North Carolina's Physician Training Programs Are Not Producing the Workforce Needed to Meet Population Health Needs

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Cecil G. Sheps Center for Health Services Research, UNC-CH

The Joint Oversight Subcommittee on Medical Education Programs and Medical Residency Programs

February 12, 2018

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This presentation in one slide

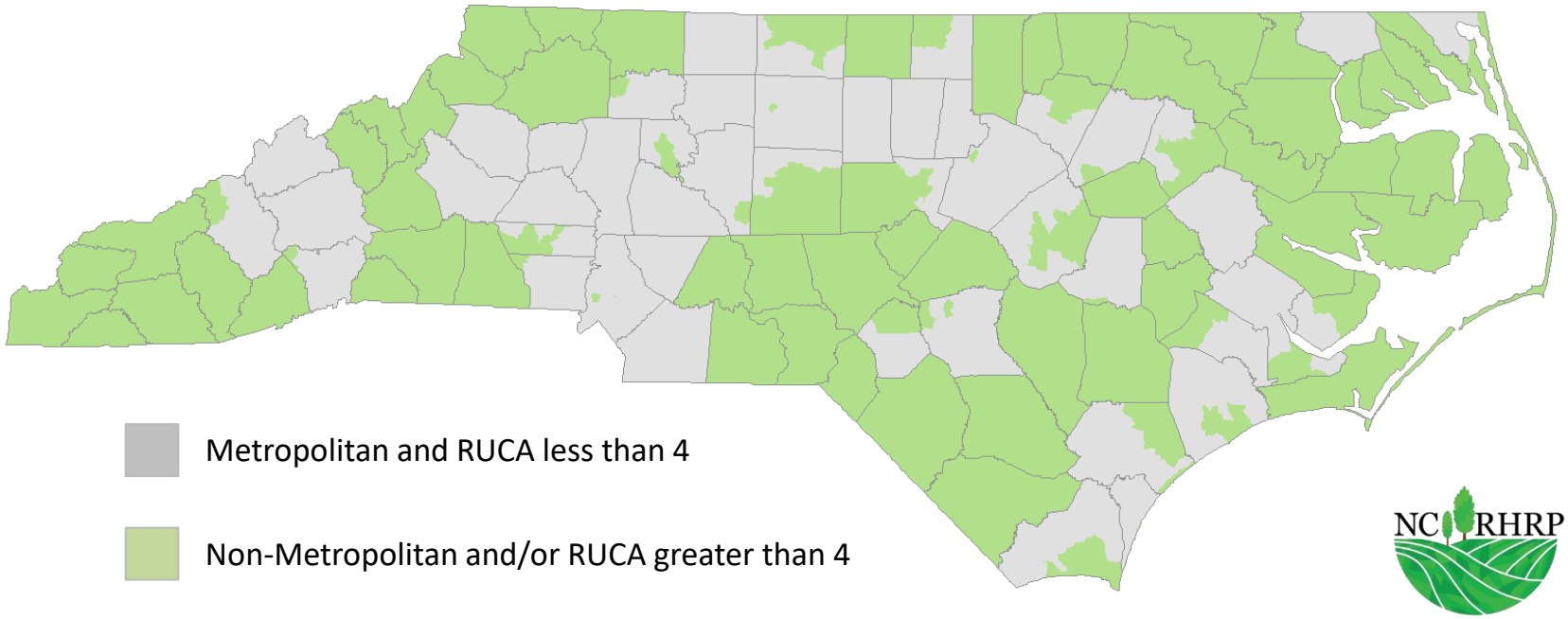
- North Carolina doesn't face an overall physician shortage. We face a shortage of physicians in rural areas and needed specialties
- Some residency programs are producing workforce needed for our state; most are not
- North Carolina can fix this—but we need transparency and accountability in spending and outcomes
- There are lessons to learn from other states' efforts to reform Medicaid GME

My role is to provide committee with objective data on workforce outcomes

- Goal of this presentation: provide data on workforce outcomes of GME training requested in S.L. 2017-57, Sec. 11J.2 (SB 257, Sec. 11J.2)
- Our research program dedicated to providing timely, objective research to inform health workforce policy
- Based at Cecil G. Sheps Center for Health Services Research at UNC-CH. Focus is statewide and national
- I sit on Council of Graduate Medical Education, independent advisory board that advises US Congress and DHHS Secretary on GME and physician workforce issues

Definition of rural matters. Here's our definition for this presentation

Metropolitan Status, North Carolina, 2013
Based on Non-Metropolitan Counties and Rural Urban Commuting Areas

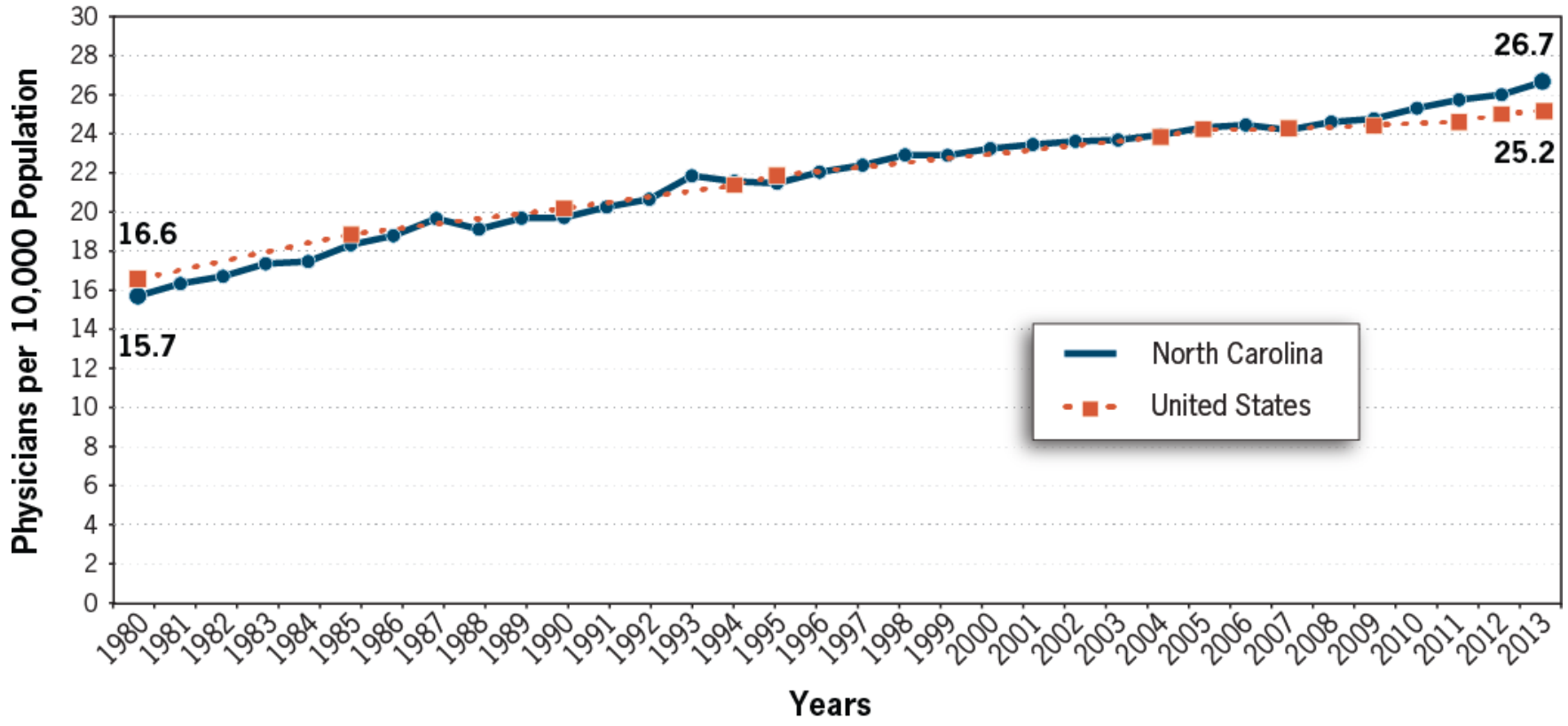


Sources: CBSAs: US Census Bureau, Office of Management and Budget; "Core Based Statistical Area" (CBSA) is the OMB's collective term for Metropolitan and Micropolitan Statistical areas. RUCAs: WWAMI Rural Health Research Center; Rural Urban Commuting Areas (RUCAs) are based on 2000 Census commuting data and 2004 ZIP code data. See http://depts.washington.edu/uwruca/ruca-codes.php for RUCA values definitions. Produced By: Rural Health Research Program, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

