

ROLLINS

SPRING 2023

EMORY | Public Health

FUELING A *SCHOOL'S* *GROWTH*



MESSAGE FROM THE DEAN

A Year of Great Progress, Amid Great Challenges



Just before my planned start as dean, the U.S. Supreme Court overturned *Roe v. Wade*, one of the most consequential public health decisions in decades.

Doctors, nurses, clinics, and public health professionals—myself among them—struggled to untangle what the ruling would mean for the reproductive health of millions of women and their families and communities. In the 12 months since, the challenges to public health have continued. The fate of medication abortion remains uncertain. Maternal mortality rates continue to be high, particularly here in Georgia. More people are struggling with mental health and substance use. Transgender youth in certain places have lost access to evidence-based services. And sadly, the gun violence epidemic in the U.S. has continued to worsen, with more than 250 mass shootings so far this year—a recent victim of which was a beloved colleague of many here at Rollins.

Amid these challenges, our Rollins community has remained tenacious in its efforts to improve health for all as well as nurture our own community. From my first day, I've been inspired by the caliber of people at Rollins and grateful for the kindness, generosity, and passion of our faculty, staff, students, alumni, and donors. It is wonderful to be part of a school where people love what they do, where new ideas are celebrated, and where a shared motivation to make a difference permeates all of our activities.

I have been personally touched by the warm welcome, kindness, and openness to change in this past year. For my family, the transition from our old professional and personal communities in Baltimore, where we spent over 20 years, has been very hard. The Rollins community has shown empathy, enthusiasm, and optimism for the future ahead, confirming the wisdom of our decision to take this journey. There is no other place like Rollins.

As a collective community, we should all be proud of what we've accomplished in the past year and where we are headed as a school of public health.

WE ARE PREPARING TO LAUNCH OUR NEW STRATEGIC PLAN.

I am grateful to everyone in our internal and external communities for their feedback during the strategic planning process. I'm excited to kick off our ambitious five-year plan this fall and genuinely appreciate the hard work of all of our colleagues engaged with the plan's steering committee and working groups who have worked tirelessly to pull our new plan together. This has been a broad school-wide effort, and I am excited to see our aspirations become reality!



WE HAVE EXPANDED OUR FOOTPRINT. As we look to the future of Rollins, the recently opened R. Randall Rollins building brings immense opportunities for continued research and academic excellence as we embark on new initiatives and grow our global influence. Donor support has always been critical to our success, and the Rollins legacy has enabled our school to grow and flourish. We continue to be grateful to all of our donors for their generosity.

WE ARE OFFERING MORE WAYS TO LEARN. From an academic perspective, in this past year, we moved to a fully online EMPH program and added a 4+1 degree program for epidemiology students. In the year ahead, we are thinking through a number of new additions and expansions to further enhance our academic offerings and reach a broader base of exceptional students who will become future public health leaders.

WE ARE UNRELENTING IN OUR WORK ON COVID-19 AND VACCINATION. Despite the progress we've made in controlling the spread of COVID-19, it is still very much an area of concern. Our community continues to work diligently through ongoing research, efforts to improve vaccine uptake, and collaborations, many of which fall under the umbrella of the work the Emory Alliance for Vaccine Epidemiology has done over the past two years.

WE CONTINUE TO FOCUS ON OUR AREAS OF EXCELLENCE AND ARE EXPANDING OUR EFFORTS IN PUBLIC MENTAL HEALTH, CLIMATE CHANGE, AND HEALTH EQUITY. We added a summer course in Public Mental Health to complement our certificate in this area and continue to pursue activities that will build on our expertise in mental health as a critical component of public health. Rollins faculty are also leading the university's Emory Climate Research Initiative, with emphasis on climate and health, addressing head-on the challenges ahead. Finally, the strategic plan will further highlight our commitment to health equity. I want Rollins to be known as the place to go if you want to do health equity and anti-racism work and where you can feel confident that all research, practice, and educational activities are grounded in our value of health equity. With the arrival of Dr. Chandra Ford this past January, joining an already robust set of faculty with eminence in health equity, we are well on our way.

WE ARE INVESTING IN AI. The benefits and concerns related to AI are on the minds of us all. I am excited about our opportunities for advancing existing areas of eminence with new hires and the introduction of new technologies and developments in artificial intelligence, while also addressing ethical challenges and honing our educational approaches in this evolving landscape.

WE REMAIN DEDICATED TO THE FIGHT FOR SOCIAL AND REPRODUCTIVE JUSTICE. Our researchers have numerous efforts underway to improve maternal health and save lives. We have built on the longstanding expertise and passion of our staff, faculty, and students in reproductive rights and maternal and child health to develop a brand-new MOOC aimed at providing educational and technical assistance across the globe. We're also working hard across the Woodruff Health Sciences Center to build a group

focused on maternal morbidity and mortality to move the needle on Georgia's abysmal record.

ALTHOUGH GREAT PUBLIC HEALTH CHALLENGES REMAIN, WE, THE ROLLINS COMMUNITY, ARE BETTER PREPARED THAN EVER TO ADDRESS THEM—TOGETHER.

I hope you will take a moment to read this issue of *Rollins Magazine*, where you can learn more about what we have been doing recently as a school to improve public health, find solutions, and inspire change. I am energized for the year ahead and can't wait to see what we will achieve together next!

M. DANIELE FALLIN, PHD

James W. Curran Dean of Public Health
Rollins School of Public Health
Emory University

NEW INITIATIVES

Together TakeMeHome expands HIV self-testing in the U.S.

By Brian Katzowitz

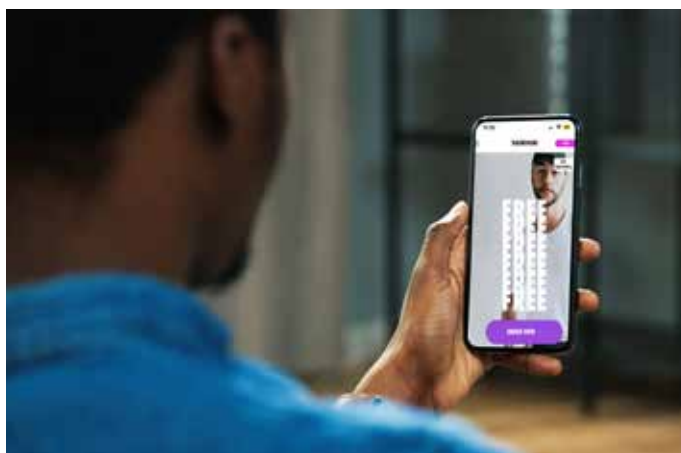


This March marked the launch of an Emory-led collaborative project, **Together TakeMeHome**, the largest nationwide HIV self-testing program to date.

The program, initiated in response to a decline in the number of HIV tests administered during the COVID-19 pandemic, is designed to increase awareness of HIV status in the U.S. by making HIV testing more accessible, convenient, and discreet.

Together TakeMeHome provides free HIV self-tests by mail to residents of all 50 states and Puerto Rico who enroll through its website. The HIV self-tests are Food and Drug Administration-approved OraQuick (OraSure Technologies Inc.) devices that use mouth swabs and take only 20 minutes to get a result.

Visitors to the Together TakeMeHome website will also find information and resources on using the self-test, what to do based on the result, and how to access other services related to HIV prevention and overall sexual health. Trained staff will be available to provide referrals to HIV prevention and care services, including pre-exposure prophylaxis (PrEP), the medicine that prevents HIV.



“Our goal is to provide up to 1 million HIV self-tests over the five-year program,” says **Travis Sanchez**, DVM, MPH, professor of epidemiology and the program's executive director. “By giving people an easy option to know their HIV status, Together TakeMeHome can help people, particularly those disproportionately affected by HIV, take this first important step in preventing and treating HIV.”

Together TakeMeHome involves several organizations, including Building Healthy Online Communities (BHOC), Signal Group, Orasure Technologies, and NASTAD (the National Alliance of State and Territorial AIDS Directors).

The project expands on BHOC's TakeMeHome HIV self-testing program and on a national demonstration project that took place in 2021 when Emory, BHOC, and other partners worked with the Centers for Disease Control and Prevention to distribute 100,000 free HIV self-tests in eight months.

