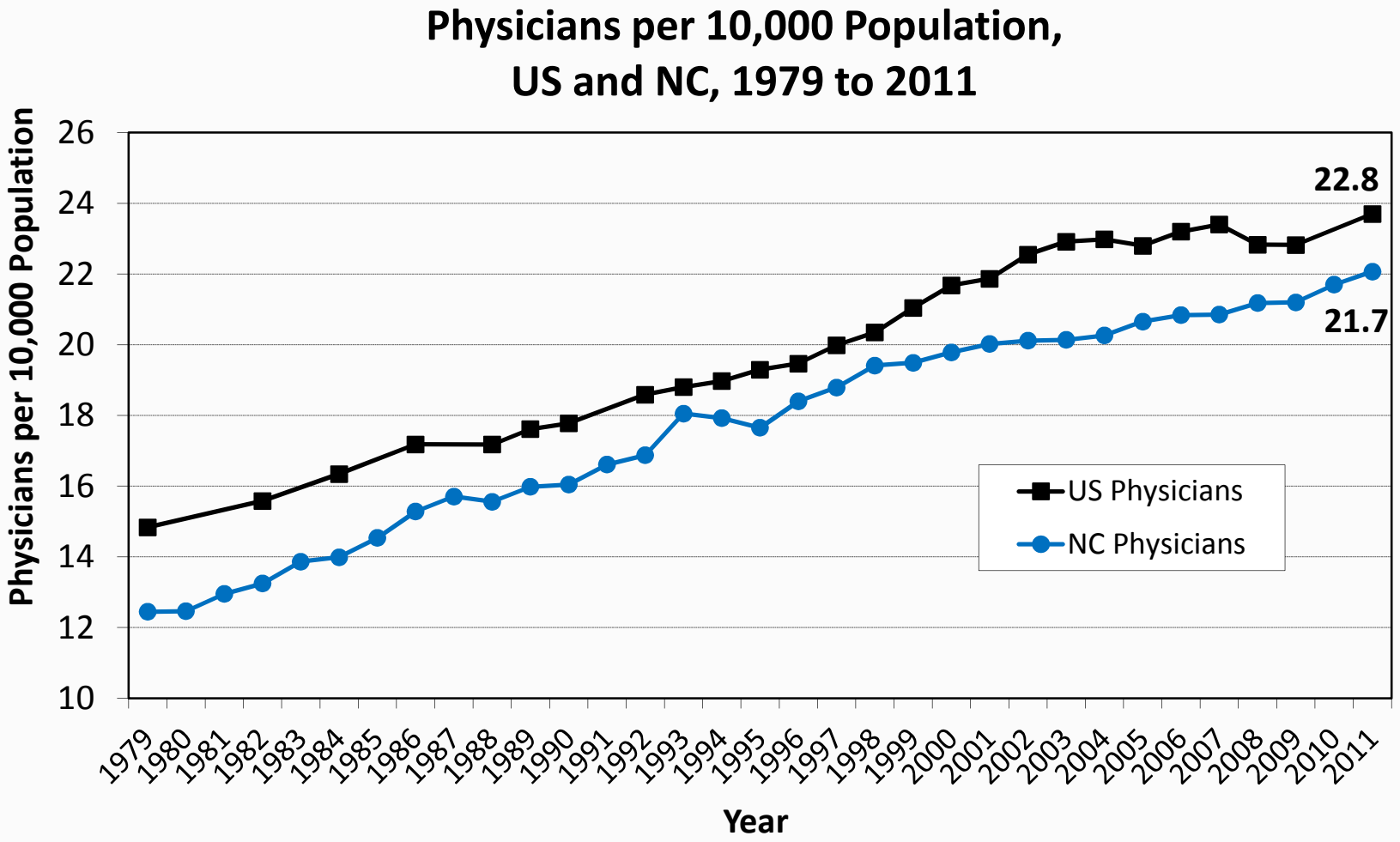
North Carolina's Physician Workforce: *Where did they complete residency training?*

NC Physician Supply Growing at Good Pace, Lags Only Slightly Behind US Average



Sources: North Carolina Health Professions Data System, 1979 to 2011; 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.

