ROLLINS SCHOOL OF PUBLIC HEALTH

Hubert Department of Global Health

2017

ANNUAL REPORT TO THE HUBERT FOUNDATION

PHOTO: Regina Zuniga 18MPH, Global Health

GEORGIA, USA: This team at the Ellenton Clinic in Moultrie demonstrates how effective public health intervention relies on academics, health providers, government agencies, and local partners all working together. To educate migrant farmworkers about the Zika virus and how to prevent it, students and professors from the Hubert Department of Global Health joined nurses, physical therapists, and dental hygienists convened by the Georgia Department of Public Health to conduct a community intervention.

A MESSAGE FROM THE CHAIR

As the chair of the Hubert Department of Global Health at Rollins, I often hear people define global health as the health of human populations beyond US borders. Throughout my career, I have learned that global health is not defined by borders but by its lack of boundaries. Global health is an approach to health, one that evaluates an individual not by the land on which he was born, but by what he needs to thrive. Global health is the vaccine that prevents an infectious disease, and the neighborhood infrastructure that prevents chronic illness. Global health is the domestic policies that define a country's healthcare values, as well the international accords that impact the planet's ecosystems. At its most sublime, global health is innovation, developed locally, refined globally, and applied universally.

Thanks to the generosity of the Hubert family, the Hubert Department of Global Health has grown into an academic community that mirrors the highest ideals of the field. We have tripled our total awards over the past five years, and our department now ranks first at Rollins in external funding. In a recent interview, Venkat Narayan described himself professionally as a "border crosser," and his words capture the achievements and ambitions of our global health faculty. We cross physical borders between territories and countries, and our teaching and research bridge multiple disciplines. Collectively, our work intersects with every department at Rollins and every unit within the Woodruff Health Sciences Center (WHSC). Among Emory's 33 members of the National Academy of Medicine, 10 are on the global health faculty. More than 40 of our faculty have joint appointments within Rollins and throughout the university, and their research interests encompass every area of public health. The WHSC recently established the Synergy Awards to inspire and support collaborative research projects across the health sciences at Emory. This year, of the 11 proposals selected to receive a Synergy Award, 10 involved Rollins faculty, and five held appointments in global health.

Our students also defy boundaries in their passion and their aspirations, embracing the notion of a world united by a fundamental right to dignity rather than one divided by arbitrary lines of nationality or social class. Many of them pursue combined concentrations in epidemiology or environmental health, or enhance their training with certificates offered through nine interdisciplinary programs. We host dual-degree students from medicine, nursing, and allied health, as well as from Emory's schools of theology, business, and law. Of the 64 Rollins students who engaged in fieldwork abroad through a Global Field Experience in 2017, more than three-quarters of them were in global health, as were the majority of the 46 recipients of the O.C. Hubert Fellowships in International Health.

My own career in global health evolved alongside the field. I began my residency in internal medicine at Emory in 1983, hoping to become a cardiologist. At the same time, the medical community was describing a new epidemic, AIDS, and the Centers for Disease Control and Prevention was a critical actor in the public health response. My interest and fascination with the HIV epidemic inspired me to pursue a fellowship in infectious diseases, and since then my career has touched on many different aspects of the crisis, from caring for individual patients at the Grady Ponce Center in Atlanta to influencing global policy at the World Health Organization's Global AIDS Program and UNAIDS. My experience in HIV/AIDS has taught me that global health transcends definition. Global health is equity and social justice. Global health is local health. Global health is public health at its best.

CARLOS DEL RIO, MD

Hubert Professor and Chair, Hubert Department of Global Health

ADDRESSING THE FACTS OF VACCINE SAFETY AND EFFICACY

Saad Omer, the William H. Foege Chair of Global Health, has spent much of his professional life establishing the importance of vaccines to early childhood health and survival. His own research provided evidence showing that vaccinating pregnant women against influenza protected their infants both by providing immunity to the virus at birth, as well as preventing pre-term birth and low birth weight associated with babies born to mothers who contracted the flu during pregnancy. Dr. Omer's findings on maternal immunity and infant health are significant because infants under six weeks of age suffer the highest burden of disease from certain vaccine-preventable illnesses, including influenza, pneumonia, and pertussis, and yet cannot be safely vaccinated on their own.

