



UNC HEALTH
SCIENCES *at*
MAHEC

Annual Report
2019

ON THE COVER

Photographed on location at Celo Health Center,
our first rural teaching practice established fall 2018

Benjamin Gilmer, MD
MAHEC Faculty
Director, Rural Fellowship
former MAHEC FM resident

Jessica White, MD
former MAHEC FM resident
former MAHEC Rural Fellow

Patricia Feeney, DO
MAHEC Rural Fellow
former MAHEC FM resident
former MAHEC Sports Med Fellow

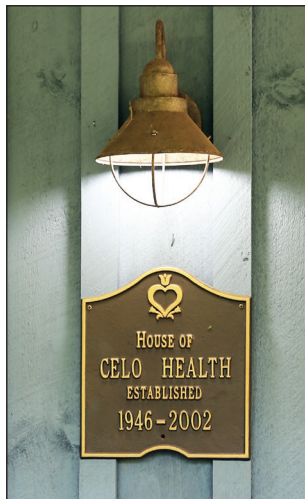
Gwen Seamon, PharmD
MAHEC Pharmacy Resident PGY2
former MAHEC Pharmacy Resident PGY1

Kacey Scott, MLIS
UNC School of Medicine
Kenan Rural Scholar
former MAHEC librarian



Courtenay Wilson, PharmD
Director, MAHEC PGY2 Residency
Program
UNC Eshelman SOP Faculty
UNC Eshelman SOP graduate

Vanna Labi
UNC Gillings School's Master of Public Health Program in Asheville, Class of 2021
former NC AHEC Scholar
former MMMP Intern



We extend our sincere gratitude to the Mountain Community Health Partnership staff at the Celo Health Center for their generosity in allowing us to photograph during office hours.

As the nation's oldest public university, the University of North Carolina at Chapel Hill has more than 225 years of service to North Carolinians. With *lux, libertas* — light and liberty — as founding principles, Carolina has charted a bold course of leading change to improve society.

The interprofessional research, clinical training, and innovative care delivered at UNC Health Sciences at MAHEC is making a profound impact on lives across the state, especially those living in rural and underserved communities across Western North Carolina. In expanding our health sciences education and research programs, we are better equipped to meet the healthcare workforce needs of today and the challenges of tomorrow.

Robert A. “Bob” Blouin, PharmD
Executive Vice Chancellor, Provost,
Chief Academic Officer, Chief Operating Officer
University of North Carolina at Chapel Hill



UNC Health Sciences at MAHEC is an enduring commitment to UNC School of Medicine's unwavering service to the state. This academic health center brings the best of UNC's health sciences educators together with the region's leading clinical training professionals.

Established in 2017 with the support of the people of North Carolina, UNC Health Sciences at MAHEC brings together students and faculty from UNC's schools of medicine, public health, pharmacy, and dentistry, allowing for unprecedented opportunities for interprofessional training, research, collaboration, and innovation in healthcare.

Julie Byerley, MD, MPH
Executive Vice Dean for Education
Chief Education Officer
UNC School of Medicine



This past August, we opened the doors of our new UNC Health Sciences at MAHEC building on our main campus in Asheville. It is a daily reminder to our faculty, students, residents, and staff of the big vision embraced by MAHEC and our academic partners at the University of North Carolina.

We are making this vision a reality by developing a new model of healthcare in which people have access to a team of primary care providers, pharmacists, public health professionals, dentists, and nurses working on the same campus alongside researchers—all committed to addressing our region's unique rural health needs and social determinants of health. The future of health in Western North Carolina depends on our success, and we are well-prepared for the challenge.

Jeffery E. Heck, MD
CEO, MAHEC
UNC Health Sciences at MAHEC
Associate Dean, UNC School of Medicine Asheville Campus