The State of the State

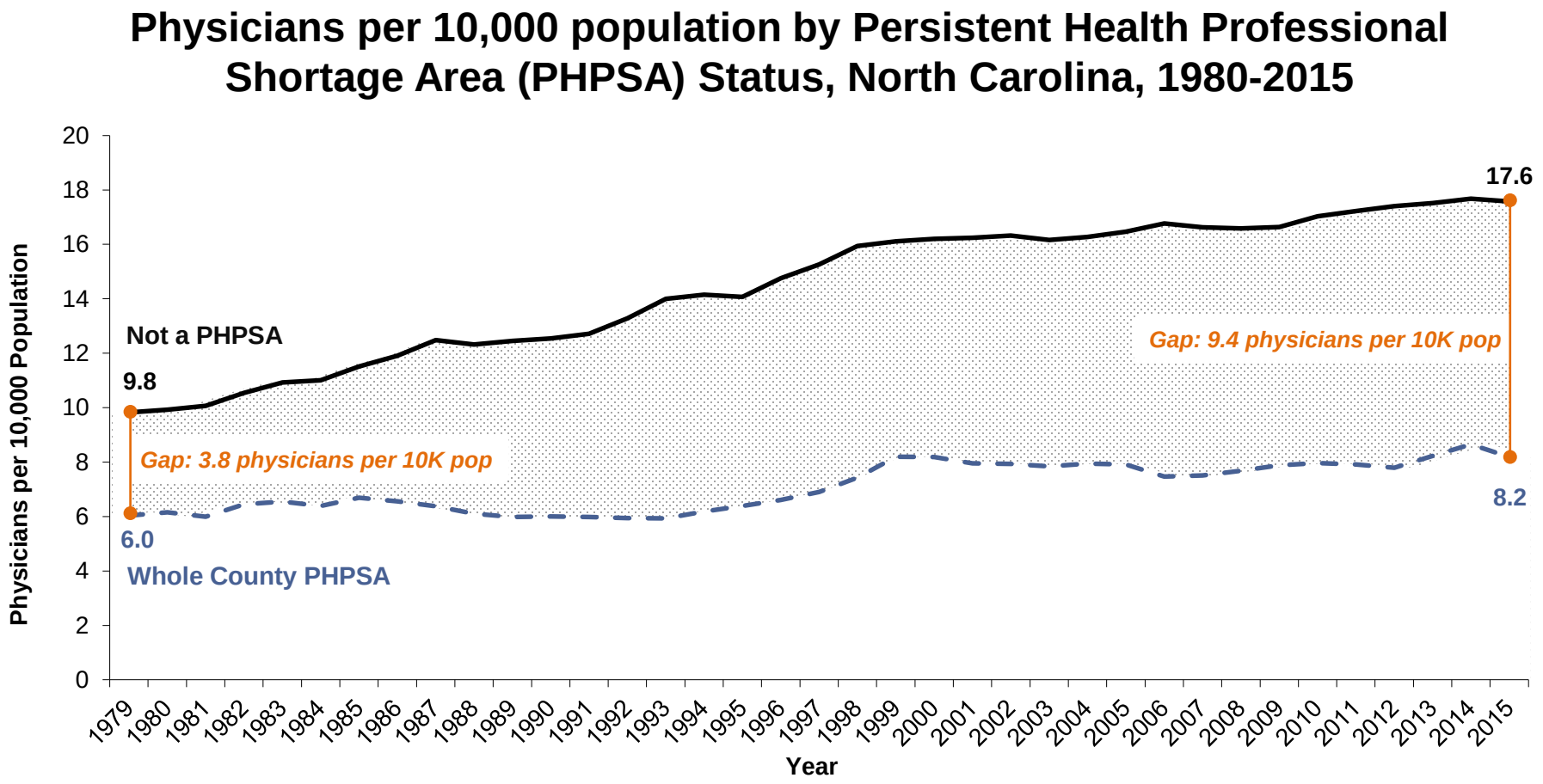
Fears of physician shortages create headlines but we see steady increase in supply in NC…

Physicians per 10,000 population, North Carolina and United States, 1980-2013



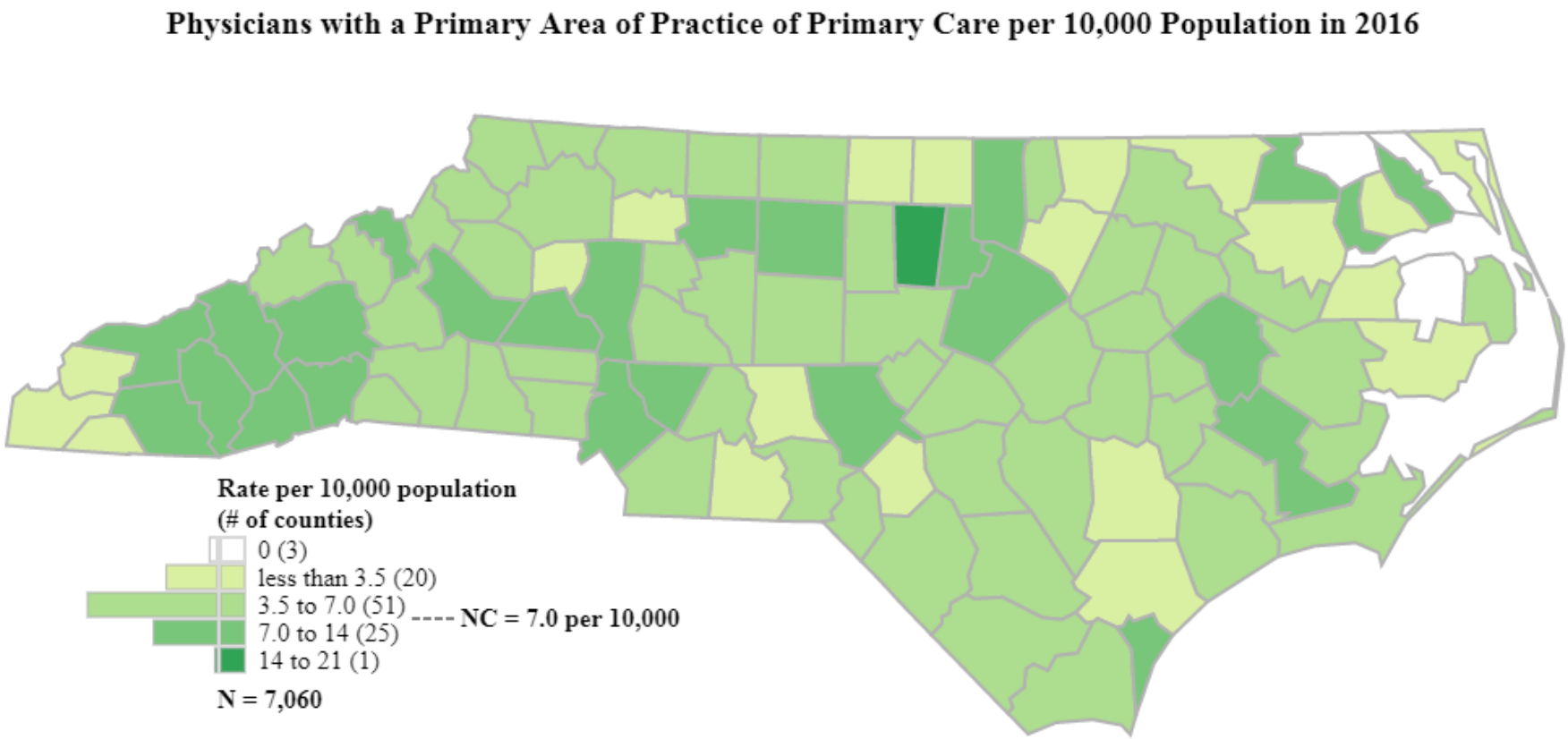
Sources: North Carolina Health Professions Data System, 1979 to 2013; American Medical Association Physician Databook, selected years; US Census Bureau; North Carolina Office of State Planning. North Carolina physician data include all licensed, active, physicians practicing in-state, inclusive of residents in-training and federally employed physicians, US data includes total physicians in patient care, which is inclusive of residents-in-training and federally employed physicians.US physician data shown for 1980, 1985, 1990, 1994, 1995, 2004, 2005, 2007, 2009, 2011, 2012, 2013; all other years imputed.

