



THE UNIVERSITY OF NORTH CAROLINA SYSTEM

UNC Board of Governors announces winner of 2022 Governor James E. Holshouser, Jr. Award

FOR IMMEDIATE RELEASE | April 20, 2023

PEMBROKE, N.C. — Dr. Cherry Maynor Beasley of the University of North Carolina at Pembroke received the 2022 James E. Holshouser Award for Excellence in Public Service during today's meeting of the University of North Carolina Board of Governors.

The award honors faculty who exemplify the University's commitment to service and community engagement. Created in 2007 and renamed in 2013 to honor former Gov. James E. Holshouser, Jr., the award was designed to "encourage, identify, recognize and reward public service by employees of the University."

Beasley is the founding member of UNC Pembroke's Department of Nursing and served as the associate dean of health sciences and chief nursing officer of the McKenzie-Elliott School of Nursing, where she was also the Anne R. Belk Endowed Professor in Rural and Minority Health. Today she is the interim provost and vice chancellor for academic affairs.



Beasley has a rich history of family members who graduated from UNCP. She holds the distinguished honor of being the first Lumbee to have earned a baccalaureate, master's and doctorate in nursing. After receiving her bachelor's degree from the University of Michigan in 1973, Beasley obtained a master's degree from University of North Carolina at Chapel Hill in 1978. She received a nurse practitioner degree from the University of South Carolina in 1998 and obtained a Ph.D. from East Carolina University in 2009. Today, she is an expert on the role of culture in health care decision making, rural health, diabetes, nursing and workforce issues and women's health.

She is passionate about health care and education for rural and underserved regions and has been instrumental in bringing high quality health care to her home in southeastern North Carolina. An educator since the 1970s, Beasley has taught at both North Carolina Central University and the University of North Carolina at Chapel Hill.

A veteran of the U.S. Army Reserve Nurse Corps, Beasley served her country for eight years from 1982 to 1990, rising to the rank of major in 1985. While in the service, she held positions as a school nurse with the Robeson County Health Department and served as a principal investigator for the Office of Minority Health.

In 1992, when UNCP launched its nursing program, Beasley became the school's first faculty member. Today, she is a prolific researcher, having written and administered multiple grants. In particular, she has focused her work on Lumbee health issues such as child development and breast cancer.

"The impact Dr. Beasley has made in this region is immeasurable," said UNC Pembroke Chancellor Robin Cummings. "With Dr. Beasley's education, expertise and work ethic, it's clear she's had options available to pursue, but she chose to come home — to southeastern North Carolina, to her Lumbee people — to make a difference in ways no one else could. She serves as proof to her colleagues of their ability to make significant contributions wherever they land in life."

Today, Beasley is a widely and internationally recognized expert in public health and has received many awards and accolades acknowledging her work. She was named the North Carolina Legislative Nurse of the Year in 2009. In 2017, she was honored with the Board of Governors Award for Excellence in Teaching. And in 2020, she was named a fellow in the American Academy of Nursing, one of the highest honors in the nursing profession. Beasley is the first UNCP faculty member to ever receive that award, joining an elite, worldwide group of only 2,700 nursing leaders.

"Through her life and work, Dr. Beasley has become an example of how our universities nourish the health of North Carolinians in the farthest reaches of our state," said UNC System President Peter Hans. "In an era of nursing shortages and other enormous challenges to public health, Dr. Beasley brings hope and light to her community. I thank her and congratulate her on this award."

"Dr. Beasley is a highly-trained and talented leader who chose to come home to serve the people of Robeson County," said Board of Governors Chair Randy Ramsey. "Her commitment to teaching, research and mentorship shows a deep passion for the wellbeing and development of her community — an attitude that represents the very heart of our University's mission. My sincerest congratulations to Dr. Beasley on this award."



UNC System President Peter Hans
Remarks to the UNC Board of Governors
April 20, 2023

North Carolina is growing and growing more diverse. And UNC Pembroke, thanks to the rich and fascinating history in this part of our state, is at the leading edge of a more inclusive, more dynamic future for higher education and for our country.

We're hearing a lot about diversity in American education right now — and witnessing a lot of controversy. While we're gathered here in Pembroke, seeing firsthand the success and energy of the UNC System's most diverse campus, I want to share how I think about higher education's role in welcoming and serving *all* students, and how diversity and free expression can not only coexist but strengthen one another.

One of the greatest achievements of American society in the 20th century was opening the doors of higher education to far more students than ever before. Black Americans, Native students, women, a growing Latin American population — all are welcome and represented on our campuses in a way that simply wasn't permitted a century ago.

Removing legal and institutional barriers that kept those students from pursuing their God-given potential has been extraordinarily good for the nation, and for North Carolina. We simply cannot imagine the kind of prosperity, growth, and individual opportunity now taken for granted without the hard-won progress of educational access for all.

It has also made our universities better at their mission. As UNC Pembroke's vision statement says, diversity "provides us with opportunities for discovery," embracing a breadth of different perspectives and backgrounds. UNC Pembroke is a living testament to the power of an institution that welcomes everyone in its community, a model for how our universities can embrace all those we're called to serve.

We are still short of where we need to be, especially when you look at differences in graduation rates, student debt, and other key outcomes for our students. Overcoming those disparities is a moral imperative for the University, which is why we have a strategic plan that focuses on more equitable enrollment of low-income and rural students; that tracks graduation rates by subgroup; that places a premium on reducing student debt, which we know disproportionately burdens low-income and minority students. And we are investing at historic levels in minority-serving institutions, which is long overdue.

Our goal is to build a university system where everyone in North Carolina is welcome — where North Carolinians of all backgrounds are invited, included, and supported. That's not an add-on to our mission; it's the very core of our calling as a public institution. We are committed to

serving this state, and this state is growing larger, more diverse, more vibrant and interesting by the day. We want and need that energy on our campuses, in our classrooms, in our research labs. Welcoming the extraordinary breadth of talent in our state makes us a stronger university for *everyone*.

If you look across our campuses today, you will see a range of initiatives, support programs and recruitment strategies being deployed to welcome and guide students who were not always well-represented in higher education. There are scholarship funds for low-income and first-generation students; clubs and student organizations that provide a home base for students of particular backgrounds and interests; mentoring efforts and peer counseling programs that help students build a sense of community; and a lot of brilliant work to rethink teaching strategies and redesign courses so that all students have the chance to thrive.

That is all important and worthy work, and the UNC System's strategic plan specifically endorses efforts to improve the enrollment and graduation of underrepresented students on our campuses – student success.

The *goal* of a diverse and welcoming university is not in question. A clear majority of Americans — including every ethnic group and party affiliation — say that diversity is a source of strength for the nation, and that schools should welcome diversity as a positive thing.

Still, the challenge of how we achieve those goals can and *must be* subject to debate. There is no single, correct way of thinking about diversity, let alone promoting it. Our embrace of openness and pluralism must include an openness to different ideas about representation and the role of education in building a more just society. It must include a tolerance — an appreciation, even — for those who disagree with our preferred way of thinking. It must include a bedrock commitment to academic freedom and freedom of thought so that we can truly benefit from the different perspectives and life experiences that our students and faculty bring with them.

I have heard the argument that our ideals of inclusion and free expression are in tension with one another, and that free speech or free inquiry must sometimes yield in order to make the University a welcoming place for all. I respectfully disagree. Diversity and free expression enhance one another, and our universities must honor both. We can't learn from one another if we're not free to speak — and eager to listen.

We can't benefit from diversity unless we have the opportunity to share our life experiences and worldviews with confidence that they'll be heard and respected.

That means we cannot compel a single way of thinking about diversity. We cannot enforce a false consensus about how to define equity in the complex and challenging context of campus

life. We can't declare a single vision of inclusion to be the right one, when we know there are many different ideas about what constitutes a welcoming environment.

There are honest, well-meaning differences of opinion about how American society ought to approach questions of race, gender, and any number of other fraught, understandably sensitive issues. There's no consensus about these issues even among minority communities. While the overwhelming majority of Americans, of all races and backgrounds, agree that discrimination is absolutely wrong and should have no place in our schools, things get much more complicated from there. We cannot call an end to these debates on our campuses when they remain such an active and unsettled part of American public life.

Our universities must make room for those good-faith conversations. That does not mean we excuse hate or bigotry. It does mean preserving space for people of goodwill to hold different visions of what progress and fairness should look like.

From my professors, my mentors, and my reading of higher education's history, I draw a deep sense of humility when it comes to declaring a single, right answer to grand societal challenges. There are just too many examples of people in positions of power getting things confidently, righteously wrong.

The well-structured contest of ideas and perspectives is how we work toward common understanding, continuing the University's age-old calling of discovering new knowledge and putting it to work. It's how we prepare our graduates for the world they're going to enter, where challenging conversations are part of life.

I see that work happening every day on our campuses. I see it happening with joy and energy right here in Pembroke. This institution proves every single day that we are a better university — a better country — when we embrace the talent and ambition of all our people.

Universities are meant to be places of connection, of coming together, and that's exactly what we see all around us here in Pembroke. It's a privilege to be here. Go Braves.

APPENDIX C

A-3. Authorization of Tuition for 2023-24

The following RESOLUTION for the 2023-24 academic year reflects the tuition increase proposed by UNC Pembroke.

RESOLUTION AUTHORIZING SPECIAL TUITION

WHEREAS, G.S. 116-143 requires that the University of North Carolina Board of Governors shall fix the tuition and fees, not inconsistent with the actions of the General Assembly, at the UNC System constituent institutions.

NOW, THEREFORE, BE IT RESOLVED, that, effective with the Fall Term of 2023, UNC Pembroke is authorized to charge and collect the following tuition rates.

UNC Pembroke

Doctor of Nursing Practice – \$5,280, residents/\$18,339, nonresidents

UNC Pembroke requests the establishment of a school-based tuition rate of \$1,000 for its Doctor of Nursing Practice (DNP). The revenue generated would be used to support the program's core operating costs, including faculty salaries, travel, and student research tools.

			North Carolina Residents			Nonresidents	
			From	To		From	To
Institution							
UNC Pembroke							
Doctor of Nursing Practice (DNP)	Grad		n/a	5,280.00		n/a	18,339.00

Doctor of Nursing Practice (DNP) Program Tuition Differential

The Doctor of Nursing Practice (DNP) program is a new program at UNC Pembroke. The program is planned to start Spring 2024, so there are currently no students enrolled in the program. The DNP program was approved by the Board of Governors in the February 2023 meeting. Included in the program approval was a \$1,000 tuition differential for students in the DNP program. The DNP program in Population Health is designed for nurses who are interested in improving population health, healthcare, and communities as a systems leader in the United States and in the world. The degree is also appropriate for educators with an expertise in leadership and population health.

Need for the Increase

Students will use various means in clinical experiences to work with identified populations. Scholarly data will be collected, and methods will vary as will evidence-based interventions and evaluative criteria. These clinical experiences require intense faculty time, technology equipment (computers, video/audio components), and will involve areas such as remote and regional medical facilities, clinics, mobile units, community organizations, and public health facilities.

How the Funds Will Be Used

The tuition differential revenue generated will help to offset some of the costs for purchasing research tools and academic research databases and data analytics programs such as Qualtrics or SPSS, as well as clinical hour tracking software. The DNP students and faculty may need additional malpractice coverage, travel funds for face-to-face contact with distance-based students, and/or assistance with data collection and dissemination of the DNP project.

Faculty Costs

The tuition differential revenue will also assist with additional faculty costs as well. The DNP program will require three new full-time core faculty accounting for three FTE and an additional total of one reassigned faculty member accounting for 1 FTE for a total of 4 FTE. The proposed DNP program will use salary levels for the Program Director (\$120,000) and full-time faculty (\$85,000) that is consistent with the 2018-19 AOTA Faculty Workforce Survey for twelve-month contracts. At the start of the program in fiscal year 2023-24, in which students are admitted and matriculate into the program, the department plans to reassign an existing faculty member part-time. The program will utilize faculty based on their content expertise as it relates to the curriculum. In addition, the program plans to hire two additional core faculty to meet additional curricular needs of the program. These new faculty lines will add \$232,638 to the cost for faculty, bringing the total cost for full-time core faculty to \$510,541.

Impact on Affordability

A student of nursing at UNCP can enter a clear educational pathway from a directed program in a community college to the Bachelor of Science in Nursing degree, to the Master of Nursing degree, which leads seamlessly to the terminal degree of the Doctor in Nursing Practice in Population Health. The median amount of student loan debt anticipated by graduate nursing students upon program completion is between \$40,000 and \$54,999. The cost of an online DNP degree at a private university in North Carolina is currently \$136,012.00 for the total 74 minimum credit units (Duke University, 2021). Even with the tuition differential, UNCP will be more affordable than other paths to this terminal degree. In addition, federal student loan forgiveness programs for nurses offer financial assistance in exchange for work commitments in underserved communities or in the public sector. The nursing federal loan forgiveness programs will reduce the overall monies owed if a federal loan is taken out and paid back over a 10-year period.

**TUITION INCREASE REQUEST FORM
FOR PROFESSIONAL SCHOOLS
2023-24**

UNCP

<i>Doctor of Nursing Practice</i>
<i>51.3818</i>

	2023-24 Annual Increment
Requested School-Based Tuition Increase	
Graduate Residents	\$1,000.00
Graduate Nonresidents	\$1,000.00

	FTE
Graduate Residents	4.00
Graduate Nonresidents	0.00
Total	4.00

Projected Revenues	
Graduate Residents	\$4,000.00
Graduate Nonresidents	\$0.00
Total	\$4,000.00

Projected Expenditures

<i>Research tools and academic research databases and data analytics programs such as Qualtrics or SPSS, as well as clinical hour tracking software</i>	\$500.00
<i>Travel Funds</i>	\$500.00
<i>Faculty Salaries</i>	\$3,000.00
Total	\$4,000.00

Does your campus intend to charge students in this program the requested graduate CITI plus the SBTI? (respond yes or no in the box)

Yes



Maximum Per-Credit Hour Tuition Rates: Supporting Documents

Meeting of the Board of Governors
Committee on Budget and Finance
April 2023

Overview

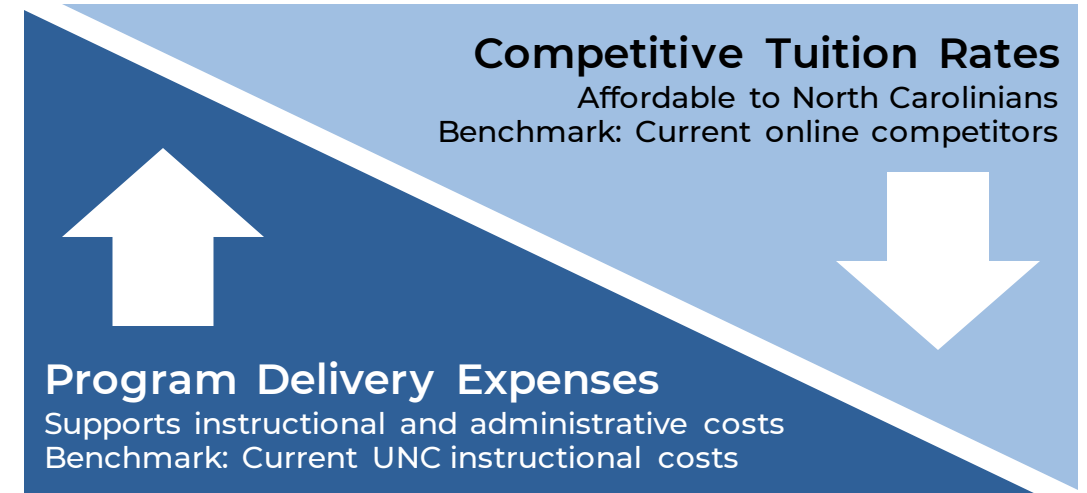
Project Status

- PKH has signed letters of intent with seven UNC institutions to design online undergraduate degree programs
- Students will enroll in the first PKH-powered programs in October 2023
- The programs will be off-model and will not receive enrollment funding; they must be self-sustaining
- Program design requires that PKH establish tuition rates based on market conditions and program costs

PKH Request

- Each year, PKH will propose the maximum tuition rate for PKH-powered programs to the UNC Board of Governors for approval
- PKH and its university customers have discretion to set tuition rates by program, up to the approved maximum rate

PKH-Powered Online Programs: Tuition Rate Market Forces

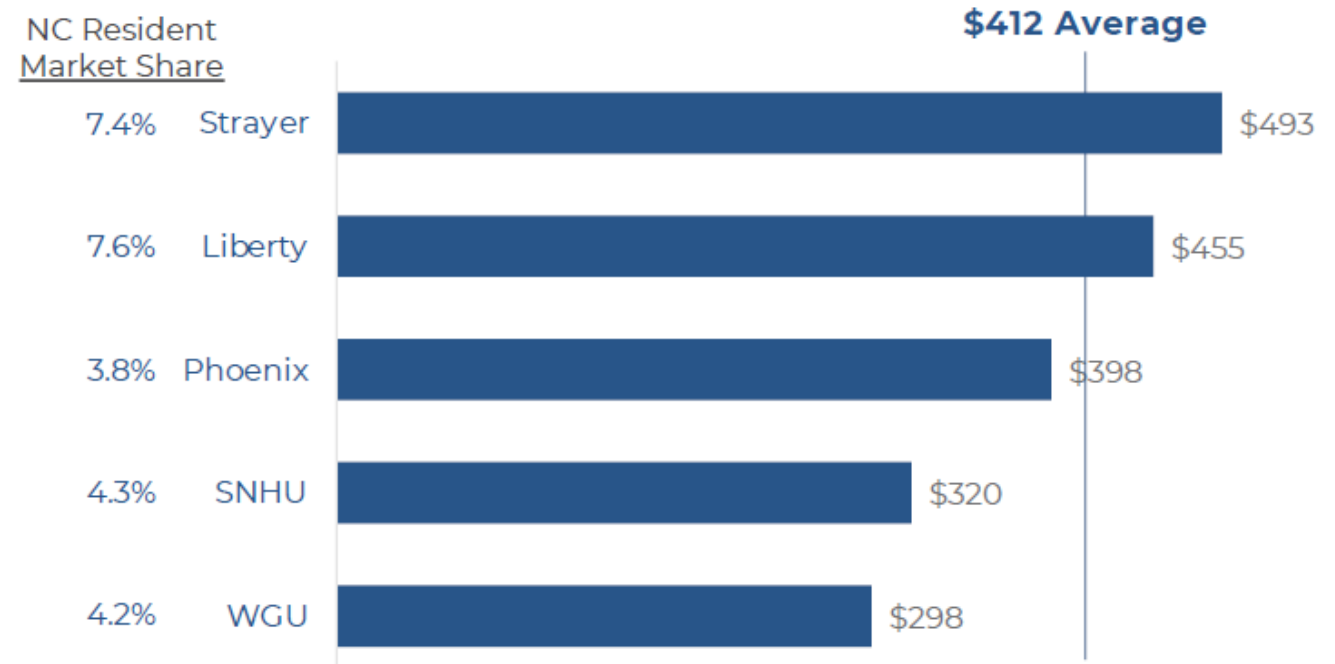


PKH-powered programs must balance affordability against delivery cost

Competitive Tuition Rates: Market-Based Benchmarks

- Over two-thirds of North Carolina's adults choose out-of-state institutions for online undergraduate studies
- The five largest out-of-state providers enroll over one-fourth of undergraduate North Carolinians studying online
- North Carolinians pay an average of \$412 per SCH at these institutions
- PKH-powered programs will compete on both price and educational quality
- Market benchmarks suggest a maximum tuition rate not to exceed \$500 per SCH for PKH-powered programs

Undergraduate Tuition per Student Credit Hour, 2022

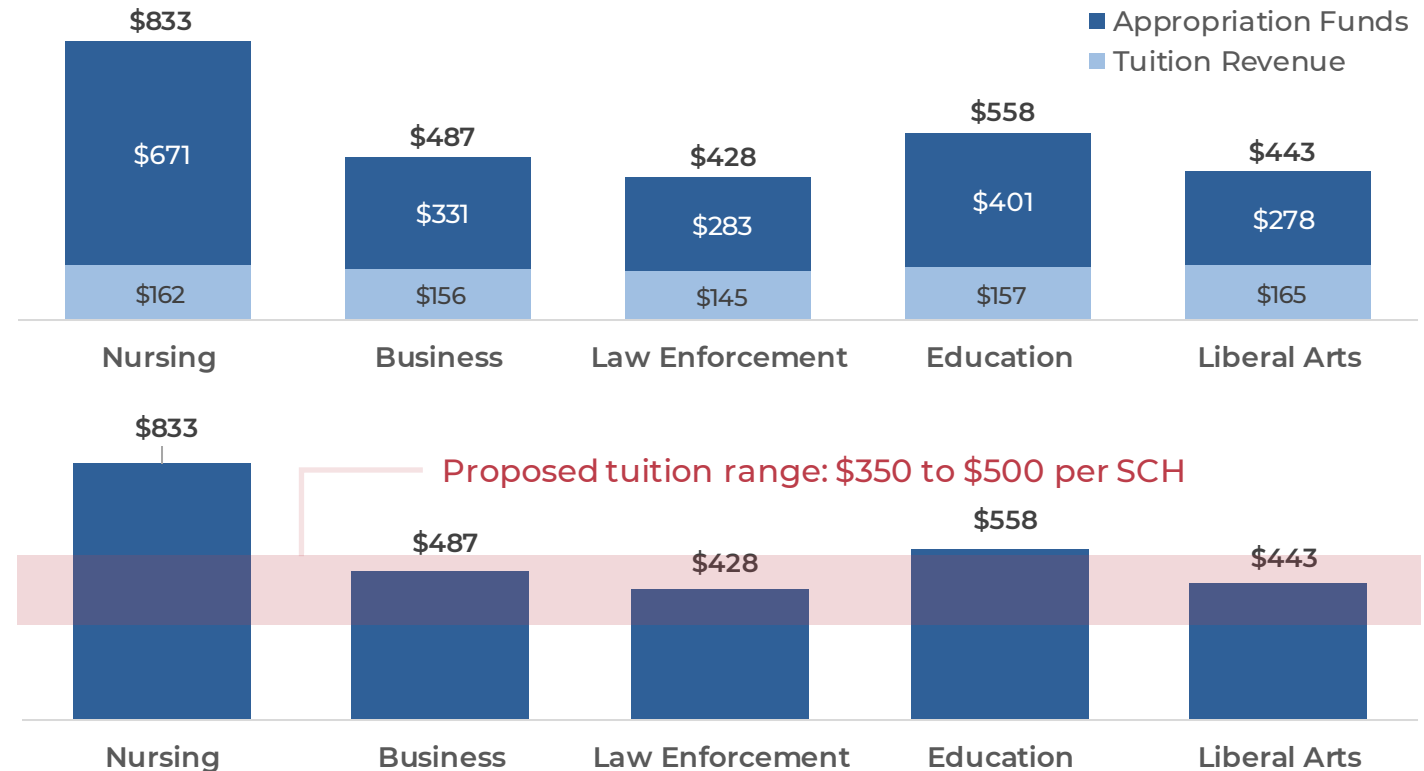


PKH-powered programs must be cost-competitive with large out-of-state institutions

Program Delivery Costs: Current UNC Program Benchmarks

- UNC revenue varies by subject area; programs with higher operating costs receive more enrollment funding
- UNC's five most popular online undergrad subject areas generate \$428 to \$833 per SCH in tuition and state appropriations
- Major cost drivers are course instruction and learner marketing & recruiting
- PKH-powered programs will be designed to economize these costs while maximizing academic quality and the student experience
- A range of \$350 to \$500 per SCH will provide flexibility at the program level

UNC Tuition and Appropriation Revenue per SCH:
Popular Online Subject Areas



PKH proposes a maximum resident undergraduate tuition rate of \$500 per SCH

Appropriation amounts vary by institution and subject area; subject-area appropriations are calculated using the Delaware Study of Instructional Costs and Productivity. Off-model programs do not receive appropriations through enrollment funding.

Graduate Program and Non-Resident Rates

Graduate Programs

- PKH's is focusing on undergraduate degree completion programs in 2023-24; however, we may receive requests to design master's programs
- Graduate program tuition is typically 40% to 80% higher than undergraduate rates, reflecting higher earning power of graduates
- Graduate programs also incur higher instructional and marketing costs
- A range of \$500 to \$800 per SCH for master's programs will provide flexibility at the program level

PKH proposes a maximum graduate resident tuition rate of \$800 per SCH

Non-Resident Tuition Rates

- Non-resident rates for on-model UNC programs are 300% to 400% higher than resident tuition rates
- Tuition from non-resident enrollments will support program's fixed costs and improve affordability for North Carolinians
- To prioritize the education of North Carolina residents, PKH proposes a non-resident rate no less than 20% higher than the resident rate set for each program

PKH proposes a non-resident tuition premium at least 20% higher than the resident rate



PKH Academic Year 2023-34 Maximum Tuition Rate Proposal

April 2023

Per G.S. 116-11(9)(e), digital learning student credit hours provided with the support of Project Kitty Hawk (“PKH”) may not be included in the UNC System’s enrollment change request and must therefore be self-supporting. In order to enable universities to offer such programs in partnership with PKH, the Board of Governors approved Section 1000.1.1-II.E.3 of the UNC Policy Manual which states that, on an annual basis, PKH shall request that the Board of Governors establish a maximum per-credit tuition rate for self-supported digital learning programs offered through a partnership with PKH (“Maximum Tuition Rate”). Section 1000.1.1-II.E.3 also requires that the nonresident tuition rate charged for a given academic program exceed the rate charged to North Carolina residents for that program.

For the coming academic year, PKH requests that the Board of Governors approve the Maximum Tuition Rate proposal below that achieves two objectives. First, it will allow constituent institutions the flexibility to set program tuition rates that are cost-competitive with similar online programs in the market, particularly those at out-of-state providers that enroll a large share of North Carolinians today. Second, tuition rates also must support the educational investment required to deliver the world-class educational experiences that the System is known for. Based on a thorough analysis of both objectives,¹ PKH requests that the Board approve the following Maximum Tuition Rate proposal:

Maximum Tuition Rate Proposal for Academic Year 2023-24		
Per University of North Carolina Policy 1000.1.1 and Section 5.18 of the March 2022 Association Agreement between the University of North Carolina (UNC) and Project Kitty Hawk (PKH), PKH shall request that the Board of Governors establish a maximum per-credit tuition rate for programs offered through a partnership with PKH (“Maximum Tuition Rate”).		
For the 2023-2024 academic year, PKH and its Board of Directors request that the University of North Carolina Board of Governors approve a Maximum Tuition Rate of \$500 per student credit hour (“SCH”) for North Carolina residents enrolling in undergraduate programs and a maximum rate of \$800 per SCH for North Carolina residents enrolling in graduate programs. To ensure North Carolinians are the primary beneficiaries of the General Assembly’s investment in PKH, the non-resident tuition rate for each academic program shall be set at a rate no less than 20% higher than a program’s state resident rate.		
	Undergraduate Programs	Graduate Programs
NC Resident	\$500	\$800
Out-of-State Resident	20% higher than NC Resident Rate	

¹ For more information, please see a summary of this analysis included in under “additional information” in your board materials.