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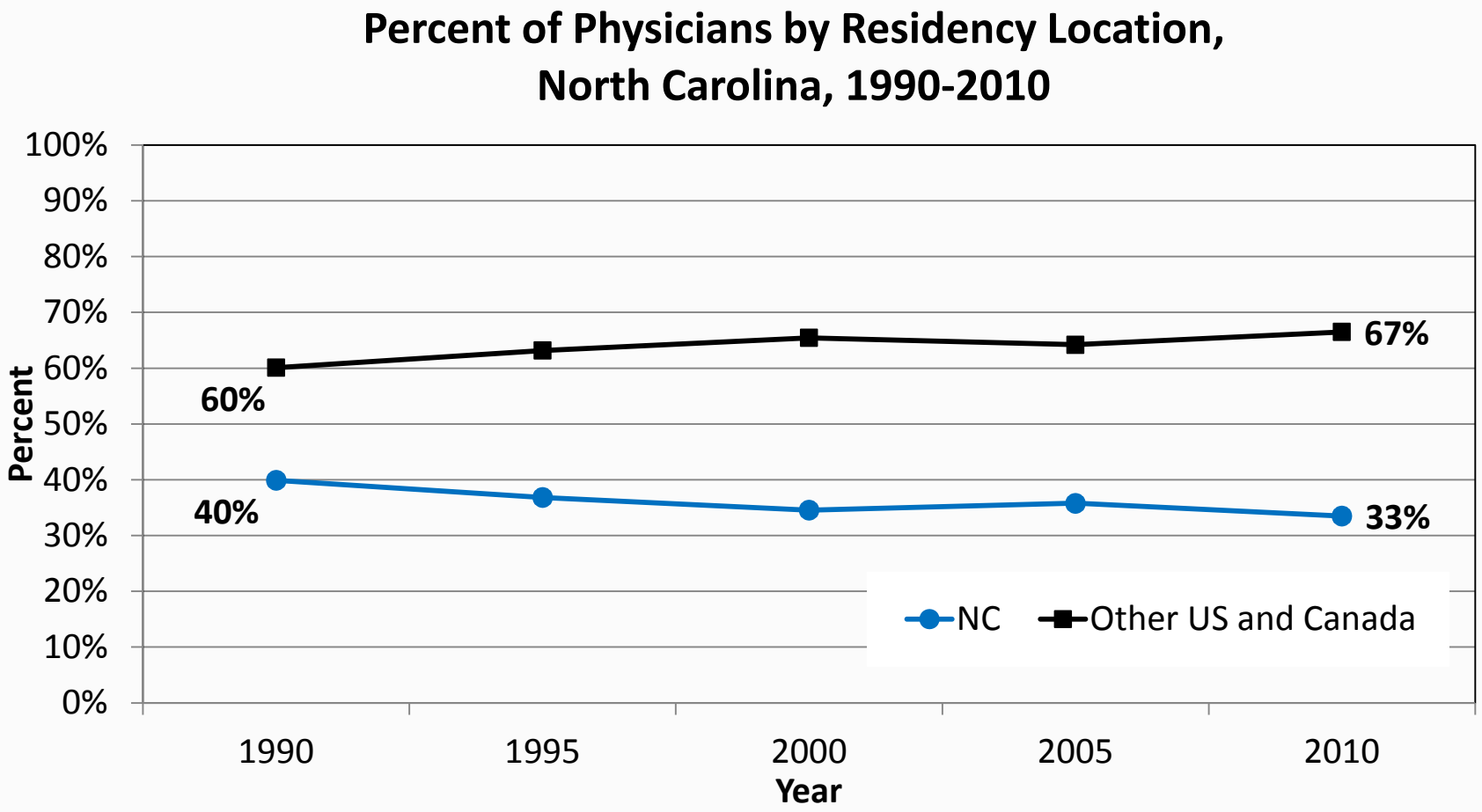
But North Carolina Increasingly Reliant on Importing Physicians Trained Outside State



Data exclude physicians missing residency location (N=314 to 753) and those indicating a foreign residency (N=40 to 156). Source: NC Health Professions Data System, Cecil G. Sheps Center for Health Services Research, UNC Chapel Hill, with data derived from the NC Medical Board, 2012.

