



Shaping Health Workforce Policy through Data: Lessons Learned from North Carolina

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AcademyHealth Health Workforce Interest Group and Health Workforce Technical Assistance Center

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HEALTH SERVICES RESEARCH**

Disclosures and Collaborators

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The work in this presentation is the collaborative effort of the Sheps Health Workforce Team!

This presentation in one slide

- States are increasingly important locus for health workforce policy
- Building a health workforce data infrastructure is critical to encourage decision makers to ***use data instead of anecdotes***
- Translating data into policy requires:
 - Creating a meritocracy of data so stakeholders can identify gaps and challenge narratives
 - Strategically and intentionally framing messages
 - Using data to evaluate workforce investments
 - Developing models that project future supply/demand *if* current trends continue but also simulate effect of different policy options
 - Leveraging licensure data to compare your state to neighboring states and nation
- This work is neither quick nor easy

States are increasingly important locus for workforce policy

The number of health workforce bills enacted by states has risen dramatically, increasing from 585 bills in 2024 to 851 in 2025 (NCSL Health Workforce Legislation Database)



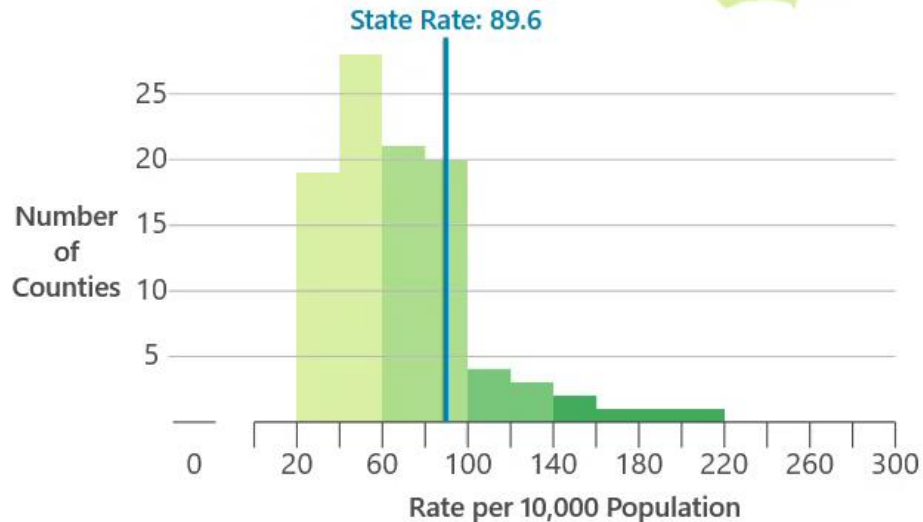
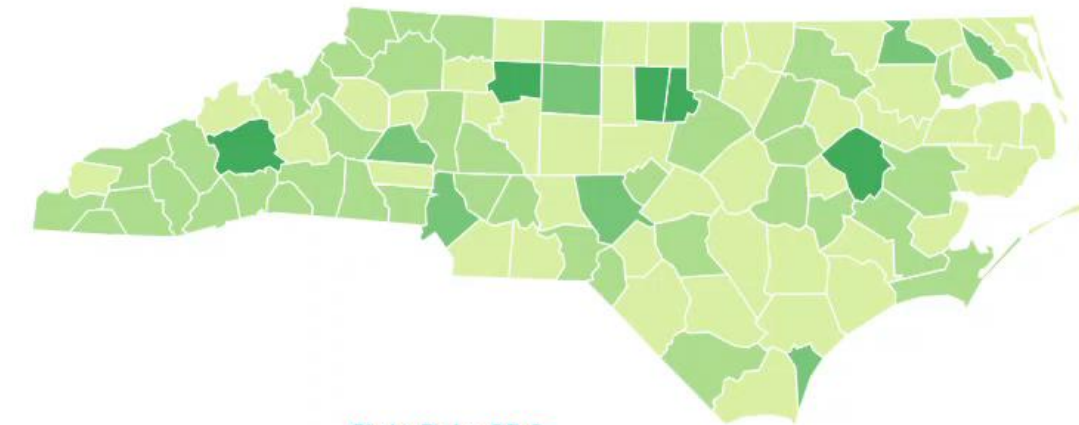
“The states are far better equipped than the federal government to address increasingly complex and serious health workforce issues”

Why did we develop health workforce data visualizations in North Carolina?

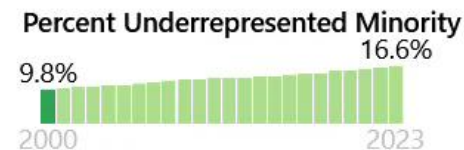
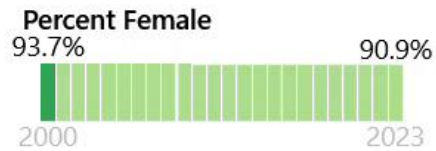
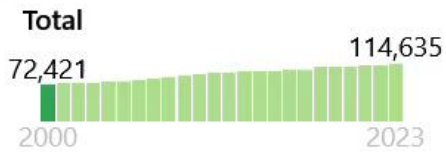
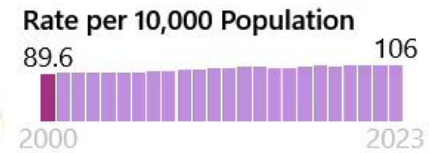
- Create a meritocracy of data—give people quick and customizable access to the data most relevant to their profession, specialty or geographic area
- Encourage stakeholders to use data, instead of anecdotes, to identify gaps and challenge narratives
- Increase access, interest, and engagement with our workforce data
- Increase dissemination by enabling users to download line charts, maps, and tables

Our health workforce viz allows users to explore and download longitudinal data and maps on 27 health professions

