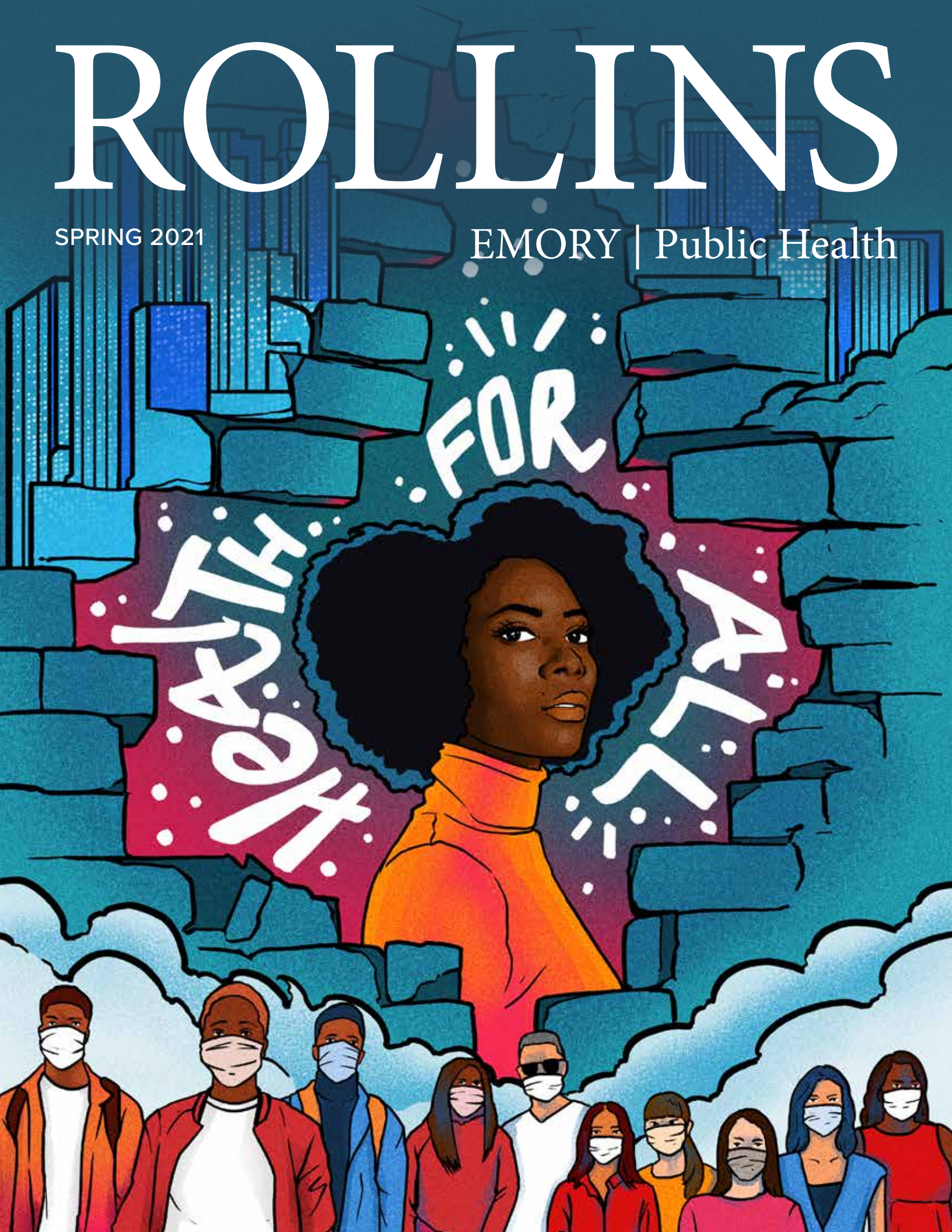


ROLLINS

SPRING 2021

EMORY | Public Health



A PLACE TO STUDY RACE

Briana Woods-Jaeger is one of a growing cadre of Rollins researchers studying the public health effects of racism. Their work spans health outcomes associated with forms of individual, structural, and systemic racism, along with interventions to begin to dismantle the scaffolding of white supremacy. Woods-Jaeger is pictured here walking by a street art exhibit called “Say Their Names.” Created by artist Austin “Blue” Richardson, the exhibit features portraits of 10 Black lives that ended at the hands of police.





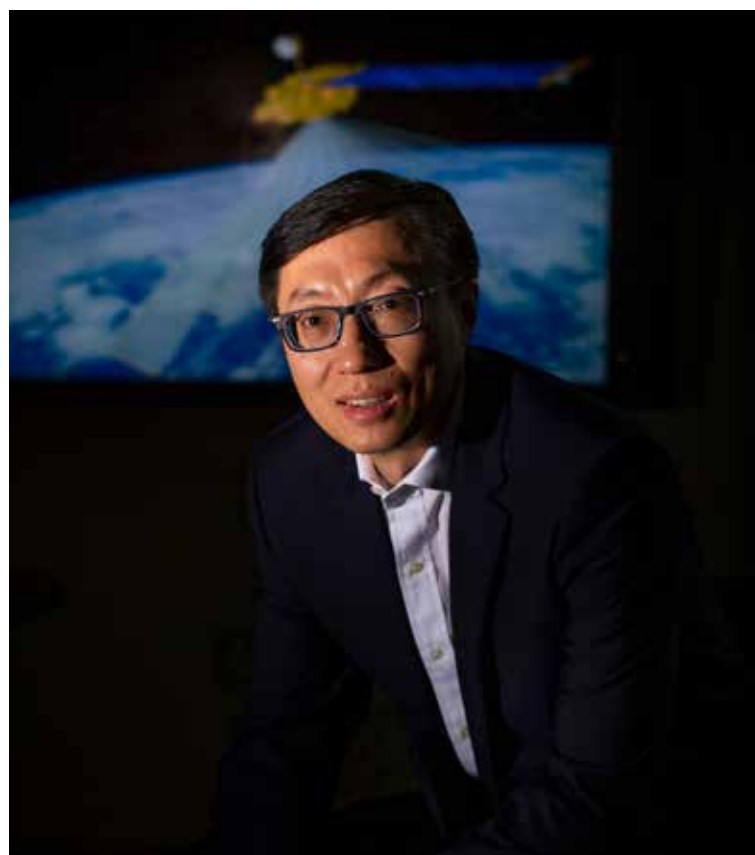
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Rollins researchers work toward a cure for the disease of discrimination.



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COVER STORY



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Illustration by Kingsley Nebechi

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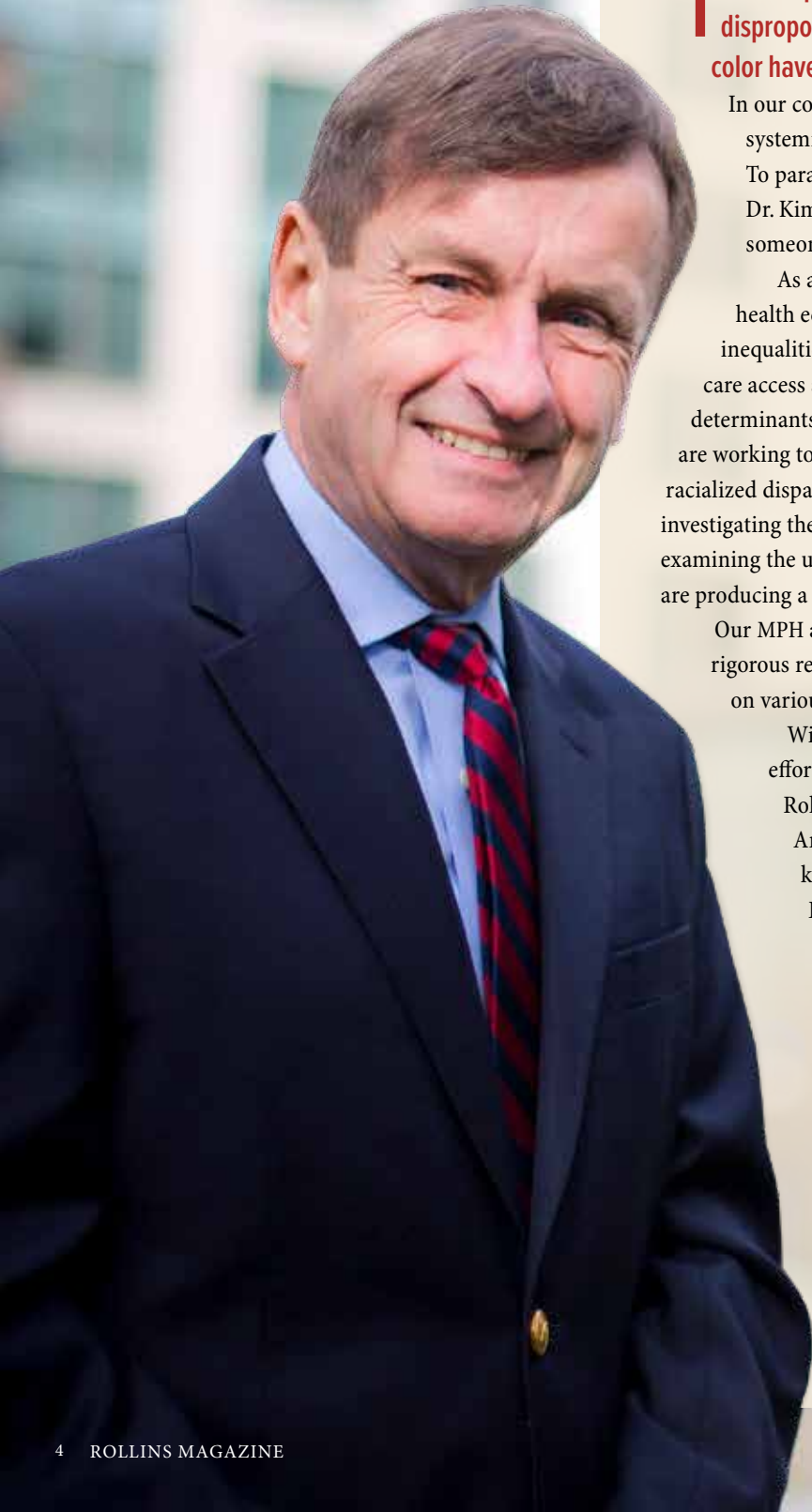
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PAIGE ROHE 04C 05MPH

After Rhoë's daughter suffered a birth injury, she started ROBIN, Reducing OBstetric INjury, to research the incidence of such injuries in Georgia. She hopes her findings will inform practice and policy.





Race, racism, and health

The twin pandemics of police violence on Black people and the disproportionate burden of COVID-19 among communities of color have focused national attention on the lethality of racism.

In our country, racism operates at the individual, structural, and systemic levels, and as a result is present in virtually every system. To paraphrase our executive associate dean for Academic Affairs, Dr. Kimberly Jacob Arriola, racism is so pervasive that asking someone to describe it is akin to asking a fish to describe water.

As a school of public health, we are committed to advancing health equity and fighting against racism. We recognize that inequalities persist for minority populations related to health care access and utilization, housing, fair income, and other social determinants that correlate with increased health risks. Our researchers are working to understand the structures that create and perpetuate racialized disparities as a first step towards dismantling them. From investigating the downstream health impacts of historic redlining to examining the underpinnings of racial police violence, Rollins scientists are producing a robust body of work on the interlocking systems of racism. Our MPH and PhD students are poised to carry on the banner of rigorous research, with many focusing their theses and dissertations on various aspects of racism's impact on health.

Within our own walls, we have committed to redoubling our efforts to build a more inclusive and anti-racist environment. Rollins already leads other schools of public health in African American applicants, admissions, and matriculants, but we know we can do more. Our new assistant dean for Diversity, Equity, and Inclusion, Dr. Joanne McGriff, is charged with creating an infrastructure to ensure that the school is moving forward to dismantle structural racism and operate within a culture of inclusivity.

We know that our efforts towards institutional transformation and dismantling racism will take time and are continuous, but we are committed to advancing our core values to ethically engage with domestic and global communities to achieve optimal population health, quality of life, and social justice.

JAMES W. CURRAN, MD, MPH
James W. Curran Dean of Public Health

Keeping an Alaskan legacy safe

The Iditarod, already known as one of the most complicated sporting events in the world, got a lot more complicated this year due to COVID-19. Dr. Jodie Guest, vice chair of epidemiology, designed and led the protocol to manage that particular obstacle as the 2021 Iditarod COVID-19 Czar. Guest and her team tested the 400 volunteers and the mushers three times before they went on the trail and multiple times during the race. It wasn't an easy task. COVID-19 testing equipment cannot survive Alaska's winter temperatures, which dipped to -55 degrees during the race. Guest used hand warmers in insulated coolers to keep the equipment warm as she flew daily to the different checkpoints along the trail to perform testing. She conducted a total of 3,600 COVID-19 tests and led contact tracing and prevention measures when one musher tested positive on the trail. Guest proudly reports that single case was completely contained with no community transmission.—*Catherine Morrow*
Read more at bit.ly/3srZ7IQ.





10 years of AIDSvu

Ten years ago, **Dr. Patrick Sullivan** and his team unveiled AIDSvu, an interactive online mapping platform to visualize the impact of the HIV epidemic on communities across the US. “It was developed as a way to take many sources of high-quality data about the HIV epidemic available in one spot and present them in easy-to-visualize ways so that you could understand HIV where you live,” says Sullivan, the Charles Howard Candler Professor of Epidemiology.

