

Carolina PUBLIC HEALTH



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GLOBAL PUBLIC HEALTH



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into practice to make an impact in the here and now.

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From **Matthew Chamberlin**
Associate Dean for Communications and Marketing

As you will see, this issue of *Carolina Public Health* magazine is focused on public health practice, which has been part of the mission of the School since its birth in 1940. Helping the people of North Carolina continues to be our North Star, and every year we deepen our commitment. We’re always interested in your thoughts and comments, which help us guide our planning of future editions. Please email sphcomm@unc.edu, and please stay healthy and safe.

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“Knowledge applied is knowledge that can improve lives. That’s been a theme of this school since its inception. It is a bedrock commitment that has driven every dean of the school.”

From the Dean

Dear Readers,

As this issue of *Carolina Public Health* reaches you, we are emerging slowly from a dark period of pandemic, more than two years of sickness, deaths, economic shock, mental health crises, and profound health and social inequities. Many bachelor’s and master’s students spent most of their days as students masked, in virtual classes and barely recognizing one another’s faces. All students, faculty and staff were affected, and yet most found positive ways to cope with the enormously difficult hand we were dealt. As we tentatively cast aside our masks, we are finding joy in really seeing one another, being together and allowing ourselves to feel hope that better days are ahead. The pandemic is not over, but we are finding our resilience.

It has been a horrifying period, but the world has focused on public health, and public health has proven itself resilient. Gillings has been strong and a major contributor to recovery. I am so proud of our people, who have done so much on so many levels to end the scourge we

have faced. Courage, compassion, relentless focus, boldness and innovation have marked our immediate and extended Gillings population. We have stood by the people on the front lines of public health and health care and worked with communities to save lives and preserve prosperity. Public health has never been more important, and we must not allow that lesson to be lost.

Our research programs have contributed immensely to taming the pandemic, but our long-term contributions will be felt not just by the strength of our academic and research programs but through our capacity to turn research evidence into practice that benefits communities in North Carolina and around the world. The Gillings School was born in the aftermath of World War I and the 1918 pandemic. It was a time of poverty, want and great social inequity. N.C. invested in the first school of public health in a public university — a statement of belief in the future and recognition of the synergistic relationship between the university, citizens of N.C. and the urgent need to harness knowledge for

good. Knowledge applied is knowledge that can improve lives. That’s been a theme of this School since its inception. It is a bedrock commitment that has driven every dean of the school.

This issue of *Carolina Public Health* is focused especially on our practice mission. As a *public* school of public health, we should never lose sight of the public — the people who must be in our front view every day as we do our work. It is a sacred obligation and responsibility to benefit the people of N.C. and the world. It is a responsibility that has motivated me every day that I have had the privilege of serving as this School’s dean. It is a commitment that should never be lost. Our impact is felt most profoundly in the students we train and in the ways we turn knowledge into value. Practice is one of the most fundamental ways that occurs.

Gillings is once more the top *public* school of public health, tied for number two overall (*U.S. News and World Report*, 2023 rankings). It is fitting that the last issue of *Carolina Public Health* during my time as dean is focused on

practice. Practice will be a key determinant of the Gillings School’s strength and impact in the years to come. As you will read in this issue, we are completing a major strategic planning effort focused on practice — a recommitment to this essential area, on equal footing with research and academics. If implemented, the plan will solidify the School’s reputation as the top practice school. I encourage our donors and friends to increase their support for Gillings practice. It is as worthy of investment as gifts for academics and research. Thank you to all our donors and friends. You help to make the Gillings School the great institution it is today, and your investments lay the foundation for an even more brilliant future. 📖

Best wishes,



Barbara K. Rimer



PRACTICE REIMAGINED AT THE GILLINGS SCHOOL



Dr. Leah Devlin
Professor of the Practice
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Dr. John Wiesman
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Dr. Milton Rosenau, founding dean of UNC's 80-year-old School of Public Health, dreamed of a time when "there shall be no unnecessary suffering and no premature deaths; when the welfare of the people shall be our highest concern." He hoped that, through prevention, we would experience the "joy that we may aid... those who shall live after us."

This challenge still rings true, especially as we face the future during a time of great transition, both within the School and in the world around us. Public health practice — where we apply our public health training and expertise to assess, develop, implement and/or lead policies, programs and interventions to improve the public's health — is the area where we in the Gillings School can make a tangible impact on health and equity in the here and now.

Gillings strategic plan for practice. Dean Rimer charged Gillings School leaders to create a strategic plan with recommendations for strengthening research, teaching and practice at Gillings for the next dean's consideration. As part of this effort, the Practice Task Force has developed recommendations that can increase our School's impact over the next five years.

The vision is to elevate practice equal to research and teaching in ways that are equity driven, local to global, and that are anchored by deep, enduring and trusting partnerships with communities. Recommendations lay out a strong vision, guided by the refreshed definition of practice listed above, that will leverage and focus the amazing resources at Gillings.

Recommendations identify key projects that will help Gillings contribute to improved health and equity across North Carolina and beyond, supported by an enhanced structure for practice; incentives for students, staff and faculty to participate in practice; a call for adequate funding from diverse sources; and defined metrics for accountability and to help us tell the story of our impact with data and examples. A strengthened N.C. Institute for Public



Eleanor Roosevelt guest speaks to a health behavior and health education class at the UNC School of Public Health in 1950.

Health will be key to actualizing this vision. An adequate and diverse workforce, public health crisis capacity, data analysis and growing trust with communities are all essential issues to address inequities in health. These issues are addressed in the practice strategic plan.

Our partners. Core to our vision for practice is how we work with communities and organizations. Community partners are re-envisioning their work in the chaotic environment the COVID-19 pandemic continues to drive. With their on-the-ground experience and insights, they help guide priorities and goals. One important way we learn how best to focus our resources is through our Practice Advisory Committee, a highly engaged advisory group that includes funders; N.C. Department of Health and Human Services leaders; local health directors; and private, nonprofit executive directors. This group helps educate us on urgent needs, connects us with stakeholders and helps integrate across areas. These kinds of enduring relationships mean that Gillings faculty and staff are highly engaged with the team that is developing new recommendations that the N.C. Institute of Medicine's Task Force on the Future of Local Public Health is generating this spring. We are also assisting in the N.C. Division

of Public Health's efforts to develop new regional capacity in support of local public health.

Our phenomenal alumni. We acknowledge, with gratitude, the thousands of Gillings School alumni working in the private and public sectors. They represent some of our best evidence of the impact our School can make in the world — doing incredible work in support of cutting-edge research, leading organizations and supporting students both in practica and as they begin their careers.

There are so many examples of public health practice that demonstrate the commitment of Gillings faculty, staff, students and alumni to make a difference in health and health equity in N.C., across the U.S. and around the world. We hope you will read on in this issue of *Carolina Public Health* to find out more!

Eleanor Roosevelt, along with Dean Rosenau, had it right: "the future belongs to those who believe in the beauty of their dreams." The faculty, staff and students at Gillings, together with partners and in concert with communities locally and globally, are making, and can make an even greater, difference in creating a healthier, more just world. 🌍

LIVING WITH COVID

The COVID-19 pandemic has been a prime, real-time example of public health practice in action. Gillings faculty and students continue to play central roles in informing ongoing response efforts; in working on vaccines and treatments to prevent serious infections and stave off future pandemics; and in talking about lessons learned from SARS-CoV-2, whether that's how to talk about personal health decisions or how to better protect vulnerable communities.

ANTIVIRAL DRUGS MAKE TREATING COVID MORE CONVENIENT

Thanks to his prior decades of coronavirus research, the lab of Ralph Baric, PhD, William R. Kenan, Jr. Distinguished Professor of epidemiology, has been one of the most industrious and important sites of scientific inquiry during the COVID-19 pandemic. Making key discoveries that have fueled the development and distribution of vaccines and treatments, researchers in the Baric Lab have been at the forefront of the COVID-19 response.

Molnupiravir, a twice-daily pill that stops the virus from multiplying, is one of two authorized drugs available that provides COVID-19 patients with the option to treat the virus at home instead of getting an infusion in the hospital. Tim Sheahan, PhD, led the breakthrough experiments in the Baric Lab that first showed molnupiravir's effectiveness against coronaviruses in 2020.

"Before the pandemic, we were working on a few antiviral drugs as potential therapies for different types of coronaviruses that were genetically unrelated," Sheahan says, "and when we found out there was a new virus in China that was a coronavirus, we added SARS-CoV-2 to our paper."

That paper led to a phase 2 clinical trial at UNC. Because Sheahan and his colleagues had done the preclinical work on molnupiravir, they were able to do the virology for UNC's clinical trial to see whether the drug would work in humans. It did: The trial, and subsequent phase 2 and 3 trials at UNC and elsewhere, found that molnupiravir more rapidly reduced infectious virus in the airway, hospitalizations and deaths significantly in people who had been recently infected with SARS-CoV-2.



Tim Sheahan, PhD, led the breakthrough study showing molnupiravir's effectiveness as a treatment for COVID-19.

"Doing the preclinical research on drugs that ultimately get used in people is gratifying," says Sheahan, who usually works with cell cultures and small animals instead of human subjects, "but participating in a clinical trial and showing that a treatment is working was a pleasant surprise."

Sheahan, who originally planned to study water resources and water biology, declared microbiology as his second major after taking a course in it at the University of New Hampshire. After graduating, he worked in a gene therapy lab in Boston that was trying to use viruses to cure genetic disease — finding "a microscopic world where there's a lot going on that you can't see" — sparking an interest in virology and a move to Chapel Hill, where he began studying under Baric in 2003.

Continuing his work in antiviral drug development, Sheahan is now focused on oral therapies that have less chance of adverse interactions with other medicines, as well as cocktail-based approaches that would attack the virus in multiple places, reducing its ability to form a drug resistance.

"Translating research into practice is usually not very common for people like me — I'm a virologist who works in a lab, and normally we're working on answering basic science questions," Sheahan says. "With the pandemic, almost everything we do is research intended to improve human health or translate into some kind of therapy, vaccine or antibody."

WARDING OFF FUTURE PANDEMICS WITH A UNIVERSAL VACCINE

Timing was everything for David Martinez, PhD, a postdoctoral researcher in the Baric Lab since 2018. He completed his Biosafety Level 3 lab training in March 2020 — just as the virus began to spread in the United States — allowing him to work in the lab studying COVID-19 alongside world-renowned virologist Baric and other coronavirus experts in a lab that was already equipped to be a leader in responding to the pandemic.

"We already had all these systems and protocols in place to work with cousins of this virus, so when it hit, we did not have to reinvent the wheel — we could rapidly transition into SARS-CoV-2 research," says Martinez, who is a Hanna H. Gray Fellow at the Howard Hughes Medical Institute. "Having expertise like that absolutely positioned us into knowing exactly what questions we needed to answer to make a contribution, and we were able to rapidly produce reagents that were useful to the field — not just in understanding fundamental biology of the virus, but in collaborating with major pharmaceutical companies to actually develop products that



David Martinez, PhD, is working on universal coronavirus vaccines that could protect against future pandemics.

are now widely used, including the Moderna and Johnson & Johnson COVID-19 shots."

Another product is a universal vaccine that would ward off future outbreaks by protecting against several types of coronaviruses that are likely to jump from animals to humans. Martinez,

“Translating research into practice is usually not very common for people like me. ...With the pandemic, almost everything we do is research intended to improve human health or translate into some kind of therapy, vaccine or antibody.”

– TIM SHEAHAN, PHD, ASSISTANT PROFESSOR

Baric and the research team developed a vaccine to protect against COVID-19 and other group coronaviruses, such as the original SARS virus and bat SARS-related viruses that could emerge at a later time. The vaccine prevented both infection and lung damage in mice, and additional testing could lead to human clinical trials next year. The team continues to work on next-generation vaccines that could introduce additional proteins that may make vaccines work better in controlling breakthrough infections.

“There is absolutely a need for universal-based vaccines that can target a broader group of coronaviruses,” Martinez says, noting that historically, a new type of pathogenic coronavirus tends to emerge within a decade of its predecessor. “If history is to repeat itself, it’s of critical importance that we work on

universal-based approaches now so that we are ready the next time a coronavirus emerges.”

Martinez grew up in El Salvador, where his father was a physician who often treated infectious diseases. When his family moved to the U.S. in 2003, he decided to study microbiology at Oklahoma University. After he completed a virology course he took as a senior, he changed his research and career focus. He received his doctoral degree from Duke University.

“And then, in 2018, I had the opportunity to work in the lab of the world’s leading coronavirologist, so I couldn’t turn that offer down,” Martinez says. “This is the Gillings School of Global Public Health, and it’s nice when the name of the school can also serve its purpose. The Baric Lab as a team can do just that — contribute to global public health — and that has been the opportunity of a lifetime.”

STUDY DOCUMENTS COVID-19’S RAPID TRANSMISSION AMONG HOUSEHOLD MEMBERS

One of the key questions about the emergence of a new virus is how readily infection can spread from person to person. UNC researchers conducted an observational study early in the pandemic showing that the SARS-CoV-2 virus transmits “early and often” among people who share a home, where practices like patient isolation and social distancing might not be practical or possible.

Researchers from Gillings include Kimberly Powers, PhD, associate professor of epidemiology; Feng-Chang Lin, PhD, associate professor of biostatistics; Rebecca Rubinstein, MPH, doctoral epidemiology student; Katie Mollan, MS, biostatistician and doctoral epidemiology student; and Haoming Zhang, MS, recent biostatistics graduate. They collaborated with researchers led by Jessica Lin, MD,




MSCR, in UNC’s Institute of Global Health and Infectious Diseases to study infection among 100 COVID-positive patients and 208 of their household members in seven N.C. counties.

The researchers found that SARS-CoV-2 spreads quickly among household members, with the majority of secondary cases occurring within the first week of the initial positive test. They also found that households with a higher living density, or more than three people occupying fewer than six rooms, had a higher risk of infection. With households from underrepresented communities in the study more likely to experience high living density, this finding may provide partial insight into how and why communities of color have suffered disproportionately from the pandemic.

“This study was conducted very early in the pandemic — before vaccines were available and even more transmissible variants emerged — and it really underscores the importance of using the vaccines we are now fortunate to have to slow transmission and prevent severe disease,” Powers says.

The CO-HOST study is one of several COVID-19 studies in which Powers was involved from the outset of the pandemic, with scientists

designing, launching and performing research on extraordinarily compressed timelines against an ever-shifting backdrop as pandemic conditions continued to evolve. For example, Powers’ study on N.C. public school teachers’ contact patterns and mask use was a challenge to design because no one knew which school districts would be open for in-person learning during the study’s data collection phase. “Research questions could quickly become obsolete, and potential avenues for pursuing the work could open or close at a moment’s notice,” she says of doing real-time research in a pandemic.

As public health experts worked almost nonstop to understand and respond to the emerging pandemic, feelings of stress and exhaustion were accompanied by unprecedented teamwork and a shared sense of purpose. “Everywhere I looked, both within my own research teams and across my full network of colleagues, people were really charging into this crisis and throwing everything they had at this threat from day one,” Powers says. “It was all hands on deck around the clock, with new collaborations forming and taking off overnight. Everyone really showed up for months and months and months on end in ways that I’ll never forget.” 

Gillings faculty, students drive research to inform continued pandemic response.

IMPROVING VACCINE ACCESS AND UPTAKE

Research by Noel Brewer, PhD, Gillings Distinguished Professor in Public Health and professor of health behavior, became an important part of vaccine strategy for the U.S. Centers for Disease Control and Prevention (CDC). Brewer found that people who received COVID-19 vaccine recommendations from their doctors or health care providers were more likely to get vaccinated. Brewer is part of the CDC's Vaccine Confidence Work Group and, with Melissa Gilkey, PhD, assistant professor of health behavior, created Announcement Approach Training, which teaches health care providers to communicate more effectively about vaccination.

Gillings researchers also were involved in efforts through the UNC Center for Health Promotion and Disease Prevention (HPDP) to boost vaccination rates in areas where rates were low. One of 26 CDC Prevention Research Centers across the country that received support to increase equitable access to COVID-19 vaccines, the HPDP provided 18 primary care clinics with the coaching, data and community partnerships needed to get more people vaccinated, especially Black and Latinx patients.

EVALUATING LONG-TERM COVID-19 VACCINE EFFICACY

Danyu Lin, PhD, Dennis Gillings Distinguished Professor in the Department of Biostatistics, developed a statistical model to determine the long-term effectiveness of vaccines against COVID-19. Pharmaceutical companies plan to use this method as part of their ongoing trials to determine the optimal timing for booster shots.