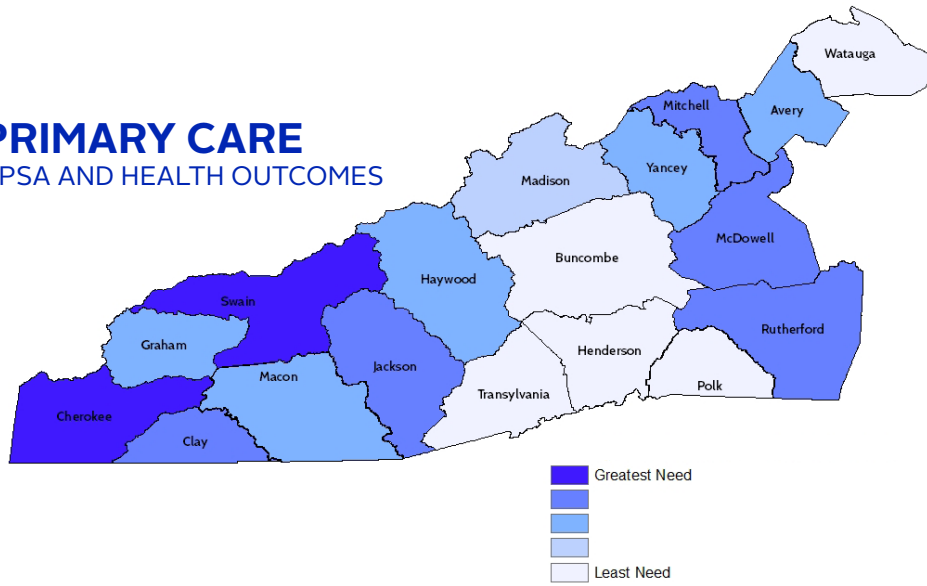


UNC Health Sciences at MAHEC Oversight Board

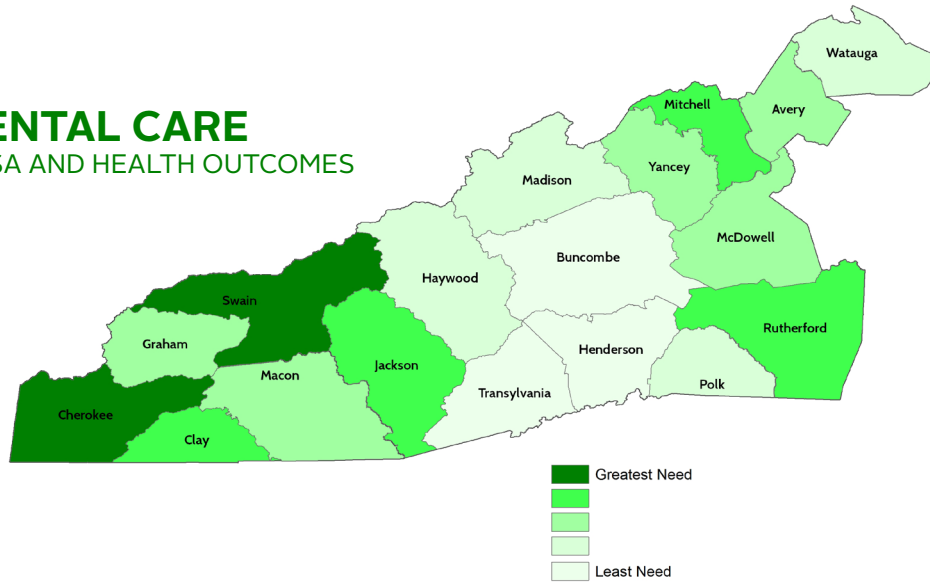
UNC Provost and Executive Vice Chancellor Robert A. Blouin, PharmD; UNC School of Medicine Executive Dean Cristy Page, MD, MPH; UNC SOM Executive Vice Dean and Chief Education Officer Julie Byerley, MD, MPH; UNC Gillings School of Global Public Health Dean Barbara Rimer, DrPH; UNC Eshelman School of Pharmacy Interim Dean Dhiren Thakker, PhD; UNC Adams School of Dentistry Dean Scott De Rossi, DMD, MBA; UNC Board of Governors W. Louis Bisette, Jr; Cherokee Indian Hospital CEO Casey Cooper; and MAHEC CEO Jeffery E. Heck, MD

STATE OF HEALTH IN WNC

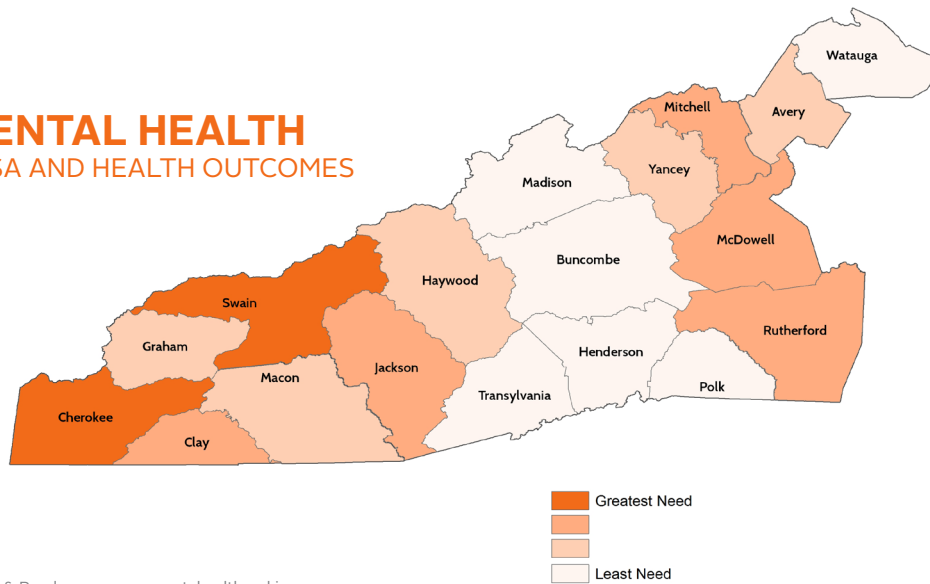
PRIMARY CARE HPSA AND HEALTH OUTCOMES



DENTAL CARE HPSA AND HEALTH OUTCOMES



MENTAL HEALTH HPSA AND HEALTH OUTCOMES



Data Sources:
 County Health Rankings & Roadmaps. www.countyhealthrankings.org
 Health Resources and Services Administration Data Warehouse. data.hrsa.gov

OUR REGION

Western North Carolina is home to nearly 1 million people living in 18 counties. On average, our primarily rural region is poorer, older, and less resourced than other areas of the state, but our communities are close-knit, innovative, and resilient.

In an unprecedented time of change, UNC Health Sciences at MAHEC continues to build upon existing regional infrastructure and focus proactively on creating additional opportunities for health across WNC.

CURRENT STATE

Limited Health Workforce

- Every WNC county is a health professional shortage area for primary care
- Only 3 out of 5 adults in WNC had a dental visit in the past year
- 8 WNC counties have no practicing general psychiatrist

Fewer Maternal and Child Health Resources

- 5 rural hospital labor and delivery closures in < 5 years
- 7 WNC counties have no practicing ob/gyns
- Limited support for perinatal substance use disorders

Ongoing Opioid Epidemic

12 of 18 counties have higher rates of opioid-related deaths than the state average

Challenging Social Determinants of Health

- 1 in 4 WNC children live in poverty
- 1 in 5 WNC residents are over 65
- 1 in 6 WNC adults 18-65 are uninsured
- Median WNC household income is \$9,160 less than state average

Opportunities for Better Health Outcomes

- Western North Carolina has higher rates of
- cardiovascular disease
 - behavioral health disorders
 - substance use disorders
 - smoking

PROMISE FOR PROGRESS

Building NC's Healthcare Workforce

- MAHEC residency/fellowship graduates (2019) staying in NC
- 11 of 16 Family Medicine
 - 3 of 5 Obstetrics and Gynecology
 - 3 of 6 Dentists
 - 2 of 2 Hospice and Palliative Medicine
 - 3 of 5 Pharmacotherapy
- (see pages 12-13)