Together TakeMeHome distributed more than 175,000 HIV self-test kits across all 50 U.S. states, Puerto Rico and Washington, D.C. during its first phase and preparations for the next phase are currently underway. ■

EMORY GLOBAL DIABETES RESEARCH CENTER SHARES ITS STRATEGIC PLAN

Shaping the Future of Diabetes

By Myra C. Patrick

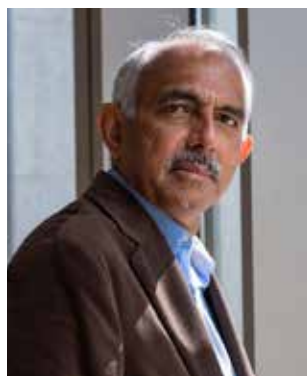


Globally, there are half a billion people with diabetes. In Georgia, approximately 1 million people have a diagnosis of diabetes and over 2 million Georgians have prediabetes, which is preventable from becoming full-blown diabetes—and a major concern worth addressing.

Recently, students, faculty, staff, and partners from around the globe gathered in the R. Randall Rollins Building’s Margaret H. Rollins Room to show their support in fighting the global (and local) epidemic during Emory Global Diabetes Research Center’s (EGDRC) 2023-2028 strategic plan launch.

The strategic plan outlines EGDRC’s vision, growth opportunities, priorities, and four scientific research pillars, one of which is artificial intelligence (AI) and technology, to drive the center forward into the future.

AI has become widespread across the arts and sciences, including public health. EGDRC aims to become a leader in AI and diabetes while ensuring that AI promotes equity, one of the center’s guiding principles.



K.M. Venkat Narayan

“We see the growth of diabetes technology and AI as a promising frontier and plan to be pioneers in this area,” says **K.M. Venkat Narayan, MD**, director of the EGDRC and Ruth and O.C. Hubert Professor of Global Health. “Technology, including AI, is powerful and has major applications for diagnosis, prediction, prevention, and

health care delivery. But it needs to be advanced in a manner that promotes equity.”

Collaboration is a significant aspect of the center’s foundation, allowing it to reach populations across the globe. In India, one of the world’s fastest-growing tech hubs, EGDRC has 24 partners, many of which are long-term collaborators, like the Madras Diabetes Research Foundation. Other important, longer-term



collaborations include the All India Institute of Medical Sciences and the Centre for Chronic Disease Control (CCDC) in New Delhi.

At the launch of the strategic plan, **Dorairaj Prabhakaran, MD, DM**, director of CCDC, spoke about his partnership with EGDRC, describing it as one of the most fulfilling collaborations he has been involved in over the past 15 years.



Dorairaj Prabhakaran

Mohammed K. Ali, MD, MSc, co-director of EGDRC and William H. Foege Distinguished Professor of Global Health, notes that these collaborations share the same key characteristics: a passion for improving health through sustainable solutions, mutual respect and trust, openness to feedback and disagreement, and accountability and collegiality.

“Strategic plans evolve with time and experience,” says Ali. “As this happens and EGDRC’s achievements grow, we plan on building the community of talented individuals engaged in diabetes and cardiometabolic health. Our goal is to challenge and improve the current paradigm of cardiometabolic health and well-being, and gain recognition both nationally and globally for our impact and legacy.” ■



Mohammed K. Ali

COMMENCEMENT 2023

Recognizing an Inspiring Class

By Kelly Jordan



It was a standing-room-only crowd in the George W. Woodruff Physical Education Center Auditorium on May 6, 2023, as family and friends from cities around the globe gathered to celebrate Rollins' 2023 graduating class.

"You signed up for this in the height of the coronavirus pandemic," said **Dean M. Daniele Fallin** during her opening address. "As a new dean, I can tell you, you are simply an inspiration."

INSPIRING REMARKS

Ravi I. Thadhani, MD, MPH, executive vice president for health affairs, spoke to the challenging and necessary role of the public health work force. "This afternoon after you remove your robes, and take off your hoods and caps, you will emerge as graduates of this incredible program and you will be asked to face emergencies," said Thadhani. "You are going to be dealing with emergent situations and complex health crises. Whether these are acute emergencies or complex crises, you have the tools to face them that you've acquired during your time here. Emory can declare that it prepares leaders in public health because of all of you."

Helene Gayle, MD, MPH, president of Spelman College and decorated public health leader, delivered a rousing commencement speech laced with humor that challenged students to, "stand for something in a world where it's easier to be against almost everything."

In speaking of her own massively impactful career, she noted her journey hasn't be linear, but that her convictions helped her remain true to herself and her personal mission. "Remembering your why goes hand in hand with perfecting your how," she said.



She urged students to identify their individual "why" and to approach their career paths with a sense of purpose and with a connection to their families, friends, peers, and support system at Rollins who have helped them along the way.

Student speaker **Sabrina Chow**, MPH, applauded her fellow graduates for their shared accomplishments and encouraged all to embrace the challenges ahead.

JOINING A GLOBAL NETWORK

This year, Rollins awarded 662 MPH and MSPH degrees, 32 dual degrees, and 32 PhD degrees. The age range of graduates was 23-64, with 82 percent identifying as women. Graduates represented 45 U.S. states and 27 countries, including Cameroon, Colombia, Gambia, Ghana, Haiti, Hong Kong, Indonesia, the Republic of Korea, Pakistan, Taiwan, Turkey, and Vietnam. Rollins alumni now number more than 12,000 with a presence in all 50 states and 100 countries.

Award winners for various achievements were asked to stand, including LEAD recipients, those honored at the first annual RSPH Awards Ceremony, and winners of the Shepard Award (Zora Kesich, MPH) and Provost's Distinguished Teaching Award (Kimberly Bob Sessions Hagen, EdD).

NEW TRADITIONS

Fallin marked her first commencement ceremony

with a few changes to the run of show, including seating the school's department chairs on stage and giving them the opportunity to address graduates in their departments as well as incorporating a quick stretch break about an hour into the event.

To view a recording of commencement at vimeo.com/event/3324647/37447e8015 ■



CELEBRATIONS

Rollins Celebrates its One-of-A-Kind Community With First All-School Awards Ceremony

By Kelly Jordan



Faculty, staff, and students packed the Margaret H. Rollins Room in late April as Rollins community members convened for the school's first annual RSPH Awards Ceremony. An initiative led by the dean's office, the ceremony was established to bring people together across Rollins, provide a venue for public recognition, and celebrate the community's collective achievements at the end of the academic year.

The room was abuzz with anticipation as friends and colleagues from across the school gathered to celebrate, reconnect, and cheer each other on. Dean M. Daniele Fallin, PhD, kicked off the ceremony with a warm welcome and thank you to all present, noting the collective excellence of everyone at Rollins.

"Before joining Rollins as dean, I kept hearing how incredible the people at Rollins are," said Fallin. "And, after a year as dean, I can confidently say the rumors are true. What an exceptional community we have!"

NEW AWARDS HONOR FACULTY, STAFF, AND STUDENTS

In addition to honoring faculty, staff, and student recipients of longstanding department, university, and organizational awards, the event also introduced a number of newly developed awards as envisioned and led by members of the staff council, research advisory committee, and practice award committee, with a special emphasis on highlighting the contributions of staff.

Newly created school-based awards include these honors:

- Early Career Research Excellence Award
- Senior Research Excellence Award
- Faculty DEI (Diversity, Equity, and Inclusion) Leadership Award
- Faculty Practice Award
- Dean Surbey Staff Award of Distinction
- Award for Excellence in Research or Practice
- Staff Excellence Award in Leadership
- Staff DEI Leadership Award Innovation Award
- Student DEI Leadership Award



A TRIBUTE TO THE GANGAROSA FAMILY

Among the event's highlights was a heartfelt tribute from Deborah McFarland, PhD, associate professor of global health and health policy, recognizing the exceptional legacy of the late Eugene J. Gangarosa, one of the school's founders, and extending a public thank you to his wife Rose and son Raymond, who were in attendance.

STANDING OVATION FOR THE TECHNOLOGY TEAM

The entire room jumped to their feet and gave a standing ovation to this year's Innovation Award winner, which went to the Technology Services Department for their extensive work implementing and supporting the IT infrastructure needs of the entire Rollins community, particularly related to the opening of the R. Randall Rollins Building in fall 2022.