Key Factors:

- PKH-powered online degree programs will not be funded through the Enrollment Funding Model and therefore will not receive state appropriations. The programs must be financially self-supporting. PKH-powered programs must be both cost-effective for learners and self-supporting for institutions.
- Tuition generated by PKH-powered programs must support all program operations, including course instruction, program administration, student marketing and recruitment, and student support.
- The target average tuition rate for undergraduate programs powered by Project Kitty Hawk will be \$375 per SCH. Tuition rates will vary by program and will depend on individual programs' costs. Programs with higher-than-average instructional or administrative costs will have higher tuition rates to reflect higher costs.

Refinance Limited Obligation Bonds – Western Carolina University

ISSUE OVERVIEW

The Western Carolina University Board of Trustees (WCU) requests authorization to amend the use agreement related to the financing of The Village and Norton Residence Hall student housing facilities (the “Student Housing Facilities”) that were financed through Affinity Housing LLC (the “Company”), a university-created nonprofit entity.

The amendment to the use agreement will authorize the Company to issue a refunding limited obligation bond (the “2023 Bond”) in a principal amount not to exceed \$5,700,000 for the purpose of (1) refunding the callable maturities of the Company’s Refunding Limited Obligation Bonds, Series 2013 (the “2013 Bonds”) and (2) paying costs of issuance related to the 2023 Bonds.

The Company was created for the purpose of constructing student housing at WCU. To finance and refinance the student housing facilities, the Company previously executed and delivered (1) Certificates of Participation (Western Carolina University Student Housing Project), Series 2003 (the “2003 Certificates”) and (2) the 2013 Bonds. In connection with the 2013 Bonds, WCU entered into a Second Amended and Restated Use Agreement, a Second Amended and Restated Ground Lease Agreement, and a Second Amended and Restated Lease Agreement, all of which were previously approved by the University of North Carolina Board of Governors. The Second Amended and Restated Use Agreement established WCU’s payment obligations under the Second Amended and Restated Lease Agreement in an amount equal to the debt service on the Company’s debt.

In anticipation of the June 1, 2023 call date, the Company may refinance the 2013 Bonds at a lower interest rate for debt service savings. WCU estimates that the refinancing will reduce its payment obligations under the related lease and use agreement by approximately \$208,000 on a net present value basis, representing an estimated 3.8 percent of the par amount refunded. The refunding of WCU’s 2013 Bonds will be subject to final review by the System Office to verify savings based on the interest rate environment at the time of the sale of the 2023 Bonds. Refinancing the 2013 Bonds will require an amendment to the use agreement to reflect WCU’s lower payment obligations with respect to the 2023 Bonds.

The 2023 Bonds will be issued on a tax-exempt basis and purchased by DNT Asset Trust, a wholly owned subsidiary of JPMorgan Chase Bank, N.A. (the “Bank”). The Bank was selected through a competitive request for proposals (RFP) process. The 2023 Bonds are expected to be delivered for settlement on or before June 1, 2023, which is the call date for the 2013 Bonds.

WCU currently has an issuer credit rating of “Aa3” with a Stable Outlook by Moody’s. Standard and Poor’s has assigned a rating of “A” with a Stable Outlook to the Company’s 2013 Bonds. This transaction is expected to have no impact on the credit ratings for WCU or the Company.

Parker Poe Adams & Bernstein LLP is bond counsel, and First Tryon Advisors is the financial advisor to WCU.

RECOMENDATION

It is recommended that the Board of Governors authorize WCU to amend the use agreement for the student housing facilities as set out in the attached resolution.

**A RESOLUTION AUTHORIZING AGREEMENTS RELATED TO THE REFINANCING OF
RENTALS RELATED TO THE CONSTRUCTION OF PRIVATE HOUSING FACILITIES ON THE
CAMPUS OF WESTERN CAROLINA UNIVERSITY**

WHEREAS, by Chapter 116 of the General Statutes of North Carolina, the Board of Governors (the “*Board*”) of the University of North Carolina System (the “*UNC System*”) is vested with general control and supervision of the constituent institutions of the UNC System; and

WHEREAS, Affinity Housing, LLC (the “*Company*”) executed and delivered its Certificates of Participation (Western Carolina University Student Housing Project), Series 2003 (the “*2003 Certificates*”), the proceeds of which were used to construct, acquire, and equip an approximately 252-bed student housing facility on the campus of WCU (the “*2003 Project*”); and

WHEREAS, the Company executed and delivered its Certificates of Participation (Western Carolina University Student Housing Project), Series 2005 (the “*2005 Certificates*”), the proceeds of which were used to construct, acquire, and equip an approximately 290-bed student housing facility on the campus of WCU (the “*2005 Project*” and together with the 2003 Project, the “*Project*”); and

WHEREAS, the Company and the State of North Carolina (the “*State*”) have entered into a Second Amended and Restated Ground Lease Agreement dated as of March 27, 2013 (the “*Ground Lease*”), whereby the Company leases from the State the real property on which the Company has constructed the Project; and

WHEREAS, the Company, as lessor, and the State, as lessee, have entered into a Second Amended and Restated Lease Agreement dated as of March 27, 2013 (the “*Lease*”), whereby the Company leases to the State the Project and the real property on which the Project is located and whereby WCU agrees to pay Base Rentals and any Additional Rentals (as those terms are defined in the Use Agreement (as defined below) and collectively referred to herein as “*Rent*”); and

WHEREAS, the Company and WCU have entered into a Second Amended and Restated Use Agreement dated as of March 1, 2013 (the “*Use Agreement*”), whereby WCU assumes the obligations of the State under the Lease and is obligated to pay Rent to the Company. Base Rentals are paid from (1) revenues of the Project and (2) to the extent such revenues are insufficient therefore, revenues received by WCU from its dormitory system after payment of the existing obligations of WCU with respect to its dormitory system specified in the Use Agreement; and

WHEREAS, the Company executed and delivered its Refunding Limited Obligation Bonds (Western Carolina University Student Housing Project), Series 2013 (the “*2013 Bonds*”), the proceeds of which were used to prepay in advance of their maturities the 2003 Certificates; and

WHEREAS, the Company executed and delivered its Refunding Limited Obligation Bonds (Western Carolina University Student Housing Project), Series 2015 (the “*2015 Bonds*”), the proceeds of which were used to prepay in advance of their maturities the 2005 Certificates; and

WHEREAS, WCU and the Company and its financial advisor have advised the Board that it may be able to achieve debt service savings by refunding all or a portion of the 2013 Bonds and thereby decrease the Rent for the Project; and

WHEREAS, pursuant to an Indenture of Trust Dated as of October 15, 2003 (the “2003 Indenture”) between the Company and U.S. Bank Trust Company, National Association, as trustee (the “Trustee”), as previously supplemented and amended, and Supplemental Indenture, Number 4 (the “Fourth Supplement” and together with the 2003 Indenture, the “Indenture”) between the Company and Trustee, the Company will execute and deliver refunding limited obligation bonds (the “2023 Bonds”), evidencing proportionate undivided interests in the Base Rentals with respect to the Project paid by WCU under the Lease, in order to prepay the 2013 Bonds; and

WHEREAS, in conjunction with the prepayment of the 2013 Bonds the Company and WCU will enter into an amendment to the Use Agreement (the “Amendment to the Use Agreement”) to account for the execution and delivery of the 2023 Bonds, including revisions to Exhibit B to reflect the decrease in Base Rentals resulting from the prepayment of the 2013 Bonds; and

WHEREAS, the 2023 Bonds are not and will not be an obligation of the Board or WCU, but will be secured solely from the Base Rentals paid by WCU under the Lease; and

WHEREAS, there have been presented to the Board a form of the Amendment to the Use Agreement and the Fourth Supplement which the Board proposes to approve and authorize WCU to execute and deliver; and

NOW, THEREFORE, THE BOARD OF GOVERNORS OF THE UNIVERSITY OF NORTH CAROLINA DOES HEREBY RESOLVE, DETERMINE AND ORDER AS FOLLOWS:

Section 1. Authorization of Amendment to the Use Agreement and Fourth Supplement.

That the form and content of the Amendment to the Use Agreement and the Fourth Supplement be and the same hereby are in all respects authorized, approved and confirmed, and the Chancellor and Vice Chancellor for Administration and Finance of WCU and the Chairman of the Board, the President of the UNC System, the Senior Vice President for Finance and Administration of the UNC System, the Secretary and the Assistant Secretary of the UNC System, or anyone acting in an interim capacity, individually or collectively (collectively, the “Authorized Officers”), be and they hereby are authorized, empowered and directed to execute, approve and deliver the Amendment to the Use Agreement and the Fourth Supplement, as applicable, including necessary counterparts, in substantially the form and content presented to the Board, but with such changes, modifications, additions or deletions therein as to them seem necessary, desirable or appropriate, their execution thereof to constitute conclusive evidence of the Board’s approval of any and all such changes, modifications, additions or deletions therein, and that from and after the execution and delivery of the Amendment to the Use Agreement and the Fourth Supplement, the Authorized Officers are hereby authorized, empowered and directed to do all such acts and things and to execute all such documents as may be necessary to carry out and comply with the provisions of the Use Agreement and the Indenture, as supplemented and amended, including the execution and delivery of amendments to the Ground Lease and Lease if necessary to consummate the transaction described in this Resolution.

Section 2. General Authority. From and after the execution and delivery of the documents hereinabove authorized, the Authorized Officers are hereby authorized, empowered and directed to do all such acts and things and to execute all such documents as may be necessary to carry out and comply with the provisions of said documents as executed, and are further authorized to take any and all further actions to execute and deliver any and all other documents as may be necessary to complete and administer the transaction contemplated by the Ground Lease, the Lease, the Amendment to Use

Agreement, the Fourth Supplement, the Use Agreement and the Indenture, as supplemented and amended, and the execution and delivery of the 2023 Bonds.

Section 3. *Conflicting Provisions.* All resolutions or parts thereof of the Board in conflict with the provisions herein contained are, to the extent of such conflict, hereby superseded and repealed.

Section 4. *Effective Date.* This Resolution is effective on its adoption.

PASSED, ADOPTED, AND APPROVED this ____ day of April, 2023.

**SECRETARY'S CERTIFICATION
OF AUTHENTICATION**

STATE OF NORTH CAROLINA
COUNTY OF ORANGE

I, Meredith McCullen, Associate Vice President and Secretary of the University of North Carolina System, *DO HEREBY CERTIFY* that (1) the foregoing is a full, true and correct copy of the approving resolution adopted by the Board of Governors of the University of North Carolina System at its regular meeting on April __, 2023 and appearing in the minutes of such meeting, (2) notice of the meeting of the Board of Governors of the University of North Carolina System held on April __, 2023 was sent to each member of the Board, and (3) a quorum was present at the meeting on April __, 2023 at which time the foregoing Resolution was adopted.

WITNESS, my hand and the seal of the University of North Carolina this __ day of April, 2023.

[SEAL]

Associate Vice President and Secretary of the
University of North Carolina System

Capital Improvement Projects - Appalachian State University, East Carolina University, Fayetteville State University, North Carolina Central University, NC State University, University of North Carolina at Chapel Hill, and University of North Carolina at Pembroke

ISSUE OVERVIEW

University of North Carolina System institutions are required to request authority from the University of North Carolina Board of Governors to proceed with non-appropriated projects using available funds (non-general funds). Non-appropriated capital projects are funded by the institution and include the construction, repair, or renovation of facilities such as residence halls, dining facilities, research buildings, athletic facilities, and student health buildings.

Seven UNC System institutions have requested 18 capital improvement projects: four new projects and 14 projects for increased authorization.

I. NEW PROJECTS

Institution/Project Title		Total Project Cost	Previous Authorization	Requested Authorization	Funding Source
North Carolina Central University					
1.	O'Kelly-Riddick Stadium Artificial Turf Replacement	\$1,825,588	\$0	\$1,825,588	Trust Funds
<i>NCCU Subtotal</i>		<i>\$1,825,588</i>	<i>\$0</i>	<i>\$1,825,588</i>	
North Carolina State University					
2.	HVAC Controls & LED Lighting Upgrade - Nelson Hall	\$1,093,078	\$0	\$1,093,078	Energy Carry-forward (HB1292)
<i>NC State Subtotal</i>		<i>\$1,093,078</i>	<i>\$0</i>	<i>\$1,093,078</i>	
University of North Carolina at Chapel Hill					
3.	Lineberger Airflow Reduction	\$2,770,000	\$0	\$2,770,000	Energy Carry-forward (HB 1292)
4.	Morehead Chemistry Teaching Labs - Phase 2	\$3,490,000	\$0	\$3,490,000	Trust Funds
<i>UNC-Chapel Hill Subtotal</i>		<i>\$6,260,000</i>	<i>\$0</i>	<i>\$6,260,000</i>	
Grand Total		\$9,178,666	\$0	\$9,178,666	

II. INCREASED AUTHORIZATION

Institution/Project Title		Total Project Cost	Previous Authorization	Requested Authorization	Funding Source
Appalachian State University					
5.	Track, Tennis, Softball Relocation (Phases I/II)	\$15,799,998	\$11,799,998	\$4,000,000	Athletics Receipts
6.	Innovation Campus Building I - Conservatory for Biodiversity and Educational Research (CBEAR)	\$61,581,386	\$54,000,000	\$7,581,386	Appropriation (88%)/ Carry-forward (4%)/ Trust Funds (8%)
<i>App State Subtotal</i>		<i>\$77,381,384</i>	<i>\$65,799,998</i>	<i>\$11,581,386</i>	

II. INCREASED AUTHORIZATION cont.

Institution/Project Title		Total Project Cost	Previous Authorization	Requested Authorization	Funding Source
East Carolina University					
7.	Main Campus - College Hill Drive Steam - Phase 3	\$2,780,186	\$2,500,000	\$280,186	Appropriation (90%)/ Carry-forward (10%)
8.	Fleming Residence Hall - Renov. of HVAC Systems and Bathrooms	\$6,150,000	\$5,650,000	\$500,000	Housing Receipts
<i>ECU Subtotal</i>		<i>\$8,930,186</i>	<i>\$8,150,000</i>	<i>\$780,186</i>	
Fayetteville State University					
9.	Butler Renovation (HVAC, Building Envelope, Fire Alarm)	\$3,745,000	\$3,450,000	\$295,000	Appropriation (92%)/ Carry-forward (8%)
10.	Campus-Wide Exterior Lighting & Brick Paver/Concrete Walk Repairs	\$1,179,000	\$900,000	\$279,000	Appropriation (76%)/ Carry-forward (24%)
11.	McLeod Hall 2-Pipe to 4-Pipe Conversion	\$5,269,184	\$4,738,400	\$530,784	HEERF
<i>FSU Subtotal</i>		<i>\$10,193,184</i>	<i>\$9,088,400</i>	<i>\$1,104,784</i>	
NC State University					
12.	Exterior Lighting LED Conversion - South and Centennial Campus	\$3,754,203	\$2,992,833	\$761,370	Carry-forward (44%)/ Trust Funds (56%)
13.	Ground Floor Renovation - Nelson Hall	\$2,100,000	\$1,840,000	\$260,000	Carry-forward (67%)/ Trust Funds (33%) (Fund Source Change)
14.	McKimmon Center - ADA Improvements/Restrooms	\$1,430,000	\$625,000	\$805,000	Appropriation (44%)/ Carry-forward (56%)
15.	North & Central Campus - Domestic Water Line Replacement	\$4,903,000	\$4,303,000	\$600,000	Appropriation (88%)/ Trust Funds (12%)
16.	Page Hall - Mechanical & Electrical Upgrades	\$15,718,948	\$12,218,948	\$3,500,000	Appropriation (25%)/ Carry-forward (50%)/ Trust Funds (25%)
17.	Transformer Installation & Main Electrical Switch Replacement - DH Hill	\$2,150,000	\$650,000	\$1,500,000	R&R (30%)/ Carry-forward (70%)
<i>NC State Subtotal</i>		<i>\$30,056,151</i>	<i>\$22,629,781</i>	<i>\$7,426,370</i>	
University of North Carolina at Pembroke					
18.	Mary Livermore Library - Special Collections	\$1,699,037	\$1,488,328	\$210,709	R&R (32%)/ Carry-forward (48%)/ Trust Funds (20%)
<i>UNCP Subtotal</i>		<i>\$1,699,037</i>	<i>\$1,488,328</i>	<i>\$210,709</i>	
Grand Total		\$128,259,942	\$107,156,507	\$21,103,435	

RECOMMENDATION

All projects and associated funding sources are in compliance with G.S. 143C-8-12 (State Budget Act).

RECOMMENDATION cont.

It is recommended that these projects be authorized and reported to the NC Office of State Budget and Management as non-appropriated projects that do not require any additional debt or burden on state appropriations.

III. REPORTING

There are no Chancellor-authorized Repairs and Renovations projects less than \$600,000 to report.

Disposition of Property by Demolition – University of North Carolina System Office

ISSUE OVERVIEW

The University of North Carolina System Office (UNC System Office) is required to request authority from the University of North Carolina Board of Governors to proceed with certain acquisitions and dispositions of real property.

The UNC System Office requests approval to demolish the former Bright Horizons building, located at 4 UNC-TV Drive, Research Triangle Park, North Carolina. The building was constructed in 1992 under a 30-year lease-build agreement and operated as a childcare facility until it was vacated on March 15, 2022. The building is approximately 16,710 gross square feet (GSF) and has an estimated replacement value of \$1,601,575. The building is no longer usable due to numerous deferred maintenance issues including a deteriorated roof, which has led to extensive water infiltration and created interior environmental health issues. Further deterioration will potentially lead to greater life-safety issues and create a situation of endangerment or liability.

The estimated project cost is \$500,000 and will be funded from the 2021-22 State Construction and Infrastructure Fund (SCIF) maintenance repair and renovation (R&R) funds allocated to the UNC System Reserve.

RECOMMENDATION

It is recommended that the Board of Governors approve this request. This item requires approval by the Council of State.

**STATE OF NORTH CAROLINA
DEPARTMENT OF ADMINISTRATION
DISPOSITION OF REAL PROPERTY**

Institution or Agency: **UNC System Office**

Date: **April 20, 2023**

The Department of Administration is requested, as provided by GS §146-28 et seq., to dispose of the real property herein described by *purchase, lease, rental, or other (specify)*. **4 UNC-TV Drive (former Bright Horizons Day Care)**

This disposition is recommended for the following reasons:

Building is no longer in use and is cost-prohibitive to renovate

Description of Property: *(Attach additional pages if needed.)*

One-story 16, 710 GSF structure located in Research Triangle Park.

Estimated value: **\$1,601,575**

Where deed is filed, if known: **Durham County**

If deed is in the name of agency other than applicant, state the name:

Rental income, if applicable, and suggested terms:

N/A

Funds from the disposal of this property are recommended for the following use:

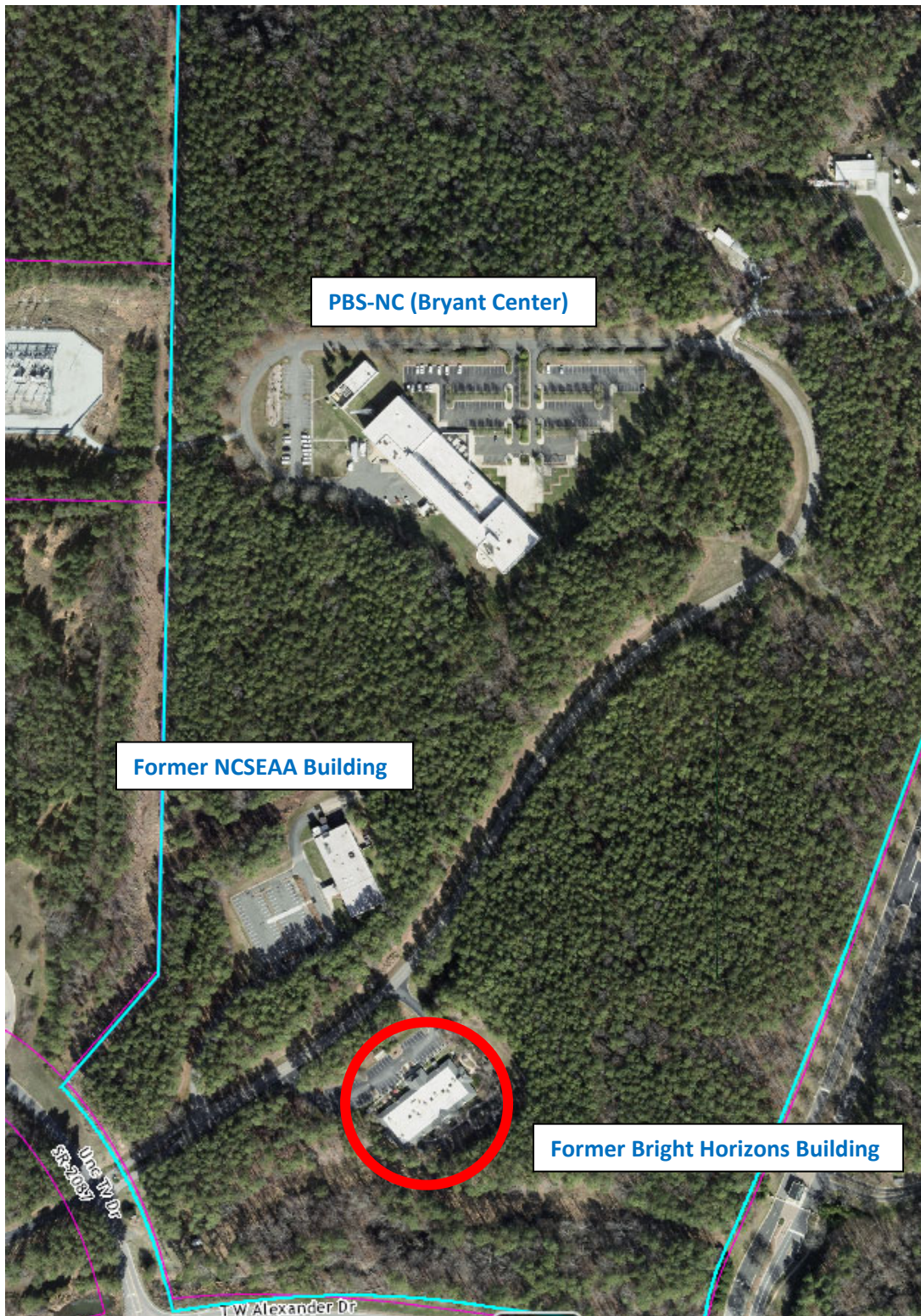
N/A

(Complete if Agency has a Governing Board.)

Action recommending the above request was taken by the Governing Board of **the University of North Carolina** and is recorded in the minutes thereof on **April 20, 2023** *(date)*.

Signature: _____
Title:

Location Map for 4 UNC-TV Drive



Outcomes of NC Medical School Graduates: How Many Stay in Practice in NC, in Primary Care, and in High Need Areas?

March 20, 2023

**Evan Galloway
Sheps Health Workforce NC
Cecil G. Sheps Center for Health Services Research**

**Hugh H. Tilson Jr., JD, MPH
North Carolina AHEC**

Submitted by the University of
North Carolina Board of Governors in response to General Statute 143-613 as
amended by Chapter 507 of the 1995 Session Laws (House Bill 230) of the
North Carolina General Assembly

**Outcomes of NC Medical School Graduates:
How Many Stay in Practice in NC, in Primary Care, and in High Needs Areas?**

EXECUTIVE SUMMARY

In 1993, the General Assembly mandated an annual report on the progress of medical school graduates going into primary care. Since 1994, the Cecil G. Sheps Center for Health Services Research at the University of North Carolina at Chapel Hill (“Sheps Center”) and the NC Area Health Education Centers program (AHEC) have collaborated to produce this report which tracks the workforce outcomes of NC medical schools five years after graduation. As a result of the legislative mandate, NC is a national model for tracking medical student outcomes. While not required by the original legislation, the Sheps Center and NC AHEC have enhanced the annual report to address the state’s workforce needs and high-urgency workforce issues. As in prior years, this report tracks NC medical school graduate outcomes for physicians who practice in NC and in rural NC counties. This report also includes an analysis of the number of medical school graduates that practice in NC safety net settings¹ that deliver care to uninsured, Medicaid, and other vulnerable populations.

Historically, this report has examined NC medical school graduates at five years following graduation per the legislative mandate. However, this period is not ideal given the time required to complete residency (3-6 years). At five-years post-graduation from medical school, physicians in psychiatry, obstetrics & gynecology (ob/gyn), surgery, and medicine/pediatrics are just completing residency, or may be in fellowship/specialty training, and may not have settled in a permanent practice location. Thus, although not required by the legislature, this report also includes ten-year outcomes for the 2012 cohort. Also not required are Appendices describing actions taken by NC medical schools and others to increase the numbers of physicians and other providers providing primary care in rural areas of our state.

Analyses of the five-year outcomes of NC class of 2017 graduates and ten-year outcomes of NC class of 2012 graduates show:

- Of the 615 NC medical school graduates from the class of 2017, 86 (14%) were in practice or training in primary care in NC in 2022, and 8 (1.3%) are in primary care in a rural NC county.
- As in prior years, ECU retained the largest proportion of graduates in practice or training in NC after five years (42%), followed by UNC (35%), Wake Forest (30%), Campbell (28%), and Duke (23%).
- For the class of 2016, a greater percentage of public medical school graduates were practicing in primary care in-state five years after graduating (ECU: 24%, n=18; UNC: 19%, n=32), compared to private medical school graduates (Campbell: 14%, n=20; Wake Forest: 14%, n=16; Duke: 4.6%, n=5).
- Four graduates from the class of 2017 were in practice in safety net settings in NC in 2022, including three UNC graduates and one Wake Forest graduate.
- Two graduates from the class of 2012 were in practice in safety net settings in 2022, including one ECU graduate and one UNC graduate.
- Of the 442 NC medical school graduates from the class of 2012, 73 (17%) were practicing primary care in NC in 2022, 10 years post-graduation; 3 graduates (0.7%) were in rural primary care in NC.
- Eight 2012 graduates were in practice in general surgery in NC ten years after graduating.