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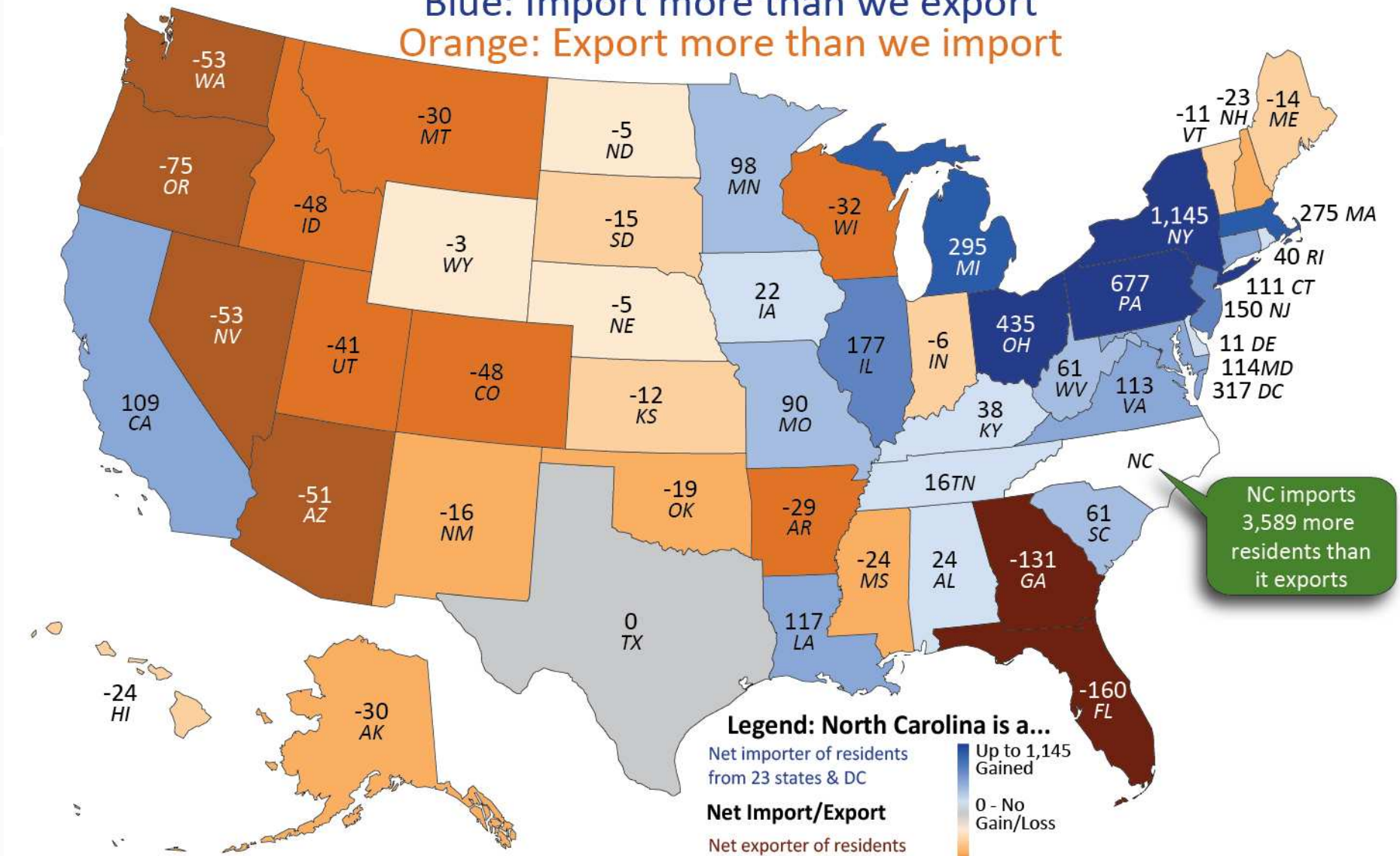
North Carolina's Trade Surplus/Deficit: Resident Physicians

Blue: Import more than we export
Orange: Export more than we import

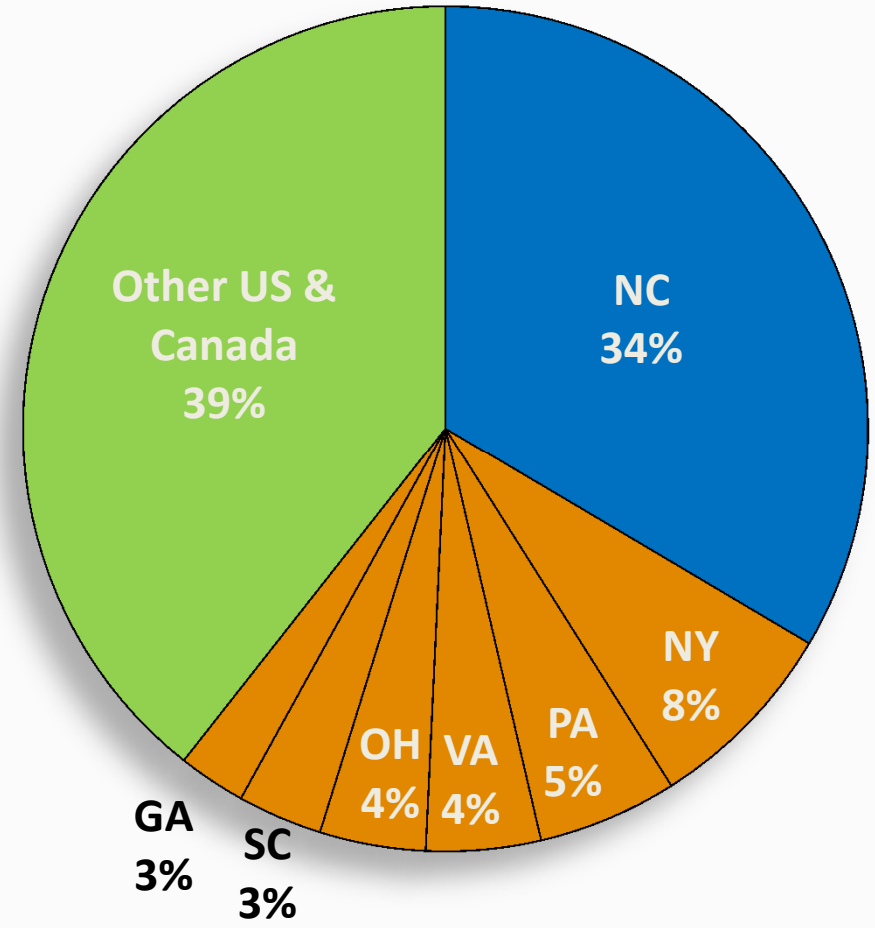


Data Source: AMA 2009 Physician Masterfile.
Notes: Includes only clinically active, non-federal, non-resident in training, non-locum tenens physicians.
Three physicians were missing practice state; 570 physicians practicing in North Carolina were missing residency state.
Produced by: North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

Thank you New York, Pennsylvania, Virginia and Ohio…..