Registered Nurses per 10,000 Population by County, North Carolina, 2000



Profession Demographics for North Carolina

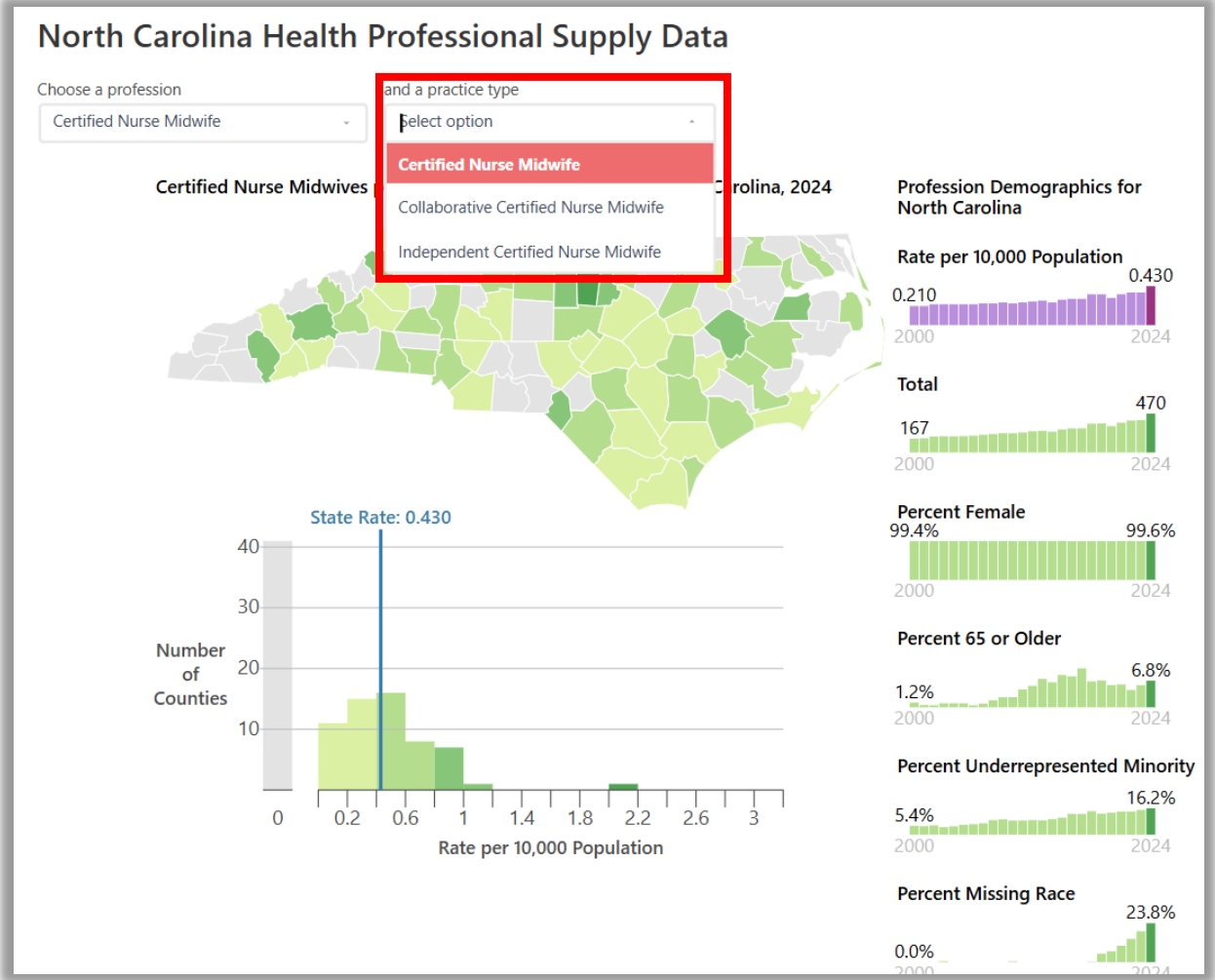


We adapt our visualizations to state legislation and policy

The [NC Session Law 2023-14: Care for Women Children and Families Act](#) provided pathway for independent practice for Certified Nurse Midwives in NC

Data will allow users to track CNMs in collaborative practice agreements and CNMs in independent practice

New legislation for licensed psychological associates also provided pathway to independent practice in 2025



It's not just about data; it's about how we communicate and frame the findings from the data

“...more can be done to expand the scope of consumable morsels of evidence, to house them in accessible archives....to make sure that those with policy-making authority know where to look and how to access this information *as they need it*...(without nursing any delusional expectations of creating a new world of evidence-driven policy making).”



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*Peterson MA. “In the Shadow of Politics: The pathways of research evidence in policy making”. *Journal of Health Politics Policy and Law*. 2018; 43(3): 341-376.

Framing and Combatting/Creating Narratives

- Framing is intentional and strategic communication of findings in ways best suited to promote policy goals
- Frames shape narratives which drive how policy issue is defined and understood
- Narratives are powerful in shaping public opinion and, ultimately, government action
- The power of narratives is growing (!!)
- We can use data/research to reshape, and challenge, prevailing narratives



NC Physician Supply Is Increasing Twice as Fast as Population

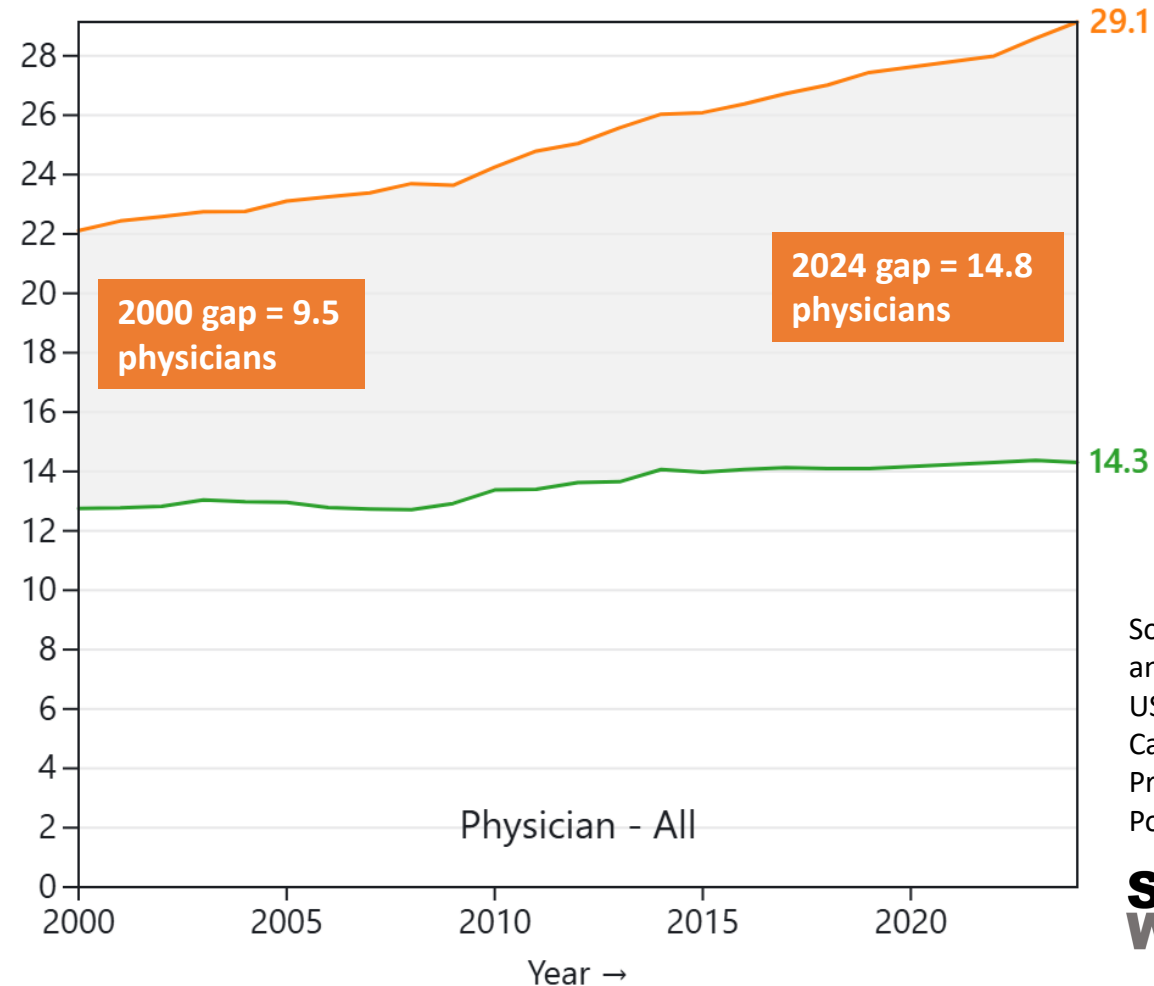
Between 2014 and 2024:

- NC's population grew 11.2% while physician workforce increased at more than twice that rate (24.5%)
 - Hospitalists had highest percentage increase (68%), followed by Emergency Medicine (40.3%)
 - Family medicine physicians increased by 32.2% and General Internal Medicine increased by 17.2%
- General pediatrics grew 8%, slower than population—that's a challenge in a state that is building a children's hospital

Primary Area of Practice	2014 Total	2024 Total	% Change
Hospitalist	947	1,591	68.0%
Emergency Medicine	1,241	1,741	40.3%
Anesthesiology	953	1,268	33.1%
Family Medicine	2,506	3,314	32.2%
Cardiology	749	978	30.6%
Psychiatry	1,245	1,568	25.9%
Radiology	1,173	1,445	23.2%
General OB/GYN	1,087	1,302	19.8%
General Internal Medicine	2,024	2,372	17.2%
General Pediatrics	1,603	1,731	8.0%
Total	23,063	28,709	24.5%

While overall physician supply is increasing, the gap between rural and urban counties has grown in North Carolina

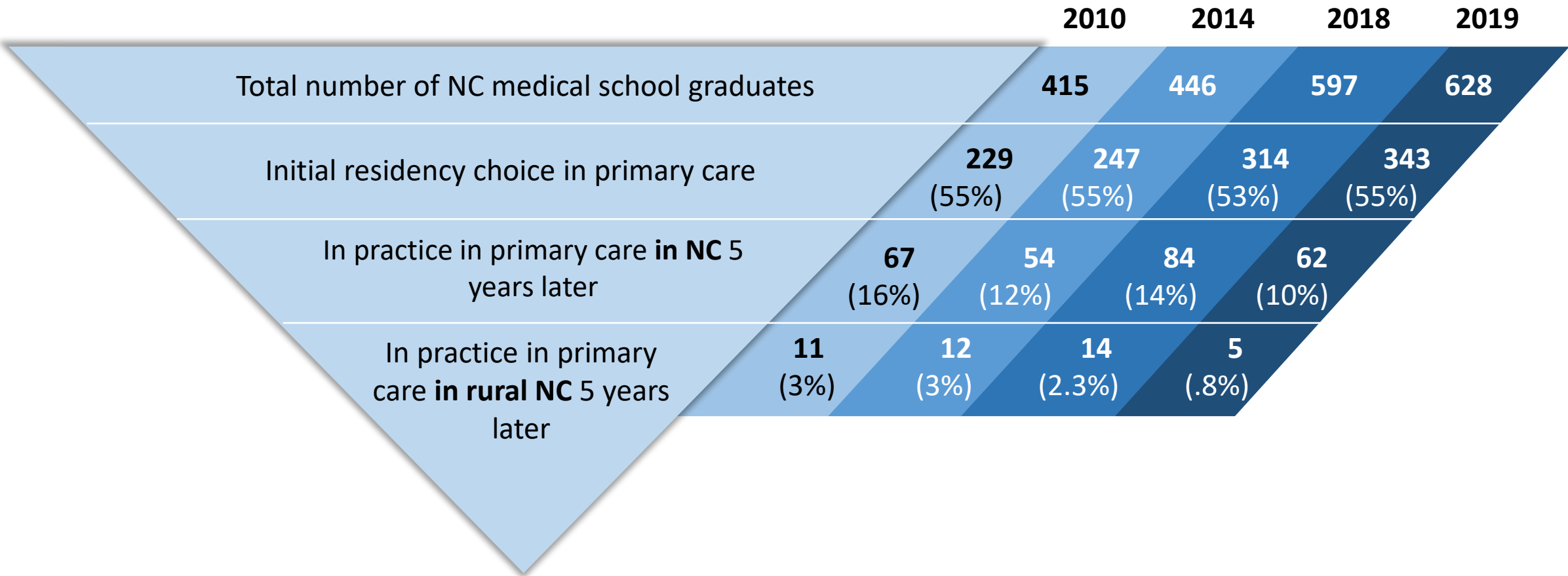
Physicians per 10,000 Population for **Metropolitan** and **Nonmetropolitan** Counties, North Carolina, 2000-2024



Source: North Carolina Office of State Budget and Management population data based on US Census data. Map produced by North Carolina Health Professions Data System, Program on Health Workforce Research and Policy.