Lin worked with Donglin Zeng, PhD, professor of biostatistics at Gillings, and Peter B. Gilbert, PhD,

lead statistician with the COVID-19 Prevention Network, which conducts phase 3 efficacy trials for COVID-19 vaccines and monoclonal antibodies. In vaccine trials, some participants get the vaccine while others get a placebo. Lin's study showed how to estimate time-varying vaccine efficacy (VE) through staggered vaccination of participants, and compares the performance of blinded and unblinded crossover designs in estimating long-term VE.

UNDERSTANDING COVID-19'S AIRBORNE VIABILITY

To learn how to reduce the risk of exposure to infectious viruses, Karsten Baumann, PhD, assistant professor of environmental sciences and engineering, led a study of air from the dorm rooms of UNC students who tested positive for COVID-19. This research laid the

groundwork for National Science Foundation research investigating several methods to inactivate infectious aerosol and contributed to a better understanding of outdoor exposures and potential methods to prevent indoor exposures, such as modifications to ventilation systems.



COVID-19 SIMULATION SHOWS NEED FOR CONTINUED SAFETY EFFORTS DURING VACCINE DISTRIBUTION

As vaccines became more widely available in the spring and summer of 2021, Associate Professor Kristen Hassmiller Lich, PhD, and doctoral student Karl Johnson, both with the Gillings Department of Health Policy and Management, helped develop a computer simulation model of North Carolina showing that continued mask-wearing and physical distancing could help prevent spikes in COVID-19 cases even as more people get vaccinated. The team, led

by Mehul Patel, PhD, a Gillings alumnus and a clinical and population health researcher in the department of Emergency Medicine at UNC's School of Medicine, showed that until about half of N.C.'s population was vaccinated, removing non-pharmaceutical interventions (NPIs) such as masks and physical distancing could lead to continued spread of the virus. Such models have helped guide state leaders in making decisions around COVID-19 safety protocols.

TRACKING HUMAN RIGHTS EFFECTS OF COVID-19 RESPONSE

As the COVID-19 pandemic continued across the world, public health responses varied greatly, and they rapidly evolved to keep up with changing conditions. The unprecedented nature of the pandemic meant human rights considerations often took a backseat to widespread public health concerns. To help keep track of how the pandemic — and pandemic response — affected human rights, doctoral students Hanna E. Huffstetler, MPH (global health), and Caitlin R.

Williams, MSPH (maternal and child health), and Benjamin Mason Meier, JD, LL.M, PhD, professor of health policy and management, led a team of Gillings students, faculty and alumni who created the UNC COVID-19 Health and Human Rights Monitor. This free, searchable online database uses media reports to monitor potential violations of human rights, with the goal of informing better responses to public health issues and emergencies without compromising human rights. [Read more](#)

HOW DO I TALK ABOUT VACCINES?

We asked a public health expert about the best approach.



Dr. Noel Brewer

Gillings Distinguished Professor in Public Health

STEP 1: ASK YOURSELF IF YOU'RE READY TO LISTEN.

The more your views on vaccination differ, the more you'll need to listen and **find a point of agreement**. If you're already worked up, you're not in a good frame of mind to have a conversation.

STEP 2: TRY TO FIND THE MAIN CONCERN.

People may have many concerns but are often motivated by a main concern. Until you get that on the table, the conversation can't progress. Regardless of what someone first says, you might ask, **"What is your biggest concern?"**

STEP 3: LISTEN AND FIND A POINT ON WHICH YOU CAN BOTH AGREE.

People will only listen to your ideas about vaccination once they have spoken and feel heard. You might say, **"I get it. You're really worried about the potential side effects. It's reasonable — no one wants unsafe medicine."**

STEP 4: HAVE BRIEF DISCUSSIONS.

Keep discussions **between 5-10 minutes**, especially the first few. Expect to spend several weeks or months gently coming back to the topic. Once a person has learned that they can talk about their opinions without judgment, you can really start to have a conversation.

STEP 5: KNOW WHEN TO TAKE A BREAK ... AND COME BACK A FEW DAYS LATER.

This is the hardest part. **Don't try to rebut their concern immediately**. Just listen, end the conversation for now and come back another time. Doing it slowly gives you time to listen, show respect and do your research in between discussions. At any point, if you feel pressure to get your point across, that's a clear cue to slow down and step away. Then come back in a few days or a week.

WHAT **NOT** TO DO ...

-  **Don't do it online or in text.** It's always more effective to have difficult conversations about vaccination in person or over the phone, where you can more easily add warmth.
-  **Don't make it a thing.** If the first exchange is unpleasant, both parties may avoid conversations about that topic in the future.
-  **Don't moralize.** Beliefs about vaccination can be deeply held. Moralizing them deepens polarization.
-  **Don't belittle or insult.** Though you may not intend to be hurtful, saying something that belittles a person's knowledge can be harmful to both the conversation and the relationship.
-  **Don't give medical advice.** Leave medical advice to the person's personal health care provider.

ADDITIONAL HELPFUL TIPS:

- Some may not have the ability or the time to get a vaccine, which underscores the importance of accessibility.
- If you don't have a lot of time to talk to a person, consider whether you should engage at all. Effective discussion will take time.
- Most people who are hesitant to be vaccinated are not "anti-vax" or vaccine deniers. If you do encounter a person who is intentionally spreading harmful misinformation, the World Health Organization Europe has identified effective ways to respond to vocal vaccine deniers in public (bit.ly/3MvXR1a). In these cases, your audience is other listeners and never the vaccine denier.

SEEKING A JUST ENVIRONMENT

Our health is directly impacted by the spaces where we live and work, the air we breathe, and the water in our world. Access to a clean and safe living environment isn't the same for everyone, and that access is not evenly distributed.

Some communities are subject to conditions that contribute to poor health because of institutionalized policies that allow industries to pollute air or water and historical, geographic and political forces that limit access to safe air and water.

Low-income communities and communities of color often are targets of unfair policies that contribute to the structural racism that perpetuates health inequities. Communities may endure environmental hazards for decades, putting them at increased risk of chronic conditions, and they must often take on advocacy work that can play out for years.

Environmental justice (EJ) work at the Gillings School seeks to collaborate with communities through participatory research methods that amplify local expertise and knowledge in the fight against environmental racism. Students, faculty and alumni are applying these methods to work in environmental sciences and engineering, epidemiology, and beyond in pursuit of a more just environment.

For decades, Associate Professor Courtney Woods, PhD, has been applying her expertise in engineering and toxicology to collaborate

with North Carolina communities. Her research team works with local leaders to identify water contaminants and inform community policy makers and regulators.

Woods recently collaborated with concerned residents in Sampson County, N.C., to test waterways for pollution from nearby landfills and agricultural operations. By working with the Environmental Justice Community Action Network (EJCAN), Woods' team identified high levels of polyfluoroalkyl substances (PFAS), an emerging contaminant that can suppress immune response and negatively impact cholesterol levels, kidney health and maternal health. They also partnered with communities and Appalachian State University faculty to alert residents to health risks and create strategies to test water supplies.

The success of this endeavor led Woods to co-found the Environmental Justice Action Research Clinic (EJ Clinic) at UNC-Chapel Hill with funding from Z. Smith Reynolds Foundation. The EJ Clinic partners with EJCAN and the N.C. Environmental Justice Network (NCEJN) to teach students how to apply the principles of participatory research to tackle EJ issues. It is also a technical resource for residents seeking policy change.

"It's a deep honor and privilege to be able to collaborate with communities in this way."

— ASSOCIATE PROFESSOR
COURTNEY WOODS, PHD



"Beyond testing for hazardous chemicals and reporting results back to residents," Woods explains, "we share information on exposure mitigation and well maintenance and information on how to organize residents to connect to public water service, if that is goal. We also encourage residents to get involved locally by attending county council and planning board meetings and public meetings with the N.C. Department of Environmental Quality (DEQ). Collaborating with community organizers in this work is critical because they help sustain the dialogue and momentum and develop strategy on how research can be used most effectively to support the community's goals."

At the Gillings School, Woods co-teaches an EJ class — formerly taught by the late epidemiology professor Steven Wing, PhD — with the NCEJN and co-leads Master of Public Health (MPH) concentrations in both Environmental Health Solutions and Health Equity, Social Justice and Human Rights (EQUITY). Through the EJ Clinic, students in these courses and concentrations can build skills to broadly apply work in EJ.

"The Clinic is an opportunity for community groups to gain access to skills and resources that students have, and there are so many

topics being addressed," says Lindsey Savelli, an MPH student in EQUITY who connected with Woods and joined the EJ Clinic to work with residents in Caswell County. "In Anderson, N.C., we're studying effects of pollution from a proposed asphalt plant and raising awareness of these hazards. We're also looking at cumulative environmental impacts to see if the DEQ can account for that in permitting processes."

Woods sees the work as a mutually beneficial way to orient students towards community-driven research and practice on real-life public health issues while equipping residents with data and resources to support their advocacy for a healthier community.

"It's a deep honor and privilege to be able to collaborate with communities in this way," Woods says.

At the undergraduate level, Associate Professor Amanda Northcross, PhD, an expert in assessing the health impact of environmental exposures, engages first-year students through a course called Environmentally Engaged Communities and Undergraduate students Investigating for Public Health Protection (ECUIPP). This combined seminar and lab introduces



“Well water, unlike municipal tap water, isn’t tested or regulated. The responsibility falls to private well owners to test.”

– AMANDA NORTHCROSS, PHD
ASSOCIATE PROFESSOR

Graduate research assistant Aleah Walsh collects water samples from a stream in Sampson County.

participatory research to incoming Carolina students. For many, it is their first encounter with topics related to public health and EJ.

This year, Northcross is teaching two sections of the ECUIPP lab. One section is collaborating with Michael Fisher, PhD, associate professor of environmental sciences and engineering and faculty at the UNC Water Institute, to develop low-cost water quality testing kits for well water users in Robeson County. Some students are investigating which kits are cost effective, while others are investigating the most efficient way for residents to test water.

“Most well water users live in rural areas in N.C., and when we look at the percentage of Black, Latinx and Indigenous people who are relying on well water — those are the groups seeing issues with quality,” Northcross explains. “Well water, unlike municipal tap water, isn’t tested or regulated. The responsibility falls to private well

owners to test, and many people don’t know how or don’t have the resources to do that. We are also working to develop a community advisory board to work with K-12 schools in the area and ensure that folks are learning how to use these kits.”

The second section is working to develop a strategy for low-cost air quality monitoring in Robeson County, where concerns about pollution are impacting cardiovascular risks for Indigenous communities. In alignment with work from Jada Brooks, PhD, at the UNC School of Nursing, and Assistant Professor Radhika Dhingra, PhD, in the Department of Environmental Sciences and Engineering, Northcross’ ECUIPP lab team is collecting data from air quality monitors set up at Boys and Girls Club locations around the county and developing a website to communicate findings to the public in an accessible way.

Northcross and Brooks have also received funding from UNC’s Whole Community Connection to

partner with youth organizations in Robeson County to create maps that identify where the community may encounter hazards and leverage assets to address them. Northcross has also received seed funding from UNC’s C. Felix Harvey Award to address issues of indoor air quality and asthma in Robeson County charter schools.

“All of it is centered around collaborating with community partners so that we can identify where their challenges might be and then work with them to ensure that we’re minimizing the impact of environmental health hazards in a way that’s sustainable,” Northcross says.

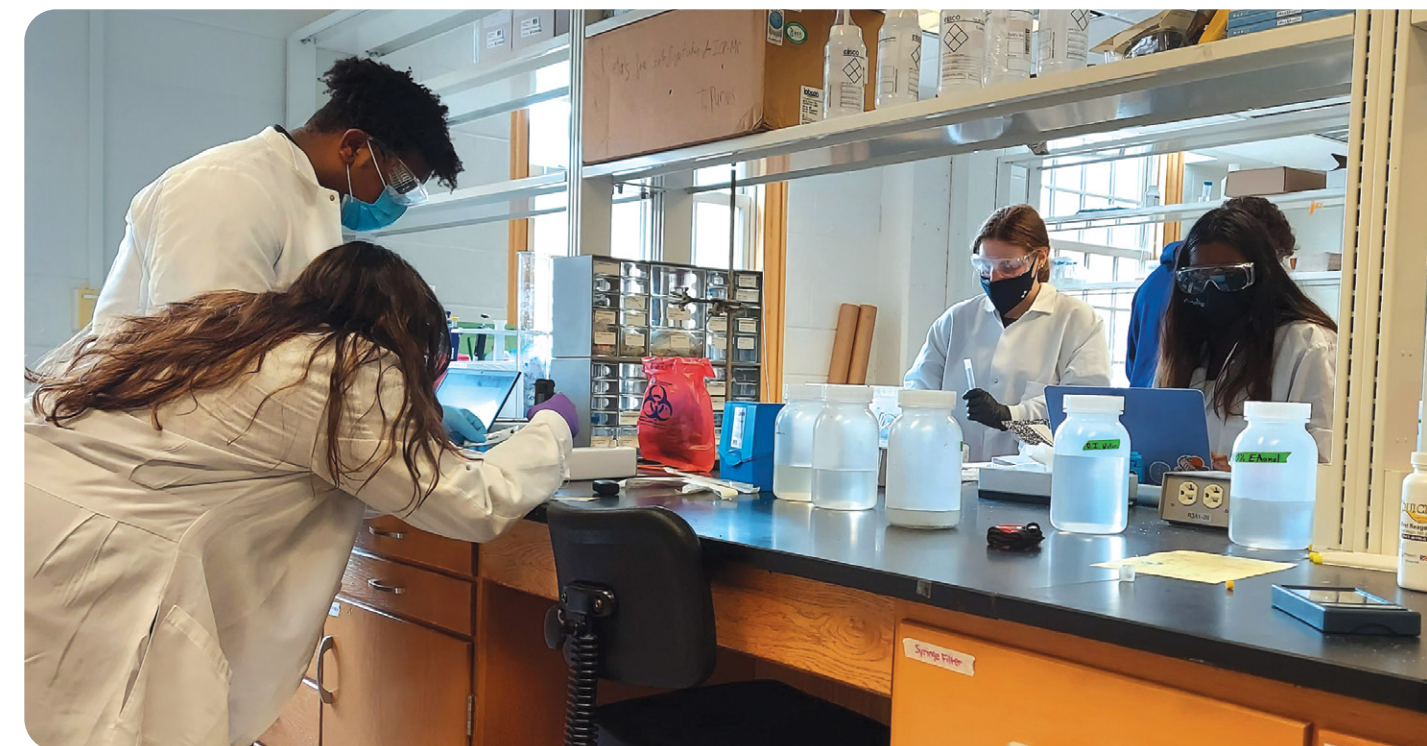
Epidemiologists at the Gillings School also have a long history of EJ work, notably led by the late professor Wing, who for more than 30 years documented exposure to environmental contaminants and engaged in participatory research to help workers and communities of color in N.C. advocate for a healthier environment.

Though Wing died in 2016, his EJ legacy endures through the many alumni he mentored and

faculty with whom he collaborated and inspired and through the Epidemiology and Justice Group at Gillings, a student organization that aims to support and educate fellow students on the history and principles of epidemiology for social justice and the practices of community-led public health research. Each year, they help organize the Steve Wing Environmental Justice Lecture, and the School recently developed a fund to help support the annual lecture series.

The newly established Sherry D. Milan Environmental Justice Scholarship supports UNC Gillings students with a demonstrated commitment to EJ work, assuring continued progress toward a healthier and more just environment. As communities across the nation continue to face environmental hazards and the effects of a changing climate, developing skills to apply public health work alongside community experts will be critical to creating lasting and impactful change. 📖

Students in Northcross’ ECUIPP lab work on water testing.



COPING WITH THE NEXT PANDEMIC: MENTAL HEALTH IN CRISIS



As the pandemic pushes into its third year, the scientific community has learned much about COVID-19, but the scope of its effect on our health – and the number of lives it has claimed – go far beyond the virus itself.

Our mental health has been strained, with studies reporting rising rates of depression, anxiety, substance use and other negative impacts on well-being. We have lost loved ones to death, isolation or estrangement. Many have lost jobs, homes, or access to vital services like child care, transportation and health insurance.

Those with jobs deemed essential have endured more risk with fewer protections. Black, Indigenous and people of color (BIPOC) have borne the heaviest burdens from COVID-19.

The pandemic's upheaval shifted our lives in varying ways, creating a spectrum of enduring hardship that mirrors what Professor Edwin Fisher, PhD, calls a mental health continuum. The support of our peers helps us endure this upheaval.