Donghai Liang with Dean Fallin

2023 RSPH AWARD WINNERS

DEPARTMENTAL TEACHING AWARDS

- **Heather Bradley** – Department of Epidemiology
- **Jeremy Grey** – Executive MPH Program
- **Umed Ibragimov** – Department of Behavioral, Social, and Health Education Sciences
- **Donghai Liang** – Gangarosa Department of Environmental Health
- **Razieh Nabi** – Department of Biostatistics and Bioinformatics
- **Richard Sanders** – Department of Health Policy and Management
- **Melissa Young** – Hubert Department of Global Health



FACULTY PRACTICE AWARD WINNERS

Moose Alperin and Allison Chamberlain

THOMAS F. SELLERS JR., MD, AWARD FOR SUPPORT OF FACULTY COLLEAGUES IN PUBLIC HEALTH

Michele Marcus

EARLY CAREER RESEARCH EXCELLENCE AWARDS

Donghai Liang and Melissa Young

SENIOR RESEARCH EXCELLENCE AWARD WINNERS

Tom Clasen and Neel Gandhi

AWARD FOR EXCELLENCE IN RESEARCH OR PRACTICE

Shirin Jabbarzadeh

STAFF EXCELLENCE AWARD IN LEADERSHIP

Angie Campbell



INNOVATION AWARD

Technology Services Department



DEAN SURBEY STAFF AWARD OF DISTINCTION

Erin Cahill, Eve Rose, Kent Tolleson, and Joanne Williams



FACULTY DEI LEADERSHIP AWARD

Whitney Rice

STAFF DEI LEADERSHIP AWARD

Rachel Corbett



STUDENT DEI LEADERSHIP AWARD

Stephanie Woodson

ROLLINS SCHOOL OF PUBLIC HEALTH STUDENT GOVERNMENT PROFESSOR OF THE YEAR AWARD

José Binongo

ROLLINS SCHOOL OF PUBLIC HEALTH STUDENT GOVERNMENT STAFF MEMBER OF THE YEAR AWARD

Noni Bourne and Ruwenne Moodley

LIVINGSTON SCHOLARS FUND

- Katherine Anderson – Behavioral, Social, and Health Education Sciences
- Steph Bellman – Environmental Health Sciences
- Melissa Chapnick – Nutrition Health Sciences
- Carol Liu – Epidemiology
- Sonia Maria Tetlow – Health Services Research and Health Policy
- Shiyu Wang – Biostatistics and Bioinformatics

EMORY WOMAN'S CLUB SCHOLARSHIP

Nicole Stephan

EUGENE J. GANGAROSA, MD, STUDENT AWARD FOR EXCELLENCE IN INTERNATIONAL HEALTH

Brian Tolleson

JAMES W. ALLEY, MD, STUDENT AWARD FOR OUTSTANDING COMMUNITY SERVICE

Quasheba Allen ■

COVER STORY

Fueling a School's Growth

The transformative impact of the Rollins family's support

By Martha Nolan • Illustration by Charile Layton



When the Emory Master of Public Health program became a school in 1990, no one could have predicted its phenomenal growth over the next 35 years, with three spectacular buildings, nearly \$128 million in research funding, and an endowment of almost \$200 million. But grow it did. That unprecedented trajectory would not have been possible without the generous and unwavering support of the Rollins family. Beginning with Wayne Rollins, a successful local businessman and philanthropist, and continuing with his children and grandchildren through the O. Wayne Rollins Foundation, the family has provided transformative philanthropic support that allowed the school that bears its name to flourish.

“Over the years, the Rollins family has built for us the most impressive physical footprint of any school of public health in the country,” says Kathryn Graves, MEd, MPH, senior associate dean of advancement and alumni engagement. “At the same time, they have been instrumental in helping us build an endowment to sustain the school in perpetuity. It would be impossible to overstate the impact the Rollins family has had on our school. We simply would not be where we are today without them.”

While the Rollins family's latest largesse comes in the form of the newly opened R. Randall Rollins Building, its support dates to the school's very first days, when what would become the Rollins School of Public Health became the first new school at Emory in more than 70 years. Wayne Rollins, whose philanthropic support of Emory began in the mid-1970s, heard that the new school needed a place to call home and said he wanted to help make that happen. Unfortunately, he died unexpectedly in 1991, before building plans had been finalized.

Determined to carry out his vision, Wayne's wife, Grace, and sons, Randall and Gary, provided funding for a building named for their mother, Grace Crum Rollins. Shortly before the new facility opened in late 1994, the university named the school for the Rollins family in honor of their generosity to Emory.

When the rapidly growing school found itself in need of more space, the Rollins family once again stepped up, helping to fund the



R. RANDALL ROLLINS BUILDING



When the Grace Crum Rollins Building was built, Associate Dean Fred Kennedy made sure the address was that of the program's former home—the little white clapboard house located at 1518 Clifton Road, NE



Gathered in front of a 1990 photo of O. Wayne and Grace Crum Rollins are (l-r) Henry Tippie, O. Wayne Rollins Foundation trustee, Gary Rollins, Amy Rollins Kreisler, Randall Rollins, and Pamela Rollins.

Claudia Nance Rollins Building, named after the mother of Wayne Rollins. The building opened in 2010, more than doubling the physical size of the school.

Twelve years later, in the fall of 2022, the school opened the doors of its third building, made possible by a \$65 million gift from the Rollins family. “The R. Randall Rollins Building, along with the Grace Crum Rollins and Claudia Nance Rollins Buildings, creates a unified public health campus unlike any other,” says **M. Daniele Fallin**, PhD, James W. Curran Dean of Public Health. “These magnificent buildings, and the people and activities that occur within them, make clear the extraordinary impact and legacy of the Rollins family.”

A CROWNING JEWEL

The R. Randall Rollins Building increases the school’s footprint to more than 500,000 square feet. The elegant 10-story building, which is filled with natural light, houses 10 new classrooms, faculty offices

for the Hubert Department of Global Health, a training room, multifunctional collaboration and event space, and three outdoor terraces.

Every aspect of the building’s design was intentional, building off lessons learned from the previous two facilities. “All of the classrooms and spaces were designed for ultimate flexibility,” says **Vanda Hudson**, senior director of fulfillment services. “The

furniture is flexible and easily moveable so the spaces can be

configured for a variety of work—open or closed, quiet or collaborative. Additionally, there is no shortage of conference rooms and group study rooms in the new space, providing our community with plenty of options when it comes to meeting or studying.”

The latest technology has been embedded throughout the building to foster that flexibility, perhaps most noticeably in the lobby. That is where the Pulse digital signage system resides—a series of multiple interactive monitors used for floor-to-ceiling digital storytelling. “The Pulse is very stylish and is the centerpiece of the audio-visual technology we’ve implemented in the building,” says **James Leonard**, chief information officer.

Classrooms and other spaces are equipped with technology to support maximum flexibility so they can accommodate in-person classes, remote learning, or a hybrid option. Students and faculty can wirelessly share screens from their laptops on large room monitors, and equipment captures audio and, if desired, video so lectures can be referenced later or archived.

The new building includes a dedicated training room, long on the school’s wish list. The Deborah A. McFarland Global Training Room is outfitted with multiple screens and flexible furniture, giving



Vanda Hudson, Dean Surbey, and Erin Cahill posing during a tour of the new R. Randall Rollins Building.



it the ability to be easily transformed for multiple learning situations. Named for a longtime faculty member, this room is meant to accommodate single- or multiple-day trainings hosted by Emory groups or other community organizations.

Also, the R. Randall Rollins Building was designed with hospitality in mind. “One of the guiding principles in the design phase was to make the building welcoming to the broad community of



An oil painting of R. Randall Rollins.



students, staff, faculty, and external partners,” says Hudson. “And we see it happen daily. I’ve seen nursing students gathered in a student lounge area. A research team from the O. Wayne Rollins Research Building came over to find a spot to meet and work. You can find people from all over the university gathering in small groups all around the building”

Another guiding design principle was integrating all three buildings to form one Rollins community. Buildings are connected by bridges and tunnels on the first floor, plaza level, and lower level. Facilities are deliberately distributed among the three buildings.

“The design creates ‘strategic inconvenience,’” says Hudson. “For example, the labs are in the Claudia Nance Rollins Building. The Rollins Café is in the Grace Crum Rollins Building. Dancing Goats Coffee and the student center are in the R. Randall Rollins Building. So, everyone ends up moving through all three buildings rather than remaining isolated in one small area, which builds a sense of community.”



INVESTMENTS IN PERPETUITY

While buildings are the most visible and concrete manifestations of the Rollins family’s generosity, support for the educational and research mission of the school through endowments has been equally transformative. In early 2022, the O. Wayne Rollins Foundation pledged its most generous financial commitment to the school to date—\$100 million to establish two endowment funds.