Saad Omer, MBBS, MPH, PhD

In recent publications, Dr. Omer has taken his advocacy for infant and maternal vaccines to the audience he believes has the most power to combat popular fears and effect change—healthcare providers. Dr. Omer published an article entitled "Maternal Immunization" in the March 30 issue of the *New England Journal of Medicine* that reviewed the current research and new developments in the role of maternal vaccination and the health of infants. In his review of four trials, he found that vaccinating mothers against influenza showed an efficacy rate in their newborns ranging from 30% to 63%. Two of those trials also showed a reduction in the incidence of low birth weight among the newborns of vaccinated mothers. In addition, Dr. Omer's review included evidence that vaccinating mothers against influenza provided enhanced protection to infants who received the vaccine for *Streptococcus pneumoniae*, a bacterial pneumonia associated with the flu and a leading cause of death in infants worldwide.

Dr. Omer's *NEJM* article bolstered the case for pertussis vaccination during pregnancy, commonly administered as a combined vaccine known as Tdap. His review of several observational studies indicated that maternal vaccination with Tdap is 91% to 93% effective in preventing infant pertussis, with no recorded increase in the risk for preterm birth. The evidence in favor of maternal immunization as a means to protect newborns has opened the door for new methods to combat other infectious diseases, including respiratory syncytial virus (RSV), a leading cause of death in premature babies, and Group B streptococcus, a common bacterial infection that can cause severe illness and death.

In an article published in the October issue of *JAMA Pediatrics*, Dr. Omer offered evidence-based suggestions to healthcare providers to help them talk to patients who refuse vaccines for themselves or their children. Vaccines have been highly successful at eradicating certain diseases in the United States, and patients often do not realize how harmful those illnesses can be, leading them to fear the vaccine more than the disease itself. Dr. Omer does not suggest bombarding parents with facts about vaccine safety, but instead focusing on information about the disease itself, in particular the severity of the symptoms. He reminds physicians to focus on the "fence-sitters," or those who are uncertain in their opposition to vaccines and will benefit most from reasoned conversation.

PHOTO: Charles Harless 17MPH, Global Health

PERU: The Amazonian Bora Tribe, led by this matriarch, proudly continue cultural practices removed from other Peruvians, and these choices make healthcare delivery challenging. Malaria, both *P. vivax* and *P. falciparum*, remains common and difficult to properly control. Valuing the traditions of a culture is of delicate and critical importance to promoting strong public health practices. This matriarch's tribe, for instance, still speak Bora as a primary language, dress in handmade palm frond skirts, paint their faces daily using crushed tree seeds, and hunt small game with neurotoxin-coated blow darts.

NEW DISCOVERIES IN TYPE 2 DIABETES

When K.M. Venkat Narayan, Ruth and O.C. Hubert Chair in Global Health, began setting up type 2 diabetes studies in India, he and his research team from Emory's Global Diabetes Research Center (GDRC) assumed that much of what scientists had learned about the disease in the United States could be applied directly to low- and middle-income countries. Diabetes is a more enigmatic illness than even the experts anticipated, and the disease pattern that emerged in India and sub-Saharan Africa proved quite different than in America. One peculiarity is the prevalence of type 2 diabetes in people who are of normal weight or underweight—a distinction that has led Dr. Narayan and GDRC researchers into epigenetics, molecular biology, and metabolomics as they seek to understand how and why diabetes functions differently in diverse populations.

In one such study, Mary Beth Weber, assistant professor of global health, partnered with the Madras Diabetes Research Foundation in Chennai, India. Her research showed that interventions that work in the United States and elsewhere to prevent prediabetes from advancing to diabetes, including lifestyle education and medication, can work as well in some segments of India's population. Some participants, however, did not respond as well to Weber's intervention, and this group seems to represent a different phenotype of the disease. These individuals were thinner and younger than the typical person with type 2 diabetes, and their disease characteristics were different as well.