"Peer support is pertinent to the entire distribution of mental health," says Fisher, who is a professor of health behavior at the Gillings School. "Whether it's being available to a student who flunked an exam for the first time or helping somebody

who's labeled as schizophrenic manage social relationships, find a job or stay in housing, peer support is useful across that entire continuum."

Fisher is director of Peers for Progress, a UNC-Chapel Hill program developed by the American Academy of Family Physicians to help people with chronic conditions find support from a peer — someone who has a shared lived experience and can provide encouragement and resources to manage long-term health. Sometimes that experience comes through a shared health condition, but more often it comes from shared social connections or interests.

"A lot of research shows it's not the number of friends you have — it's the variety of social connections," Fisher explains. "When you're angry at somebody at work or in your family, you want to talk to somebody who's not a part of that. Or maybe you need to talk to somebody who understands what it's like to be working on deadline and have a crying baby and an unsympathetic boss."

Peer support is a need we all share — one that works best when ongoing access is built into all aspects of life. Since its inception, Peers for Progress has grown into a global network of researchers, experts and advocates who aim to make that support accessible.

"It doesn't mean going to a group every week for the rest of your life," Fisher says. "Peer support is a culture. We would like every sorority and fraternity president, every instructor, every supervisor of a workgroup and all the members in it to be better at listening to and supporting one another. The more those resources are spread, the more we see a healthy culture distinguished by mutuality and achievement."

In recognition of this need, UNC-Chapel Hill established the Peer Support Core, which includes Fisher, Associate Director Samantha Luu, MPH, and a team from Carolina and the Gillings School who are working to increase awareness and create opportunities to provide that listening ear. This includes unit-level programs, individual training and a framework for support pods, which are informal groups based on shared experiences or interests.


Gillings is host to pods ranging from support for BIPOC and international students — facilitated by Associate Dean for Student Affairs Charletta Sims Evans, MEd — to pods hosted by the Culture of Health that encourage healthy home environments, which have been critical during the pandemic.

Gillings students Toby Turla and Sonam Shah have also co-founded Peer2Peer, a student-led group at Carolina that offers students free support sessions with a trained peer responder.

"At the end of the day, a lot of people just want another person to talk to, especially someone who is unbiased and will listen without judgement," says Turla.

A peer support approach to mental health is a multi-layered one, according to Fisher — one that addresses isolation and anxiety by teaching people critical social support skills, helping supervisors support their employees, and addressing systemic or organizational issues that place unrealistic demands on individuals.

"Skills are important," Fisher says, "but skills need to be implemented in a way that's complimentary to organizational and system-level interventions. Otherwise, a lack of individual skills can very easily become victim blaming."

UNC and Peers for Progress provide resources to strengthen peer support skills. UNC's Heels Care Network is a hub of mental health and well-being resources. Organizations and workplaces looking to establish pods or other peer support services can take advantage of the extensive guides developed by the UNC Peer Support Core. 

If you need immediate mental health care, resources are available:

- **National Suicide Prevention Lifeline:** 800-273-8255 (TALK) or suicidepreventionlifeline.org
- **National Crisis Text Line:** Text HOME to 741741
- Call your organization's employee assistance program or your health plan for services.

PUBLIC HEALTH IN PRACTICE

Gillings experts and students are engaging in practice that makes a difference locally, nationally and globally.

LOCAL/NATIONAL PRACTICE

GOOD BOWLS PAYS IT FORWARD DURING PANDEMIC

For longtime nutrition researcher Alice Ammerman, DrPH, Mildred Distinguished Professor of nutrition at the Gillings School of Global Public Health and director of the UNC Center for Health Promotion and Disease Prevention, working to address long-term public health issues like chronic disease and food insecurity required a long-term solution.

“In this line of research, I kept finding that I couldn’t make a lasting impact — when a grant ends, a program ends,” she says. “I needed to find a way to build something that was self-sustaining.”

In 2018, Ammerman founded social venture start-up Equiti Foods and created Good Bowls, nutritious frozen meals that are prepared using products from local farmers. Online and in-store product sales, along with grants and donations, help provide cost-subsidized bowls to communities that otherwise lack access to nutritious, healthy meals.

When the COVID-19 pandemic hit, the Good Bowls team designed an innovative initiative called “Pay it Forward” — a collaboration among Good Bowls, Pittsboro Eats! and other community organizations, small farmers, local restaurants and volunteers — to promote good nutrition and help food-insecure families during the pandemic.



Good Bowls partners and local volunteers assemble healthy meals for families in Chatham County.

The idea was inspired by a story Ammerman heard on the radio about someone in Texas paying a restaurant to provide food for families in California. “I thought if it could work from Texas to California, it could work here,” she says.

Funded partly by an NIH grant with supplemental COVID funding, the initiative uses social media to urge people to donate a bowl (or more) through an online portal. Ammerman coaches participating restaurants on a healthy bowl recipe along with options for sourcing from local farmers. The restaurant cooks a big batch of food for the bowls, which are then packed and sealed by the Good

Bowls team and local volunteer groups. The bowls are frozen and delivered to Communities in Schools (CIS) for distribution in Siler City, where there is a large Latinx population hit hard by COVID-19 and food insecurity.

Since it began in June, Pay it Forward has provided more than 1,500 donated meals to local families, while helping local farmers increase their sales and providing local restaurant partners with a COVID-safe boost in business.

“It made sense for us to partner with Good Bowls because our relationships with local families allow us to get those resources to people in need,” says CIS Executive Director Tych Cowdin. “Distributing perishable foods with a small staff can be difficult, so having healthy frozen meals is a wonderful idea. Another thing I appreciate about Good Bowls is that they are always so responsive to what people want and need — they are always seeking feedback from the clients and from their partners.”

That responsiveness is in keeping with Ammerman’s reliance on community-based participatory research (CBPR), a research approach that focuses on partnerships between researchers and the community in order to improve health outcomes and build community capacity.

“My research has always been very applied and practice-oriented because I’ve always wanted to do something that has a more lasting impact. My focus is on trying to understand what communities need and working with them to develop strategies to address these needs,” she says. “Intensive research-driven interventions may be totally impractical and unsustainable in practice, so involving community partners who are ‘in the trenches’ is really important.”

LOCAL/NATIONAL PRACTICE

DURHAM HEALTH AMBASSADOR PROGRAM GETS US “BACK ON THE BULL”

In the spring of 2020, Durham Mayor Steve Schewel invited local scientists to meet with him and share their thoughts as to how the community could endure the health and economic stresses of the emerging COVID-19 pandemic.

“People were fearful of going out, businesses were struggling and trying to implement best practices, and there was a lot of concern about COVID-19 risks as well as the economic health of essential businesses,” says Kurt M. Ribisl, PhD, Chair and Jo Anne Earp Distinguished Professor in the Department of Health Behavior, who attended the meeting.

A few months later, the mayor asked Ribisl if the department would get involved with Durham’s Back on the Bull campaign, where businesses could publicly share their health and safety practices in hopes of reassuring a wary public that they were safe places to visit. Ribisl turned to Master of Public Health student Marlyn Pulido to partner on the project, hiring her full-time to lead the work upon graduation.

Working with Patsy Polston, PhD, assistant professor of health behavior; Yesenia Merino, PhD, then-director of inclusive excellence and training; and a team of master’s students, Pulido and Ribisl led a phased, community health-based plan focusing specifically on assisting Black-owned and Hispanic-owned businesses in Durham. Partnering with local nonprofit El Centro Hispano and using grant funds from the city, they hired and trained 14 local multilingual, multicultural community members to become Durham Health Ambassadors.

“We were really looking to gear up a community health worker-based program,” Pulido says. “Things were just starting to reopen, and we



Durham Health Ambassadors worked during the pandemic to help local businesses comply with protocols and stay safely open for business.

wanted to offer in-person support to help local businesses figure out what they needed, not just to comply with quickly changing mandates but also to stay safe and be successful.”

Whether sharing information on the latest mandates and best practices, to leveraging the University’s ability to order personal protective equipment when it was in short supply, to personally ordering and delivering masks and hand sanitizer, the ambassadors worked closely with local businesses throughout the next several months to reduce their risks and stay open for business.

When COVID-19 vaccines began to be distributed, appointments were extremely difficult to come by — and Black, Latinx and Indigenous populations already had disproportionately higher rates of COVID-19 illness and death than white populations. The Ambassadors worked to reduce that disparity, focusing on making appointments for essential workers at the grocery stores, gas stations and restaurants they had gotten to know over the summer.

As vaccinations became more widely available, the group’s focus shifted from making appointments to promoting equitable access and ensuring Spanish-language access at vaccine events.

The Ambassadors joined the Durham Vaccine Equity Advisory Coalition, a group of nine local community organizations trying to address disparities in vaccine access. By the end of the project, those large gaps in vaccine rates were significantly narrowed or closed altogether.

“Helping these businesses weather the economic storm was one big win, and reaching parity in vaccinations — to get to where almost all the groups had the same vaccination rate — was the other big win,” Ribisl says. “It took a lot of effort — we flooded the community with community health workers who would meet at local businesses, camp out at small grocery stores, attend vaccine information sessions and clinics. Every barrier that was there, the team broke through. The dedication of these community health workers was really, really amazing.”

CAROLINA CENTER FOR TOTAL WORKER HEALTH® AND WELL-BEING ESTABLISHED AT GILLINGS

The Gillings School is now home to the Carolina Center for Total Worker Health® and Well-Being, one of 10 centers of excellence nationwide funded by the National Institute for Occupational Safety and Health (NIOSH) to advance the health, safety and well-being of workers throughout the United States.

The five-year, \$7 million award means that Gillings now serves as a hub for research, education and practice that creates healthy workplaces and accelerates the development of solutions for complex occupational safety and health problems.

“During the COVID-19 pandemic, we have witnessed the very nature of work — and the work environment — change drastically,” says Laura Linnan, ScD, principal investigator for the Carolina Center, professor of health behavior, and senior associate dean for academic and student affairs.



The work done by the Carolina Center for Total Worker Health® and Well-Being underscores the importance of maintaining health at work.

“We believe the Carolina Center for Total Worker Health® and Well-Being is positioned to serve as a catalyst for conducting important research and translating results into practice and policy-based changes that support worker health in North Carolina, the southeast region of the United States and nationally in the years to come.”

Key research projects underway at the Center are:

- Reducing falls and improving protection from falls for firefighters: Firefighters have one of the highest rates of slip, trip and fall (STF) injuries on the job, contributing to 20–25% of all firefighter injuries each year. Led by Eric Ryan, PhD, in UNC’s Department of Exercise Science and Sports, researchers will study 1,200 firefighters in the southeastern U.S. to identify STF events and risk factors, and determine the feasibility of a community-based participatory approach to develop STF mitigation strategies.
- Pandemic-related mental health and well-being of essential health care workers: Led by Marianne Baernholdt, PhD, MPH, RN, FAAN, at UNC’s School of Nursing and Samantha Meltzer-Brody MD, MPH, at the UNC School of Medicine, this study of nurses and physicians who work in varied inpatient clinical settings will identify interventions aiming to mitigate burnout, depression, moral distress and other mental health issues these workers typically face that have been exacerbated by the COVID-19 pandemic.

In addition to its primary research projects, the Carolina Center offers competitive pilot project funding to address emerging issues in the future of work and worker health, along with an outreach initiative that will provide a wide array of educational opportunities to support worker health and well-being.

The Center’s first round of pilot funding went to GracieLee Weaver, PhD, assistant professor

of public health education at UNC-Greensboro, who plans to integrate a Total Worker Health® approach into an online opioid misuse prevention program she is developing for workers in industries with high risks for injury; and Becky Salmon, PhD, a postdoctoral fellow at the UNC School of Nursing, whose research on psychosocial safety as a component of Total Worker Health® will specifically focus on helping socioeconomically disadvantaged working mothers maintain employment and improve their well-being.

Complementing the Center’s research and outreach efforts is the School’s Total Worker Health® graduate certificate program, which trains students to collaborate across disciplines to protect and promote worker health and well-being. Students take a course on work as a social determinant of health; a course to learn about work-related measures/methods at the individual, organization, and population levels and how to engage with workers; and a course working directly with local businesses to plan, implement and evaluate comprehensive Total Worker Health® workplace interventions as part of an interdisciplinary team. As certified Total Worker Health® practitioners, graduates of the certificate program have the knowledge and skills to lead worker health, safety and well-being initiatives in a variety of settings.

“With an initial focus on essential workers, safety and mental health of workers, we are thrilled to be able to work with researchers and other potential partners at UNC, neighboring academic institutions, government officials, employers and workers as part of the research, outreach and education activities of this new Center,” Linnan says. “We hope to collaborate with others who are interested in helping shape the future of work and improving the well-being of workers.”

BIostatISTICS IN PRACTICE: ANALYZING GENETIC VARIANTS THAT MAY INFLUENCE DISEASE

There are thousands of genetic variants, or changes in the DNA that make up a gene, and that may affect how diseases develop — but these variants’ actual identities are unknown. With UNC’s selection as a key leader in a national genomic research project, Michael Love, PhD, assistant professor of biostatistics and genetics, aims to answer those unknowns. He will direct statistical design and data analysis for an experiment that could identify these variants for the first time and lead to a better understanding of how multiple diseases develop by figuring out which proteins and types of cells are involved.

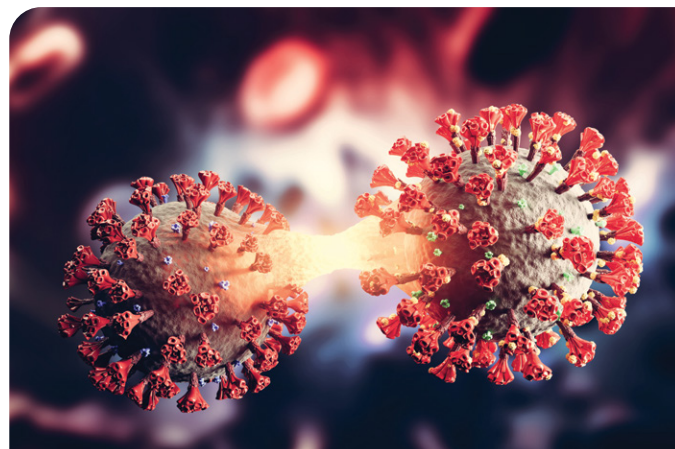
A \$185 million five-year project funded by the National Institutes of Health, the Impact of Genomic Variation on Function (IGVF) Consortium includes 30 research sites across the country studying how DNA variants affect human health. Along with Hyejung Won, PhD, assistant professor of genetics, and Karen Mohlke, PhD, professor of genetics, Love is a principal co-investigator for UNC’s \$9.25 million study, whose results may help identify new targets for drugs to treat common illnesses more effectively.

“The aim is to increase our knowledge and the predictive power of our models,” Love says of

this intensely collaborative effort, which relies on the expertise of researchers across various disciplines. “It would not be possible to carry out this experiment without a large group of experts at UNC-Chapel Hill contributing their pieces. This experience in team science is incredibly valuable, with teams of geneticists, biologists, computer scientists, statisticians and others coming together to design experiments and interpret results.”

UNC’s team will select roughly 250,000 variants across the project’s five years, focusing on a different category of trait or disease each year and including variants from populations of diverse ancestries. Researchers will measure the variants’ functional effects and compare them across sex, tissue type (brain, heart, lungs, etc.) and other factors. These measurements will provide roughly 10 million data points that will be used to generate a comprehensive catalog to help researchers better understand how genomic variation impacts human health and disease, which in turn could accelerate biomedical research into more effective treatments.

“When you’re a biostatistician working with large amounts of data, practice doesn’t always mean getting out into a community,” says Lisa LaVange, PhD, biostatistics chair and professor. “But if you are analyzing data or running models to develop therapies that can improve diagnosis or treatment of disease and lead to better health outcomes, you can’t get more practical than that.”



NCIPH REMAINS ESSENTIAL RESOURCE FOR PUBLIC HEALTH PRACTITIONERS

As a bridge between academia and public health practice, the North Carolina Institute for Public Health (NCIPH) works closely with state and local public health departments, health care organizations, and community partners on pressing public health needs.

Formally established at Gillings in 1999, NCIPH is a critical resource for public health practitioners in North Carolina. In addition to offering in-person and online courses, training sessions and conferences on a variety of topics to public health practitioners, NCIPH collaborates with local health departments through the N.C. Local Health Department Accreditation Program. N.C. was one of the first states to implement an accreditation program to assure and enhance the quality of local public health. NCIPH staff helps local health departments meet the required accreditation standards, assess the most urgent health needs in their communities and develop strategies to meet those needs.