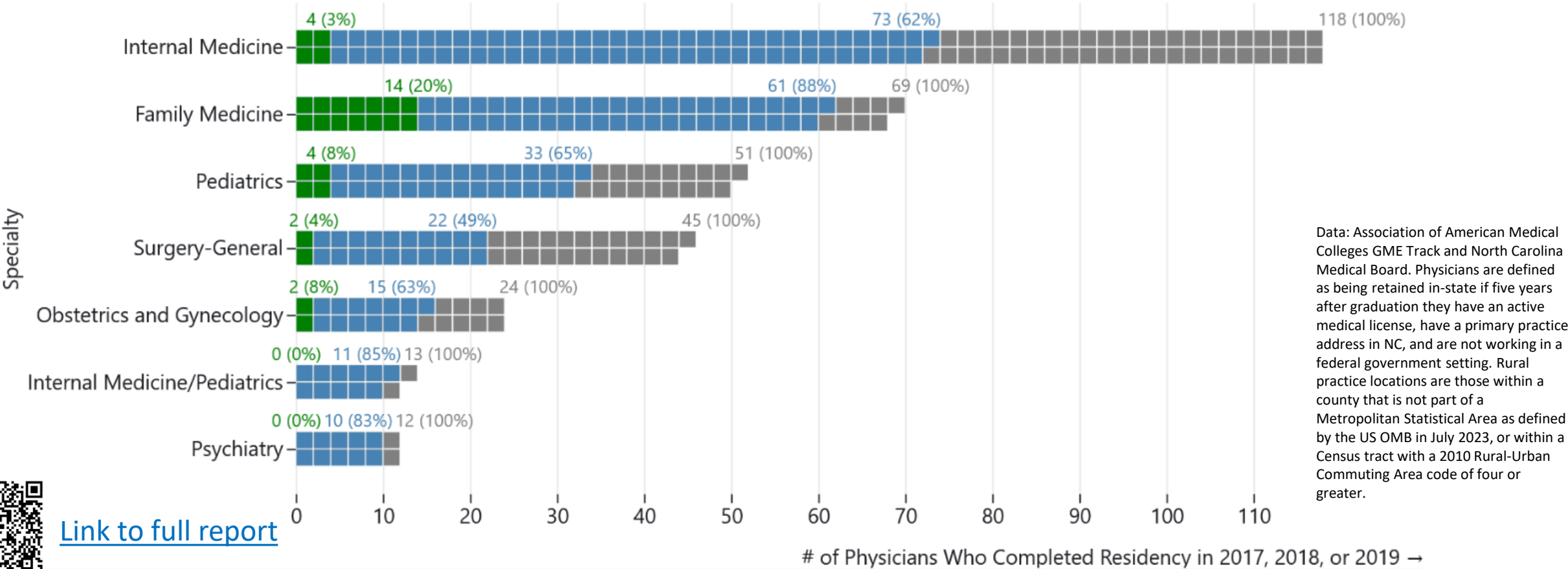
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And despite the number of graduates increasing, we have not increased the number in practice in rural, primary care in NC

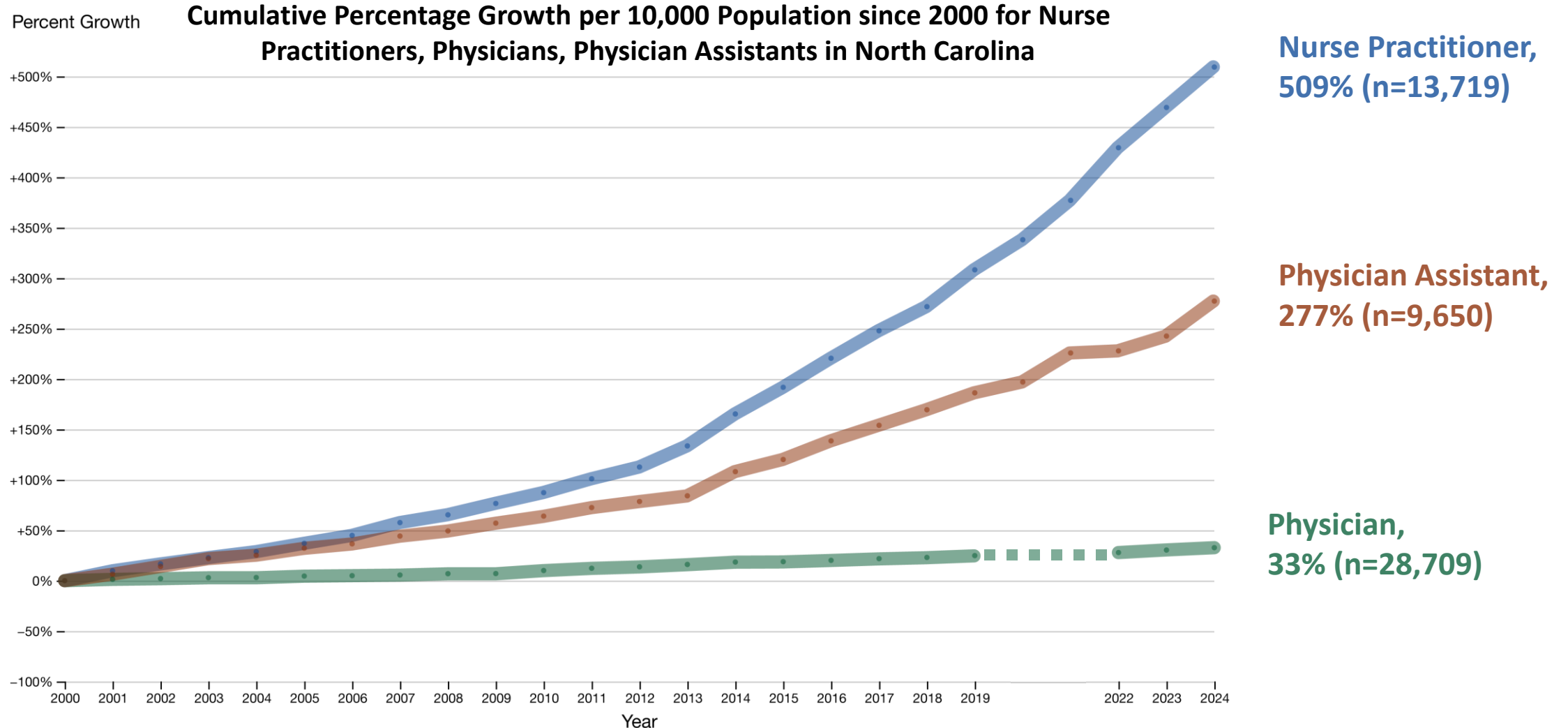


Nearly 65% of “double” NC educated/trained physicians were retained in state (compared to 37% overall)

Resident Retention in **North Carolina** or **Rural NC** Five Years After Graduation for Physicians Graduating in 2017, 2018, or 2019 from an NC Residency *who also Graduated from an NC Medical School* by Resident Specialty