To say AIDSvu was visionary at the time of its launch would be an understatement. “I think you can divide the world into before and after AIDSvu,” says Greg Millet, vice president and director of public policy for amfAR (the Foundation for AIDS Research). “I really believe AIDSvu fundamentally transformed the way we are able to view data for the domestic epidemic. It’s been instrumental not only for researchers but for policy makers in understanding what’s taking place in their own backyards.”

Over the years, Sullivan and his team have added more and more granular data. Today, the site provides data down to the census tract level for some of the largest US cities. Data are available at the county level in 48 US states and at the zip code level in more than 50 US cities. At the county level, AIDSvu maps data on HIV prevalence, new diagnoses, PrEP use, and the PrEP-to-need ratio. At the state level, the site adds HIV mortality, HIV testing, and HIV care-continuum indicator data.

Users are also able to overlay service provider locations—including testing sites, PrEP services, and NIH-funded HIV treatment trial sites—directly onto AIDSvu’s maps to illustrate how services are distributed in relation to the burden of HIV. Social determinants of health can be displayed side by side on a secondary map to visualize the relationships between HIV and social factors such as poverty, education level, median household income, and health insurance coverage.

AIDSvu maps have been used to develop targeting for door-to-door testing campaigns, identify areas of high need for telemedicine HIV care facilities, and identify service gaps for HIV prevention services, among other applications. Funders such as the Elton John AIDS Foundation and the Gilead COMPASS initiative have used data on the burden of HIV diagnoses to prioritize highly impacted areas for grant funding. Academic researchers have used AIDSvu data to justify the selection of study sites in grant proposals.

“AIDSvu has had a huge impact on HIV research and advocacy over the past 10 years,” says Raniyah Copeland, president and CEO of Black AIDS Institute. “What AIDSvu does is put data in the hands of communities to be able to inform decisions, advocate, and understand what’s actually happening in communities across the country.” ■



Vaccine tracker added to health equity dashboard

Rollins researchers launched the COVID-19 Health Equity Dashboard last year as a dynamic, online tool to visualize the burden of coronavirus infections and deaths against the underlying social determinants of health, such as percentage of the population who live in poverty, who are African Americans, or who are uninsured. The team recently added a vaccine tracker to the dashboard.

While the dashboard currently shows overall vaccination coverage at state and national levels, the team is working on incorporating recently released data on coverage by race. Whereas nearly one in three residents of Georgia are African American, only about one in seven of those vaccinated are African American.

“The original goal of the dashboard was to show the differential impact of the virus,” says **Dr. Shivani A. Patel**, Rollins Assistant Professor of Global Health and the leader of the team that developed the dashboard. “We added the vaccination tracker so that we can see how well we are reaching communities that have been hardest hit.” ■

Domestic violence spikes during pandemic

Even before the onset of the COVID-19 pandemic, domestic violence was one of the most common human rights abuses in the world, affecting one in three women. The issue becomes even more pressing during emergencies, which often exacerbate gender inequalities.

Dr. Dabney P. Evans, associate professor of global health, looked at the impacts of COVID-19 on domestic violence, comparing incident reports filed with the Atlanta Police Department before and during the pandemic. She found that domestic violence reports spiked in March 2020, when city and state governments enacted shelter-in-place orders.

Evans says there are several risk factors for domestic violence, including unemployment and social isolation.

“So if you just think about those two things, we know that in Georgia the unemployment rate skyrocketed about 400 percent shortly after the pandemic hit,” she says. “We also know that social isolation is actually one of the public health measures that we were suggesting.”

As a result, she explains, “we were mapping these dual or triple pandemics . . . the first being the COVID-19 pandemic, the second being the racial unrest and police violence happening in our country, and then this third pandemic of domestic or intimate partner violence.”

Evans acknowledges that while social isolation is critical for managing the COVID-19 pandemic, public health officials should also consider the overall effects of these policies. She recommends that when governments enact shelter-in-place or similar orders, they should set aside resources for people impacted by violence.—*Deanna Altomara*



Certificate in Climate and Health

Rollins is launching a new certificate program to train students for careers in climate change and health. “Climate change is one of the defining challenges of the century,” said **Dean James Curran**. “It is essential that we offer our students opportunities to develop the skills they will need to be leaders in this field.”

The new certificate in climate and health will be offered to all students enrolled in the MPH or MSPH programs. To receive the certificate, students will be required to complete a two-course sequence on climate and health, take two additional electives, and complete a thesis or capstone on a climate-related topic.

The certificate is one of two new initiatives to boost

Emory’s contributions in the field of climate and health specifically. Last year, Rollins launched a new Emory Climate and Health Research Incubator to foster new research that can improve society’s response to climate change.

“We have seen a real increase in demand from students for more training in climate and health,” said **Dr. Yang Liu**, Gangarosa Distinguished Professor and Chair of the Gangarosa Department of Environmental Health and director of the research incubator. “This certificate program gives them a clear path to get that training and complements our efforts in climate-related research.”

The climate and health certificate and the Climate and Health Research Incubator are part of a broad portfolio of



climate-related activities developed by Emory University in the past several years. Others include a commitment to achieve carbon neutrality by 2050, the university-wide Climate@Emory initiative, annual student delegations to the UN Climate Talks, the statewide Georgia Climate Project, and support for the statewide Drawdown Georgia project. ■

One in eight Americans have been infected with COVID-19

In a first of its kind nationwide survey, Rollins researchers found that one in eight residents of the US—more than 39 million people—had been infected with SARS-CoV-2 by the end of October 2020.

Participants were randomly selected from a US Postal Service database and sent invitations to provide samples via a home testing kit that included nasal swabs and dried blood from a finger prick. More than 4,600 people completed surveys and returned samples to a central laboratory by mail.

“Early estimates of national prevalence had been developed among people who were symptomatic, who had some reason to be tested for the virus, or who were seeking care for other medical conditions,” says lead author **Dr. Patrick Sullivan**, Charles Howard Candler Professor of Epidemiology. “This was an effort to minimize those biases as much as possible. By mailing out test kits, we were able to include people who might not have experienced symptoms or might not have been tested.”

The study found that people living in metropolitan areas were 2.5 times more likely to have been infected than those living in non-metropolitan areas. Also, Blacks and Hispanics were more likely than whites to have experienced SARS-CoV-2 infection (2.2 times and 3.1 times more, respectively). Roughly one in six of those infected at some point had been diagnosed with COVID-19 and reported to health departments, based on comparisons with CDC reports.

In addition, in a survey of participants’ attitudes toward vaccination, the study found that 32 percent said they were unsure or unwilling to receive a COVID-19 vaccine. However, most of these respondents were not “strongly opposed” to vaccination, which represents an opportunity for public health interventions.



Illustration by Davide Bonazzi

The COVIDVu study was supported by the National Institute of Allergy and Infectious Diseases and the Woodruff Foundation. It was developed from expertise gained by AIDSvu. —*Quinn Eastman*

Fortifying food and scholarship

The Food Fortification Initiative (FFI) is celebrating 18 years of partnership with Rollins. Founded in 2002 by **Dr. Glen Maberly**, former chair of the Department of International Health, and based out of Rollins, FFI helps countries build and strengthen food fortification programs. Food fortification is a proven intervention to prevent the devastating consequences of micronutrient malnutrition, which includes maternal death and birth defects.

At Rollins, FFI provides students and faculty with an opportunity to apply classroom learning to make lasting public health change. Over the 18-year span, FFI has employed 53 graduate students (including 24 through the Rollins Earn and Learn program), supervised 21 master’s theses and 8 practica, and guest lectured for six courses. The Rollins-FFI partnership continues after students leave the classroom, with 10 alumni having supported FFI’s work as employees, consultants, and volunteers.

Many students leverage their time at FFI to jumpstart their careers. **Jonathan Barkely 14MPH** says, “The projects I completed at FFI advanced my research and analysis skills and helped me land a full-



time epidemiology position after earning my MPH. While at FFI, I gained experience using large databases, responding to data requests, performing analyses, and preparing publications. These skills all contributed to my professional development and have been helpful throughout my career in public health.” ■

Addressing the needs of people experiencing homelessness with dignity

The Dignity Pack Project supplies people experiencing homelessness in Atlanta with basic hygiene supplies, period supplies, condoms, and PPE. The project, which began in August 2020, has provided approximately 800 “Dignity Packs” to a population with increasing needs during COVID-19 in a short time. The project was conceptualized and is run by three Rollins students: **Alison Hoover**, second-year global health MPH student; **April Ballard**, PhD candidate in environmental health sciences; and **Ana Rodriguez**, second-year global environmental health MPH student.

Hoover was recognized by the Bill & Melinda Gates Institute and Bayer in the fall of 2019 as a “120 Under 40: The New Generation of Family Planning Leader.” Because of this recognition, she was eligible to apply for funding from the Gates Institute for Population & Reproductive Health and Bayer to carry out a project on population and reproductive health.

The students use the grant money to buy supplies in bulk from Costco, Target, and Amazon. In-kind and cash donations also have come from local organizations, friends, and family. Hoover’s apartment serves as an unofficial warehouse.

“Supplies have been adjusted over time to adapt to the shifting realities of the COVID-19 pandemic, and more importantly, based on systematically collected feedback from those experiencing homelessness,” explains Hoover.

Distribution typically happens at places where partner organizations such as SafeHouse Outreach are serving food to Atlanta’s homeless population. The Dignity Pack

Project team sets up a table where people can “shop” for the type and number of items they want. Product kits are not prepackaged so that they can select items depending on their preferences and needs. “This presents a humanist, rights-based approach to harm-reduction efforts among people experiencing homelessness,” Hoover says.

Recognizing this great work, the Dignity Pack Project recently won a 2021 Martin Luther King Jr. Community Service Award. The award honors the legacy of Dr. King and the mission and values of public health with the precepts of social justice.

Hoover says, “When we talk about our responsibility as public health practitioners, this is an example of where a basic survival need and the human right to exist is not being met. It feels ignored, important, and urgent. The Dignity Pack Project is harm-reduction focused; it is recognizing that people have basic needs for their survival and dignity and just focuses on that.”

In the long-term, the team hopes for more funding for organizations and entities that are trying to support those experiencing homelessness, as well as institutional-supportive policies and funding for people to stay fed, warm, and clean when they please. “It’s been beautiful to see people in Atlanta welcome us. There’s a lot of rightful mistrust in communities that are low income and the ones hit the hardest by the COVID-19 pandemic, so I think one of the best things about the project has been the community’s willingness to invite us in as if we are their next-door neighbors,” Ballard says. —*Karina Antenucci*



Low-dose aspirin may improve pregnancy chances for women with prior miscarriages

Low-dose aspirin therapy before conception and during early pregnancy may increase pregnancy chances and live births among women who have experienced one or two prior miscarriages. “This work is the first to demonstrate that low-dose aspirin therapy may improve the reproductive outcomes of couples who have experienced prior pregnancy losses,” says **Dr. Ashley Naimi**, associate professor of epidemiology. Naimi led the study with colleagues in the Epidemiology Branch at NIH’s Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD).

The trial included more than 1,000 women between 18 and 40 years old with one or two previous miscarriages. The women received either daily low-dose aspirin (81 milligrams) or a placebo while trying to conceive. If they did conceive, they would continue to receive this regimen through the 36th week of pregnancy. Although the

original study, published in 2014, found no overall difference in pregnancy loss rates between the two groups, there was a higher birthrate for women who had experienced only one previous miscarriage before the 20th week of pregnancy.

Unlike the original analysis, the current reanalysis considered whether a participant adhered to the treatment, skipped days, or discontinued it entirely, possibly because of side effects such as bleeding, nausea, or vomiting. The researchers found that, for every 100 women adhering to the aspirin regimen for at least five days a week, there were eight more positive pregnancy tests, six fewer pregnancy losses, and 15 more live births. Women who adhered to the therapy four days per week experienced similar results. The researchers concluded that taking low-dose aspirin at least four days a week could improve the odds for pregnancy and live births in this group of women.—*Catherine Morrow*



How can we treat the disease of discrimination?



R. TENÉ LEWIS DIDN'T PLAN TO STUDY RACISM.

Trained as a psychologist, she envisioned a career investigating how stress impacts the human body. But in nearly every analysis involving Black participants that she conducted, discrimination resulting from racism produced more detrimental physical effects than any other stressor.

When she shared these results, she was often discouraged from pursuing that line of research. She was told her work would not be seen as scholarly or scientific. That the work would make people uncomfortable.

"This was not the direction I wanted my career to go in," says Lewis, associate professor of epidemiology. "Even now, it is controversial. It's difficult to get this work funded, it's difficult to get this work published. If not for the twin pandemics of COVID-19, which disproportionately impacts Black Americans, and the widely viewed killings of Black men and women by police officers, I don't know that we'd be having this conversation now."

Indeed, racial health disparities have been long and thoroughly documented. Black men are more than twice as likely to be killed by police as white men. Black women are up to four times as likely to die of pregnancy-related complications than white women. And the average life expectancy of African Americans is four years lower than the rest of the US population.