“We work with community nonprofits and other partners, but state and local health departments are really our bread and butter,” says Amy Belflower Thomas, MHA, MSPH, director of community assessment and strategy at NCIPH and an adjunct professor in the Public Health Leadership Program. “We touch all 85 health departments regularly as part of the accreditation process, and, in the past few years, our emphasis has changed from quality improvement to strategic planning. We help local health partners strategize on how to meet their communities’ needs, and our mission is to help them increase their capacity to do that.”

As the COVID-19 pandemic led to overwhelming demands on public health professionals, it also changed the way NCIPH did its work and interacted with its partners. For example, field surveys are a critical part of community health assessments, which are a requirement for accreditation. Typically, these surveys rely on field workers going door-to-door to reach the most households and collect the most robust and inclusive data. But due to concerns about the spread of the virus, data collection methods shifted to more remote, technology-based approaches that are not as readily available to all residents. Some counties tried a hybrid approach, sending a postcard to see if a resident was willing

HELPING SCHOOL STAFF ADAPT TO NEW ROLES DURING PANDEMIC

As school leaders and staff across N.C. tried to adapt to rapidly changing roles and responsibilities and respond to a variety of needs that emerged during the pandemic, the state Department of Public Instruction turned to NCIPH for help.

“So many things were constantly changing during the pandemic, and it required our team to very nimble and responsive,” says Rachel Wilfert, MD, MPH, CPH, director of workforce training and education at NCIPH.

Critical areas where these training modules were most needed were understanding how to mitigate disease outbreaks, establishing best practices for virtual school nurse visits, development and leadership of school nursing teams, helping schools care for the emotional well-being of students and staff in the context of virtual learning, and working to raise awareness of critical inequities in oral health and supporting connections to care. Visit the school staff training center here: bit.ly/nchealthyschools

to engage and then following up with a call or porch visit. Others used socially distanced or virtual focus groups to ask for residents' opinions.

"We focus on providing technical assistance and meeting our partners where they are, and the counties focus on engaging their community members," Belflower Thomas says. "But we know we can't truly improve equity without hearing everyone's voices."

That the pandemic brought more visibility to longstanding equity issues creates an opportunity to challenge the structural and systemic conditions that contributed to those disparities. "Public health has always known inequity, but COVID-19 was really able to bring that to light so everyone could see it," Belflower Thomas says. "And because of that, our partners became more interested in rethinking how we do our work to better address those challenges."

As part of the strategic planning effort on practice, Gillings leaders are discussing how to set the NCIPH on the right path forward to assure its continued relevance and effectiveness. The Institute's interim director, Steve Cline, DDS, MPH, has served on the task force and conducted a more detailed assessment specific to NCIPH.

"Building this roadmap allows us to put our best foot forward to meet the needs that the new public health environment calls for," says Cline, who talked to public health leaders in N.C. and nationwide, as well as current and former NCIPH

staff and customers, as part of his assessment. "We all believe in the mission of providing service to the state by connecting practice to teaching and research and by connecting the School to communities across N.C. There is a lot of good practice being done at the Institute and at Gillings as a whole, and we need to find ways to elevate practice and make that work more visible."

NUTRITION POLICY IN LATIN AMERICA

Lindsey Smith Taillie, PhD, Assistant Professor, Department of Nutrition

After Chile adopted a three-phase, evidence-based policy requiring warning labels on junk food and sugary drinks in 2016, Lindsey Smith Taillie, PhD, and W. R. Kenan Jr. Distinguished Professor of nutrition Barry Popkin, PhD, along with colleagues at the Global Food Research Program, worked with Chilean research collaborators on a project to evaluate the effects of the law. "We found that the policy was really helpful in shifting the healthfulness of what people bought," she says.

Chile's law didn't just address warning labels. Over a three-year period, it banned marketing directed at children, banned commercials for junk food and sugary drinks on television from 6 a.m. to 10 p.m., and banned sales of these products in schools.

"It went to a whole new level, changing the environment that kids are raised in with regard to food," Taillie says. "Our evaluation showed that this policy works to reduce intake of products that have the labels."



When a new president took office in Chile in 2018, Taillie supported Chilean colleagues in disseminating information about the law and its impact to officials in the new administration. "We were able to keep the law in place in Chile," she says. Since then, "we have been working with people to use these results to inform policy in other countries."

Taillie and colleagues worked with researchers and advocates in Colombia, which eventually passed a law similar to Chile's. Similar laws have since been passed in Argentina, Peru, Uruguay, Mexico and Brazil. Real-world changes are what she dreamed of when pursuing a career in public health, she said.

"Being able to work this closely to design laws that affect the entire food supply, and every person in that country, is super cool," she says. "We can go and see it in action. We can go to the supermarkets in these countries and see these labels."

EYE DISEASE IN AFRICA

Emily Gower, PhD, Associate Professor, Department of Epidemiology

The work of Emily Gower, PhD, aims to improve patient outcomes in treating trichiasis, the late stage of an eye disease called trichoma. Trichomas — highly contagious, common bacterial eye infections similar to "pinkeye" — often affect children. Kids who live in areas without access to clean water can get infected many times a

year, resulting in scarred eyelids by age 10 or 12. If the scarred eyelid turns inward, a person's eyelashes scratch their cornea, causing extreme pain, light sensitivity and, eventually, blindness.

Trichiasis is commonly managed through surgery that cuts the eyelid and rotates the lashes back to their anatomically correct position. Those who perform these surgeries often have the equivalent of a high school education, plus one year of nursing training and one week of trichiasis surgery training.

"When I started working on this, individuals who did one week in the classroom were chosen and then immediately started doing live surgery," she says. "That is stressful, and the outcomes are poor."



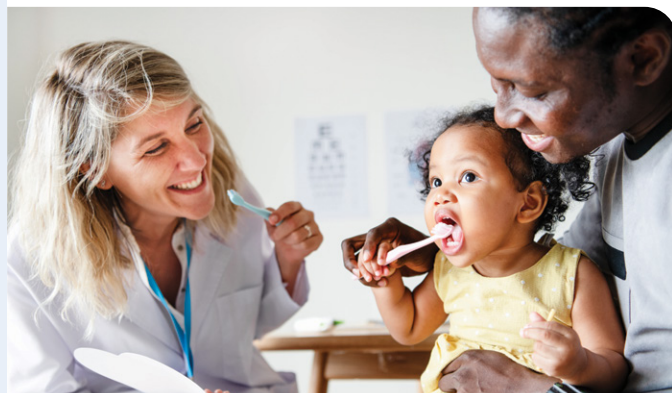
To help train surgeons, Gower created a silicone model of a human head that has a removable orbital (eye) cavity and

disposable eyelid cartridges. The device, Head Start, is affectionately known as "Phil" by Gower and colleagues. "Now the standard of care is to practice on Phil before going out and doing any surgery," she says. "It has significantly improved the training process for surgeons, and now the World Health Organization (WHO) requires it."

When Gower began working on trichiasis, more than 8 million people worldwide — most of them women — needed the surgery, and the condition was endemic in more than 50 countries. Today, nine of those countries have been certified as free of trichiasis by the WHO.

"I can see the difference that it's made in people's lives," she says. "And I've enjoyed being part of the process of getting there."

Gower's current focus is on faster screening for trichiasis. She and collaborators have loaded



30,000 images of eyelids before and after surgery into a machine-learning app that is trained to identify candidates for surgery. “We’ve developed an app that will allow someone to walk up to someone and take a picture of their eye, and then the app can tell whether or not that person has trichiasis and needs to be brought for surgery,” she says. Her hope is that it will improve the screening process for future procedures.

HEALTH SYSTEMS IN CHINA

Sean Sylvia, PhD, Assistant Professor, Department of Health Policy and Management

As a health economist, Sean Sylvia, PhD, studies and implements behavioral changes that improve health services in middle-income countries. His work is mainly in China, but he also has projects in Ghana and India. He seeks to advise these countries’ health systems how to deliver health care services more effectively.

In China, Sylvia’s projects cover a range of issues, from maternal and child health to early childhood education to adult primary care. One project has retrained workers from China’s Family Planning Commission — the former keepers of China’s one-child policy — to deliver content about young children’s social-emotional and cognitive skills during home visits. Another project is aimed at early childhood development within child care centers.

“In all of these, we’re looking at impacts,” he says. “We design randomized trials and look at

how it affects kids’ cognitive outcomes, their social-emotional outcomes, how parents engage with their kids differently, how it changes what we as economists call ‘parental investment’.”

In rural China, he and colleagues have trained “standardized patients” (similar to “mystery shoppers”) to develop a direct-to-consumer telehealth system for primary care. Before COVID-19, they examined 44 different platforms to see which platform characteristics correlated to better care outcomes. He has also worked on training programs for better patient communication in sexual health clinics.

It’s exciting to work in China, Sylvia says, because there is a sense there of having a more direct impact on policy. “They’re at a point where they’re just rich enough to start investing in their health system and are going through all these massive health reforms,” he says. “We’ve been able to provide some good evidence to guide policy makers.”

Sylvia says he is concerned about the current research decoupling between the U.S. and China. “It’s a huge detriment to public health research in general. There are so many things that we can learn from each other. There’s a long history of cooperation between the U.S. and China in medicine and health, especially here at UNC.”

GLOBAL FOCUS: HUMANITARIAN HEALTH INITIATIVE

Sheila Leatherman, CBE, Gillings Global Advisor

The Humanitarian Health Initiative (HHI), led by Sheila Leatherman, is a new effort to increase the School’s work to improve the health of people in countries where development outcomes are affected by fragility, conflict and violence. The HHI leverages the collective efforts of faculty and students through research, awareness

building and education, capacity building and technical support to countries and nongovernmental organizations, engagement and service projects, and advocacy and influencing of policy and practice.



The initiative has funded four interns in the 2020–21 academic year and six in 2021–22 through generous donor support. These internships pair current students with faculty and experts in the School’s Research, Innovation and Global Solutions unit, giving students firsthand experience applying their public health training where it can be of maximum impact.

Through this initiative, students have supported humanitarian organizations, increased understanding of maternal health issues and sought to improve access to effective health care in fragile settings.

“We aspire to have impact on improving the health and well-being of the lives of those suffering from humanitarian crises,” Leatherman says. “Future efforts will be built on current activities and assets but further developed to increase impact.”

STUDENT LEADERS PROMOTE SERVICE, PRACTICE THROUGH GILLINGS ON THE GROUND

Putting public health into practice means seizing every opportunity to get out of classrooms and into communities. That’s long been a hallmark of the Gillings School, and one in which students have been engaged.

So, when the Carolina Center for Public Service issued a call for grant proposals in fall 2019, Katherine Gora Combs, then a first-year Master of Public Health (MPH) student and a research assistant for senior administrative leaders, worked with staff and faculty to pull together an application to fund a new disaster response training program at the School.

The grant application was successful. Through almost a year of collaboration across School departments and with community organizations, Gora Combs and the planning partners created a training curriculum leveraging the expertise of a variety of speakers with on-the-ground experience in disaster preparedness and response. Called Gillings on the Ground, the new program was slated for a spring 2020 kickoff — and then, the COVID-19 pandemic hit.

“COVID had a huge impact on our plans — we had to put the program on pause and spent the summer modifying everything and pivoting to an online program,” Gora Combs says. “But it actually worked out better that it was virtual — we were able to expand our pool of speakers and participating organizations to include people who were not just from Orange County. Also, the online flexibility allowed us to expand our reach to more students.”

Gillings on the Ground trained its first cohort in fall 2020 in an all-virtual format. In fall 2021, the program offered a six-week online “mini course”



focusing on multiple aspects of disaster response and community engagement, with speakers ranging from county health directors to geospatial mapping analysts to church pastors sharing their experiences. Once completing their training, participants had the opportunity to engage in disaster-related service opportunities with community partners. MPH student Arielle Moss took over the lead role for the spring 2022 program, developing a partnership with the American Red Cross and UNC Wilmington to offer a more hands-on aspect of disaster response that culminated in a one-day emergency shelter simulation in Wilmington led by the Red Cross and New Hanover County Emergency Management. After finishing the course, participants will be able to use a streamlined application process to become Red Cross volunteers.

“When most people think of disaster management, they don’t really think about all the complexities involved,” says Aaron Carpenter, a first-year MPH student in the Department of Health Policy and Management who signed up for both the Fall 2021 and Spring 2022 sessions. “It has been really great to hear from people who have been working in the field for decades about their experiences and get their input. They really encourage you to ask questions, and I have gained a lot of knowledge about the ins and outs of disaster preparedness and response.”

Throughout her years of working with state and local governments on disaster recovery, Amy Belflower Thomas, MHA, MSPH, director of community assessment and strategy at the North Carolina Institute for Public Health and an adjunct professor in the Public Health Leadership Program, found that mobilizing volunteers after a hurricane or flood was not always a smooth process.

“Volunteers often are not properly or fully trained even though they really want to help — or a lot of volunteers show up immediately after a disaster hits, even though much more support



Master of Public Health student Doreen Alumaya leads a lactation station as part of the Gillings on the Ground program.

is actually needed during longer-term recovery efforts,” says Belflower Thomas, who worked closely with Gora Combs to develop Gillings on the Ground. “Having a program like this that can train people proactively means they will be fully prepared to help whenever the time comes.”

For Gora Combs, who is now a doctoral student in the Department of Epidemiology, Gillings on the Ground builds on the School’s longtime focus on service and practice — and is a way to raise awareness about the breadth of public health when it comes to disaster response since the program is open not just to students, but also to interested faculty, staff, alumni and community members.

“There are a lot of different disaster response training programs across the country, but they don’t focus on response along the lines of public health like ours does,” she says. “While the COVID-19 pandemic has opened people’s eyes to public health throughout the pandemic, public health actually touches every part of health and well-being, including hurricanes, floods and other types of disasters. This program serves as a great addition to the applied training opportunities that Gillings already offers — and it shows those who are not at Gillings how public health is involved in disaster response more broadly, not just in the pandemic.”

STUDENT HEALTH ACTION COALITION AIMS TO MEET LOCAL HEALTH NEEDS

The oldest student-run free health clinic in the country, the Student Health Action Coalition (SHAC) brings together UNC students from across several disciplines to provide care for underserved populations in the Triangle. Founded by a small group of medical students in 1967, SHAC is run entirely by student volunteers and serves more than 500 local patients annually, providing a range of services that include basic medical care, dental care, mental health services and social work services.

Once a week for more than 50 years, SHAC’s medical and dental clinics have provided services to patients who couldn’t otherwise afford care. Student leaders have established newer initiatives such as Mental Health, Gender Affirming Care, Bridge to Care and SHAC XYZ (a free STI testing program) to address emerging community needs. Through SHAC’s outreach programs, volunteers go into the community to provide blood pressure and blood sugar monitoring, lifestyle modification counseling and other services, while social needs navigators work with patients from a more holistic approach, providing support to address food insecurity, safe housing, financial assistance, mental health, transportation or insurance.

“I think the fact that it’s run by students lets us be a little more nimble than larger institutions or organizations,” says MD-PhD student Caleb Easterly, who is in his second year as chief community relations officer (CCRO) at SHAC and is studying health policy and management at Gillings. As part of his work to maintain and strengthen SHAC’s relationships with patients and the surrounding community, he’s creating a patient feedback form and a patient advisory board.

“Part of how I see my role as CCRO is to fight to make sure that the care we offer at SHAC is as good, if not better, than what people might get elsewhere, and this requires constantly reflecting on how we’re doing and how we can do better.”

SHAC partners:

- School of Medicine
- School of Nursing
- School of Pharmacy
- School of Dentistry
- School of Public Health
- School of Social Work
- School of Business
- Division of Physical Therapy (Department of Allied Health Sciences)
- Division of Occupational Therapy (Department of Allied Health Sciences)
- Division of Speech and Language Pathology (Department of Allied Health Sciences) 



ADDRESSING THE MATERNAL MORTALITY CRISIS THROUGH INNOVATION AND COLLABORATION FOR EQUITY

By Dorothy Cilenti, DrPH, Kristin Tully, PhD, Suzanne Woodward, Piia Hanson, MSPH, MBA, Alison Stuebe, MD

The National Center for Health Statistics released a report in February 2022 stating that the number of maternal deaths during pregnancy and the first six weeks after childbirth increased 14%, from 754 deaths in 2019 to 861 deaths in 2020. Black women experienced the most deaths, with their mortality rate three times that of white women. These additional deaths are alarming and represent a trend in maternal deaths in the United States that has been worsening since 2000.