The Rollins Fund for Faculty Excellence is dedicated to recruiting and retaining exceptional senior faculty by nearly doubling the number of the school’s endowed faculty positions and by providing early career support for Rollins assistant professors. The Rollins Fund for Student Success will increase the number of merit scholarships given to public health students. This fund may also provide students with career-enhancing experiences through the Rollins Earn and Learn work-study program and global field experiences.



Last year’s landmark gift is but the latest in endowment support. The family funded the O. Wayne and Grace Crum Rollins Endowment, which provides the dean flexibility in responding to the school’s highest priorities and has enabled the endowment of three department chairs and six assistant professors. These positions allow seasoned faculty the freedom to grow their research and junior faculty the opportunity to launch their research careers.

In addition, the family has honored friends by naming the following positions: the Michael M.E. Johns Distinguished Professor in Health Policy, the Wilton Looney Distinguished Professor in Cardiovascular Research, and the Stephen D. Clements Jr. Distinguished Professor in Cardiovascular Disease Prevention.

After 9/11, the family established the Center for Public Health Preparedness and Research, which has been active in responding to the COVID-19 pandemic and other man-made and natural disasters. In 2018, the Rollins family established the Rollins Distinguished Professorship in Substance Use Disorders.





These endowments have been transformative for faculty recipients. **Tim Lash**, DSc, MPH, the O. Wayne Rollins Distinguished Professor of Epidemiology and chair of the Department of Epidemiology, has used the funds to support doctoral students in research that is creative but not funded by grants. For example, one of his doctoral students is looking at whether the onset of the pandemic reduced adherence to endocrine therapy in breast cancer patients in Georgia.

“A gap in endocrine therapy can increase the risk of recurrence, and with everyone staying home during the pandemic, we wanted to see if that impacted treatment adherence,” says Lash. “The study is too specific and small to be funded, but it’s very important.”

Lash also uses his endowment to support faculty in career development and leadership courses. “Having the ability to use these funds to make differences in things that would otherwise be hard to support elevates the whole department,” he says.



Alvaro Alonso, MD, PhD, MPH, is the Stephen D. Clements Jr. Distinguished Professor of Cardiovascular Disease Prevention. The position was named to honor the eminent cardiologist who has long cared for the Rollins family. Alonso uses the funding to support doctoral students in their studies to advance cardiovascular disease prevention.

“These funds allow students to attend conferences where they can present their work and network with colleagues,” he says. “The funds support research for which they would otherwise not be able to

get funding. These things really contribute to their development and their ability to be successful down the road.”

Alonso also uses the endowment funds to obtain research data. For example, he is currently studying the link between gestational diabetes and the future risk of cardiovascular disease.

“With just the data we have available at Emory, I would not be able to do this study,” he says. “But funds from the Rollins family allow me to obtain data from a vast database—in this case, we looked at 200,000 people who have been pregnant. Having access to this kind of data allows us to answer questions we otherwise would not be able to.”



As the Rollins Distinguished Professor of Substance Use Disorders, **Hannah Cooper**, ScD, believes having such a role at a school of public health is a landmark. “For so long, substance use disorders have been treated as criminal and legal issues, not public health issues,” says Cooper. “But Rollins has always been an outlier, with Jim Curran, who focused on HIV, including those who acquire it through drug use, as a public health issue, and Claire Sterk, who put the health of the people who use drugs at the center of her academic career. The Rollins investment in this issue built on the strengths Jim and Claire established and propelled us to become a leader in this critical area.”

More concretely, the endowment has allowed Cooper and the school to become leaders in the field of substance use disorders in several ways. Cooper has a leadership role in Georgia’s Multi-Stakeholder Opioid and Substance Use Response Plan. She is currently working to build awareness and research around the role of drug use in driving maternal mortality. Georgia has one of the highest maternal mortality rates in the U.S., and the nation has one of the highest rates among high-income countries. What is often unnoticed, says Cooper, is the role drug use plays in these rates.

“In Georgia, the second leading cause of maternal deaths is overdoses,” says Cooper. “In some states, it’s the leading cause. I’ve been using some of that important Rollins endowment to build up research programs to elevate evidence around drug-related harms during pregnancy and the postpartum period.”

The endowment has also allowed the school to establish

a predoctoral training program for students in substance use disorders, which currently supports five students.

“We would not be where we are today without the Rollins family,” says Fallin. “Their support of our facilities and our endowment has allowed us to attract and retain the brightest and most dedicated faculty, students, and staff. People around the world will live longer, healthier lives because of the investments the Rollins family has made in public health.” ■



NAMED SPACES IN THE R. RANDALL ROLLINS BUILDING



A number of named spaces mark the legacies of other influential donors, partners, alumni, faculty and staff. They include:

THE APPLEBAUM-PEABODY GLOBAL HEALTH IDEATION ROOM, given by Rollins Dean’s Council member Dr. Rhona S. Applebaum and her husband, Mark Peabody, whose funding addresses the global diabetes pandemic and the health benefits of physical activity.

THE ‘OHANA ROOM, established by Rollins Dean’s Council member Dr. Joan Penrose Cioffi to honor the memory of her late husband, Charles P. Freitas Jr., in recognition of his Hawaiian heritage and the special meaning of family that ‘Ohana evokes for the Rollins School of Public Health.

THE DEAN JAMES W. CURRAN CONFERENCE ROOM, named by alumni, faculty, and friends in honor of James W. Curran, Emory’s longest-serving dean and the longest-serving dean at a school of public health.

THE DEBORAH A. MCFARLAND GLOBAL TRAINING ROOM, given by Dr. Deborah McFarland, jointly appointed associate professor of global health and health policy and management. McFarland has long managed the Rollins Global Field Experience program and the William H. Foege Fellowships in Global Health.

THE ROGER W. ROCHAT, MD, and Susan Rochat Room, named in honor of Dr. Roger W. Rochat (one of the school’s earliest faculty members) and his wife, Susan Rochat, who together in 2002 founded Emory’s Global Elimination of Maternal Mortality from Abortion Fund at Rollins. The room is a gift from their daughter, Suzette Rochat Harris, and son-in-law Michael Harris.

THE MARGARET H. ROLLINS ROOM, named in honor of Margaret (“Peggy”) Rollins and her extraordinary loving partnership with her late husband of 67 years, R. Randall Rollins, who passed away on August 17, 2020, at the age of 88.

THE NIGERIAN ROOM honors students from the African Diaspora. Rollins alumnus and Dean’s Council member Dr. Michael Ugwueke, 86MPH, and his wife, Rebecca Ugwueke, named The Nigerian Room to provide students with a gathering place and a place of pride.

FEATURE STORY

Fighting the Maternal Mortality Crisis

How Rollins researchers are working to decrease the maternal mortality rate in Georgia

By Abigail Libers • Photography by Erik Meadows



If maternal mortality is an indicator of a nation’s health, then the United States is in bad shape. Of the wealthiest countries in the world, the nation has the highest maternal mortality rate—and it keeps getting worse. In 2021, maternal mortality (defined as a death during pregnancy or within one year of the end of pregnancy) rose by 40 percent in the U.S., with Black women dying at more than twice the rate of white women, according to a recent Centers for Disease Control and Prevention (CDC) report. While the pandemic certainly played a role in the uptick, the fact is, the U.S. maternal mortality rate has been climbing for decades.

The state of Georgia isn’t immune to the crisis. In fact, Georgia’s maternal mortality rate is among the worst in the country with 33.9 deaths per 100,000 live births, according to data compiled by the National Center for Health Statistics between 2018 and 2021. (For context, the national average is 32.9 deaths per 100,000 live births, per the 2021 CDC report.) Similar to the rest of the country, the numbers are worse for Black women: According to the Georgia Department of Public Health’s Maternal Mortality report, for the period 2018–2020, there were 48.6 pregnancy-related deaths per 100,000 live births among non-Hispanic Black women versus 22.7 pregnancy-related deaths per 100,000 live births among non-Hispanic white women.

Why is it so dangerous to give birth in Georgia? “The high mortality rate has a lot to do with structural and social conditions in our state, which include significant challenges accessing quality reproductive health care, systemic racial inequalities, and policy changes affecting pregnant and postpartum people,” says **Whitney Rice**, DrPH, MPH, Rollins Assistant Professor in the Department of Behavioral, Social, and Health Education Sciences and director of the Center for Reproductive Health Research in the Southeast (RISE).