The real issue is maldistribution. Gap between shortage and non-shortage counties is growing



Notes: Figures include active, instate, nonfederal, non-resident-in-training physicians licensed as of October 31st of the respective year. North Carolina population data are smoothed figures based on 1980, 1990, 2000 and 2010 Censuses. Persistent HPSAs are those designated as HPSAs by HRSA in the Area Health Resource File using most recent 7 HPSA designations (2008-2013, 2015).
Sources: North Carolina Health Professions Data System, 1980 to 2015; North Carolina Office of State Planning; North Carolina State Data Center, Office of State Budget and Management; Area Health Resource File, HRSA, Department of Health and Human Services.

20 NC counties have comparatively few primary care physicians; 3 counties have none



Notes: Data include active, licensed physicians in practice in North Carolina as of October 31 of each year who are not residents-in-training and are not employed by the Federal government. Physician data are derived from the North Carolina Board of Medicine. County estimates are based on primary practice location. Population census data and estimates are downloaded from the North Carolina Office of State Budget and Management via NC LINC and are based on US Census data. Source: North Carolina Health Professions Data System, Program on Health Workforce Research and Policy, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Created October 5, 2017 at https://hpds.sirsdemo.unc.edu.

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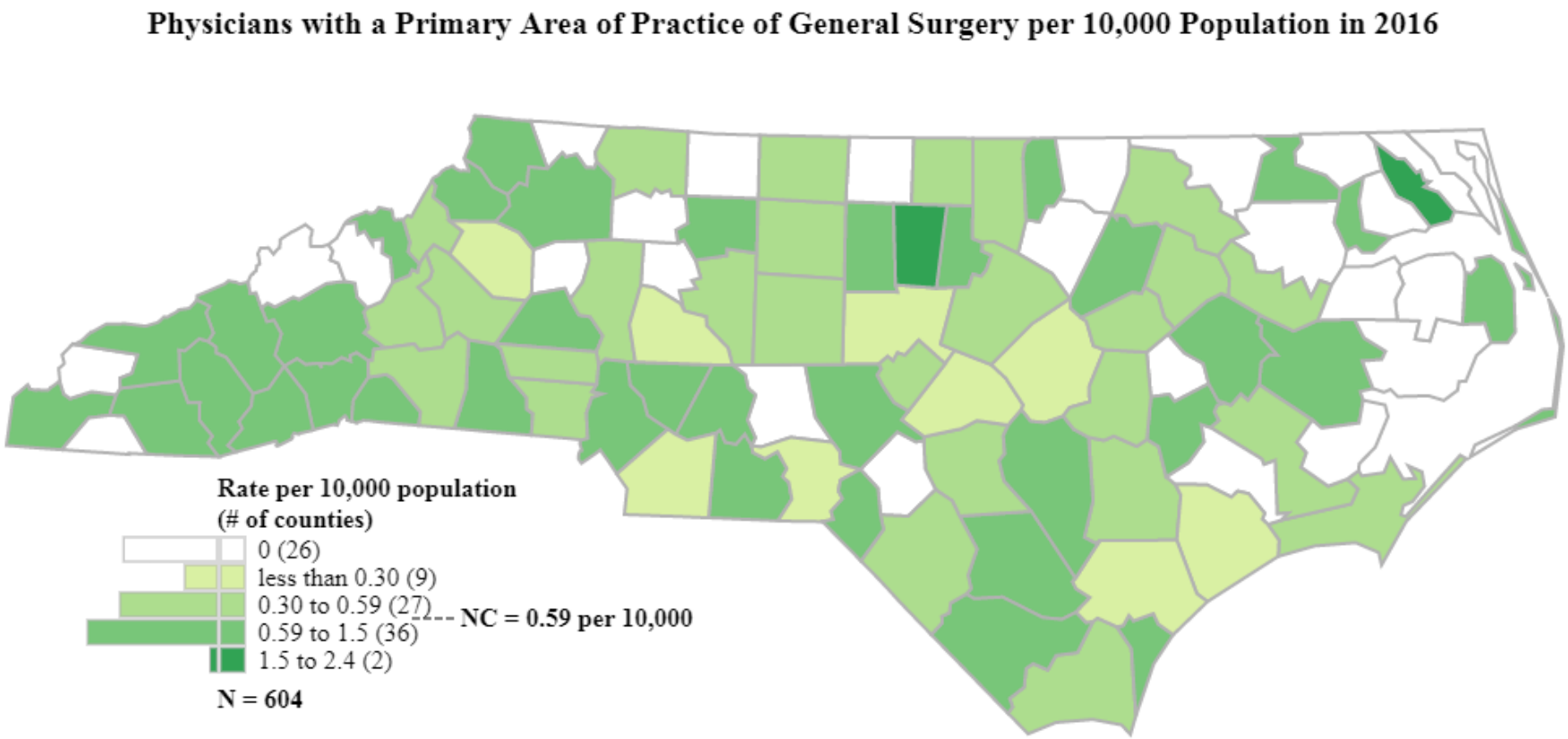
26 NC counties have no general surgeon



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Closures of obstetric delivery units in rural NC have made state and national headlines

LISTEN TO AMERICA

A partnership between **Carolina Public Press** and **HuffPost**

Rural Maternity Wards Are Closing
Women's Lives Are On The Line

In the mountains of western North Carolina, pregnant women don't kn
deliver.

By Catherine Pearson and Frank Taylor | 09/25/2017 05:45 am ET | Updated Sep 2

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by Adriana Gallardo

LETTER FROM NORTH CAROLINA

Rural Hospitals Are Dying and Pregnant Women Are Paying the Price

Heavily reliant on Medicaid dollars, small hospitals shut down maternity wards just to stay afloat.

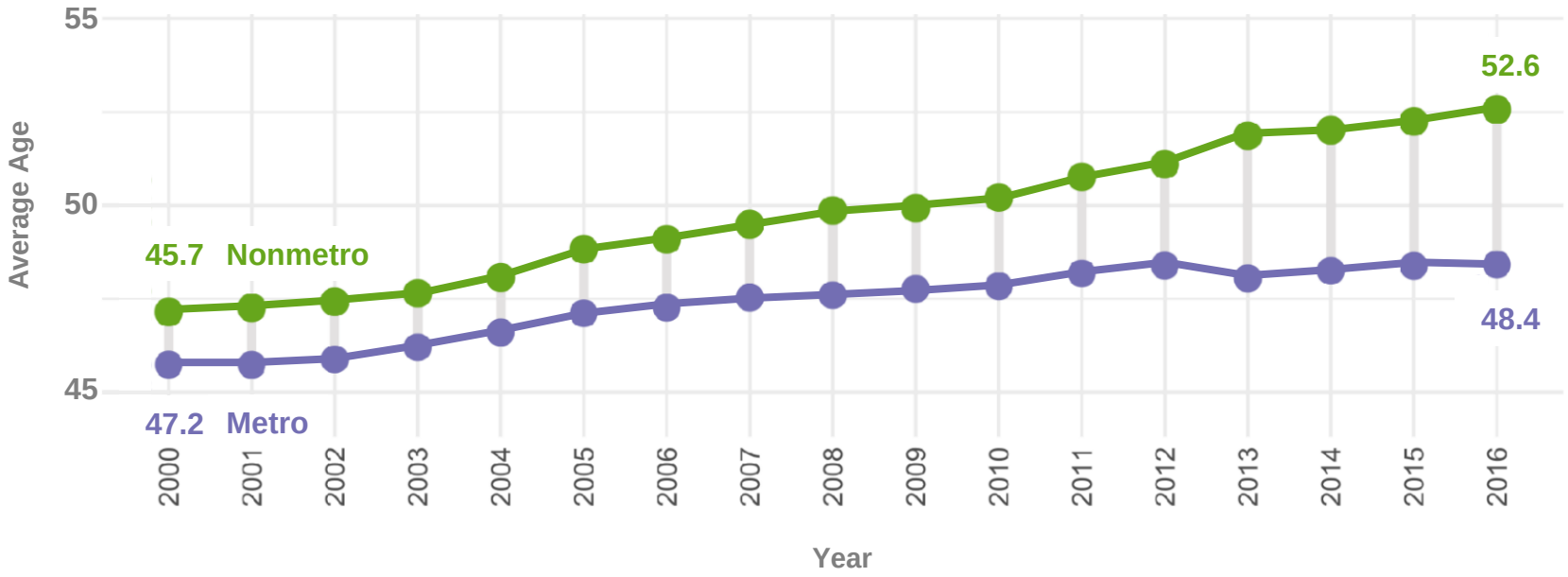
By LISA RAB | October 03, 2017

J. Scott Applewhite/AP Photo

BOONE, N.C.—Three years ago, Lucia Parker gave birth to her first child surrounded by people she loved. Her mother, sister, and husband were by her side at Blue Ridge Regional Hospital, and the nurses attending her were family friends. Each of them took turns massaging her back. They lifted her out of a