The preventable nature of maternal mortality and inequities by race in the U.S. call attention to the ways we have constructed health care and our society. Numerous media outlets, including *The New York Times*, *The Washington Post*, *NPR* and others covered this new report with calls to action.

When considering causes of racial and other inequities in maternal mortality, it is essential to consider the health care system and acknowledge racism and other forms of bias within policies and interpersonal interactions. Innovative practices in public health and clinical care, pay structures and measurement are a part of identifying what is working well in maternal health and establishing accountability.

UNC is a hub of action to address maternal mortality with an explicit focus on health equity.

In response to worsening maternal health outcomes, the Maternal Health Learning and Innovation Center (MHLIC), housed at UNC-

Chapel Hill with funding from the Maternal and Child Health Bureau and the Health Resources and Services Administration, works with diverse stakeholders to promote evidence-informed approaches that center equity and value the perspectives of people with lived experience. In partnership with many organizations, the aim is to identify engagement and policy levers that accelerate the implementation of innovations. Many of these innovations are being launched or expanded in states and regions that are transforming their health systems to be more data driven, equitable and responsive to the needs of pregnant people and their families.

The COVID-19 pandemic and response unmasked persistent, multilevel problems, such as gaps in access to health care, lack of adequate care coordination, suboptimal health care working conditions, variation in nurse-to-patient ratios, and misalignment between women and their health care teams in terms of racial and language concordance. In addition, the evolving nature of COVID-19 science meant that messaging around key components of health decisions changed over time.

It is now known that pregnant people are a priority population to serve with COVID-19 vaccines, because they are at a higher risk of severe illness from the virus. Gillings Distinguished Scholar of Infant and Young Child Feeding Alison Stuebe, MD, was at the forefront of calling for new

parents and their newborns to remain together during COVID-19 and establish exclusive and continued breast/chestfeeding, which is consistent with World Health Organization guidance.

“Early recommendations to separate birthing people from their infants illustrate the failure of reductionist approaches to the COVID crisis,” Stuebe says. “This virus unmasked the multiple ways that biomedical approaches fail to address the social contexts and structures that determine health and well-being.”

Stuebe and Kristin Tully, PhD, assistant professor of obstetrics and gynecology, lead a Patient Safety Learning Lab (PSLL), funded by the Agency for Healthcare Research and Quality, to evaluate journeys through care and reengineer systems to be more effective, just and enjoyable. The lab’s interdisciplinary team partners with parents, companions and health care team members to redefine what it means for mothers and birthing people* to be safe and well in this country.

Health and safety are positive concepts which mean much more than surviving a pregnancy. Care during this precious part of our lives should foster autonomy, provide timely access to relevant information, promote self-efficacy and belonging for new families to thrive, and be structured for clinicians to offer respectful, equitable and supportive care.

The research and capacity-strengthening work at UNC complements activism in maternal health to transform health care and public health in this country. Respectful, equitable care requires a diverse workforce, and Gillings has been at the forefront of efforts to advance this work.

The Carolina Global Breastfeeding Institute at Gillings is providing technical assistance to historically Black colleges and universities (HBCUs) and other organizations serving communities of color to develop internationally credentialed lactation consultant training programs. Educational grants to diversify the workforce are among the comprehensive



strategies included in the Black Maternal Health Momnibus Act of 2021, a set of policy proposals that is critical to advance birth equity and improve the quality of care for all. In addition, UNC’s Kathryn Menard, MD, MPH, is a member of the U.S. Secretary’s Advisory Committee on Infant and Maternal Mortality which has proposed a set of recommendations to address the unacceptable disparities in infant and maternal outcomes.

This is an exciting time for the Gillings School and faculty, staff and students at other schools to be a part of real, sustained change for maternal, infant and family health. Unfortunately, there is an immense need to improve our society and the inclusivity and patient-centeredness of health care services. 🏠

Learn more about MHLIC, PSLL and colleagues’ work to make real, sustained change: maternalhealthlearning.org, postnatalsafety.com, newmomhealth.com, Carolina Global Breastfeeding Institute.

*We use the term birthing people in addition to mothers to promote inclusive and affirming care for all who give birth.

BRINGING DESIGN THINKING TO PUBLIC HEALTH

Design thinking, or human-centered design, is a creative approach to problem solving that began in product design but has broad, interdisciplinary applications in public health practice.

Liz Chen, PhD, MPH, assistant professor of health behavior, serves as the design thinking lead at Innovate Carolina and co-leads the Carolina Graduate Certificate in Innovation for the Public Good. Unlike other problem-solving approaches that use empirical data to move forward and find a single solution, Chen says design thinking involves going backward, in a sense, to further understand a problem in context alongside people who are impacted by the challenge before trying to solve it.

“We rely on building empathy and letting end users lead,” Chen says. Design thinking practitioners work with those experiencing a public health challenge to design multiple potential solutions. Constant data collection, iteration and learning from failures are built into the process.

Design thinking goes hand in hand with approaches like community-based participatory research, Chen says, where communities have more power in generating solutions

than other public health approaches. Design thinking also involves small-batch, cyclical testing similar to implementation science and continuous quality improvement processes.

“Our students look for ways to engage directly with audiences so they aren’t the ones holding all the power and making decisions about how interventions look,” she says.

While a Master of Public Health (MPH) student in the health equity, social justice and human rights (EQUITY) concentration, Jared Bishop (’21) worked as one of Chen’s design thinking research assistants. He joined the Supplemental Nutrition Assistance Program-Education (SNAP-Ed) team at the UNC Center for Health Promotion and Disease Prevention’s Food, Fitness and Opportunity Research Collaborative (FFORC) to help design educational opportunities for caregivers of young children. They partnered with Cooking Matters, a national program that teaches participants to use nutrition information to make healthier choices and cook delicious, affordable meals.

“We got everyone together in a room. No one knew what to expect. No one knew how to think in this way.”

— MARGARET BENSON NEMITZ, MPH
NCIPH COMMUNITY ASSESSMENT COORDINATOR

The FFORC team’s multi-stage, multilayered process was grounded in design thinking. Bishop and colleagues identified places where caregivers would prefer to access food skills education: health care settings, schools or early childhood education centers, and food retail environments — specifically, grocery stores. They conducted separate design thinking processes for each.

Inside grocery stores, they held caregiver-only sessions to identify “pain points” and “happy points” about the shopping experience and then held cocreation sessions with managers who implement SNAP-Ed in different states.

“We did design thinking with an equity focus,” Bishop says, “centering the voices of caregivers. Not only did we listen to their feedback — we made sure their voices were uplifted when we worked.”

The process made the caregivers feel seen and heard, Bishop says. “Hearing that other parents have the same concerns about navigating those areas was comforting for them, knowing they’re not alone.”

The FFORC team’s project resulted in a publicly available toolkit and roadmap to use design thinking to build SNAP-Ed plans.

Margaret Benson Nemitz, MPH, an alumna of the health behavior MPH program, and colleagues at the North Carolina Institute for

Public Health (NCIPH) implemented design thinking with local health departments to plan how they might reach their annual goals better.

“There are many similarities between what human-centered design teaches us and what strategic planning teaches us,” Benson Nemitz said.

They recruited six local health departments in N.C. to participate on a design team. They framed their challenge through a design thinking lens: “How might we design a support system for quality improvement for all local health departments while providing for differences among health departments?” The participants, all new to design thinking, met monthly from July to December 2021.

“No one knew what to expect. No one knew how to think in this way,” she said. “It was fun to watch representatives get comfortable drawing their ideas, asking big questions and us all being confused together.”

They spent time with a literal drawing board, Benson Nemitz said, even adding things they later determined wouldn’t work in practice alongside the ideas they thought would work. But that openness, creativity and quick feedback are built into design thinking.

“It was interesting how foreign the process felt to the group,” she said, “and how much joy there was. How much freedom and fun and play.”



STAFF PROFILE

Giving 100% to support students

Charletta Sims Evans, MEd, sings Tina Turner’s “You’re Simply the Best” to her 10-year-old son every morning on the way to school.

“He gets upset,” she says with a laugh, but for her, it’s a fun way to constantly remind him that he’s loved and supported.

As associate dean for student affairs, Sims Evans makes sure students at Gillings know they’re supported, too. She goes out of her way to cultivate relationships with students, giving them her cell phone number and checking in frequently to see how they’re doing. That personal touch often leads to long-term friendships, reflected in the countless invitations Sims Evans receives to former students’ dissertation defenses, weddings and baby showers.

Health policy and management student Julia Nevison, who got to know Sims Evans through her service on the School’s Student Government Association, recalls a time last year when she was feeling busy and overwhelmed. Sims Evans reached out and took her to lunch. “That really meant a lot to me,” Nevison says. “At the end of the day she’s here to support us, 100%.”

A Mount Olive, North Carolina native, Sims Evans grew up in the nearby small town of Dudley, where her love for music was nurtured by strong family traditions. “I listen to all types of music. My family sings a lot, and I used to sing in church choirs growing up,” says Sims Evans, whose favorite musician is Patsy Cline. “When my family gets together for holidays, we sing.”



Charletta Sims Evans, MEd

In keeping with another family tradition, Sims Evans went to Winston-Salem State University, which her mother, sister, cousins, aunt and uncle attended. After graduation she moved to Maryland, where she was a certified recreational therapist at a mental institution. She earned her master’s degree in counseling and was a public school guidance counselor in Maryland before returning to N.C. to start her student affairs career in higher education, working at several universities and the N.C. Community College System before joining Gillings in 2011.

In the Office of Student Affairs, Sims Evans leads a team of 22 professionals who offer academic and career counseling, handle student disputes and grievances, advise student organizations, and provide student outreach and recruitment. When Greg Bocchino, EdD, senior executive director of academic advising and student affairs, first interviewed for his job at Gillings more than eight years ago, he knew she was a great leader who would also become a great friend. “I recognized right away that Charletta was a unique, caring, and talented individual; a supportive leader and supervisor; and someone that I could work for, and with, for a long period of time,” he says. “My parents ask me how she’s doing on a weekly basis — she is like family to me.” 🏠

STAFF PROFILE

Making all feel welcome, wanted

“It’s part of who I am.”

Angelica Figueroa’s eyes light up as she talks about Busch Gardens in Williamsburg, Va., where she worked for a decade before joining the Dean’s Office at the UNC Gillings School of Global Public Health. Figueroa first got a job at the amusement park in high school and worked her way up from a gift-store cashier to senior supervisor for guest arrival, with more than 200 team members reporting to her during the peak summer months.

“Busch Gardens is where I learned many formative skills and foundational values, and a philosophy centered on leadership and customer service,” says Figueroa, who has relied on that philosophy as administrative support in the Dean’s Office for more than 11 years. “My theme park experience is one of the reasons I was hired at Gillings. In both, my goal has been to deliver a quality, positive and memorable experience.”

First hired as a temporary employee, Figueroa was promoted to executive assistant to Dean Barbara K. Rimer and promoted again to office manager. A highly skilled project manager, she leads a six-person team that works closely with the School’s senior leaders — planning and supporting events and projects, managing calendars, assisting with communications, and facilitating the school’s pursuit of its mission.

One of those staff members, Lisa Warren, has worked with Figueroa in the Dean’s Office since 2015. “Angelica does a ton of high-quality work herself, and she is highly gifted at teaching, encouraging and managing the people she supervises,” Warren says. “She is an amazing



Angelica Figueroa

problem solver who has a way of bringing out the best in people to benefit every situation.”

Born in Puerto Rico as the oldest of three children, at age 9, Figueroa moved with her family to Newport News, Va. She met her future husband, Matthew, when they were both students at the College of William and Mary, where she earned her degree in international studies. They live in Chapel Hill with their 2-year-old son, David, who has Down Syndrome. “His diagnosis has really changed the way I look at the world. In other ways, it’s reinforced and expanded values that I hold dear — each of our contributions matter and have their own impacts,” she says. “I feel incredibly fortunate to have that perspective.”

Figueroa’s values, background and appreciation for others allow her to connect the dots across people, ideas and events in a way that elevates the dean’s office and Gillings as a whole. “She is kindness, competence and fearlessness wrapped in a package of decency and a willingness and eagerness to learn new skills,” Rimer says. “Angelica makes everyone who enters the Dean’s Office feel welcome and wanted. Her knowledge of the school is vast, and she calls it up in the most seemingly effortless way. Angelica is the heart and soul of the school.” 🏠

STAFF PROFILE

Leading in a time of transition

Robert Smith III, PhD, joined the Gillings School in February as the School's new vice dean.

But his commitment to public health goes back to his childhood, where, as a young man, he earned the nickname "Doc."

"To this day, I get calls from family members asking for my help with diagnoses or advice around issues of public health, even before COVID-19," Smith says. "As I look at the work that lies ahead of us to fulfill the Gillings School's mission, it will be important to preserve our core while embracing our future. The world has changed so much in the past two years, but the response from Gillings has been amazing. I marvel at the life-changing research coming from our faculty, our brilliant and diverse students, and our committed staff who continue to work tirelessly in the face of so much change."

Smith spent the last 10 years as associate chair for administration in the Department of Neurology at the UNC School of Medicine, where he focused on policy development and implementation, financial planning and management, strategic planning, human resources management, and information systems design and delivery. Before coming to UNC-Chapel Hill, Smith was the director of human resources consulting at the University of Virginia, where he previously was chief administrative officer in the departments of pediatrics, obstetrics and gynecology.

Smith joins Gillings at a time when the pandemic has changed many assumptions



Robert Smith III, PhD

about work and the role of public health in society. Old learning and operational habits are being examined, and Smith brings his experience with the "Future of Work" from his time at the School of Medicine. While Gillings has helped to usher in the most diverse class of students in the School's history, there is still work to be done with enrollment and hiring.

"Good people stay in good places," Smith says. "And a big part of my job will be to continue to make Gillings a 'good place.'"

Smith began collaborating with Gillings in 2012, when he delivered his first guest lecture on ethics in the Department of Health Policy and Management. He has worked closely with second-year Master of Healthcare Administration students to place them in internships within the School of Medicine that allow them to gain practical experience in a hospital setting.

Outside of work, Smith has been an avid cyclist since his time as a member of the Piedmont Flyers cycling team.

"My love for Gillings goes back a long way, and there's a reason why we're the top *public* school of public health," he says. "I want to help preserve all that makes us great while still looking toward the future." 🏠

FACULTY PROFILE

Putting people at the center

Ciara Zachary's public health career began in research and program evaluation.

She was designing, implementing and evaluating injury prevention and behavioral health programs that focused mainly on diverse and underserved communities. She soon realized that program design could only go so far in solving public health challenges, especially where equity was concerned.

"I recognized that policy is such an important lever, and advocacy is such an important tool," says Zachary, PhD, MPH, a 2008 Master of Public Health Gillings graduate in health behavior who earned her doctorate from Johns Hopkins University in her hometown of Baltimore.

That recognition prompted her to apply for a policy analyst position at the North Carolina Justice Center, an advocacy organization for economic and social justice issues. Zachary got the job and moved to N.C., and where she became a respected policy analyst and effective advocate — first at the Justice Center and then as Health Program Director at the nonprofit organization NC Child, which works for better opportunities for all children in N.C.

"Her policy expertise, her passion for justice and her focus on keeping people at the center of what that work looks like is so impressive," says Nicole Dozier, director of the N.C. Justice Center's Health Advocacy Project. "She interacts with people in a way that makes them feel comfortable and connected, and she has a way of inspiring them to action."

In 2020, Zachary joined Gillings as assistant professor and leader of the health policy



Ciara Zachary, PhD

concentration in the Department of Health Policy and Management, where she focuses on teaching public health students about policy analysis, improving equity in health care access, and the importance of communities and coalitions in achieving change.

"She is one of a special group of faculty in our school with direct advocacy experience, and she has a commitment to and long history of working with and for low-income populations," says Pam Silberman, JD, DrPH, health policy and management professor and longtime leader in state health policy. "She has a great understanding of Medicaid and health policy, along with that real-life experience as an advocate trying to shape policy and empowering people to have a voice in the process. She's the real deal."

Zachary applies that people-centered approach to her classroom — not just in how she teaches but also in how she treats her students. "She places a strong focus on underserved populations and assuring that they are centered in classroom conversations," says Raquel Harati, who worked as Zachary's teaching assistant after taking one of her courses. "She also truly cares about her students and their well-being outside of the classroom. She is one of the most supportive supervisors and professors I have ever had." 🏠

DEAN BARBARA K. RIMER'S LEGACY IS ONE OF HEAD & HEART

Many people dream of changing the world. Some people actually do it. Though she would demur to the description, Barbara K. Rimer, DrPH, is among the latter group.

