

# ROLLINS

FALL 2016

EMORY | Public Health

## RACING ZIKA

SCIENTISTS RUSH TO SOLVE  
MYSTERIES OF THE EPIDEMIC

A vote for health 18 | There's an app for that 20 | Lifting depression 24

A high-angle photograph of a large group of Rollins first-year students, many wearing orange shirts, participating in a career fair on a green lawn in front of a modern building with large glass windows. The students are gathered around several tables covered with blue and red cloths, some of which have informational materials and signs. The scene is bright and sunny, with shadows cast on the lawn. The building behind them has multiple stories with large windows reflecting the sky and surrounding greenery. The overall atmosphere is busy and organized.

**10TH ANNIVERSARY OF ROLLINS-TEER DAY.** Rollins first-year students participate in a career fair following a morning of volunteering. Each year, more than 500 students, staff, and faculty work with Atlanta-area charities and organizations. This year, the day's good works were dedicated to the memory of Dr. Philip Brachman, who passed away in June. "It was wonderful to see all of Rollins come together and give back to the Atlanta community," says Lindsay Ruhlin 17MPH, who coordinated this year's Rollins-Teer Day.



**Racing Zika 12**  
Scientists rush to solve mysteries of the epidemic that leaves debilitating birth defects in its wake



**A vote for health 18**  
Policy expert Ken Thorpe pushes candidates to address chronic disease



**There's an app for that 20**  
Student organization out in front on mHealth



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Eugene Gangarosa celebrates milestone birthday

COVER STORY



Salvador, Brazil, was one of the first places hit by the Zika virus. Overcrowding and poor sanitation create ideal conditions for the mosquito that carries the virus.  
Photo credit: Uiler Costa

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Rollins magazine is published by the Rollins School of Public Health, a component of the Woodruff Health Sciences Center of Emory University (whsc.emory.edu). Please send class notes, observations, letters to the editor, and other correspondence to Editor, *Rollins*, 1762 Clifton Road, Suite 1000, Atlanta, GA 30322. Reach the editor at 404-727-6799 or martha.mckenzie@emory.edu. To contact the Office of Development and Alumni Relations, call Kathryn Graves at 404-727-3352 or email kgraves@emory.edu. Visit the Rollins School of Public Health website at sph.emory.edu. To view past issues of the magazine, visit publichealthmagazine.emory.edu.

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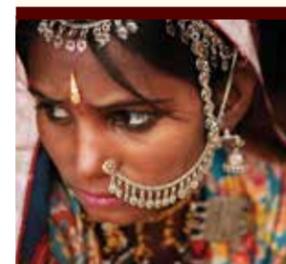
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STEPHANIE VENN-WATSON OOMPH

Dolphins are susceptible to metabolic syndrome, or pre-diabetes, just like humans. But unlike humans, they can switch in and out of this state and never go on to develop full-blown diabetes.



The iPad edition of *Rollins* magazine is available by downloading Emory Health Magazines in the App Store.



ROLLINS SCHOOL OF PUBLIC HEALTH

## Lending expertise to Zika response

**M**uch about the current Zika epidemic remains unknown. Why has Zika broken out now? How often do infections in pregnant women lead to birth defects and what is the full spectrum of these problems? Does one infection produce immunity, which persists and prevents future infections?

As with most epidemics, responders cannot wait to get all the answers before taking action, and the CDC and other public health agencies have responded rapidly. We are happy to have the expertise to contribute to that timely emergency response. Uriel Kitron, a globally recognized expert in vector-borne diseases, was among the first to document the outbreak in Brazil. Eli Rosenberg is helping the CDC quickly develop cohort studies in Puerto Rico by lending the methodological expertise he's built up over years of designing and running HIV/AIDS studies. The CDC is also sending funding through our Center for Humanitarian Emergencies to assess vector surveillance and control capacities of South and Central American countries and provide customized training.

Responding to an epidemic like Zika depends greatly on the disease detectives in the CDC's Epidemic Intelligence Service (EIS). In this issue, we pay tribute to two such detectives. Eugene Gangarosa, one of the founders of our school, celebrated his 90th birthday. Gene began his public health career studying outbreaks of cholera. He joined the CDC in 1964, and he went on to head its enteric infections unit. His contributions to our school—and to public health—are immeasurable.

Sadly, Professor Philip Brachman, who served as the director of the EIS program from 1970 to 1981, passed away recently. Phil's 60-year public health career included 30 years at the CDC and 30 years at Rollins, where he was the founding director of the Hubert H. Humphrey Fellowship Program. He trained generations of people throughout the world to respond to outbreaks such as Zika. He was a respected colleague, a cherished teacher, and a valued friend. He will be greatly missed.

James W. Curran, MD, MPH  
*James W. Curran Dean of Public Health*

## Sterk named Emory University president

**T**he 20th president of Emory, Claire E. Sterk took the helm of the University on September 1. Sterk has strong ties to Rollins, dating back to 1995 when she joined the faculty. During her tenure there, Sterk served as the Charles Howard Candler Professor of Public Health, chair of the Department of Behavioral Sciences and Health Education, and associate dean for research.

She went on, in 2005, to serve the University as senior vice provost for academic affairs and then provost and executive vice president for academic affairs beginning in 2013. The move across campus did not diminish her commitment to public health. "That's where my passion lies," she told Rollins faculty during a recent retreat. "It is at the core of who I am."

Sterk's primary research interests are addiction, mental health, and HIV/AIDS, with a focus on community-based interventions. Emory's first female president, she is a leading international figure in the fields of public health and anthropology. Her husband and research partner, Kirk Elifson, serves on the faculty at Rollins.

"President Sterk has been an active teacher and a funded researcher her entire career," says Dean James Curran. "She has a broad understanding of all aspects of academia. We could not be more proud of the fact that she began her Emory career as a faculty member in Rollins."

A native of the Netherlands, Sterk earned her PhD in sociology from Erasmus University in Rotterdam and a doctorandus degree in medical anthropology from the University of Utrecht.

She came to the United States in the 1980s and became a visiting scientist at the Centers for Disease Control and Prevention, where she worked on HIV/AIDS projects.

In addition to service on several editorial boards, she has held many professional leadership positions, including president of the Alcohol, Drug, and Tobacco section of the American Sociological Association; board member of the Society for Applied Anthropology; and member of the National Institute of Health's National Advisory Council of the National Institute on Drug Abuse. ■

## Summer school

*Rollins convened several innovative, impactful workshops and courses during the past few months. Here's a look.*



### 1 Sanitation revolution

**Christine Moe and Eddie Perez want to start a revolution—an urban sanitation revolution.** Moe, Perez, and like-minded colleagues fired the first shot by convening a two-day workshop, “Achieving Universal Access to Urban Sanitation Services,” in June aimed at addressing the critical need for sanitation solutions for poor families living in urban slums and informal settlements throughout the world.

Co-organizers and sponsors of the workshop

included the Bill & Melinda Gates Foundation, the Water and Sanitation Program of the World Bank, the CDC Foundation, the University of Leeds, and the Center for Global Safe Water, Sanitation and Hygiene at Emory, of which Moe is director. Over 72 invited attendees came from across the globe and, by design, represented a range of disciplines and stakeholders, including city government administrators, engineers, city planners, microbiologists, public health practitioners, professors, NGO staff, and donors.

“We wanted to bring in people from both inside and outside the WASH sector,” says Moe, who began campaigning for the workshop almost two years ago.

While the workshop featured a few presentations, most of the time was spent brainstorming and sharing evidence-based lessons about sanitation successes and failures. One of the key lessons discussed was to not have a “one-size-fits-all” approach but instead to have a menu of innovative, decentralized sanitation technology and service options. Other lessons included the importance of political leadership and accountability to provide safe sanitation solutions to all citizens—especially the poor.

The workshop has spawned follow-up sessions on urban sanitation planned for Stockholm, Kuala Lumpur, and Chapel Hill, N.C. Moe, Perez—a global health lecturer—and colleagues will also be pushing the message out beyond the WASH sector.