Residency Location of Active Licensed Physicians, North Carolina, 2010

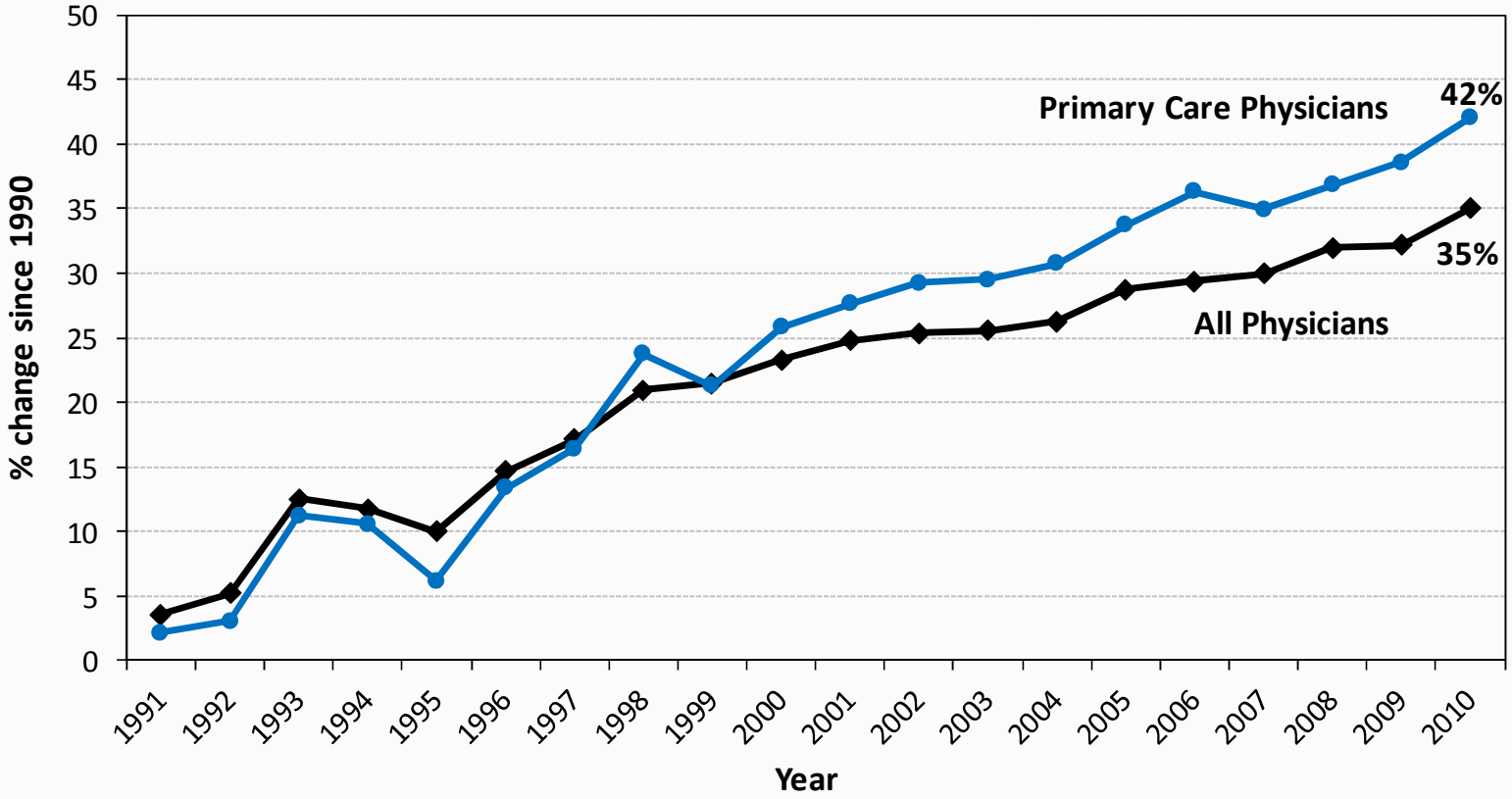
N = 19,843



Sources: North Carolina Health Professions Data System with data derived from the North Carolina Medical Board, 2010; Figures include all licensed, active, instate, non-federal, non-resident-in-training physicians. Data exclude physicians missing residency location (N=753) and those indicating a foreign residency (N=156) .