And rural workforce is aging at faster pace than urban workforce

Average Age of North Carolina Physicians Over Time (Metro vs. Nonmetro)



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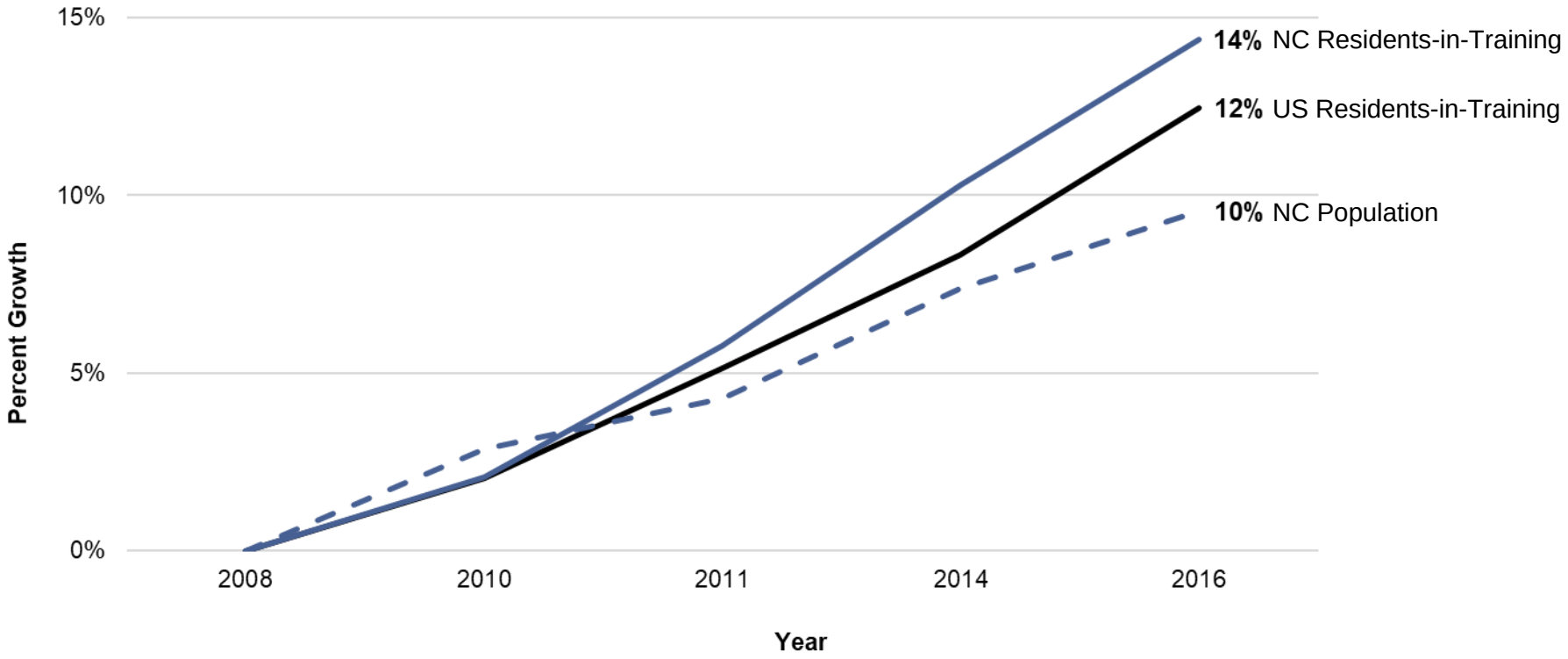
Simply investing in more GME training is not going to address these issues

North Carolina has experienced growth in total number of residents

Cumulative Growth in Number of NC and US Residents-in-Training and NC Population Since 2008



Note: Residency data are effective Dec 31 of each year except 2008, which is Aug 1.
Sources: AAMC State Physician Workforce Data Reports, 2009-2017, https://www.aamc.org/data/workforce/reports/; NC population data from Log Into North Carolina (LINC), accessed 2/12/18.
Produced by: Program on Health Workforce Research and Policy, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

But the pipeline is leaky

We tracked the outcomes five years after graduation for:
2,017 physicians who graduated from NC residency programs in 2008, 2009, 2010, 2011