¹ NC DHHS Office of Rural Health. Safety Net Sites website. Accessed February 20, 2023.
<https://www.ncdhhs.gov/divisions/office-rural-health/safety-net-resources/safety-net-sites>

BACKGROUND

In 1993, the North Carolina General Assembly expressed interest in expanding the pool of generalist physicians for the state. In N.C.S.L.1993-321, the General Assembly required each of the state's four medical schools to develop a plan to expand the percent of medical school graduates choosing residency positions in primary care. Primary care was defined as family practice, general internal medicine, general pediatric medicine, internal medicine-pediatrics, and obstetrics-gynecology. It set the goal for the East Carolina University (ECU) and UNC Schools of Medicine at 60% of graduates entering primary care. For the Wake Forest University and Duke University Schools of Medicine, it set the goal at 50%. Campbell University School of Osteopathic Medicine graduated its first class in 2017 and was therefore not included in these goals.

Since 1994, the Cecil G. Sheps Center for Health Services Research at the University of North Carolina at Chapel Hill ("Sheps Center") and the NC Area Health Education Centers program (AHEC) have collaborated to produce this report tracks the workforce outcomes for NC medical schools. As a result of the legislative mandate, NC is a national model for tracking medical student outcomes. Data from this report were featured in the New England Journal of Medicine as an example of how to track workforce outcomes in John Iglehart's 2018 article on "The challenging quest to improve rural ." ²

While not required by the original legislation, the Sheps Center and NC AHEC have enhanced the annual report to address the state's workforce needs and high-urgency workforce issues. As in prior years, this report tracks NC medical school graduate outcomes for physicians who practice in NC and in rural NC counties. This report also includes an analysis of the number of medical school graduates that practice in NC safety net settings ³ that deliver care to uninsured, Medicaid, and other vulnerable populations.

Historically, this report has examined NC medical school graduates at five years following graduation per the legislative mandate. However, this period is not ideal given the time required to complete residency (3-6 years). At five years post-graduation from medical school, physicians in psychiatry, obstetrics & gynecology (ob/gyn), surgery, and medicine/pediatrics are just completing residency, or may be in fellowship/specialty training, and may not have settled in a permanent practice location. This is typically the case for general surgeons, whose training period is five years, and for ob/gyns, psychiatrists and medicine/pediatrics residents who often do a fellowship after a four-year residency. Ten years following graduation from medical school is a more reasonable timeframe to track outcomes, as it allows for fellowship training following residency. Thus, although not required by the legislature, this report also includes ten-year outcomes for the 2012 cohort.

² Iglehart J. The challenging quest to improve rural health care. NEJM, 2018. 378(5):473-479.
<https://www.nejm.org/doi/full/10.1056/NEJMp1707176>

³ NC DHHS Office of Rural Health. Safety Net Sites website. Accessed February 20, 2023.
<https://www.ncdhhs.gov/divisions/office-rural-health/safety-net-resources/safety-net-sites>

DATA SOURCES AND METHODS

Data Sources

Data included in this report come from several sources:

- The North Carolina Medical Board's annual licensure files (NCMB), maintained by the NC Health Professions Data System
- GMETrack, the graduate medical education tracking file of the Association of American Medical Colleges (AAMC)
- Data from the alumni and student affairs offices at the Campbell University School of Osteopathic Medicine, the Duke University School of Medicine, the Brody School of Medicine at East Carolina University, the University of North Carolina at Chapel Hill School of Medicine, and the Wake Forest University School of Medicine
- The Federal Office of Management and Budget for population and core based statistical area data, which are used to determine which counties in NC are classified as metropolitan (urban) or non-metropolitan (rural). For this report, we used the March 2020 file in which 50 counties in North Carolina are rural (non-metropolitan).
- The NC Department of Health and Human Services (DHHS) list of safety net sites, updated December 1, 2020
- The 2019 vintage of the Area Deprivation Index produced by the University of Wisconsin Center for Health Disparities Research.

Campbell University School of Osteopathic Medicine (Campbell) is not mandated to provide data for this report, as the school did not exist when the 1993 legislation was passed. However, Campbell has provided initial match data for the last several years and now has its first five-year cohort reported in this report.

As in prior years, this report does not emphasize initial residency match data, as many physicians change residency specialties or locations over the course of their GME training. Outcomes are better measured after graduation from residency.

Methods

This report differs from previous reports in using the NCMB's licensure data as the primary data source, and only using GMETrack data to verify the NCMB data. The reasons for this change in methodology are twofold. One is that the AAMC were unable to provide data on 2017 Campbell graduates under the current data use agreement. The other reason is that 2022 GMETrack data are not available until later this year, meaning that we cannot use the GME Track data to determine the status and location of graduates who are still in training in 2022.

As a result, this report relies on the NCMB's licensure file to determine primary practice location and area of practice, as in previous reports, as well as medical school and graduation year, data which previously came from the GMETrack file. Where possible, data from GMETrack were still matched with the NCMB annual licensure file on variables like name, date of birth, and birth city to confirm and check the NCMB data. In only two instances across both cohorts, did the GMETrack data contain graduates who were not in the NCMB data for the cohort. Further analyses clarified that these individuals were present in the licensure file, but had entered an incorrect graduate year. Conversely, several graduates in each cohort were found in the NCMB data who did not initially match to graduates in the GMETrack data, usually because of

combinations of data entry errors (e.g., transposed birth dates) and name changes. These data validation analyses suggest that the change in methodology should not affect the outcomes reported.

This report uses the reports received directly from each medical school for the number of graduates in each cohort. Previous reports relied on the GMETrack data for these values, but as Campbell is not yet included in the data use agreement, we used the data we already have for each institution. Small variations exist between the data sources, as can be seen in **Table 1**.

Table 1: Comparison of the Number of Medical School Graduates Reported for 2017 By Each School and in the AAMC/GMETrack Data

School	2017 Grads from School	2017 Grads from AAMC
Campbell	147	N/A
Duke	108	105
ECU	74	78
UNC-CH	171	175
Wake Forest	115	113

Once the matching and checking were complete, we produced descriptive statistics to determine where physicians were practicing and in which specialties.

For safety net provider information, we geocoded both the North Carolina Department of Health and Human Services safety net site list and the practice addresses in the NCMB file for each cohort. We then intersected the geocoded datasets to find potential matches between providers and sites. Potential matches were manually checked for accuracy with many false positives being discarded. Safety net providers are defined as facilities that provide a significant level of and other health-related services to uninsured, Medicaid, and other vulnerable populations.

Data Limitations Starting in 2020

In prior iterations of this report, before 2020, we have reported the number and percent of NC medical school graduates in training or practice in primary care anywhere in the United States. These findings were possible because the AAMC was able to match their data on medical school graduates to the AMA physician Masterfile data on physician practice locations and specialties across the U.S. However, in 2020, the AAMC and AMA legal teams renegotiated their data use agreement for the AMA Masterfile. Per the terms of the new agreement, AAMC is no longer able to match and share AMA Masterfile data with the Sheps Center. In the past, we have used AMA data to identify physicians who had died or were no longer in practice. In addition, we compared names of physicians who practiced in NC per AMA data with the NCMB physician roster, to determine whether we were missing NC physicians due to name changes. In both cases, the corrections were small—but we were unable to make similar corrections for the graduating cohorts in this report. Our match rates for the cohorts in this report were in line with prior years' match rates, but it is possible that we are missing a few physicians that we would have been able to identify historically.

FINDINGS

Class of 2017 Outcomes: Retention in Primary Care

Figure 1 shows the aggregate outcomes of the 2017 North Carolina medical graduates regarding primary care. Per the 1993 legislation mandating this analysis, these primary care specialties include family medicine, general internal medicine, general pediatrics, obstetrics & gynecology, and internal medicine-pediatrics. However, internal medicine-pediatrics is not reported as an area of practice by the NCMB. However, physicians trained in internal medicine-pediatrics typically report either pediatrics or general internal medicine as an area of practice and are therefore still captured as primary care physicians.

Figure 1: Retention of 2017 NC Medical Graduates in NC Rural Primary Care Five Years After Graduating

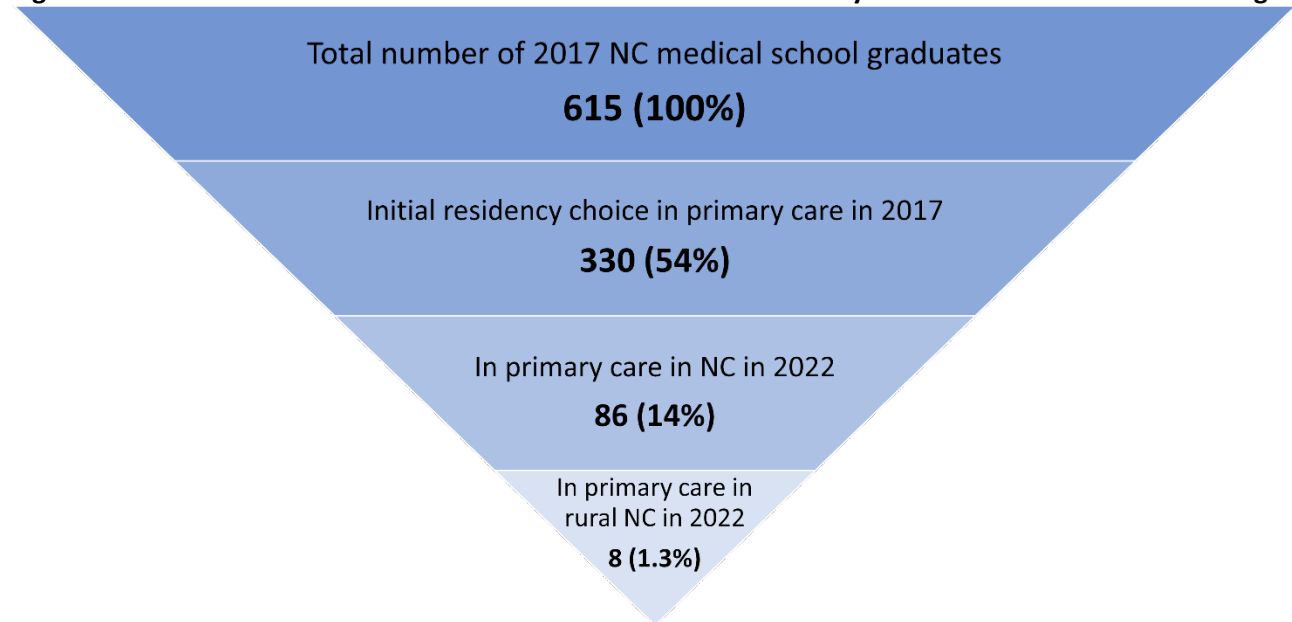


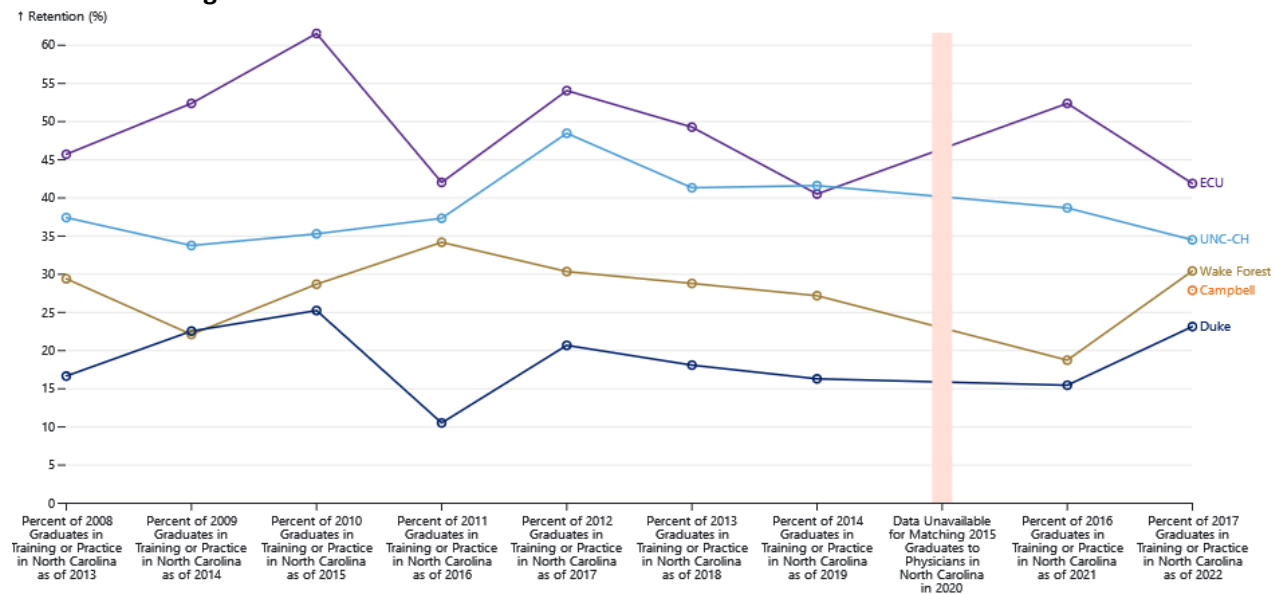
Figure 1: Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: North Carolina Health Professions Data System with data derived from the Association of American Medical Colleges, the NC Medical Board, and the respective medical schools, 2022. Rural source: US Census Bureau and Office of Management and Budget, March 2020. "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.

Out of the 615 medical school graduates in 2017, 86 (14%) were in training or practice in primary care in NC in 2022 (**Figure 1**). For purposes of comparison, between 12% and 17% of the most recent graduating cohorts (the classes of 2010-2016), were in training or practice in primary care in NC five years after graduating. A little over one percent (n=8) of the 2017 cohort was in primary care in a rural NC county. Typically, between 1% and 3% of NC medical school graduates tend to practice in primary care in rural NC five years after graduating.

Retention of Graduates in North Carolina and in Rural Counties

A greater percentage of graduates from the state's public medical schools are retained in NC five years after graduating, compared to the state's private medical schools (**Figure 2**). ECU tends to retain the greatest percentage of its graduates in state five years post-graduation, followed by UNC, Campbell, Wake Forest, and Duke.

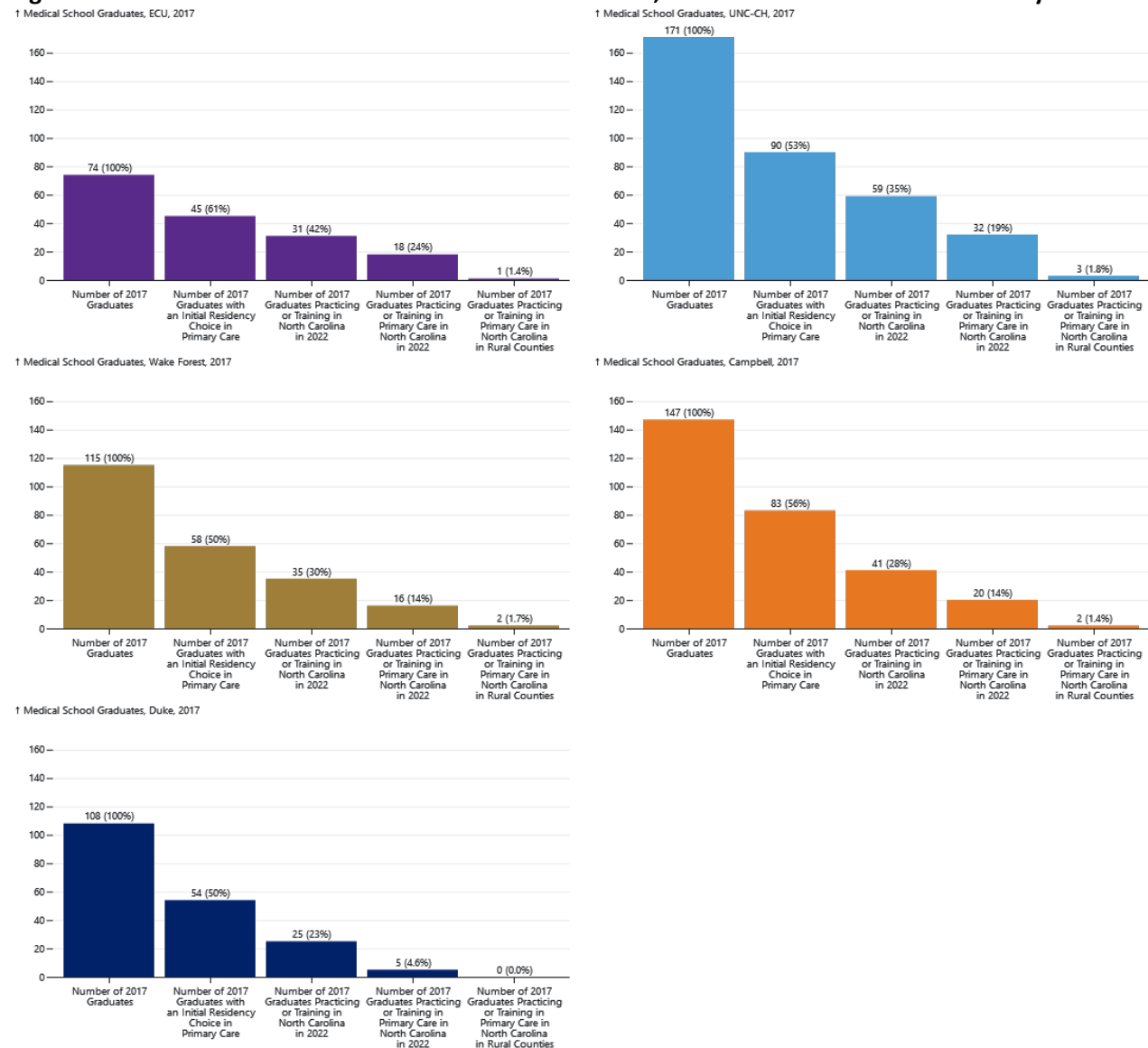
Figure 2: Percent of NC Medical School Graduates in Training or Practice in North Carolina Five Years After Graduating



Produced by the Program on Health Workforce Research and Policy, 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 Association of American Medical Colleges and the NC Medical Board, and the respective medical schools.

Figure 3 shows the primary care practice or training outcomes for each school’s 2017 graduates. Each individual figure is a version of **Figure 1** for each school’s graduates. Very few graduates from any school are practicing primary care in a rural area. However, ECU retained 24% of its 2017 graduating class in North Carolina practicing or training in primary care. UNC retained 19% of its graduates in primary care, representing 32 physicians, making UNC the medical school contributing the largest number of medical school graduates retained in the state’s primary care workforce.

Figure 3: Workforce Outcomes Five Years after Graduation, 2017 Medical School Graduates by School



Produced by the Program on Health Workforce Research and Policy, 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 Association of American Medical Colleges and the NC Medical Board, and the respective medical schools, 2022. Rural source: US Census Bureau and Office of Management and Budget, March 2020. "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.

Practice in Safety Net Settings and Most Economically Distressed Neighborhoods

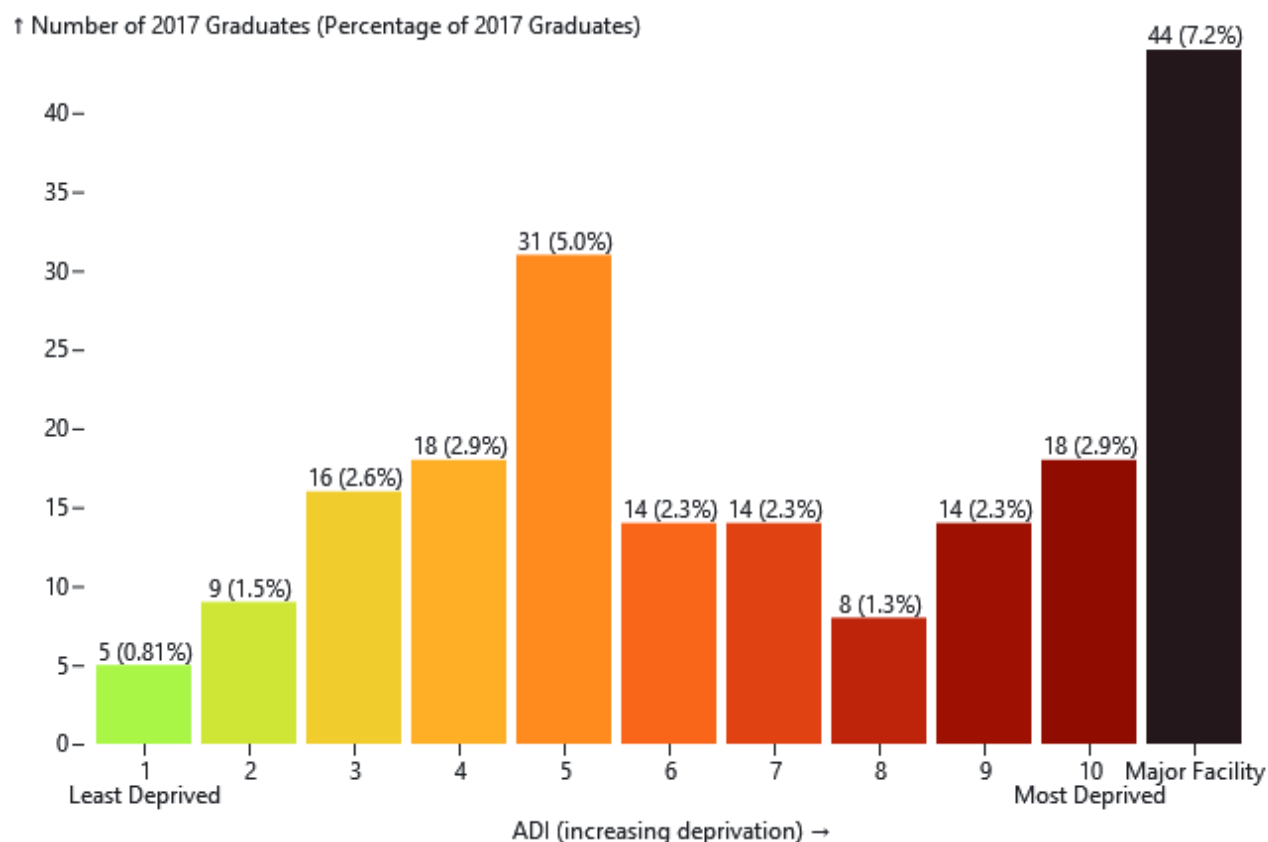
Safety net providers are defined as facilities that provide a significant level of and other health-related services to uninsured, Medicaid, and other vulnerable populations. Four graduates from the class of 2017 were in practice in safety net settings in NC in 2022, including three UNC graduates and one Wake Forest graduate. All four sites were Federally Qualified Health Centers (FQHCs).

Figure 4 compares the Area Deprivation Index (ADI) of the neighborhoods where physicians who were retained in North Carolina five years after graduation report their primary practice location. The ADI is based on factors related to income, education, employment, and housing quality in a census block group, which is the geographic equivalent of a neighborhood. Low scores indicate low levels of economic distress, and high scores indicate high levels of economic distress. Five percent (32/615) of the class of 2017 worked in a practice location in the top quintile (ADI 9 and 10) of economically distressed neighborhoods five years after graduation.

ADI scores are not assigned for census block groups dominated by large facilities, such as hospitals. ADI scores were not available for almost a quarter (23%, n=44/191) of the graduating class of 2017 who were still in North Carolina because their primary practice location was a large facility, most likely a hospital, which makes sense as many of these physicians are likely still in training.

Figures 4, 5, and 6 include only individuals who were active and licensed in North Carolina in 2022, as this report relies on the NCMB data for practice outcomes. The 424 (69%) graduates who were practicing or training in another state, or who were not active in 2022 are omitted. The values are calculated as a percentage of the total graduating class.

Figure 4: Neighborhood Disadvantage Status in 2022 of Physicians Retained in North Carolina Who Graduated from a NC Medical School in 2017



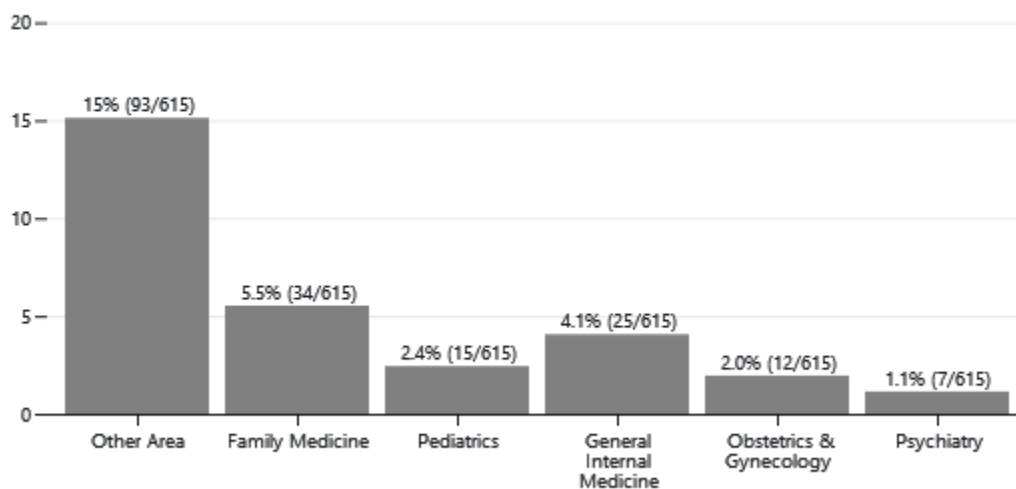
Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: North Carolina Health Professions Data System with data derived from the Association of American Medical Colleges and the NC Medical Board, and the respective medical schools, 2022. ADI Score obtained from the University of

Retention in Primary Care and Psychiatry Areas of Practice

Figure 5 displays the outcomes for 2017 graduates by area of practice. Physicians report a primary area of practice to the NCMB each year of licensure. A physician's primary area of practice can differ from their training specialty.

Figure 5: Percentage of 2017 Medical School Graduates Practicing or Training in Primary Care in North Carolina by Area of Practice in 2022, North Carolina Overall and Rural

† Percentage of 2017 North Carolina Medical School Graduates by Area of Practice in North Carolina in 2022



† Percentage of 2017 North Carolina Medical School Graduates by Area of Practice in North Carolina in Rural Counties in 2022

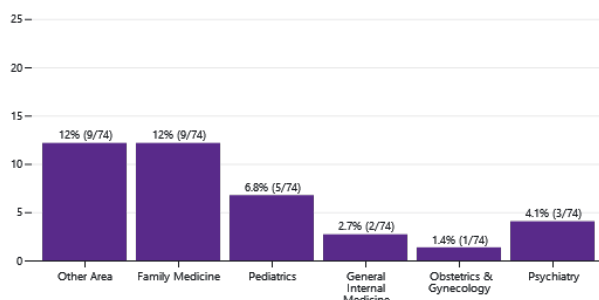


Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: North Carolina Health Professions Data System with data derived from the Association of American Medical Colleges and the NC Medical Board, and the respective medical schools, 2022. Rural source: US Census Bureau and Office of Management and Budget, March 2020. “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.