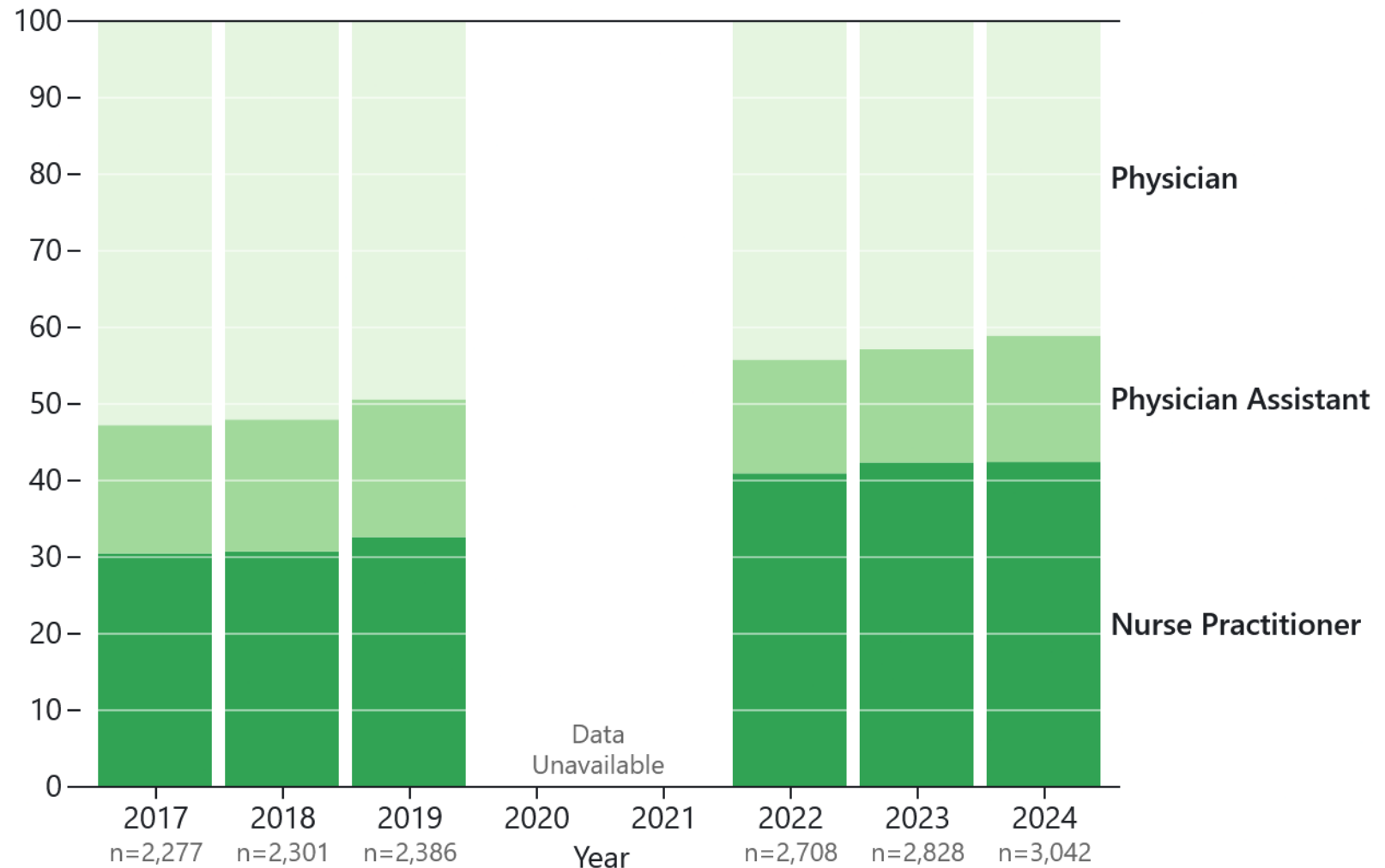
Meanwhile, NC has seen rapid growth in Nurse Practitioners and Physician Assistants



Sources: North Carolina Health Professions Data System with data derived from the North Carolina Medical Board and North Carolina Board of Nursing, 2000 to 2018. Figures include all active, in-state, non-federally employed, non-resident-in-training physicians, and all active, in-state PAS and NPs licensed as of October 31 of the respective year.

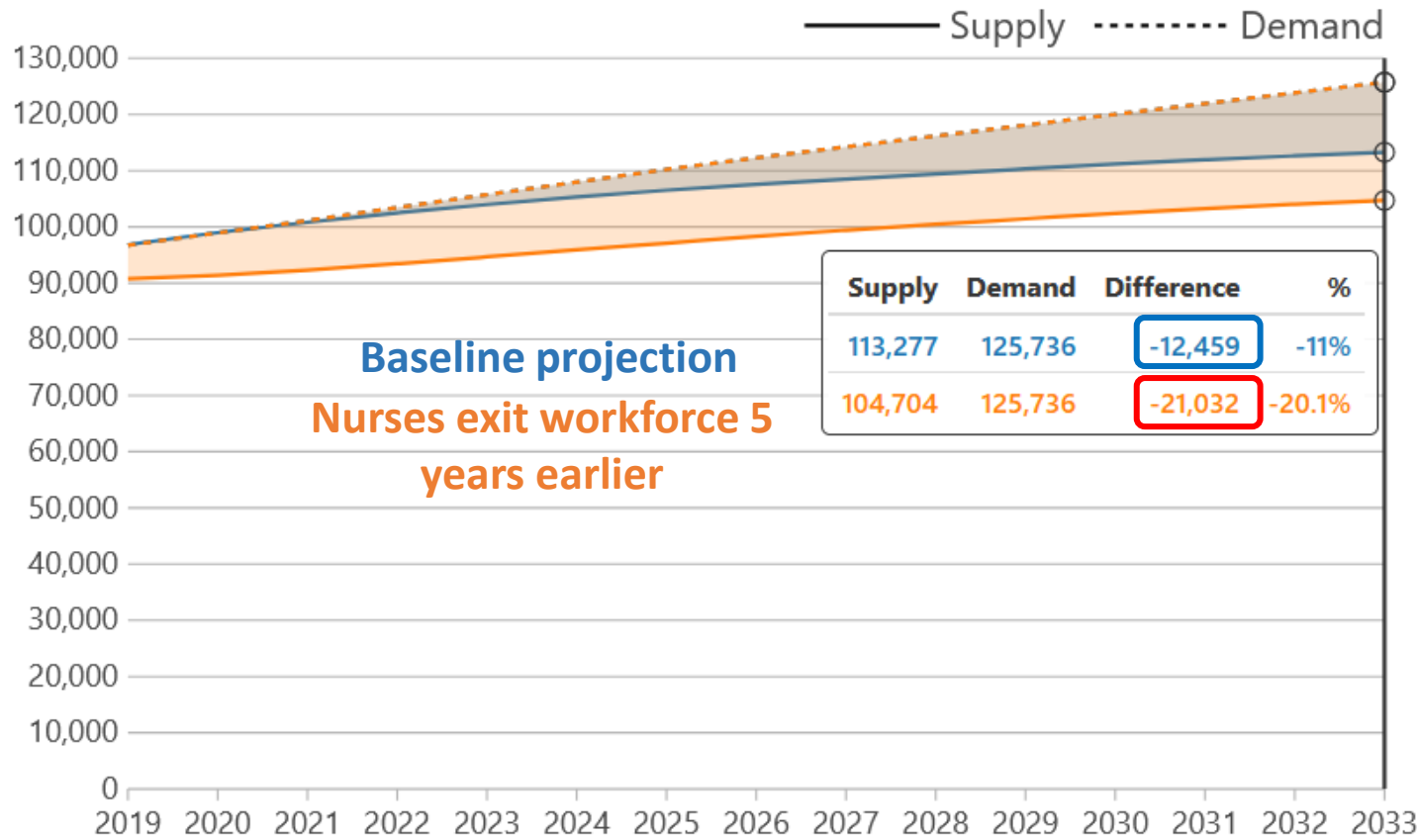
And they make up a growing share of North Carolina's rural primary care workforce