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

Percentage Growth Since 1990 of Physicians and Primary Care Physicians per 10,000 Population, North Carolina, 1991-2010



Sources: North Carolina Health Professions Data System with data derived from the North Carolina Medical Board ,1979 to 2010; North Carolina Office of State Planning. Figures include all licensed, active, instate, non-federal, non-resident-in-training physicians.

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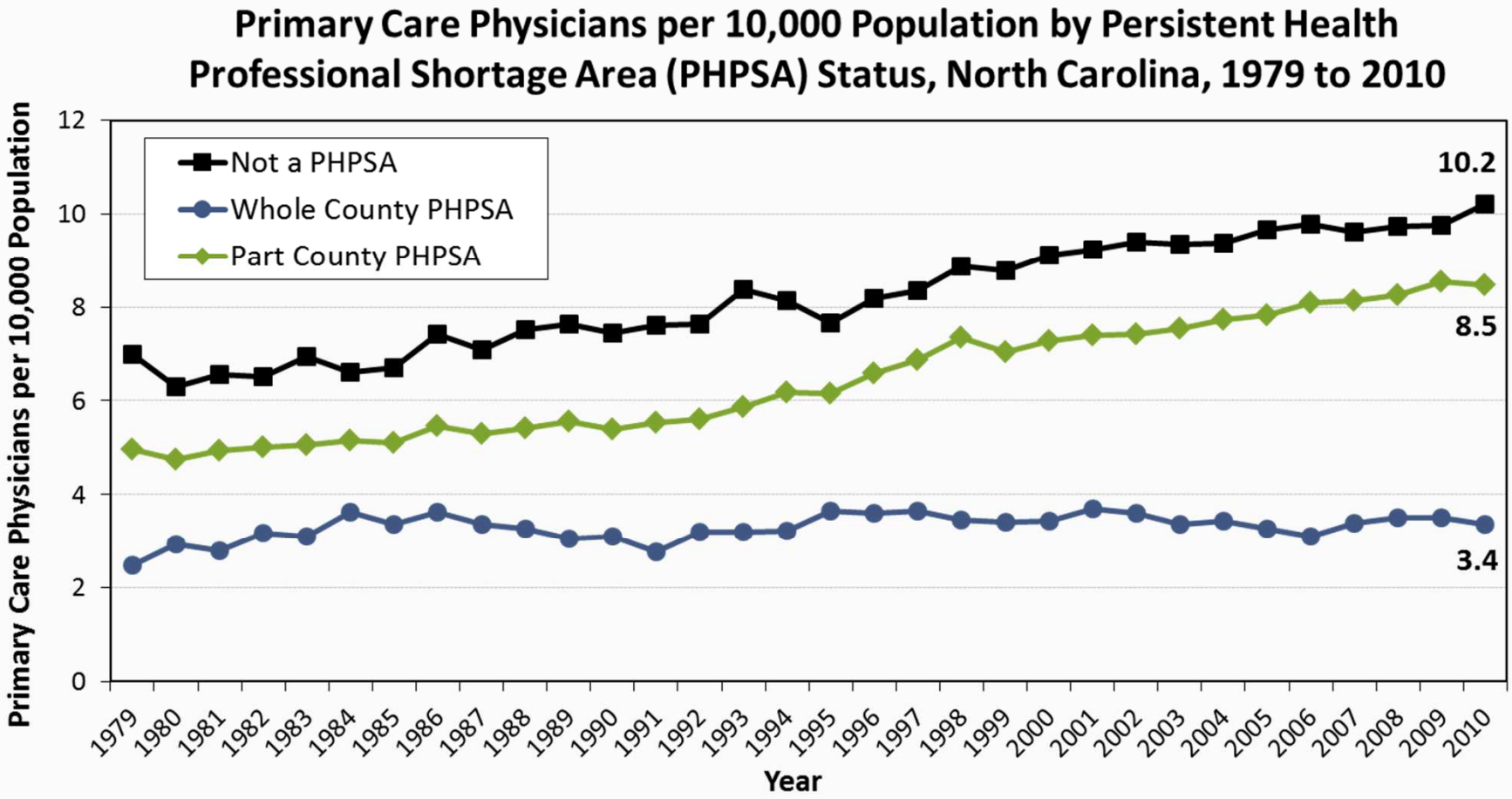
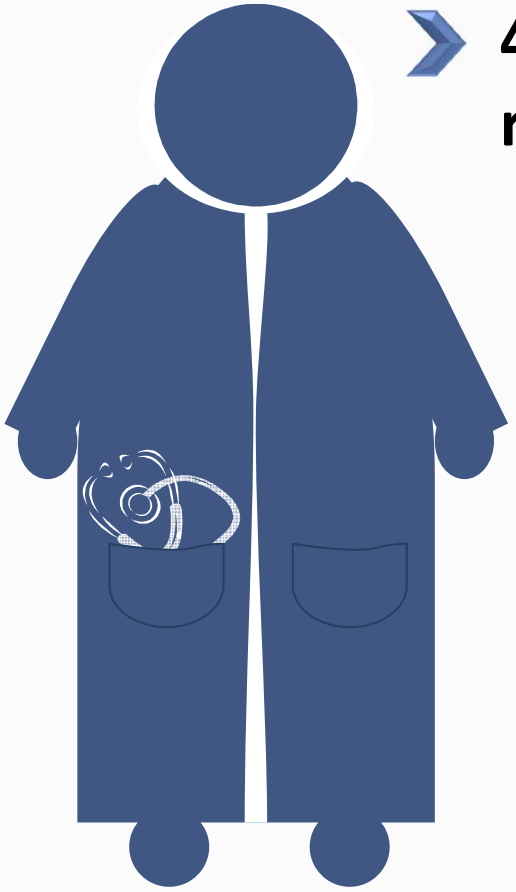
Despite Overall Growth, NC's Most Underserved Areas Face Persistent Shortfalls