“What is it that starts a revolution these days?” says Moe. “It takes an important goal, evidence, advocacy, and a good communication strategy working via social media campaigns and other means. We really think there is momentum for a sanitation revolution, and we need to make it happen!” ■

### BY THE NUMBERS

**2.4 billion people worldwide do not have access to basic sanitation: they lack safe means of disposal of excreta and waste water.—World Health Organization**

**Nearly 1 billion people—one sixth of the world’s population—live in slums. That number could double by 2030.—UN-Habitat**

**700,000 child deaths from diarrhea each year are linked to poor sanitation.—Bill & Melinda Gates Foundation**

genetics were just a few of the disciplines represented. The challenges of capturing the complexity of exposures and their potential health effects across the lifespan are vast. Yet the significance of these challenges also speaks to the great need for moving the exposome forward. The tools covered in the afternoon lab sessions throughout the course introduced participants to what is currently available to tackle the exposome and provided a window into what new development opportunities could advance research. ■



### 3 Watersheds to shower heads

**The Emory Center for Public Health Preparedness and Research hosted a two-day program, “From Watersheds to Shower Heads: A Workshop on Legionella Research and Policy” in May.** Funded by a grant from the Alfred P. Sloan Foundation, this multidisciplinary workshop was the first U.S.-based public health conference on Legionellosis—also known as Legionnaires’ disease—in 25 years.

Legionnaire’s disease has been on the rise, with a fourfold increase in cases reported to the CDC since 2001. Last year, New York City experienced one of the largest outbreaks in history in the South Bronx, resulting in legislation requiring cooling towers in the city to be registered with the department of health.

The workshop, chaired by Ruth Berkelman, Rollins professor, drew professionals from academia, industry, law, and government, with expertise in fields as diverse as public health, engineering, microbiology, medicine, industrial hygiene, and public utilities. View a video of the workshop at [emry.link/Legionnaires](http://emry.link/Legionnaires). ■

### 2 Exploring a lifetime of exposures

**Rollins hosted a first-of-its-kind summer course to delve into the emerging science of the exposome.** The Emory Exposome Summer Course drew 150 people from seven countries and more than two-dozen institutions to focus on the current state and future directions of exposome research. For five days, attendees heard from leaders in the field and participated in hands-on lab sessions to learn about new tools for

conducting exposome research. Although many of the leaders in exposome research are toxicologists and exposure scientists, the diversity of disciplines represented by course attendees demonstrated the significant interest from other fields along with a recognized need to include and understand the impact of complex environmental exposures. The perspectives offered by this diverse group throughout the week provided a window into the collaboration required



to bring a human exposome project to fruition. Nursing, sociology, nutrition, bioinformatics, neuroscience, and human



### Using ECG to predict cardiac risk

**Electrocardiography (ECG) may be helpful in measuring the risk of cardiovascular disease in asymptomatic individuals, according to a study led by Amit J. Shah, assistant professor of epidemiology.** With nearly half of sudden cardiac deaths occurring in people who were unaware of having heart disease, researchers aimed to derive and validate a cardiovascular disease equation based primarily on ECG metrics.

The team used data from the National Health and Nutrition Examination Survey, in which approximately 10,000 community-based adults ages 40-74 years were followed for cardiovascular events. From these data, they derived and validated a risk equation based on a person’s age, sex, and three ECG metrics: heart rate, T-axis, and QT interval.

“Although ECGs are normally used to diagnose present-day heart disease in individuals believed to be at risk, many asymptomatic patients with normal ECGs may have electrocardiographic signs of disease that could predict future risk,” explains Shah. “We believe that this is a potential added benefit of the ECG: to help screen for high-risk individuals and ultimately augment preventive efforts in clinical settings.” ■

## Police violence as a public health issue

It's hard to turn on the news or open a newspaper without coming across an account of excessive police violence or demonstrations in reaction to it. However, police violence has not been considered as a public health issue until recently.

Hannah Cooper, associate professor of behavioral sciences and health education, recently edited a special issue of *Journal of Urban Health* devoted to this topic. "Research on excessive police violence as a public health issue is in its infancy," says Cooper, who worked with Mindy Fullilove, a professor at the Mailman School of Public Health, on the issue. "I think that's because the people who set the research agenda are not the people who are targeted by the police, so this issue has not shown up on their radar."

In fact, Cooper stumbled on the topic accidentally while working on her dissertation in 2004. Her topic was drug use and HIV incidence in a New York City neighborhood, but the people she interviewed—both drug users and non-drug users—brought up police violence again and again. It emerged as such a large, overshadowing factor in their lives that she decided to add a paper on the topic to her dissertation. She's been studying the issue since.

The *Journal of Urban Health* special edition featured nine



papers on various aspects of police violence. Several of the papers examined the health effects of excessive police violence, including one that found neighborhoods with higher rates of stop and frisk—a potentially invasive body search for drugs or a weapon—also had higher rates of high blood pressure, diabetes, and cardiovascular disease.

"We tend to think of physical injury resulting from police violence, but this paper looked at long-term chronic outcomes," says Cooper. "Living in an environment characterized by what is perceived as police harassment increases the incidence of poor health." ■



## Sullivan appointed to PACHA

Patrick S. Sullivan was appointed to the Presidential Advisory Council on HIV/AIDS (PACHA). Council members are a diverse group of 24 researchers, service providers, and community leaders from around the country. Sullivan, an epidemiology professor, was sworn in at the 59th Presidential Advisory Council on HIV/AIDS meeting in Washington, D.C.

PACHA provides advice, information, and recommendations to the president through the secretary of health and human services on domestic and global HIV/AIDS policy issues.

"This is a highly prestigious accomplishment," says Dean James Curran. "It is also a testament to the fact that Dr. Sullivan is revered as an expert in the HIV community. His research contributions and research advancements are invaluable to the field. He is highly deserving of this tremendous honor."

Sullivan has more than 20 years of experience in HIV epidemiology, prevention, and behavioral surveillance, including stints at the Centers for Disease Control and Prevention and the National Institutes of Health. He is the principal scientist of AIDSvu.org, an online mapping resource for HIV surveillance and related data, and co-director of the Prevention Sciences Core of the Emory Center for AIDS Research. ■

## MEDIA SAVVY

"The first onset of heart attack in people of South Asian origin happens about a decade earlier than any other racial or ethnic group."

**MOHAMMED ALI,**  
ASSOCIATE PROFESSOR OF GLOBAL HEALTH AND EPIDEMIOLOGY, TOLD MEDSCAPE

"We think raindrops are able to rupture pollen grains and disperse much smaller granules that can more easily be inhaled deeper into our lungs."

**STEFANIE SARNAT,**  
ASSOCIATE PROFESSOR OF ENVIRONMENTAL HEALTH, TOLD WXIA-TV IN SPEAKING ABOUT THUNDERSTORM-RELATED ASTHMA

"It's knocking at our door."

**DABNEY P. EVANS,**  
ASSISTANT PROFESSOR OF GLOBAL HEALTH AND BSHE, TOLD HEALTH DAY IN SPEAKING OF THE ZIKA VIRUS

## Subsidizing chronic disease?

Our agricultural policies may be bad for our health. A new study has found that people who eat a lot of foods derived from the crops that are subsidized by the government, such as wheat, corn, sorghum, and soybeans, have a higher risk of diabetes and cardiovascular disease. That's because the lion's share of these subsidized commodities are converted into foods currently on the USDA's naughty list—high-fat meat and dairy products, refined grains, high-calorie juices and soft drinks, and processed and packaged foods.



"We need better alignment of agricultural and nutritional policies," says K.M. Venkat Narayan, Ruth and O.C. Hubert Professor of Global Health and Epidemiology. "One potential policy lever may be to shift agricultural subsidies toward the production of healthier crops such as fruits and vegetables." Eating fewer subsidized foods alone will not eradicate obesity, but people who eat more fruits and vegetables can reduce their risk. "Our hope is that this study shines a light on the disconnect between federal nutritional recommendations and food commodity subsidies and potentially leads to future collaborative research and action," says Narayan.