858 (43%) were in practice in North Carolina five years after graduation

65 (3%) were in practice in rural NC five years after graduation

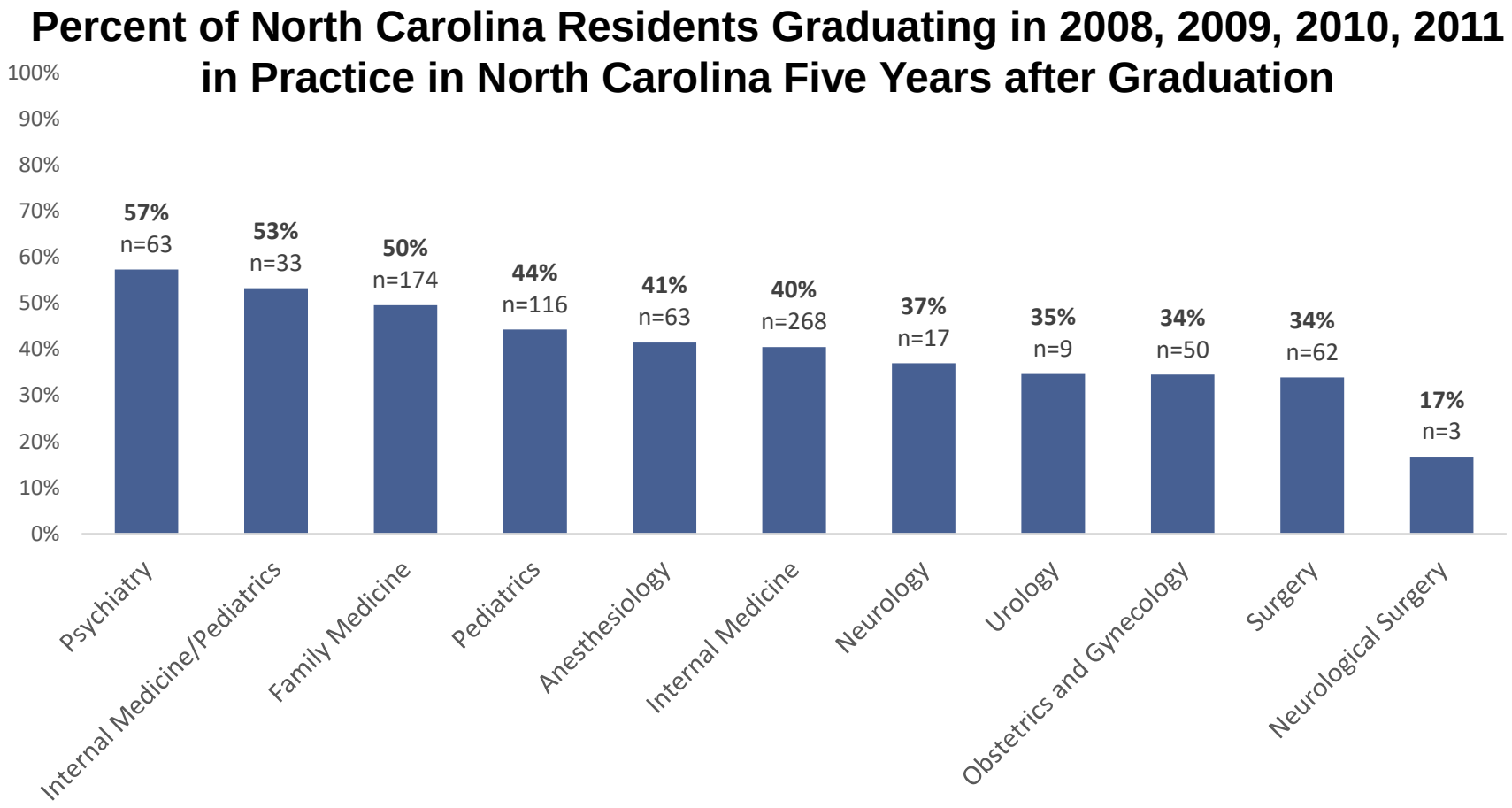
-or-

365 (18%) were in practice in generalist specialties in NC five years after graduation
(family medicine, general internal medicine, general pediatrics, ob/gyn, psychiatry, child psychiatry, general surgery)

Rural and generalist specialty boxes are not mutually exclusive

Notes: Generalist specialties include family medicine, internal medicine, general pediatrics, ob/gyn, psychiatry, child psychiatry and general surgery. The values in this table are derived from aggregating the workforce outcomes of four cohorts of residents who completed training in 2008, 2009, 2010, or 2011. We used North Carolina Medical Board licensure data to determine the location and primary area of practice for each physician five years after graduation, e.g., for a resident who completed training in 2008, we used 2013 NC Medical Board data to determine his/her location and primary area of practice.
Source: North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research, UNC Chapel Hill, with data derived from the North Carolina Medical Board.

Most graduates are not retained in state



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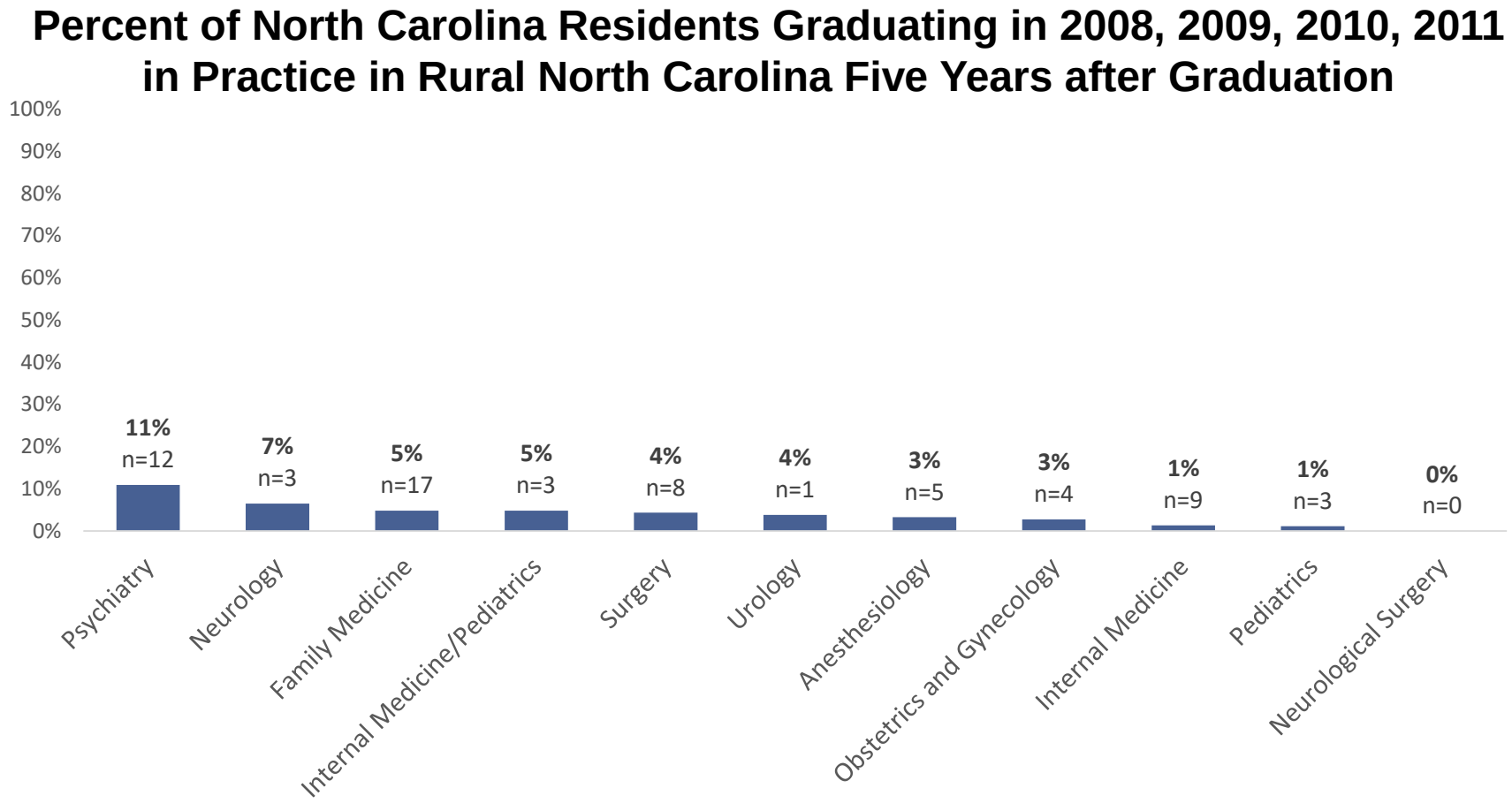
Averages mask variation in retention in NC between training programs

Some training programs perform better than others in retaining graduates in North Carolina:

- Psychiatry: average 57%; range 39% to 69%
- Family medicine: average 50%; range 25% to 74%
- Pediatrics: average 44%; range 30% to 56%
- Internal Medicine: average 40%; range 33% to 66%
- Ob/Gyn: average 34%; range 20% to 50%
- Surgery: average 34%; range 18% to 47%

Even fewer practice in rural North Carolina after graduation



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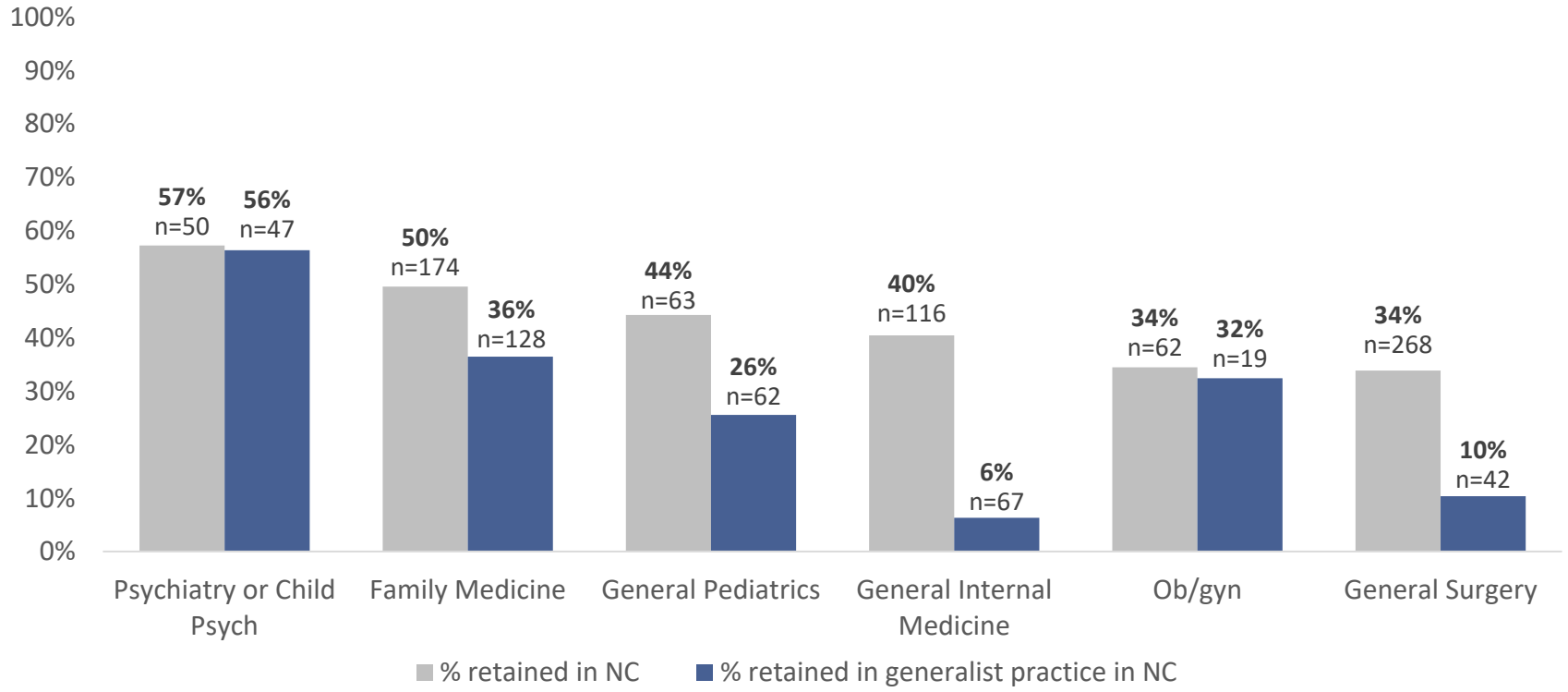
Averages mask variation in rural practice between training programs