Scholars have been exploring racism as a root cause of these racial health disparities for several decades, but this work has been limited in scope. Rollins researchers have been steadily expanding that range. One scientist has shown how racism gets under the skin, causing biologic changes that can lead to disease. Other Rollins researchers are looking at the upstream systems and structures, such as redlining and police violence, that support and sustain racism. Only when the structural underpinnings of racism are understood can they begin to be dismantled.

"For too long investigators have examined race and health as we would obesity or smoking," says Dr. Lauren McCullough, Rollins Assistant Professor of Epidemiology. "But it's a social construct that comes with so much history. To understand the underpinnings of why Blacks have such poor health outcomes, we really have to pull back the layers to look at the structural and systemic underpinnings of the Black condition in the US."

Put another way, "The race outcomes seen today are the direct consequence of racism that has been in operation for 400 years," says Dr. Camara Jones, adjunct professor of behavioral, social, and health education sciences.

No one is saying it will be easy. "Most of us work in white-dominant institutions, like the NIH, the CDC, private universities," says Dr. Michael Kramer, associate professor of epidemiology. "Fundamentally changing the cogs in the wheels of structural racism will likely mean rejecting some of the things that those of us who have power and privilege in these systems enjoy."

Yet many are hopeful that the momentum gained by the COVID-19 pandemic and BLM protests will not fade but gather steam. More researchers are turning their attention to racism, including students, who will be the ones to carry the work forward.

"I see some real changes starting to happen," says Lewis. "National conversations are taking place. Schools of public health are talking about the importance of racism as a public health crisis. To the extent that the next generation continues to push this as an important topic, it will continue to be an important topic. My hope is that this is not a moment but a movement."

By Martha McKenzie | Illustration by Kingsley Nebechi



For too long investigators have examined race and health as we would obesity or smoking. But it's a social construct that comes with so much history.—Lauren McCullough

GETTING UNDER THE SKIN

When Lewis got into the field, there were very few studies even testing the association between people's reported experiences of discrimination and any objective indicator of clinical disease. Over the past 15 years, in collaboration with cardiologists, rheumatologists, and neurologists, she has documented how stress resulting from discrimination results in elevated levels of coronary artery calcification, visceral fat, and C-reactive protein—all of which increase the risk of strokes and heart attacks.

Her studies consistently showed that discriminatory stress produced worse outcomes in physical health than other stressors, including financial stress, traumatic stress, and interpersonal stress. Compounding the injury, Lewis and others found that strategies that can typically ameliorate the health effects of other types of stress—social support and coping skills—do not lessen impacts of discriminatory stress. She suspects the reason is that, unlike any other stressor, discrimination is pervasive and lifelong. "As human beings, we want to feel that we belong, and we want to be treated with dignity," she says. "Experiencing large and small indignities over the course of your lifetime is cumulative and results in worse disease, more physical health symptoms, more physiological dysregulation, and on and on."

With the deleterious effects of discrimination on physical health now well documented, Lewis has moved on to more nuanced work, parsing out physical reactions to different types of discriminatory

experiences. In one study she is looking at the physical effects of vigilance, which refers to the threatened state in which many Black Americans exist in their day-to-day lives. "If you are aware that the salesclerk may follow you around in a store, or that you may end up handcuffed at a routine traffic stop, you walk around on high alert," says Lewis. "Our preliminary results show the more vigilant you are, the more carotid atherosclerosis you have."

Next, Lewis will focus on vicarious exposure. "People of color in this country have a sense of linked fate," she says. "So witnessing what happened to George Floyd is traumatic for anyone. But for Black people in this country, there is a sense that that could be me or someone I love. It becomes a collective trauma. That is a vicarious exposure, and it has the potential to produce adverse physiological reactions just as other forms of discrimination do."

LIVING, AND DYING, BEHIND A RED LINE

Redlining, the practice of banks refusing to make mortgage loans in certain, typically Black, neighborhoods, was outlawed in 1968. But few would argue the practice doesn't persist in some form. "People think redlining is a thing of the past, but it continues today in different forms," says McCullough. "Mortgage loans may be more expensive in persistently redlined neighborhoods. Home insurance may be harder to get. Appraisals may be unrealistically low."

REDEFINING THE UNACCEPTABLE

McCullough has been studying disparities in cancer mortality for decades, and her data has shown what everyone else's has—living in a neighborhood with high rates of poverty, low levels of education, and lack of access to care is associated with poor health outcomes. "What we haven't looked at is what is upstream of those factors contributing to the bad outcomes," says McCullough. "We decided to link our data from the Georgia Cancer Registry with the federal housing database to measure the impact of redlining."

McCullough's team found that 80 percent of metro-Atlanta's Black women diagnosed with breast cancer between 2010 and 2014 lived in formerly redlined census tracts—neighborhoods like Cascade Heights and the Greenbriar area. Only 20 percent of the city's white women lived in such areas (Hispanic women were not included in these analyses). By contrast, 60 percent of Atlanta's white women lived in areas with a pronounced lending bias (areas favored by lending institutions for mortgage loans)—such as Buckhead and Sandy Springs—vs. 20 percent of Black women. Looking at breast cancer outcomes, she found that women who lived in redlined areas were 60 percent more likely to die of their breast cancer than women who did not. This association was seen among both Black and white women. In contrast, women who lived in areas with pronounced lending bias, predominantly white areas, were 15 percent less likely to die. Importantly, this reduction was limited to white women.

She hypothesizes the stress resulting from living in neighborhoods with economic, social, and structural disinvestment is causing physiological damage, particularly inflammation. Inflammation, in turn,

promotes tumor progression. Her group is now doing a deeper dive to identify what specific biologic pathways are being disturbed by living in these neighborhoods, and ultimately what can be done both in terms of pharmacologic and behavioral interventions, as well as policy changes.

"Our research group sits in a unique position, at the intersection of molecular and social epidemiology," says McCullough. "We are able to look at both the social conditions that happen above the skin and the biological mechanisms that occur below it. So while we work on social justice issues and local policy changes, we can also be thinking about what can be done clinically and more immediately for these women who are going to be diagnosed in the next two to 10 years to make sure they have better outcomes."

HOW WE GOT HERE

Kramer, who teaches spatial epidemiology, is known to be fond of maps, so he wasn't surprised when a colleague sent him a map that President Abraham Lincoln had commissioned by the Census Bureau in 1860. The map showed the distribution of the slave population by county in the Southern states.

What did surprise Kramer was how familiar the map seemed. He had been studying the decline in heart disease mortality in the US during the past 50 years. The decline has been smaller among Blacks (52 percent on average) than among whites (63 percent on average), and has surprisingly varied, sometimes dramatically, by county.

"Naively, I thought slavery was evenly spread across the South,



Michael Kramer found that counties that historically had high concentrations of enslaved people had the smallest decrease in heart disease mortality among Black men. He hypothesizes that the slave-based economy actually shaped the contours of the social norms and institutions of those places in ways that lasted way past the Civil War. He is pictured here near Slave Square in Atlanta's Oakland Cemetery.



Structural racism is so deeply embedded in our social, cultural, and political systems; values; and beliefs that it is hard to even identify. Naming structural racism is in some ways as difficult as asking a fish to describe water.

—Kimberly Jacob Arriola

but actually it was quite variable—some counties had extremely high concentrations of enslaved people and some counties, even those nearby, had very low concentrations,” says Kramer. “As I studied the map, I was struck that the pattern of counties with high concentrations of slavery looked a lot like the pattern of counties with the smallest decline in Black heart disease mortality from 1970 to 2010.”

Upon further digging, he found the correlation to be fairly consistent. Black populations in counties with a history of highest versus lowest concentration of slavery experienced a 17 percent slower decline in heart disease mortality. He hypothesizes that the slave-based economy actually shaped the contours of the social norms and institutions of those places in ways that lasted way past the Civil War.

“We are not comparing a county in Mississippi to a county in Vermont,” he says. “We’re comparing a county in Mississippi that had a high slave concentration in 1860 to another county in Mississippi that had a low one. And within these neighboring counties you can see marked differences in today’s level of Black/white disparities in poverty, educational attainment, and employment opportunities. We think that is a lasting legacy of slavery.”

Those findings point to the need to focus not only on the historical processes that created segregation and discrimination but also on the current structures and systems that perpetuate them. “Whenever we in public health or clinical medicine come up with some great new idea, like the best way to prevent heart disease, we need to think not only about how it works but how we can make it equitably available,” says Kramer. “In other words, how do you make sure everyone—even those without money or power—benefit equally from it.”

THE STRUCTURE OF RACISM

Dr. Kimberly Jacob Arriola has been studying disparities in renal transplant for decades. The prevalence of end stage renal disease among Blacks is 3.4 times that of whites, yet Blacks are less likely to get

the gold standard treatment—kidney transplant. Experts have known about this disparity for decades, but the needle has barely moved.

Studies that have looked into the causes for transplant inequalities have focused on patients—Blacks typically are under- or unemployed, lack insurance, and may mistrust the medical system—and/or physicians—doctors may perceive Black patients as less likely to adhere to the prescribed post-transplant medical regimen.

“Both of these perspectives miss the mark,” says Arriola, the Charles Howard Candler Professor of Behavioral, Social, and Health Education Sciences and executive associate dean for Academic Affairs. “We need to understand and address the upstream causal factors, particularly structural racism. Unequal access to transplant is the outcome of a coordinated set of social forces in which poverty, income inequality, unemployment, and underemployment are highly intertwined.”

As a member of the newly created Inclusion, Diversity, Equity, and Access (to Life) (IDEAL) task force of the American Society of Transplantation, Arriola is collaborating with others in the field to address aspects of structural racism as it impacts transplants. She suggests interventions such as creating national organ allocation policies that consider disparities alongside efficiency, having transplant centers analyze data at each step of the continuum to identify disparities and create systems that mitigate them, and adopting systems that enhance communication between dialysis facilities and transplant centers to better support patient completion of the transplant evaluation process.

Arriola suggests no sustained progress can be made without addressing the structural racism that led to these transplant disparities, but she thinks with enough effort, her field could lead the way. “With focused attention to structures and processes, the field of transplantation could serve as a model for how to redress racial inequities created by structural racism that could inform efforts in the realm of health care more generally,” she says.

REDEFINING THE UNACCEPTABLE

GROWING UP IN VIOLENCE

Poverty, residential segregation, and barriers to educational and occupational opportunities all contribute to Black youth’s disproportionate exposure to community violence. Many studies have looked at ways to lessen this exposure and to mitigate its health effects, but rarely have the youth involved had a seat at the table. Dr. Briana Woods-Jaeger and her team have spent three years partnering with—and listening to—Black teens in Kansas City to understand their perceptions and lived experiences of community violence and racism.

Working with a partner already well established in the area, Youth Ambassadors, Woods-Jaeger and her team created a community action board made up of youth and adults who serve them in the fields of health, education, criminal justice, and faith. After three years of focus groups, quarterly meetings, a community-

wide survey, and community forum, they came up with a consensus on what Black youth in the area see as the highest priorities.

One priority is increasing mental health access and supports in schools and the community. “Mental health is a system with a long history of racism,” says Woods-Jaeger, assistant professor of behavioral, social, and health education sciences. “Black youth are less likely to be referred to mental health services, more likely to be misdiagnosed, and many of their mental health concerns are responded to more with punishment rather than support. This is happening across schools, child welfare, hospitals, and criminal justice—multiple systems are interacting to reinforce this.”

In the next phase of her study, which is focusing on interventions, Woods-Jaeger is investigating ways to address the systemic racism within each of those systems and create culturally responsive mental health

Mental health is a system with a long history of racism. Black youth are less likely to be referred to mental health services, more likely to be misdiagnosed, and many of their mental health concerns are responded to more with punishment rather than support.—Briana Woods-Jaeger



The race outcomes seen today are the direct consequence of racism that has been in operation for 400 years.—Camara Jones

support for Black youth who've experienced trauma. Another priority is addressing racism in schools, where Black students face daily racial microaggressions—being told they are not going to be able to get into certain colleges, or that they would not be interested in things like debate. They are often wrongly perceived to be threatening. They tend to receive much harsher punishments than white students for the same subjective infractions, such as dress code violations and defiance.

For the next several years, Woods-Jaeger and her team will be working with schools to look at their discipline policies and examine how they are disproportionately affecting Black youth. "We'd like to work together to change those policies and make sure they are equitable."

In addition, she is expanding her work to Atlanta through two newly funded studies, one that evaluates enhanced mental health supports for Black youth in schools and a second that follows the same partnering approach Woods-Jaeger took with youth in Kansas City through an arts-based, qualitative research approach (photovoice) to explore teens' perspectives on racism as a public health issue and what priorities need to be addressed locally.

THE POTENTIAL OF POLICY

Drs. Kelli Komro and Melvin Livingston lead a team to investigate policy solutions for racial and economic inequities. Specifically, they are studying the health impacts of the Earned Income Tax Credit (EITC) and minimum wage laws.

"Income and economic security are key social determinants of health, living in poverty is associated with a multitude of poor health outcomes across the lifespan, and Black and Latinx families are more than twice as likely to live in poverty than white families," says Komro, professor of behavioral, social, and health education sciences. "That's the reason I do this research."