Dr. Weber and her RSPH colleague, Lisa Staimez, assistant professor of global health, examined blood samples from people from India with prediabetes and found that they exhibited dramatic change in their beta cell function, a development that is typically associated with obesity-related type 2 diabetes and does not occur until after the disease has progressed. Early dysfunction of beta cells may be a result of lack of proper nutrition, beginning with the patient's mother or even generations earlier. Scarce nutrition may have led Asian people to store more body fat around their organs, which is linked to higher risk for cardiometabolic diseases such as diabetes.

Lisa Staimez, PhD, MPH, and Mary Beth Weber, PhD, MPH

Dr. Staimez is beginning a study of the diabetic population in India that did not respond well to traditional interventions. She is investigating how a mother's weight affects her children, assessing the infants of both normal weight and underweight women and comparing their beta cell function at six months of age. By uncovering how type 2 diabetes develops in thin people or those from populations with a history of being undernourished, Staimez and her research team aim to shed brighter light on treating and preventing diabetes across the globe.

PHOTO: Caleb Ebert 18MPH, Global Epidemiology

PHILIPPINES: A woman from the Ifugao tribe sings thanks as she picks rice in one of the top rice-producing countries in the world. Agriculture and nutritional history are integral to understanding the spread of chronic diseases such as type 2 diabetes in undernourished countries. Public health researchers are discovering that populations that have experienced famines can be predisposed to type 2 diabetes, a disease more popularly associated with overnourished populations. The Ifugao tribe is one of many in Northern Luzon that structure their livelihoods around rice farming.

CLEANER COOKSTOVES FOR CLEANER AIR

Thomas Clasen, the Rose Salamone Gangarosa Chair in Sanitation and Safe Water, first noticed the potential health hazard posed by indoor cook stoves while conducting research on water and sanitation in Ethiopia, India, and other low- and low-middle-income countries. While visiting local homes, he observed the thick, acrid smoke emitting from indoor stoves that burned wood, dung, or a crude form of charcoal, and immediately recognized the potential health risks these common cooking methods posed. In 2014, he expanded his research to include household air pollution during a field trial in Rwanda that implemented both water filters and improved cook stoves. The results confirmed the need for a large-scale field trial with gas stoves, the cleanest scalable intervention for these settings.

Thomas Clasen, JD, PhD

This year, his groundbreaking research received significant recognition through a $30 million grant from the National Institutes of Health, with partial support from the Bill & Melinda Gates Foundation. The award funds a five-year field trial to assess the impact of cleaner burning cook stoves on household air pollution and health, and Dr. Clasen is leading the study in collaboration with colleagues at the School of Medicine at Johns Hopkins University and Colorado State University.

An estimated three billion people around the world cook and heat homes with traditional stoves or open fires that use coal, wood, or animal dung as fuel. Evidence suggests that the resulting indoor air pollution contributes to low birth weight, stunted growth, and an increased risk of developing pneumonia, a leading cause of death in children. In adults, exposure to the smoke may increase the risk of developing cardiovascular disease, COPD, and other chronic illnesses. Globally, indoor air pollution resulting from unclean cooking stoves correlates to 4.3 million preventable deaths annually, making it one of the 10 leading risk factors for morbidity and mortality.

Dr. Clasen's research team is setting up trial sites in India, Guatemala, Peru, and Rwanda, and each will recruit 800 households that include a pregnant woman to the randomized-controlled study. Half of the 3,200 total participating households will receive liquefied petroleum gas stoves, and the other half will serve as controls. The team will follow the households for 30 months, monitoring the stove use and individual exposure to indoor air pollution. They will assess a range of health outcomes, including birth weight, preterm birth, growth and respiratory infections in children; and respiratory function, blood pressure, inflammation, and other indicators of heart disease in adults.

The size and scope of the study provide an unprecedented opportunity to link indoor air pollution to health outcomes, as well as to collect data related to a long list of complex illnesses. Dr. Clasen and his team hope to establish feasible cook stove interventions that can improve health, and to provide compelling evidence that informs global environmental health policy among vulnerable populations.

PHOTO: Olivia Paige 18MPH, Global Health

INDIA: During the summer monsoon season in Mumbai, commuters attempt to make their way home despite dangerous flooding. The city of more than 20 million residents sits at a low sea level and lacks effective drainage infrastructure. Scientists point to climate change as being a key cause of flooding in the region. In India every year, hundreds die in flooding and hundreds more are forced to take shelter in government relief camps.