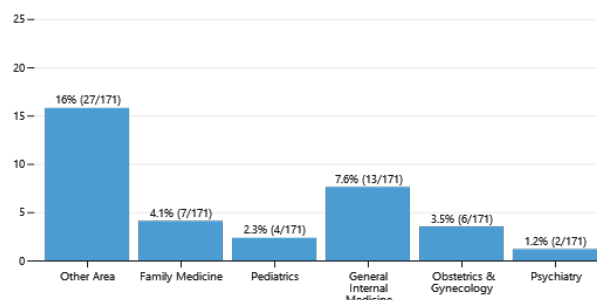
Figure 6 shows the same set of practice outcomes but for each school individually.

Figure 6: Percentage of 2017 Medical School Graduates Practicing or Training in Primary Care in North Carolina by Medical School and Area of Practice in 2022.

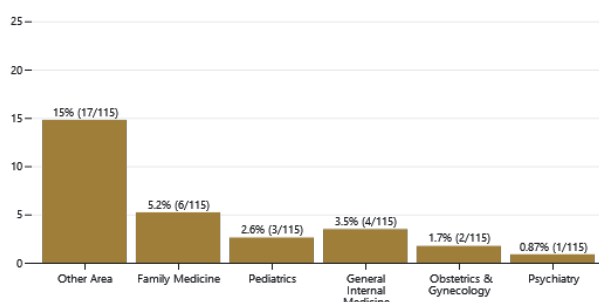
† Percentage of ECU's 2017 Medical School Graduates by Area of Practice in North Carolina in 2022



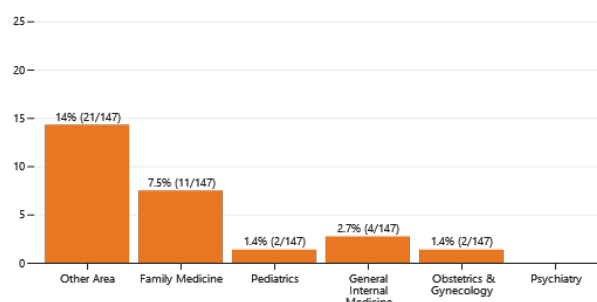
† Percentage of UNC-CH's 2017 Medical School Graduates by Area of Practice in North Carolina in 2022



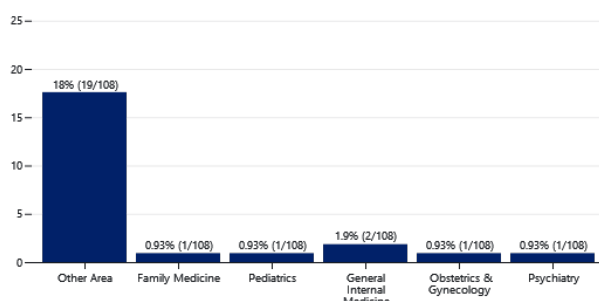
† Percentage of Wake Forest's 2017 Medical School Graduates by Area of Practice in North Carolina in 2022



† Percentage of Campbell's 2017 Medical School Graduates by Area of Practice in North Carolina in 2022



† Percentage of Duke's 2017 Medical School Graduates by Area of Practice in North Carolina in 2022



Produced by the Program on Health Workforce Research and Policy, 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 Association of American Medical Colleges and the NC Medical Board, and the respective medical schools, 2022.

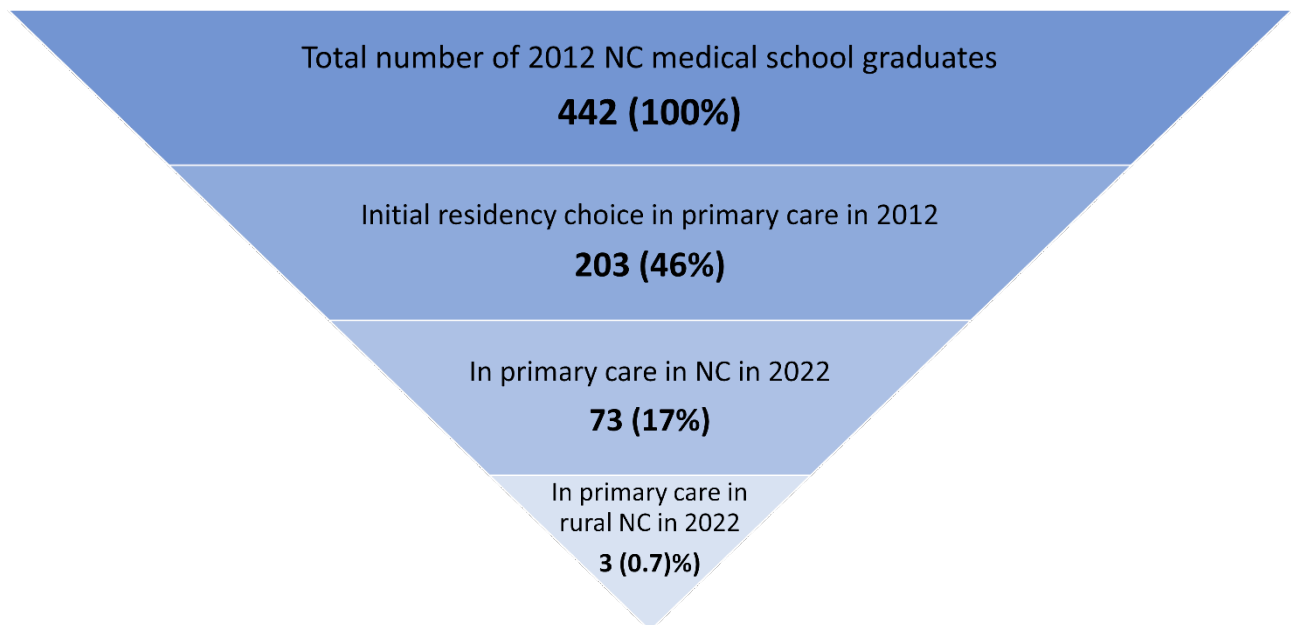
Psychiatry includes physicians who report practicing in the following specialties: Psychiatry, Child and Adolescent Psychiatry, Psychoanalysis, Forensic Psychiatry, Psychosomatic Medicine, Psychiatry/Geriatric, Family Medicine-Psychiatry, Internal Medicine-Psychiatry, and Pediatrics-Psychiatry.

Class of 2012 Outcomes

We also tracked 2012 graduates of NC medical schools to determine where graduates were ten years following graduation from medical school. As noted previously, ten years post-graduation from medical school allows time for physicians to complete residency and fellowship training.

Figure 7 illustrates the aggregate outcome of North Carolina’s medical school graduates ten years after graduation in 2012.

Figure 7: Retention of 2012 NC Medical Graduates in NC Rural Primary Care Ten Years After Graduating

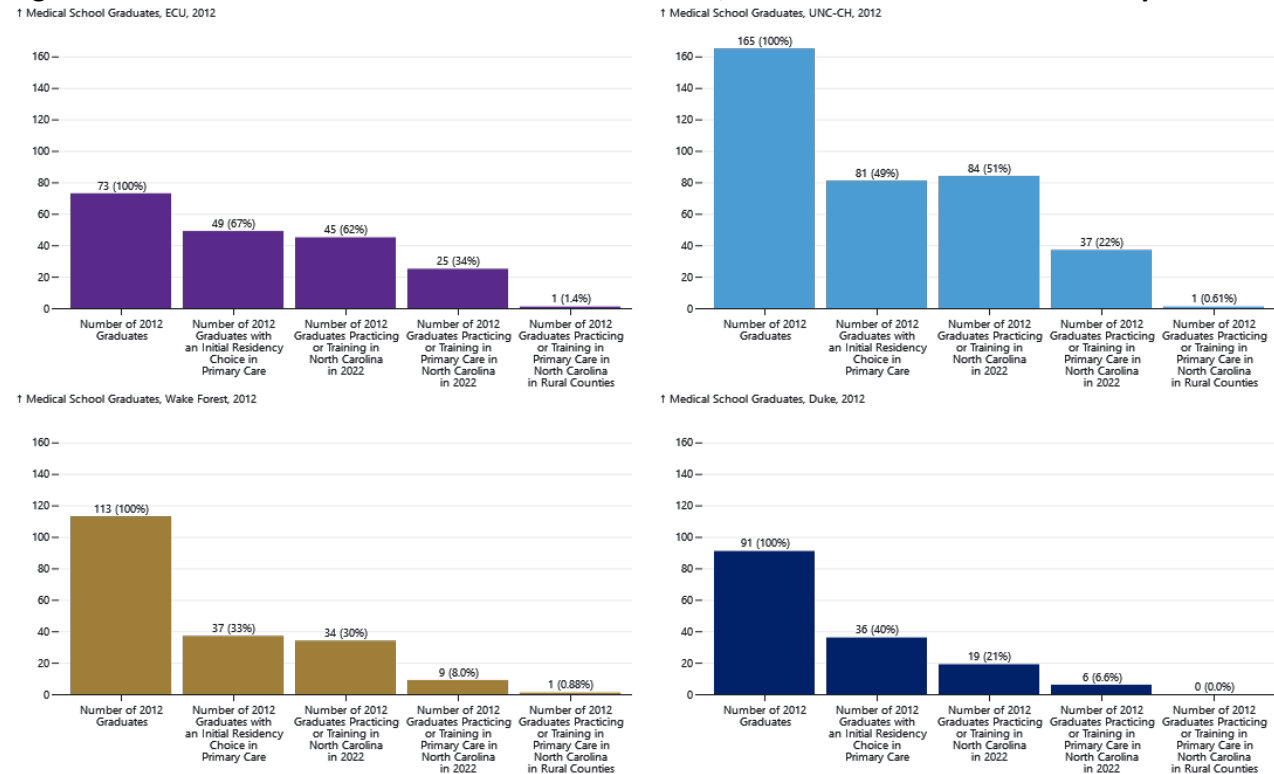


Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: North Carolina Health Professions Data System with data derived from the Association of American Medical Colleges, and the NC Medical Board, and the respective medical schools, 2022. Rural source: US Census Bureau and Office of Management and Budget, March 2020. “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.

Retention of Graduates in North Carolina and in Rural Counties

The retention of primary care providers for each school's 2012 graduates is illustrated in **Figure 8**.

Figure 8: Workforce Outcomes Ten Years after Graduation, 2012 Medical School Graduates by School



Produced by the Program on Health Workforce Research and Policy, 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 Association of American Medical Colleges and the NC Medical Board, and the respective medical schools, 2022. Rural source: US Census Bureau and Office of Management and Budget, March 2020. "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.

Practice in Safety Net Settings and Most Economically Distressed Neighborhoods

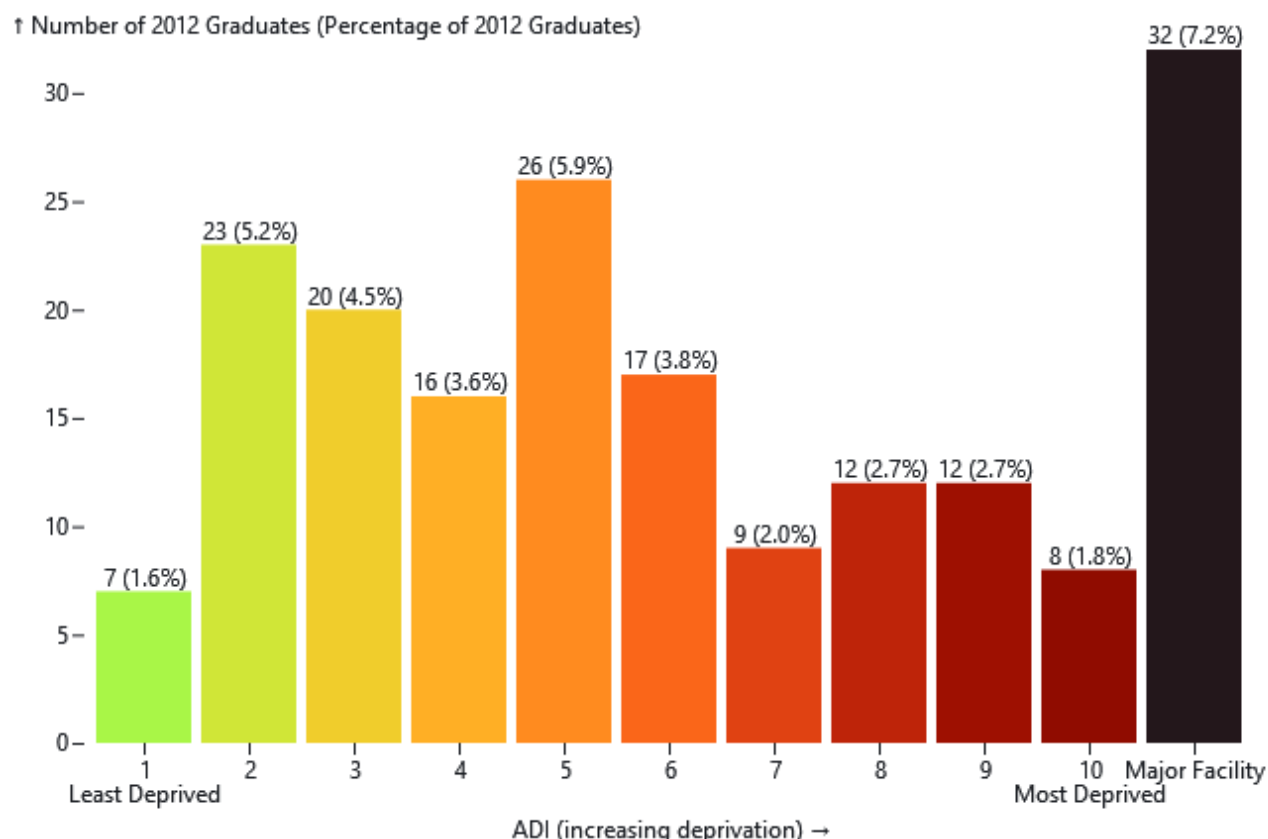
Two graduates from the class of 2012 were in practice in safety net settings in 2022, including one ECU graduate and one UNC graduate. One site was an FQHC and the other was a small rural hospital.

Figure 9 compares the Area Deprivation Index (ADI) of the neighborhoods in North Carolina where physicians from the class of 2012 report their primary practice location in 2022. Nearly five percent (n=20/442) of the class of 2011 worked in a practice location in the top quintile of economically distressed neighborhoods ten years after graduation. As with the 2017 cohort, note the large proportion of graduates for whom an ADI score is not available because their practice location is a major facility. Of course, depending on the location and type of facility, many of these graduates will also be serving many economically distressed patients.

Figures 9, 10, and 11 include only individuals who were active and licensed in North Carolina in 2022, as this report relies on the NCMB data for practice outcomes. The 260 (59%) graduates who were practicing or

training in another state, or who were not active in 2022 are omitted. The values are calculated as a percentage of the total graduating class.

Figure 9: Neighborhood Disadvantage Status in 2022 of Physicians Retained in North Carolina Who Graduated from a NC Medical School in 2012



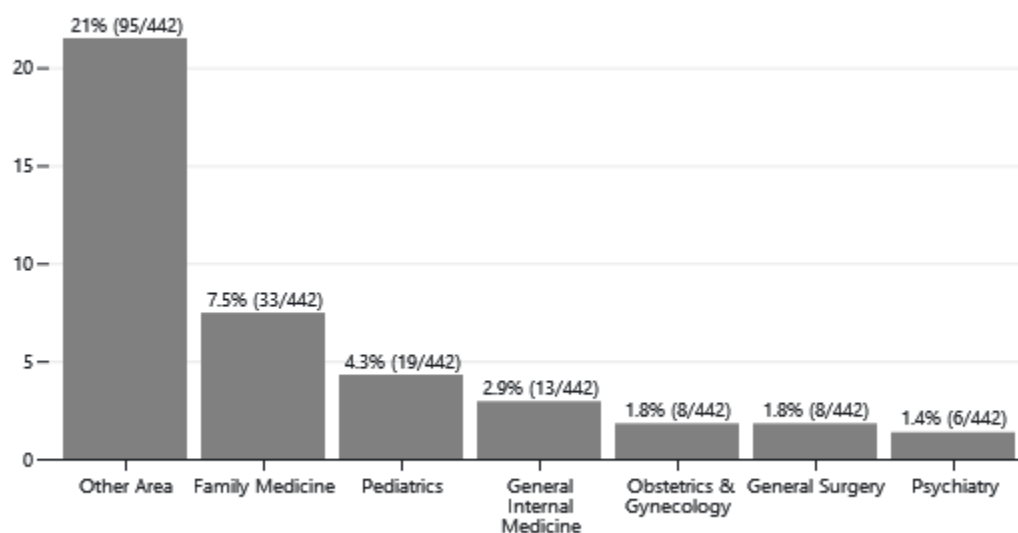
Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: North Carolina Health Professions Data System with data derived from the Association of American Medical Colleges and the NC Medical Board, and the respective medical schools, 2022. ADI Score obtained from the University of Wisconsin School of Medicine Public Health. 2019 Area Deprivation Index v3.1 Downloaded from <https://www.neighborhoodatlas.medicine.wisc.edu/> January 11, 2022.

Retention in Primary Care, General Surgery, and Psychiatry Areas of Practice

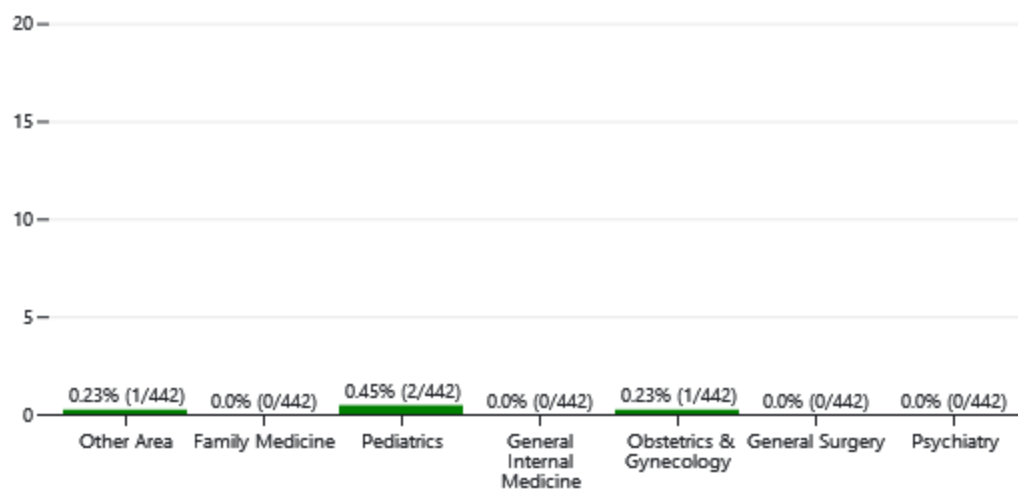
Figure 10 shows outcomes for 2012 graduates who are in North Carolina and have a primary care area of practice, or who are practicing psychiatry or general surgery. The outcomes for general surgery are reported here for the 2012 cohort, but not for the 2017 cohort, because general surgery residencies typically last five years, and many general surgeons complete a sub-specialty fellowship afterwards. For this reason, reporting on general surgery practice outcomes at five-years post-graduation may be misleading.

Figure 10: Percentage of 2012 Medical School Graduates Practicing or Training in Primary Care in North Carolina by Area of Practice in 2022, North Carolina Overall and Rural

† Percentage of 2012 North Carolina Medical School Graduates
by Area of Practice in North Carolina in 2022



† Percentage of 2012 North Carolina Medical School Graduates
by Area of Practice in North Carolina in Rural Counties in 2022

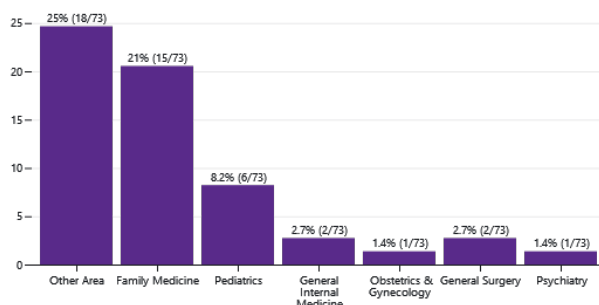


Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: North Carolina Health Professions Data System with data derived from the Association of American Medical Colleges and the NC Medical Board, and the respective medical schools, 2022. Rural source: US Census Bureau and Office of Management and Budget, March 2020. “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.

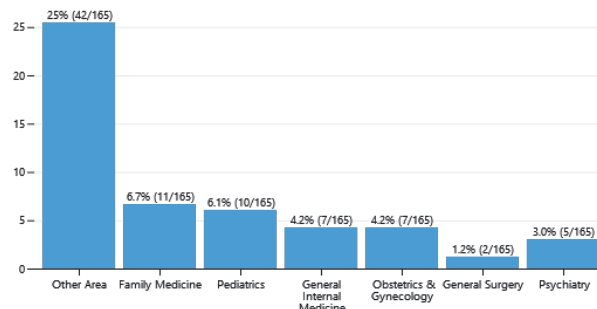
Figure 11 shows the same set of area of practice outcomes but for each school individually.

Figure 11: Percentage of 2012 Medical School Graduates Practicing or Training in Primary Care in North Carolina by Medical School and Area of Practice in 2022.

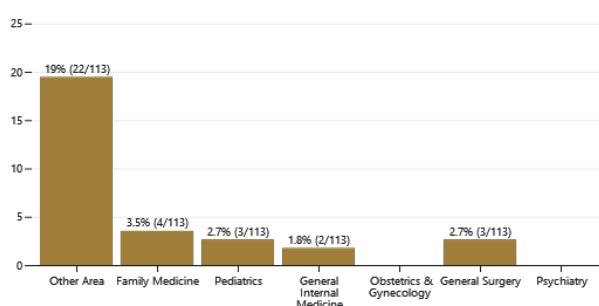
† Percentage of ECU's 2012 Medical School Graduates by Area of Practice in North Carolina in 2022



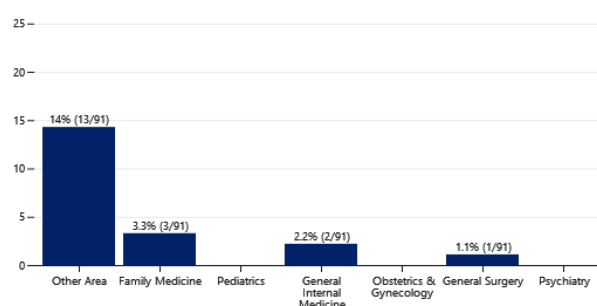
† Percentage of UNC-CH's 2012 Medical School Graduates by Area of Practice in North Carolina in 2022



† Percentage of Wake Forest's 2012 Medical School Graduates by Area of Practice in North Carolina in 2022



† Percentage of Duke's 2012 Medical School Graduates by Area of Practice in North Carolina in 2022



Produced by the Program on Health Workforce Research and Policy, 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 Association of American Medical Colleges and the NC Medical Board, and the respective medical schools, 2022.

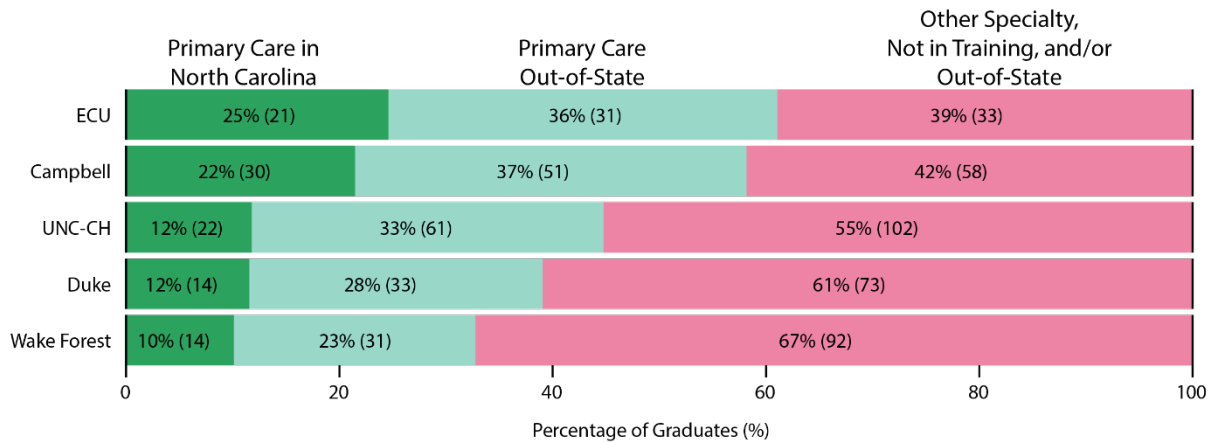
General surgery includes physicians report practicing in the following specialties: General Surgery, Abdominal Surgery, Colon & Rectal Surgery, Critical Care Surgery, Head and Neck Surgery, Oncology Surgery, Pediatric Surgery, Transplant Surgery, Trauma Surgery, or Vascular Surgery.

Initial Match Data: 2022 Graduating Cohort

As mentioned earlier, this report does not emphasize initial match data from the NC medical schools. Residents sometimes switch specialties or residency programs throughout the course of their training, and many subspecialize. Matches to “primary care” specialties (Family Medicine, Internal Medicine, Pediatrics, Internal Medicine-Pediatrics, and Obstetrics & Gynecology) are inflated compared to the number of graduates eventually expected to practice in those fields. We also track two other needed specialties in NC: psychiatry and general surgery. Prior trends indicate that many NC graduates, including most of those who match to Internal Medicine and General Surgery, will go on to complete fellowship training and eventually practice in a sub-specialty field. Family Medicine is an exception to this trend.

Figure 12 shows the proportion of each school’s 2022 graduates who had an initial match to a primary care residency in North Carolina or in another state. ECU matched the greatest proportion to primary care residencies in North Carolina (25%, n = 21) and overall (61%, n= 52), but Campbell matched a greater number of graduates to primary care residencies both in North Carolina (30) and overall (81).