The federal EITC is a tax credit to supplement the income of low-wage workers based on income level and family structure. Some states supplement EITC up to 53 percent of the federal level, some states provide a less generous supplement, and some do not provide any extra support. To gauge the health impact of EITCs, Komro examined low-weight births because they are linked to increased risk for many health and developmental problems. And low-weight births are more common among Blacks (14 percent of all live births) than whites (7 percent). The 20-year, 50-state study found a 12 percent

reduction in low-birthweight births among both Black and white women in states with the most generous EITC.

Komro and Livingston, associate professor of behavioral, social, and health education sciences, then looked at Washington, D.C., as a natural experiment. The district has a large, poor, and Black population, and it has increased its EITC four times from 2000 to 2015. When EITC was adopted, and each time it was increased, there was a concurrent drop in low-birthweight births. When D.C.'s EITC reached 40 percent of the federal level, the district saw a 40 percent decrease in low-birthweight babies from its level before it added EITC. That translates into the prevention of almost 350 low-birthweight births per year in D.C.

Minimum wage laws are another area of interest. Komro looked at these laws across all states from 1980 to 2011. She found that a \$1 increase in the minimum wage above the federal minimum wage was associated with a 1 percent to 2 percent decrease in low-birthweight births and a 4 percent decrease in infant mortality. That means, if all states increased their minimum wage by \$1, there would be about 2,800 fewer low-birthweight births and 518 fewer infant deaths each year.

"This is such a timely topic, with Congress considering raising the federal minimum wage and increasing child tax credits," says Komro.

Next, Komro and PhD student Rachael Spencer are studying health outcomes associated with Temporary Assistance for Needy Families. "Our goal is to tease out policy solutions to reduce racial income and health inequities," she says.

THE COMPLEXION OF PROTECTION

Dr. Hannah Cooper came to study police violence by accident 20 years ago when working on her dissertation. She had planned to look at how police drug crackdowns impacted harm reduction behaviors, such as going to the doctor or participating in a needle exchange program, among people using drugs in New York City. But in her interviews, the stories participants came back to again and again were about police violence. Enduring relentless stop-and-frisks. Getting questioned and hassled while hanging out with friends on the sidewalk. Being pushed against a wall or down onto the pavement for little reason. She was persuaded to change the topic of her dissertation to police violence.

It has taken far too long for other public health researchers to listen to these stories and recognize their implications for health, according to Cooper, Rollins Distinguished Professor in Substance Use Disorders. "I'm

always outraged at how little public health research there has been to this incredibly important topic," she says. "We let this violence go on for so long without monitoring it, without trying to understand its causes, without trying to intervene."

Cooper frames excessive police violence as a critical public health issue in her new book, *From Enforcers to Guardians: A Public Health Primer on Ending Police Violence*, co-written with Dr. Mindy Thompson Fullilove, professor of urban policy and health at the New School. In the book, they analyze the history of policing in the US, which from the start was intended to protect whites and subdue minorities. They discuss the expansion of police powers during the war on drugs, including the erosion of the Fourth Amendment protecting against unwarranted search and seizure and the arming of police forces with military equipment following President Bill Clinton's decommissioning of army bases.

Cooper and Fullilove write that there is a deeply engrained "toxic triad" of marginalization, distorted policing, and violence. This toxic triad is a very stable, pathological social system that will not yield to a "magic bullet," a single intervention of some kind, like implicit bias training or the establishment of the civilian review board. There is, however, a way forward that can work.

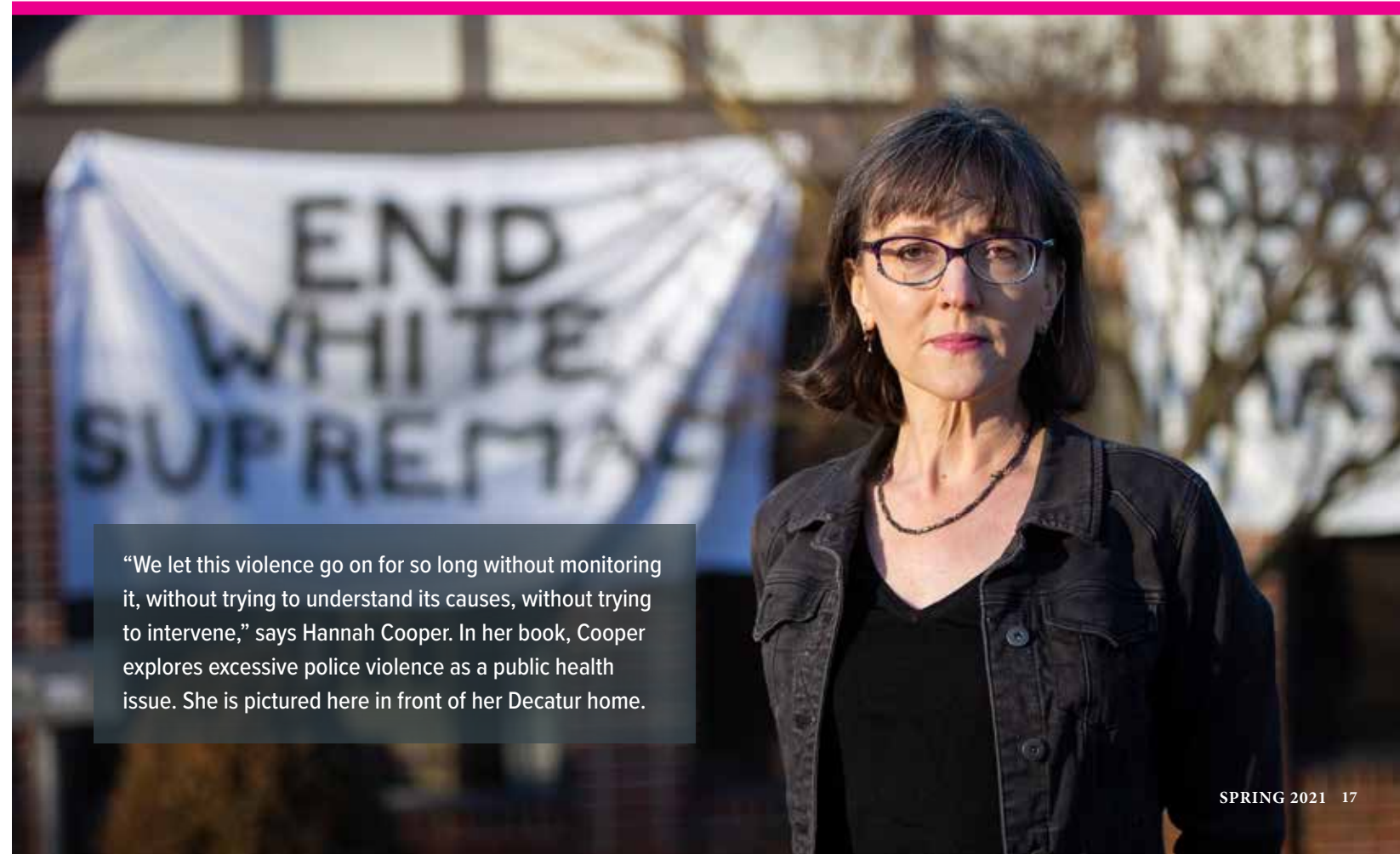
Part of that way forward is rethinking the role of police, noting that we are turning to police to address social ills such as homelessness and mental health issues. But police are not trained to provide social

services. "We need to identify what is the appropriate role for the police, and then, where we are lifting responsibilities off their shoulders, who else can fulfill that role," she says.

She hopes states and municipalities take advantage of the freedom to experiment with policing as they have with schooling and housing. One municipality might abolish police altogether and shift the money to social services, preventive services, and education. Another might decide to cut funding in police and invest it in social services but keep their police in a very defined role. Others might continue as they are. "My hope is that we are on the cusp of some important discoveries," says Cooper.

"Research into individual, systemic, and structural racism has come incredibly far since I first entered the field," says Lewis. "The scope of the work I see being done here at Rollins, and at other institutions across the country, gives me hope that we can ultimately move toward an anti-racist future." ■

MURAL MESSAGES | Atlanta has a thriving street art scene, with many works portraying aspects of racism and racial justice. Pictured in this article and the next are murals by Julio Ceballos (p. 12), Austin "Blue" Richardson (p. 15), Joe Camoosa (p. 18), and SofaHood (p. 20). For more about Atlanta's street murals, visit streetartmap.org.



"We let this violence go on for so long without monitoring it, without trying to understand its causes, without trying to intervene," says Hannah Cooper. In her book, Cooper explores excessive police violence as a public health issue. She is pictured here in front of her Decatur home.

Not a moment but A MOVEMENT

Whether the current focus on racism as a public health crisis will be a temporary uptick or a sustained push depends largely on the people now enrolled in public health graduate schools across the country. They are the next generation of scientists and practitioners who will do much of the heavy lifting required to disassemble the systems and structures that have supported racism for centuries. If talking to a few such Rollins students is any indication, they are up for the challenge.

IZRAELLE MCKINNON 16MPH came to Rollins determined to study racism and its contribution to health disparities. Growing up, she thought it was normal to have so much disease in her family—grandparents, parents, aunts, and uncles with hypertension, diabetes, and heart disease. Not until she began learning about health disparities in college did she link the poor health of her family members to experiences of racism and the low-resource Black neighborhood they lived in.

McKinnon is focusing her dissertation in the Department of Epidemiology on social capital as possible protection against the health effects of racism, specifically heart disease in younger women 30 to 45 years old. Black women of this age have a higher prevalence of heart disease not only than white women but also than Black and white men of the same age. McKinnon is evaluating factors that might protect against early cardiovascular disease among

young Black women. “When we talk about Black neighborhoods, we tend to focus on material deprivation or social disorder, but there is a flip side,” she says. “Research in many other minority communities—your Chinatowns and Little Mexicos—tends to focus on the potential for positive health outcomes related to living in close-knit neighborhoods, where people help each other out, share resources, and support each other.”

Bringing in the perspective of protective characteristics in Black neighborhoods, instead of focusing exclusively on detrimental factors, is necessary not only to inform prevention interventions, but to reexamine the narrative of Black health in Black neighborhoods.

McKinnon is looking at what factors in a community contribute to its social cohesion, and if they, in turn, are protective against heart disease. Is having a place of worship important for health? What about having a YMCA or another space where people can gather socially? Are community network resources like home and business ownership important for health?

“We will be isolating these social capital effects from other things that could be affecting outcomes, so we’ll be controlling for things like education, employment status, and household income, as well as cardiovascular disease risk factors such as obesity, physical activity, and diabetes,” she says. “We want to see if there is something about social capital above and beyond the other things that we

“I want to study and promote positive, health-protective factors for Black people living in Black communities.”

—Izraelle McKinnon

know affect cardiovascular disease that is important for health in majority Black communities.

“If we can show how high social capital and high social cohesion translates into better health outcomes, that could help justify investing in those things within the community,” she continues. “Basically, I want to study and promote positive, health-protective factors for Black people living in Black communities.”

After she earns a PhD in December, McKinnon plans to continue her research. “Working with and studying under people like Tené Lewis and Michael Kramer paved the way for research like mine,” she says. “They have helped upcoming scholars like me by shining light on the importance of this line of study.”

LASHA CLARKE 16MPH grew up in a predominantly Black and low-income neighborhood in Brooklyn, but she attended school in an affluent, predominantly white neighborhood on the Upper East Side. “The world where I spent my day was completely different than the world I went home to,” she says. “Before I even knew the phrase ‘social determinants of health,’ I saw them in action.”

After college, Clarke volunteered as a doula for Black and Latinx women in her community, and once again was struck by how different her clients’ pregnancy and birth experiences were from those of women of other race/ethnicities.

Clarke came to Rollins to earn an MPH in global epidemiology in the hopes of better understanding the causes and solutions for the disparities she had been seeing her whole life. While working with Dr. Carol Hogue, Jules and Uldeen Terry Chair in Maternal and Child Health emeritus, she was finally able to put a name to her particular interest—gendered racism.

Under Hogue, Clarke studied the vastly disproportionate rates of adverse birth outcomes, such as preterm birth and low birthweight, among Black women. There has been a growing consensus in the literature that stress, particularly racial stress, may be the culprit. “Studies have shown that even when you control for education, income level, and employment, the disparity between Black and white women still exists,” says Clarke.

For her dissertation in the Department of Epidemiology, Clarke is moving beyond looking at racism in general as a stressor for pregnant women, focusing instead on the health impact of both gender and race. She is finding that gendered racial stress is a distinct measure of stress. “It is time to move beyond looking at racism writ large as a public health issue and get into more solutions,” she says.

Specifically, Clarke is investigating how gendered racism contributes to spontaneous preterm birth. As a proxy for the level of stress internalized by a pregnant woman, she is measuring levels of C-reactive protein (CRP) in the blood, which is a well-known marker of systemic inflammation. She is, in fact, finding an association between gendered racial stress and CRP levels. “You start to suspect inflammation when CRP passes 3.0mg/L,” says Clarke. “In women who report experiencing gendered racism, we are finding levels greater than 8.0 mg/L.”

After she earns a PhD in the spring, Clarke plans to continue her



“Before I even knew the phrase ‘social determinants of health,’ I saw them in action.” —Lasha Clarke

research into reproductive health disparities. “I want to focus on maternal health equity with a community approach,” she says. “I would like to bring members of the community into the studies as collaborators to not only describe what is happening, but to develop solutions together that are culturally rooted and culturally relevant.”