Some training programs perform better than others in retaining graduates in rural practice in North Carolina:

- Psychiatry: average 11%; range 6% to 15%
- Family medicine: average 5%; range 0%-11%
- Surgery: average 4%; range 0% to 18%
- Ob/Gyn: average 3%; range 0% to 11%
- Pediatrics: average 1%; range 0% to 5%
- Internal Medicine: average 1%; range 0% to 4%

State needs generalists to meet primary care, mental health, obstetric care and surgery needs of our population

Percent of North Carolina Residents Graduating in 2008, 2009, 2010, 2011 in Generalist Practice and in Generalist Practice in North Carolina



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What are other states doing?

NC spends ~$90 million on Medicaid GME. Ranked 5th in 2012

- Total Medicaid GME payments increased 10% from $3.87 billion in 2012 to $4.26 billion in 2015*
- In 2015, 43 states and DC made Medicaid GME payments*
- In 2015-2016, we undertook study of 10 states engaged in Medicaid GME reform
- NC was not included in our sample

*Henderson T. Medicaid Graduate Medical Education Payments: A 50-State Survey. Association of American Medical Colleges: Washington, DC. 2013. https://members.aamc.org/eweb/upload/Medicaid%20Graduate%20Medical%20Education%20Payments%20A%2050-State%20Survey.pdf

Finding #1: Impetus for GME reform stemmed from multiple sources

- Many states had a “champion” who articulated vision, coalesced stakeholders and worked with executive/legislative branches
- Many had “implementer” who focused on logistics of changing GME payment mechanism, applying for 1115 waiver or revising State Plan Amendment
- States undertook GME reform to address concerns about:
  - maldistribution by specialty, geography, setting
  - having enough GME slots to match medical school expansions (not an issue for NC)
  - potential loss of Teaching Health Center funds
  - disparities in GME funding received by different training institutions

Illustrative quote

"So we had some folks getting paid about $4,000 per trainee and we had a couple of places paid in excess of $60,000 per trainee…Folks never wanted to fiddle with it because the folks who were getting paid $60,000 per trainee kind of liked it. What we did was publish what everybody was getting paid and it created this bit of an uproar where folks realized what the variation was. Then the conversation became 'This is clearly unfair. It's not rooted in policy. What do we do instead?'"

Finding #2: Different approaches to GME reform

- State approaches to reforming GME financing:
  - Better leveraging Medicaid funds
  - Pursuing 1115 waivers to modify federal rules for allocating GME funds
  - Delinking GME funding from claim
  - Creating innovation pools
  - Providing seed money for new training programs
  - Funding rural rotations and training tracks
- Many states identified resistance from teaching hospitals as reason for seeking new GME funds rather than redistributing existing funds

Illustrative quote

"For a few years they actually tried to appoint some task forces…but when the Governor's Office put this task force together it was essentially made up of folks from these academic medical centers and so the result of these kind of inquiries never really went too far because the hospitals of course have a vested interest in these funds just staying the way that they are."

Finding #3: Oversight bodies play critical role

- Most states had oversight body to:
  - Reach consensus on state workforce needs
  - Use data to decide where funds should be targeted
  - Educate legislature and DHHS about GME
  - Navigate competing interests of stakeholders
- Oversight bodies included range of GME stakeholders
- All were advisory, none were authoritative

Illustrative quote

"We're going to have to play together because this is everyone's problem, and so it became a group championing the effort as opposed to one or two organizations or one or two schools or something like that. We wanted to keep consensus and show that even though a pot of money would potentially land on the floor that we weren't going to pull out knives and swords and start fighting each over scarce resources"

Finding #4: We heard loud call for increased transparency

- States voiced desire to know how GME dollars were spent and “what they bought”
- Emphasized that little transparency currently existed
- In few states that had published data, transparency spurred reform
- In one state, GME funding was cut from Governor’s budget because of lack of data on return on investment (ROI). It was later restored by legislature

Illustrative quote

"Nobody owns this. That's one of the things we're trying to convince the state is somebody needs to own this and take interest in it, whether it be in terms of accountability, in transparency, because as we seek more funding people are going to say you need to be able to demonstrate to us that you're making a difference."

Finding #5: We also heard loud call for increased accountability

- States were focused on fiscal accountability for Medicaid funds, not workforce outcomes
- Voiced strong desire to move toward system that better aligned funding with population health needs
- Cautious about how much training programs could be held accountable for workforce outcomes
- Interviewees repeatedly noted that training institutions benefited from lack of transparency and vigorously opposed increasing accountability

Illustrative quote

"We are trying to move into a more results, performance-based system that payments will be tied into satisfactory demonstration of a commitment to the health care needs of the state. There's been no accountability, no reporting, no nothing, so the hope is eventually things will evolve and there'll be accountability as far as of a redistribution of existing resources in a way that behooves the citizens with better access in rural and underserved areas".

Finding #6. Lack of data and metrics are barrier to measuring workforce outcomes

- Workforce data collection and analysis seen as critical to demonstrate ROI
- Interviewees voiced need for financial support collect and analyze data to measure workforce outcomes
- Developing and operationalizing metrics that can be tied to funding decisions is tricky

Two illustrative quotes

"Connecting the dots precisely gets tricky"

"What I want to stress though is that was a fight that I did not want to fight. I purposely have left that out. For us, all these dollars are just to do training in these areas. Getting the person to remain in that and/or keep doing it over 5 years or 10 years was just too complicated to track at this point. Every time we went there, it just began to derail everything."