The full paper, first-authored by Karen Siegel as part of her doctoral work at Emory, is available in the July 5 online edition of *JAMA Internal Medicine*. ■



# Linking minimum wage & infant mortality



Raising the federal minimum wage of \$7.25 an hour by just \$1 could save a lot of babies' lives. A new study found that a \$1 minimum wage increase above the current federal level could have prevented an estimated 3,000 low-weight births and 500 post-neonatal deaths in 2014.

Researchers looked at minimum wages and birth outcomes in 50 states over three decades. They found that states that increased the minimum wage \$1 above the federal level had a 4% decrease in infant deaths and a 1% to 2% drop in low birth-weight babies.

"The annual social and health cost of preterm or low-weight births in the U.S. was at least \$26.2 billion in 2005. The pain and suffering from the deaths of so many infants in their first year of life are incalculable," says Kelli Komro, professor of behavioral sciences and health education and lead author of the study. "Minimum wage laws not only help lower-income families make ends meet, they also appear to influence important infant health outcomes." ■



Jonathan Lewin and James Curran congratulate 2016 Hatcher Award winner Linda McCauley. The award is named for Emory's former vice president for health affairs.

dreds of publications, continuous federal funding—three NIH grants this year alone—and has served on many National Academy of Medicine committees."

McCauley's interests have long straddled nursing and public health. She is a leading researcher in environmental exposures with a focus on identifying culturally appropriate interventions to decrease the impact of environmental and occupational health hazards in vulnerable populations.

The annual award is named for Dr. Charlie Hatcher, who advocated for the creation of the school of public health during his tenure as Emory's vice president for health affairs.

"This award sums up the interconnectedness of Emory health sciences—an award named after a surgeon, given by the dean of public health, and awarded to the dean of nursing," says Jonathan Lewin, executive vice president for health affairs, executive director of the Woodruff Health Sciences Center, and president, CEO, and chair of Emory Healthcare. "What we have here is extraordinary." ■

## McCauley receives Hatcher Award

Linda A. McCauley, dean and professor of the Nell Hodgson Woodruff School of Nursing, was awarded the 2016 Charles R. Hatcher Jr. M.D. Award for Excellence in Public Health.

"Linda has a remarkable record, not only as a dean but as an alumna—she got her nursing degree from Emory in 1979," says Dean James Curran, who presented the award. "She has hun-

## Sad goodbye to ASPPH's Spencer

Harrison C. Spencer, president and CEO of the Association of Schools & Programs of Public Health (ASPPH) died August 10. He assumed the newly created position of president/CEO of the Association of Schools of Public Health in 2000. He led the organization's transformation as the ASPPH in 2013.

Spencer worked tirelessly on behalf of academic public health. He traveled thousands of miles annually, was responsive to deans, program directors, and partners who asked him to lend his expertise, provide keynote addresses, serve on panels and review boards, and inspire the next generation of public health scholars and practitioners.

Prior to joining ASPPH, Spencer led two schools of public health as dean—the Tulane University School of Public Health and Tropical Medicine and the London School of Hygiene and Tropical Medicine. He also held leadership roles at University of Nairobi, the World Health Organization, and the CDC, where he was chief of the parasitic diseases branch.

See the ASPPH tribute to Spencer at [emory.link/harrisonspencer](http://emory.link/harrisonspencer) ■



Carlos del Rio, Hubert Professor and chair of the Hubert Department of Global Health, has been selected as the 2016 recipient of the Ohtli Award, one of the highest awards given by the Government of Mexico. The Ohtli Award was conceived to recognize and honor Mexican, Mexican-American, or Latino leaders whose efforts have contributed significantly to the well-being, prosperity, and empowerment of Mexican communities abroad. ■

## Down the Road

Emory Reproductive Health Association will hold its second conference. This year's theme is Health Equity in Sexual and Reproductive Health. The keynote speaker will be Michelle Allen, State STD Director for the Georgia Department of Public Health.

November 12th, 10:00 am - 3:00 pm  
Room 1000, Claudia Nance Rollins Building

Everyone has heard a variation of the saying—if exercise were a pill, it would be the miracle drug of our time. A Rollins group is working to get that pill into a prescription bottle.

The Exercise is Medicine Global Research and Collaboration Center (EIM-GRCC) will hold a think tank meeting and conference titled "The Wild, Wild West of Quantified Healthcare." The goal—find ways to integrate objective physical activity data, such as that obtained by FitBits and other wearable devices, into routine health care delivery, including wellness programs and clinical interventions.

December 5th, 8:00 am - 6:00 pm: Open conference  
December 6th, 8:00 am - 2:00 pm: Think tank (invitation only)  
Emory Conference Center Hotel  
For more information: [felipelobelo@emory.edu](mailto:felipelobelo@emory.edu) or go to [emory.link/EIMGRCC](http://emory.link/EIMGRCC)

SCIENTISTS RUSH TO SOLVE MYSTERIES OF THE EPIDEMIC

# Racing Zika

BY MARTHA MCKENZIE

PHOTOGRAPHY BY UILER COSTA

In May, 2015, Uriel Kitron was in Salvador, Brazil, studying dengue when a new virus showed up. At first he brushed it aside like the pesky mosquito that carried it. With his Brazilian collaborators, he published several papers—among the first—on the widespread Zika virus outbreak in northern Brazil, but like others he did not consider it a cause for alarm. The symptoms—a rash, fever, headache, muscle aches—were mild compared with dengue and disappeared within a few days.

“Even though it was spreading so rapidly, we really thought it was no big deal,” says Kitron, professor and chair of the environmental sciences department at Emory and professor of environmental health and epidemiology at Rollins.

Salvador, Brazil, was one of the first places in the Western Hemisphere hit by the Zika virus. Overcrowding and poor sanitation create ideal conditions for the mosquito that carries the virus.



Uriel Kitron, professor of environmental health and epidemiology, works with a team of scientists in Salvador, Brazil, doing vector surveillance.

Then came the first surprise—an increase in the cases of Guillain-Barré Syndrome (GBS), an autoimmune disorder that can result in paralysis. A few months later came another, even more disturbing surprise—a spike in the number of babies born with microcephaly, a condition characterized by small heads and underdeveloped brains. This is the first new cause of birth defects identified by the Centers for Disease Control and Prevention in 50 years and the first time ever that the cause has been spread by mosquitoes.

“The fact that Zika can pass through a woman’s placenta and affect her unborn child is a game-changer,” says Kitron. “That goes to your deepest fear and is about as unsettling as it gets.”

That fear has leant a sense of urgency to the search for answers about the virus. Although Zika has been circulating in Africa and Asia for decades, it was considered relatively benign, especially compared with more serious mosquito-borne diseases such as malaria and dengue. Only when it made the leap into the Western Hemisphere and spread like wildfire through northern Brazil, leaving unexpected and devastating results, did scientists take notice. The virus has likely infected millions in Latin America, and more than 2,000 cases of microcephaly had been confirmed as of late September.

Zika is transmitted primarily by the *Aedes aegypti* mosquito—the same mosquito that carries yellow fever, dengue, and

chikungunya—but cases of sexual transmission have also been reported. However, much of the biology and epidemiology of Zika remains a mystery. Can asymptomatic people still spread the disease? Are babies of asymptomatic pregnant women at risk for microcephaly? Can it be spread other than by sex or mosquitoes, as a Utah case suggests? And, the million-dollar question, how and why does it cause microcephaly?

Other countries are experiencing Zika outbreaks without the spike in microcephaly cases seen in Brazil. That spike could still come, but if it doesn’t, what is different about the Brazilian outbreak? “One of the things we are finding is that all three viruses—Zika, dengue, and chikungunya—are co-circulating in Brazil,” says Kitron. “Perhaps that is an important factor for the severe disease outcome, perhaps that’s what makes it different in Brazil. Socio-economic factors may also play a role. There is still so much we don’t know about Zika. Case control and cohorts studies that have been initiated recently will help us answer this and other questions about Zika.”

#### HELPING WITH THE ‘HOW TO’

Eli Rosenberg is working with the CDC to set up one such study. The assistant professor of epidemiology has spent years developing and running HIV cohort studies in the Rollins PRISM Health Research Group. He’s helping the CDC quickly

repurpose those tools and methods to study the Zika virus in Puerto Rico, the site of the largest U.S. outbreak.