PREVENTING OBESITY STARTS IN KINDERGARTEN

Solveig Argeseanu Cunningham, associate professor in global health, was the lead author on an article published this year in the *Annals of Epidemiology* that revealed important findings about the role early childhood obesity has on an individual's long-term health. Childhood obesity has become a major health concern in the United States, and 12% of children have obesity by the age of five years. Dr. Cunningham and her research team sought to answer the question of whether obesity in childhood is a fleeting issue or a long-term health problem, one with serious implications for the future of the nation.

Dr. Cunningham's team analyzed data from the Early Childhood Longitudinal Study (ECLS) Kindergarten Class of 1998-1999, a national program that provides data on a wide range of variables that affect children's development and school performance. They examined children's growth patterns over time, focusing on the impact that developing obesity in early childhood had on weight and growth into early adulthood. Dr. Cunningham's findings were stark—30% of US children in the ECLS study experienced obesity at some point between the ages of five and 14. Among those children who developed obesity by age 14, 63% experienced "entrenched obesity," or obesity that continues into adolescence, as did 72% of children who started kindergarten with obesity. The results of the study indicated that children who experience obesity for at least one year during childhood are highly likely to be obese in adolescence, and that a child's change in body mass index (BMI) during the kindergarten year is a significant predictor of entrenched obesity.

Solveig Argeseanu Cunningham, PhD

Dr. Cunningham's analysis provides evidence that childhood obesity is not a passing phenomenon, and that parents and physicians should regard changes to a child's BMI as a medical issue that warrants intervention. In terms of national health policy, Dr. Cunningham's findings create a persuasive argument in favor of targeting prevention programs as early in childhood as possible, before obesity becomes entrenched in adolescence and adulthood. Kindergartners are prime candidates for positive health education, such as classes that model appropriate nutrition and increased opportunities for physical education. Kids of all ages are excited to learn and follow strong role models, giving teachers, administrators, and parents the opportunity to effect positive change in the lives of young children before obesity develops.

PHOTO: Jasmine Ko 17MPH, Global Epidemiology

MALAWI: A childhood and family nutrition study in Malawi illustrates the intersection of behavioral health and global health. In front of this family's home, a young mother answers questions about her son's complimentary feeding practices. He is participating in a randomized trial that tests an innovative feeding bowl, and data collected after a year reveals improvements in volume and consistency of complimentary foods and anthropometric measures. The government of Malawi and the World Bank collaborated on this project to enhance and scale maternal and child nutrition service delivery.

FORMING THE VANGUARD OF GLOBAL HEALTH ETHICS

In 2014, the Conrad N. Hilton Foundation established the Conrad N. Hilton Chair in Global Health Ethics at the Rollins School of Public Health, with a joint appointment at Emory University's Center for Ethics. The new chair will create and catalyze innovative scholarship and lead an integrative program in global health ethics at Emory. Last fall, James V. Lavery, PhD, joined the Emory faculty as the inaugural Hilton Chair.

James V. Lavery, PhD

Dr. Lavery's broad experience and expertise in both public health and bioethics create an exciting opportunity for Emory and the Hubert Department of Global Health to stand at the forefront of discovery in the emerging field of global health ethics. He was the first bioethicist to serve the Fogarty International Center at the National Institutes of Health, where he led the production and editing of *Ethical Issues in International Biomedical Research: A Casebook*, which has been widely used for teaching international research ethics in universities around the world. From 2005 to 2015, Dr. Lavery served as a primary investigator for the Ethical, Social, and Cultural Program for the Bill & Melinda Gates Foundation's global health and global development programs, an initiative he developed with funding from the foundation. He most recently served on the faculty at the Dalla Lana School of Public Health at the University of Toronto, where he was also a member of the Joint Centre for Bioethics. While in Toronto, Dr. Lavery developed his research program into an academic consultancy, housed in the Centre for Ethical, Social & Cultural Risk in the Li Ka Shing Knowledge Institute of St. Michael's Hospital.