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.

Where a physician completed residency is 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.

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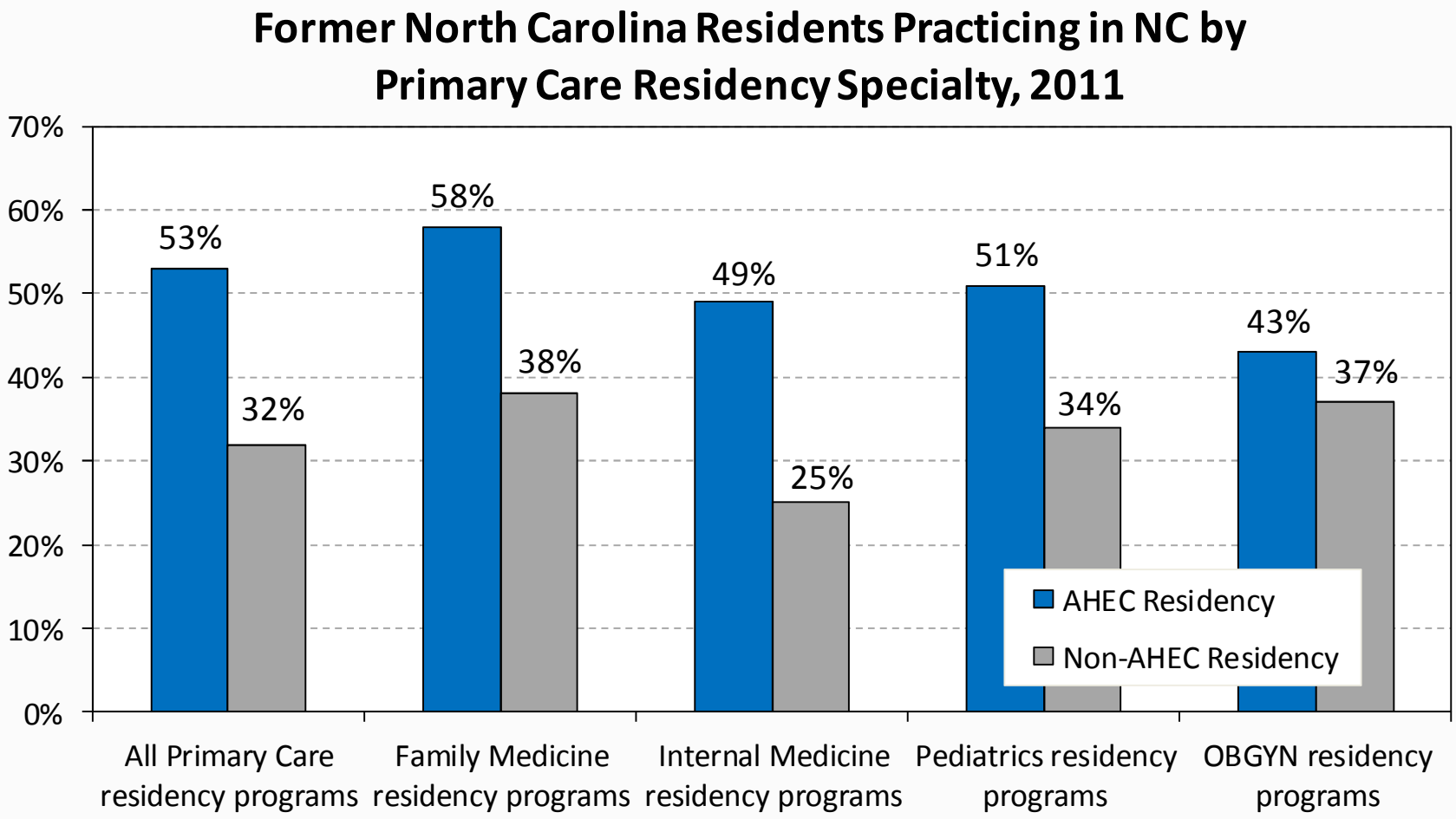
AHEC Residents More Likely to Stay in NC and Choose Primary Care



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.