DR. DANA WILLIAMSON 03MPH 20G focused her dissertation in the Department of Behavioral, Social, and Health Education Sciences on building community capacity as a way to counteract environmental injustices. The subject is close to her heart, having grown up in Detroit, a city burdened by excessive pollution and near Flint, Michigan.

Williamson evaluated capacity-building efforts of both traditional public health interventions used to address environmental inequities, gleaned from a systematic review that spanned 30-years worth of work, and of interventions through the EPA’s Environmental Justice Academy, a leadership development program for community activists.

In the systematic review, Williamson found a preponderance of “helicopter science.” Researchers went into a community, extracted needed data for their studies, and left without engaging meaningfully with the community or leaving behind a structure for making policy or systems for environmental change. “Granted, the articles that fit my criteria for review were fairly limited, but in most of them the researchers came in with their own agenda,” says Williamson, who is currently an ASPPH Environmental Health Fellow with the EPA Office of Science Advisor, Policy, and Engagement.

By contrast, the interventions by EJ Academy fellows started with finding out what the community wanted. In one example, Williamson



“We’ve done enough measuring and assessing. We really need to move toward eliminating these disparities and their disproportionate risks and impacts. Everyone deserves the right to live in a community where they can play outside and breathe fresh air.”—Dana Williamson

cites an intervention in a town in which a busy road with high truck traffic passed directly in front of a local school. The children, many of whom had asthma, were exposed to high levels of exhaust. The intervention—putting a stop sign in front of the school—resulted in the rerouting of much of the tractor trailer and 18-wheeler traffic.

“By truly working with the community, EJ Academy fellows were able to push forward in making some actual community changes,” says Williamson. “Compare that to the more typical academic research approach of coming in and measuring air quality as it relates to asthma. We’ve done enough of measuring and assessing. We really need to move toward eliminating these disparities and their disproportionate risks and impacts. Everyone deserves the right to live in a community where they can play outside and breathe fresh air.”

SAUNDRA LATIMER, a first-year MPH student in the behavioral, social, and health education sciences department, worked with Dr. Briana Woods-Jaeger on her study of Black youth’s exposure to violence in Kansas City (see page 15). Latimer coordinated a photovoice project with area teens.

The students were instructed to go out and take photos that symbolized some aspect of racism to them. One of the photos was selected at each session, and Latimer helped the teens drill down into what was being represented in the photo, how it related to their lives, and what would they like to do about it.

One photo, for example, focused on a young woman’s dreadlocks. During the

discussion that followed, one teen recounted the violation she felt when a woman she didn’t know touched her hair in a restaurant. Others shared stories of people they knew who felt they had to change their hair style and even the way they talked at work in order to be seen as more professional. Several students were frustrated that people outside the Black community did not understand that dreadlocks are a way to keep hair healthy and prevent damage. “In the end, they felt that if people just understood Black culture, they might be more respectful of it,” says Latimer. “So they proposed using TikTok, podcasts, YouTube, and the like to try to educate people.”

A photo of a Civil War statue led to a discussion about the dearth of African American history taught in schools, and a focus on oppression rather than achievements when it is taught. The students want to advocate for a curriculum change to incorporate more positive Black history.

A photo of vinyl records by Black recording artists brought up feelings of Black culture being appropriated by whites and of a need to pass on Black traditions, family stories, and memories to the next generation. In response, some of the students have started making videos while interviewing family members, collecting family photos, and devising other ways to hold on to memories and traditions.

“Asking how you fix racism is such a vast, broad question that it’s hard to pinpoint something tangible. But this project got students to focus on one specific aspect of racism and then come up with things they could actually do to address it.” — Saundra Latimer



“Asking how you fix racism is such a vast, broad question that it’s hard to pinpoint something tangible. But this project got students to focus on one specific aspect of racism and then come up with things they could actually do to address it.”— Saundra Latimer

Anti-racist AGENDA

Rollins commits anew to diversity, equity, and inclusion

By Martha McKenzie | Illustration by James Steinberg



The killing of George Floyd brought the horror of racism into sharper focus across the nation. Even institutions that have striven to promote social justice and equity within their walls recognized they were being called to do more. Rollins is no exception.

“Public health by its very nature is dedicated to social justice and ending health inequities,” says Dean James Curran. “As a school, we have always been guided by these principles. But the events of the past year have pushed us to do more. We are redoubling our efforts to develop a plan of action that persistently works against racism and white supremacy.”

Toward that end, Rollins has created a new position, Assistant Dean for Diversity, Equity, and Inclusion (DEI). Dr. Joanne McGriff, assistant professor of global health and former associate director of the Center for Global Safe WASH, has assumed the post, charged with creating an infrastructure to ensure the school is moving forward to dismantle any form of racism. More specifically, she will advise faculty search committees; develop a diversity, equity, and inclusion plan at Rollins; work to ensure diverse student selection and recruitment efforts; support inclusive teaching practices; and measure Rollins’ progress on these efforts through regular data collection and reporting.

“I am passionate about creating a culture of diversity, equity, and inclusion,” says McGriff. “Given our unique location within the ‘Civil Rights Capital’ of the nation, I believe we are well positioned to partner with other diverse institutions to improve DEI conditions within our school and serve as a model to other public health schools who are seeking to make similar changes.”

McGriff’s first order of business has been to meet with all the stakeholders—faculty, staff, and students, including a group of Black students who submitted a letter during the summer expressing concerns about the climate within the school. Lul Mohamud, a second-year MPH student and one of the authors of the letter, reflects, “My main goal in writing the letter was to make sure the Rollins faculty, staff, and students—the entire community—is not only cognizant of what is going on, but understands they are not on the sidelines. They are active participants in the system, whether it’s directly, or by being a spectator, or by being an unknowing participant.”

“Given our unique location within the ‘Civil Rights Capital’ of the nation, I believe we are well positioned to partner with other diverse institutions to improve DEI conditions within our school and serve as a model to other public health schools who are seeking to make similar changes.”
—Joanne McGriff

Mohamud and her colleagues met not only with McGriff, but also with Dean Curran, Dr. Kimberly Jacob Arriola, executive associate dean for Academic Affairs, Dr. Kara Robinson, associate dean for Admissions and Student Affairs, as well as several others from senior administration. “I could feel a dedication among the people in administration we were meeting with,” says Mohamud. “People seemed truly invested. That gives me hope that what we are saying is being heard.”

McGriff confirms the students are, in fact, being heard, and heeded, but she acknowledges the effort will be a marathon, not a sprint. “We are talking about some changes that involve modifying the culture of the school,” she says. “That is something that happens over years, not days or months.”

Even so, some initiatives have already been implemented. For example, incoming students participated in cultural humility training and were required to read at least one book from a recommended list of anti-racist titles. First-year students attended the annual CDC Day virtually for a discussion of this year’s topic, “Endemic Racism during a Pandemic.” The school produced a webinar series, “Rollins Takes Action 2020,” which covered topics such as police violence and envi-

ronmental injustice. And each department created a DEI committee, if they didn’t already have one, to address issues specific to their realm.

The school already performs well in attracting students of color. According to data from the Association of Schools and Programs of Public Health, Rollins ranked No. 1 in African American applicants, admissions, and matriculates in the fall 2019 admissions cycle among the top five schools of public health. When looking at all schools and programs of public health, Rollins ranked No. 2.

“Our geographic location is part of the appeal, as well as efforts we’ve made over the years to connect with historically black universities in the Atlanta area,” says Prudence Goss, assistant dean of Admissions and Student Affairs. “In fact, three of our deans are graduates of Spelman College—Kimberly Jacob Arriola, Kara Robinson, and myself.”

Goss and her team are doing a multiyear review of data to analyze admission practices (including how much GRE scores influence admissions), scholarship awards, and academic performance. “We want to see which students are receiving the most generous scholarships and if GRE scores actually correlate with subsequent academic performance,” says Goss. “We also need to make sure students of color

feel supported once they are here.”

One student has already taken that matter into her own hands. Cherie Grant, a second-year student in behavioral, social, and health education sciences and president of the Association of Black Public Health students, started the Bridge program, a mentorship matching first- and second-year MPH students based not only on race but on academic department as well as professional and social interests. “People just need to feel comfortable in the spaces they are in,” says Grant. “The program has gotten a lot of positive feedback, so I hope it’s kept going after I graduate.”

Increasing diversity among the school’s faculty is also a top priority. Members of the several search committees that are now active have undergone unconscious bias training and are well tuned to the issue of diversity. “I’ve been very encouraged by how many people have reached out to me wanting to know how they can do a better job in that area,” says McGriff.

The RSPH Education Committee has formed a subcommittee to discuss anti-racism curricula, but one new course has already been launched. Dr. Brianna Woods-Jaeger, assistant professor of behavioral, social, and health education sciences, posted her new seminar class, Addressing Racism as a Public Health Issue to Promote Health Equity, for the spring semester, and it filled up almost immediately with a long waiting list. For her text, she is using a new book from the American Public Health Association, *Racism—Science and Tools for the Public Health Professional*—and she is inviting guest speakers to examine policies and programs that are designed to dismantle racism. “I want to not only give students an overview of racism as a driver for

health inequities but also to encourage them to think about public health professionals’ role in dismantling racism,” she says.

In the Department of Epidemiology, O. Wayne Rollins Distinguished Professor and Chair Tim Lash is overseeing drafting new competencies on racism as a public health crisis for the department’s MPH and PhD programs. “We wanted to make sure we did something with real effect,” says Lash. “One of the most powerful levers we have is setting a competency. You not only have to articulate what it is, but where it is going to be taught, and how it is going to be evaluated to show students have achieved it.”

Dean Curran and members of the school’s administration acknowledge the road ahead is long, but they are committed to making a lasting change. “The horrific events of the past year—the glaringly unequal burden of the COVID-19 pandemic and the killings of unarmed Black people by police, with the resulting Black Lives Matter protests, have laid bare the need to address racism as a public health crisis head on,” says Curran. “And that means change must start here, in the institutions that train future public health leaders. We commit to playing an active role in dismantling racism in our society.” ■

Under new LEADERSHIP

*New chairs in three
departments look
to the future*

By Martha McKenzie
Photography by Kay Hinton



Rollins named three new department chairs in 2020. The fact that, after nationwide searches, two of the new department heads came from within Rollins' own ranks speaks to the depth and breadth of talent within the school, according to Dean James Curran. The third, coming from another institution, has had close professional ties with Rollins for years. Meet our new leaders:

A CLIMATE FOR CHANGE

The new chair of the Gangarosa Department of Environmental Health is an expert on the public health impacts of air pollution and global climate change. Dr. Yang Liu joined Rollins in 2009, and his research has included working with National Aeronautics and Space Administration (NASA) to analyze satellite data on air pollution and developing models to assess the health impact of wildfires. As Gangarosa Distinguished Professor and Chair, Liu intends to expand the department's research in two main areas—climate change and data science.

He has already launched a new certificate program, the certificate in climate and health (see more on page 7). “Research on climate change is a must for any leading environmental health department in the 21st century. It’s the most pressing issue we will face in our lifetimes,” says Liu. “And the data involved in studying environmental health is becoming more and more massive, requiring a knowledge of data science. We need more faculty and students to be experts in these areas.”

Liu’s most high-flying work is with NASA. The Emory team he leads is part of a \$100 million mission that will use satellite images to study air pollution and its impact on public health. “This is the first time NASA has ‘baked’ societal benefits and public health applications into a mission’s DNA,” says Liu. “It’s groundbreaking.”

A device known as the Multi-Angle Imager for Aerosols (MAIA), scheduled to launch into orbit in 2022, will collect satellite imagery over a dozen global megacities during a three-year period. Liu’s team will create the algorithms and statistical models needed to convert that imagery into air pollution composition and concentrations.

In another unique feature, the NASA mission will include a ground component. Advanced air quality monitors will be set up in the cities being scanned by MAIA. They will collect actual data on the ground, which will allow Liu and his team to determine how accurate the algorithms and statistical models are in interpreting the satellite images and then make necessary adjustments.

“Most monitors measure only the mass concentration of particulate matter,” says Liu. “Monitors that can break down the composition of that mass are rare—there are only two such EPA monitors in Atlanta, and they are 30 miles apart and cover 5 million people. By integrating satellite-retrieved particle composition information with ground observations, we will be able to determine a specific area’s exposure to specific particle components.”

Once scientists gather data on levels and types of pollution in specific areas, epidemiologists will analyze health data in that area. “The innovation here is that they will no longer have to rely solely on the total mass concentration of particulate matter—they’ll be able to parse it out to individual compounds,” he said. “They may find, for example, that elevated levels of organic carbon are associated with more asthma ED visits, and high concentrations of elemental carbon may be linked to more heart attacks.”

Another area of Liu’s interest is the health effects of global climate change, particularly those related to wildland fires. The warming

Yang Liu plans to expand research in climate change and data science within the Gangarosa Department of Environmental Health.

planet is clearly fueling more wildfires, and their impact is exacerbated by the relentless encroachment of neighborhoods into forests. Liu is working to project future wildfire risks in areas small enough to be actionable. It’s not an easy task. The global climate models used to predict future global mean temperatures use a grid system, and each unit of the grid is huge. A typical cell is 10,000 square kilometers, or roughly the size of Rhode Island. “You can’t make policy decisions based on information that is so crude,” says Liu.