In his first year at Emory, Dr. Lavery has focused on designing courses, building relationships with his colleagues, and developing a community engagement program called the Learning Platform. His classes will serve as the foundation of Emory's global health ethics program, and they will examine a range of topics, including the impact of historical cultural policies on current global health practice, the ethical implications of health-related definitions, the value of equity as a guiding concept for global health, and the ethical role of evidence in global health. In addition, he is designing a two-part core course on community engagement in global health and global health development, and he recently introduced a seminar series called Humanizing Global Health. While he has been designing the global health ethics program, Dr. Lavery has enjoyed the opportunity to guest lecture in a number of classes at Rollins, including Community Transformation, Public Health Evaluation, and Evidence Based Decision Making.

The Learning Platform, which Dr. Lavery is developing as part of his grant from the Gates Foundation, employs a partnership model to foster community buy-in for global health practice. The platform will help funders and implementation partners engage more effectively with stakeholders, thereby enhancing their service and delivery methods and increasing the impact of their investment. The Learning Platform partners include CDC, the World Health Organization (WHO), the Bill & Melinda Gates Foundation, the Wellcome Trust, and other organizations engaged in the daily development and implementation of public health policy and practice. Dr. Lavery recently initiated the development of the Learning Platform's internet infrastructure, and he plans to have the program operational by spring of 2018.

PHOTO: Emily Niehaus 18MD 19MPH, Epidemiology

NAVAJO NATION RESERVATION, NEW MEXICO, USA: Diné people walk under a beautiful, endless sky during Just Move It, an event that promotes a healthy lifestyle. The residents of the Navajo Nation Reservation face many of the same public health challenges as people in low-income countries, including communication with local people and leaders, introducing Western medicine into traditional medicine culture, improving access to care, and battling a diabetes epidemic stemming from diets with more processed food.

CHANGING ATTITUDES ABOUT PARTNER VIOLENCE IN NEPAL

Elizabeth MacRae 18MPH, Global Health

Prior to pursuing her MPH in global health at the Rollins School of Public Health, Lizzy MacRae worked in development and administration for a drug and alcohol recovery program, where she learned of the potential positive impact that effective management can have on the health of both individuals and the community as a whole. The Hubert Fellowship enabled Lizzy to develop the skills she will need to build a similarly successful and important program in global health through her project with Equal Access Nepal in Kathmandu.

Lizzy MacRae, center, with her research team in Kathmandu.

Lizzy joined Equal Access Nepal to implement and assess their Change Starts at Home project, which shifts norms, attitudes, and behaviors that perpetuate partner violence in Nepal through social behavioral change, communication, and community engagement. The successful program utilized a radio series, mobile technology, and engagement activities, including workshops, theater productions, and community meetings to change patriarchal social norms and reduce the incidence of partner violence. By incorporating feedback from the project facilitators and other stakeholders, Lizzy refined the curriculum for publication, anticipating that other groups will adopt these intervention strategies and methodology. She created a toolkit for non-governmental organizations to codify approaches used by the Change project and provided a template to scale the strategy for larger communities and populations.

Through the Change project, Lizzy gained appreciation for the importance of involving a broad range of stakeholders in the design and implementation of a program aimed at changing social behavior rooted in cultural models. Change incorporated individuals, families, neighbors, and community leaders to create a gradual shift in the population's tolerance for gender-based discrimination and violence. The project's participants inspired Lizzy, and she hopes communities continue to address relationship violence by redefining the acceptable, creating a world in which women and girls are free from violence and safe to pursue the educational and social opportunities they deserve.

ASSESSING PUBLIC HEALTH EMERGENCY READINESS IN THE US VIRGIN ISLANDS

Cory Arrouzet 18MPH, Epidemiology

Most students choose to participate in a Global Field Experience to gain real-world skills that will help them in their public health careers. When Cory Arrouzet selected a project that involved conducting a Community Assessment for Public Health Emergency Response (CASPER) survey in the US Virgin Islands, he did not know how quickly the real world would illustrate the results of his fieldwork, nor how devastating that picture would be.