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AHEC-Trained Residents More Likely to Practice in Rural Areas

NC AHEC Residents: Metropolitan vs. Non-Metropolitan Practice Location, 2011

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.

GME Costs and Funding

Sources of GME Funding, United States

- **Medicare:** $9.5 billion annually for GME (2009 dollars). Slots capped by BBA of 1997.
- **Medicaid:** $2-3 billion annually from state appropriations and matching federal payments
- **Veterans Administration:** 10% of residents = $1 billion
- **Department of Defense:** 2,200 residents
- **Private payers**
- **Your hospital's name here:** clinical income from revenue-generating specialties

Source: Paul Rockey, Scholar –in-Residence, ACGME

Sources of GME Funding, North Carolina

Residency costs covered from four sources of revenue:

- Medicare direct and indirect payments to teaching hospitals (dominant source)
- Medicaid GME payments to teaching hospitals
- Clinical income
- State appropriation to AHEC ~$32 million

How Much Does it Cost to Train a Resident?

Door #1

Door #2

Door #3

How Much Does it Cost to Train a Resident?

Door #1?

Door #2

Door #3

How Much Does it Cost to Train a Resident?

How Much Does it Cost to Train a Resident?

Door #1

Door #2

Door #3?

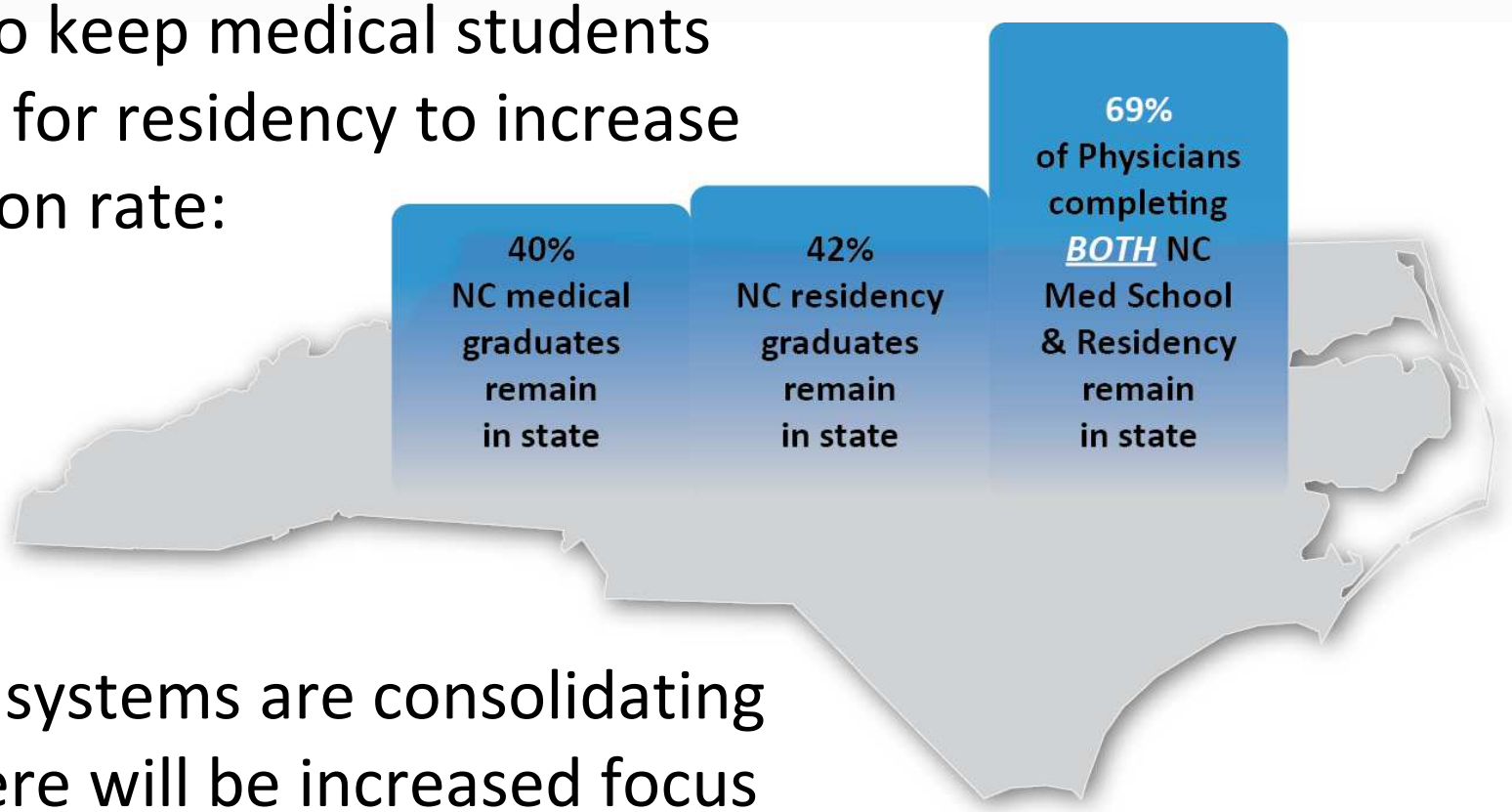
How Much Does it Cost to Train a Resident? Who Knows?