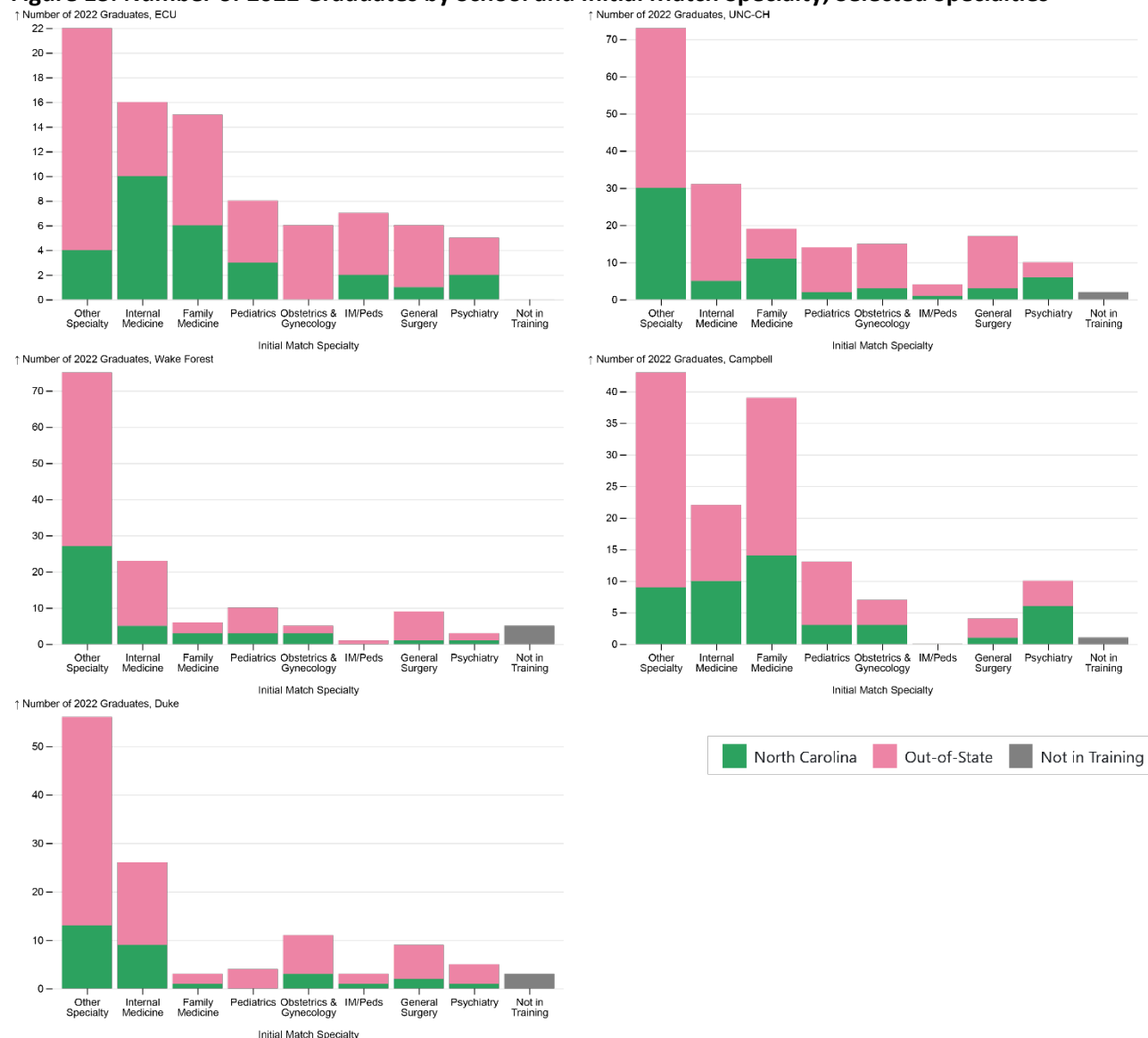
Figure 12: Initial Matches of 2022 Graduates for Primary Care by School



Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: the respective medical schools, 2022.

Figure 13 displays the number of 2022 graduates who matched to primary care specialties, general surgery, or psychiatry. (Note that the axes are scaled to each school's number of graduates.)

Figure 13: Number of 2022 Graduates by School and Initial Match Specialty, Selected Specialties



Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: the respective medical schools, 2022.

DISCUSSION

While most people interact with the health system at some point in their lives and have a general understanding of the work physicians do, the majority are unaware of the specifics related to physician training—for example, the difference between a medical student and a resident. Legislators⁴ and other influential stakeholders, many of whom may be able to directly influence the health system, often come from career paths outside of health care. When concerns about the availability of physicians to meet the demand for health care arise, expanding medical education is a logical first impulse for those unfamiliar with physician training pathways. Medical school is one of multiple points along a physician's career trajectory where stakeholders can intervene to encourage practice in needed specialties and geographies.

⁴ Spero JC, Fraher EP, Ricketts TC, Rockey PH. GME in the United States: A Review of State Initiatives. Cecil G. Sheps Center for Health Services Research, The University of North Carolina at Chapel Hill. September 2013.

The newer analyses tell an important and previously untold story about the contribution of NC medical schools to the NC physician workforce. Overall, again we see a small percentage of the 2012 and 2017 graduating cohorts working in safety net settings. To address state workforce needs, we need to think broadly about both where those populations are geographically located—not all of them are in rural areas—and we also need to think broadly about which types of physicians serve those populations, as many work in specialties other than primary care.

While this report tracks outcomes from NC medical schools, it still does not track outcomes of NC residency programs, and there is no legislative mandate to track NC residency program outcomes. While some NC medical school graduates also complete an NC residency, many residents in NC residency programs completed medical school outside of North Carolina. We continue to think it would be valuable to track the outcomes of NC residency programs.

Tracking NC residency program outcomes would provide information to make decisions about how to target state funds most effectively. The Sheps Center, in collaboration with AHEC, is a national leader in tracking the workforce outcomes for medical schools and GME programs at the program level. In short, there are resources within the state that can accomplish this work if legislation is passed that requires a study of NC residency outcomes.

A key driver of retention of primary care physicians in North Carolina is the availability of community based primary care residencies in the state. Medical students must go through at least three years of training before being able to practice independently, and many physicians practice close to their residencies for the remainder of their careers.⁵⁶⁷ AHEC primary care residencies have a solid track record of keeping physicians in the state. Data from the American Medical Association physician master file demonstrate that 53% of active physicians who completed an NC AHEC residency between 1997-2017 remained in practice in NC, compared to 41% who completed a non-AHEC residency.⁸]

In addition to residencies, other intervention points exist in the training of physicians that could further support the selection of primary care practice in a distressed community. Attachment B of this Report describes a Pathway to help admit students from those communities, deploy a focused curriculum with community health service tracks, provide rotations in Select Teaching Practices focused on and supported to provide high-quality primary care experiences, facilitate matching into a primary care residency training program, and provide Fellowships to support new graduates when the practices in those communities. Attachment C shows North Carolina counties with less than the 1,500:1 primary care to population ratio recommended by Healthy North Carolina 2030. This Pathway could target those communities. This pathway is more likely to succeed if accompanied by targeted scholarships with the goal of these students have no debt upon graduation and it must be observed that increased reimbursement rates for primary care would eliminate a substantial financial barrier to medical students choosing to practice primary care.

⁵ Dorner FH, Burr RM, Tucker SL. The geographic relationships between physicians' residency sites and the locations of their first practices. *Acad Med.* 1991;66(9):540–4

⁶ Seifer SD, Vranizan K, Grumbach K. Graduate medical education and physician practice location. *JAMA.* 1995;274(9):685–91.

⁷ Fagan EB, et. al. Family medicine graduate proximity to their site of training: policy options for improving the distribution of primary care access. *Fam Med.* 2015;47(2):124-30.

⁸ Spero J. Compared to Non-AHEC Residents, a Higher Percentage of NC AHEC Residents are Practicing in NC. Sheps Health Workforce NC Blog, 18 March 2019. Accessed 10/8/19 at: https://nhealthworkforce.unc.edu/ahec_resident_outcomes_2017/

Notes

Limitations: The information used in this analysis to determine a medical graduate's initial specialty choice for residency and to determine retention in primary care comes from different sources. When calculating retention in primary care five years after graduation, data directly from each medical school are used to determine initial choice of residency. When collecting this data, we do not differentiate between internal medicine and medicine-preliminary, so the data may appear to be inflated for initial residency choice of primary care.

Beginning with the class of 2014, Sheps no longer received AMA Masterfile data matched to AAMC GMETrack data as in prior years. This change was the result of a renegotiated data use agreement between AMA and AAMC that took effect in 2020. Without the AMA Masterfile data, it is not possible to track workforce outcomes for NC medical school graduates in practice or training outside of NC. In addition, Sheps no longer has access to variables from the AMA Masterfile indicating whether a physician is dead or has left active practice.

Beginning with the class of 2006, all MDs graduating in a year, regardless of month, are counted with that year's graduates.

Primary Care Coding: Primary care coding was revised in 2014 to reflect more accurate aggregation of AMA minor codes to AMA major codes. Primary care residency specialties are defined by legislation passed by the NC General Assembly in 1993 (Senate Bill 27/ House Bill 729) and include family medicine, general internal medicine, general pediatric medicine, internal medicine-pediatrics, and obstetrics and gynecology. Specialties included under the definitions of current practice specialties for primary care, psychiatry, and general surgery were revised in 2014 and reviewed by practicing clinicians for accuracy.

"Primary Care" is defined for both initial specialty of residency training (identified using match data provided by each medical school) and for current practice or training area (identified using NCMB data for physicians in NC).

More specialties are included under the definition of "primary care" for current practice or training area than for specialty of residency training because physicians may specialize within their primary care area of practice following training.

Appendix A

Self-reported responses to requests for information about what each medical school is doing to try to increase the number of students who will practice primary care in rural North Carolina.

Campbell University School of Osteopathic Medicine

The mission of the Campbell University School of Osteopathic Medicine (CUSOM) is to educate and prepare community-based osteopathic physicians in a Christian environment to care for the rural and underserved populations in North Carolina, the Southeastern United States, and the nation. The focus on community-based care is significant as it recognizes the unique health care needs of rural and underserved populations. The preparation to enter those environments is unique and has been a core focus for our school. The Christian environment that we foster has played a significant role in shaping the values and beliefs of our graduates and shaping the way they approach their work as physicians. By instilling a strong sense of compassion, empathy, and ethical principles in its graduates, CUSOM is helping to ensure that they are well-prepared to provide high-quality, patient-centered care that is consistent with institutional values.

Campbell University School of Medicine opened its doors to its inaugural class of 162 students in 2013. Campbell University also became the first College of Osteopathic Medicine to serve as an ACGME sponsoring institution for Graduate Medical Education. As a sponsoring institution, Campbell University has provided support and resources to its affiliated residency programs ensuring that they meet the standards and requirements set forth by the ACGME. 15 osteopathic programs successfully transitioned to ACGME accreditation under Campbell University's Sponsoring Institution. Campbell University now serves as the Sponsor for 24 ACGME accredited programs with 2 additional pending applications in partnership with 6 hospitals and systems.

Medical Student Impacts

The graduating class of 2017 (our inaugural class) would have completed 3 year residencies in 2020, 4 year residencies in 2021, and 5 year residency programs in 2022.

The graduating class of 2018 would have completed 3 year residencies in 2021, 4 year residencies in 2022, and 5 year residency programs in 2023.

Neither class is, likely, fully represented in the data collected by AAMC or UNC Sheps Center for Health Services Research until the 2023 and 2024 information is released.

Of the data that we have on the first two classes (2017 and 2018), 216 of our graduates are currently in practice with 65 of those graduates (30%) being located in the state of North Carolina. 41 are still in fellowship and 42 are still in a primary training program. The first two classes show 48% of our graduates being in the fields of Family Medicine or Internal Medicine and an additional 22% being in NC specific areas of need defined as General Surgery, Obstetrics, Psychiatry, and Pediatrics.

Overall, these trends suggest that CUSOM is making a positive contribution to the development of the physician workforce in North Carolina and that its graduates are well-prepared to enter the workforce and provide high-quality care to patients. It's great to see that a significant number of the CUSOM graduates from the classes of 2017 and 2018 have entered practice or fellowship programs, with a substantial number remaining in North Carolina. The strong commitment to primary care fields and

specific areas of need is critical to positively impacting our state's ability to provide comprehensive, patient-centered care.

Graduate Medical Education Impacts

Campbell University had a goal of having a net neutral impact on the number of graduate medical education positions by creating enough positions that we would not graduate more medical students than the graduate medical education positions we created. To date, Campbell University has started 24 residency and fellowship programs in North and South Carolina with 2 pending applications. Those programs contain 427 GME positions with 157 of those being PGY-1 positions. We have residency programs in Family Medicine (x4), Internal Medicine (x3), Emergency Medicine (x2), General Surgery, Psychiatry, OBGYN, Dermatology, Transitional Year (x5) and ONMM. We have fellowship programs in Sports Medicine (x2), Child and Adolescent Psychiatry, Cardiology, and Moh's Micrographic Surgery.

Our first resident started in 2014. Since that time, Campbell University Graduate Medical Education programs have placed 84 providers into active clinical practice with 32 of those remaining in North Carolina (38%) and 19/32 (59%) being in the fields of Family Medicine or Internal Medicine. Primary care is a critical component of health care, as it provides the foundation for patient care and helps to manage the overall health and well-being of individuals and populations. A solid primary care workforce is essential to ensuring that patients have access to comprehensive, high-quality care and that health care systems can effectively address the health needs of their communities.

Summary

Campbell University Graduates are now currently active in 32 of North Carolina's 100 counties. The full impact of Campbell University graduates to the physician workforce is still emerging. 2020 saw the inaugural class graduate from 3-year primary care programs. 2022 saw the first graduates in Surgery and Psychiatry from Campbell University GME programs. Combining the efforts of our medical school and our graduate medical education programs, Campbell University has placed 99 new providers in 32 North Carolina counties as of February 2023.

Duke University School of Medicine

Duke provides medical student clinical rotations. The goals of this program are for students to learn clinical skills in the context of a local community and to appreciate the effects of culture and context on health and health behaviors. 20 Duke students each year rotate through clinics in Roxboro, Henderson, Oxford, Mebane, Fremont, evaluating and following patients in these rural communities.

Duke also offers the Primary Care Leadership Track (PCLT), the goal of which is to create change agents for the system through primary care. The 4-year program offers leadership training, a longitudinal-integrated 2nd year clerkship, which includes following pregnant mothers and delivering their babies, time for service with a community agency, and 3rd year research in community-engaged population health.

PCLT graduates have chosen primary care residencies: family medicine (outpatient adults, children, and prenatal care), general internal medicine (adults only), primary care pediatrics (children only), pediatrics/psychiatry, medicine/psychiatry, and Obstetrics/gynecology

ECU Brody School of Medicine

- Our Mission
 - Increase the supply of primary care physicians serving North Carolina
 - In most recent Match, 43% matched in North Carolina and 51% in primary care¹
 - Brody ranks in the 91st percentile nationally in medical schools on the percent of graduates practicing in-state after completing residency training²
 - 52% of ECU (Brody) graduates are retained in-state five years after graduating – the highest among medical schools in North Carolina³
 - ECU (Brody) has 33% of graduates practicing primary care in-state five years after graduating - the highest among medical schools in North Carolina³
 - 69% of Brody graduates from 1980 to 2017 practice in underserved areas⁴
 - Percent of graduates statewide in⁴
 - Socioeconomically disadvantaged communities – 20%
 - Hispanic communities – 22%
 - Black communities – 21%
 - High-poverty communities – 24%
 - Ranked 22nd in Most Graduates Practicing Primary Care by US News and World Report⁵
 - #7 in the top 20 medical school programs in Family Medicine⁵
 - Improve the health status of eastern North Carolina's residents
 - We partner with practice environments in rural Eastern North Carolina in order to provide our students the opportunity to get to know these communities better and enhance their desire to move to these areas after they complete their training.
 - 82% of graduates participated in a free clinic for the underserved⁶
 - 31% of our graduates have experiences in community health before graduating²
 - We have developed our curriculum to assure that our students are introduced to the social determinants of health and made aware of existing health care disparities in order to better prepare them to make an impact in addressing them during the course of their careers.
 - 85% of our students have experiences in health disparities and 78% in cultural awareness before graduating²
 - 98% of our students are prepared to care for patients from different backgrounds (Brody ranks nationally in the 92nd percentile)²
 - Ranked 16th by US News and World Report for Most Graduates Practicing in Health Professional Shortage Areas⁵
 - Enhance access of minority and disadvantaged students to a medical education
 - Current enrollment is 344¹
 - 26% of our medical students are from rural counties
 - 46% came from Tier 1 (24%) and Tier 2 (22%) counties in North Carolina
 - 18% are first generation
 - 30% are from underrepresented minority groups
 - 27% from EO1 and EO2 socioeconomic status (whose parent(s) completed highest level of education less than a Bachelor's degree with service, clerical, skilled and unskilled occupation)
 - Ranked in Top 10% of Most Diverse Best Medical Schools by US News and World Report⁵

Sources:

¹ Internal records (Student information system; admission records, and NRMP Match data file (2022))

² AAMC Missions Management Tool (2023)

³ Outcomes of NC Medical School Graduates: How Many Stay in Practice in NC, in Primary Care and in High Needs Areas. March 30, 2022. Sheps Health Workforce NC. Cecil G. Sheps Center for Health Service Research.

⁴ AMA ChangeMedEd Graduate Profile (2023).

⁵ US News & World Report (2023)

⁶ AAMC Graduate Questionnaire (2022)

University of North Carolina at Chapel Hill School of Medicine

Kenan Rural Primary Care Scholars Program – With support of the Sarah Graham Kenan Endowment and the William R. Kenan, Jr. Charitable Trust, the Kenan Primary Care Scholars Program offers medical students rural experiences in Central, Eastern, and Western North Carolina. These longitudinal exposures during medical school prepare students for careers in rural primary care while also providing financial support and enrichment experiences to sustain their commitment to rural primary care in North Carolina.

FIRST (Fully Integrated Readiness for Service Training) Program – The FIRST program began in 2015 and aims to increase primary care physicians in rural and underserved areas in North Carolina. Students complete medical school at an accelerated pace – in three years instead of four. The students have conditional acceptance at affiliated residency programs in Family Medicine and Psychiatry Pediatrics, and Surgery. They then serve in a rural or underserved area of North Carolina for at least three years. Students are recruited to the FIRST Program prior to entering medical school and during the fall of their first year of medical school. The FIRST Program promotes close faculty mentorship and familiarity with the system, includes a longitudinal quality improvement project with an assigned patient panel, includes early integration into the clinic, and fosters a close cohort of fellow students.

NC Rural Promise Scholarship - The NC Promise Scholarship is a scholarship program which allows students additional “on-ramps” for pursuit of rural primary care. Students who determine after their first year of medical school a commitment to primary care in rural North Carolina are eligible to apply in their second or third year of medical school. Students are supported with rural placements for rotations, connections to rural educational opportunities through the Office of Rural Initiatives (ORI), and support for practice placement after residency through the Office of Rural Health and others. If a student determines commitment in 4th year, they can apply for a one-time scholarship NC Rural Promise Scholars plan to enter the fields of family medicine, pediatrics, internal medicine, OB/Gyn, psychiatry, or general surgery and commit to serving in one of North Carolina’s rural counties. The scholarship funding was allocated by the North Carolina General Assembly in recognition of the mission of the School of Medicine and the potential impact graduates can make caring for the people of the state. Scholarship support is paid toward debt reduction before graduation. Upon the completion of residency training, the honorees have made a commitment to serve in one of the state’s rural counties that is underserved.

Important Pathway Programs before medical school – UNC SOM has a wide array of other programs that seeks to connect high school and college students to rural primary care programs and interests. Examples include the Rural Medicine Summer Academy that offers rising high school seniors a week-long immersive experience on UNC’s SOM campus; The Rural Medicine Pathway Program, a partnership with the Carolina

Covenant Scholars Program provides mentorship, guidance, and community engagement experiences to students from rural areas of North Carolina and helps prepare students to apply to UNC SOM. The new S.E.R.V.E. initiative out of ORI connects programs from middle school through college programming for students from rural SE NC counties, including exploration events hosted in their local communities; Heal Day with the Heels, bringing students to campus, and an On Call Speaker Series connecting providers who graduated from those high schools back to share their journeys with students. The SEEDS Scholarship Program enters year two offering support specifically to students from five counties in SE NC, and those who plan to pursue needed specialties in the region. In partnership with OSEEE and AHEC partners, ORI also provides outreach and program support to high schools, community college, and undergraduate institutions across the state and works with collaboratives such as Rockingham Primary Care Initiative on community-based programs to develop workforce for in North Carolina.

Wake Forest University School of Medicine

Family Medicine Interest Group: The mission of the Wake Forest School of Medicine Family Medicine Interest Group is to encourage interest in the specialty of Family Medicine; furthering the ideal of longitudinal, patient-centered care. Inspired by the AAFP Family Physicians' Creed and the Mission Statements of the AAFP and NCAFP, we strive to holistically improve the health of our community while exemplifying professionalism and creativity. Our overarching goal is to support and recruit interest by capturing students in training to become exceptional, humanistic physicians. Exposing students to Family Medicine as a career path early at interest fairs and via lunch talks supports this goal. Having upper-level students (formally and informally) mentor new students continues this pipeline through the residency match process. Further, our events consider health care policy and affordability, striving to advance high quality clinical evidence and advocate for health equity. By hosting events and combining efforts with other student groups, we hope that topics (e.g. LGBTQ health) that do not receive extensive attention elsewhere in the curriculum are illuminated. While we hope that our efforts lead to more students entering the primary care Family Medicine workforce, those who choose other specialties will also benefit from our diverse programming. 134 students signed-up on Canvas; 52 members in the group; suture workshop with 20 students on February 28

Share the Health Fair: According to the 2021 Forsyth County Measures Report, the top five intervenable leading causes of death for the county are cancer, heart diseases, chronic lower respiratory disease, cerebrovascular disease, and diabetes. Share the Health Fair exists to help meet these health discrepancies by minimizing barriers to care, improving social determinants of health, increasing awareness of preventative measures to avoid common chronic diseases, connecting fair participants to options for year-round health care, and empowering fair participants with the tools necessary to take their health into their own hands. Since its inception in 2000, the mission of the Share the Health Fair has been to provide basic medical screenings and information on health care and healthy living for all members of the Winston-Salem community, especially those who may not otherwise have adequate access to these services. It is an entirely student-organized effort, providing a unique opportunity for Wake Forest University School of Medicine (WFSUOM) students to learn about community health and promote wellbeing within the community that has welcomed us as we pursue medical education. The fair in 2022 was staffed by over two-hundred volunteers, including 201 students from WFUSOM, 30 students from WSSU PT, 13 NW AHEC Scholars, 21 physician volunteers, and other outreach program volunteers.

DEAC Clinic: DEAC provides an opportunity for to deliver high quality patient care adapted to our unique student-run clinical model. Students and attending physicians love our new clinical space with areas for exam rooms, lab space, triage, front desk, and teaching from our wonderful physician volunteers. Our new clinic also allows us to deliver new initiatives like providing hot meals in partnership with Campus Kitchen. As our clinic grows, we look forward to further developing the wonderful roles that DEAC plays in our community over the many years in this new space. The Vision Clinic is a new student-run clinic run in partnership with City with Dwellings and currently funded via the Schweitzer Fellowship and will see primarily homeless population for vision related issues. We are currently purchasing equipment, establishing educational material for student volunteers, and setting up the new space which should be completed in early 2023. As of October 24th, DEAC is excited to announce that we have successfully implemented our Food Insecurity pilot program in partnership with Campus Kitchen. Campus Kitchen is an organization at Wake Forest University that aims to reduce food waste by distributing excess produce to the community. As part of our partnership, Campus Kitchen prepares fresh, nutritious meals with the surplus they acquire for distribution at DEAC clinic. All patients being seen at the clinic are offered a meal to take home with them at the end of their visit. We have received positive feedback and gratitude from patients who otherwise would not have had time to cook dinner that night. As a cross-disciplinary team, we recently added 2 new PA directors to our board, both 1st year PA students. They will help us connect more with our PA colleagues in the PA school in addition to serving as managers in our clinic and special initiatives like our efforts to address food insecurity. In addition, we have had PA alumni reach out to our clinic to seek opportunities to donate and help which we graciously appreciate. There are 74 fourth year pharmacy students rotating at Atrium Health Wake Forest Baptist (AHWFB) during the 2022-2023 academic year. We have had 3 pharmacy volunteers each week of clinic from July to September. We have extended the uncontrolled hypertension project and enrolled two patients during Q3. We are currently out of blood pressure cuffs, but recently ordered more and are waiting for the shipment. We encourage Med Teams to continue to utilize this resource as we have found it beneficial to our patients. Regarding medication assistance, we have utilized both Crisis Control and MedHelp (previously known as Charity Care) through AHWFB to provide support to our patients. We utilize Crisis Control as a first-line resource if the patient lives locally and MedHelp as a secondary resource. We have printed applications for this in English and Spanish and have them available when needed.

Clinic Information

1. In this most recent quarter, there were 57 total visits in the DEAC Clinic (10 telehealth, 47 In-person). Of those visits, 18 were for patients new to DEAC and 39 visits were for patients returning to DEAC.
2. The clinic continues to see patients within one week of the patient requesting an appointment.
3. Show rate: 68% (39/57) of patients showed up for their scheduled appointment between Oct- Dec 2022.
4. During Oct- Dec 2022, 11 patient encounters required use of a translator during the visit.
5. Total cost of operation for the DEAC Clinic October - December 2022: \$3,178
6. Number of student volunteers Oct - Dec 2022: 65 Students volunteered 114 times
7. Number of preceptor volunteers Oct - Dec 2022: 9 preceptors volunteered 19 times

Clerkships: As part of the Wake Ready Curriculum, students complete a variety of community rotations/experiences between our two campuses (Winston-Salem and Charlotte) during the clerkship, with the opportunity to participate in electives in the post-clerkship curriculum. During the clerkship curriculum, all students complete an Ambulatory IM clerkship and Family Medicine clerkship. Students

also complete ambulatory components during their Pediatrics, Psychiatry and Obstetrics/Gynecology clerkships. A description of the dedicated community/ambulatory clerkships of Ambulatory IM and Family Medicine are included below.

Clerkship: Ambulatory Internal Medicine

Duration: 2 weeks

Description of Clerkship: The core clerkship in Ambulatory Internal Medicine focuses on the basic competencies of ambulatory internal medicine. Students spend time in various ambulatory settings which include continuity care clinics, complex care teams and urgent care clinics. Students are expected to participate in the care of patients presenting to these clinics, including but not limited to conditions such as COPD, Diabetes, Hyperlipidemia, Hypertension, Obesity, Tobacco Use, Depression and Joint Pain. Also, as part of the clerkship, students complete a Population Health QI activity in which students address patient's health maintenance by addressing vaccine gaps in patients they are participating in their care.