Rollins researchers are working hard to improve the maternal



Illustration by Simona Bortis-Schultz



Whitney Rice



Carmen Marsit

mortality rate in Georgia, and, hopefully, the rest of the country. “We’re coming at it from all angles, from accessibility issues to the policies involved,” says **Carmen Marsit**, PhD, Rollins Distinguished Professor of Research and executive associate dean for faculty affairs and research strategy. Here’s a look at what Rollins researchers are working on now—and in the future.

IMPROVING ACCESS TO QUALITY MATERNAL CARE

When it comes to preventing maternal deaths, access to quality health care during pregnancy is crucial, but it can be difficult in a



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state like Georgia, where maternity care deserts are prevalent.

“In Georgia, the rate of OB-GYNs per residents in metropolitan areas is more than double that for non-metro areas,” says Rice. “Having to drive long distances to access care can carry health risks during and outside of pregnancy, and while this presents a challenge for everyone, it’s especially problematic for Black people, who are more likely to forgo care due to a lack of resources.”

Rural counties with a higher number of Black residents are also more likely to not have or lose access to obstetric care, notes Rice. All these factors increase the risk of maternal mortality.

One way to improve maternal care in rural areas (and beyond) is greater use of doulas, trained professionals who provide physical, emotional, and informational support to birthing people. Rice and her RISE colleagues have been working on a project that focuses on doula care during pregnancy.

One of their studies, published in *Sexual and Reproductive Health Matters*, showed how doulas were an essential part of health care teams during the pandemic and calls for doulas to be integrated into maternity care teams more broadly.

“Doulas play a critical role in elevating the patient care experience and can help bridge the gap in care that pregnant people in rural areas may experience,” says Rice. While doulas aren’t a replacement for medical care from a midwife or doctor, they can improve both physical and psychological outcomes for birthing and postpartum people, research shows.

Another barrier to accessing quality maternal care is recent policy changes like Georgia House Bill 481, which bans abortions after around six weeks of pregnancy. Being unable to access a safe abortion can have devastating consequences: A recent report from the Commonwealth Fund showed states that have restricted abortion have fewer maternity care providers, more maternity care deserts, and higher rates of maternal mortality and infant death, particularly among women of color.

Rice and her colleagues recently estimated what the potential consequences of Georgia’s early abortion ban could be. “Our findings show that nearly 90 percent of abortions that were

provided in the past would no longer be allowed under the current ban,” says Rice. “While this certainly affects all people who seek care, the groups disproportionately affected are Black people, young people, and those with less education.”

USING DATA TO INFORM POLICY CHANGE

In most U.S. states, maternal deaths are reviewed by Maternal Mortality Review Committees (MMRCs), multidisciplinary groups that look at clinical and nonclinical information to



Michael Kramer

more fully understand the circumstances of a death and develop recommendations to prevent similar deaths in the future. MMRCs are important because they share their recommendations with stakeholders—such as hospitals, state and local policy-makers, and health care providers—who can implement system or policy changes.

For the past five years, **Michael Kramer**, PhD, associate professor of epidemiology and director of the Emory Maternal and Child Health Center of Excellence, has been developing a tool called the Community Vital Signs Toolkit to help MMRCs better understand the lives of the women who died. “It’s a data dashboard that creates a visualization of attributes of their lived experience that are important to maternal mortality, like how many OB-GYNs there are per capita, the prevalence of drug overdose mortality, the rate of housing instability, the number of violent crimes, etc.,” explains Kramer. “The goal is to get these factors into the conversation so the committee’s recommendations can reflect them.”

The tool was rolled out nationally in summer 2022 and is currently available in 35 states.

Users can enter any U.S. street address, and the tool generates a visualization (in PDF form) of the risk factors in that person’s area.

“It helps the committees see, for example, that maybe a woman didn’t make it to her follow-up doctor’s appointment because she lives in an area with poor transportation,” Kramer explains. “Maybe she needed a home nurse visitation.”

Sarah Blake, PhD, MA, associate professor of health policy and management, has been supporting the roll-out of the Community Vital Signs Toolkit. She’s helped train users in

different states to use the tool and is now evaluating how they're building it into their MMRCs. For the past three years, Blake has served on Georgia's MMRC as a health services researcher and Medicaid specialist. She meets with the committee every few months to review cases.

"It's critical to my work because it helps me feel like I'm making a contribution and it informs my research," says Blake, who helped petition the state legislature to extend Medicaid for low-income pregnant women from six to 12 months. "It's one of the most successful things we've done."

Blake also works with the CDC to educate its state-based Maternal Mortality Review Information Application (MMRIA) teams. MMRIA is a standardized data system that MMRCs use to understand maternal deaths—and hopefully prevent them in the future. "I show states how to interpret and use their data," explains Blake. "That way, they can make meaningful policy changes."

In her work with the CDC, Blake has also done analyses of maternal mortality data examining barriers to health care. "We've looked at pregnancy-associated overdose deaths, cardiac deaths, and mental health-related deaths," she says. "The aim is to help the CDC understand from a qualitative lens what shapes women's lives before they experience a maternal death. It's important to understand what was going on in their lives to prevent other women from dying."

Gathering and analyzing data is at the core of what many Rollins researchers do—but their results are only as good as their data. That's why **Emily Peterson**, PhD, assistant professor of biostatistics, focuses her work on accurately capturing maternal deaths.

"There's a high rate of misdiagnosed maternal deaths," she says. "Diagnosing them is not as straightforward as diagnosing a heart attack, for example." To be considered a maternal death, it must be related to complications of pregnancy (versus a pregnant woman dying in a car crash, for instance).

Previously, Peterson collaborated with the World Health Organization to analyze maternal deaths on a global scale and found that on average, across all countries, 50 percent of maternal deaths were misclassified or undercounted. Last year, in collaboration with the CDC, she started looking at the levels of misclassification in the U.S.

"It's important because if you're trying to create policy, you need to base it on an accurate picture of what's happening in that area," Peterson explains. "And the way you get an accurate picture is by assessing how good your data are. If your data are perfect, you're done—but our data aren't perfect."

CREATING A BETTER FUTURE

Rollins researchers are committed to doing everything they can to reduce the maternal mortality rate in Georgia and the rest of the country. "I see this as the health challenge of our generation," says Marsit. "Maternal health ties to child health, and that's our future. If we aren't thinking about how to have healthy moms and babies,



Sarah Blake



Emily Peterson



Kathleen Adams

then we're putting our future at risk.”

Fortunately, a lot of research is coming down the pipeline. Rollins researchers have partnered with Emory School of Medicine on a National Institutes of Health-funded study examining the rates and explanatory factors behind Georgia's severe maternal morbidity rates. **Kathleen Adams**, PhD, professor of health policy and management, is leading the effort to separate out the reasons for the differences between non-Hispanic Black women and non-Hispanic white women. “If we can reduce morbidity, then we can potentially reduce the mortality rate,” she says.

Hannah Cooper, ScD, professor of behavioral, social, and health education sciences and Rollins Distinguished Professor of Substance Use Disorders, has proposed research on substance use and harm reduction during pregnancy. If funded, her project will address an important issue since drug overdose is a leading cause of maternal deaths in the U.S. This fall, Blake will work with the Georgia Department of Public Health to look at the impact of COVID-19 on maternal mortality.

Based on work through RISE, Rice and her colleagues are writing up new findings from their evaluation of U.S. state-level contraceptive access policies—specifically how they may alleviate or worsen preventive health inequities. “We also have important work under way to make reproductive health education—particularly about abortion— more broadly accessible, and we're doing research to evaluate those efforts,” notes Rice.

Undoubtedly, working to reduce the maternal mortality rate can feel like an uphill battle. But for Rollins researchers, passion fuels the work. “We're all angry about what's happening to moms in Georgia, and we're especially outraged at the racial and ethnic disparities,” says Blake. “We want to change that, but we have to do it based on evidence. We need more than our hearts and our passion—as researchers, we need to provide proof, ask the right questions, and get the right data.”

For Rice, what keeps her going is knowing that reproductive health research can inform important stakeholders and hold them accountable to ensure that women achieve reproductive well-being, whatever that means to them. “I want to see that for my daughter, my family, my friends, my colleagues—everyone,” she says.