Over the summer, Cory traveled to St. Croix to partner with the US Virgin Islands Department of Health's Zika Epidemiology Team conducting a CASPER survey to assess the residents' knowledge, attitudes, and practices pertaining to Zika intervention. As part of the survey, Cory and his team also assessed household disaster and emergency preparedness levels. Cory designed the questionnaire and helped strategize the logistics for data collection, in which 12 teams conducted interviews in the field over the course of four days. At the end of the assessment period, Cory drafted an article for the CDC's *Morbidity and Mortality Weekly Report* describing the results of the CASPER survey and highlighting residents' gaps in knowledge about Zika. His work helped the health department prepare more targeted and informative educational materials for citizens and healthcare providers.

The CASPER survey also revealed multiple challenges that the islands would face in the event of a major disaster, results that Cory and his colleagues saw on raw display just weeks after he returned to Atlanta. In September, the US Virgin Islands suffered direct hits from two successive hurricanes—first Hurricane Irma, destroying many of the physical structures across the islands, and then Hurricane Maria, causing catastrophic floods just 14 days later. The wonderful people who Cory worked with and interviewed now live without safe shelter, a reliable electrical grid, or access to basic health services. These post-disaster conditions make Zika a more imminent threat, and yet the health department must focus limited resources on the acute crisis at hand. Cory hopes that the islands receive the aid necessary to rebuild, and that his work both as a student and as a future practitioner can help areas like the Caribbean build a public health infrastructure that allows them to prepare and respond to disasters and limit the devastation.

St. Thomas, US Virgin Islands, damaged by Hurricanes Irma and Maria.

EVALUATING HEALTH BEHAVIORS IN EUROPE'S MIGRANT COMMUNITIES

Nouha Boundaoui 18MPH, Global Health // Emily Smith 18MPH, Global Epidemiology

Each year, Hubert Fellows travel all over the world to complete their global field research, but few work in Western Europe. Emily Smith and Nouha Boundaoui added Belgium to the list of countries this summer, where they conducted a health survey of migrant families in Brussels.

More than one million migrants and refugees crossed into Europe in 2015. Syrian refugees accounted for the largest number of immigrants into the region, with others arriving from Afghanistan, Iraq, and North Africa. In Belgium, during the peak of the migration of refugees from the Middle East, the government received approximately 5,600 asylum applications per month. As these families awaited asylum, they found a modicum of shelter in temporary camps in Brussels city parks. These miniature towns became microcosms for the health problems of the world's most marginalized populations.

Nouha and Emily conducted surveys in both English and Arabic, investigating the prevalence of chronic disease and related health behaviors among refugees, asylum seekers, and migrants resettling in Brussels. In personal conversations with participants, they learned a tremendous amount about their experiences with acculturation and its effect on health behavior. They collected data on diet, exercise habits, and general health, and are analyzing that information to identify trends of chronic disease prevalence and risk.

Nouha views public health as the natural intersection of politics, history, community health, and individual wellness, and she and Emily understand the role that each plays in the health and well-being of a refugee family settling into a new country. As climate change and human conflicts increase the global diaspora, understanding and addressing the lifelong implications for health must become a policy and funding priority for governments and public health agencies. Nouha and Emily plan to publish a report later this year on the results of their survey, with the hope of shedding light on how migration and resettlement affect long-term health outcomes.

Immigrants and refugees in Brussels are often invisible in plain sight.

PHOTO: Samantha Stacks 18MPH, 18N, Global Health

ETHIOPIA: One global health solution is girls. Empowering girls leads to better outcomes for their health, the health of their families, and the health of their communities. When we give them the tools to thrive, the potential of positive change is immeasurable for all of us. When we hold girls up to the light, the world's future looks bright.

CARLOS DEL RIO, MD

Carlos del Rio, Hubert Professor and Chair of the Hubert Department of Global Health, accepted the appointment as interim executive associate dean for clinical affairs at Grady Memorial Hospital. In this part-time role, Dr. del Rio serves as the primary liaison between the Emory School of Medicine and the Grady Health System, and is responsible for the strategic vision and direction of Emory's clinical, research, and teaching programs at Grady. Dr. del Rio is a member of the National Academy of Medicine.