“We are helping the CDC pop up a cohort study very quickly,” says Rosenberg. “We help them with the implementation—how to set up a clinic, how to move people through it, how to manage the volume of participants—and with database development—how to get the data, make sure the lab data and the survey data end up in the same place and make sense, how to generate reports.

“All of our data systems took us about five years to perfect, but they don’t have that kind of time to figure all this out with Zika,” continues Rosenberg. “The beauty of the partnership with Rollins is that we have the expertise in this type of design from our HIV studies, so we are able to translate it quickly for our CDC colleagues.”

The CDC team is testing the household members of symptomatic Zika patients to try to find out what percentage test positive for Zika. They will compare the viral load for symptomatic and asymptomatic patients to understand if both can transmit the virus equally. And they will take blood, saliva,

semen, and vaginal fluid samples to see how long the virus can remain in each. “If the majority of cases don’t have symptoms then the epidemic feels like a runaway train, which points to different methods of control versus if we only have to worry about symptomatic patients,” says Rosenberg.

#### TRAINING IN VECTOR CONTROL

While trying to answer the many questions about the virus, scientists are also rushing to fight the ongoing outbreak with any method at hand. And they’ve battled this mosquito before.

*A. aegypti* carried yellow fever and was very nearly eradicated after a coordinated campaign in the Americas from the 1950s to 1970s. “Just as we were almost there, political will waned, funding waned, and the campaign

ceased,” says Audrey Lenhart O2MPH PhD, who is leading the international vector-related activities for the CDC’s Zika response. “Since then, *A. aegypti* has come back with a vengeance and recolonized most of the places where it was before. And now there is an even greater degree of available habitats for them, thanks to the huge urbanization trends in recent decades.”

**“The fact that Zika can pass through a woman’s placenta and affect her unborn child is a game-changer.”**

That's because *A aegypti* is an urban beast. It preferentially bites people and can only travel a couple hundred yards from its larval habitats in its lifetime. It can breed in a pool of water as small as a bottle cap. So the mega cities of Latin America, with people crammed together in houses that lack screens and air conditioning, are like paradise for this mosquito.

Its daytime feeding activities also mean that the insecticide-treated bed nets that successfully control mosquitoes that carry malaria don't help with *A aegypti*. With lack of a magic bullet, control efforts rely on setting mosquito traps, treating breeding sites, and educating people about wearing repellent and emptying containers of water—labor-intensive and expensive endeavors.

To strengthen the capacity of local public health officers in vector surveillance, control, and management, the CDC is partnering with the Rollins Center for Humanitarian Emergencies, led by Dabney P. Evans, an assistant professor. The center will first assess the capabilities and needs of 37 individual Latin American and Caribbean countries, looking at areas such as

basic computing skills, current global information systems (GIS) proficiency, and self-identified needs. Based on those results, it will then select appropriate GIS software and develop training materials. Finally, the center will offer four or five GIS training sessions—one in Columbia, one in Guatemala, two in the Caribbean, and possibly at fifth at a yet to be determined location.

“The use of spacially mapped data is fairly limited right now in many of these countries,” says Evans. “These efforts are aimed at building that capacity in order to fight Zika specifically, but this training will be very useful for

future disease surveillance, as well.”

#### MAPPING THE U.S. RISK

While Zika has spread like wildfire through parts of South America and the Caribbean, a widespread outbreak in the continental U.S. is considered unlikely. As of late September, there were more than 3,600 travel-related cases of Zika infection in the continental U.S., including 85 in Georgia. Three Florida counties experienced mosquito-acquired Zika outbreaks.

## “So what are we doing to be better prepared to battle the next outbreak?”



Audrey Lenhart O2MPH leads the CDC's vector-related activities, top left. Eli Rosenberg, assistant professor of epidemiology, is helping the CDC get cohort studies up and running in Puerto Rico, above right.



Uriel Kitron and two colleagues check for *Aedes aegypti* larvae in standing water.

But thanks to a lifestyle that includes airtight houses and better public health surveillance, *A aegypti* doesn't find U.S. neighborhoods welcoming. Indeed, outbreaks of chikungunya and dengue, which are also spread by *A aegypti*, have been relatively small and limited to Florida, Hawaii, and Texas.

“So far we have found *A aegypti* only in one county in Georgia and not very many of them even there,” says Jennifer Burkholder 13N 13MPH, who is the Zika response lead for the Georgia Department of Public Health. “We are ready to respond if there is an outbreak, but we do not expect one.”

That said, even a small outbreak can have devastating consequences for a few. A group led by Saad Omer, the William H. Foege Chair in Global Health, is creating a county-by-county Zika risk map of the U.S. “We are building on work that has already been done on vectors and layering on top of that the number of women who are pregnant or giving birth to determine the potential risk for microcephaly,” says Michael Mina 14G 16MD, who is working as a post-doc with Omer. “This will help policy makers decide

how best to allocate the funds they have to fight Zika and target mosquito interventions.”

#### LESSONS TO BE LEARNED

The current Zika epidemic is likely a portent of things to come, says Kitron. “We have been seeing more and more new and emerging diseases,” he says. “That's because we're invading natural habitats, and because anyone can be anywhere within 24 hours. So what are we doing to be better prepared for the next outbreak?”

Not enough. “Having a solid, sustainable surveillance system is at the heart of protecting against transmission and disease, but when you have elections every two to four years, investing in something that might happen in five, 10, or 20 years is a hard sell,” he continues. “But if we don't invest many more resources in surveillance, we are running the risk of missing new diseases until much damage is done and costs skyrocket. An effective surveillance system may not prevent epidemics like Zika and West Nile virus, but it will enable us to be better prepared and react sooner.” ■



It's an American presidential campaign, so you expect the grandiose posturing from candidates, the hollow rhetoric, and the political gamesmanship. You expect the discord and the shouting. The 2016 campaign has a surplus of that, with the volume turned all the way up.

Ken Thorpe has been working to make his message heard above the cacophony. He's leading the effort to inform the voting public about the high cost of chronic disease in the U.S. and to make the candidates address the issue.

"The challenge is to get people away from the simple dichotomy of being for or against Obamacare. Oftentimes, the discussion doesn't get any deeper than that," says Thorpe, Robert W. Woodruff Professor and chair of health policy and management.

When the Patient Protection and Affordable Care Act became law, Thorpe was hoping it was just a first step. He pushed for Medicare and private plans to adopt better lifestyle

and prevention programs and for more coordinated, patient-centered, collaborative care. But Congress didn't seem interested in doing any additional work on health care beyond all the talk of repealing or not repealing.

Thorpe works on health policy issues through an organization he founded and runs, the Partnership to Fight Chronic Disease (PFCDD). He launched PFCDD just prior to the presidential election of 2008 because he knew health care reform was going to be a big issue. "We wanted to make sure the discussion about reform wasn't just about health insurance but also about what's really driving the increase in health care spending," he says.

That would be the growing prevalence of chronic diseases. This election season, Thorpe and the partnership made sure the issue went coast to coast during the presidential primaries, producing and airing a 30-second TV ad throughout the debates.

"Our approach was different this election," Thorpe says. "We did more advertising, and we really used social media to push the word out. And rather than primarily targeting policy makers, we took it to the public to try and pressure the candidates into addressing chronic disease."



Thorpe and his team focused on a few key primary states: California, Florida, Iowa, Nevada, New Hampshire, and Wisconsin. The point was to educate the voting public and really challenge the candidates. "If they're going to do health care reform, they can't do it without addressing the growth of chronic disease," says Thorpe. "These are not partisan issues. Keeping people healthy is something you expect both Republicans and Democrats to work on together."

Besides the TV spots, Thorpe also wrote guest editorials for news sources like *The Hill* and *The Huffington Post*, and many of his PFCDD colleagues at the state level have been publishing their two-cent's worth in local and regional newspapers across the country.

"I think we've been effective in changing the dialogue so that people are focusing on the correct problem," says Thorpe.