Dr. Rimer joined the UNC School of Public Health as an adjunct associate professor in 1992. She began her service as dean in 2005, launching a 17-year journey at the helm of what is now — through a transformative gift she helped secure — the internationally renowned Gillings School of Global Public Health.

When Dean Rimer steps down this summer, she will remain on faculty as Alumni Distinguished Professor in the Department of Health Behavior. In announcing that she was stepping down as dean, she made it clear that she still has work to do, students to mentor and untapped passion for making positive change.

That same irrepressible energy has colored Dr. Rimer's entire service as dean. She reshaped the role from her first day in it — being both the first woman and first behavioral scientist to hold the position — and went on to become the School's longest-serving dean. She led Gillings to what currently stands at five consecutive rankings periods as the top public school of public health in the United States and second overall according to *U.S. News and World Report*.

Under her leadership, the School has vaulted past peers in grant dollars, becoming the top *public* school of public health for funding from the National Institutes of Health and building a portfolio of more than \$1 billion in research dollars since 2016. That funding has supported scientific inquiry, education and practice across all 100 North Carolina counties, 47 countries and five continents.

Over the course of her career, Dean Rimer has compiled a litany of national achievements. A notable cancer researcher in her own right, she chaired the National Cancer Institute's Advisory Board, was elected to the Institute of Medicine, received the American Cancer Society's Medal of Honor and was appointed to the President's Cancer Panel, which she chaired from 2011 to 2019. She was vice chair of the Task Force on Community Preventive Services for the U.S. Centers for Disease Control and Prevention, she co-authored hundreds of scientific papers, and she earned more awards than can be named here — but none of this defines her.

What most people think of first is her powerful fusion of insight, humility and generosity of spirit.

At the Gillings School, Dean Rimer paired her innovative vision with a singular work ethic. She spearheaded the development of the Water Institute at UNC, created the School's Practice Advisory Committee to engage community leaders across N.C., and fostered strong partnerships across the University and the state, positioning Gillings researchers to lead large-scale projects of critical importance in areas such as water quality, children's environmental health, and COVID viral sequencing and surveillance.

She also marshalled Gillings leaders in revamping the Master of Public Health (MPH) degree, launched the online MPH@UNC program, and developed a multi-partner public health program with UNC-Asheville and the Mountain Area Health Education Center. These accomplishments have altered the course of public health for the better — but, again, they do not define her.

Dean Rimer has championed inclusive excellence within the Gillings School — through an ambitious Inclusive Excellence Action Plan — and more broadly, as part of the N.C. Governor's Commission on Inclusion. From candid town hall meetings with students to thoughtful blog posts about events like Nikole Hannah-Jones' tenure application, she has offered an example of leadership not through buzzwords, but through action informed by collaboration. The School's 2021 fall cohort was its most diverse yet, welcoming a record number of students from historically excluded groups. And still, this is not what defines our outgoing dean.



In the case of Dean Rimer — Barbara, to all who meet her — what most people think of first is her powerful fusion of insight, humility and generosity of spirit.

There are few staff and faculty at the Gillings School who have not received a hand-written note or email from Barbara congratulating them on a promotion, mourning the loss of a loved one or celebrating the birth of a child. Similarly, few in the Gillings community have not witnessed Barbara's sincere redirection of any accolades given her to the people around her, whom she consistently credits for the School's continued preeminence.

In one of her blog posts, Dean Rimer quoted Dr. Jane Goodall: "I think empathy is really important, and I think only when our clever brain and our human heart work together in harmony can we achieve our full potential."

For 17 years, Dean Barbara K. Rimer has offered a shining example of that philosophy in action. That example is her greatest legacy. 📖

GIVING A VOICE TO EVERY STORY

The complexity of public health work can make it easy to lose sight of uniquely human experiences that impact well-being. Researchers often gather and present data with a narrow focus that may not fully address the public's concerns, which can intensify barriers to care or leave people vulnerable to misinformation.

The solution may lie in storytelling, according to Nabarun Dasgupta, PhD, MPH, a Gillings Innovation Fellow and senior researcher at UNC's Injury Prevention Research Center. In public health, narrative can shine a light on challenges faced by underserved communities and put a human face on commonly overlooked issues.

Dasgupta, a 2013 doctoral graduate of the Gillings School, has leveraged his background in epidemiology to tell public health stories through data visualization and empathy.

"I like to say epidemiology is the science of telling true stories about health with numbers," he explains. "Visualizations are great for telling a story that sticks in people's minds — if you do it right. More important than creating complex ways to slice and dice numbers is making sure we're not overlooking who owns the data or where there might be gaps."

His expertise has helped agencies like the U.S. Centers for Disease Control and Prevention and the World Health Organization track public health concerns. He co-founded Epidemico, a health analytics startup that uses machine algorithms to predict disease outbreaks. His

knowledge of visual dashboard design has aided development of apps, websites and other tech for government agencies around the world.

His goal is to give the public concise understanding of health challenges and amplify patient voices.

Since 2002, Dasgupta has also worked to better understand the overdose crisis. In 2007, he co-founded Project Lazarus to address surging overdose deaths in Wilkes County, North Carolina. By working with local pastors, agencies and community health outlets, Project Lazarus took an approach to harm reduction that Dasgupta calls "radical empathy" by having difficult conversations about a stigmatized topic that affected many.

Project Lazarus brought the overdose death rate down 69% by helping doctors prescribe opioids more safely, developing support for pain patients and training people to use naloxone, a drug to reverse overdose. With support from the N.C. Medical Board, Project Lazarus was the first program to distribute naloxone kits directly to pain patients and people who use drugs, even though it required a doctor's prescription at the time.

"I like to say epidemiology is the science of telling true stories about health with numbers."

— **NABARUN DASGUPTA, PHD, MPH**
SENIOR RESEARCHER AND GILLINGS
INNOVATION FELLOW

In 2012, Dasgupta co-founded the Remedy Alliance naloxone buyers club in response to a shortage of this life-saving drug. The team worked directly with Pfizer to acquire naloxone at a discounted price for distribution in harm reduction programs. Today, the buyers club facilitates nearly 150 such programs. It has been critical during the pandemic, when shortages have made costs skyrocket and limited the drug's access from last mile programs that have difficulty meeting regulations necessary to acquire it.

"We are leaving behind our strongest allies in the current model of distributing and administering naloxone," Dasgupta says. "There are Super Savers in the community who have reversed dozens of overdoses, and they teach others how to use it. They're the ones who drive most of that intervention. We're not empowering this innovative first responder phenomenon to be even more effective. We need to focus on getting them naloxone with no limits from insurance companies or pharmacists."

The overdose crisis has recently shifted away from prescription drugs to street drugs that are more difficult to track and may contain dangerous



ingredients. In 2022, Dasgupta received funding from the Foundation for Opioid Response Efforts to develop laboratory methods to analyze street drugs in real time, along with systems to alert the public about potential dangers.

His recent work also centers untold stories by encouraging people to report side effects of drugs and vaccines, including the COVID-19 vaccine, because adverse events reported by physicians and pharmacists are sometimes different from those that concern patients.

It's hard for clinicians to be honest about side effects, Dasgupta says, but proactive conversations are necessary to establish trust in health care.

"What patients fear more than side effects is having information withheld. In our zeal to get people vaccinated, I feel like public health hasn't been talking about side effects in an open way, and so some people aren't going back for their second dose or boosters. That's something we could have addressed and can serve as a lesson on how to improve future public health communication." 📖

SCHOOL NEWS

STUDENTS

Three Gillings students are among 11 UNC-Chapel Hill graduate students and recent graduate alumni who have received The Graduate School's 2022 Impact Awards, in recognition of research that contributes to the educational, economic, physical, social or cultural well-being of North Carolina communities and citizens. They are:

- **Caitlin Biddell**, a doctoral student in health policy and management, for her work in financial assistance processes in cancer care;
- **Jeliyah Clark**, a doctoral candidate in environmental sciences and engineering, for her research on drinking well water during pregnancy and the effects of dietary interventions on birth outcomes; and
- **Lindsay Savelli**, a master's student in health equity, social justice and human rights, for her studies of environmental racism and asphalt plant pollution in Caswell County.

Master of Public Health (MPH) student **Morgan Cooper, RD**, received one of UNC-Chapel Hill's 2021 Public Service Awards, the Office of the Provost Engaged Scholarship Award, alongside preceptor Ryan Lavalley, PhD, assistant professor of occupational science and occupational therapy, for innovative work in partnership with the Orange County Partnerships for Home Preservation, the Orange County Department on Aging and the Marian Cheek Jackson Center, in support of home preservation and repair and aging-in-community.

Five master's students from Gillings were in the most recent cohort of the E(I) Lab Program, an entrepreneurship and innovation lab that encourages UNC-Chapel Hill graduate students across various disciplines to collaborate to solve challenges in health care. Three teams participated:

- First place: Mental Health Matchmakers, which included Gillings students **Kayla McKiski** and **Noah Hammes**, designed a project to test the feasibility of matching mental health services with students coping with substance use disorders.
- Second place: Trashbusters, which included **Shauna Fraser-Kim** from Gillings, worked to resolve the increase of medical waste brought about by the current global pandemic.
- Third place: **Jane Tandler** and **Victoria Tetteh** from the Gillings were part of Tetteh Back Pocket, which created a platform with resources to help people manage their chronic back pain.

Two Gillings students were among 14 UNC undergraduates selected as Phillips Ambassadors for Summer, Fall and Academic Year 2021 study abroad programs in Asia. **Caroline Le** of Raleigh, a health policy and management major, and **Skyler Noble** of Chapel Hill, an applied mathematics and biostatistics double major, studied through the Yonsei University international summer school program. Ambassadors are selected twice a year and receive \$6,000 each.

Takhona Hlatshwako, a senior from the Kingdom of Eswatini in Southern Africa (formerly Swaziland) studying health policy and management, has been named a Rhodes Scholar to pursue a fully funded postgraduate degree at the University of Oxford in Fall 2022. She plans to pursue a master's in international health and tropical medicine through the Oxford Centre for Tropical Medicine and Global Health within the Nuffield Department of Medicine.

Gillings student **Aneesha Tucker**, a double major in health policy and management and women and gender studies, received the 2021 Martin Luther King Jr. Scholarship from UNC-Chapel Hill. Amy Lo, a junior from Cleveland, Ohio, who

studies public health nutrition with minors in chemistry and food studies, was one of two runners-up.

Three Gillings students received the inaugural Gillings School Graduate Teaching Assistant (TA) Award: **Dane Emmerling**, graduate teaching assistant and doctoral student in health behavior; **Lee Doyle**, graduate research assistant and MPH student in health behavior; and **Hanna Huffstetler**, graduate teaching assistant and doctoral student in health behavior.

EXAMPLES OF GRANTS/ CONTRACTS

Audrey Pettifor, PhD, professor in the Department of Epidemiology, is co-leading a \$15 million state-funded surveillance effort to facilitate and enhance genomic sequencing capabilities of the SARS-CoV-2 virus across N.C. The **CORVASEQ (Coronavirus Variant Sequencing) Surveillance Network** is a partnership between the N.C. Department of Health and Human Services Division of Public Health and the N.C. Policy Collaboratory. CORVASEQ includes several academic institutions and health care systems. An online dashboard will be created as part of the information sharing and epidemiological tracking aspects of the program.

The Rapidly Emerging Antiviral Drug Development Initiative (READDI), a nonprofit drug research and development organization that was founded by the UNC School of Medicine, Gillings School of Global Public Health, Eshelman School of Pharmacy and the Eshelman Institute for Innovation, **won RTI International's Forethought Research Collaboration Challenge and received \$5 million in seed funds** to produce antiviral drugs that can block many viruses at once, in an effort to prevent future pandemics.

Jason Surratt, PhD, professor of environmental sciences and engineering, will be UNC's principal

investigator on a **\$12 million National Science Foundation project** to determine the content of airborne particulate matter, which has significant effects on health and climate change. He will work with Georgia Institute of Technology **Professor Nga Lee "Sally" Ng, PhD**, the lead principal investigator. The project will establish a network of 12 sites around the United States outfitted with state-of-the-art instruments to characterize the properties of aerosols. Surratt will lead a group at the site in the Great Smoky Mountain National Park at Look Rock, Tenn. Surratt also received the 2021 **Kenneth T. Whitby Award** from the American Association for Aerosol Research (AAAR) in recognition of outstanding technical contributions to aerosol science and technology by a young scientist.

The Improving Provider Announcement Communication Training (IMPACT) Program Project, led by **Noel Brewer, PhD**, Gillings Distinguished Professor in Public Health, has received **\$11.7 million in funding from the National Cancer Institute** to study ways that health care providers can contribute to vaccine recommendations, what motivates providers to recommend human papillomavirus (HPV) vaccines, who should facilitate training and what kind of communication interventions are most cost-effective. IMPACT research project leads include **Melissa Gilkey, PhD**, associate professor of health behavior; **Justin Trogdon, PhD**, and **Stephanie Wheeler, PhD, MPH**, professors of health policy and management; and **Sachiko Ozawa, PhD**, associate professor from the UNC Eshelman School of Pharmacy and adjunct associate professor of maternal and child health. **Nisha Gottfredson, PhD**, assistant professor of health behavior, will co-lead the data core with Trogdon. One of the world's top researchers in risk beliefs and communication, Brewer was named Gillings Distinguished Professor in Public Health in 2021 and was appointed to the Commission for Vaccine Refusal, Acceptance and Demand in the USA by *The*

Lancet, one of the world's foremost publications on health research, to design a plan for public policy to support high acceptance of safe and effective vaccines in the U.S.

UNC's **Center for Environmental Health and Susceptibility (CEHS)**, led by **Melissa Troester, PhD**, Gillings professor of epidemiology, will work with North Carolina State University (NCSU) researchers on a multi-institutional project funded by a **\$17 million grant from the National Institutes of Health (NIH)**. The Southeastern Liver Health Study will follow 16,000 people in N.C. and Georgia for up to five years to explore a potential link between environmental contaminants and liver cancer. Michael Sanderson, MPH, associate director of the CEHS, will work with NCSU on project administration and evaluation.

The **UNC Nutrition Obesity Research Center (NORC) has received a \$5.6 million grant from the National Institutes of Health (NIH)** to fund another five years of support. This award is the fifth time the NIH has provided five-year funding for the center, allowing for continuous work in the field of nutritional sciences and obesity since the center's establishment in 1999. Led by co-directors **Elizabeth Mayer-Davis, PhD, RD**, Cary C. Boshamer Distinguished Professor of nutrition and medicine and chair of the Department of Nutrition, and **Raz Shaikh, PhD**, associate professor and associate chair for research in the Department of Nutrition, NORC is one of 11 centers in the country funded by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) that is specifically designed to enhance the efficiency, productivity, effectiveness and multidisciplinary nature of nutrition and obesity-related research.

Gillings faculty will lead two new centers as part of the NIH study **Nutrition for Precision Health, powered by the All of Us Research Program (NPH)**, a five-year effort that will develop predictive algorithms and generate new data to advance personalized nutrition and improve public health. **Mayer-Davis** is the principal investigator

for the \$13 million Clinical Center, which will enroll more than 2,000 study participants. **Susan Sumner, PhD**, professor of nutrition, is the principal investigator for the \$19 million Metabolomics and Clinical Assay Center (MCAC), which will analyze metabolomics data to measure tens of thousands of compounds in biospecimens to provide a more comprehensive view of an individual's health and wellness. Sumner is based at the Nutrition Research Institute (NRI) in Kannapolis. The NRI is home to the Eastern Regional Comprehensive Metabolomics Research Core, one of six U.S. centers that work together to establish national standards for metabolomics and increase national metabolomic capacity in clinical and translational research.

Blue Cross and Blue Shield of N.C. has dedicated **\$3.2 million for a new, large clinical study** to investigate how to best help people who are food insecure achieve better health through nutrition. Study co-leaders are **Darren DeWalt, MD, MPH**, director of the UNC Institute for Healthcare Quality Improvement at the UNC School of Medicine and a 2004 MPH Gillings graduate; **Alice Ammerman, DrPH**, the Mildred Kaufman Distinguished Professor of nutrition at Gillings and director of the UNC Center for Health Promotion and Disease Prevention, and **Seth Berkowitz, MD, MPH**, assistant professor of medicine and member of the UNC Cecil G. Sheps Center for Health Services Research.