Her work in reproductive health also has an ancestral imperative. “My grandmother was a family planning nurse, and she was bold, brave, and committed to the work,” says Rice. “I've always felt my work in this field was in connection to her and what she strove for.” ■



Hannah Cooper

FEATURE STORY

Brave New World

How Rollins researchers are embracing evolving technologies, from artificial intelligence to data apps, to combat biases, improve health equity, and transform public health

By Muriel Vega • Photography by Erik Meadows



Artificial intelligence (AI) and technology are rapidly transforming how we create and process data. AI programs such as ChatGPT, a computer program that simulates conversation with people, are changing the landscape across different disciplines and industries.

In the realm of public health, AI is providing new ways to remove biases, explore personalized medicine and targeted interventions, and dig deeper into causality. It requires researchers to move quickly yet thoughtfully and consciously. While AI can open doors to understanding bias in at-risk communities, it can also create significant ethical dilemmas.

“When we talk about AI and how it’s used, especially in public health, there are tremendous positives to it, but there are also lots of low-hanging dangers that can come from it,” says **Robert Krafty**, PhD, chair of the Department of Biostatistics and Bioinformatics. Among these dangers: not accounting for racial bias and blindly trusting patterns in the data.

Training is key to avoiding such pitfalls, he notes. Rollins prepares students to work in every facet of public health research and practice. New graduates, regardless of their focus, will need to “have a fundamental understanding of artificial intelligence and technology so that when they read the literature or think about how best to use evidence-based research to help their populations, they’re doing it from an informed perspective,” adds Krafty.

That’s where Emory University’s AI.Humanity Initiative comes in. This initiative focuses on the impact of AI on society as it integrates deeper into our lives to examine fairness, bias, ethical issues, consequences, and more. The initiative aims to inspire greater collaboration between departments and function as a



Illustration by Charlie Layton



Robert Krafty

recruiting tool for AI experts to increase learning and innovation.

As part of this initiative, Emory recently announced the Center for Artificial Intelligence Learning to promote AI literacy across campus. Beginning this fall, the center will offer year-round courses, workshops, and speaker visits to cover general AI literacy, data visualization, neural networks, cloud computing, and more.

Lance Waller, PhD, the center’s co-leader and professor of biostatistics and bioinformatics, believes the center will push forward Emory’s AI.Humanity Initiative to answer the question, “How does AI integrate into life or humanity?”

“It will help us to not only invest in the development of new algorithms, but to also understand how they can be applied in a range of settings, such as research, teaching, and service,” says Waller. “It will foster collaborations among researchers in the



Lance Waller

sciences, social sciences, and the humanities, including the Emory Center for Ethics, as we consider the impact of AI tools on humanity.”

LOOKING DEEPER INTO RANDOMIZED TRIALS

With AI in its infancy, researchers are proceeding cautiously to understand the data AI-generated modeling produces. One of the big issues then surrounds the question of how AI will be used. Will researchers use it to find patterns they want to see and act on those? Or will they be more thoughtful and use AI to address the harder questions related to underlying causes and structures, as well as avoiding inherent biases?



Hui Shao, PhD, associate professor of global health, is applying causal AI and machine learning methods in his precision medicine and public health research related to diabetes and multimorbidity.

Shao pointed out that randomized clinical trials were designed to answer certain questions, but the data itself has a lot of value past those questions and remains largely unexplored. Shao is revisiting those trials and applying machine learning algorithms to provide more insight into how treatment effects vary across different population subgroups with diabetes and other health conditions.

“It’s very easy for researchers to ignore some important subgroups that are not included as part of the protocol or part of traditional groups, like what if people with higher A1C (an average blood sugar level test to determine diabetes) respond better to the treatment? What if people with early signs of kidney failure respond worse to the treatment or are proven to have a higher risk for adverse events? Those modulating indicators are often ignored from the original protocol and not included as part of the trial standardized analysis. But those signals can be picked up by the AI,” says Shao.

By acquiring data from causal AI algorithms, Shao aims to develop more precise treatment plans and strategies to maximize health outputs and avoid unnecessary adverse effects. These trials include disease prevention for diabetes or hypertension, lifestyle interventions, and drug trials. With a solid foundation in medicine and pharmacoepidemiology, Shao possesses a keen eye for discerning supplementary data that could be extrapolated from various clinical factors.

Shao shares that kidney function, blood pressure, heart rate, BMI, and glucose levels can often serve as strong indicators for treatment responses. Those are often ignored from trials, but based on these further AI insights, we can tailor how the traditional practice in the clinic works to maximize health benefits and minimize harm.”

Shao and his team presented at the American Diabetes Association about the type 2 diabetes drug, Albiglutide. By reanalyzing randomized clinical trials and processing the data with AI, they found that liver function is closely tied to whether a patient will respond to the treatment.

“Patients should have an unimpaired liver function to benefit from Albiglutide,” says Shao. “If a person has early signs of non-alcoholic fatty liver disease, Albiglutide will not benefit them in terms of cardiovascular disease prevention.”

Shao shares that using AI helps uncover patterns in large amounts of data, especially in those randomized clinical trials. Still, he’s careful when reviewing all results. “AI-generated patterns should be cross-referenced with clinical content to determine if they have a solid foundation in pathology or physiology, as this would enhance the scientific validity of the findings,” says Shao. “Nonetheless, there may be instances where the results, although statistically significant, do not provide meaningful or interpretable insights, which could potentially compromise the study’s credibility”

It’s a thin line to walk to make sure the information is being used and interpreted correctly, but when the patterns are found valid, they can save lives and improve the outcomes of clinical practice. For example, Shao’s team put AI data work in a real-world scenario — providing prescription suggestions, leveraging their clinical drug trial work in collaboration with Tulane University. Every time they found how the heterogeneous treatment varied across patient subgroups, they fed the data to their AI algorithm, hoping that it would later be used as a

reference for clinicians when prescribing treatments.

One of those algorithms is the BRAVO (Building, Relating, Assessing, and Validating Outcomes) diabetes model, a machine-learning-based microsimulation model that accurately predicts diabetes comorbidities and complications. After collecting a large amount of population data, the AI model simulates the progression of diabetes with set equations over a period of time.

“While I’m very excited about what the capabilities of AI has, when it’s attached to the practice, when the patient is on the other side of the table, we need to proceed very cautiously and make sure we don’t over-interpret what the AI can bring us,” he says.

UNDERSTANDING BIASES IN AI DATA—AND HOW TO ELIMINATE IT

Razieh Nabi, PhD, Rollins Assistant Professor of biostatistics and bioinformatics, is developing causal methods to make better data-driven treatment and policy decisions. Focusing on causal inference, Nabi works on developing novel methodologies to understand cause and effect relationships when a randomized control trial can’t happen due to costs or other reasons.



Drawing insights from machine learning, statistics, and AI, Nabi thinks about counterfactuals, like what if the patient had taken a different treatment or started the treatment earlier, to draw causal conclusions from observational data. She attempts to understand the consequences of hypothetical interventions to quantify the causal effect of the exposure under study on the outcome of interest.

Nabi also uses causal inference to better understand different sources of bias in data, such as confounding bias, bias due to informative censoring and missing data, and discriminatory biases reflected in data due to historical patterns of injustice and inequality in our society.

Decision-making is what differentiates causal inference from predictive modeling, says Nabi.

As an example, consider the ChatGPT tool which tries to learn patterns in data and mimic them. It relies on a humongous amount of text data and tries to synthesize it and generate a set of new paragraphs based on spurious correlations, but the output is not necessarily factually correct.

“The problem with mimicking patterns in data is that they are not robust enough to tolerate perturbations (variations) or external interventions, and this is because such patterns do not account for confounding factors,” says Nabi.

Machine learning and AI operate under the assumption that there will be no changes to the input and the environment will always be the same. But when this assumption is broken, machine learning and these predictive models make mistakes.

For example, in medical imaging, AI often performs better predictions than humans when identifying whether a skin lesion is cancerous. But, once a disruption is introduced into the model—i.e., the imaging angle changes, or the background is darker—AI makes a mistake as it cannot adapt quickly.

In her research, Nabi is working on predictors, that are not just correlated with the health outcome but cause the outcome. In essence, she’s working to tease apart spurious correlations from causation and find the best plausible way to quantify how much the outcome would change if these features changed in a cause-effect sense.

“This is really the core objective of causal inference—trying to understand the consequences of interventions or think about these counterfactual scenarios—and trying to quantify the relation between the outcomes and the treatments that we’re interested in,” says Nabi. “That’s very different from what AI predictive models do, which focus on finding patterns. Both are useful, but we have to be careful about how we are going to use them and in what settings.”