He thinks Hillary Clinton, the Democratic presidential nominee, gets it. "She's demonstrated that she understands the issues of cost and outcomes, of rewarding quality care," says Thorpe. "These things would be key parts of any reform proposal she puts together."

He also thought that former Republican candidates John Kasich and Jeb Bush got it. However, Thorpe isn't really sure what to expect from the candidate who got the Republican nod.

"Donald Trump has been less specific about health care, but as he goes forward in the campaign, he'll be pushed on the issue and his thinking will evolve," Thorpe says.

Either way, PFCDD will continue making its case through the election, and there's plenty to talk about. According to a recent PFCDD study, 191 million people in the U.S. had at least one chronic disease in 2015, and 75 million had two or more. Chronic diseases are on pace to cost the U.S. \$42 trillion between now and 2030—annually that comes to \$2 trillion in medical costs and \$794 billion in lost employee productivity. Between now and 2030, simple changes in our health care system—such as improvements in the prevention and treatment of chronic disease—could save 16 million lives, prevent 169 million cases of chronic disease, and save \$6.3 trillion in health care costs.

It's the price tag of chronic disease that resonates with policy makers. "It's important to talk about how chronic disease impacts the economy because that's what gets the attention of the media and ultimately, the people who want to lead us and who are developing their ideas about health care," says Candace Dematteis, PFCDD's policy director. "Everyone talks about the expense of health care, but most are not looking at the drivers."

When Thorpe and his partnership colleagues talk about solutions, they typically focus on preventive measures and proper management, much of it provided through a community-

care approach with proven results.

"We've done some work at the state level, most notably in Vermont with the community health teams we put together," says Thorpe. "Nurse practitioners, nurses, pharmacists, and social workers help patients and families execute health plans, working with primary care physicians. It's a team-based approach that focuses on the patient rather than individual conditions."

A statewide public-private initiative to transform care delivery was introduced in Vermont in 2008. Since then, the state's growth in health care costs have slowed.

"Community-based programs implemented in relatively low-cost settings have been a success," says associate professor Jason Hockenberry, one of Thorpe's research collaborators in the health policy and management department. "They try to stave off development of chronic disease by identifying people who are at higher risk and trying to change their behavior. It's about targeted prevention, and it's about management."

This approach seems pretty simple. A web-based central health registry captures changes in patients' data, perhaps a marked increase in blood sugar. Then a program, probably including diet and exercise, is prescribed and implemented at the community level, maybe through the local YMCA or community clinic.

The community health team paradigm pioneered in Vermont and copied by other states may also fit the rest of the world. Toward that end, Thorpe has

extended PFCDD's mission to India, where other Rollins researchers, including Mohammed K. Ali, associate professor of global health and epidemiology, have long been engaged in studies of diabetes.

India is one of the world's fastest-growing nations, and its burden of chronic disease is particularly heavy. People in India develop chronic conditions at a significantly earlier age than in the U.S., so they have to deal with them longer.

In India as in the U.S., the aim is for a multi-pronged approach supported, at least in part, through enlightened government largesse. It's a smart investment, the ounce of prevention. "It's about governments buying into the idea that health and chronic disease are important issues," Ali says. "Health in general represents an outflow of cash. You've got to invest in it, and the long-term investment in a population's health is in a nation's own best interest."

That's what Thorpe has been trying to impress upon the people who want to lead the U.S. government. Good health is a smart investment. And as the U.S. transitions toward a historic new presidential administration, Thorpe will stay on message.

"We're not finished reforming health care in this country," he says. "This is the next stage of the process. It's health care reform, version two." ■





# THERE'S AN APP FOR THAT

*Student organization out in front on mHealth*

BY MARTHA MCKENZIE

**W**hen Nishant Kishore came to Rollins in 2014 to pursue an MPH, word got around that he knew how to develop mHealth platforms and applications, a skill that—judging from the response it received—is akin to being able to accurately predict the stock market. Classmates approached him to ask for tutorials, and he began meeting with small groups of interested students to share some tips and tricks on using mobile devices to support public health.

Kishore quickly realized the appetite for this knowledge was ravenous, so he and then-second year MPH student Roxanne Moore founded a new student organization, the Rollins mHealth Collaboration (RmC). The goal was twofold—to train students how to build mHealth systems in their first year and to line the students up with internship or job opportunities in their second year.

“This is a big up-and-coming field. There are a lot of organizations around the world looking for these sorts of skills, but I don’t know of a good training protocol anywhere,” says Kishore, who is now a data manager for the Malaria Zero project at the Centers for Disease Control and Prevention as well as the owner of his own mHealth consulting firm, EpiTech. “The training that is available focuses on when it’s appropriate to use mHealth and how to implement an existing program in the field. The mHealth Collaboration is the only group I know of that is specifically training people how to build these platforms.”

Every other week for two-hour sessions, Kishore met with fellow students in a first-floor classroom. Following a curriculum of his own design, he taught them how to build and use a wide variety of mHealth platforms. He also showed them how to connect to the local SMS (short message service) gateway provider, what costs are incurred, and how to devise the user interface. Most sessions required some prep work, and each featured a lecture, a demonstration, and then hands-on practice. It was a demanding curriculum, but the students were eager to take it on.

“It’s basically like taking another class but for no credit,” says Kyndall White 17MPH, who replaced Kishore as president of RmC following his graduation. “It’s a lot to take on in addition to your regular classes, but it gives you very marketable skills.”

That marketability attracted students from all Rollins departments. “It was cool to see how these mHealth skills can be useful in different contexts,” says White. “A BSHE student might want a text message reminder to reinforce a behavior. A health policy student might use it to track people’s opinions of a particular policy.”

Another facet of the mHealth Collaboration—and the reason it was dubbed “collaboration” instead of “club”—is that its members will take consulting jobs from alumni, professors, and organizations. It’s a win-win, giving students hands-on experience and researchers much-needed assistance.

Oswaldo Henriquez, a physician at Grady Memorial Hospital, reached out to the student organization when he wanted a mobile app to help low-resource cancer patients access the care they need. The mHealth team is creating a text message system that Henriquez will be able to use to remind patients of the various appointments they have. Patients will have to respond to each reminder with a “yes” or “no,” which could help reduce the number of no-shows. And Henriquez will be able to stay in touch with his patients, even if they move without telling his office, as they often do.

“A lot of our patients at Grady are marginalized, and it’s easy for them to miss appointments and fall off our radar,” says Henriquez. “They may show up again months later and the cancer has progressed. This message system will help keep them in the system so they get the care they need.”

Mark Fajans 16MPH landed a summer practicum with Family Health International 360 in Myanmar thanks to the mHealth experience he gained through RmC. The organization was using a mobile application to track people with drug-resistant TB, but the app could be used only to collect the data and store it to be analyzed at the end of the trial. The lag time meant that some participants might die before researchers could get the results.

Nishant Kishore taught fellow students **Kyndall White 17MPH**, right, and **Katherine Stanfill 16MPH**, middle, how to build mHealth platforms through Rollins mHealth Collaboration.



So Fajans built a dashboard that enabled the data to be analyzed in real time, allowing researchers in the field to make immediate changes to treatment, if necessary.

“I know the experience I got in the mHealth Collaboration is what got me this practicum,” says Fajans, who now works in the CDC’s global HIV and TB division. “It was totally new to me when I started, but it was surprisingly easy to pick up and learn to use.”

That’s exactly the secret Kishore has been trying to share with students. “The science of mHealth has been seen as prohibitively technical for so long that people were afraid of it,” he says. “One purpose of RmC is to show that it’s not that way anymore. Give me an hour, and I can teach you how to build a platform.”

In fact, Kishore taught himself to build and use mHealth platforms while a Peace Corps volunteer in Nicaragua from 2011 to 2014. By trial and error, he designed and implemented Chat Salud, a mobile health application to provide education on topics such as safer sex practices, HIV intervention, and domestic violence. After

the Peace Corps, he worked for a nonprofit in Mexico developing mobile health systems for maternal health, again figuring it out as he went. So by the time he came to Rollins, Kishore had about three years’ experience in building mHealth platforms.