Putting Mothers First

- High-risk maternal-fetal medicine and ob/gyn provider for WNC
- Rural ob/gyn training and maternal child-health fellowships
- 45% of ob/gyn residency graduates establish rural practices
- 242 women were supported with integrated perinatal substance use treatment in 2019 (see page 17)

Training North Carolina to Treat Opioid Use Disorder

733 providers trained in medication-assisted treatment across NC (see page 16)

Collaborating to Enact Social Change

MAHEC collaborates with more than 50 community-based organizations to improve access to safe and affordable housing, food security, transportation, and interpersonal safety and to address toxic stress and other social determinants of health

New Asheville-based MPH program places students with organizations across WNC to improve social determinants of health (see page 5)

Transforming Rural Health Practices

- Recruiting and training future healthcare professionals for WNC (see pages 12-13)
- Building rural teaching practices to retain and sustain them (see pages 14-15)

2019
update

Continued to expand to 26 application phase and 54 individualization phase students—a 50% increase in enrollment from 2018.

Added an accelerated curriculum (FIRST) for students committing to practicing family medicine in underserved and rural areas of North Carolina.

PATHS TO RURAL PRACTICE

UNC School of Medicine Asheville Campus

142 students have completed our third-year program since 2009
24 rural teaching sites in 12 WNC counties

Kenan Primary Care Medical Scholars

43 rural medicine scholars have trained in 11 WNC counties since 2009

FIRST Fully Integrated Readiness for Service Training (FIRST) Program

Accelerated 3-year curriculum
3 years in NC residency program
3 years practicing in underserved NC community

Medical students Bailey Allen and Wesley Roten cross paths in the hospital

➔ Read Bailey's story at www.mahec.net/FIRST



“The Asheville campus is special. The longitudinal curriculum and flexible white space gave me the opportunity to shape my learning experience. The smaller class size and supportive administrators, residents, and preceptors gave me all the encouragement I needed to make the most out of my education.”

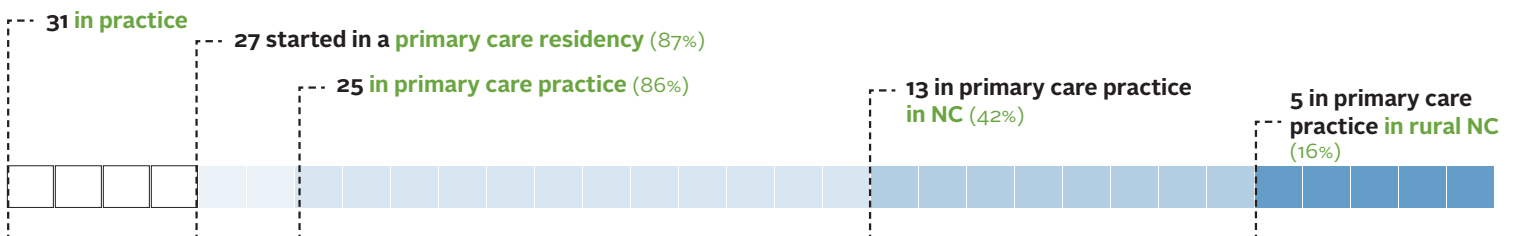
➔ Read Wesley's story at www.mahec.net/ruralscholar



UNC
SCHOOL OF MEDICINE
ASHEVILLE

Graduates in Practice as of 2019

Retention in Primary Care in Rural NC



2019 update

Completed a strong first year with 14 students working with 18 Western North Carolina counties.

The second cohort has expanded to 16 students working in a range of healthcare professions from 5 WNC counties (4 of them rural).

Nearly half of these students have previously participated in UNC and MAHEC pipeline programs.

“Having an MPH gives me an excuse to think more broadly in terms of relationships and systems so I can have a bigger influence. I'm learning how to be a public health leader who brings people together to create solutions that are better than any individual or organization could achieve on their own.”

Going the Distance to Improve Health

You might say that Matt Ransom, PharmD, a hospital pharmacist, really goes the distance to improve health. At least he has since enrolling in UNC Gillings School's MPH Program in Asheville and working with the Toe River Health District to develop mobile harm reduction services in rural Avery, Mitchell, and Yancey counties.

Once they have operationalized harm reduction services, they hope to expand mobile health services to include telehealth, medication-assisted treatment, chronic disease management, even parenting support—whatever WNC residents need to be healthy no matter where they live.

➔ Read Matt's story at www.mahec.net/mpstory

Matt and his preceptor, Toe River Health District Director Diane Creek, MSW, didn't have office meetings. They used the time spent driving through the remote areas of Avery, Mitchell and Yancey counties for meeting and precepting sessions, affectionately referred to as **windshield time.**



MAHEC and UNC Eshelman School of Pharmacy have a strong partnership that spans academic research and interdisciplinary clinical practice. MAHEC pharmacists are UNC Eshelman School of Pharmacy faculty charged with training first- and second-year residents, geriatric pharmacy residents, PharmD students, and rural health scholars in innovative models of ambulatory care pharmacy practice.

Residents learn to work at the top of their license by participating in team-based care that includes rural practice, co-visits, annual wellness visits, and medication and chronic disease management.

RESEARCH AREAS

UNC Health Sciences at MAHEC with UNC Eshelman School of Pharmacy health researchers:

- Perinatal substance use treatment
- Access to contraception in rural regions
- Access to healthcare for underserved populations
- Mental healthcare access
- Clinician well-being and resilience

MAHEC pharmacy faculty and residents:


- Opioid stewardship and tapering protocols
- Medication for opioid use disorder
- Naloxone coprescribing
- Hepatitis C treatment in primary care settings
- Implementation of clinical pharmacy services
- Geriatric care and deprescribing
- Home-based primary care for high-risk older adults



Taking the pharmacist out of the pharmacy

In high school, second-year resident Gwen Seamon, PharmD, worked as a pharmacy assistant at the same time the opioid epidemic was devastating families in her rural community. She saw first-hand how hard it was for people to access treatment for opioid use disorder.