Participants in clerkship: All third year medical students on the Winston-Salem and Charlotte campuses (approx. 145 total)

Outcomes: Participation in care of patients with the above listed diagnoses/conditions and completion of the Population Health project.

Clerkship: Family Medicine

Description of Clerkship: The core clerkship in Family Medicine is a 4 week clerkship on the Winston-Salem campus and a longitudinal clerkship on our Charlotte campus during the 2022-2023 academic year. The clerkship consists of students participating in patient care in the outpatient family medicine clinics in both Winston-Salem and Charlotte. Students are expected to participate in the care of patients presenting with back/neck pain, dysuria, headache, joint pain, rashes, asthma/COPD, depression, diabetes mellitus, hyperlipidemia, hypertension, obesity, respiratory illness, tobacco use, adult and pediatric maintenance health exams, and counseling on smoking cessation.

Participants in clerkship: All third year medical students on the Winston-Salem and Charlotte campuses (approx. 145 total)

Outcomes: Participation in care of patients with above noted presentations, along with final exam in course (NBME exam).

Also during the clerkship phase of the curriculum, students also complete the Health Equity thread/curriculum. The curriculum encompasses a series of activities that focuses on health equity and the social determinants of health, such as housing, transportation, access to care, maternal-fetal health disparities as examples. When possible, the experiences are partnered with a community organization in Winston-Salem and Charlotte that are working to address these disparities.

Health Equity

Goals of Program:

1. Understand the scope of health disparities in the United States
2. Identify ways to contribute to the reduction of health disparities as a practicing clinician
3. Demonstrate the knowledge and skills needed to improve the health of underserved populations
4. Explore activities with community partners that will foster an interest in careers working with underserved populations.

Number of participants: All third year medical students at both campuses (approximately 145 students)

Outcomes: Completion of multiple exercises during curriculum addressing health equity and the social determinants of health

During the post-clerkship curriculum, students have the opportunity to participate in electives that are community based and related to primary care. The following electives can be enrolled in by students, with various enrollment each year.

**Strengthening the Training of the Physician Workforce Needed to Create a Healthy North Carolina
A Roadmap for a Statewide (and Nationwide) Approach**

An AHEC Proposal to develop a Collaboration between NC Medical Schools

Objectives:

1. Facilitate a path into medicine for students from rural and other underserved communities who might otherwise not have been able to envision themselves as future physicians.
2. Improve the supply and distribution of physicians in needed specialties in rural communities and other communities with less access to resources to create a healthy North Carolina.
3. Develop and extend learning opportunities across the state of North Carolina through community-based learning and relationships.

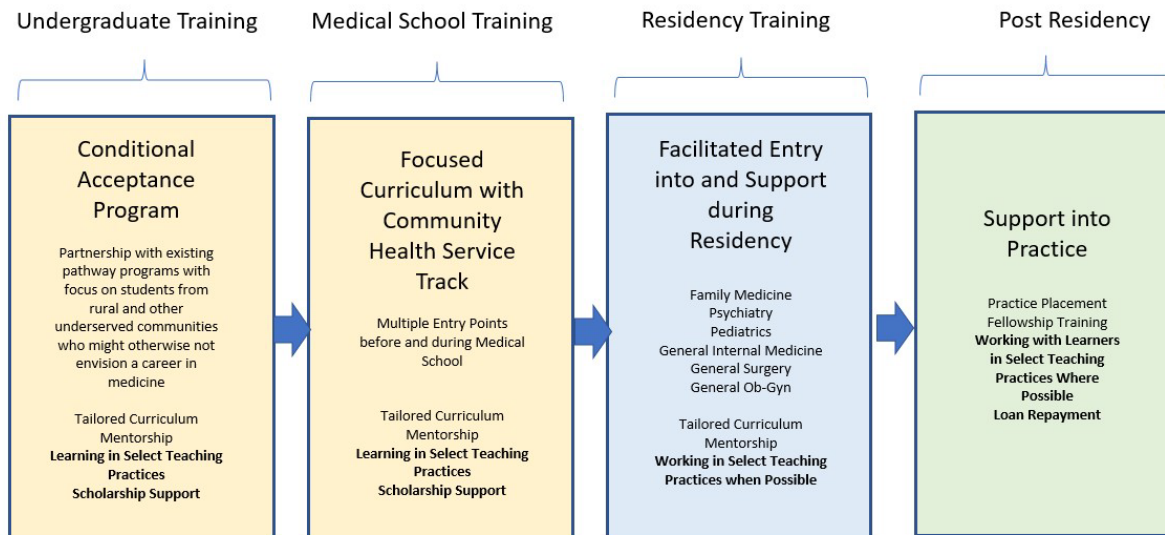
Summary:

A multi-pronged approach is needed to address this set of complex and important issues. The different components of the approach are described in more detail below. AHEC seeks to convene educational leaders of the two state medical schools to focus on 1) how to recruit more students who are likely to pursue careers in needed specialties, 2) how to train students in high quality primary care while in medical school and 3) how to create and support high functioning practices in which to teach students. The other components are also critically important and need to be addressed in a different manner.

Critically Important Areas of Focus to Achieve Objectives:

To reach these objectives, the program will:

- 1) Recruit students into medical school who are more likely to pursue careers in needed specialties in rural and other underserved communities (**Conditional Acceptance Programs into Medical School**)
- 2) Train these students in high quality primary care while in medical school (**Focused Curriculum with Community Health Service Tracks**)
- 3) Creation and Support of high functioning primary care practices able to effectively teach (**Select Teaching Practices**)
- 4) Help students match into appropriate residencies and support them during residency training (**Facilitated Primary Care Residency Training**)
- 5) Provide further support and training after residency to optimize their successful entry into practice in rural and other underserved areas (**Fellowship Training Programs**)
- 6) Provide financial support during training to allow learners to focus on their training and not be burdened by debt load that dissuade them from pursuing careers in primary care with a goal of entering practice without debt (**Scholarships and Loan Forgiveness Programs with Goal of Zero Debt**)
- 7) Continue to work at a national and state level to increase financial investments in primary care to allow for long term sustainability of primary care practices (**Increase Primary Care Reimbursement**)



Area of Focus #1: Conditional Acceptance Program

The program will recruit students with strong intentions to practice medicine in rural and other underserved communities in North Carolina at the end of their first year of undergraduate school and notify them of acceptance into program prior to their second year of undergraduate school. The students will have conditional acceptance into the participating NC medical schools if students meet defined milestones. Medical Schools participating in the collaboration will either have such a program already in existent or will develop such a program. The draft program components are further described below. **The educational collaborative convened by AHEC will further refine these components.**

Undergraduate students during their first year are nominated by their undergraduate programs. Partner HBCUs, Community Colleges, and Universities in the UNC System will be selected based on their interest in participating and their ability to recruit students who will likely pursue careers in rural and other underserved areas.

Criteria for Consideration:

- 1) Intends to practice in rural and other underserved communities in North Carolina
- 2) Strong connection to rural or other underserved communities in North Carolina
- 3) Completed one college level math and college level science course
- 4) In state residency

Nominated students are reviewed by participating medical schools for conditional acceptance into the program at the end of their first year of college.

Program Components that supplement Undergraduate Education:

- 1) Mentorship
- 2) Curriculum focusing on professional formation, clinical skills, and foundational sciences
- 3) Training in Select Teaching Practices for the majority of outpatient clinical experiences – Students will learn clinical medicine in teaching practices that are chosen based on the location of the

practice in a rural or otherwise underserved setting, the quality of care delivered in the practice, and the high commitment to education. These practices will receive additional support and training to allow them to effectively train Track students. This teaching model is described further below.

Proposed Milestones to Matriculate into Medical School:

- 1) Students enrolled in the program must meet the following milestones to be considered for admission into medical school.
- 2) Complete course work required for graduation with a BS or BA from undergraduate program at one of the partner institutions identified through the program and maintain a science GPA 3.5 or higher
- 3) Achieve MCAT score of 500 or higher prior to matriculation
- 4) Complete required clinical and community service experiences

Admission is not automatic. Their performance in the program will be reviewed and voted upon by the respective SOM admission's committee.

Program participants who matriculate into medical school are guaranteed a place in the Community Health Service Track described below and will be encouraged to pursue programs for workforce development in needed specialties across North Carolina. Participation, however, is not required as a condition of matriculation.

Area of Focus #2: Focused Curriculum with Community Health Service Track:

This track is intended to expand the total number of students engaged in rotations and experiences across rural and less resourced communities. In addition, having a specific and named rural track for students committed to rural practice will provide students additional leverage for residency placement through an LCME accredited track. Medical Schools participating in the collaboration will either have such a track already in existence or will develop such a track. Schools may choose to name their track differently. The components below are draft components of what such a track should include. **The educational collaborative convened by AHEC will further refine these components.**

Participating medical schools will work together to offer students an augmented rural and underserved curriculum. This will allow team formation among students who have shared commitment to education and engagement in rural and underserved communities across the state. Where possible this curriculum will be offered virtually to allow didactic learning without returning to the home campuses.

This track will also serve as a recruitment and gateway program for students identified through the conditional early assurance program. Program participants will be offered a guaranteed spot in the Community Health Service Track, but do not have to pursue the track to be considered for the conditional assurance program.

The track focuses on training MD students to become physicians who will serve rural and other underserved communities.

Sample Program Components:

- 1) Mentorship – Entering into Community Health Track, every student will be assigned a rural health preceptor. They will help students develop a statewide network of support that will provide important academic, professional, and social development.
- 2) Curricular Enhancements – Students in the track will complete all core requirements of the respective medical school curricula, but in addition will learn skills essential to being a rural physician in NC such as enhanced procedural skills including advanced point of care ultrasound skills.
- 3) Training in rural hospitals for a portion of required and elective inpatient experiences.
- 4) Training in Select Teaching Practices for the majority of outpatient clinical experiences – Select Teaching Practices are essential to the success of this program and are currently underdeveloped at most medical schools. For this reason, Creation and Support of Select Teaching Practices is discussed as a separate area of focus.

Area of Focus #3: Creation and Support of Select Teaching Practices

Students will learn clinical medicine in teaching practices that are chosen based on the location of the practice in a rural or otherwise underserved setting, the quality of care delivered in the practice, and the high commitment to education. These practices will receive additional support and training to allow them to effectively train Track students.

The creation of high functioning primary care practices in which to teach learners (Elite Teaching Practices) deserves further discussion. Developing these Select Teaching Practices is fundamental to ensuring a well-prepared primary care workforce for our future.

- 1) Select Teaching Practices will provide learners with the skills needed to succeed in primary care.
- 2) Select Teaching Practices inspire learners to pursue careers in primary care by role modeling the creativity and innovation that is possible in primary care.

Draft components of Select Teaching Practices are further described below. **The educational collaborative convened by AHEC will further refine these components.**

Sample Components that make Select Teaching Practices different from currently existing community preceptors:

- 1) Engaged Practices that provide high quality care. Select Teaching Practices will be high functioning primary care offices that provide a broad range of services to patients and have an enthusiasm for passing on their knowledge to the next generation of physicians. Select Teaching Practices will teach regularly so they can hone teaching skills and so that students integrate effectively into practice and directly contribute to the care of patients. Teachers in Select Teaching Practices will participate in occasional events to help improve their teaching skills and help us improve the curriculum. Select Teaching Practices will be important members of the teaching team will have an important voice in how students are trained.
- 2) Student assigned to Select Teaching Practices intend to pursue careers in primary care. These students have been carefully selected for their interest in primary care and are receiving focused training in high quality primary care. Select Teaching Practices are thus able to teach a highly motivated group of students that share the practices enthusiasm for primary care.

- 3) Students assigned to Select Teaching Practices make useful contributions to care. The same group of students are assigned to Select Teaching Practices over time so that they get to know the practice. This allows students to contribute to patient care in meaningful ways. The students are able to assist in value based care, patient education, and documentation. Other ideas have been put forth by national organizations;
<https://www.stfm.org/media/1348/studentsasaddedvalue2018.pdf>. These students may also return to your communities as colleagues and even partners.
- 4) Enhanced support to make it easier for Select Teaching Practices to teach. Draft ideas are listed below.
 - Payment that is more than a token of thanks. Select Teaching Practices will be reimbursed at a substantially increased rate. This support may come from participating medical schools or participating clinical organizations.
 - More clear expectations for students. Define clearly what a practice can offer the student and then clearly communicate those expectations to the student. Better two-way communication between the school and the Select Teaching Practice and more flexibility on the part of the school.
 - Reduced administrative burden of teaching. Standardization of course assignments, requirements, and grading forms between schools. Greater flexibility in assignments. Engage preceptors when creating course assignments and course requirements. Collaborate with curricular leaders to allow students to participate in ongoing projects of the practice and still get course credit.

Additional Areas of Focus that are important but are not part of this collaborative:

Additional Area of Focus: Facilitated Primary Care Residency Training

Participating residencies will ensure that Track students continue to receive mentorship and support during residency.

The goal of this longitudinal approach is to train students in needed specialties to work in rural and underserved communities. Formal training often ends with residency. A minority of medical students from NC medical schools will practice primary care or psychiatry, and far fewer still will practice in rural and underserved areas.

Graduate Medical Education (GME) in NC has grown from 4 communities 50 years ago to 26 communities now. Most GME outside of academic health centers is in primary care psychiatry. NC is home to three new psychiatry programs in the last five years and at least one new program is well into planning. Training residents in the communities in rural and urban communities where people live and work is a proven strategy to increasing provider supply and improving access to care.

Students from the track will be encouraged to schedule guest rotations with AHEC supported primary care and psychiatry residency programs and other community-based residency programs. These students will be encouraged to consider these programs as ideal opportunities to train in the types of communities they want to live and work and develop professional connections to those communities.

Additional Area of Focus: Fellowship Training Programs

Upon completion of residency, the program will support entry into practice with additional fellowship training. Fellowship training will provide enhanced clinical and business skills to succeed in rural practice. The fellowship will also provide teaching skills to grow the next generation of elite teaching practices.

MAHEC and UNC Office of Rural Initiatives have developed a rural fellowship program. Recently trained providers with employment in a rural community can have a portion of their professional time covered by the fellowship (10-20%) to allow the physician time to develop specific skills for rural practice as well as networking and rural leadership development. This fellowship has demonstrated early success and efforts will be made to expand it statewide.

Additional Area of Focus: Financial Support and Reduction of Loan Burden

Loan burden on student graduating from medical school has increased dramatically over the past decade. The current average debt of graduating medical students nationally is now about \$200,000. With continued wide disparities in salaries between specialties, large debt burden can influence student choice of specialties.

Even for students trained in needed specialties, large health systems in wealthier communities often provide larger recruiting incentives and salaries, making it more difficult to recruit physicians into rural and underserved areas.

Programs to minimize financial pressures during training and reducing eventual total debt burden are an important part of ensuring an appropriate physician workforce in rural and other underserved communities. The goal of this program is to have participants enter practice with zero debt.

Additional Area of Focus: Increase Primary Care Reimbursement

Work at a national and statewide level to implement the recommendations of the National Academies of Science Engineering and Medicine to pay for primary care teams to care for people not doctors to deliver services. The report recommends that:

- Payers should evaluate and disseminate payment models based on the ability of those models to promote the delivery of high-quality primary care, not on achieving short-term cost savings.
- Payers using a fee-for-service (FFS) model should shift primary care payment toward hybrid (part FFS, part capitated) models, and make them the default over time.
- The Centers for Medicare & Medicaid Services (CMS) should increase the overall portion of spending going to primary care.
- States should implement primary care payment reform by facilitating multi-payer collaboration and by increasing the overall portion of spending in their state going to primary care. Implementing high-quality primary care begins by committing to pay primary care more and differently because of its capacity to improve population health and health equity for all of society, not because it generates short term returns on investment for payers. High-quality primary care is a common good promoted by responsible public policy and supported by private-sector action.

Selected References:

Implementing High Quality Primary Care: Rebuilding the Foundation of . The National Academies of Science, Engineering and Medicine 2021. <https://www.nationalacademies.org/our-work/implementing-high-quality-primary-care>

Multiple Models exist on which this proposal is built. Links to some of these programs are provided below:

Alabama College of Community Health Sciences: <https://cchs.ua.edu/rural-programs/rmsp/#:~:text=The%20Rural%20Medical%20Scholars%20Program,where%20they%20are%20most%20needed>

Michigan State: <https://msururalhealth.chm.msu.edu/programs/rural-physician-program.html>

U of Minnesota <https://med.umn.edu/md-students/individualized-pathways/rural-physician-associate-program-rpap>

NE Ohio Medical School: <https://www.neomed.edu/medicine/admissions/paths/early-assurance/Eight%20Year%20Continuum>. Brown Rhode Island. <https://plme.med.brown.edu/>

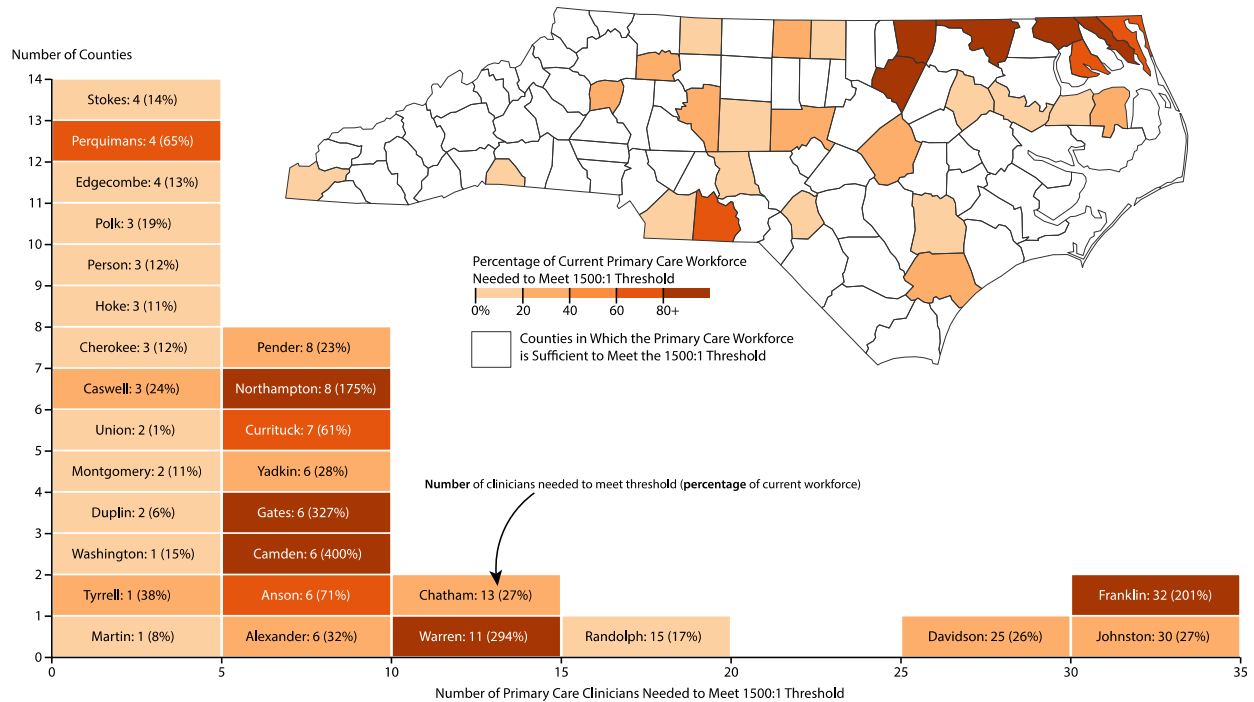
JAMP with support from Texas Legislature: <https://www.uta.edu/academics/schools-colleges/science/degree-programs/health-professions/special-programs-volunteering-research-opportunities/jamp>

WWAMI; Recruit students from rural communities and enroll them in Rural Track (TRUST). <https://www.uwmedicine.org/school-of-medicine/md-program/wwami>

Attachment C

Healthy North Carolina 2030 includes a goal for each North Carolina county to have a 1,500:1 population to primary care clinician ratio. Although this is not specific to primary care physicians graduating from North Carolina medical schools, it provides some insight into where additional primary care clinicians are most needed. Recruiting students from these communities and providing robust primary care experiences in these counties should enhance the likelihood of those students providing primary care there.

Percentage of Current Primary Care Workforce Needed to Meet 1500:1 Population to Clinician Threshold, 2017 - 2021 Average, North Carolina



Notes: Primary care physicians, physician assistants, and nurse practitioners are defined as in Spero, J. C., & Galloway, E. M. (2019). Running the Numbers. North Carolina Medical Journal, 80(3), 186-190. Physicians with a primary area of practice of obstetrics/gynecology were weighted as 0.25 of a full-time equivalent (FTE) primary care practitioner. All other primary care physicians were weighted as 1 FTE. Primary care physician assistants, nurse practitioners, and certified nurse midwives were weighted as 0.75 FTE. Physician and physician assistant data are derived from licensure data provided by the North Carolina Medical Board. This analysis only includes physicians who are not residents-in-training and are not employed by the Federal government. Nurse practitioner and certified nurse midwife data is derived from licensure data provided by the North Carolina Board of Nursing. Data include active, licensed practitioners in practice in North Carolina as of October 31 of each year. Practitioners are assigned to counties based on primary practice location. County populations were adjusted for age and gender according to primary care use rates described in data from the Medical Expenditure Panel Survey. The raw (unadjusted) population data was from the NC Office of State Budget and Management (<https://www.osbm.nc.gov/demog/county-projections>).

NC Center on the Workforce for Health

NC Center on the Workforce for Health

What is the issue and why is it important? North Carolina's historic, persistent, and worsening health workforce shortages can best be addressed through intentional, transparent, and collaborative engagement by the communities interested in solving those problems. Although many organizations focus on health workforce development, that work typically is focused on a specific profession, geography, or institution. We propose a more comprehensive and strategic approach to the evolving workforce needs of North Carolina's health ecosystem.

What do we propose to do about it? The NC Center on the Workforce for Health will provide a forum for health employers, workers, educators, regulators, policymakers, and others throughout North Carolina to convene, discuss challenges and opportunities, share best practices and lessons learned, identify potential solutions and metrics for success, and monitor progress toward addressing these challenges. Feedback from extensive interviews indicates the desire for immediate solutions to these urgent problems, and support for a forum to share emerging best practices and assistance in identifying practical solutions. There is broad consensus that sustained collaborative work will be necessary to create a renewed statewide system of workforce development that meets the needs of the employers and prioritizes whole-person care, including the social drivers of health.

How will we do it? The Center's work will evolve to respond to progress and new challenges.

It will assess data, policy and best practices research, and inputs from participants, and provide actionable syntheses and forum for stakeholders to develop consensus strategies for collective or individual pursuit. All initiatives and recommendations will include desired outcomes and metrics to monitor progress. Participation in the Center is voluntary and inclusive; its agenda and outcomes will be participant driven. Information flows will be bi-directional: statewide data, analysis and information will be distributed to local communities for their consideration and local responses and needs will inform statewide priorities, analysis, and work. For example, great local work that is responsive to health workforce challenges and opportunities will inform the Center's work, and the Center will provide data and information for those communities to consider, technical assistance when requested, and an opportunity for participants to learn from each other. The Center will serve as a voice for the recommendations, and participants will operationalize and advocate for them as appropriate.

The Center is currently staffed by volunteer time provided by NC AHEC, NCIOM, and the Sheps Center for Health Services Research. Work to secure ongoing financial support for the center is underway. We envision a model of staff support at the Center to develop meeting agendas, synthesize participant feedback to inform recommendations and strategies, conduct data analysis and policy research and identify improvements to recommendations as appropriate. We also envision a team of local leaders to convene community stakeholders to facilitate local discussions and coordinate communications between those communities and the Center's statewide work.

The Center meets quarterly to conduct and advance its work. Committees can be leveraged within available resources and as needed for more in-depth or focused work.

The Center meets quarterly to conduct and advance its work. Committees can be leveraged within available resources and as needed for more in-depth or focused work.

NC Center on the Workforce for Health

The Center will

- Provide a mechanism to ensure that efforts to address health workforce issues persist over time which will ultimately better align the supply of health workers with the demand for those workers.
- Convene employers, educators, workers, regulators, and others to develop, deploy, monitor, and assess efforts to address health workforce issues. Convenings will be at the state and local levels with bi-direction information flow.
- Gather and make available relevant data and policy, analyze, and synthesize that information to make it actionable, and provide technical assistance and guidance to interested parties when acting to address health workforce issues.
- Provide a forum for interested parties to share best practices and lessons learned.

For more information please contact: Hugh Tilson, hugh_tilson@ncahec.net, 919-961-6242

APPENDIX I

The UNC Policy Manual

700.1.1

Adopted 02/10/84

Amended 04/12/00

Amended 04/11/03

Amended 07/01/07

Amended 01/11/08

Amended 02/27/15

Amended 04/15/16

Amended 07/29/16

Amended 03/30/20

Amended 11/18/21

Amended 02/24/22

Amended / /23

Policy on Minimum Eligibility Requirements for Undergraduate Admission for the University of North Carolina System

- I. Purpose. The University of North Carolina (UNC) Board of Governors has, since 1988, established minimum requirements for undergraduate admission to any constituent institution. These requirements serve to provide a common set of minimum standards to be considered for admission as an undergraduate student. Exceptions and special considerations to these minimum eligibility requirements are provided in Sections 700.1.1.1[R], 700.1.1.2[R], 700.7.1, and 700.7.1[R] of the UNC Policy Manual. Any constituent institution may set admissions requirements that exceed the minimums established in this policy upon the approval of their board of trustees.
- II. High School Diploma. All students should hold a high school diploma or its equivalent.
- III. Minimum Course Requirements. The following courses must be completed at the high school level, although those courses may be completed at an earlier time (e.g., middle school).
 - A. English: four course units emphasizing grammar, composition, and literature.
 - B. Mathematics: four course units in any of the following combinations:¹
 1. Algebra I, algebra II, geometry, and one unit beyond algebra II; or
 2. Algebra I, algebra II, and two units beyond algebra II; or
 3. Common core math I, II, and III, and one unit beyond common core math III; or
 4. Integrated math I, II, III, and one unit beyond integrated math III; or
 5. NC Math 1, 2, 3, and one unit beyond NC Math 3 identified as meeting the 4th level mathematics requirement for admission to UNC System institutions.

¹Students applying to the University of North Carolina School of the Arts must only complete three mathematics courses in order to be eligible for admission.