† Percentage of Total Nonmetropolitan Primary Care Clinicians (NPs + PAs + Physicians)



We use models as tools to help policy makers understand future trajectory of workforce...

Registered Nurse Supply-Demand under “Baseline” (Pre-Covid) and Early Exit Scenario



If burnout or other factors cause nurses to exit the workforce five years earlier, the shortage nearly doubles

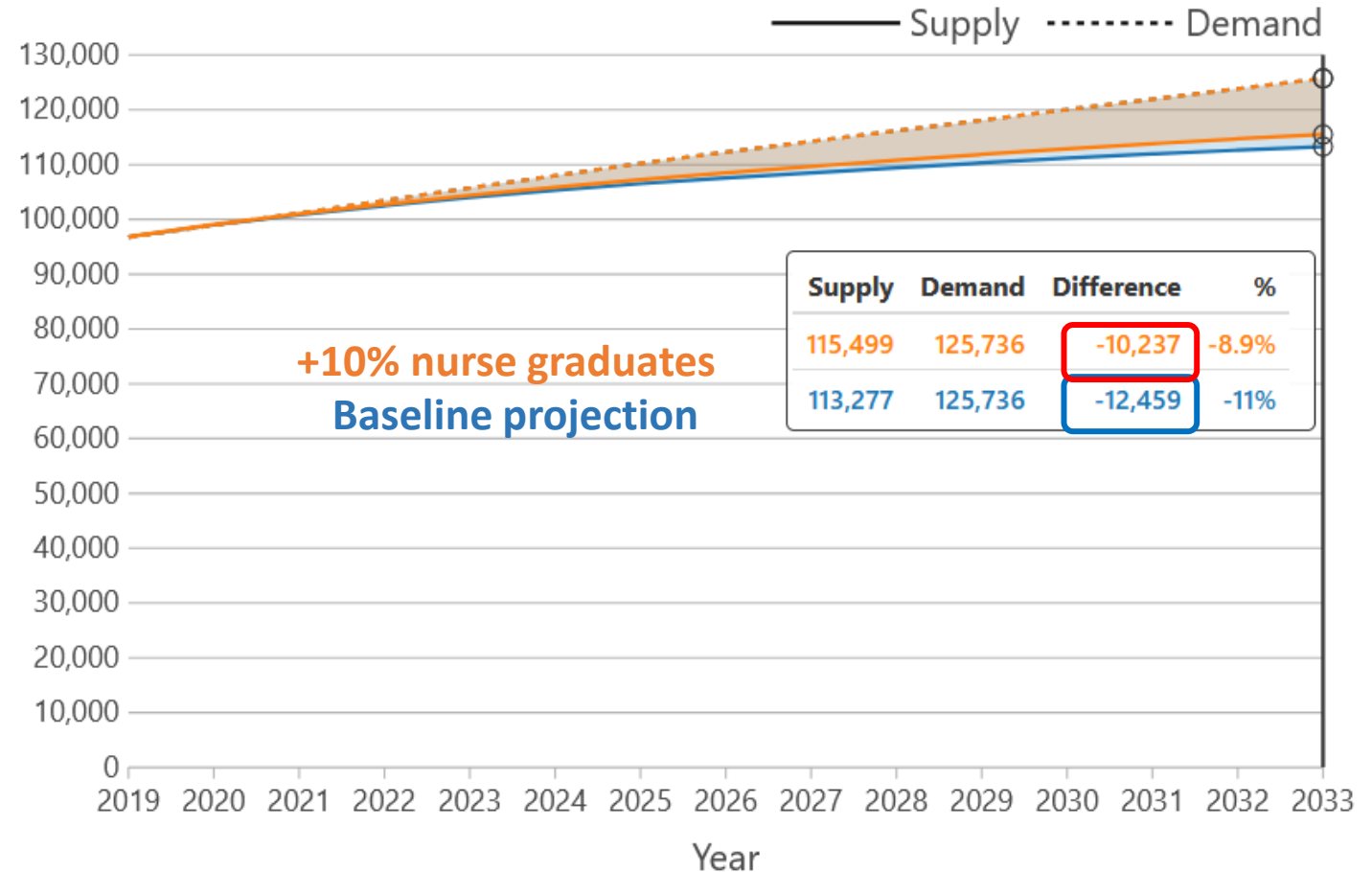
<https://ncnursecast.unc.edu/>

...and understand the effect of different interventions

We're not going to educate our way out of the nursing shortage.