K.M. VENKAT NARAYAN, MD, MSC, MBA

Venkat Narayan, Ruth and O.C. Hubert Chair in Global Health, was selected as the 2017 recipient of Emory's Marion V. Creekmore Award for Internationalization. Each year, Emory awards one faculty member who excels in the advancement of the university's commitment to internationalization. Dr. Narayan was elected to the National Academy of Medicine in 2016.

DABNEY EVANS, PHD, MPH

The American Public Health Association (APHA) selected Dabney Evans to receive the 2017 Mid-Career Award in International Health, which recognizes outstanding emerging professionals in the field. Carlos del Rio nominated Dr. Evans in honor of her exemplary work as a teacher, researcher, and advocate for some of the world's most marginalized populations. Representatives from APHA presented the award at the annual meeting in November in Atlanta. Dr. Evans was one of the first Emory faculty members to include health and human rights in the public health curriculum, and she has built her career by charting interdisciplinary paths that advance discourse across a range of humanitarian issues. In addition to serving as an associate professor in global health, Dr. Evans is the director of the Center for Humanitarian Emergencies at Rollins, the executive director of the Emory Institute of Human Rights, and the interim director of the Institute for Developing Nations at the Laney Graduate School.

ROBERT F. BREIMAN, MD

The National Academy of Medicine elected Robert F. Breiman, MD, to its 2017 class of leading health scientists and international members. Dr. Breiman is director of the Emory Global Health Institute and is a professor with joint appointments in the Hubert Department of Global Health and the Department of Environmental Health at Rollins and at the School of Medicine. An infectious disease epidemiologist, Dr. Breiman's research and policy initiatives focus on issues related to preventing mortality, childhood pneumonia and enteric diseases, immunizations, and urbanization in Africa and Asia. He is the principal investigator and executive director for the Child Health and Mortality Prevention Surveillance (CHAMPS) Network, a new, long-term global health surveillance network funded by the Bill and Melinda Gates Foundation, designed to characterize and provide crucial data for preventing childhood mortality in sub-Saharan Africa and South Asia.

NEEL R. GANDHI, MD

Neel Gandhi has published a study in *The New England Journal of Medicine*, providing compelling evidence that person-to-person transmission is driving the spread of drug-resistant tuberculosis (XDR TB) in South Africa, mostly among persons dually infected with HIV. The study builds on a growing body of evidence about the spread of XDR TB through person-to-person contact. His work has important implications for efforts to prevent the disease, which traditionally have focused on ensuring that patients receive accurate and complete TB treatment.

DEBORAH MCFARLAND, PHD, MSC, MPH

Deb McFarland received the 2017 Association of Schools and Programs of Public Health (ASPPH) Teaching Excellence Award, given to graduate public health faculty for excellence in teaching, research, and mentorship. In addition to serving as an associate professor with joint appointments in global health and health policy and management, Dr. McFarland is the director of the William H. Foege Fellowships in Global Health and the Global Field Experience program.

We are grateful to the Hubert family for building the foundation for global health at Rollins. The power of your generosity crosses over borders and travels through time, propelling our faculty, students, and alumni as they enhance health in communities near and far. In her first year in office, President Claire Sterk, the Charles Howard Candler Professor of Public Health, identified global health innovation as one of four emerging priorities for the university. Her choice reflects our existing excellence in the field, an area of strength made possible by the Hubert family. Thanks to your extraordinary investment, Emory University is changing the landscape of global health, bringing new discoveries to the forefront of human health and improving lives today and for generations to come.

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A NOTE ABOUT THE FEATURED PHOTOGRAPHS

The featured photographs in this report were taken by Rollins students while conducting research in the field. The photos depict the collaborative nature of global health research, illustrating the many reasons why we say global health is public health.

COVER

PHOTO: Charles Harless 17MPH, Global Health

PERU: A five-year-old boy ecstatically holds a chicken after a successful chase through the deep-Amazonia jungle surrounding his village of Santa Emilia. He thrives despite having his third recurrence of P. vivax malaria and having to travel six hours down river by motorized canoe to reach the nearest health outpost. The closest hospital is another ten hours farther. Effective malaria control continues to be a severe challenge that both government and local research universities are committed to improving—so that healthy children beautifully remind us of human endurance, and the pure joy so seemingly constant in youth.