C. Science: three course units, including at least:

1. One life ~~or biological~~ science unit (e.g., biology, ecology, zoology); and
2. One non-life science unit ~~Physical Science~~ (e.g., astronomy, chemistry, earth science, environmental science, physical science, physics); and
3. One laboratory science unit~~course~~.

~~Second Language: two course units of a language other than English.~~

D. Social Studies: two course units, including one unit in U.S. history.²

[For students applying for first-time (freshman) admission to constituent institutions through the 2024 spring semester:]

E. Two course units of a language other than English.

[For students applying for first-time (freshman) admission to constituent institutions after the 2024 spring semester:]

E. Two additional academic courses from English, mathematics, science, social studies, world languages, or computer science. *(Note: these courses should be selected in alignment with a student's academic and career objectives. Completion of two sequential world language courses is recommended.)*

F. Applicants who require special consideration: Constituent institutions shall develop a policy for evaluating applications from students who have not completed all minimum course requirements and shall at least include provisions addressing students with a documented Individualized Education Plan (IEP) or 504 plan. The institutional policy shall be approved by the board of trustees in accordance with regulations promulgated by the president.

IV. Recommended Courses. While the minimum course requirements serve as the cornerstone of the UNC System admissions policy, students are encouraged to pursue a challenging and rigorous high school curriculum aligned with their academic and career objectives. Completion of the minimum course requirements does not guarantee admission to any individual UNC System institution. As such, students should consult with their high school counselor regarding additional courses recommended by individual UNC System institutions. Additionally, students should:

A. Consider taking the most rigorous courses available at their high school that they can successfully complete

B. Ensure to complete an academically challenging course load in their senior year, even if they have completed the minimum course requirements

IV. High School Grade Point Average and Standardized Test Scores. Students must meet either the minimum high school grade point average (GPA) or standardized test score in order to be considered for admission. All

²An applicant who does not have the unit in U.S. history may be admitted on the condition that at least three semester hours in that subject be passed by the end of the sophomore (second) year.

applicants for admission, except those exempted by current UNC policy or regulation, must submit a standardized test score, even if they satisfy the minimum eligibility requirement through the high school GPA.

- A. High School GPA: A minimum weighted GPA of 2.5; or
- B. Standardized Test Scores: A composite ACT score of 19, or combined SAT (mathematics and evidence-based reading and writing) of 1010.
- C. Chancellor's Exceptions: The maximum number of chancellor's exceptions is limited to one percent of the total number of applicants accepted as first-time undergraduates each year. A chancellor's exception may be applied to the SAT/ACT minimum requirement or the high school GPA minimum requirement.

V. Graduates of Cooperative Innovative High Schools (Early College). Each UNC constituent institution must offer to any student who graduated from a cooperative innovative high school program with an associate degree and who applies for admission to a constituent institution the option of being considered for admission as a first-time (freshman) or as a transfer student.

- A. The constituent institution shall also provide written information to the student regarding the consequences that accompany each option and any other relevant information that may be helpful to the student when considering which option to select.
- B. Beginning March 1, 2017, the Board of Governors shall report annually regarding the number of students who graduated from a cooperative innovative high school program with an associate degree and which option was chosen by those students when applying for admission to a constituent institution.

VI. Graduates of North Carolina School of Science and Mathematics (NCSSM). Each UNC constituent institution must offer first-time (freshman) admission to any applicant attending the residential program at NCSSM. Such offer of admission shall be contingent upon the applicant:

- A. Successfully completing all NCSSM graduation requirements and remaining enrolled and in good standing at NCSSM through the time of the student's graduation. For the purposes of this policy, "in good standing" shall mean with no pending disciplinary charges or pending academic violations that could lead to dismissal as of the date of graduation;
- B. Meeting the academic program requirements as outlined in Section 700.1.1.3[R] of the UNC Policy Manual;
- C. Completing all application requirements established by the constituent institution by a standard public deadline; and
- D. Satisfying the provisions of Section 700.5.1[R] of the UNC Policy Manual.

This guaranteed offer of admission shall apply only to acceptance to the respective constituent institutions, and shall not apply to any specific school, major, or program of study within the constituent institutions.

This section VI., shall be effective for all NCSSM students applying for first-time (freshman) admission to

constituent institutions beginning with the 2022 fall semester.

VII. Notification of Stakeholders and Educational Policymakers. The president is directed to develop plans and further recommendations to inform key stakeholders and education policymakers of the changes in requirements.

VIII. Other Matters

A. Effective Date. With the exception of section VI., above, the requirements of this policy shall be effective for all first-time students applying for admission at a constituent institution for any semester beginning with the 2024⁴⁹ fall semester through the 2025 fall semester (including students who attended the institution for the first time in the prior summer term).

B. Relation to Federal and State Laws. The foregoing policy as adopted by the Board of Governors is meant to supplement, and does not purport to supplant or modify, those statutory enactments which may govern or relate to the subject matter of this policy.

C. Regulations and Guidelines. This policy shall be implemented and applied in accordance with such regulations and guidelines as may be adopted from time to time by the president.

**Request for Authorization to Establish
Bachelor of Science (BS) in Professional Studies
CIP 24.0101
Appalachian State University**

I. Program Highlights

- Appalachian State University proposes the establishment of a Bachelor of Science in Professional Studies. The major is designed to provide degree-seeking students, especially post-traditional and part-way home students with the knowledge, critical thinking, and leadership skills needed to take on complex responsibilities in a wide range of professional fields. The program will be available on the Boone campus, online, and at the App State Hickory site.
- The proposed program aligns with App State University's mission and vision to support educational access and empower learners through innovative academic programs accompanied by experiences taking place beyond the classroom, cultivating scholarship, engagement and creativity. The knowledge and experience gained will shape students into globally minded, responsible members of society who engage with and actively contribute to their communities.
- This program is well designed for part-way home students, military students, and high credit hour transfer students. App State has more than 7,200 part-way home students. As employers seek a workforce of individuals who have a bachelor's degree, this program will provide a flexible pathway for individuals to obtain a that degree in the most convenient way possible for learners. We have identified 4,357 students who withdrew in the last five years after having earned at least 60 credit hours. If this program is approved, we would immediately engage with this group of partway home students.
- Graduates, whether looking to enter the workforce, to make a career change, or to continue advancing within current employment, will be able to meet their goals with the completion of this rigorous academic yet flexible program. Students will work with advisors to design pathways that are individualized and applicable. There is a required course early in the program which introduces students to course choices to allow them the opportunity to develop skills and competencies to meet their future and career goals. The required capstone course will provide students a chance to exhibit these skills and competencies through an internship or other significant project.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** While the Professional Studies program will provide a clear path to graduation for traditional student populations, part-way home and those who have withdrawn from the institution, Appalachian will also look to expand the pipelines to post-traditional and adult learners in surrounding rural counties. Since this program builds upon courses already offered at Appalachian, this degree program will help former students with prior academic credit to reduce their cumulative student debt by maximizing the applicability of previously earned credits to a high-quality, post-secondary bachelor's degree.
2. **Student Demand.** The UNC System strategic plan includes a goal to increase access and grow student enrollment in Tier 1 and Tier 2 counties. Per *My FUTURENC*, there are over 7,000 adult students enrolled in North Carolina Community College curriculum programming in eight Tier 1 and Tier 2 counties surrounding Watauga in fall 2021. This flexible, online degree program will provide greater access to a degree completion program for students in Western North Carolina,

who currently have limited access to this type of degree program, given there are no public baccalaureate degree completion programs in the western region of the state. Giving students the viable option of an accessible, attainable degree will assist the UNC System in meeting the rural enrollments goal, as well as supporting the goal of learner persistence to help meet the State's economic needs of educating 2 million North Carolinians not yet holding a postsecondary degree.

Additionally, of the 791 students over the age of 25 who completed a degree at Appalachian State within the past 6 years after transferring in 60 plus hours (a target group for this degree program), the average number of credit hours earned by graduation is 140; 25% of this group earned over 152 credit hours by the time they graduated. This is significantly over the 120 credit hours required for a degree at Appalachian. It is our goal that the increased flexibility of this degree program will allow a significant number of these students to complete their degrees more efficiently.

- 3. Employment Opportunities for Graduates.** Given the flexibility of the program, there is an array of opportunities that awaits students once they successfully complete their individualized program. In January and February of this year, there were a total of 237,461 unique job postings in North Carolina of which at least 26% noted a bachelor's degree requirement for the position. (LightCast). While graduates of this program would not be eligible for all of these positions, perhaps graduates can use the flexibility of this program to be eligible for many more career paths than they would be without the bachelor of science degree. Additionally, within a two-year timeframe (2020-2022) there were more than 151,000 individuals within North Carolina who reported attaining an associate's degree as their highest level of education, (Lightcast). Over the last two years there were almost 250,000 job postings in North Carolina, which required a bachelor's degree, (Lightcast).
- 4. Impact on Access and Affordability.** The multiple modalities through which this program is offered provides students the opportunity to finish their degree in such a way that is convenient for them. Recognizing that this population is unique in terms of college credit completed, work experience, age, etc. Appalachian will provide ample support to these students starting at the prospect stage, and continuing as students move toward fulfilling their ultimate goal of attaining an undergraduate degree. Examining the costs associated with the Professional Studies degree programs and student debt is complicated as the comparisons are reflective of a traditional four-year program—many students will be able to complete this degree program in two years or less. Complexities aside, Appalachian can deliver an affordable Professional Studies bachelor's degree to students without students accruing a massive amount of debt. In 2023, Lightcast projected median earnings of a bachelor's degree within this field to be \$49,000 within North Carolina and \$52,000 nationally. After four years, the average debt of graduates earning a degree from North Carolina public/private institutions is between \$29,750 and \$21,720 with a median monthly loan payment of \$268 (U.S. Department of Education Scorecard); the average national debt of graduates is \$27,870 (Texas Public Policy Foundation, College Earnings and Debt by Major).

App State is not requesting any program-specific fees or tuition differential for this program. Tuition and fees for the 2023-2024 full-time (12+ credit hour) rates are as follows:

Full-Time 2023-2024 Undergraduate Tuition and Fees per Year (In Dollars)

Category	Resident	Non-Resident
Tuition	4,242.00	21,238.00
Tuition Differential	--	--
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	3,839.00 Online - 1,156.96	3,839.00 Online - 1,156.96
Special Fees	--	--

5. **Expected Quality.** A total of 120 hours is required for this program. This includes completion of 44 semester credit hours of general education, free elective hours, and degree-major hours—including 9 hours of required courses and the two areas of focus (each is a minor or certificate). Students will also meet all university residency requirements which means having at least 24 semester credit hours at the 3000 level or higher. Part of the purpose of the introductory course in this major is to help students think about the desired outcomes of their college experience, career-focused or other. Students will then discuss with an advisor how to choose degree focus areas to achieve these outcomes. The capstone course of the program is designed to give students hands-on experience in their area either through an internship or other significant project.
6. **Faculty Quality and Number.** If the program is approved, a program director will be hired whose duties will include teaching the introductory and senior capstone course for 2 sections, as well as working with advisors for oversight of students enrolled in this program. Initially, there will not be new faculty hired for this program, as the teaching responsibilities will be absorbed by current faculty members. This program will use existing course content provided by our faculty who teach general education and other relevant degree areas.
7. **Relevant Lower-level and Cognate Programs.** The flexibility and student choice present in the Professional Studies program allows students to build upon any expertise or specializations offered at Appalachian in any combination they desired outcomes.
8. **Availability of Campus Resources (library, space, etc.)** Whether students are taking online or in-person courses, Appalachian is equipped with sufficient infrastructures related to library resources, physical space, instructional technology, student support resources, etc. No new space will be needed at this time.
9. **Existing Programs (Number, Location, Mode of Delivery).** There are similar degrees at: East Carolina, University Studies - 24.0101, On-campus and Online; Fayetteville State University, Interdisciplinary Studies - 24.0101, On-campus and Online; UNC Charlotte, Professional Studies, online; UNC Greensboro, Liberal and Interdisciplinary Studies - 24.0101, On-campus and Online
10. **Potential for Unnecessary Duplication.** The proposed Professional Studies program differs from the above mentioned UNC System programs in the required number of general education credit requirements, and significant degree-major requirements which includes the completion of two focus areas, (a minor or certification with at least 12 hours each). The program will serve former App State students who left the university in good standing as well as military students because

both populations have significant prior learning credits which will be readily applied to the degree requirements. Additionally, non-traditional and stop-out students often want to return to college at an institution close to where they live. The other UNC System institutions with similar degree programs are in the piedmont and eastern part of the state. The program gives students in the western part of the state an option nearby through which to complete their degrees.

- 11. Feasibility of Collaborative Program.** While collaborating with other UNC System institutions isn't explicitly laid out in this proposal, the opportunity does exist. App State currently serves almost 5,000 transfer students, many of whom bring credit into Appalachian from other UNC System institutions. This program will ensure that students transferring in will maximize applicability of transfer credits towards a degree at Appalachian, while obtaining their degree in a minimal number of hours (120 SCH). Additionally, students will be permitted to take visiting coursework at other UNC System or North Carolina Community College institutions to supplement Appalachian's offerings, provided they have sufficient credits in-residence per institutional and System policies.

III. Summary of Review Processes

- 1. Campus Review Process and Feedback.** The academic proposal was reviewed and approved by The Academic Policy and Procedure Committee; Dr. Ted Zerucha - Assistant Vice Provost, General and Experiential Education; Dr. Mike McKenzie - Vice Provost of Academic Program Development and Strategic Initiatives; Dr. Dan Layzell - Vice Chancellor of Finance and Operations; Dr. Heather Hulburt Norris - Provost and Executive Vice Chancellor; and Dr. Sheri Everts – Chancellor.

UNC System Office Review Process and Feedback. Throughout the review process, Appalachian State University provided relevant information pertaining to program requirements and resources. The institution submitted appropriate documentation and research to support the statements made.

IV. Recommendation

Staff recommends that the Board of Governors approve Appalachian State University's request to establish the Bachelor of Science in Professional Studies (CIP 24.0101), effective fall 2023.

**Request for Authorization to Establish
Bachelor of Science (BS) in Materials Science and Manufacturing
CIP 40.1001
Fayetteville State University**

I. Program Highlights

- Fayetteville State University proposes the establishment of a Bachelor of Science (BS) in Materials Science and Manufacturing.
- The purpose of the proposed degree program is to strengthen FSU's portfolio of innovative STEM degree programs consistent with the institution's mission statement. The program would support North Carolina's manufacturing industry, which produces 20 percent of the state's GDP and provides employment in rural counties at rates beyond the state and national average (according to the North Carolina Rural Economic Development Center). The proposed degree program would attract more students, including military-affiliated students, to the area and develop a STEM workforce for the state, nation, and U.S. Army.
- The proposed degree program would support the FSU Mission Statement by offering a "robust and innovative degree" program. The program would promote the goals of the FSU Vision Statement to become "the regional university of choice for students from rural, military, and other diverse backgrounds who are poised to become visionary leaders who transform communities, states, and nations."
- The proposed degree program in materials science and manufacturing would support the state economy by producing a skilled workforce in a STEM field. North Carolina is among the top 10 manufacturing states in the United States. Production industries are among the pillars of North Carolina's economy. Companies purchase significant inputs from many other sectors, including research and development, professional services, agriculture, travel, construction, and trucking. In North Carolina's 85 rural counties, employment in manufacturing is higher than the state or national average. In 18 rural counties, manufacturing accounts for more than 20 percent of local employment. However, there are no BS degrees in manufacturing offered in the state. The proposed degree program will directly support the manufacturing industry in the state.
- Fort Bragg, located near Fayetteville, NC, is the largest military installation in the U.S. by population. Approximately 30 percent of FSU students are military affiliated, including active-duty personnel and veterans. According to the Department of Defense (DoD), additive manufacturing is a powerful tool to enable innovation and modernization of defense systems, support readiness, and enhance innovation and capability. As DoD's demands in this field increase, the proposed degree program would attract more military affiliated students.
- Students who graduate from this program would be proficient in computational materials science and manufacturing methods in preparation for careers as science and technology professionals in production industry, government, military, and academia. They would apply their hands-on training to identify and solve real-world problems in materials and manufacturing systems, present solutions in oral, written, and graphic modes, conduct work or testing in materials science and manufacturing fields.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** The proposed degree program would provide a career option uniquely suited for the population served by FSU. Around 30 percent of FSU students are military affiliated and most of the students are from rural counties. In North Carolina, additive manufacturing provides 20 percent of the employment in 18 rural counties, a higher rate than the state average. The DoD published a strategy noting that additive manufacturing can enable innovation and support warfighter readiness. Given few other related bachelor's programs in the University of North Carolina System or at Historically Black Colleges and Universities nationwide, the proposed degree program may appeal to FSU's unique student population.

The proposed BS in Materials Science and Manufacturing degree program would be consistent with the FSU Mission Statement's position of offering a "robust and innovative degree" program. The proposed degree program's suitability for rural and military-affiliated students would support the FSU Vision Statement goal of becoming "the regional university of choice for students from rural, military, and other diverse backgrounds who are poised to become visionary leaders who transform communities, states, and nations."

2. **Student Demand.** North Carolina is one of the top 10 manufacturing states in the United States. According to the North Carolina Rural Economic Development Center, manufacturing represents 20 percent of the state's GDP. In 18 rural counties, the employment in manufacturing exceeds the state average, accounting for more than 20 percent of local employment. Most students at FSU are from rural NC counties. However, the only bachelor's degree in Materials Science or Engineering is offered at NC State University. North Carolina students could benefit from an expansion of this career option.

The FSU Department of Chemistry, Physics, and Materials Science recognized a trend in student interest in materials science in recent years. Since December 2020, there have been seven graduates from the BS in Chemistry with a Concentration in Materials Science degree program. Since 2017, 10 students completed the Materials Science minor.

Nationally, the HBCUs that offer a bachelor's degree in manufacturing or materials science are Florida A&M University, Howard University, and Jackson State University. FSU may be able to attract prospective out-of-state materials science students considering attending an HBCU.

Fort Bragg, located near Fayetteville, is the largest military installation in the U.S. by population. Around 30 percent of FSU students are military affiliated, including active service persons and veterans. According to the "Department of Defense Additive Manufacturing Strategy" published in 2021 (<https://www.cto.mil/dod-additive-manufacturing-strategy/>), the value of additive manufacturing for innovation and modernization of defense systems has been recognized by DoD. The proposed degree program may attract military affiliated students.

3. **Employment Opportunities for Graduates.** According to Burning Glass, a labor market analysis company, from 2016 to 2021, 391,058 jobs related to manufacturing were offered in North Carolina, mostly in Charlotte, the Research Triangle, and the Triad. More than 10,000 jobs related to manufacturing were offered in Fayetteville. Average salaries ranged from \$55,058 for managers, to \$79,551 for engineers and computer Occupations, and \$96,306 for sales managers. Burning Glass reported that employers were seeking skills in production, repair, project management, software

and information technology, etc. Most of the jobs were considered as low risk for replacement by automation. By far, the bachelor's degree was the credential most requested by employers.

FSU consulted with Dr. Yaroslava G. Yingling, NC State's Director of Undergraduate Programs, regarding their BS in Materials Science and Engineering degree program. Among their graduates from the BS degree program prior to the pandemic, 82 percent obtained jobs or were admitted to graduate schools at the time of graduation.

4. **Impact on Access and Affordability.** In fall 2021, Fayetteville State University became an NC Promise institution. NC Promise helps support FSU's enrollment and retention rate, while making the cost of tuition more affordable for in-state students. Fall 2023 tuition rates for student and commuter students are listed below. FSU is committed to its mission to meet the educational, career, and personal aspirations of its students from rural, military, and other diverse backgrounds. Providing a high-quality academic degree program that fulfills labor market needs at an affordable price can expand access for FSU students. Furthermore, the proposed program aligns with the UNC System-level goals of expanding access to affordable high-quality degrees by providing students from diverse background access to higher education and ensuring the UNC System education remains among the most affordable in the nation. FSU is not requesting any program-specific fees or tuition differential for this program. Tuition and fees for the ACADEMIC YEAR full-time (12+/9+ credit hour) rates are as follows:

Full-Time 2023-24 Undergraduate Tuition and Fees per Year (In Dollars)

Category	Resident	Non-Resident
Tuition	(NC Promise Tuition) 1,000.00	(NC Promise Tuition) 5,000.00
Tuition Differential	N/A	N/A
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	2,525	2,525
Special Fees	N/A	N/A

5. **Expected Quality.** The proposed degree program would consist of 120 credit hours: 39 credit hours of university core curriculum; 24 credit hours of correlative requirement courses (CSC 105: Introduction to Computer Science for Technical Majors, MATH 142: Calculus with Analytic Geometry I, MATH 241: Calculus with Analytic Geometry II, PHYS 125: College Physics I, etc.); 33 credit hours of materials science and manufacturing core requirements; 18 credit hours of general concentration courses; six credit hours of general concentration electives.

The proposed curriculum would offer a concentration in computation, including MATS 303: Data Visualization and Graphics, MATS 331: Numerical Methods in Material Processing, and MNFG 461: Machine Learning and Artificial Intelligence for Materials Science and Manufacturing. The proposed degree program would seek programmatic accreditation from the Accreditation Board for Engineering and Technology (ABET), a non-governmental organization that accredits post-secondary education programs in applied and natural science, computing, engineering, and engineering technology. The application for accreditation is allowed when at least one program graduate is

produced. Therefore, the Department of Chemistry, Physics, and Materials Science anticipates submission of the ABET accreditation application in the fifth year of the program.

6. **Faculty Quality and Number.** Faculty members in the chemistry program are qualified to teach courses in the proposed degree program, holding terminal degrees in relevant subject areas. Two additional tenure-track positions would be sought to meet the needs of program majors. The first faculty member would be requested for the beginning of the proposed degree program. The second faculty member would be hired in the third year to support student needs.
7. **Relevant Lower-level and Cognate Programs.** FSU has lower-level programs that can support the proposed degree program, including a minor in materials science and a minor in chemistry. This would be bolstered by MATS courses in the existing BS in Chemistry with a Concentration in Materials Science degree program. Other subject-matter fields at FSU would provide valuable support of the proposed degree program, including chemistry, mathematics, and statistics.
8. **Availability of Campus Resources (library, space, etc.)** FSU has sufficient existing infrastructure, including research laboratories and equipment, to support the proposed degree program. The proposed degree program will not create an immediate need to modify or upgrade existing technology, information technology, or services. If additional resources are needed due to increased enrollment, updates will be conducted using funds from university enrollment-driven resources and faculty research grant awards. The Charles Chesnutt Library has sufficient resources to support the proposed degree program. The library maintains over 365,000 book titles, 170,000 e-book titles, 1,080 current periodical titles, and 410 electronic journal titles. Students, faculty, and staff have access to over 11,600 full-text electronic journal titles through NC Live. In addition, the library provides over 400 full-text article and information databases and websites (including scholarly journals, magazines, newspapers, statistics, biographies, reference works, e-books, maps, and streaming audio and video). The Chesnutt Library is a depository for federal publications through the U.S. Government Printing Office and State of North Carolina Publication Office, providing access to 43,156 item holdings in government documents.
9. **Existing Programs (Number, Location, Mode of Delivery).** NC State University offers the BS in Materials Science and Engineering, entirely on campus. The enrollment for this program fell by ten students during covid to 115; the total enrollments in the two preceding years was 125 and 124 with 36 and 41 graduates respectively.

10. Potential for Unnecessary Duplication.

In the discipline of materials science, only NC State offers major and minor degree programs in Materials Science and Engineering. The programs are in the category of engineering and do not involve manufacturing. The University of North Carolina at Greensboro offers a Post-Baccalaureate Certificate in Advanced Materials. There are no other programs involving materials science for undergraduates in the UNC System. In the discipline of manufacturing, NC State offers the Master of Integrated Manufacturing Systems Engineering and Master of Biomanufacturing. North Carolina Agricultural and Technical State University offers the Master of Science in Technology Management with an Advanced Manufacturing concentration. There are no other universities offering manufacturing-related degree programs for undergraduates in the UNC System. Within the UNC System, no university offers an undergraduate degree program combining both materials science and

manufacturing. The proposed degree program would be unique and avoid duplication of curricular options at other universities.

- 11. Feasibility of Collaborative Program.** The proposed degree program would create collaboration opportunities with NC State, the University of North Carolina at Chapel Hill, and The University of North Carolina at Greensboro, which offer the BS, post-bacc certificate, or PhD in Materials Science or Manufacturing degree programs. In addition, collaborations may occur with North Carolina A&T, which houses a center for advanced manufacturing, and the University of North Carolina at Charlotte, which established a Center for Additive Manufacturing of Advanced Ceramics (CAMAC). Nationwide, there is a possibility for collaboration with Northwestern University, which offers Materials Science or Manufacturing degree programs.

III. Summary of Review Processes

- 1. Campus Review Process and Feedback.** The academic proposal was reviewed and approved by the following: The Department of Chemistry, Physics, and Materials Science Curriculum Committee, Dr. Daniel Autrey, Department Chair, the Lloyd College of Health, Science, and Technology (CHST) Academic Affairs Committee, Dr. Afua Arhin, Dean of the Lloyd College of Health, Science, and Technology, the Faculty Senate Academic Affairs Committee (Chair, Dr. Kimberly Hardy), the Faculty Senate (Chair, Dr. Zahra Shekarkhar), Dr. Nicole Lucas, SACSCOC Liaison, and Dr. Monica Leach, Provost and Vice Chancellor for Academic Affairs.
- 2. UNC System Office Review Process and Feedback.** Throughout the review process, FSU provided relevant information pertaining to program requirements and resources. The institution submitted appropriate documentation and research to support the statements made.

IV. Recommendation

Staff recommends that Board of Governors approve Fayetteville State University's request to establish the Bachelor of Science (BS) in Materials Science and Manufacturing (CIP 40.1001) effective fall 2023.

**Request for Authorization to Establish
Bachelor of Science (BS) in Environmental Engineering
CIP 14.1401
University of North Carolina at Charlotte**

I. Program Highlights

- The University of North Carolina at Charlotte proposes the establishment of a Bachelor of Science (BS) in Environmental Engineering.
- The proposed program seeks to help satisfy the growing demand for licensed environmental engineers in North Carolina's largest metropolitan region, which is a hub in the Southeast for manufacturing and industrial activity.
- Through coursework that combines training in the core subject matter of environmental engineering with design experience that runs throughout the curriculum, students will have opportunities to assess, analyze, and solve real-world and locally relevant problems related to pollution of soils, water, and the atmosphere. These pollution prevention and engineering issues are particularly important in North Carolina's largest metropolitan area, as well as throughout the region with large sources of drinking water. Students will also learn and apply engineering approaches to providing adequate supplies of safe drinking water, protecting citizens from stormwater flooding, and preventing human impacts from hazardous waste pollution.
- The curriculum will provide students opportunities to engage with the community and work together to solve the unique problems present in a diverse urban environment as well as the areas within the region that are transitioning from farmland to residential and industrial. The proposed curriculum will provide students instruction and design experiences in the core subject matter areas within environmental engineering (water treatment, wastewater treatment, hazardous and solid waste, air quality engineering) and water resources engineering (fluid mechanics/hydraulics, groundwater and surface water hydrology, stormwater control).
- A market survey performed by EAB found that demand for environmental engineers within the state is growing at approximately 2.3 percent per month and currently exceeds that supplied by existing programs.