With a **\$2.8 million grant from the NIH**, Gillings nutrition researchers are studying what types of personalized digital messages and guidance can best help people modify their behavior to meet their goals, such as eating more healthful foods, getting active and keeping tabs on their weight. **Carmina Valle, PhD**, assistant professor of nutrition; **Deborah Tate, PhD**, professor of nutrition and health behavior; assistant professors of nutrition **Brooke Nezami, PhD**, and **Heather Wasser, PhD**; and **Nisha Gottfredson, PhD**, associate professor of health behavior, are co-investigators.

The Department of Maternal and Child Health (MCH) has received a **\$1.97 million award from the Health Resources and Services Administration (HRSA)**'s Maternal and Child Health Bureau, which will renew funding of the department's National MCH Workforce Development Center led by **Dorothy Cilenti, DrPH**, associate professor of maternal and child health, for another five years. The Center was established in 2014 as the national training hub for workforce development in maternal and child health.

GILLINGS NEWS

Andrew Olshan, PhD, Barbara S. Hulka Distinguished Professor of epidemiology, will serve as the UNC Gillings School of Global Public Health's interim associate dean for research. Olshan fills the position left by **Penny Gordon-Larsen, PhD**, Carla Smith Chamblee Distinguished Professor of Global Nutrition, who served in the role since September 2018 and has been named interim Vice Chancellor for Research at UNC-Chapel Hill

For the third consecutive year, leadership at the UNC Gillings School of Global Public Health was honored with the **Health Professions Higher Education Excellence in Diversity (HEED) Award** from *INSIGHT Into Diversity* magazine for outstanding commitment to and ongoing promotion of inclusive excellence. As the COVID-19 pandemic has laid bare the urgent need for racial justice, the Gillings community is dedicated to dismantling the systems of racism that create barriers to equitable health.

SELECTED FACULTY/STAFF HONORS

Ralph Baric, PhD, the William R. Kenan, Jr. Distinguished Professor in the Department of Epidemiology, recently received several honors and recognitions for his coronavirus research:

- The 2021 **Oliver Max Gardner Award**, the highest honor the

UNC System confers on faculty members. Established by the will of former N.C. Gov. O. Max Gardner, the award recognizes faculty who have “made the greatest contribution to the welfare of the human race.”

- Induction into the **National Academy of Sciences**, one of the highest distinctions for a scientist or engineer in the U.S., recognizing distinguished and continuing achievements in original research.
- The **North Carolina Award**, the state's highest civilian honor. Governor Roy Cooper presented Baric with the award, which was created by the General Assembly in 1961 to recognize significant contributions to the state and nation in the fields of fine arts, literature, public service and science.

Shelley Golden, PhD, associate professor and vice chair for academic affairs for the Gillings School's Department of Health Behavior, received The Graduate School's 2021 Faculty Award for Excellence in Doctoral Mentoring. The annual award recognizes a faculty member who encourages students to establish their own record of scholarly activity, provides a supportive environment, and achieves a successful record of graduate degree completion among the students they have advised.

Sandra Greene, DrPH, professor of the practice in the Department of Health Policy and Management and senior research fellow and co-director of the program on health care economics and finance at the Cecil G. Sheps Center for Health Services Research, was recently appointed as chair of the N.C. State Health Coordinating Council (SHCC) by Governor Roy Cooper's office. The SHCC oversees health planning in the state and develops the annual State Medical Facilities Plan to guide expansion of health care services in this state.

Stephen Hursting, PhD, MPH, the American Institute for Cancer Research/World Cancer Research Fund Distinguished Professor at Gillings, has been named

director of the UNC NRI, following the retirement of **Steve Zeisel, MD, PhD**, professor of nutrition Based in Kannapolis, N.C., the NRI advances precision nutrition by investigating how genetics, gut microbiota and environment affect an individual's requirements for and responses to nutrients.

The Howard Hughes Medical Institute (HHMI) named **David Martinez, PhD**, postdoctoral researcher at UNC Gillings, as part of a cohort of 21 early career researchers who were named 2020 Hanna H. Gray Fellows.

Benjamin Mason Meier, JD, LLM, PhD, professor of global health policy, received the 2021 Mid-Career Award in International Health from the **American Public Health Association (APHA)**. This award recognizes an outstanding mid-career professional with demonstrated achievement and commitment to international health promotion and development.

Beth Moracco, PhD, associate professor of health behavior and associate director of the UNC Injury Prevention Research Center, received the University's 2021 Edward Kidder Graham Award, which is given to those who fulfill Graham's ambition “to make the campus co-extensive with the boundaries of the state” in the context of UNC's mission to extend knowledge-based service around the world.

Aunchalee Palmquist, PhD, MA, IBCLC, assistant professor of maternal and child health, received the Gillings Faculty Award for Excellence in Health Equity Research, which recognizes faculty who demonstrate excellence in research that has made a substantial impact on improved equitable outcomes or sustained reduction in inequities in a pressing public health issue.

Susan M. Smith, PhD, has been named the inaugural holder of The Dickson Foundation-Harris Teeter Distinguished Professorship in nutrition. Smith, who joined the faculty in 2016, is a professor of nutrition at the Gillings

School of Global Public Health and serves as deputy director for science at UNC's NRI.

Courtney Woods, PhD, associate professor of environmental sciences and engineering, received a UNC-Chapel Hill Public Service Award for outstanding contributions to the campus and broader communities. She received the Office of the Provost Engaged Scholarship Award in the category of research, recognizing her collaborative environmental justice research projects and establishment of the Environmental Justice Action Research Clinic.

Two researchers from the Department of Environmental Sciences and Engineering were named to committees convened by the National Academies of Sciences, Engineering, and Medicine to tackle some of the country's most pressing environmental health challenges. **Barbara Turpin, PhD**, professor and chair of environmental sciences and engineering, is part of the committee to study the chemistry of urban wildfires in the wildland-urban interface (WUI), the area where urban homes transition into undeveloped wildland. **Glenn Morrison, PhD**, professor of environmental sciences and engineering, has been named to the committee that will study the emerging science on indoor air chemistry, focusing on under-reported chemical science discoveries that show a link between chemical exposure, air quality and human health.

Nine Gillings faculty members were named to Clarivate's 2021 Highly Cited Researchers list, which recognizes significant influence in their fields through the publication of multiple highly cited papers during the last decade. Their names are drawn from the publications that rank in the top 1% by citations for field and publication year. The faculty members are:

- **Ralph S. Baric, PhD**, William R. Kenan, Jr. Distinguished Professor of epidemiology.
- **Noel T. Brewer, PhD**, Gillings Distinguished Professor in

Public Health and professor of health behavior.

- **Stephen R. Cole, PhD**, professor of epidemiology.
- **Kelly R. Evenson, PhD**, professor of epidemiology.
- **Hans W. Paerl, PhD**, professor of marine and environmental sciences and engineering and William R. Kenan, Jr. Distinguished Professor at UNC's Institute of Marine Sciences.
- **Barry M. Popkin, PhD**, William R. Kenan, Jr. Distinguished Professor of nutrition.
- **Bryce Reeve, PhD**, adjunct professor of health policy and management at Gillings, and professor of population health sciences and Pediatrics within the Duke University School of Medicine.
- **Timothy Sheahan, PhD**, assistant professor of epidemiology.
- **David J. Weber, MD**, professor of medicine, pediatrics and epidemiology, and associate chief medical officer of UNC Health Care.

Five Gillings faculty members were recognized by Expertscape as some of the top experts in their fields, based on scientific publications since 2010 from the National Institutes of Health's PubMed journal database:

- **Adaora Adimora, MD**, professor of epidemiology at Gillings and the Sarah Graham Kenan Distinguished Professor of Medicine;
- **Cynthia Bulik, PhD, FAED**, professor of nutrition and the Distinguished Professor of Eating Disorders in UNC's Department of Psychiatry;
- **Myron Cohen, MD**, professor of epidemiology and is the Yeargan-Bate Eminent Distinguished Professor of Medicine, Microbiology and Immunology in the School of Medicine;
- **Joseph Eron, MD**, adjunct professor of epidemiology and the Herman and Louise Smith Distinguished Professor of Medicine; and

- **Ralph Baric, PhD**, the William R. Kenan, Jr. Distinguished Professor in the Gillings School's Department of Epidemiology and a professor of microbiology and immunology with UNC's School of Medicine.

The student-nominated **Teaching Excellence and Innovation Awards** honor Gillings faculty members who inspire students; enhance student learning through creative, engaging and innovative teaching methods; and/or support student success in the classroom and student growth as public health professionals. The 2022 award winners are:

- **Jamie Crandell, PhD**, associate professor of biostatistics and nursing;
- **Brian Wells Pence, PhD**, professor of epidemiology;
- **Julia Rager, PhD**, assistant professor of environmental sciences and engineering;
- **Patsy Polston, PhD**, assistant professor of health behavior;
- **Katie Meyer, ScD**, assistant professor of nutrition; and
- **Jennifer Medearis Costello, MS**, adjunct faculty for academic affairs.

Clare Barrington, PhD, associate professor of health behavior and director of the doctoral program in health behavior, received one of the School's most prestigious awards, the Bernard G. Greenberg Alumni Endowment Award for teaching, research and service.

Andrew Olshan, PhD, Barbara S. Hulka Distinguished Professor of epidemiology and interim associate dean for research, received the John E. Larsh Jr. Award for Mentorship, one of the School's most prestigious awards, which recognizes the faculty member who best exemplifies the qualities of mentoring and commitment to students.

Daniel Westreich, PhD, professor of epidemiology, received the Edward G. McGavran Award for Excellence in Teaching, which recognizes career-long excellence in teaching by a faculty member at the Gillings School.

ALUMNI

Dilshad Jaff, MD, MPH, Gillings Humanitarian Fellow, received the 2022 Harriet Hylton Barr Distinguished Alumni Award, which honors an alumnus or alumna for outstanding achievements and contributions to public health.

Celette Sugg Skinner, PhD — alumna, adjunct professor of health behavior at Gillings and member of the Gillings School's Public Health Foundation board — has been selected as the first dean of a new school of public health to be launched at the University of Texas (UT) Southwestern in Dallas, on an interim basis. The UT System Board of Regents approved plans for the new school in February 2021.

M. Katherine Banks, PhD, was chosen by the Texas A&M University System Board of Regents as president of the system's flagship institution, Texas A&M University. A member of the National Academy of Engineering and a fellow of the American Society of Civil Engineers, she earned a Master of Science degree in environmental sciences and engineering from Gillings in 1986, followed by a doctoral degree from Duke University. Banks had previously served as Texas A&M Engineering Vice Chancellor and Dean, and as Vice Chancellor of Engineering and National Laboratories and College of Engineering dean.

Ronald Aubert, PhD, was appointed interim dean of the Brown University School of Public Health while the dean is on short-term leave for a temporary special assignment as the White House coronavirus response coordinator. Aubert, who received his doctoral degree in epidemiology from Gillings, had been serving as interim associate dean for diversity and inclusion at Brown's School of Public Health and faculty director of the university's Presidential Scholars Program.

Michael “Trey” Crabb III, MHA ‘01, MBA, was named senior vice president and chief business development officer at Methodist Le Bonheur Healthcare, which operates health care facilities

across the Mid-South region. Crabb earned a Master of Healthcare Administration (MHA) degree in health policy and management and holds a Master of Business Administration degree from the Kenan-Flagler Business School. For nine years, Crabb served on the Public Health Foundation Board.

Alex Gertner, PhD, a 2020 doctoral alumnus in health policy and management, has received two honors for his dissertation for research into the use of effective treatments for opioid use disorder (OUD) in Medicaid beneficiaries: The Dean's Distinguished Dissertation Award from The Graduate School at UNC in the field of social sciences, and the Annual Outstanding Dissertation Award from AcademyHealth, a professional organization for health services researchers, health policy analysts and health practitioners. Gertner's dissertation research was published in a June 2020 study in *Health Services Research* and an August 2020 study in *Health Affairs*.

Jessica Melton, MHA, was named president and chief operating officer of Suburban Hospital in Bethesda, Md. Suburban is nationally recognized for excellence and is a member of Johns Hopkins Medicine. Melton graduated with an MHA degree from Gillings in 2007 and serves on the Public Health Foundation Board.

Jennifer Mundt, MSPH, was named the N.C. Department of Commerce's first assistant secretary of clean energy economic development and will lead the state's efforts to develop opportunities in the clean energy industry. Mundt earned a Master of Science in Public Health (MSPH) degree from the Department of Environmental Sciences and Engineering in 2007.

Sharon Phares, PhD, MPH, was named the chief scientific officer for the National Pharmaceutical Council (NPC), where she directs NPC's research strategy and oversees research related to policy that affects the pharmaceutical industry. She received an MPH from the Gillings School's Public Health Leadership Program in 2010.

William Ray, MPH, was appointed as North Carolina's director of emergency management and the deputy homeland security advisor at the N.C. Department of Public Safety. Ray earned an MPH from the Gillings Public Health Leadership Program in 2010 and a graduate certificate in Community Preparedness and Disaster Management from the Department of Health Policy and Management.

Sara Roszak, DrPH, has been named senior vice president, health and wellness strategy and policy for the National Association of Chain Drug Stores (NACDS), and president of the NCADS Foundation, which seeks to improve patient health through research, education and philanthropy. An adjunct professor of clinical education at the Eshelman School of Pharmacy, she earned a Doctor of Public Health degree from Gillings' executive program in health leadership in 2019.

Vilma S. Santana, MD, PhD, was inducted into the Academia de Medicina da Bahia (Bahia Academy of Medicine). This honor recognizes her dedication to a career of education, research and forming partnerships to advance public health globally. She earned a doctoral degree from the UNC Gillings Department of Epidemiology in 1994.

Kevin Tate, MHA, was named UNC Family Medicine's new vice chair for administration. An alumnus of the UNC Gillings School for Global Public Health, he earned a MHA degree from the School's Department of Health Policy and Management in 2005.

The following Gillings alumni have received appointments in the Biden-Harris administration:

- **Mayra Alvarez, MHA ‘05**, serves on the Biden-Harris COVID-19 Health Equity Task Force.
- **Chip Hughes, MPH ‘82**, was named Deputy Assistant Secretary for Emergency and Pandemic Response in the U.S. Department of Labor.

- **Anne Reid, MPH ‘08**, was appointed deputy chief of staff at the U.S. Department of Health and Human Services (HHS).

Paula Brown Stafford, MPH, was named Triangle Business Journal's 2022 Women in Business Lifetime Achievement Award winner. A biopharmaceutical executive and leadership consultant with more than 35 years of industry experience, she is currently the president, chief executive officer and chairperson of the board of directors of Novan, Inc., a clinical development-stage biotechnology company. She is an adjunct professor in the Gillings Public Health Leadership Program.

Five Gillings alumni were named in the Triangle Business Journal's 2021 40 under 40 list, which highlights the Triangle's best and brightest business and community leaders younger than 40 years. The 40 under 40 list highlights people who will shape the Triangle for years to come. The list includes three alumnae of the Department of Health Policy and Management — **Morgan Jones, MSPH ‘07, Randi Towns, BSPH ‘15**, and **Dharmi Tailor, JD, BSPH ‘10**; and alumna of the Department of Health Behavior, **Rachel Page, MPH ‘11**; and **Andrew Herrera, MPH ‘17, MBA**, an alumnus from the Public Health Leadership Program.

IN MEMORIAM

Frederic Karl Pfaender, PhD, emeritus professor of environmental sciences and engineering at Gillings, passed away in March 2022 at age 78. After earning his doctoral degree at Cornell University in 1971, Pfaender taught environmental sciences and microbiology at the Gillings School for more than four decades. A loyal member of the American Society for Microbiology for 56 years, he travelled internationally in service of his chosen science and proudly mentored graduate and doctoral students. In addition to being a dedicated educator and mentor, Pfaender also contributed to the building and renovation plans for Rosenau Hall and Michael Hooker Research Center. When he and his wife Sheila, former assistant director for program and resource development at the N.C. Institute for Public Health, retired to Alleghany County in the late 2000s, Fred refocused his passion and energy on several community-oriented committees and initiatives.

David Steffen, DrPH, who was a clinical assistant professor in the Public Health Leadership Program (PHLP) until 2017, passed away in July 2021. Steffen, who worked as district public health director for the State of New Mexico Department of Public Health, earned his Doctor of Public Health degree in 2000 and, in 2001, was recruited by the N.C. Institute for Public Health to run the National Public Health Leadership Institute, which trained senior leaders in governmental agencies, academia, health care, associations, nonprofit organizations, foundations and other

partner organizations. His influence in health leadership extended into the UNC School of Medicine, where he co-directed the Academic Career Leadership Academy in Medicine program, which provides leadership education to junior faculty members at the School, with an emphasis on those underrepresented in medicine. The Steffen family has established the David Steffen and Jill Kerr Family Scholarship to support PHLP students who demonstrate a commitment to improving public health practice.