Moving Forward

We need to fundamentally change the way we invest in medical training

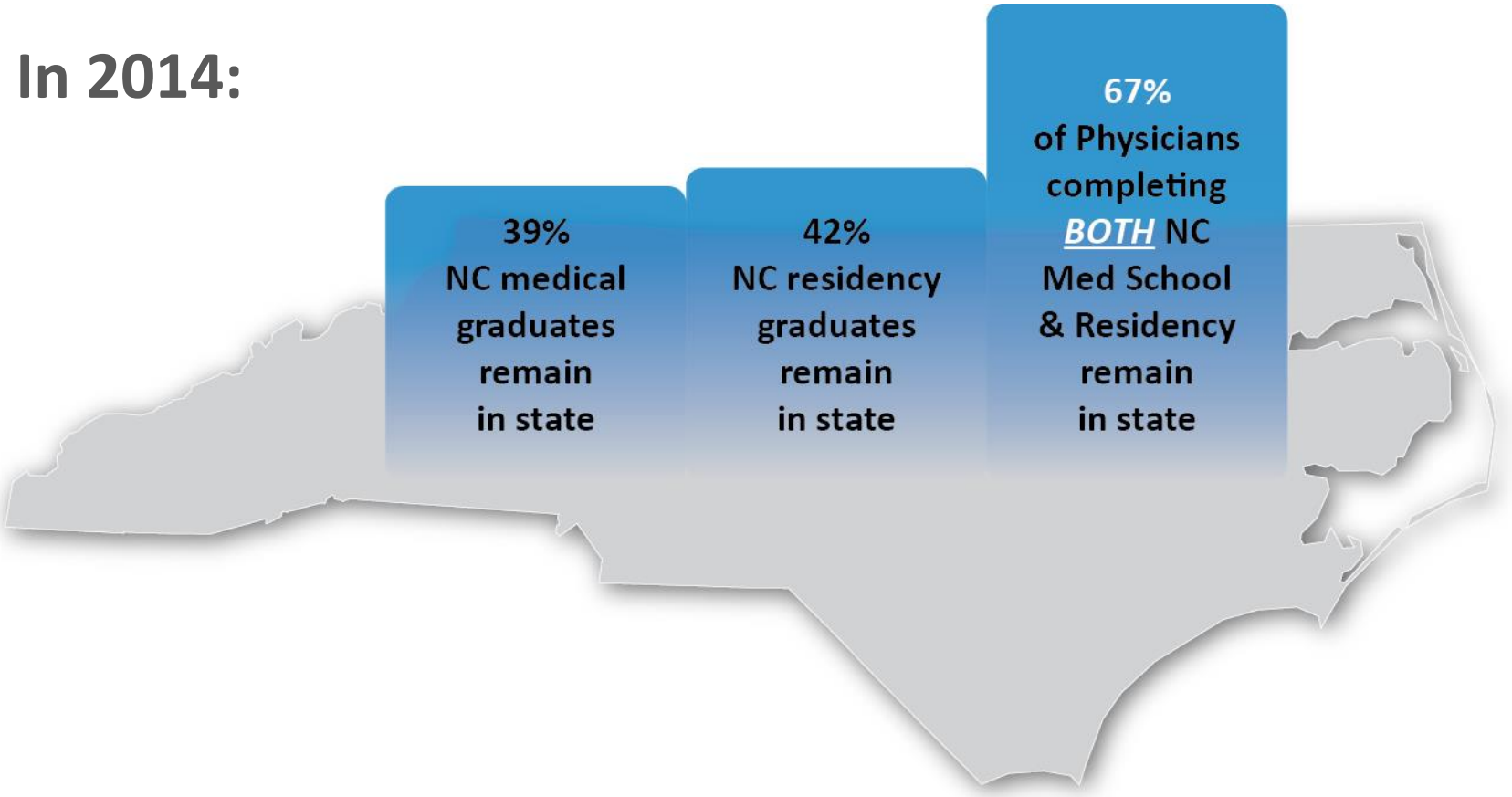
Legislature could require:

1. Transparency: require annual tracking of Medicaid GME funding
2. Accountability: invest resources in annual tracking of workforce outcomes to determine ROI for ~$90 million Medicaid investment in GME
3. Oversight body: convene group to use data to target funding toward training programs and institutions that produce workforce to meet population health needs

Also need to address leaky pipeline through increased funding for loan repayment, community-based training programs and training tracks

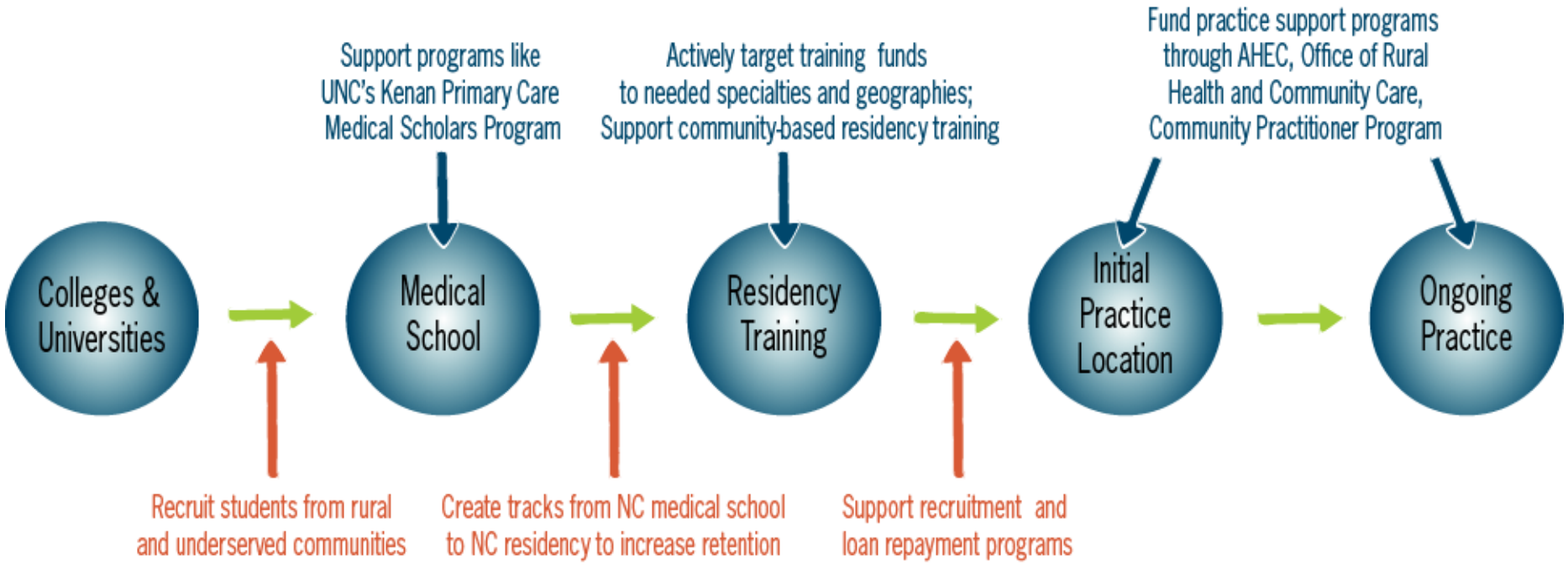
Rural and Primary Care Training Tracks: Retention much higher for physicians completing both UME and GME instate

In 2014:



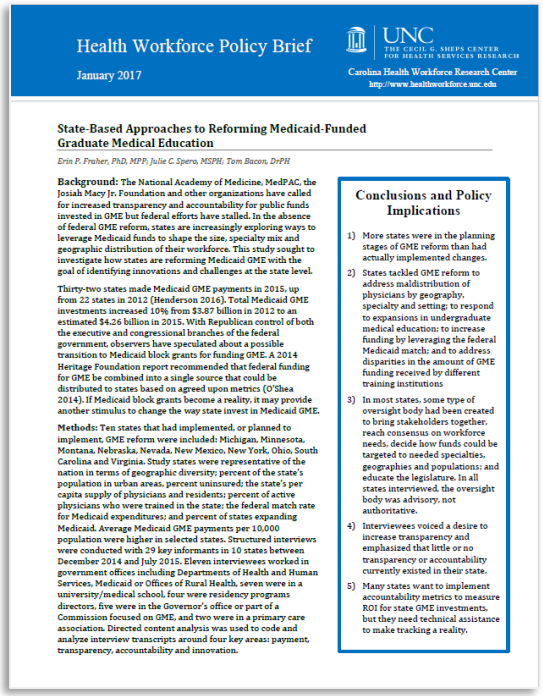
Source: AAMC 2015 State Data Book, with data derived from the 2014 AMA Physician Masterfile.

Multiple points in a physician's career trajectory where we can intervene



Want more data or resources?

Access the Medicaid GME report and other presentations



Health Workforce Policy Brief

January 2017

UNC THE CECIL G. SHEPS CENTER FOR HEALTH SERVICES RESEARCH

Carolina Health Workforce Research Center

http://www.healthworkforce.unc.edu

State-Based Approaches to Reforming Medicaid-Funded Graduate Medical Education

Erin P. Fraher, PhD, MPP; Julie C. Spero, MSPH; Tom Bacon, DrPH

Background: The National Academy of Medicine, MedPAC, the Josiah Macy Jr. Foundation and other organizations have called for increased transparency and accountability for public funds invested in GME but federal efforts have stalled. In the absence of federal GME reform, states are increasingly exploring ways to leverage Medicaid funds to shape the size, specialty mix and geographic distribution of their workforce. This study sought to investigate how states are reforming Medicaid GME with the goal of identifying innovations and challenges at the state level.