We need to focus on retention

**Registered Nurse Supply-Demand under “Baseline” (Pre-Covid)
and 10% Increase in Nurse Graduates**



Our workforce model led to legislation and state appropriation to increase nursing graduates by 50%

We presented Nursecast Data to North Carolina General Assembly in 2022

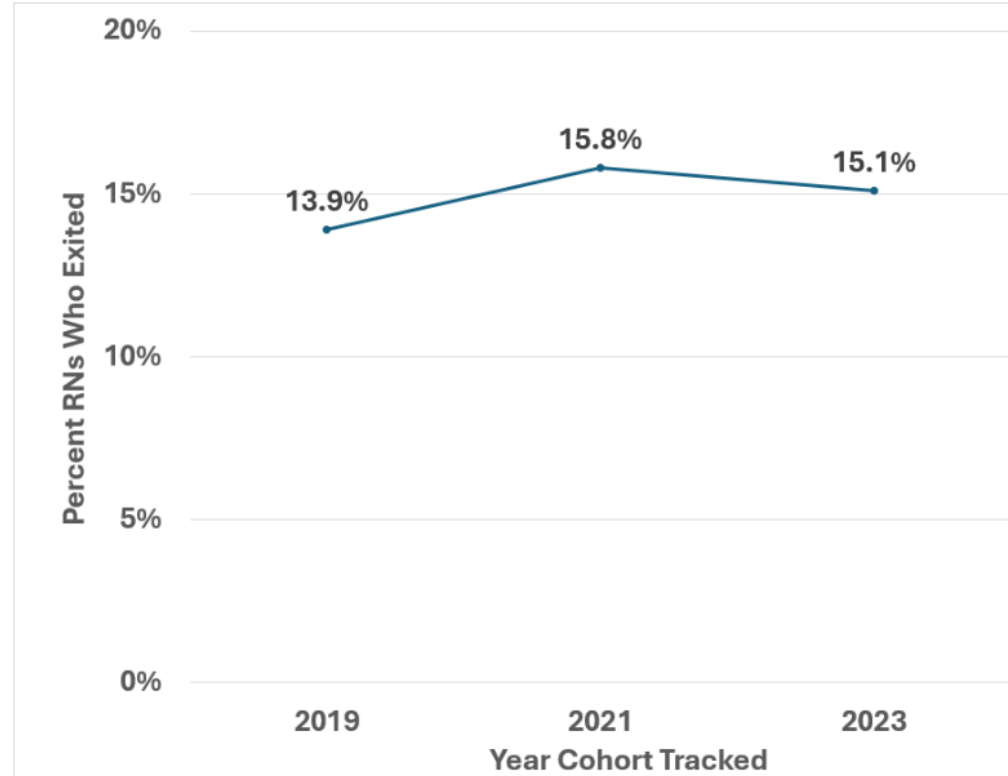


The UNC System invested \$29 million to expand its 12 nursing programs and asks us to conduct evaluation



We are transforming cross-sectional data to panel-level data to track individual-level career transitions and trajectories

North Carolina RN Workforce Exit Rate, 2019-2023

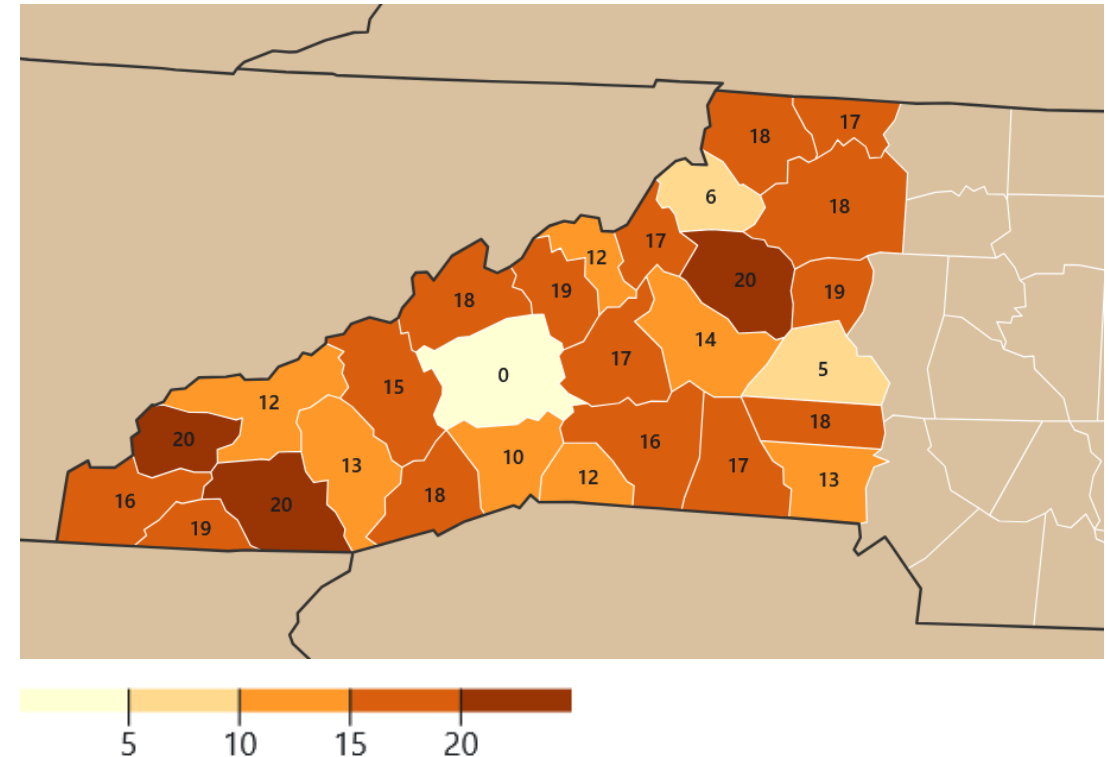


Spencer C, Joshi A, Galloway E, Moore C, Fraher E. How has RN Retention in North Carolina Changed over Time? 2025 April 14. Research Blog Post. NC Health Workforce. <https://nchealthworkforce.unc.edu/blog/rn-retention/>