He was so instrumental in building, running, and teaching in the collaboration, it would be easy to assume the organization would wither and die after his graduation. Easy but wrong. Kishore spent last year grooming five students to take over the collaboration. They plan not only to carry on what he started, but to improve on it.

“We plan to have a hack-a-thon using TeleRivit, a text messaging system, in the fall and a case competition in the spring,” says White. “We’re also adding two supplemental sessions for second-year students—one on how data is stored using the Cloud or a server and one on how to talk to product managers about incorporating mHealth in their projects. And for students who attend all of the sessions, we are going to award a certificate saying they are mobile health specialists.” ■

## Two tools for WASH

**When the Center for Global Safe Water, Sanitation, and Hygiene (CGSW) landed a grant from the Bill & Melinda Gates Foundation to develop a tool to rapidly assess health risks from fecal contamination in poor urban neighborhoods, it needed to find a new way to collect and analyze the data. They turned to Kishore.**

The tool Kishore helped design, called SaniPath, allows researchers to collect fecal contamination data on drain water, flood water, and ocean water. It also collects data about how often people come into contact with each potential source of contamination. The tool then combines the two sets of data to generate a report that city planners and government officials can use to deploy interventions where they’ll have the most impact.

“The SaniPath tool is actually constructed out of two separate open-source modules,” says James Michiel, a senior mHealth analyst at

CGSW. “It’s hard to explain in understandable terms, but Nishant was basically able to take an analytical package and move it inside a data repository. The result is an incredibly sophisticated tool that is easy to use.”

Michiel also relies on two people Kishore trained in mHealth to help with another CGSW project. Katherine Stanfill 16MPH, who currently works part-time at the center, and White, the current RmC president, work on the WASH Conditions tool, an mHealth assessment tool to analyze WASH data at health care facilities in low- and middle-income countries.

“Katherine and Kyndall are basically doing the work of professional mHealth consultants,” says Michiel. “It’s almost like having an mHealth innovation lab right here at CGSW.” ■



## Sizing up the competition

**Patrick Sullivan developed an app that can help men who have sex with men (MSM) remain healthy.**

Through HealthMindr, men can order condoms and HIV test kits to be delivered to their door. They can answer questions about their sexual habits and the app will suggest how often they should be tested and send reminders to help ensure that they follow through. Men can also use HealthMindr to determine if they are a candidate for pre-exposure prophylaxis (PrEP) or post-exposure prophylaxis (mPap), and if so, where they can get it.

Kishore consulted with Sullivan and his team on many of the technical aspects of the app development. In addition, Kishore

created an exhaustive index of HIV-related apps already on the market to help determine the need for an app like HealthMindr. He found 147 HIV-related apps in the Google Play store and 138 in the Apple store. Kishore then classified each app by developer and content. His finding—71% of HIV-related apps were developed by non-academic, non-public health institutions, only 7% focus on MSM, and none of the apps dealt with PrEP or mPap.

“Nishant helped us think about how to make a case for HealthMindr in the market context,” says Sullivan. ■



## A transmission scavenger hunt

**Lance Waller turned to Kishore and other RmC members for help in preparing a grant application to study the transmission of Buruli ulcers in West Africa.** The ulcer is a rare skin and soft tissue infection that tends to strike in poor rural communities.

RmC members fashioned and tested an app that could potentially allow Waller to track the route of transmission in the field. Erin Stearns 16MPH, who was RmC’s vice president, helped organize a scavenger hunt around campus. Volunteer students were randomly assigned as “infected” or “healthy.” They were given a list of five buildings that they needed to visit and an app called Map My Run to track their movements. One building—which appeared on the lists of all the infected students and none of the healthy ones—stood in as an infected water source.

Stearns and her team were then able to create a color-coded map (healthy runners in blue, infected in red) overlaying their routes and

the buildings they visited. Even an untrained eye can pick out that every infected student visited the same building.

“I wouldn’t have been able to do this without their help,” says Waller, chair of the biostatistics and bioinformatics department.

“Erin and her colleagues were able to pull multiple sources of information—routes from the running app on the phone, an open source mapping system that had the streets and buildings on campus, and the designation of infected or healthy. When you put together those three bits of information that previously had nothing to do with each other, it tells a story.”

Waller will use the results as proof of concept in his grant application and hopes to roll out a similar approach in field studies in Ghana or Benin. ■



Taryn Sweeny wears a hockey helmet to protect herself in seizure-related falls. Project UPLIFT helped boost her mood and reduce her seizures.



# Lifting depression among those with epilepsy

◆ PROJECT UPLIFT USES DISTANCE DELIVERY TO TEACH MINDFULNESS SKILLS ◆

BY DANA GOLDMAN • PHOTOGRAPHY BY MATT NAGER

## Taryn Sweeny was diagnosed with epilepsy when she was 14 years old.

Recurrent seizures, along with resulting falls and injuries, have forced the now 41-year-old Colorado woman to wear a hockey helmet whenever she moves about. Some of her seizures leave her confused and briefly unable to speak. She cannot leave the house alone and has to depend on others to drive her.

It's hardly surprising that Sweeny has also wrestled with depression. "I can't get around and do much," she says. "I had really started to feel sorry for myself."

Then she heard about Project UPLIFT (Using Practice and Learning to Increase Favorable Thoughts). The program is a groundbreaking distance-delivery intervention for people living with depression and seizures. She didn't expect much, but she was desperate enough to give it a try.

Through the program, Sweeny learned to relax and calm her mind and body. Her experience was so positive that she decided to participate in Project UPLIFT a second time. As a result, not only has she been able to keep depression at bay, the intensity of her seizures has actually decreased.

"It opens your eyes in a new way," she says. "I come back with more understanding of how my brain and body work, so now I know a better way to handle stress."

Project UPLIFT is the brainchild of Nancy Thompson, professor of behavioral sciences and health education and epidemiology. She came up with idea as a result of her work as a clinical psychologist in the 1990s. Thompson knew that patients with chronic diseases are much more likely to experience depression than their mentally healthy counterparts. In fact, the Epilepsy Foundation reports that more than a third of people living with epilepsy also suffer from depression. That's compared with an estimated 6.7% of the general population, according to the National Institute of Mental Health.

Despite the enormity of the problem, people with chronic illness are less likely to access in-person counseling due to

lack of mobility and social isolation. Back in the early 2000s, Thompson saw that nascent Internet technologies could offer a solution. In fact, when Project UPLIFT started in 2006, it was the first group intervention in which participants had the option of "meeting" via the web or over the phone.

Over the course of eight weeks, trained local facilitators lead participants through a curriculum of mindfulness skills as well as cognitive-behavioral therapy exercises to identify and change unhelpful thought patterns. Those skills include the ability to recognize distorted thoughts and challenge their accuracy, shift attention and focus when distressed, and reduce reactivity to disturbing thoughts.

The Centers for Disease Control and Prevention funded Project UPLIFT's initial studies. That early research showed that the intervention reduces depression symptoms by more than 50%, with participants showing more knowledge about depression, seizures, and skillful responses than members of a control group. In addition to halting depression, Project UPLIFT has also been shown to reduce the frequency of seizures in people with epilepsy, reducing emergency room visits and associated costs of acute care. Thompson thinks that's because Project UPLIFT decreases participants' stress, a major trigger for seizures. In addition, the training in mindfulness may lead participants to more awareness of possible seizure indicators, such as auras, allowing them to take proactive steps.

While the program has trained facilitators in 27 states and in Canada, Thompson and colleagues are currently working to expand Project UPLIFT's reach even further. They're studying the possibility of using a similar curriculum for women with heart disease, people with cystic fibrosis, pregnant women in rural areas, and caregivers. Thompson and colleagues are also doing the legwork so that Medicare and Medicaid may include Project UPLIFT in their funded programs for patients.