William T. “Bill” Small Jr., MSPH, former associate dean and senior advisor for multicultural affairs, passed away in April 2021 at age 82. He earned an undergraduate degree in chemistry from North Carolina Central University and a MSPH degree from the Department of Environmental Sciences and Engineering at Gillings. After working as an occupational health chemist for the state, Small joined Gillings in 1971 as coordinator of minority affairs. During his tenure moved into the roles of assistant dean for students, associate dean for students, and associate dean and senior advisor for multicultural affairs. Small helped shape the Minority Student Caucus and supported the foundation of the Minority Health Conference, which features the “Annual William T. Small Jr. Keynote Lecture.” In 2010, he and his wife, Rosa, endowed the William Thomas Small Jr. and Rosa Williamson Small Scholarship, which focuses on enhancing the social, economic and cultural diversity of the student body. 📖

Are prescription produce programs worth it?

A grant from The Duke Endowment could help find the answer.

Produce programs like RPRx offer patients prescriptions that provide up to \$40 per month in electronic benefits to buy fruits and vegetables without additives. These programs have been associated with improved diet and health, but few studies explore their cost implications.

Thanks to a grant from The Duke Endowment, Shu Wen Ng, PhD, Distinguished Scholar in Public Health Nutrition at the UNC Gillings School of Global Public Health, and her colleagues aim to determine exactly that: how — and by how much — increasing access to fruits and vegetables can reduce health care costs and improve outcomes, and whether that return on investment justifies expanding these programs.

The United States Department of Agriculture funds prescription produce programs for households and individuals considered low income through their Gus Schumacher Nutrition Incentive program. Ng believes a more financially sustainable approach could be within reach — if these programs prove effective in reducing health care utilization and medication costs.

“If we can prove a good return on investment and that these programs can lower health care costs, it might be smart for both private insurers and public programs like Medicare, Medicaid and Tricare to cover the costs of produce prescriptions,” she says. “Our hope is that this could be one way to start pushing the dialogue around how to better support patients, particularly those who face financial barriers.”



The \$765,000 grant will help Ng and her team survey clinicians and patients, analyze health records and pursue other workstreams to find out whether patients in RPRx see better health outcomes and lower health care costs, compared to patients who are not in the program. The researchers are working with health clinics in North Carolina.

“The idea of using produce prescriptions to reduce health care costs and improve outcomes is a promising one, and deserves further study,” said Chris Collins, associate director of health care for The Duke Endowment. “We are proud to support UNC’s effort to evaluate this important question.”

A lack of access to healthy food is associated with a host of health issues. Ng notes that while low-income, Black, Indigenous and other people of color are more likely to experience food insecurity and related health impacts, improving access to healthy food is just one component of addressing health equity. 📖

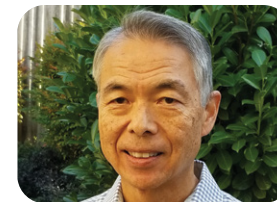
ANNUAL DONORS: WHY I GIVE



NANCY MCGEE, DRPH

DrPH, 2011. San Francisco, California. Principal in Healthcare and Life Sciences Practice at Heidrick & Struggles.

“Giving to Gillings can offer people who are interested in public health the opportunity to get an excellent education. The Doctor of Public Health remote program — where you could engage a diverse set of executives and allow them to pursue their careers while getting one of the best public health educations in the country, from their homes — was an amazing gift.”



CARL YOSHIZAWA, PHD

Biostatistics, 1984. San Ramon, California Retired. Former VP of Biostatistics and Data Management at Genomic Health, a company (since acquired by Exact Sciences) that developed genomic laboratory tests to help guide treatment decisions for patients with cancer.

“I am grateful for the education I received, which enabled me to enjoy a career that was meaningful and leveraged my talents. I value the good work that the School continues to do, and am proud to be an alumnus.”



EMILY NEWMAN, MPH, AND KATHRYN CARPENTER, MPH

Both are MPH, Health Behavior, 2020. Chapel Hill, North Carolina. Co-founders of Newman Carpenter, a creative agency impacting health behavior change.

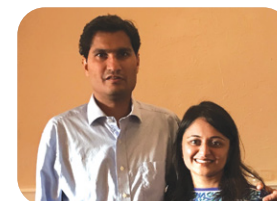
“We want to support the students who run the Minority Health Conference as they work to grow and evolve the conference, and highlight the efforts of practitioners and community members who work to improve the health of all communities.”



DEBORAH (DEBBIE) WINN, PHD

Epidemiology, 1980. Silver Spring, Maryland. Retired in 2021 after serving in several leadership roles with the federal government, particularly the U.S. Centers for Disease Control and Prevention and the National Cancer Institute.

“As the oldest of 12 siblings, having financial support was essential for me to be able to attend graduate school. Gillings provided me that support through a training grant and other resources during graduate school. I am still grateful and want as many students as possible to have the opportunities that I did.”



AMIR AND ASRA FIROZVI

Raleigh and Littleton, North Carolina. Asra, an ophthalmologist who specializes in glaucoma, is president of the ophthalmology division of North Carolina Eye Ear Nose & Throat in Durham. Amir is an internal medicine physician.

“Each of us had a parent who recently passed away. Both of them were involved in their local communities and were immigrants from developing countries. Public health and epidemiology are vital to the developing world. We wanted to honor them by donating to a cause that would have effects locally and internationally.”

GIVING NORTH CAROLINIANS SOMETHING TO SMILE ABOUT

PREMIER SCHOLARSHIP WILL TRAIN TOMORROW'S DENTAL PUBLIC HEALTH WORKFORCE

Epidemiology alumni Martha Ann Keels, DDS, PhD '91, and Dennis Clements, MD, PhD '91, have made a \$1.25 million pledge to endow a premier fellowship to fully cover tuition, fees and other expenses for students who are interested in pediatric dentistry to obtain a public health degree. Students will be Adams School of Dentistry students who then can come to Gillings and study in any of the School's departments.

"My experience at Gillings opened up the doors to my career, and I am still doing research and treating patients through collaborations that all tie back to there," says Keels, a pediatric dentist who has been affiliated with Duke Children's Hospital for more than 30 years. "I'm so grateful for my experience, and I think one of the ways you can thank your teachers is to give them great students to teach — that's what we're doing with this fellowship. We're giving thanks backward by paying it forward."

Clements and Keels — who first met in graduate school at Gillings while she was a teaching assistant in one of his epidemiology courses, kept in touch and got married about five years later — are longtime collaborators both in life and in dental public health. The couple travels to Honduras — often with students from both Duke and UNC — to provide medical and dental care for children on the island of Roatán.

Due in large part to lack of access to preventive oral health care and treatment, millions of people suffer every day from pain caused by dental disease. Poor oral health is also linked to chronic diseases and to poor health overall. Increasing the focus on public health in dentistry promises improvements to health statewide.

"The biggest infectious disease problem is oral disease, and in a lot of countries, the only solution is to pull a tooth," says Clements, a pediatrician and professor at Duke University, where he is interim director of the Duke Global Health Institute. "It's worth trying to do something about it — that's why we want to support and encourage people who want to do this kind of work."

"We're giving thanks backward by paying it forward."

— MARTHA ANN KEELS

"We want to support and encourage people who want to do this kind of work."

— DENNIS CLEMENTS



IMPROVING ACCESS, HONORING A TRAILBLAZER

The Gillings School is launching the Dental Public Health Initiative in Teaching, Research, and Practice — which will combine cutting-edge classroom instruction with industry-leading, evidence-based research on prevention and clinical and policy solutions to the state's most pressing problems in oral health care. Recent major gifts from friends and alumni will strengthen the Gillings School's partnership with the UNC Adams School of Dentistry as the two schools work to train tomorrow's dental public health workforce and reduce dental health disparities.

For Bill Milner, DDS, MPH '84 (health policy and management), and his wife Susan, supporting oral public health at Gillings is a natural extension of Bill's work to improve access to dental care for those who do not have access to traditional dental clinics. He is the founder of Access Dental Care, a nonprofit, mobile onsite provider that for more than 20 years has brought comprehensive dental services to residents in retirement communities, nursing homes, group homes and other facilities. Access Dental Care serves patients in 33 counties.

Longtime supporters of the School, the Milners recently designated a substantial amount of their estate to fund a professorship in dental public health to help build a more robust educational program on the importance of dental care, particularly for marginalized or underserved communities.

"... we can continue to build on the positive programs that Gillings has and has always had."

— BILL MILNER

Reaching a milestone

Regular gifts from generous members of our community go a long way. In fact, they helped UNC achieve a historic milestone that saw **\$4.25 billion raised** during the Campaign for Carolina.

Annual giving provides crucial support for public health research, education and practice at the Gillings School. Contact giving.sph@unc.edu to learn more.

"This gift is an opportunity for us to help continue the oral health program within Gillings, and hopefully to leverage our gift and convince others with an interest in dental public health to give as well, so that we can continue to build on the positive programs that Gillings has and has always had," Bill Milner says.

Ross Vaughan '66, '70 MD, retired neonatologist and professor of pediatrics, is supporting the program in honor of his late wife Bettie R. McKaig, DDS '78, MPH '84, a trailblazer in her field. She earned a bachelor's degree in dental hygiene, a dental degree and a master of public health — all from Carolina. Bettie's background in public health and the couple's friendship with Leah McCall Devlin '76, DDS '79, MPH '84, a professor who is helping to lead the Dental Public Health Initiative in Teaching, Research, and Practice (DPHI), helped inspire the gift.

"She believed strongly in the University that made her life and career," Vaughan says, "so I want to support future generations in her honor." 📖

For more information about opportunities to support the Gillings School's oral health program, please contact Matt Cain at giving.sph@unc.edu and 919-966-0198.

GILLINGS FACULTY GIVE BACK

A few of the values that make the Gillings School so special are its strong sense of community, its focus on training the next generation of public health leaders and its steadfast commitment to service. For longtime faculty, those values also serve as inspiration to give back.

Gillings friends and alumni are already contributing to these faculty-started funds. If you'd like to add a donation, please contact giving.sph@unc.edu.

THE LISA MORRISEY LAVANGE SCHOLARSHIP IN BIOSTATISTICS

Lisa LaVange, PhD, professor and chair of biostatistics, first thought of establishing a scholarship fund during the capital campaign in the 1990s and is finally making it happen. She has had a broad biostatistics career with leadership roles in industry, government and academia and is enjoying being back at Gillings leading the department, where she was once a graduate student. In 2019, LaVange put her long-held idea into motion to support up-and-coming public health leaders.

The Lisa Morrissey LaVange Scholarship in Biostatistics is available to all qualified graduate students. Particular attention is given to enhancing the social, economic and cultural diversity of the Gillings student body — for example, by supporting applicants who demonstrate the qualities of enhancing diversity and leadership and show a commitment to advancing the role of women in statistics.

“Every job I’ve had in my career has tied back to Gillings — not just in knowledge and skills but



in friendships and connections and professional networks,” LaVange says. “I have supported the School in other ways, but I really wanted to support students who want to become leaders in biostatistics. One of my goals in creating this fund was to connect with alumni and with people who have worked with me over the years, in hopes that they might think of doing something like this, too.”

THE GENI ENG COMMUNITY EQUITY AWARD AND LECTURE

Geni Eng, DrPH, professor of health behavior, is retiring June 30 after 40 years at the School. The former Peace Corps volunteer and renowned expert in community-based participatory research believes communities can come together to solve public health challenges through cultural changes. A new endowment in her name will support students and community partners who are working together to make systemic changes.

The Geni Eng Community Equity Award and Lecture will support a student in the School's Health Equity, Social Justice and Human Rights Concentration; the Department of Health Behavior; or the Cancer Health Disparities Training Program who has demonstrated equitable collaboration and enhanced understanding and actions toward achieving health equity. It also will fund an honorarium for the community lecturer presenting in partnership with the student awardee.



“I am so grateful for the many years of being a student and then working with students and communities in North Carolina,” Eng says. “The communities have been like my co-instructors. They are just so key to what our students are producing, and I wanted to recognize their contributions to training the future workforce in public health.”

THE CAROLINA HOME STATE PUBLIC HEALTH SCHOLARS PROGRAM

For Anna Schenck, PhD, director of the Public Health Leadership Program, investing in the next generation of public health leaders hits close to home. She grew up in Rockingham, N.C., earned her degrees in Chapel Hill, and worked for a local health department and the state before joining a nonprofit focused on improving the quality of care for Medicare patients in the Carolinas.

Schenck serves on the scientific advisory committee for America's Health Rankings and laments N.C.'s below-average rankings despite boasting a top-tier school of public health. To help train leaders who could bridge that disconnect, she and her husband, Jim, established the Carolina Home State Public Health Scholars program to support North Carolinians seeking a Master of Public Health degree.



“As we train the next generation of public health leaders, I’m particularly interested in ensuring some of them are from N.C. and will use those skills in their home state — because we can and should do better,” Schenck says. “And because we think that’s really important, Jim and I wanted to step up to the plate.” 📖

LiRA: A LIPREADING TECH STARTUP

UNC-Chapel Hill's graduate and professional schools enjoy a close relationship that emphasizes interdisciplinary collaboration and innovation among both faculty and students. Competitions that reward innovation give students an opportunity to gain practical experience in solving health care challenges and to win financial support for their early-stage solutions.

One of those solutions is LiRA, a lipreading technology startup formed in January 2020 by five UNC graduate and professional students. The company is gaining marketplace momentum after consistently finishing in or near the top spots in competitions both at UNC and in outside innovation challenges. Nga Nguyen, a Master of Public Health student and medical student from Fayetteville, North Carolina, is LiRA's chief operating officer.

"We want to develop technologies that build a world where each voice, every bond and all communication is realized," Nguyen says.

LiRA, which stands for "Lip Reading Assistant," is developing technology called LipTrain that will improve communication for voice-impaired patients by tracking and translating their lip movements. Their goal is to transform how health care professionals interact with voiceless patients and to provide voiceless patients with the ability to self-advocate. The company is inviting volunteers to record themselves reading as part of a study designed to improve the technology's tracking ability.



The LiRA team, from left to right: Dina Yamaleyeva, Andrew C. Prince, Alison Schaefer, Andres Tello and Nga Nguyen.

LiRA was a finalist in the 2020 Gillings Pitch Competition, finished in first place in the 2020 E(I) Lab hosted by the UNC Eshelman School of Pharmacy, received a 2021 NCIDEA MICRO grant, won first place at the 2021 Big Launch Challenge Pitch Competition, and was named a co-winner of the 2021 RIoT Your Reality Challenge. Most recently, LiRA won the \$25,000 top prize in the Covintus Tech Tank Pitch Competition, a technology-focused accelerator designed to groom startup founders. The company plans to collaborate further with Covintus in developing machine learning, natural language processing and computer vision resources. 🏠

To learn about how you can support innovation at the Gillings School, contact Advancement: giving.sph@unc.edu or (919) 966-0198

WHY I GIVE



"I regularly pull from experience I've had in many different settings, including my Master of Public Health practicum. That's why I believe in giving toward student experiences. Gillings was a real launching point for me, and it's exciting to share that opportunity."

Michael Wilson, MPH '14 (health behavior)
South Africa country director and co-founder of Advance Access & Delivery



Gillings emphasizes that students will one day sit beside their professors to solve public health challenges. This meant a great deal to me as a student and is something I try to emulate now that I am the professor. By giving to the School, I hope to keep this spirit of mentoring alive."

Mercedes Carnethon, PhD '00 (epidemiology)
Vice Chair of Preventive Medicine, Mary Harris Thompson Professor, Feinberg School of Medicine

YOUR GIFT IS CRUCIAL TO OUR CONTINUED INNOVATION IN RESEARCH, EDUCATION AND PRACTICE.

Please contact us to learn more about how you can support the School's mission to improve public health, promote individual well-being and eliminate health inequities across North Carolina and around the world: (919) 966-0198 or email.sph@unc.edu

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CHE SMITH, PHD '15

Biostatistics
Senior Analytics
Engineer, Netflix

“As a student, participating in the executive board of the Minority Student Caucus and the planning committee for the Minority Health Conference expanded my perspective on how I could apply my skill set to address public health challenges that disproportionately affect people who remain underrepresented and underserved.

These groups also strengthened my identity and revealed the potential of my impact in the world in an indelible way. I give back to enable the legacies of both the Caucus and the Conference to continue and expand, and to empower students who are passionate about health equity and increasing the representation of historically excluded people in public health professions to realize their full potential.”