Unlike *Let's Make a Deal*, which had three doors with cost estimates….

Cost estimates of GME training tend to vary greatly…

Things We Can All (Probably) Agree On

- Need to keep medical students instate for residency to increase retention rate:

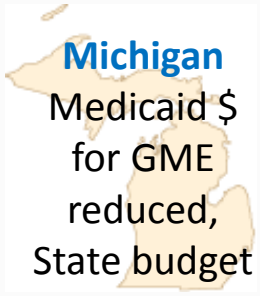


- Health systems are consolidating —> there will be increased focus on training in community-based settings

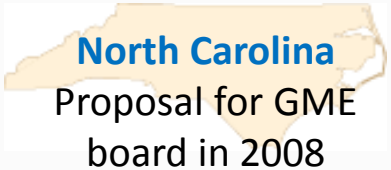
Other Things We Can All (Probably) Agree On

- Largest barrier to residency expansion in North Carolina is cost
- Residency training is expensive, varies by specialty, geography, institution
- Feds are not likely to increase Medicare funding, other sources of federal funding not sustainable
- States are going to have to find a way to pay for any increases in GME

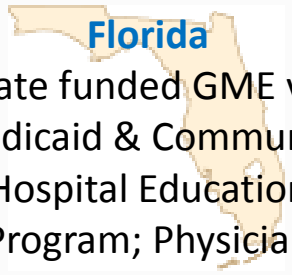
Spectrum of State GME Policy Innovation



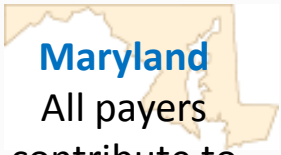
Michigan
Medicaid $ for GME reduced, State budget is tight



North Carolina
Proposal for GME board in 2008

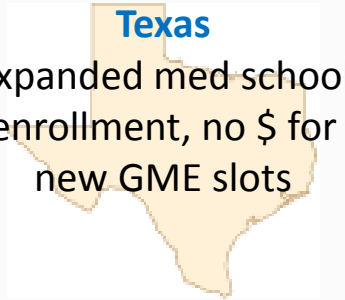


Florida
State funded GME via Medicaid & Community Hospital Education Program; Physician Advisory Council



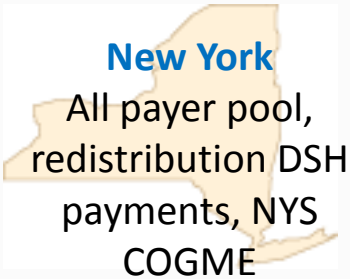
Maryland
All payers contribute to GME pool

Conversation ← GME Innovation → **Action**

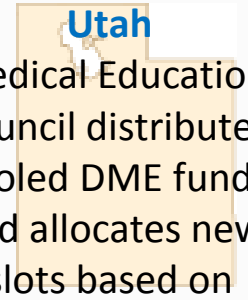


Texas
Expanded med school enrollment, no $ for new GME slots

Georgia
SW AHEC & Hospitals formed GME consortium to develop new slots



New York
All payer pool, redistribution DSH payments, NYS COGME



Utah
Medical Education Council distributes pooled DME funds and allocates new slots based on need

Senate Bill 696

- Introduced in 2011 session, passed Senate but did not move beyond committee review in House
- Proposed innovative GME models targeted at increasing residents in underserved communities and increasing number from underrepresented minorities
- Bill is a good start but review of best practices from nearly 20 states suggest North Carolina needs even more systematic, coordinated and data-driven approach to GME expansion

Four Core Elements of "Model" State GME Legislation

1. Fund ongoing workforce analyses so that GME expansion can be targeted to high priority needs
2. Create governance structure to make decisions about allocating new funds between specialties, geographies and training sites
3. Develop sustainable funding model that includes 3rd party payers
4. Implement residency tracking system so state can evaluate return on investment for public funds

THE FOLLOWING **PREVIEW** HAS BEEN APPROVED FOR

ALL AUDIENCES

Beyond GME is the Whole New World of the "Flexible Worker"

Coming your way in 2013

from the Sheps Center,

research on the *flexible worker*

But not these kind of flexible workers…

… or this kind…

Transformed Health System Will Require Transformed Workforce

Health systems, AHEC, universities, community colleges, regulators, professional bodies need to work together to prepare

- Health professionals already in the workforce to:
  - take on new roles
  - shift to outpatient and community settings
  - alter the types of services they provide
- New types of health professionals with competencies required in new models of care
- New graduates and existing workers to better function in team-based models of care

Questions?

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