All of these successes mean the world to Thompson. "I've put into UPLIFT the totality of what I've learned from public health throughout my entire career," she says. "But it's important to remember that the uplifting is done by the patients' own hands, by learning the skills to improve their own mental health." ■

# Celebrating 90 YEARS

**F**riends, colleagues, and family members gathered to celebrate the 90th birthday of a public health legend, Dr. Eugene Gangarosa. Many attendees were toting Gangarosa's recently released autobiography, *But Now They Are Angels: Reflections on My Life in Service to Public Health*.

For Gangarosa, the toll of waterborne disease is personal. His mother lost four of her first five children to aquatic illnesses in her native Sicily. Now an international expert on unsafe water, Gangarosa has taught a graduate course on food and waterborne diseases at Emory every year since 1982. He came to the university that year—after a career at the CDC and the American University of Beirut—to direct the struggling master of community health program within the School of Medicine. He was instrumental in transforming the program into what is now the Rollins School of Public Health.

Gangarosa has received the highest awards given by the CDC and Emory. He was awarded CDC's Medal of Excellence for distinguished scientific contributions and Emory's Thomas Jefferson Award for outstanding contributions to the university.

However, giving rather than receiving has been the thrust of Gangarosa's career. He and his wife, Rose, have provided invaluable support to the school, endowing two professorships and establishing the first global health experience fund.

"Gene was instrumental in establishing our school. He built one of the top WASH programs in the country. He and Rose have had a tremendous impact locally, nationally, and globally," says Carlos del Rio, Hubert Professor and chair of the Hubert Department of Global Health. "As long there is a school of public health at Emory, Gene and Rose Gangarosa's presence will be felt here."

View more photos at [bit.ly/gangarosa90th](http://bit.ly/gangarosa90th).



**Clockwise from top left:** Tom Sellers, Gene Gangarosa, John Boring, Christine Moe, Jim Curran, and Rose Gangarosa; Mike Kutner congratulates Gene and Rose; Gene admires his birthday cake; Gene and Rose with Matt Freeman, Bethany Caruso, and their daughter, Hannelore; two of Gene's

brothers, Dr. Frank Ganis and Dr. Louis Gangarosa; the Gangarosa family; Gene pauses his remarks to give Rose a kiss for their 66th wedding anniversary; Gene describes his passion for the work he's done through the years in public health. In the middle: a standing ovation for Gene Gangarosa.

# I Don't

Efforts to end child marriage



Every two seconds, a girl gets married. She leaves behind studying lessons and playing with friends for cooking and cleaning for her husband's family. She abandons her hopes and dreams for a harsh, unrelenting reality.

The consequences of marrying before age 18 are well known. Child brides are denied education and become locked in poverty. They face pregnancy before their bodies have developed enough to safely give birth. And they face a higher risk of violence.

Kathryn Yount, Asa Griggs Candler Chair of Global Health, was studying the link between child marriage and violence in Bangladesh when she made an unexpected discovery.

Looking at data on child brides from 77 Bangladeshi villages, Yount found that while marrying after age 18 usually provided some protection against partner violence, the opposite was true in villages with a high prevalence of very early child marriage—marriage before age 15. In those villages, older brides were actually at higher risk for partner violence.

"Most likely, these women are facing backlash for having bucked the social norm of very early marriage in their villages," says Yount.

"That suggests interventions need to move beyond targeting individuals toward targeting whole communities."

Traditional interventions to curb child marriage have involved giving parents money in exchange for keeping their girls at home and in school. These payments are meant to offset the expected costs of older brides and the perceived lack of return on investment since girls will end up living in their husbands' households.

While that intervention is still useful, particularly on a village-wide level, it's probably not enough on its own. Yount suggests a community-wide education effort to explain the ill-effects of child marriage. Additionally, providing "safe spaces" for adolescent girls to gather could help empower them. Trained personnel could work with the girls to build self-esteem, develop life skills related to sexual negotiation, and discuss gender norms. And interacting with peers would help girls build a social support network.

"More intervention studies are needed," says Yount. "People are recognizing that adolescence is a key opportunity for intervention that has been missed. There is a sense of urgency now since a large number of young women globally are entering their childbearing years. Efforts to curb child marriage and gender-based violence are taking off like a firestorm." —Martha McKenzie

## New Michael M.E. Johns M.D. Chair in Health Policy

The O. Wayne Rollins Foundation has funded the Michael M.E. Johns M.D. Chair in Health Policy to honor Johns' leadership of Emory's Woodruff Health Sciences Center (WHSC). Johns himself will be the inaugural holder of the chair.

An otolaryngologist and head and neck cancer surgeon by training, Johns served as Emory's fifth chancellor from 2007-2012. Prior to that post, he was CEO of WHSC and Emory executive vice president for health affairs.

He left Emory in 2014 to return to his medical school alma mater, University of Michigan, as interim executive vice president for medical affairs and interim CEO of its health system. The next year he came back to Emory to serve as interim executive vice president for health affairs until Jonathan Lewin assumed that position earlier this year.

During Johns' tenure as WHSC CEO, he led a comprehensive strategy that positioned the Woodruff Health Sciences Center as one of the nation's preeminent academic health centers in education, research, and patient care. He initiated the drive that resulted in National Cancer Institute Cancer Center Designation for the Winship Cancer Institute.

The chair is just the latest honor for Johns. He received the



Michael Johns, here with Jim Curran, is being honored with a chair in his name in the Department of Health Policy and Management.

2015 Castle Connolly National Physician of the Year Award for Lifetime Achievement. He was the 2006 recipient of the Charles R. Hatcher Jr. M.D. Award for Public Health. And in 2009 Dean Curran established the Michael M.E. Johns M.D. Lecture in Health Policy to honor Johns' leadership of WHSC. Johns is a member of the National Academy of Medicine (formerly called the Institute of Medicine) and has served on several committees and as vice chair of the NAM council.

"Dr. Johns has played an important role in the growth of our school and of the entire Woodruff Health Sciences Center," says Dean James Curran, who attended medical school with Johns. "He is widely recognized as a catalyst of new thinking in many areas of health policy and health professions education. He is well deserving of this chair in his honor." ■

## Presswala rejoins development team

Kathleen Presswala has rejoined the Rollins development team as director of stewardship and development communications.

Presswala was director of annual giving from 2011 to 2014, and her efforts led to significant increases in support from alumni and friends. Since then she has pursued a freelance writing career that included projects for the RSPH and the Winship Cancer Institute.

Presswala began her fundraising career in Boston as a development associate for Elderhostel after graduating from Bowdoin College. She

earned a law degree from the University of Georgia before returning to nonprofit fund-raising with Atlanta Ballet, where she served as the annual giving officer.

"We are thrilled to welcome Kathleen back to Rollins and pleased that we will once again be the beneficiaries of her many talents," says Kathryn Graves 93MPH, associate dean for development and external relations.

Presswala joins colleagues Michelle



James, senior director of alumni and constituent relations; Julie Smith, director of development and strategic partnerships; Karla Ruggiero, director of annual giving; and Sonia D'Avilar, program coordinator. ■



NANCY THOMPSON 77PH



Born: JOSEPH H. GALLAGHER V, TO MIA HEMMES GALLAGHER 09 MPH



CARMEN PRICE 12MPH



MARRIED: LAUREN E. OWENS 14MPH and Evan Valentine



PRIYA GUPTA 15MPH

## 1970s

**NANCY THOMPSON 77PH** received Emory's 2016 Scholar/Teacher Award, supported by the United Methodist Church's General Board of Higher Education and Ministry. The award honors exceptional teaching, significant contributions to the scholarly life of the university, concern for students and colleagues, and commitment to high standards of professional and personal life.

Thompson was a student in the first-ever masters of community health class in 1975. While working at the CDC a few years later, she began teaching at Emory. She came on full time in 1985. She played a pivotal role in developing the curriculum for the school of public health, and over the years she has touched untold numbers of students with her enthusiasm and commitment. Read more about Thompson's career at <http://emry.link/nancythompson>.