Later, when completing her degree, Gwen discovered MAHEC's ambulatory care residency programs. She applied and soon found herself working alongside ob/gyn and behavioral health providers at Project CARA supporting pregnant women with opioid use disorders. This training helped prepare Gwen for a PGY2 residency in rural Yancey and Mitchell counties where she is developing a clinical pharmacy position to enhance team-based care at this federally qualified health center.

 Read more about Gwen's work with Project CARA at www.mahec.net/CARAstory

“You can’t understand what these women have experienced until you sit with them and hear their stories. This is what it takes to shift your perspective.”

Research prioritizes rural healthcare workforce development and actively engages community partners and stakeholders from across Western North Carolina that MAHEC has cultivated over the past 45 years.

UNC Health Sciences at MAHEC's multidisciplinary research team includes healthcare professionals and learners as well as health economists, medical sociologists, anthropologists, data analysts, and librarians.

Research projects include:

- Factors supporting rural healthcare workforce recruitment, training, and retention
- Evaluation of statewide residency program training in treatment of opioid use disorder
- Best practices for substance use treatment in primary care
- Innovations in medical education
- Women's health including preconception and interconception care, perinatal substance use disorders and women's health screening
- Health disparities and inequities

CURRENT RESEARCH

Exploring the impact of structural racism on the health of African Americans in rural Western North Carolina



This equity-focused research is a community-based collaboration/partnership with UNCA, ABIPA, and MAHEC. In addition, local researchers and community members have the opportunity to learn from national experts from a variety of research institutions across nation.

Robert Wood Johnson Foundation Interdisciplinary Research Leaders Grant

Recipients:

Jill Fromewick, ScD
UNC Health Sciences at MAHEC Research Scientist

JéWana Grier-McEachin
Executive Director, Asheville Buncombe Institute of Parity Achievement

Ameena Batada, DrPH, MPH
Associate Professor of Health and Wellness, UNC Asheville
Adjunct Associate Professor, UNC Gillings School of Global Public Health

In 2018-19, research was published in:

- Academic Medicine
- American Journal of Health-System Pharmacy
- American Journal of Obstetrics & Gynecology
- American Journal of Public Health
- The American Surgeon
- Clinical Obstetrics and Gynecology
- Family Medicine
- Family Practice
- Journal of Addiction Medicine
- Journal of the American Pharmacists Association
- Journal of Cardiovascular Nursing
- Journal of Family Practice
- Journal of Pediatric & Adolescent Gynecology
- Journal of Psychosocial Nursing
- Journal of Vascular Surgery
- The Journal of Rural Health
- Maternal and Child Health Journal
- The New England Journal of Medicine
- North Carolina Medical Journal
- Obstetrics & Gynecology
- Personalized Medicine
- Research in Social and Administrative Pharmacy

Library Science Delivers

Embedded departmental and subject matter expertise

- **34,878** service consultations with health and human service personnel in WNC
- **20,223** service consultations with preceptors of AHEC learners
- **6,288** proactive alerts delivering information to support faculty interests
- **3,349** articles delivered
- **406** contact hours of instruction
- **43,772** AHEC Digital Library login sessions

MAHEC FAMILY MEDICINE RESIDENCY PROGRAMS

2019 update

Asheville program expanded to 36 residents and added faculty focused on regional health issues including opioids, behavioral health, and geriatric care.

Established two new specialty clinics for patients with hepatitis C and those with intellectual and developmental disabilities.

Hendersonville program expanded to 13 residents training at 9 sites in 5 WNC counties providing integrated primary care that includes office-based treatments for opioid use disorder and hepatitis C.



Hendersonville Rural FM residents and families

“I love the full scope, broad training we get at MAHEC. I have felt very supported in this unique academic and community-based setting. I know when I go out to practice in rural Western North Carolina, MAHEC will be there for me.”

—Brittany Hipkins, MD, MPH
PGY3 Chief Resident
FMRP Asheville

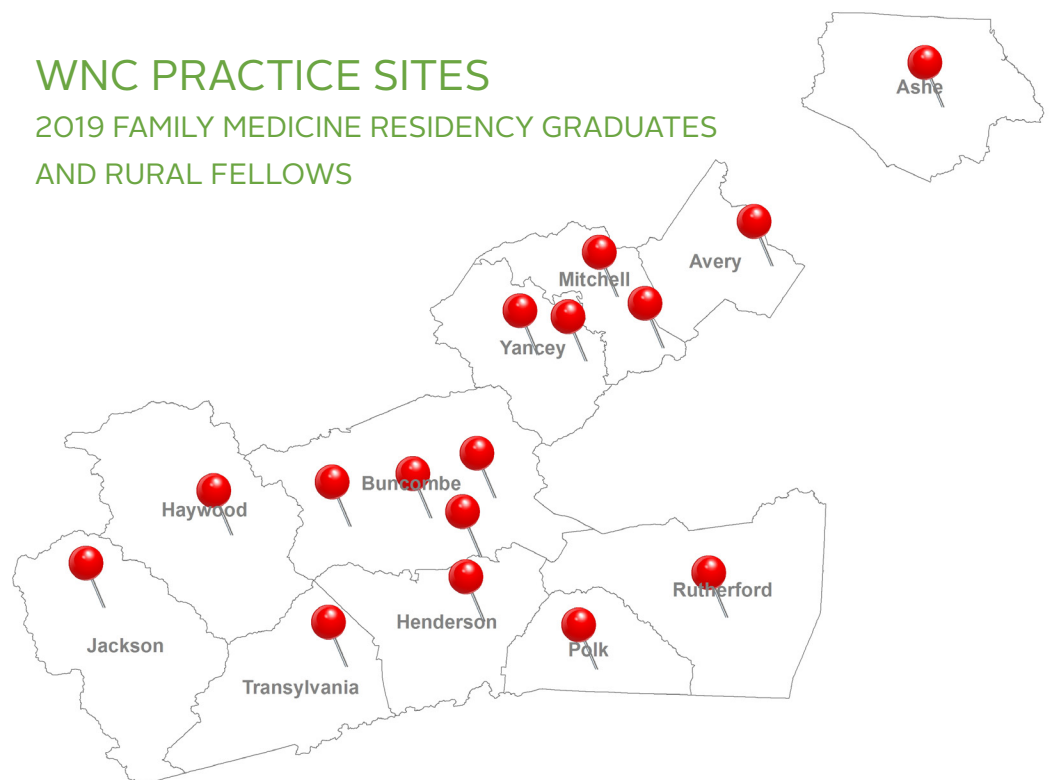
“The breadth and depth of our clinical experience give residents the confidence that we can practice anywhere with the full scope that’s possible with family medicine.”