So Liu and his team are nesting models within the global climate models to refine projections. In doing so, they were able to shrink a cell to a manageable 100 square kilometers.

As department chair, Liu’s plans include recruiting more researchers specializing in key environmental health issues such as environmental epidemiology and toxicology, biomarkers and -omics research, WASH, environmental justice, and climate change. He also wants to strengthen the department’s expertise in data science. Metabolomics, genomics, and epigenomics all involve massive data that requires artificial intelligence and machine learning to analyze it. Even conventional environmental epidemiology must include data science components these days.



Liu holds a master of science in mechanical engineering from the University of California at Davis and a PhD in environmental sciences and engineering from Harvard University. He has published more than 200 peer-reviewed articles and serves on the editorial boards of a number of academic journals. Recently, he was selected as a 2020 Georgia Research Alliance Distinguished Investigator.

Liu succeeds Dr. Paige Tolbert, who retired in March 2020, after serving as chair for 15 years, and Dr. Thomas Clasen, who served as interim chair. Liu is the department’s first Asian chair.

TRAINING GLOBAL LEADERS

Dr. Usha Ramakrishnan takes over as Richard N. Hubert Distinguished Professor and Chair of the Hubert Department of Global Health just as a program she’s been developing for years is launched. The new Global Health and Development PhD program will be a flagship for the department, says Ramakrishnan.

“It feels a bit like my baby,” she says. “I’ve been working to establish it for years, and it’s finally here. And, I believe, it is unique. There are a few doctoral programs in global health. There are a few doctoral

programs in development studies or development economics. But, as far as I know, this is the first program bringing global health and development together.”

With the goal of training leaders who can use science to improve public health policy and practice for underserved populations globally, the curriculum is necessarily broad and diverse. Faculty will include members from Rollins, Emory College, and the schools of medicine, nursing, law, and business, as well as partners based at the CDC, The Carter Center, CARE, and the Task Force for Global Health.

The program, which is currently accepting applications, will ground doctoral students in implementation science, ethics, and development economics. “We are building off the success of our MPH program in global health, the university’s master’s in development practice, and the strength of our experts across the campus,” says Ramakrishnan, who has led the university’s PhD program in Nutrition and Health Sciences. “My vision is to graduate the first cohort of Global Health and Development PhDs in five years and grow from there.”

Ramakrishnan’s leadership in both the nutrition and health sciences and the new global health and development doctoral programs earned her the 2020 Marion V. Creekmore Award of Internationalization. Created by the Emory Office of Global Strategies and Initiatives, the award honors a faculty member who excels in the advancement of the university’s commitment to internationalization.

Ramakrishnan has been part of the Rollins faculty since 1994, when she joined as a postdoctoral fellow under the mentorship of Dr. Reynaldo Martorell, a renowned expert in international nutrition. Like her mentor, Ramakrishnan’s research has focused on maternal and child nutrition in low-resource countries.

She recently completed a 10-year study of a prepregnancy nutrition intervention in rural Vietnam. More than 5,000 women of reproductive age who were planning to have a child were recruited and randomized to one of three treatment groups to receive weekly micronutrient supplements containing either several essential vitamins and minerals including iron and folic acid (MM), only iron and folic acid (IFA), or only folic acid (FA) until they conceived. All women who conceived received daily prenatal IFA supplements. Ramakrishnan and her team have successfully followed the children of these women through ages six to seven years. This is one of the first studies of its kind that reported improved birth outcomes among those who received the MM supplements for at least 6 months, followed by improved linear growth by age 2 years, and most recently, improved performance on tests of cognitive function as the children begin primary school.

In working to implement preconception interventions, Ramakrishnan broadened her scope beyond nutrition. She is involved in helping programs that target women of reproductive age and address the importance of women’s empowerment.



Usha Ramakrishnan has sheperded the launch of the Global Health and Development PhD program within the Hubert Department of Global Health.

“Age at first pregnancy is an important determinant of outcomes, for example, but you don’t change that by giving nutrients,” she says. “That requires social change. My work now is at the intersection of nutrition, reproductive health, and human rights to optimize outcomes in the next generation.”

Ramakrishnan earned a PhD in international nutrition, epidemiology, and human nutrition from Cornell University in 1993. She has published more than 170 peer-reviewed articles and several book chapters, many of which relate to her research expertise in maternal and child nutrition. At Rollins, she has served on several departmental- and school-level committees including the Faculty Council and MLK Awards Committee. She is a graduate of the Woodruff Leadership Academy. She is currently a member of the admissions committee for the MD/PhD program, the Emory University Faculty Council, and the COACHE Steering Committee. Ramakrishnan also holds adjunct positions at Sri Ramachandra Institute of Higher Education and Research in Chennai, India, and Instituto Nacional de Salud Pública in Cuernavaca, Mexico.

Ramakrishnan served as vice chair and interim chair of the department and succeeds Dr. Carlos del Rio, who left the post to become executive associate dean for Emory School of Medicine at Grady Health System. She is the department’s first Asian and first female chair.

SOLVING MENTAL HEALTH EQUATIONS

Dr. Robert Krafty’s work aims to better understand and treat mental and behavioral health. His tools—algorithms, statistical models, and machine learning. He uses these to translate the massive data gleaned from MRIs, fMRIs, EEGs, and wearable devices like FitBits into something that can be understood. “My work involves collaborating with teams of clinicians and other scientists,” he says. “I do the math that can unlock useful information contained in the data.”

The Rollins Distinguished Professor and Chair of the Department of Biostatistics and Bioinformatics, Krafty is nationally recognized in the field of biostatistics. He has tackled sleep problems in older adults who were primary caregivers for their spouse. Seniors in general have trouble getting enough sleep. Compounding the problem, conditions that can interfere with sleep, such as hypertension, diabetes, acid reflux, and restless leg syndrome, tend to increase with age. The tremendous stress associated with being a primary caregiver can make those sleep problems even worse.

Using polysomnography in participants’ homes, Krafty’s team measured the heart patterns of elderly adult caregivers during their sleep and compared them with seniors who were not caregivers. “We wanted to understand what part of their sleep is disrupted and how can we help correct that,” he says.

Krafty was able to decode the massive data collected by the devices and the team found the heart patterns of caregivers indicated they were more aroused and less relaxed during the night of sleep than their non-caregiving counterparts, especially during periods of deep sleep where relaxation is essential to the restorative properties of sleep.

In addition to sleep, Krafty and his team have found that other daily social timekeepers, such as meals and physical activity, are essential to the health of older adults. One group of older adults who are at increased risk for negative health are those who recently lost a spouse. The team developed and is studying an intervention that uses mobile tablets and wearable ActiGraphs to help spousal-bereaved older adults develop and maintain a healthy lifestyle.

“This is a rewarding study to work on,” says Krafty. “Helping to tweak daily patterns can improve a person’s quality of life. It’s a seemingly small thing, but it can have a big impact, especially for people who are grieving the loss of a spouse.”

When Krafty assumed his new post last September, he was no stranger to Rollins or the biostatistics and bioinformatics department. He had followed the work of several of the department’s researchers for at least 10 years, and had collaborated with several of them in his own work. “It almost felt like coming home,” he says.

The relentless evolution of big data necessarily shapes his plans for the department. “The field changes at such a rapid pace, we have to continually focus on strengthening our faculty expertise in big

biomedical data and updating our curriculum for master’s and PhD students so that when they graduate, they will have the exact state-of-the-art skills that they need,” he says.

Toward that end, Krafty is looking to recruit faculty members who are experts in machine learning, bioinformatics, and large data in infectious disease and environmental health. He is also working to establish both a new degree and a new certificate program in health data science.

“The MSPH degree in health data science would train people who are going to be practitioners in data science, such as analyzing electronic health records and using massive data sets to understand causes of poor health,” he says. “The certificate would allow students in any other degree program to gain some skills and knowledge of data science on top of their current degree. We think that would make graduates very competitive in the job market and enable them to make immediate and impactful contributions.”

Krafty came to Rollins from the University of Pittsburgh’s Graduate School of Public Health, where he was a tenured faculty member and chair of the biostatistics curriculum. Previously, he was an assistant professor of statistics at Temple University. He holds a master’s in mathematics and a PhD in biostatistics from the University of Pennsylvania.

Krafty replaces Dr. John Hanfelt, who has served as interim chair of the department from August 2018 through August 2020. ■

Robert Krafty’s plans for the Department of Biostatistics and Bioinformatics are shaped in part by the relentless evolution of big data.





ROLLINS ENTREPRENEURS GOING THEIR OWN WAY

By Martha McKenzie | Illustration by Pietari Posti

Keisha (Edwards) Hunt, Taroub Harb Faramand, Kelvin Brown, Meaghan Kennedy, and Elizabeth Sprouse all went through Rollins at different times. They studied different subjects in different departments. But they have one thing in common. They all started their own businesses. Here are their stories.

MERGING PUBLIC HEALTH AND INFORMATION TECHNOLOGY

The success of Metas Solutions has been beyond Keisha (Edwards) Hunt's wildest dreams. The 2003 MPH graduate launched the management consulting firm in 2014 with her husband, Eric, out of their basement. "When we started the company, I just wanted to make sure we were not going to lose our house," says Hunt.

They didn't. Today Metas Solutions boasts more than 45 employees in two Atlanta offices, one in North Carolina, and another office slated to open in Washington, D.C. "We never anticipated this kind of growth," says Hunt. "It's just been staggering."

She also never anticipated her current career. She worked as a high school English teacher after graduating from Duke University, and she envisioned doing grass-roots, community-level work in health education, perhaps within school systems. Toward that end, she enrolled, baby boy in tow, in Rollins' Department of Behavioral, Social, and Health Education Sciences.

Her plans changed when she was recruited by Booz Allen Hamilton to work in their civil health practice, providing advisory services to the US Department of Health and Human Services and other federal agencies. She stayed for 11 years and met her husband on the job. Early on, they discovered starting their own business was a shared goal.

After leaving Booz Allen and working at PricewaterhouseCoopers (PwC) Public Sector for more than a year while she moonlighted supporting the fledgling business, Hunt and her husband decided it was time. The team got a tremendous assist by subcontracting back to their previous employers. "Booz Allen

and PwC teamed with us as partners," she says. "The reason we were able to get off the ground is because we had established and kept good relationships with them, and they in turn trusted us."

They also got a boost by becoming certified by the US Small Business Administration as an 8(a) Economically Disadvantaged Woman-Owned Small Business. "Someone told us to watch out," says Hunt. "They said once you get your 8(a) certification, you need to be ready because work will come flying at you from all directions. That was certainly true."

Hunt and her husband bring different skill sets to the table—she the public health expertise and he the information technology prowess. "Metas Solutions' services revolve around solving a public health challenge with information technology solutions," she says.

Their work with the CDC's Vaccines for Children (VFC) program is an illustrative example. The CDC buys vaccines at a discount, distributes them to grantees such as state health departments and local health agencies, which in turn distribute them to physicians' offices and public health clinics registered as VFC providers. "Metas Solutions works hand-in-hand with the CDC developers of the web-based system, developing the requirements, support, customer service as well as identifying and fixing defects and doing data analysis," says Hunt. "It's a highly technical program, and we basically make sure it is operating the way it is supposed to."

Though it seems such a long time ago, Hunt still treasures her time at Rollins. She was enrolled in another public health program early in her pregnancy, and her adviser encouraged her to take a leave of absence, doubting she would be able to complete the program as a single mother. When she was ready to restart graduate school, she visited different public health schools with her young son and got a reception she describes as cold and indifferent. So when she interviewed at Rollins, she made arrangements to leave her son with a sitter, but she was greeted with disappointment. "The person I was meeting said, 'You should have brought your son with you!'" says Hunt. "The



KEISHA (EDWARDS) HUNT

whole environment was so warm and accepting. I knew this was the place for me.”

Taking stock, founding a successful business is the thing Hunt is the second most proud of. Her proudest moment? “Graduating from Rollins on time with a high GPA and my 11-month-old son on my hip.”

WORKING TOWARD GENDER EQUITY

When Dr. Taroub Harb Faramand 95MPH founded WI-HER (Women Influencing Health, Education, and Rule of Law), a global development consulting firm, she was ready. She had been working as chief of party of the USAID Health Sector Reform and Development Project, managing an \$86 million project aimed at improving the quality of care for Palestinians. Before that, she served as USAID Health Officer, a director of global health projects, and as a senior vice president for global health programs with Project HOPE, where she oversaw a network of core and field staff responsible for more than 80 programs in 36 countries.

“By the time I started WI-HER in 2011, I already had extensive experience in managing global health projects, strengthening health systems, and leading health sector reform,” says Faramand, who received the 2007–2008 Rollins Alumni Association’s Distinguished Achievement Award. “But I came to believe that health programs



TAROUB HARB FARAMAND

alone cannot improve people’s lives unless they are linked to other sectors such as education, agriculture, energy, and the rule of law. All areas must work together to address the underlying social problems.”

Toward that end, Faramand began assembling a team of public health, medical, legal, and development professionals that today comprises WI-HER. The company now works in more than 35 countries on programs that build sustainable local capacity with a particular focus on gender equity and social inclusion. For example, WI-HER worked with the government of India to overcome barriers to women’s housing finance and housing ownership, developing and promoting innovative housing finance products and services that allow financial institutions to circumvent barriers to women’s access. In Uganda, the firm worked with the community to improve adherence to HIV treatment among men, achieving 90 percent viral load suppression. In Western Kenya, WI-HER built capacity of health providers during COVID-19 to provide better services to gender-based violence victims, achieving 100 percent adherence to WHO standards of care.