We use data to monitor workforce trends after natural disasters

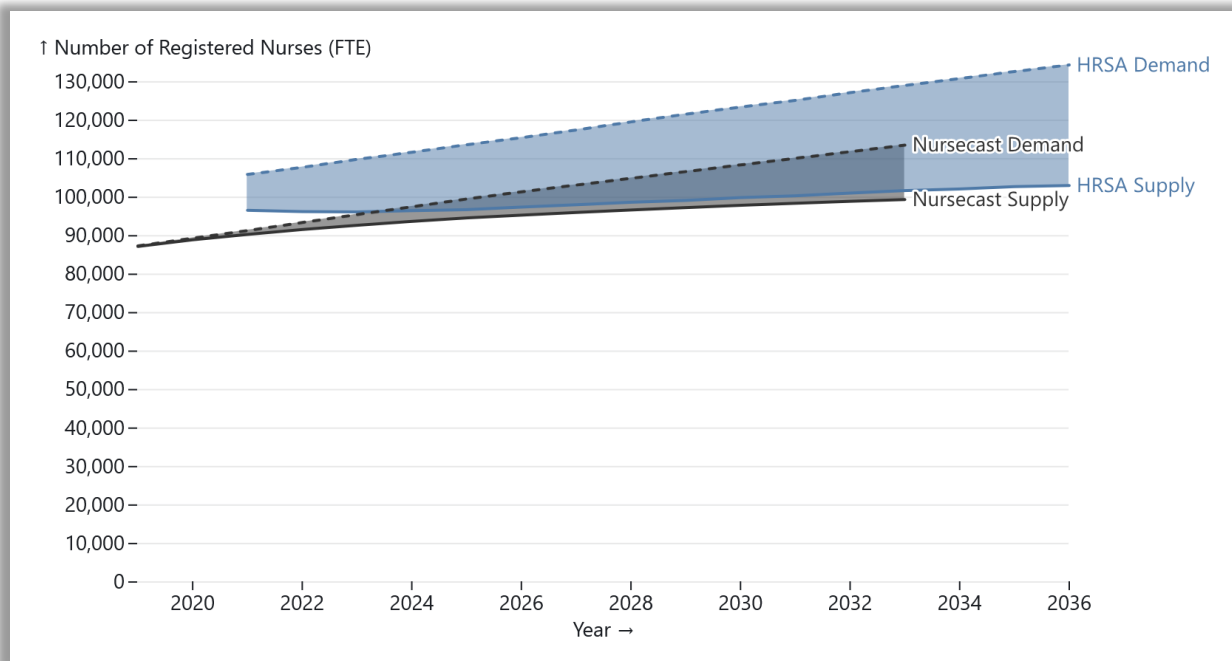
- We analyzed workforce supply for 21 health professional groups in 28 NC counties that were FEMA-designated disaster areas
- Even prior to Hurricane Helene, most counties in designated disaster areas had lower workforce supply than state average
- In response to Hurricane Helene, 6 of the 11 NC health professions boards in the HPDS implemented regulatory waivers
- This year, we are examining whether health professionals were retained, exited or re-entered affected regions

Number of Professions in County with Rate Lower than the State Rate per 10,000 Population, 2023

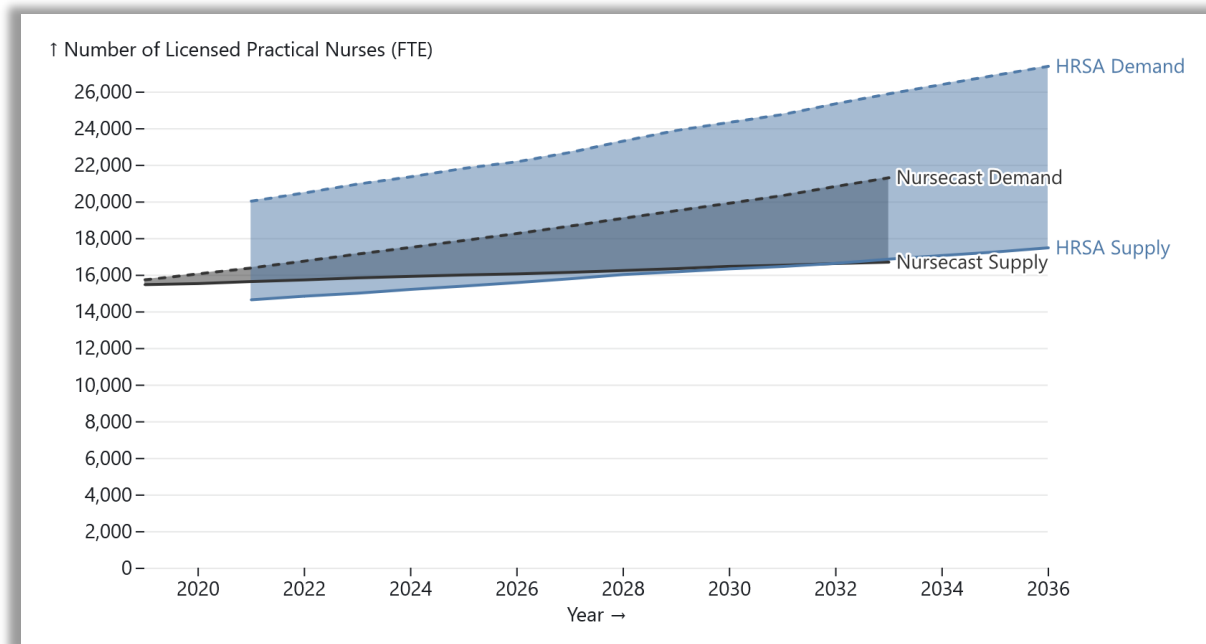


We use NC data to compare national workforce projections for North Carolina

HRSA projections of **RN** supply and demand compared with NC Nursecast projections



HRSA projections of **LPN** supply and demand compared with NC Nursecast projections



This Work Isn't Easy or Quick

- Difficult to invest time in crafting policy messages
- Speaking truth to power requires courage (Wildavsky, 1979) and can be risky
- Drafting policy briefs that interpret and frame data requires skill, time and “shininess”
- Policy change is frustratingly slow and incremental, requires patience and perseverance

Not all policy is driven by data. Louisiana is only state where florists are licensed

- Louisiana previously required florists to make a floral arrangement that could be judged as part of licensing process. In 2010, legislature did away with that requirement.
- Rationale cited is that without licensure “you're going to set up a situation where anybody can open a floral shop”

Gov. John Bel Edwards 'not sure why' Louisiana requires florists, others to be licensed, wants review

BY ELIZABETH CRISP | ECRISP@THEADVOCATE.COM JAN 14, 2018 - 7:15 PM (7)



Louisiana Governor John Bel Edwards speaks during the "Nashville to the Rescue" benefit for injured East Baton Rouge Sheriff's Deputy Nick Tullier, Tuesday, January 9, 2018, at the Marriott in Baton Rouge, La.

Buy Now

Source: http://www.theadvocate.com/baton_rouge/news/politics/article_b6bbd088-f979-11e7-ae8a-a3a0d3dd36d8.html

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