— Parker W. Leland, MD
PGY2 Chief Resident
FMRP Hendersonville

HVL residents have cured and/or initiated treatment for more than **200** patients with hepatitis C since 2017.

WNC PRACTICE SITES

2019 FAMILY MEDICINE RESIDENCY GRADUATES AND RURAL FELLOWS



2019 update

Received provisional ACGME approval and a grant from the Health Resources and Services Administration.

Announced Molly Benedum, MD, as residency program director effective September 2019.

Recruiting 4 residents to begin training in July 2020 and will expand to 6 residents per class in subsequent years.

Some of our **most isolated rural counties** are in the northwestern corner of the state:

Ashe
Wilkes
Avery
Caldwell
Watauga

Designated as health professional shortage areas with a high percentage of uninsured and underserved residents living at or below the poverty line

“If there’s one high impact thing you can do to actually change the health of a rural community, it would be to send a family physician into that area—not only to improve access but to bring the community together to address common health issues.”

Bryan Hodge, DO, former director of MAHEC’s rural family medicine residency program in Hendersonville, and a rural physician himself, is currently helping guide the development of MAHEC’s new rural family medicine residency program in Boone and rural teaching practices across the region.

Through his leadership in the National Rural Health Association and as a consultant for AAFP’s Residency Program Solutions, he is also helping other medical programs across the country build better roads to rural health.



BUILT TO SUPPORT THE NEXT GENERATION OF RURAL PHYSICIANS



*A symbol of pioneering spirit:
The Mile High Swinging Bridge
at Grandfather Mountain*

MAHEC GENERAL SURGERY RESIDENCY PROGRAM

**2019
update**

Our five-year program expanded to five residents in the PGY1 class.
Currently training 15 general surgeons for rural practice.

MAHEC's rural general surgery residency program is a collaboration with Mission Hospital, one of the busiest surgical hospitals in the state. Residents are given early and ongoing operative exposure in the surgical procedures in greatest need in rural communities including acute care, trauma, burns, breast, pediatric, vascular, endocrine, oncologic, colorectal, hepatobiliary, and pancreatic surgery.

IN 2018-2019

10 surgery residents performed

3,532 surgical procedures in

6 WNC hospitals

that include rural, level II trauma, veterans, and UNC hospitals

All residents participate in academic research supported by an inpatient research project manager and 52 faculty surgeons.

Research areas:

- Geriatrics
- Orthopedics
- Critical care/trauma
- Wound care

MAHEC PSYCHIATRY RESIDENCY PROGRAM

**2019
update**

The Center for Psychiatry and Mental Wellness opened in July.

Our Appalachian region has higher rates of behavioral health and substance use disorders than state and national averages. At this critical time, there are shortages of mental healthcare providers in all 16 counties, and many have no practicing psychiatrist. Our psychiatry residents are trained as generalists in a variety of settings including primary care, which is where most rural and underserved patients receive support for their behavioral health needs.

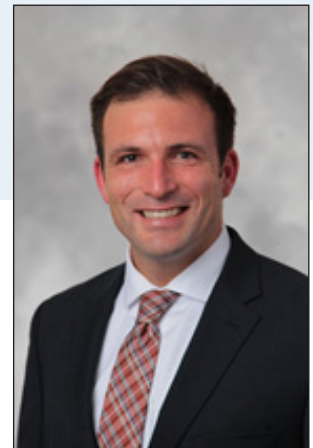
12 residents

16,000 patient encounters
over the next year

5 WNC counties supported

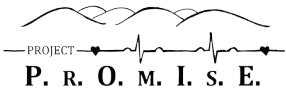
"I grew up in a small town, and I knew I wanted to practice in a rural area. It just made sense to choose a residency where I could get rural exposure. This program really gets us out there working with a variety of patient populations, which is the training we need to support rural communities."

—Thomas Campbell, MD, PGY3 Psychiatry Resident



CENTER FOR HEALTH PROFESSIONS EDUCATION

Providing numerous opportunities for WNC high school and undergraduate students to explore rural health careers and get the education and training they need to pursue them.



Project PROMISE (2018-19)

- 456 high school students
- 6 rural WNC counties
- 20 health careers workshops, internships, and a 3-day summer camp



Minority Medical Mentoring Program

- 3-4 students per semester-long internship (71 since 2006)
- 135 credit hours of clinical rotations and health career and service learning per semester
- 42 baccalaureate, 7 masters, and 2 doctoral degrees to date



Pre-Healthcare Professions Internship

- 10 undergrads in 8-week internships (70 since 2013)
- 20 hours per week clinical shadowing and research
- 60% move into health careers or advanced health programs



NC AHEC Scholars

- Inaugural 2018-19 cohort of 13 students from
- 8 rural colleges and 8 different health disciplines
- 40 hours of didactics, 40 hours of clinical rotations per year

MAHEC Office of Regional Primary Care Education (2018-19)

- 211 students from 12 NC universities
- 465 student rotations
- 78,683 clinical hours
- 99 practice sites in 12 WNC counties

“Three days full of nothing but everything I have ever dreamed of or wanted to be.”