“I believe gender, equity, and social inclusion are key to achieving optimal health outcomes,” says Faramand. “But from my

experience, this is not well understood or accepted. That’s one of the reasons I started WI-HER. I wanted the freedom to be creative and innovate in integrating gender, equity, and social inclusion to improve health outcomes in ways that work for people and that are contextually and culturally appropriate.”

The road has not been an easy one, Faramand acknowledges. She left a stable job with a good salary and benefits for the unknown. She had to learn the ropes of running her own business on her own. And she didn’t pay herself a salary for the first nine years, instead investing most of her savings into the company. But all the sacrifices were worth it. “I look back on what I’ve created with WI-HER, and what we’ve accomplished, and I feel proud,” she says.

Of her time at Rollins, Faramand says, “I came to get my MPH because I could not advance in my career without that degree. But once I got to Rollins, I realized it was the best decision I had ever made. I was mentored by the very best in epidemiology and global health—Roger Roachat [professor of global health], Stan Foster [professor of global health emeritus] and Hani Atrash [adjunct professor and director, Division of Healthy Start and Perinatal Services, Health Resources and Services Administration]. I can’t begin to express how they influenced my life.”

ADVANCING TELEHEALTH

Dr. Kelvin Brown 98MPH 03MD started his first business while he was still a general surgery resident at Emory between 1998 and 2003. That’s when he created Vital Statistics, an organization that conducted health fairs and screenings in businesses, schools, and community centers.



Taroub Harb Faramand conducts a capacity development session with members of the Kisimba community in Eastern Uganda so they, in turn, can lead change and address gender disparities affecting health outcomes.

Spurred by trends he was seeing in his surgical practice, Brown started his second business, Precision Health and Weight Loss Centers, in 2008. The centers, which now number four in the Atlanta area, offer health assessments, customized meal and fitness plans, and weight management services.

Brown is just launching his third business, GoVirtueWell, which is a sort of telemedicine middleman. Brown, who says he has been using telemedicine “since before it was cool,” admits the COVID-19 pandemic gave his new venture a tremendous jumpstart. “I’ve always known telemedicine is going to be the future,” he says. “But with COVID, it had a 7,000 percent increase nationwide last year.

The pandemic reduced regulations, increased reimbursements for virtual businesses, and increased the adoption of virtual medicine by both providers and patients. It really shortened our go-to market planning, maybe by a couple of years.”

GoVirtueWell will be a series of nationwide locations—kiosks or small offices within corporations, retail spaces, or other facilities—staffed with a medical assistant and the tools necessary to assess a patient virtually. “A patient shouldn’t have to be an IT



KELVIN BROWN

expert to access telemedicine,” says Brown. “Not everyone is going to have the technology or bandwidth for good transmission. But a patient could go to a GoVirtueWell location—perhaps five minutes from their home—and have all their vital signs taken, get accurately diagnosed, and meet virtually with their own physician.”

Brown is currently operating two GoVirtueWell locations, one near the airport and another in Lithonia. He plans to open other locations in Georgia and Tennessee later this year and envisions opening many more. “I could see having them in large corporate headquarters, where they would benefit both the employers and the employees,” he says. “They would be useful in assisted living facilities. They could also go in rural and

underserved areas as a way to address health care disparities.”

Brown credits his time in the Department of Health Policy and Management at Rollins for some of this business success. “That is where I really learned how to create programs for change,” he says. “It taught me how to look at both the small and big picture and to foresee coming challenges as they related to health care and the economy.”

BUILDING ECOSYSTEMS

Meaghan Kennedy 93MPH decided she wanted to go out on her own while she was working at the CDC. It’s not that she didn’t like the work at the agency—she loved it. She had enrolled in Rollins right out of college with the express purpose of landing a job at the CDC, and she wasn’t disappointed.

She joined that agency working in HIV in the division then led by Dean Curran. There she gained the critical thinking skills and rigor she has relied on throughout her career.

“I was running some of CDC’s international and domestic HIV seroprevalence projects and learning an insane amount,” she says. “This was the 90s and HIV was very political then, so in addition to learning about data analysis and study design, I was getting an amazing lesson in how to engage with different groups in different ways to move things forward.”

The problem was things tended to move forward slowly in a vast governmental agency, and Kennedy longed for a faster pace and more self-determination. She took graduate courses and taught research methods at Georgia Institute of Technology, started accepting a wide variety of freelance assignments to broaden her experience, and in 2001 she founded Orange Sparkle Ball, an innovation accelerator. (She drew the name from her cat’s favorite toy at the time.)

Today, the company employs 10 people, and its work takes several forms. “Much of our work is service design,” she says. “We use the same skill sets mapping the licensure requirements of childcare providers as we do mapping customer touch points in a start-up restaurant chain.”

She helps companies break down their problems into manageable bites. “Often a company will say, ‘We are going to solve this problem by buying this very expensive technology solution,’” she says. “I’ve never seen that work.”

Instead, Kennedy and her team will help an organization take a more incremental approach, identifying smaller components within the larger problem and solving them before moving on to the next



MEAGHAN KENNEDY

component. To provide that solution, Kennedy often relies on technology solutions from small or start-up companies.

“Start-ups are the job creators globally,” says Kennedy. “If you can figure out how to match them with larger organizations, you are introducing innovation into the larger organization and also supporting job creation. At its highest level, it’s building ecosystems.”

Kennedy also helps organizations grow their products. She is working with

a large university to expand a community-strengthening platform they have built and commercialized. “We are doing community analysis and helping them figure out how to integrate all of that into the next phase of their work,” she says. “They had gotten to a certain level of maturity, and they have come to us for help pushing forward.”

The COVID-19 pandemic proved to be a double-edged sword for Orange Sparkle Ball. “Half our work totally stopped, and half accelerated to the point it’s been really hard to keep up with,” says Kennedy. “We hired two Rollins REAL students to help keep up with that demand.”

Most of the COVID-19 work she has taken on revolves around risk mitigation technologies and translating rapidly evolving science for industry. For example, the team sourced technologies that can identify indoor airborne exposure risk. “Early in the pandemic, we understood the need to assess airborne risk in environments, so we looked at sensor technologies to measure airborne proxies,” she says. “We learned a whole lot about airflow dynamics.”

Her advice for others thinking of starting their own business: “Just start,” she says. “Start trying things, do small tests of things. If you get traction, the market has validated what you are doing and you keep moving forward. If not, pivot and try something else. And you need to be very future-focused, following where the trends are going. Being able to be focused on what is coming next is what I enjoy most about my work.”

MAINTAINING SCHOOL TIES

“If anyone thinks they want to start their own business, it is great fun. Be sure to talk to us first, though.”

Elizabeth Sprouse 17MPH felt these words were meant for her. After 16 years of her career, first in communications and then in clinical informatics, she was back getting a master’s in applied public health informatics through Rollins’ Executive MPH program, while working full time in clinical informatics at Emory Healthcare. She was attending a track luncheon during an on-campus weekend when this counsel was shared by Mark Conde, who led her EMPH track, and Dewey Blaylock, an EMPH adjunct professor.



Meaghan Kennedy conducts a social entrepreneur workshop at Rollins before the pandemic limited such gatherings.

“I took them up on their offer,” says Sprouse.

Double Lantern Informatics is a boutique public health and clinical informatics consulting firm. “In informatics, you are between public health practitioners or clinicians and the information technology team,” Sprouse says. “This is a unique place to be, and you have the opportunity to affect real change.”

Sprouse credits her time at Rollins with changing the trajectory of her career. “It is

not only the applied training that you receive at Rollins, but also the people who become a part of your life,” she says. “I count my professors among my strongest supporters and mentors. Many are entrepreneurs themselves and give willingly of their time and guidance.”

For Sprouse, the community extends beyond her professors. She is back in the EMPH teaching intro to applied public health informatics and includes her colleagues and students among her circle of friends. She also treasures the relationships she has built while serving on the Rollins Alumni Board. She is in her third year and currently president-elect.

In 2017, when Sprouse started Double Lantern, she left her role as director of clinical informatics at Emory Healthcare. She had worked at Emory for years and loved her time there. “However, I wanted to work in both clinical and public health informatics and see what I could do with my one crazy life,” Sprouse says. “I have been fortunate to also be supported by my colleagues at Emory Healthcare and still be able to work on fulfilling projects in this capacity.”

One of Sprouse’s favorite projects at Emory Healthcare has been partnering with them to establish a program for enabling the use of the FHIR (Fast Healthcare Interoperability Resources) data standard to advance care, improve the user interface of legacy systems, and support innovation, while also being intentional and protecting sensitive data.

“For me, there is always a member of the Emory community ready to give me a boost over any hurdle I encounter,” Sprouse says. “I try to do the same for others. Going to Rollins was one of the best things I ever did for myself. Starting Double Lantern has been a close second. Mark and Dewey were right—it is a lot of fun.” ■



ELIZABETH SPROUSE

New scholarships and support for COVID-19 epi fellows

Drs. Claire E. Sterk and Kirk W. Elifson have established the Claire E. Sterk Scholarship Endowment. The fund will provide scholarship support to Rollins students with preference for students with a demonstrated interest in addressing the public health challenges related to addiction. “Our collaborative public health research over the past 30 years in the Atlanta community revealed the critical role played by alcohol and substance abuse in exacerbating physical and mental health challenges, community disorganization, and individual distress,” says Sterk.

“We seek to focus on underlying social and health disparities that public health students are ideally positioned to address,” says Elifson.

Sterk served as the 20th president of Emory University from 2016 to 2020, and as provost and senior vice provost beginning in 2005. Prior to those roles, she dedicated her career to research in addiction, mental health, and HIV/AIDS, and she continues that work today in Rollins. Her research support from the National Institutes of Health totals more than \$35 million, and she has authored three books and well over 100 academic publications.

Dr. Ami Shah Brown 00MPH and Bruce Brown 01MPH have established the Shah Brown Family Scholarship in memory of their daughter, Kaia Morgan Moten Brown. “We originally started thinking about the scholarship as a way to honor Kaia,” says Ami. “But it’s also a celebration of the fact that public health brings together diverse perspectives and backgrounds, and Bruce and I are representative of that.”

As senior vice president of regulatory affairs for Inovio Pharmaceuticals, Ami works on the development of new vaccines and immunotherapies. Bruce is president of Natreon, a nutrition and life-sciences company. “We represent different areas of public health,” says Ami. “We wanted to commemorate that, in public health, it’s all important.”



Claire E. Sterk and Kirk W. Elifson, top, and Bruce Brown and Ami Shah Brown, directly above, have established new scholarships.

Funding from the **Robert W. Woodruff Foundation** allowed the establishment of the Rollins COVID-19 Epidemiology Fellows program, a two-year service and training fellowship that aims to bolster Georgia’s epidemiologic capacity. Additional funding from five foundations has allowed the program to recruit its first cohort of 17 recent MPH graduates and place them as entry-level epidemiologists at the Georgia Department of Public Health and across the state’s health districts.

The **R. Howard Dobbs Jr. Foundation** provided funding for a fellow in the Savannah/Brunswick/Coastal Health District. **Callaway Foundation** supported a fellow in the LaGrange Health District. “We were excited to have the chance to be part of the program,” says Tripp Penn,

president of Callaway Foundation. “The last year has shown us how critical public health is to our state and how under-resourced our statewide and local teams are.”

In the Albany/Southwest Health District, the **Williams Family Foundation of Georgia** supported a fellow. “COVID has unmasked for the rest of Georgia and the United States what we have known for some time as a rural-based funder, that decades of underinvestment in the public health infrastructure is detrimental to our community’s overall health,” says Alston Watt, executive director of the foundation.

In the Columbus/West Central Health District, the **Bradley-Turner Foundation** and the **Kathelen V. and Daniel P. Amos Fund, Community Foundation of the Chattahoochee Valley** funded a fellow. “One of the biggest lessons of this pandemic to us is the absolutely critical role that a comprehensive public health response is to the well-being of all of our citizens,” says Kathelen Amos 79C, Emory trustee and advisor to the fund. ■

CLASS NOTES

1980s



MICHAEL O. UGWUEKE 86MPH, President and CEO of Methodist Le Bonheur Healthcare in Memphis, received the Baldrige Foundation Harry S. Hertz Leadership Award. The award recognizes role-model leaders who challenge, encourage, and empower others to achieve performance excellence.

2010s



Born to **HEIDI M. SOETERS 06C 09MPH** and **ERIC M. HAMM 08MPH 17MR** of Atlanta, a son, Ansel William Hamm-Soeters, on Aug. 22, 2020. He joins big sister, Carolina. Soeters is an epidemiologist at the Centers for Disease Control and Prevention's Center for Global Health in their Global Immunization Division's Vaccine Introduction Team. Hamm is an emergency medicine physician affiliated with Wellstar Atlanta Medical Center.



Born to **JESSICA WALTON HIKE 10MPH** and Tayven R. Hike of Alpharetta, Ga., a son, Jacob Campbell Hike, on Oct. 12, 2020. He joins big brother, Parker. Hike is an IT manager at Children's Healthcare of Atlanta.