How then can AI be used to benefit public health? At the intersection of AI and causal inference is figuring out some of the underlying factors that bias our findings, and how to resolve them. Such steps are particularly important in health care, especially those affecting under-represented minorities.

“Despite the illusion of objectivity in algorithms, they rely on humans in every step of their development, from data collection to how methods are being deployed and used in practice as policies,” says Nabi. “The patterns that algorithms see will be the patterns of discrimination we’ve seen in society, so AI is going to learn that and reintroduce it.”

To avoid this, Nabi strives to ensure that these algorithms respect fairness norms. She first thinks about what it means for an algorithm to be fair concerning a sensitive attribute and an outcome that interests her and then forces it to respect it. “AI has a potential, and we’ve seen the potential, but we just have to be careful in how we unlock it,” she says.

INTEGRATING WITH EXISTING DATA APPS FOR QUICKER ADOPTION AND SCALABILITY

In recent years, research has focused on creating apps from scratch that improve scheduling with providers and screenings or create portals to access and order prevention goods, like condoms. But **Aaron Siegler**, PhD, associate professor of epidemiology, shares that these types of projects often aren’t viable past the

research stage or applicable in the real world.

“If you demonstrate in a clinical trial that an app works, what’s next? Are you going to start your own business? Maybe you hope an app owner reads your research. It’s hard,” he says. “If we build technology outside of existing systems, it takes a lot of work to bring it into those systems later.”

Siegler is trying a new approach by leading a technology-driven clinical trial to prevent HIV in China. Funded by the National Institutes of Health, the trial is testing use of a popular existing app to scale up pre-exposure prophylaxis (PrEP) intervention services. PrEP is a medication used to prevent HIV; when taken as prescribed, it reduces the risk of contracting HIV from sex by about 99 percent.

Siegler is piloting the intervention in partnership with the developers of Blued, a gay dating and social networking app with more than 12 million monthly active users in China. Through the pilot, the app offers a health portal for users to access PrEP intervention services and order preventive care items such as HIV tests, condoms, and lubricants.

The predominant health outcome, in this case, is not general use but the more specific use of telemedicine visits. Users can see a clinician virtually, go to a local lab for HIV testing, and receive PrEP prescriptions by mail.

Siegler notes that with a user base and business model in place, there’s a more direct pathway to scalability. Trust and access are two main factors in this clinical trial as well.

“People have been using an app for years that they trust. Part of the concept for this trial is working with something that already exists and reaching people where they are,” he says.

Users already spend a certain number of hours on their smartphones every day. Siegler’s approach provides them access to effective prevention interventions in a space where they’re already comfortable and present. Early clinical trial data shows promising usage and early uptake of PrEP services.

“If we can develop the right system for more collaboration between companies with health apps and researchers with the ability to build interventions and test them in clinical trials to understand the exact impact on public health—that’s huge,” says Siegler.

Krafty shares that AI and technology, like apps, can help us in two ways: at a macro population level, to understand where we need to shift resources and initiatives as we think about overlooked populations. In the same vein as personalized medicine, AI can also aid the spread of personalized public health. “We can tailor things to individuals and specific subpopulations. So, we can think about the good of the public, but by tackling each individual,” explains Krafty.

In his research, Krafty uses AI to address at-risk populations before they have clinical problems, specifically in adults ages 65 and older who are recently bereaved. With the help of wearable devices, he is collecting data on their moods and daily activities to monitor for major depressive episodes. Accounting for both



Aaron Siegler

observational and missing data, Krafty uses AI to process the data, see patterns to prevent users from having a major health event, and administer treatment.

On a larger scale, artificial intelligence is saving lives and improving health care for millions of people. “AI is making hospitals run more efficiently,” says Nabi. “It’s helping clinicians make decisions with more confidence by providing them with powerful tools to automate certain tasks and support and inform them. And it’s helping patients by personalizing treatments and improving delivery of care.”

When Emory’s Center for Artificial Intelligence Learning opens this fall, it will aid in these powerful endeavors by advancing the use of AI to solve problems ethically and drive research to improve and protect the health of patients and different populations, locally and globally. ■

FEATURE STORY

What Happens After the Vaccine Leaves the Lab?

Emory researchers develop new research alliance to ensure vaccine success from development to deployment

By Anthony Van Witsen • Photography by Erik Meadows



While some may have thought the book was closing on COVID-19 when the first vaccines were released in early 2021, a group of researchers at Rollins knew several important questions about vaccination remained. That same year, they created the Emory Alliance for Vaccine Epidemiology (EAVE), based on the idea that developing a vaccine is only the first stage in its long life cycle.

“We’re bringing together all of the expertise around understanding the impacts of vaccines in the real world,” says



Benjamin Lopman

to devise the best policies for dealing with it, along with vaccine hesitancy, the complex collection of motives and attitudes that lead people to delay or decline vaccination for themselves or their families. It also involves tracking vaccine uptake, the proportion of the population that receives their vaccination—not just for COVID but for a range of vaccines. Addressing these aspects requires asking questions beyond those raised in the traditional

EAVE co-director **Benjamin Lopman**, PhD, professor of epidemiology. For Lopman and co-director **Natalie Dean**, PhD, assistant professor of biostatistics and bioinformatics, the “real world” means looking at everything that affects how vaccines are used and how effective they are when first deployed on a widespread scale.

Facets include studying the dynamics of how a disease moves through a population and how



Illustration by Matt Chirworth



Natalie Dean

biomedical lab as well as bringing together a multifaceted team looking at vaccination issues from varying perspectives.

“There is both a biomedical mindset as well as a social and behavioral science mindset,” Lopman adds.

A NEW INSTITUTION FOR A NEW AGE OF VACCINES

Dean and Lopman believe the world is entering a new golden age of vaccine development due to incredible advances in biotechnology such as the use of messenger RNA to develop new vaccines with unprecedented speed. Such advances will help bring more vaccines to market more quickly, multiplying the number of questions that will need to be addressed once the vaccines gain regulatory approval and begin to be used. Another example is the

growth of home testing for COVID-19, which raises a new series of questions about how to evaluate vaccine efficacy.

“If you think about who is doing home testing,” Dean says, “it shifts the profile of cases over time. A lot of the milder cases now will just go unreported, and you have over-representation of severe cases. So, even with no change in how well the vaccine is working, you can see changes in what the vaccine appears to be doing because of changes in the reporting systems.”

EAVE has four interrelated missions: conducting impactful research, building a community of investigators in multiple disciplines, training the next generation of research leaders, and disseminating findings to policy-makers and the general public. To support these missions, the group brings together Emory researchers in epidemiology, biostatistics, computer science, biology, global health, and other disciplines to tackle vaccine effectiveness on multiple fronts.

In addition to Lopman and Dean, Rollins faculty and staff associated with the center include:

- **Robert Bednarczyk**, PhD, associate professor of global health
- **David Benkeser**, PhD, assistant professor of biostatistics and bioinformatics
- **Allison Chamberlain**, PhD, research associate professor of epidemiology
- **Brian Graaf**, MPA, project director of Lopman Research Lab
- **Jodie Guest**, PhD, MPH, professor and vice chair of the Department of Epidemiology
- **Michael Haber**, PhD, professor of biostatistics and bioinformatics
- **Samuel Jenness**, PhD, associate professor of epidemiology
- **Max Lau**, PhD, assistant professor of biostatistics and bioinformatics
- **Elizabeth Rogawski McQuade**, PhD, assistant professor of epidemiology
- **Kristin Nelson**, PhD, assistant professor of epidemiology
- **Lavanya Vasudevan**, PhD, MPH, CPH, associate professor of global health
- **Cynthia Whitney**, MD, MPH, professor of global health
- **April Zion**, MPH, project manager of EAVE

Researchers are encouraged to try new ways to evaluate vaccine performance or do research that pushes existing knowledge in new directions.

UNDERSTANDING BEHAVIOR'S ROLE IN DISEASE TRANSMISSION

Lopman is part of an international team studying the multiple ways disease is spread by human physical contact. The team is exploring answers to questions such as: How do contact patterns change with social distancing? What's the average number of contacts people have with social distancing compared to without?



David Benkeser

Do different groups of people have more or fewer contacts at different times?

“We’re studying the kind of human behavior that underlies infectious disease transmission,” Lopman says. “Two people coming into contact with each other is necessary for a pathogen to spread, so human behavior is critical. And surprisingly, we have very limited, very poor data on such behaviors.”