— Project PROMISE summer camp participant from McDowell County



Patricia Feeney, DO Rural Fellow

demonstrates making a litter to transport an injured person during a wilderness medicine session for Project PROMISE summer campers

From inspiring rural high school students to engaging

HIGH SCHOOL

- Project PROMISE
- MMMP Interns
- Health Careers Awareness Events

UNDERGRADUATE

- UNC Asheville / WNC Bridge Foundation Internship
- NC AHEC Scholars
- H.E.A.R.T. Internship
- MAHECexplorer Internship

POSTGRADUATE

- Davidson Impact Fellows
- MedServe Fellows
- AmeriCorps VISTA

GRADUATE PROFESSIONAL

- UNC SOM Asheville Campus/Kenan Rural Scholars
- UNC Gillings School's MPH Program in Asheville
- UNC Eshelman School of Pharmacy Asheville Campus
- WCU Health Sciences Programs

RESIDENCY PROGRAMS

- Family Medicine
- Ob/Gyn
- Pharmacy
- Dental
- Surgery
- Psychiatry
- Nursing

RURAL FELLOWSHIP PROGRAMS

- Family Medicine
- Pharmacy
- Maternal-Child Health

RURAL TEACHING PRACTICES



Spotlight:

Vanna Labi

- MMMP Intern
- NC AHEC Scholar
- UNC Gillings School's MPH Program in Asheville, Class of 2021

Following the pipeline to a passion

Vanna Labi spent the first nine years of her life in the Philippines, which gave her a deep appreciation for rural health challenges. When her parents, both nurses, moved to rural Western North Carolina, she started on a journey with MAHEC that would prepare her to address these challenges: Minority Medical Mentoring Program intern; NC AHEC Scholar and now a student at UNC Gillings School's MPH Program in Asheville. She looks forward to bringing with her all she has learned in these programs to Chapel Hill when she applies to the UNC School of Medicine in a few years.

"MAHEC solidified my passion to become a family physician and helped me realize it was not out of my reach. My dream goal is to attend medical school in Chapel Hill and do my last two years in Asheville, then spend the rest of my life giving back to the people in this region."

rural physicians in dynamic rural teaching practices

Spotlight:

Stephen Kimmel, MD

- UNC SOM Asheville Campus
- MAHEC Family Medicine Residency
- MAHEC Rural Fellow - Blue Ridge - Yancey and Burnsville

Putting passion into practice

Stephen Kimmel, MD, grew up in Avery County in rural Western North Carolina, where he was inspired to study medicine after an encounter with a paramedic who spoke to his high school anatomy class.

After graduating from college, Stephen enrolled at the UNC School of Medicine in Chapel Hill where he embarked on the road to becoming a rural physician. Stephen received rural-focused training and support every step of the way as an Asheville Campus third- and fourth-year medical student.

After graduating in 2015, he joined MAHEC's Family Medicine Residency Program in Asheville and then went on to become a MAHEC Rural Fellow.

During his yearlong fellowship, Stephen received additional mentorship and training from MAHEC faculty while he established inpatient and outpatient practices in rural and medically underserved Mitchell and Yancey counties.

This continuous educational pipeline is how UNC Health Sciences at MAHEC is building a healthcare workforce today to ensure the future health of our rural region tomorrow.



Train rural learners

- Interdisciplinary rotations
- Weekly didactics
- 1:1 mentorship

Sustain rural providers

- Practice transformation support
- Faculty development
- Ongoing education & faculty support reduces burnout

Transform rural health

- Train qualified healthcare professionals
- Support rural practices
- Conduct community-based research

CURRENT SITES

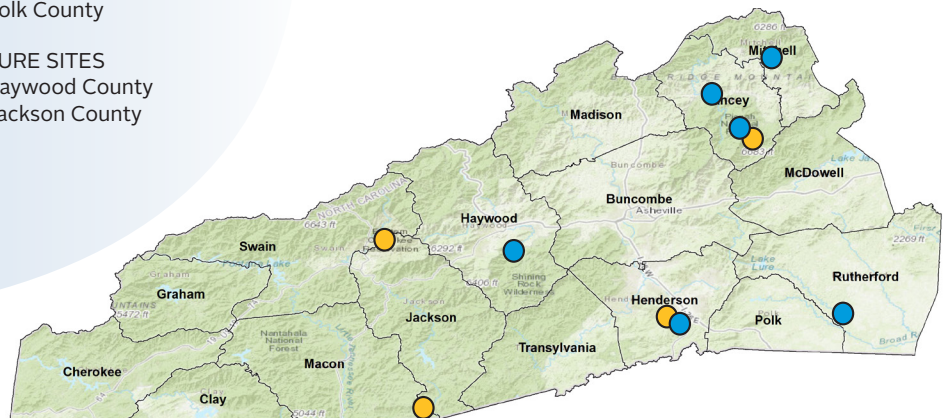
- Yancey and Mitchell Counties
- Polk County