KANAKA S. SATHASIVAN 11MPH has been appointed to the board of directors for It's Time Texas, a public health nonprofit in Austin, Texas. Sathasivan is currently director of communications for Texas Nurses Association, where she helps produce educational materials for nurses and the public, as well as policy documents to advocate for nursing and public health at the state capitol.



Born to **ALYSE LOPEZ-SALM 13MPH** and her husband Miguel Lopez Williams, a son, Miguel Angel Lopez-Salm, on June 2, 2020.



Married: **AMEENAY MASHHOOD ELAHI KHAN 09OX 10C 15MPH** and Caleb Andrews of Atlanta were married on June 13, 2020. Khan is a clinical informatics project manager with Emory Healthcare.



Born to **RUTH GEIGER TUCKER 11OX 13C 15MPH** and Corbett L. Tucker of Monticello, Ga., a son, Henry Coleman, on Nov. 18, 2020. Tucker, a lecturer at Oxford College, has served as an assistant farmer and educator at the Oxford College Organic Farm. In that role, she worked on a pilot program for local K-12 students to visit the farm, assisted with farm operations, taught classes, and was responsible for Oxford's food safety program.

ADAOBI N. CHINONYELUM OKOCHA 15C 17MPH, a fourth-year medical student at Meharry Medical College, was elected to the Student National Medical Association's Board of Directors as Region X director. The SNMA is the nation's oldest and largest independent, student-run organization focused on the needs and concerns of students of color.



IN MEMORIAM

FACULTY

STANLEY FOSTER passed away on March 14, 2021, after a prolonged illness. Foster's public health career encompassed more than 60 years as an international epidemiologist and teacher. Among the many achievements of his prolific career include his role in containing the last case of variola major (the deadliest form of smallpox) in the world while leading the World Health Organization's smallpox program in Bangladesh.

During his time employed with the Centers for Disease Control and Prevention (1962-1994), Foster lived all over the world investigating a number of infectious disease emergencies, including plague, rabies, measles, shigella, food poisoning, keratoconjunctivitis, rotavirus, Lassa fever, and Ebola virus.

Foster joined Rollins in 1994, where his passion for public health flourished in his role as an educator and mentor. Public health students from around the world remember his commitment to their personal development, and the most common phrase used to describe his courses was "life-changing." Though he officially retired in 2013, Foster



continued to be a regular fixture in the hallways of Rollins, where his smile and small talk were happily welcomed.

Foster received numerous awards throughout his career, including but not limited to the HHS Distinguished Service Award, CDC Watson Medal of Excellence Award, RSPH Sellars Award, APHA Lifetime Achievement Award for Excellence in International Health, and Emory Williams Award for Distinguished Teaching.



JOHN L. YOUNG JR. passed away on March 11, 2021. Young was a professor of epidemiology at Rollins from 1998 to 2013 and spent the better part of his life devoted to advancing public health. He was considered to be the "father" of cancer surveillance in North America and was instrumental in establishing and advancing the principles

of this field. While serving in the Public Health Service, he was employed at the National Cancer Institute during the establishment of the Surveillance, Epidemiology, and End Results (SEER) program. He helped define the cancer surveillance rules and standard operating procedures for the SEER program, and ultimately the nation and the world.

JOHN BORING III passed away in his sleep on January 10, 2021. Prior to retiring in the fall of 2012, Boring earned the status of professor emeritus of epidemiology after 46 years of teaching at Emory. He was the first chair of the Department of Epidemiology and served on the search committee that led to the appointment James Curran as dean of the RSPH.

Boring joined Emory in 1966 as an assistant professor in the School of Medicine. This is where he found his truest calling and lifelong professional purpose—teaching. He went on to become a full professor of epidemiology, creating the public health/epidemiology curriculum for the School of Medicine along the way.



IN MEMORIAM

Among his many accomplishments, John was recognized five times as RSPH instructor of the year, received the Thomas F. Sellers Jr. MD Award in 1993 (honoring a Rollins faculty member deemed a role model by colleagues), and received the Thomas Jefferson Award in 1995 (Emory's highest faculty honor). In 2020, the Department of Epidemiology named its annual Infectious Disease Grand Rounds lecture in his honor.



JONATHAN LIFF passed away on October 10, 2020, following a prolonged illness. Liff was the former director of the Georgia Center for Cancer Statistics and a professor and in the Department of Epidemiology until his retirement in 2013. He was one of the first faculty members hired at Rollins

by former Dean Ray Greenberg and was beloved by students, faculty, and staff alike.

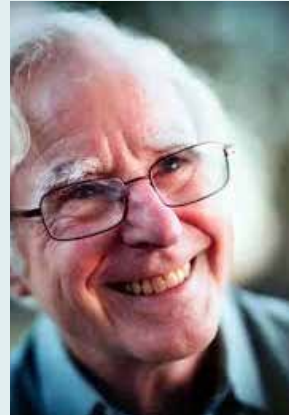
1970s

EMMY LOU EATON FABER 79MPH of Alpharetta, Ga., on Jan. 12, 2021, at the age of 96. Faber received an RN from Patterson State School of Nursing in 1947, a BS in nursing from Oglethorpe University in 1975, and a master's of community health from Rollins in 1979. She served in the nurse cadet corps during World War II and as a career military spouse to her late husband, Theodore Faber, whom she married in 1949. When her husband retired from the US Air Force in 1966, they moved to Atlanta, and she returned to a career in nursing at Emory and then at Northside Hospital, where she was one of the first nurses to open the hospital. She retired from Northside Hospital as director of education in 1990. Faber lived for more than 40 years on their family farm in Alpharetta. She is survived by three sons.

1980s

JERRADINE MORGAN BRYANT 83MPH of North Ridgeville, Ohio, on Oct. 11, 2019, at the age of 71. Bryant's

JOHN MICHAEL LANE passed away on October 21, 2020, at the age of 84. Lane was the director of smallpox eradication at the CDC when WHO formally declared the disease vanquished in 1980. Lane studied medicine at Harvard University, graduating in 1961 and joining the CDC two years later, where he was soon working with the team responsible for tackling smallpox. After the eradication of smallpox and until he retired from the agency in 1987, he served as the CDC's director of prevention services. Lane then came to Emory as professor. After the MPH program became its own division in the Woodruff Health Sciences Center, Lane led its Center for International Health, the precursor of the Hubert Department of Global Health.



professional career was devoted to preventing health care-related infections and improving patient safety in health care settings. After receiving a BS degree in nursing from the Ohio State University and a master's degree in public health from Rollins, Bryant served as an infection control consultant at the Ohio Department of Health and as a nurse epidemiologist at Crawford Long Hospital and the Cleveland Clinic Main Campus. She was a national leader in prevention of health care-related infections and served as director and president of the Certification Board of Infection Control, the editorial board of the *American Journal of Infection Control*, and the board of trustees for the Association



of Practitioners in Infection Control Research Foundation. Bryant also worked on quality management in health care for two health care insurance companies before retiring in 2011. She is survived by her husband, Roger F. Dennis, three stepchildren, and three siblings.

VIRGINIA GARRETT GALVIN 77M 78MR 84MR 88MPH of Avondale Estates, Ga., on Sept. 22, 2020, at the age of 68. Galvin received an undergraduate degree from the University of Texas at Austin and completed her MD and master's degree of public health at Emory. She was an emergency room physician, but later followed her passion for community health to serve for a decade as the public health director for Cobb and Douglas counties. Galvin, a captain in the US Air Force Medical Corps, was active in many community groups. In 1994 she was selected as a fellow in the prestigious Kellogg National Fellowship program. Galvin is survived by two daughters.



1990s

ELAINE J. KOENIG 92MPH of Atlanta on Dec. 18, 2020, at the age of 78. Koenig graduated from Queens College and Columbia University Vagelos College of Physicians and Surgeons where she earned a BS in physical therapy. She spent much of her career as a physical therapist before completing her master's degree of public health at Rollins. She worked as director of educational programs at Rollins, executive director of the Greater Atlanta Affiliate of the Susan G. Komen Breast Cancer Foundation, and director of patient and family services at the Winship Cancer Institute at Emory Healthcare. Koenig is survived by her husband, Ronald H. Koenig, three daughters, and four grandchildren.



2000s

DOUGLAS W. LOWERY-NORTH 08MPH of Bend, Ore., on Aug. 4, 2020, at age 58. Lowery-North graduated from Vanderbilt

University and Vanderbilt University School of Medicine. He completed residency training in emergency medicine at UCLA, where he served as chief resident. He was a flight surgeon in the Air Force Reserve, served on the faculty at UCLA and at Rollins, where he received a master of public health degree in biostatistics and informatics. Lowery-North moved to Bend, where he joined the Central Oregon Emergency Physicians Group and was named chief medical informatics officer at the St. Charles Health System. He is survived by his parents, his husband, Eric, two children, and a sister.



2010s

IRA S. ADAMS-CHAPMAN 87C 11MPH of Atlanta on Oct. 25, 2020, at age 55. Adams-Chapman received a BA degree from Emory prior to completing a MD degree from the Medical College of Georgia in 1991, a residency in pediatrics at Cincinnati Children's Hospital, and a fellowship in neonatology at the University of California at San Diego. She returned to Atlanta in 1998 to practice neonatology at Children's Healthcare of Atlanta and at Emory University as an associate professor of pediatrics and the Jennings Watkins Scholar in Neuroscience at the school of medicine. In 2011, Adams-Chapman earned an MPH at Rollins. She served as director of the Developmental Progress Clinic, where she will be remembered as a talented writer, researcher, and neonatologist who wrote books, spoke at conferences, and mentored many future physicians. Adams-Chapman is survived by a daughter, Jordan T. Chapman 17Ox 19C, a son, and two siblings.



Advocating for childbirth safety

When **PAIGE ROHE 04C 05MPH** went into labor in December 2015, she was relatively calm. The crib was built and the baby clothes were put away. Rohe had had a few episodes of high blood pressure, but her doctors assured her it was well managed.

The delivery, however, was anything but calm. During a long and difficult labor, her daughter's shoulder got stuck behind her pelvic bone, which resulted in her daughter Eva's left arm being paralyzed.

Though Rohe was working as the physician communications lead for Children's Healthcare of Atlanta (CHOA) at the time, and she and her husband had taken birth education classes, she says she went into childbirth with little understanding of the types of injuries it could entail. She had never heard of the condition that left Eva's arm paralyzed—brachial plexus birth palsy (OBPI). She didn't know if the injury was temporary or permanent and had no idea what types of therapy or treatment to pursue.

In looking for answers, Rohe discovered that childbirth injuries are not tracked on a state or national level. "Maternal mortality is broadly studied," says Rohe. "Georgia has a maternal mortality review board—it's one of the few states that does—but childbirth injuries are rarely discussed."

So she began what would become the ROBIN Project, which stands for Reducing OBstetric INjury. Connections she had made at CHOA and at Rollins as a student and as a member of the alumni association helped her get her project off the ground.

The first order of business was to determine how common OPBI is in Georgia. At her request, the Georgia Department of Public Health (GDPH) did a study looking at birth records and found 43.3 out of every 100,000 live births had reported severe birth injuries, including OPBI. However, OPBI is often not diagnosed until six to eight weeks after birth, so it is often absent from birth records. Eva's birth record listed only "floppy arm."

To draw a more complete picture, Rohe and a fellow Rollins alum Allan Peljovich 89MPH secured funding to do a statewide study using data from GDPH and the Department of Community Health, which administers Medicaid. "It will be the first of its kind in the country because we are using

reimbursement codes instead of looking at electronic birth records," says Rohe. "We hope to use that data to inform practice and policy."

Many infants are referred to treatment late or referred to the wrong specialist, for example. Babies with OPBI need to see a pediatric orthopedic specialist. Most women use up the 12 weeks allowed under Family and Medical Leave Act during maternity leave, but mothers and infants who suffer birth injuries may require frequent and recurring medical and therapy visits for many months or years. And insurance can be hard to navigate—one mother told Rohe her insurance company labeled her baby's OBPI as a preexisting condition and initially refused coverage.

"If we can get reliable data on birth injuries, we can make sure babies are being referred to treatment earlier rather than later. Perhaps we could inform policy on FMLA leave and insurance coverage. Eva had her first surgery at six months and is still in regular therapy. The whole goal is to make sure parents are getting the appropriate information they need," says Rohe.

In the meantime, Rohe has already raised awareness of the issue. Working with both houses of the Georgia Legislature, she was able to have March 16 designated Birth Safety Awareness Day. Unfortunately, March 16, 2020, was also the day that government offices closed for the COVID-19 pandemic, so the inaugural event at the state capitol had to be canceled. "That was disappointing, but it was inspiring to see both sides of the political spectrum come together to designate this day," says Rohe. "Birth safety is something everyone can agree on."

Rohe is currently director of communications for the National Association of Chronic Disease Directors, and she works on the ROBIN Project in her free time. Eventually, however, she would like to register the project as a nonprofit and expand its scope beyond OBPI to include all birth injuries. "OBPI is sort of the canary in the coal mine," says Rohe. "It's obviously personal for me, but it can also serve as an indication of the incidence of other birth injuries. This work is how I deal with the fact that Eva's recovery is so unknown. I don't know what her life is going to be like. Working on the ROBIN Project helps me cope." ■



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