Thirty-two states made Medicaid GME payments in 2015, up from 22 states in 2012 (Henderson 2016). Total Medicaid GME investments increased 10% from $3.87 billion in 2012 to an estimated $4.26 billion in 2015. With Republican control of both the executive and congressional branches of the federal government, observers have speculated about a possible transition to Medicaid block grants for funding GME. A 2014 Heritage Foundation report recommended that federal funding for GME be combined into a single source that could be distributed to states based on agreed upon metrics (O'Shea 2014). If Medicaid block grants become a reality, it may provide another stimulus to change the way state invest in Medicaid GME.

Methods: Ten states that had implemented, or planned to implement, GME reform were included: Michigan, Minnesota, Montana, Nebraska, Nevada, New Mexico, New York, Ohio, South Carolina and Virginia. Study states were representative of the nation in terms of geographic diversity; percent of the state's population in urban areas, percent uninsured; the state's per capita supply of physicians and residents; percent of active physicians who were trained in the state; the federal match rate for Medicaid expenditures; and percent of states expanding Medicaid. Average Medicaid GME payments per 10,000 population were higher in selected states. Structured interviews were conducted with 29 key informants in 10 states between December 2014 and July 2015. Eleven interviewees worked in government offices including Departments of Health and Human Services, Medicaid or Offices of Rural Health, seven were in a university/medical school, four were residency programs directors, five were in the Governor's office or part of a Commission focused on GME, and two were in a primary care association. Directed content analysis was used to code and analyze interview transcripts around four key areas: payment, transparency, accountability and innovation.

Conclusions and Policy Implications

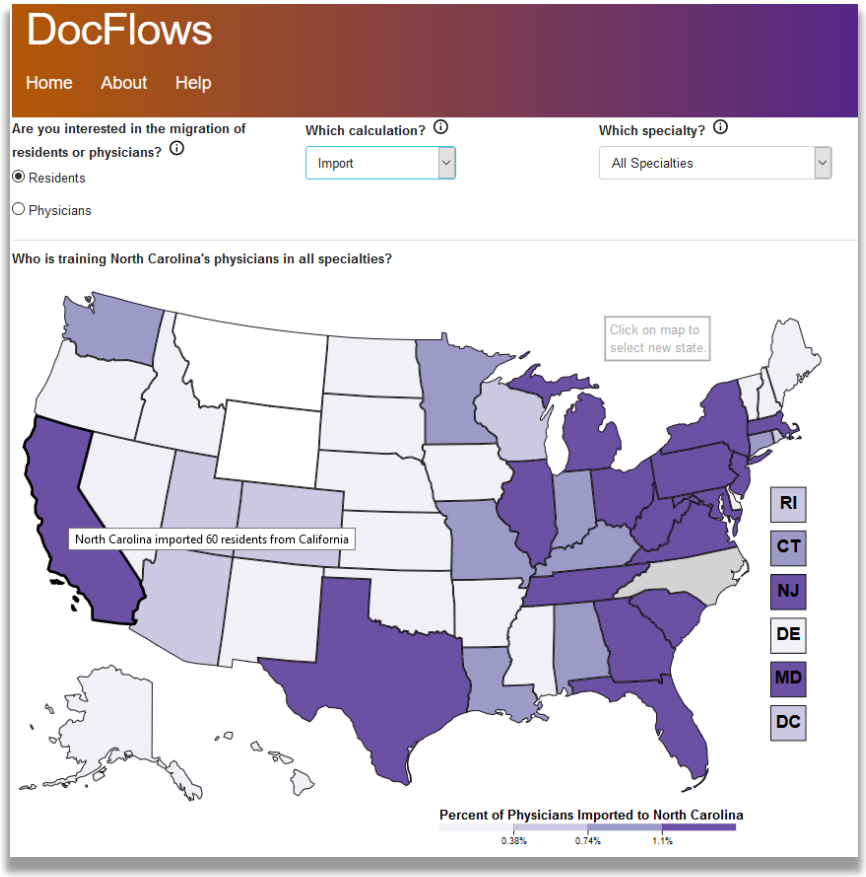
1) More states were in the planning stages of GME reform than had actually implemented changes.
2) States tackled GME reform to address maldistribution of physicians by geography, specialty and setting; to respond to expansions in undergraduate medical education; to increase funding by leveraging the federal Medicaid match; and to address disparities in the amount of GME funding received by different training institutions
3) In most states, some type of oversight body had been created to bring stakeholders together, reach consensus on workforce needs, decide how funds could be targeted to needed specialties, geographies and populations; and educate the legislature. In all states interviewed, the oversight body was advisory, not authoritative.
4) Interviewees voiced a desire to increase transparency and emphasized that little or no transparency or accountability currently existed in their state.
5) Many states want to implement accountability metrics to measure ROI for state GME investments, but they need technical assistance to make tracking a reality.

http://www.shepscenter.unc.edu/programs-projects/workforce/projects/carolina-health-workforce-research-center/

Access our DocFlows App that provides data on migration of residents after training

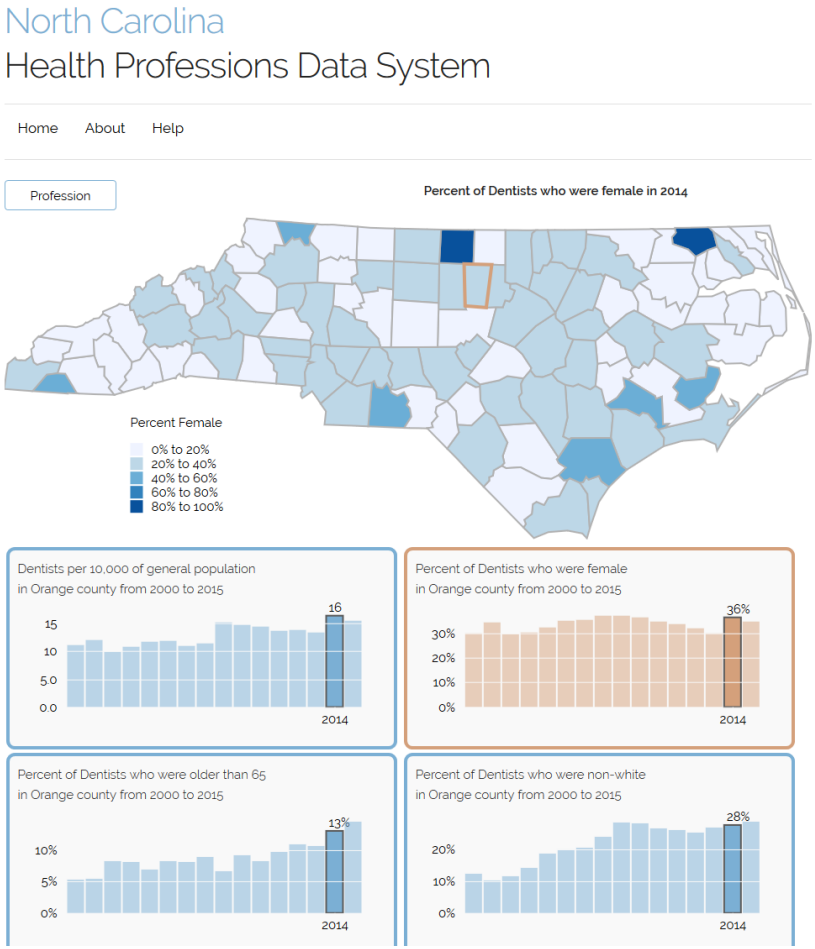
- Data visualization tool allows users to query, download and share maps showing moves by residents and actively practicing physicians between states in 36 specialties

- DocFlows available at: docflows.unc.edu



Use our online, interactive data visualization tool to access data on licensed health professionals in your region

- Explore 15 years of data on over a dozen health professions in NC
- Total supply, supply per 10K, percent female, percent over 65, percent minority
- State and county-level data
- Interactive map and bar charts
- Can download data for use in presentations or for analysis
- nchealthworkforce.sirs.unc.edu



Or contact us

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