FUTURE SITES

- Haywood County
- Jackson County

Rural Fellows Locations

- 2018-19
- 2017-18



Transforming rural health through rural teaching practices

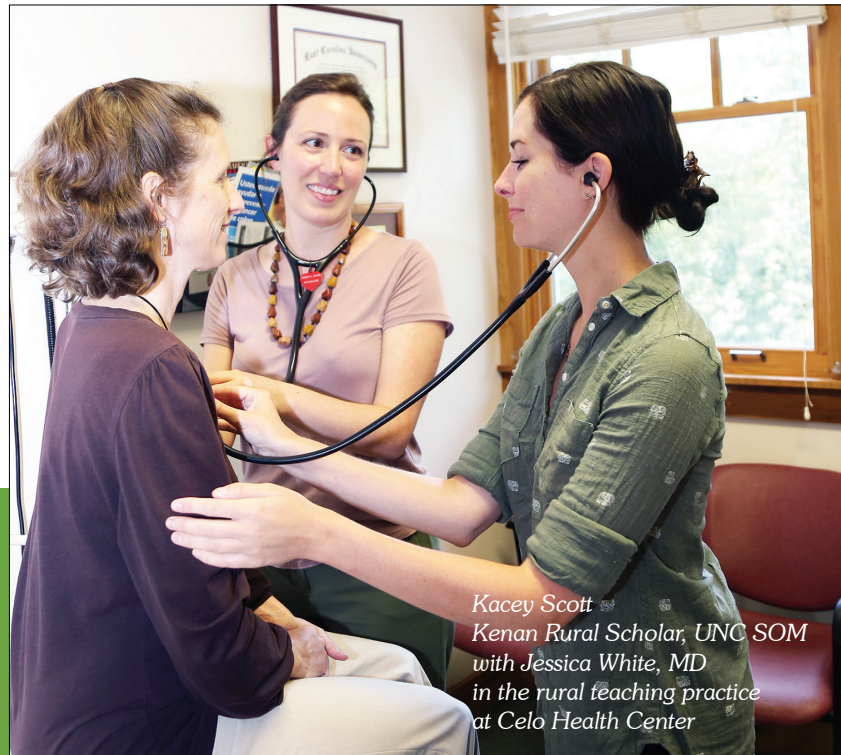
Rural teaching practices are at the heart of our rural health strategy. With the support of our academic health center, these practices provide quality team-based care in a multidisciplinary environment that encourages the engagement and retention of rural providers. This model emphasizes lifelong learning and ensures a steady supply of highly qualified rural healthcare professionals.

Key features:

- Weekly practice-wide didactics
- Multidisciplinary learners
- Mentoring and faculty development
- Practice transformation support
- Academic endeavors

Rural learners:

- Medical residents and fellows
- Pharmacy residents and fellows
- Medical students and rural scholars
- Nurse practitioner students
- NC AHEC Scholars
- Project PROMISE students



*Kacey Scott
Kenan Rural Scholar, UNC SOM
with Jessica White, MD
in the rural teaching practice
at Celo Health Center*

“The future for efficient rural practices is multidisciplinary. A team-based approach is encouraged by the cohort having different disciplines to share.

In rural medicine, practicing with a scarcity of resources is a key skill.

By learning and collaborating with other disciplines in multiple rural environments, all fellowship participants benefit.”

— Charlie Baker, MD
Baker Center for Primary Care
Avery County

A MODEL RURAL PRACTICE

In the fall of 2018, UNC Health Sciences at MAHEC worked with Mountain Community Health Partnership to establish a rural teaching practice at MCHP’s federally qualified health centers in Yancey and Mitchell counties where six MAHEC family medicine residency program graduates are employed.

MCHP’s commitment to team-based primary care, connection to MAHEC, and remote rural location made it a model rural teaching practice partner.

Over the past year, MCHP has provided clinical training and practice opportunities for rural fellows, family medicine and pharmacy residents, Kenan Rural Scholars, medical students, family nurse practitioner students, NC AHEC Scholars, and Project PROMISE high school students.

➔ Read more at
www.mahec.net/rtp

2019
update

The MAHEC Dental Health Center at Columbus in Polk County opened in August.

The Center is co-located with a primary care practice affiliated with St. Luke's Hospital to support interprofessional team-based care and training.

MAHEC's Rural Dental Teaching Practice

- Onsite medical director and faculty
- 7 dental residents/ 7-week rotations
- 1 full-time dental hygienist, 2 dental assistants
- 10-12 dental assisting students per semester
- 7 rural scholars from UNC Adams School of Dentistry in 2020
- Supports 35+ learners each year

Blake Gutierrez, DDS wasn't always a small town dentist. In fact, he grew up in a suburb near Salt Lake City and went to dental school in a large metro area. He started on the road to rural dentistry when he learned about public health and the possibility of serving those who most needed dental care. This discovery led him to a residency program that emphasized rural practice, which gave him the skills to return to Utah to open a dental clinic in a small town where he worked until MAHEC invited him to help launch a rural practice in North Carolina.

Why rural dentistry?

"Teeth are teeth but, when you are in a rural setting, you really have to bring creativity to the game because resources are scarce. You have to keep your skills sharp and think outside the box so you can recommend plan A but also plans B, C, and D so your patients can choose the plan that works best for their circumstances. I love this challenge."

He also loves the excitement that learners bring to a practice, especially an integrated primary care setting that encourages continuous learning and makes good dentists great ones.



Rural Dentistry Makes Good Dentists Great



STATEWIDE OPIOID RESPONSE INITIATIVES

Across North Carolina, we are developing

Best practice models

- Safe pain management
- Medication-assisted treatment
- Opioid tapering protocols
- Innovative youth education



Partnerships

- NC Department of Health and Human Services
- CDC Foundation
- North Carolina residency programs
- Numerous regional, state, federal, and national organizations

North Carolina Medication-Assisted Treatment Training Project

1266 providers and healthcare professions students trained

- 29 residencies
- 7 PA programs
- 1 NP program

Continuing Professional Development

153 opioid continuing education programs reached 10,270 participants (125% increase over last year)

“DHHS’s partnership with MAHEC to train the next generation of healthcare providers in addiction is **changing the treatment landscape in North Carolina.**

As a result of this partnership, hundreds of providers will be able to better serve their patients and communities.”

➔ Read more at www.mahec.net/matimpact

—Susan Kansagra, MD, MBA
Chronic Disease and Injury Section Chief, NC DHHS

It's Just a Pill... Isn't It?

- An original children's musical
- Developed and professionally produced by UNC Health Sciences at MAHEC
- Educates children and adults about the dangers of prescription pill misuse and the resources available to treat substance use disorder



Performed for more than 4,000 middle school age children, parents, educators, and community members across North Carolina.