II. Academic Program Planning Criteria (UNC Policy 400.1)

1. **Relation to Campus Distinctiveness and Mission.** UNC Charlotte is committed to addressing cultural, educational, environmental, health, and social needs of the greater Charlotte region. The proposed program draws from the strength of our existing coursework, allowing students to pursue opportunities not offered elsewhere in the region.
2. **Student Demand.** The proposed program responds to student interest and employment market demand, as validated by a EAB report. The EAB market survey found that demand for environmental engineers within the state is growing at approximately 2.3 percent per month and currently exceeds that supplied by existing programs.
3. **Employment Opportunities for Graduates.** Environmental engineers work in regulatory, compliance, and design functions related to environmental protection of air, water, and soil resources. The drinking water treatment and wastewater treatment sectors are major employers of environmental engineers. Environmental engineers also work to prevent and mitigate flooding,

human health, and infrastructure impacts from stormwater. Because their job functions relate to development and maintenance of essential human infrastructure such as drinking water supply and treatment; stormwater collection; and wastewater collection, treatment, and housing, societal demand for environmental engineers is robust.

Labor market research by EAB concluded that environmental engineering positions are expected to increase 18 percent statewide and 12 percent regionally between 2018 and 2028, which compares favorably to the nine percent statewide and 10 percent regional expected increases in employment over the same period for all occupations.

4. **Impact on Access and Affordability.** The median indebtedness for UNC Charlotte Civil and Environmental Engineering undergraduates is \$26,000. From the U.S. Bureau of Labor Statistics (May 2020), the median annual wage for environmental engineers was \$92,120, with the lowest 10 percent earning less than \$55,450, and the highest 10 percent earning more than \$144,670. A payment of \$288.65 per month is needed to satisfy a \$26,000 student loan at a 6 percent APR. Repayment of this loan for someone earning a starting salary of \$50,600 is about 6.8 percent of their annual salary and 3.8 percent for someone earning the median salary of \$92,120, making this proposed program an affordable option for students. The proposed BS in Environmental Engineering degree will increase both access and affordability in the state's most populous metropolitan region.

Tuition and fees for the 2022-23 full-time (12+ credit hour) rates are as follows:

Full-Time 2023-2024 Undergraduate Tuition and Fees per Year (In Dollars)

Category	Resident	Non-Resident
Tuition	\$3812.00	\$18,474.00
Tuition Differential	\$-0	\$0
Mandatory Fees (Athletics, Student Activities, Health Services, Educational & Technology, Campus Security, Debt Service, ASG)	\$3212.00	\$3212.00
Special Fees (Major Fee)	\$300.00	\$300.00

5. **Expected Quality.** Through coursework that combines training in the core subject matter of environmental engineering with design experience that runs throughout the curriculum, students in the proposed program will have opportunities to assess, analyze, and solve real-world and locally relevant problems related to contamination of soils, water, and the atmosphere. These pollution prevention and engineering issues are particularly important in North Carolina's largest metropolitan areas. Students will also learn and apply engineering approaches to providing adequate supplies of safe drinking water and protecting citizens from stormwater flooding and hazardous waste contamination.

This program is an important addition for UNC Charlotte because it will provide opportunities to engage with the community and work together to solve the unique problems present in a diverse urban environment. Graduates from the environmental engineering program will be critical,

creative, and independent thinkers who will support the interdisciplinary efforts required for the changing environmental needs of society.

6. **Faculty Quality and Number.** The faculty engaged in the proposed program are currently serving students in the Department of Civil and Environmental Engineering (CEE) within the William States Lee College of Engineering. Stability in the department and similarity between the existing BS in Civil Engineering and proposed BS in Environmental Engineering enables the program to be offered with nominal increases in faculty. One vacant faculty position will be reallocated to the proposed program. As the program grows, receipts generated will be used to hire additional faculty to support that growth.
7. **Relevant Lower-level and Cognate Programs.** The proposed program will be supported in coursework by chemistry, mathematics and statistics, biological sciences, geology and earth sciences, and physical and optical sciences among others. Expansion of these fields will be commensurate with their desired growth and not contingent on the demand of the proposed program.
8. **Availability of Campus Resources (library, space, etc.)** There are two labs that are proposed for the environmental engineering degree that are already part of the existing Civil and Environmental program. Therefore, existing campus physical spaces and infrastructure are sufficient to support the program. The library has an expansive set of databases in the proposed area of study. Journal articles and books that are not held by the library can be obtained at other libraries in the state and region through Interlibrary Loan.
9. **Existing Programs (Number, Location, Mode of Delivery).** There is currently one existing undergraduate BS in Environmental Engineering in the University of North Carolina System: NC State University, which operates an on-campus program.
10. **Potential for Unnecessary Duplication.** A market survey performed by EAB found that demand for environmental engineers within the state exceeds that supplied by existing programs and the BS degree in Environmental Engineering will be distinct from those already offered within the UNC System in its locale and its focus on the specific educational and environmental needs of the Charlotte region.

The BS in Environmental Engineering will complement the existing BS in Civil Engineering degree by offering an option that provides the applied, hands-on teaching and learning approach for which the department is known. For 50 years the CEE department at UNC Charlotte has nurtured close, working relationships with the local engineering and water resources professional communities. There is an active, vibrant civil engineering alumni community in the Charlotte metropolitan area. Alumni and other local professionals are guest speakers, mentors, and project reviewers in many of the courses in the civil engineering curriculum.

11. **Feasibility of Collaborative Program.** The proposed program builds on an existing collaborative relationship between the related departments at UNC Charlotte and NC State. Close collaborations through research and career fairs will continue.

III. Summary of Review Processes

1. **Campus Review Process and Feedback.** The proposed program was reviewed and approved by the Dean of the William States Lee College of Engineering, the Undergraduate College and Curriculum Committee, Faculty Council, provost and chief academic officer, chief financial officer, and chancellor.
2. **UNC System Office Review Process and Feedback.** Throughout the review process, UNC Charlotte provided relevant information pertaining to program requirements and resources. The institution submitted appropriate documentation and research to support the statements made.

IV. Recommendation

Staff recommends that the Board of Governors approve the University of North Carolina at Charlotte's request to establish the Bachelor of Science (BS) in Environmental Engineering (CIP 14.1401) effective fall 2023.

Dual Memberships and Conflicts of Interest

The Board of Governors seeks at all times to be fair and impartial in carrying out its responsibilities and tries to avoid even the appearance of partiality or undue influence. To promote this objective the following guidelines are adopted as board policy and recommended to the members for their guidance:

1. Service on Foundation Boards or Boards of Visitors of Constituent Institutions

Members of the Board of Governors may, from time to time, be asked to serve simultaneously on a foundation board or a board of visitors or some similar board for one of the 16 constituent institutions. No matter how conscientious or successful a member may be in maintaining impartiality among constituent institutions, service on such a board will undoubtedly be construed by some as showing favoritism. It is also felt that some institutions will feel pressure to name members of the Board of Governors to such boards if service on them becomes commonplace. For these reasons members of the Board of Governors are encouraged to decline any such service.

2. Service on Boards of Private Colleges and Universities

Members of the Board of Governors may be asked to serve simultaneously on the board of a private college or university in North Carolina. While such an invitation is always an honor, there are potential areas of conflict in such dual memberships. A member should satisfy himself or herself that dual service will not interfere with his or her obligations either to the University of North Carolina or to the private institution.

3. Inquiries Concerning Admissions and Job Openings

From time to time a member of the Board of Governors may wish to inquire, either directly or through an officer of the University, about a job opening in the University or about the admission of an individual to an institution or to a program. Sometimes a Board member is asked to write a letter of recommendation on behalf of a candidate for a job or for admission. It is highly inappropriate to use one's position on the Board of Governors in an attempt to influence employment or admissions. It is not inappropriate, however, for a member to make inquiries or to write letters of recommendation on the member's personal or business stationery. It should always be clear that the Board member is not seeking a favor and understands that the decision in all cases will be made strictly on the merits.

4. Appointments by the Board of Governors

In order to avoid any appearance of undue influence, the Board of Governors will not consider for

membership on any board to which it makes appointments any person who is a spouse of a Board of Governors member, a brother or a sister or a lineal ancestor or descendant of a member, or the spouse of any such person. This policy shall not apply, however, to any person who may have been elected or appointed to any such board prior to the time the related person became a member of the Board of Governors. Nor shall the policy apply to any person who may already be serving on any such board at the time of the adoption of the policy. ~~The Board of Governors will not consider for membership on any board to which it makes appointments any person who was a member of the Board of Governors at any time during the two-year period immediately preceding the effective date of the appointment.~~ The boards to which this policy shall apply include the boards of trustees of the constituent institutions and all boards to which the Board of Governors make appointments.

5. Inappropriate Advantage Derived from Board Membership

a. Purpose. It is of critical importance that decisions made on behalf of the University by its governors, trustees, chief executive officers, and chief finance officers be in the best interest of the University and not be influenced by any potential financial gain to the decision-makers. Furthermore, to assure public confidence in the integrity of the University, it is important that the University not appear to be influenced by the personal financial interests of those in decision-making positions. The purpose of this policy is assure public confidence in the integrity of the University by preventing members of the governing boards and chief executive and finance officers of the University from using their positions, or appearing to use their positions, to influence the decisions of the University for their personal financial gain while at the same time allowing the University to take advantage of contracts that are advantageous to the citizens of North Carolina and to the University and also avoiding having service to the University be so restrictive that persons with substantial financial interests will be reluctant to serve.

b. Definitions

As used in this policy, the following terms have the following meanings:

- i. "Business entity" means a "business" as defined in G.S. 163A-152(5)¹ or a not for profit corporation.
- ii. "Person" means a member of the Board of Governors or of a board of trustees of a constituent institution, the vice president for finance, a chancellor, or the chief finance officer of a constituent institution.
- iii. "Substantial interest" means any of the following:
 1. A "business with which associated" as that term is defined in G.S. 163A-152(7),² except that ownership of more than \$10,000 in a publicly traded corporation by itself is not a substantial interest; or
 2. A "nonprofit corporation or organization with which associated" as that term is defined in G.S. 163A-152(54),³ except that uncompensated service as a director, officer, or trustee of a not for profit corporation is not a substantial interest.
- iv. "The University" as applied to members of the Board of Governors, the president, and the vice president for finance means the University of North Carolina System Office (UNC System Office) or any of the constituent institutions. The University as applied to

members of the boards of trustees, a chancellor, or a chief finance officer of a constituent institution means the constituent institution on whose board of trustees the member serves or at which the chancellor or chief finance officer is employed.

c. Requirements

i. Each person must contemporaneously submit to the vice president of finance, each Statement of Economic Interests that the person files with the State Ethics Commission pursuant to G.S. 163A-187. These disclosure statements are public records.

ii. Whenever a person has actual knowledge that a business entity in which the person has a substantial interest is attempting or planning to enter, is entering, or has entered into a contract with the University, the person must report the nature of the person's substantial interest and the nature of the contract to the chief finance officer of the institution that is or would be a party to the contract. If the person is a chief finance officer, then the chief finance officer must make this report to the chancellor or to the president of the institution that is or would be a party to the contract. Reports required by this paragraph shall be in writing and will be public records retained by the respective chief finance officers.

iii. The University will not enter into a contract with a value of \$10,000 or more, or with expected payments of \$10,000 or more per year, with a business entity in which a person has a substantial interest, unless one of the exceptions in paragraph c.iv., applies. A person will not in any way:

1. Participate in making a contract;
2. Attempt to cause or influence the University to make a contract; or
3. Attempt to influence the contract specifications or contracting process concerning a contract between a business entity in which the person has a substantial interest and the University.

The vice president for finance and the respective chief finance officers of the constituent institutions are responsible for determining whether the University is entering into a contract with a value of \$10,000 or more with a business entity in which a person has a substantial interest.

iv. The restrictions on entering into a contract in paragraph c.iii., do not apply if the person with the substantial interest does not participate in making or administering the contract and:

1. The contract results from a competitive sealed bid or a competitive request for proposals with specifications and criteria;
2. The contract is for goods or services sold or provided to the general public at a uniform price or is for goods on state contract sold to state agencies at a uniform price, unless the contract is prohibited by state law;
3. The contract is an employment contract with the dependent child or spouse of the president, the vice president for finance, a chancellor, or chief

finance officer, or the dependent child of a member of the Board of Governors or a board of trustees and the employment is allowed under Section 300.4.2 of the UNC Policy Manual;

4. The contract is with a bank or a public utility; or

5. The committee of the Board of Governors or of the relevant board of trustees designated pursuant to paragraph d.i., below, finds that the contract is in the best interest of the University. Examples of when a contract might be in the best interest of the University include, but are not limited to, when it has financially advantageous terms, when the goods or services to be provided are demonstrated to be unique, or when the contract is a continuation of a contract that was in effect before the person with the substantial interest became affiliated with the University.

v. If a person is an employee or agent of a business entity, the person shall not attempt to influence the University to enter into a contract with the business entity that employs or retains the person.

vi. A person shall not attempt to influence the administration of or payments under a contract between the University and a business entity in which the person has a substantial interest or between the University and the person's employer.

vii. No person shall disclose or use confidential information or information concerning economic development or technology research or development which the person received in his capacity as a board member or employee of the University for the person's financial gain.

viii. No person shall accept a gift or favor from a business entity, or the principal in a business entity, which has entered into a contract with the University within the past year, who currently has a contract with the University, or who intends to attempt to enter into a contract with the University if the person:

1. Has or will prepare plans, specifications, criteria or estimates for the contract;
2. Awards, approves, negotiates, or administers the contract; or
3. Inspects or supervises the contract.

This paragraph does not prohibit the receipt of advertising items of nominal value, awards such as plaques or trophies, food served at professional meetings or banquets, or gifts from family members or personal friends when it is clear that the friendship extends beyond the business relationship.

ix. A person shall not represent, as attorney, agent, or trustee, a third party who has an adverse relationship with the University. A person shall attempt to dissuade a firm or business entity in which the person has a substantial interest from engaging in representation adverse to the University.

d. Procedures

i. The chair of the Board of Governors and each chair of a board of trustees shall designate a standing committee to determine whether a potential conflict is a permissible or impermissible activity and to make recommended findings as to whether this policy has been violated.

ii. Potential conflicts:

1. Any person who receives a report of a potential conflict shall forward that report to the chief finance officer of the institution that is or would be a party to the contract.

2. If the person with the substantial interest claims or the chief finance officer believes that the contract is permissible pursuant to paragraph c.iv.1., 2., 3., or 4., above, the determination of whether the contract is permissible or impermissible may be made by the respective president or chancellor, or the president or chancellor may request that the designated committee make the determination. Any determination by the president or a chancellor shall be in writing and shall be a public record.

3. If the person claims that the contract is permissible pursuant to paragraph c.iv.5., above, because the contract is in the best interest of the University, or if a chancellor or the president refers a conflict question to the committee, then the designated committee shall determine whether the proposed contract is a permissible or impermissible activity under this policy and shall enter its determination in the minutes of its proceedings.

4. If the person who has the potential conflict is a member of the designated committee, the person shall not participate in the deliberations of the committee, other than to present the relevant facts to the committee, and shall abstain from voting.

iii. Allegations of conflict

1. If any person or any senior academic or administrative officer (SAAO) becomes aware or alleges that a person covered by this policy has violated this policy, the person shall report the alleged violation to the chancellor or President of the institution that is or would be a party to the contract.

2. The person who receives the allegation shall forward the allegation:

a. To the designated committee of the board of trustees or of the Board of Governors if the person alleged to have violated this policy is a member of that board;

b. To the designated committee of the Board of Governors if the president is alleged to have violated this policy;

c. To the president if the person alleged to have violated this policy is a chancellor or the vice president for finance; or

d. To the respective chancellor if the person is a chief finance officer of that constituent institution.

3. If the person alleged to have violated the policy is the President or a member of a Board of Governors or of the board of trustees, then the designated committee will determine whether or not the policy has been violated. The chairperson of the designated committee will designate an individual to investigate the allegations and to make a report to the committee. After considering the report of the investigation and any response by the person alleged to have violated the policy, the committee shall make a determination as to whether the policy has been violated and, if so, a recommendation as to the appropriate sanction to the respective board of trustees or Board of Governors. The board of trustees or Board of Governors shall vote to affirm, reject, or modify the recommendation.

4. If the person who has the potential conflict is a member of the designated committee, the person shall not participate in the deliberations of the committee, other than to present the relevant facts and arguments to the committee on his own behalf, and shall abstain from voting.

5. A Board of Governors member, board of trustees member, or president who is alleged to have violated this policy is entitled to receive notice of the allegation, to be present to hear the report presented to the designated committee, and to inform the committee of any facts or arguments that demonstrate that he or she did not violate the policy.

6. If the vice president for finance, a chief finance officer or a chancellor is alleged to have violated this policy, that allegation will be investigated and acted upon in accordance with the procedures for disciplining, demoting, dismissing, or terminating the contract of employees of that position.

iv. The president will present this policy annually to the Board of Governors and will present it to new members at the beginning of their service. The chancellors will present this policy annually to their respective Boards of Trustees and will present it to new members at the beginning of their service.

e. Sanctions

i. If the Board of Governors or a board of trustees finds that one of its members has violated this policy, the Board may take one or more of the following actions:

1. Reprimand or censure the member;
2. Remove the person from any board office the person holds or from any committee chairmanship or assignment; and
3. Report the violation to the entity that appointed the member.

ii. If the Board of Governors finds that the president has violated this policy, the Board of Governors may discipline, demote or dismiss the president, as it deems appropriate.

- iii. If the president finds that the vice president for finance has violated this policy, the president may discipline, demote, or dismiss the vice president, and shall report the violation and the action taken by the president to the Board of Governors.
- iv. If the president finds that a chancellor has violated this policy, the president may discipline the chancellor and report the action taken to the Board of Governors and the relevant board of trustees, or the president may recommend to the Board of Governors that the employment of the chancellor be terminated and that the chancellor be demoted or dismissed.
- v. If a chancellor finds that a chief finance officer has violated this policy, the chancellor may discipline, demote or dismiss the chief finance officer and shall report the violation and the action taken to the president and the board of trustees.
- vi. Pursuant to North Carolina law, any contract between the University and an entity in which a person has a substantial interest which was entered into in violation of state laws governing conflicts of interest is void.

The provisions of Section 5 are effective July 1, 2001. Initial disclosure forms will be filed on or before October 1, 2001. The provisions of paragraph c.iii., will apply to all contracts entered into after January 1, 2002. The Statement of Economic Interest replaces all disclosure forms due to be filed on or after July 1, 2007; the initial Statement of Economic Interest for people employed or in office on January 1, 2008, must be submitted to the vice president for finance by April 15, 2008.

¹ G.S. 163A-152(5) defines a "business" as, "Any of the following organized for profit:

- a. Association.
- b. Business trust.
- c. Corporation.
- d. Enterprise.
- e. Joint venture.
- f. Organization.
- g. Partnership.
- h. Proprietorship.
- i. Vested trust.
- j. Every other business interest, including ownership or use of land for income."

² G.S. 163A-152(7) Business with which associated. A business in which the covered person or filing person or any member of that covered person's or filing person's immediate family does any of the following:

- a. Is an employee.
- b. Holds a position as a director, officer, partner, proprietor, or member or manager of a limited liability company, irrespective of the amount of compensation received or the amount of the interest owned.
- c. Owns a legal, equitable, or beneficial interest of ten thousand dollars (\$10,000) or more in the business or five percent of the business, whichever is less, other than as a trustee on a deed of trust.
- d. Is a lobbyist registered under Article 8 of Chapter 163A of the General Statutes.

For purposes of this subdivision, the term "business" shall not include a widely held investment fund, including a mutual fund, regulated investment company, or pension or deferred compensation plan, if all of the following apply:

- 1. The covered person, filing person, or a member of the covered person's or filing person's immediate family neither exercises nor has the ability to exercise control over the financial interests held by the fund.
- 2. The fund is publicly traded, or the fund's assets are widely diversified.

³ G.S. 163A-152(54) Nonprofit corporation or organization with which associated. Any not for profit corporation, organization, or association, incorporated or otherwise, that is organized or operating in the state primarily for religious, charitable, scientific, literary, public health and safety, or educational purposes and of which the covered person, filing person, or any member of the covered person's or filing person's immediate family is a director, officer, governing board member, employee, lobbyist registered under Article 8 of Chapter 163A of the General Statutes or independent contractor. Nonprofit corporation or organization with which associated shall not include any board, entity, or other organization created by this State or by any political subdivision of this state.

APPENDIX L

Dr. Katie Lowry

Dr. Katie Lowry is a pediatrician and owner of Robeson Pediatrics, PA. A native of Pembroke, NC, Dr. Lowry received her BA in Biology and Master's in Public Health from the University of North Carolina at Chapel Hill. She is an advisory team member at PowerPoint Church and a member of the Kiwanis of Robeson Lumberton and the North Carolina Pediatric Society.

Russell Smith

Russell Smith has been in the retail clothing business for 40 years. He established Russell's Clothing in 1983 and continues to serve his customers from all over the country. Mr. Smith is a past Rotarian and served two terms as president of Washington's 102-year-old club. He graduated from Beaufort County Technical Institute in 1975 with an associate degree in Retailing and Marketing Technology. Mr. Smith just began his thirteenth year on the Beaufort County Community College board of trustees having served three of those years as Chairman.

April 2023 Boards of Trustees Appoints and Reappointments

Name	Current Board Member	Notes
------	----------------------	-------

East Carolina University

Vanessa A Workman	No	
Van D. Isley	Yes	
Thomas P. Furr	Yes	
Carl M. Rogers	No	

North Carolina A&T State University

Gina Loftin	No	
Gregg Lowe	No	
Jini Thornton	No	
Kimberly Gatling	Yes	

NC School of Science and Mathematics

Adam F. Falk	Yes	No residency required
Wayne Kimball, Jr.	No	No residency required
Carl Ryden	No	CD 13
Chaula Jain	No	CD 14
Clark Jenkins	No	CD 3
Erik Troan	Yes	CD 2
Richmond Baker	Yes	CD 12
Nathan Ramsey	Yes	CD 11
Cindy Goodman	Yes	CD 9
D. Craig Horn	No	CD 8
Warwick Arden	Yes	NC Institution Provost, ex-officio appointment
Herman Holt	Yes	NC Institution Provost, ex-officio appointment
Tonya Smith-Jackson	Yes	NC Institution Provost, ex-officio appointment

North Carolina Central University

Garland Keith Chadwell	Yes	
David Alexander	No	
William V. Bell	Yes	
Lisa Martinez	No	

Name
Current Board Member
Notes
UNC-Chapel Hill

David L. Boliek Jr.	Yes	
John P. Preyer	Yes	
Patrick Ballantine	No	
Ralph W. Meekins Sr.	Yes	

UNC Greensboro

Oita Coleman	No	
Linda Sloan	Yes	
Mae Douglas	Yes	
Dale Phipps	No	

UNC Pembroke

Patricia T. Willoughby	No	
James E. Lockemy	Yes	
James B. Hyley, Jr.	No	
Linda "Mickey" Gregory	Yes	

UNC Wilmington

Yousry Sayed	Yes	
Earl F. "Hugh" Caison, II	Yes	
Traci L. Butler	No	
Aldona Z. Wos	No	

Western Carolina University

Rebecca Brown	Yes	
Daniel Field	No	
Kathryn Greeley	Yes	
Kenneth Hughes	Yes	

APPENDIX N

Anne B. Faircloth (reappointment)

Ms. Faircloth owns and manages multiple agricultural and real estate businesses, including Lafayette Farms. She serves on the North Carolina Board of Agriculture and is a member of the board of trustees for the NC Museum of Art, Maderia School, Sampson Regional Medical Center, and the Sampson County Community College Foundation. Ms. Faircloth has previously served on the boards of the North Carolina Pork Council and United Way of Sampson County. Ms. Faircloth supports UNC-Chapel Hill's Carolina Performing Arts, University Press, Kenan-Flagler Business School, Methodist University, Penland School of Crafts, among others. The Clinton-Sampson Chamber of Commerce recognized her as their Businessperson of the Year in 2016. Ms. Faircloth graduate Cum Laude from Duke University and received a MA from Hollins College.

John G. McNeil (reappointment)

Dr. McNeil is the President and CEO of Verum Clinical Research. Dr. McNeil's work has led to the development of the only efficacious vaccines for HIV prevention and for prevention of Falciparum Malaria in African infants and toddlers. Dr. McNeil has held senior positions at Sanofi Pasteur, the Bill and Melinda Gates Foundation, the National Institutes of Health as well as multiple roles over 24 years in the US Army Medical Research and Materiel Command. Dr. McNeil is a current member on the board of trustees for Fayetteville State University. Dr. McNeil is a graduate of UNC-Chapel Hill and Wake Forest Bowman Gray School of Medicine.

Raymond O. Collier

Raymond Collier is a native of Johnston County, North Carolina, and owner of Ray Collier Farms. Mr. Collier is a member of the Pleasant Hill Masonic Lodge, the Lenoir County Shriners, and the Lenoir County Committee of 100. Mr. Collier has served on the board of directors of the Deep Run Water Corporation and the NC State University Chapter of the Alpha Gamma Rho Fraternity. Mr. Collier was appointed to the Lenoir Memorial Hospital board of directors in 2003, serving as chairman of that board from 2013-2020.



MEETING OF THE BOARD OF GOVERNORS
April 20, 2023

Closed Session Motion

Motion to go into closed session to:

- Prevent the disclosure of information that is privileged or confidential under Article 7 of Chapter 126 and § 143-748 of the North Carolina General Statutes, or not considered a public record within the meaning of Chapter 132 of the General Statutes.
- Prevent the premature disclosure of an honorary award or scholarship.
- Consult with our attorney to protect attorney-client privilege.
- Consider the qualifications, competence, performance, or condition of appointment of a public officer or employee or prospective public officer or employee.

Pursuant to: G.S. 143-318.11(a)(1), (2), (3), and (6).