The social mixing research is under way on multiple fronts. One project, known as GlobalMix, is the first standardized, multisite study of how rates and patterns of social mixing differ across and within cultures. Researchers are gathering data in rural and urban areas of Guatemala, Pakistan, India, and Mozambique. In another project, employees in a large American corporations keep diaries and wear proximity sensors to learn how infectious diseases spread in business settings and whether teleworking changes that pattern. A third project looks at how disease spreads through social contact in nursing homes.

“This work is important for characterizing models that look at populations,” says Dean. “They’re looking at how folks mix across age groups. The challenge has been having limited data from different settings. People have been relying on results from one study for a long time. Ben and his group’s work is very important because they’re capturing data from different settings and different countries in different contexts.”

Early research conducted after the start of the pandemic found widely diverse patterns of social contacts. A survey of U.S. adults found, for example, that people had different numbers of contacts depending on whether they took place at school or in the workplace. Men had more contacts on average than women, while those identifying as Asian had fewer contacts than other demographic groups. Variations in behavior sometimes led to significant differences in disease exposure between various activities and groups. Lower income and minority groups were more likely to fall into the category of “essential workers,” which may have required them to return to work sooner.

Gathering information grows more difficult when researchers

try to collect social contact data across diverse countries and cultures. “There are a lot of nuances in asking people about their interactions and understanding people’s perception of what a contact is,” says Lopman. “And in societies where not everyone is literate, it’s challenging to know how to record this kind of data. Anthropologists are helping us do the studies in the most rigorous way and to collect data in a culturally appropriate manner. We’re capturing some of that diversity between urban and rural sites and from continent to continent.”

KEEPING DIFFERENT PEOPLE INFORMED IN DIFFERENT WAYS

Because human behavior is so diverse, people need different kinds of information about vaccines and need to acquire it in myriad ways. For Guest, searching for better ways to communicate the need for testing and vaccination has sometimes required her to reverse the conventional relationship in which experts impart knowledge and others are expected to listen.

“We all have different lived experiences,” Guest says. “There are reasons for many people to mistrust the medical community. And if we don’t acknowledge that in advance, we’re ignoring an incredibly important part of who someone is and how information is heard.”

This hard-won insight led Guest to meet with and study multiple and diverse groups throughout the COVID-19 pandemic to try to understand what kinds of vaccine information each required.

“We started in the poultry plant community in north Georgia in the Spring of 2020, where English as a primary language is one of the barriers to science communication,” she says. “In these communities, people have a lot of concerns about the collection of information that could put their livelihood and their ability to reside in north Georgia at risk. People did not want to test because, if they test positive, they will not be able to work and will lose their income.”

Guest believes the information environment throughout the pandemic—particularly social media—created a level of misinformation never experienced before. With everyone learning about the virus in real time, missteps occurred, particularly the tendency to say the same thing to everyone.

This “one-size-fits-all” approach did not work, Guest explains. “We started using the phrase, ‘What is someone’s why?’ For instance, why are you not interested in this vaccine? What are the barriers for you? As opposed to, here’s a requirement, go out and get vaccinated, period. That’s not a personal approach, and we needed to change that.”

Her conviction that these conversations made a difference led her to get involved with the sometimes messy reality of community engagement and deep listening. After spending time with poultry workers, her team partnered with Atlanta’s Mexican Consulate to find new ways to meet workers’ information and access needs. The team also did a multimonth survey of people experiencing homelessness in Atlanta’s Woodruff Park. Studying



Jodie Guest

this specific population required using different methods.

“People didn’t want a vaccine for different reasons than those we had seen when we had been working with in north Georgia’s poultry plants,” says Guest. “They were very concerned about potential side effects, how they would deal with those side effects. Specifically, there were concerns about who would watch their possessions.” In order to capture information like this, Guest and her team moved away from a structured set of questionnaires. “What we found worked best was having open-ended conversations and keeping track of the different themes that emerged.”

The pandemic and new biomedical technologies have created a changed environment for vaccines in the world beyond the lab. EAVE researchers believe that’s where some of the most important science is beginning to emerge.

“We need to think about the best way to use a vaccine, the best way to tackle these infectious diseases,” Lopman says. “That’s where EAVE will really make a contribution.” ■

PROFILE

Ken Thorpe steps down as health policy chair

By Martha Nolan



Kenneth Thorpe, PhD, is stepping down as chair of the Department of Health Policy and Management (HPM), a position he has held for 22 years. He will remain in the department as the Robert W. Woodruff Professor of Health Policy.

Thorpe was already a prominent leader in the field when he joined Rollins in 1999, having served as the U.S. deputy assistant secretary for health policy during the Clinton administration. James W. Curran, MD, MPH, who was dean of Rollins at the time, saw the potential Thorpe's reputation offered the school.

"I knew he would be a good recruiter, and he has been, bringing many prominent faculty on board," says Curran. "He greatly elevated the status of the department in what was still a fairly new school."

Under Thorpe's leadership, HPM faculty tripled in size, and research programs broadened to include health care reform, economics of disease and health care delivery, and development and evaluation of policies and practice aimed at disease prevention and health promotion in cancer, chronic disease, and mental health. The department expanded its original

MPH concentration in health policy to include a concentration in health management, an MSPH in health services research, and an accelerated one-year program in health care management. Thorpe established a doctoral program with concentrations in health services research and health policy. A newly proposed concentration in organizational theory is under review.

"Ken has been responsible for building the Department of Health Policy and Management into a nationally recognized program," says Michael Johns, inaugural Michael M.E. Johns, MD, Chair in Health Policy, emeritus executive vice president for health affairs at Emory, and emeritus president and CEO of Emory Healthcare.

When Thorpe served in the Clinton administration, he played a major role in crafting the ill-fated health care reform bill.

"I was in charge of crunching all the numbers," says Thorpe. "We had to calculate how much money we could raise to determine where we would allocate those dollars, how generous the subsidies could be, etc. I wasn't involved in any of the microdetails, but the budgeting process set the overall focus and scope of the proposed reforms."

Thorpe reprised this effort under President Obama, working on two major provisions of the Affordable Care Act. He currently chairs the Partnership to Fight Chronic Disease, an international coalition focused on highlighting the impact of chronic disease on health care spending and identifying prevention and care coordination strategies to address these issues.

Notes Johns, "Ken has made significant contributions to Emory, to the Rollins School of Public Health, and to the field of public health at large." ■



PHILANTHROPY

New Scholarship Strengthens Ties with Georgia Tech

By Martha Nolan



William (Bill) J. Todd, professor of the practice at Georgia Tech's Scheller College of Business, is determined to provide Tech alums with the opportunity to also become Rollins alums.

To this end, Todd recently provided a generous gift to establish The Todd Family Scholarship Fund, the first fund created to provide

scholarship support for Georgia Tech graduates admitted to Rollins.

"I think Georgia Tech students—whether they're in biology, neuroscience, biomedical engineering, or even business—have the qualifications, the motivation to serve, and the passion for the mission of public health," says Todd. "The schools of public health want them, and Rollins wants them in a big way because it has such a strong relationship with Georgia Tech. The barrier, however, seems to be financial aid. So, I'm trying to address that."

Todd has long been invested in Rollins. He has served on the Rollins Dean's Council since 2002 and was involved in elevating the Master of Public Health program to school status at Emory in 1990.

Todd's 40-year career focused on health care and technology management in Atlanta, commencing at Emory, where he spent 20 years at



Emory University hospitals, clinics, and the medical school, holding a variety of administrative posts, and ultimately serving as assistant vice president for medical administration at the Robert W. Woodruff Health Sciences Center. He later became president and CEO of the Georgia Cancer Coalition. During his tenure, more than \$300 million was invested to support research and prevention efforts to reduce cancer deaths statewide.

As a first-generation college student at Georgia Tech and a child of the '60s who wanted to "change the world," Todd attributes his interest in public health and his desire to use his management skills in a nontraditional industry such as health care to his job as a ward clerk at Crawford Long Hospital while still in school.

"I got to see how things operated. Sometimes they went very

well and sometimes they went poorly because of a lack of systems management. That's what Georgia Tech people do; we think in terms of systems," says Todd.

In 2011, he returned to Georgia Tech where every semester he teaches the Management in the Healthcare Sector seminar. James W. Curran, MD, MPH, dean emeritus of Rollins, is a popular guest lecturer in his class.

"It's a great treat for the students," states Todd. "Dr. Curran introduces so many students to public health who are then inspired to attend Rollins," states Todd.

The Todd Family Scholarship Fund will help Georgia Tech students achieve this goal. ■