Treating generations of trauma one pregnancy at a time

PROJECT CARA QUICK FACTS

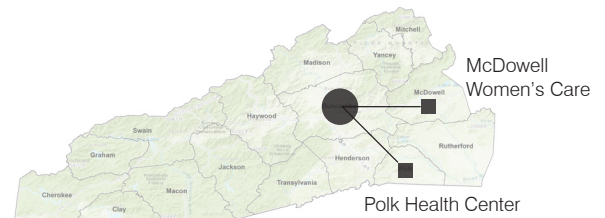
- Works with Maternal-Fetal Medicine in the MAHEC Department of Obstetrics and Gynecology
- Provides trauma-informed substance use treatment and perinatal care in one comprehensive program
- Serves women from 21 WNC counties (19 of them rural)
- Provided **242** women with perinatal substance use treatment this year
- Trained a variety of health sciences learners in this integrated care model
- Supported rural health practices so women can get care where they live

To date, Project CARA has helped nearly **750** women reach their goals that include having a healthy baby, stabilizing their life, and keeping their family intact. This is how we are healing generations of trauma one pregnancy at a time.

We serve women from **19** rural WNC counties

This is the **HUB & SPOKES** model we use to take care of women where they live

Women who engage in prenatal care **locally** and remain in postpartum care **locally** may increase their chances of staying with their babies and staying in recovery.



2019 update

The Simulation Center at UNC Health Sciences at MAHEC received provisional accreditation from the Society for Simulation in Healthcare, the only center in Western North Carolina, and one of only five in the state, to do so.

Scenario settings include:

- trauma
- labor and delivery
- OR
- emergency

Using:

- high fidelity manikins
- standardized patients
- laproscopic surgery
- point-of-care ultrasound
- virtual reality

“It felt like I was at the scene, and I was dealing with an actual emergency case. It was a great experience. I had to use my knowledge and critical thinking skills to prioritize the best action,” explains Patricia Rade, a senior WCU nursing student.

7,290 learners trained in **563** programs

including

205
school nurses

from more than

40 NC counties



Simulation Center Director Elaine Alexander, RN, MSN, assists second-year ob/gyn resident Amelia Cline, MD, during a shoulder dystocia simulation.

2019 update

The Center for Advanced Nursing Education (CANE) is established to train nurses to work at the full scope of their license so they can support the cost-effective delivery of high-quality healthcare in a variety of settings.

CANE employs a variety of innovative training approaches including virtual reality and simulation education, interdisciplinary team-based care, and Project ECHO® video teleconference learning.



WCU nursing students participate in a virtual reality simulation at UNC Health Sciences at MAHEC to prepare them for handling emergency situations.

Photo credit: Western Carolina University

Initiatives include:

- Preparing WCU baccalaureate nursing students for rural and ambulatory care practice
- Training nursing residents and fellows for rural practice at MAHEC's family medicine and ob/gyn practices
- Developing nurses' capacities to include co-visits, patient education, transitions of care, and patient assessments
- Managing school nurses and school health programs for two K-12 school districts



MAHEC's Project ECHO® for School Nurses

Best practices for the most challenging school health issues in our region:

- Chronic disease management
- Seizure disorders
- Behavioral health and substance misuse
- Concussion management

ECHO® sessions include the opportunity to submit and discuss real cases with medical specialists.

Since fall 2018 MAHEC's ECHO® has reached **1,126** participants across **43** NC counties

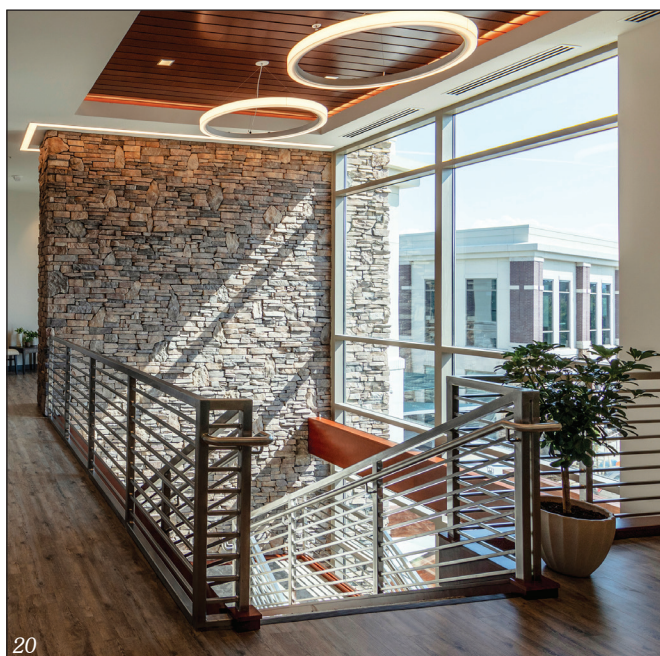
➔ Read more at www.mahec.net/ourECHO

INNOVATION HUB

2019
update

The UNC Health Sciences at MAHEC building was completed.

UNC School of Medicine Asheville Campus, UNC Gillings School's MPH Program in Asheville, Center for Health Professions Education, and Rural Health Initiatives are now in their new spaces.



BUDGET SUMMARY

UNC Health Sciences at MAHEC FY 2019-20 Fiscal Plan Summary

FY 19-20 Spending

Administration	\$	843,000
School of Medicine	\$	540,000
School of Public Health	\$	823,000
School of Pharmacy	\$	1,157,000
Social Determinants of Health Community Initiative	\$	331,000
Academic and Research Faculty	\$	1,769,000
Mission Subspecialty Fellowships	\$	1,000,000
Faculty Development	\$	660,000
UNC/MAHEC Academic Grants	\$	229,000
Boone Family Medicine Residency Program	\$	257,000
Student Pipeline Projects	\$	496,000
Rural Fellowships	\$	350,000
Rural Teaching Initiative	\$	888,000
School of Dentistry and Columbus Dental Practice & Rural Teaching Site	\$	464,000
Project CARA	\$	240,000
Center for Advanced Nursing Education	\$	425,000
Administrative Overhead Allocation	\$	1,108,000
Total Spending	\$	11,580,000



UNC Health Sciences at MAHEC

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