## 2000s

**LEISE KNOEPP 098C 00MPH** is working in urogynecology at the Ochsner Medical Center in New Orleans, La.

**NICHELLE WILLIAMS NIX 03MPH** is director of the Alabama Governor's Office of Minority Affairs. It is a cabinet-level office, making Alabama only the second state to

have such an office. It is the first and only state to have an office that takes a comprehensive approach to focusing on women and minorities. "I am honored to support Governor (Robert) Bentley's efforts to create jobs, improve education, and increase opportunities and access for women and minority communities across the state," she says. "It is my singular mission to help make Alabama a better state for everyone."



DAVID A. BRAY 01C 04MPH 08 PhD (right) & RET. GEN. COLIN POWELL

**DAVID A. BRAY 01C 04MPH 08PhD** was named a 2016 Young Global Leader by the World Economic Forum.

**BORN: A son, Joseph Henry Gallagher V, to MIA HEMMES GALLAGHER 09MPH** and her husband Joseph IV (Joe) on Feb. 16, 2016. He is their first child.

## 2010s

**MARINA FERNANDEZ-ROMAGNOLI 10MPH** and her husband Pablo A.

Romagnoli 11PhD have accepted positions at the Instituto Universitario de Cordoba in Argentina as instructors in the new School of Medicine.

**LT. JAMES D. GOOCH 11MPH** is a health assessor in Region 4 for the Agency for Toxic Substances and Disease Registry.

**CARMEN PRICE 12MPH** is the senior project lead at Global Healthcare Solutions, part of Boston Scientific.

**ELISA STORYK 13MPH** is working as a clinical research coordinator at Emory's Winship Cancer Institute on the multiple myeloma team.

**NIDHI BADIYANI 14MPH** is a tobacco control specialist at a nonprofit organization called "Breathe California." She writes that they conduct programs to promote smoke-free environments.

**MARRIED: LAUREN E. OWENS 14MPH** and Evan Valentine in May, 2015, in Rockville, Md.

**PRIYA GUPTA 15MPH** published an article in *Nutrients* titled "Iron, Anemia, and Iron Deficiency Anemia Among Young Children in the United States." Iron deficiency and anemia are associated with impaired neurocognitive development and immune function in young children. This analysis describes the prevalence among children ages 1-5 years based on data from the 2007-2010 National Health and Nutrition Examination Survey.

## Leaving a legacy in public health

**P**hilip Brachman Sr. MD died unexpectedly on June 6, 2016. He was known for his tireless leadership and mentorship and for his work in education, health, and social justice.

Brachman spent the first 30 years of his career at the Centers for Disease Control and Prevention, which he joined in 1954. He served as director of the Epidemic Intelligence Service (EIS) from 1970 to 1981. In that post, he played a seminal role in the formation of the EIS program.

Today the CDC recognizes excellence in teaching EIS officers with an annual Philip S. Brachman Award.

After retiring from the CDC, Brachman spent the next 30 years of his career as professor of global health and epidemiology at Rollins. He was a passionate and dedicated teacher, reportedly never missing a class.

"I consider Phil a public health giant," says Dean James Curran. "He was a valuable asset to our school and to the entire global health community."

Brachman was nationally recognized as an anthrax expert, and his expertise was called upon during the anthrax crisis following 9/11. In 1957, Brachman had investigated the only other inhalational anthrax epidemic in U.S. history. During the 2001 epidemic, his frank opinions and expert advice on human an-

thrax infections were quoted almost daily in the national press.

Brachman was the first and only director of the Hubert H. Humphrey Fellowship program at Rollins. This program, established by President Carter in 1988, brings mid-career public health practitioners from all reaches of the globe to Rollins to study the latest methods and theories. After completion, the fellows return to their countries of origin to teach other health professionals. In this way, Brachman has helped build the global health workforce capacity around the world.

Philip, along with his wife Susan, was one of the founding parents of

The Paideia School in Atlanta. He was chairman of the board of trustees for seven years and remained an active supporter of the school up until his death.

Brachman's passing elicited an outpouring of tributes from former students, colleagues, and friends:

"The number of lives you have improved, spanning the globe and generations. That is something to strive for—a life well lived!"

"I am a Chinese, yet found my mentor in the United States."

"Thank you, Dr. Brachman, for every single word, for being a role model, an example of strength, for believing in a better world and working to make it happen."

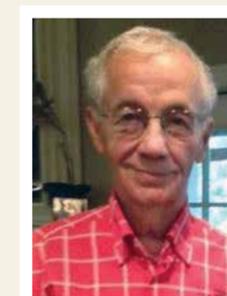
To read more tributes to Brachman or to leave your own, visit [emry.link/brachman](http://emry.link/brachman).



**JAMES BODE WEAVER III 08MPH** of Atlanta on Sept. 16, 2015. His first career was in journalism and mass communications. As a professor, he taught at several universities, including Georgia, Emory, Virginia Tech, and Auburn. As a broadcaster, he worked as a DJ and earned an Emmy for news reporting. He joined the CDC in 2007, shortly after going back to school to earn his MPH at Rollins. In 2009, he was awarded the Outstanding Health Marketing Scientist of the Year.



**DON A. FRANCO 85MPH** of West Palm Beach, Fla., on Jan. 31, 2015, at 83. He trained as a veterinarian in Ontario, Canada, and in the Phillipines and had a veterinary practice in Trinidad. He came to the U.S. to work for the U.S. Department of Agriculture, Food Safety and Inspection. After earning his MPH at Emory, he published on the plight of poverty and public health needs in third-world countries.



## Dolphins & diabetes

**Stephanie Venn-Watson OOMPH studies dolphins to learn how to prevent diabetes.**

In her work as a veterinary epidemiologist and director of clinical research at the National Marine Mammal Foundation in San Diego, Venn-Watson discovered that dolphins are susceptible to metabolic syndrome, or prediabetes, just like humans. But unlike humans, dolphins can switch in and out of this state and never go on to develop full-blown diabetes.

Venn-Watson uncovered this surprising ability by accident while doing routine blood work on the dolphins in the Navy Marine Mammal Program in San Diego Bay. These animals work for the Navy to find and detect underwater objects, and Venn-Watson helps care for them in exchange for being able to study them. When she compared the blood chemistry of dolphins that had fasted through the night to that of dolphins who had just been fed, she was startled.

“Instead of seeing differences similar to other animals in fasting and non-fasting states, we were surprised to see differences that looked like people with diabetes versus those without diabetes,” says Venn-Watson. “The dolphins that fasted were diabetic-like, and when they ate, they weren’t.”

Venn-Watson hypothesizes this ability to slip in and out of a prediabetic state stems from the need for glucose to feed their large brains. “They don’t eat glucose—fish is a high-protein, low-carb diet. So they need to make it,” she says. “We think they have a gene that switches on to make glucose when they need it.”

To test this, the Navy is working with the Salk Institute to mine the dolphin genome and

look for that switch. If they can find it, it could lay the groundwork for gene therapy for humans.

In another study, Venn-Watson looked at two populations of dolphins with different rates of metabolic syndrome—the Navy’s group in San Diego Bay, which had a high rate, and a group in the Sarasota Dolphin Research Program, which had a lower rate. She studied the diets of both—the San Diego dolphins primarily ate capelin and their Sarasota counterparts favored mullet—to see if that could explain the differences. She expected to find that the group that was protected from metabolic syndrome had a diet high in omega 3 fatty acid, but she was surprised again. The nutrient that was actually predictive of lower levels of prediabetes turned out to be a saturated fat, C17, which is found in mullet, and also in butter and whole milk.

Venn-Watson put the dolphins with metabolic syndrome on a high-mullet, low-capelin diet for six months. By the end, the animals’ insulin levels came down and their glucose normalized—they were no longer prediabetic.

These findings have led her and her team to wonder if the shift away from whole dairy fats that began in the early 1980s following revised USDA guidelines has resulted in a C17 deficiency, which in turn has fueled a diabetes epidemic.

The U.S. Navy has a pending patent on C17 as a drug treatment for metabolic syndrome, and Venn-Watson and her husband, a Navy physician, have started a small business, EpiTracker, to do the research needed to move C17 through the FDA drug approval process.

“We hope these discoveries can someday lead to therapies to prevent, treat, and maybe even cure diabetes,” says Venn-Watson. —*Martha McKenzie*

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Eugene Gangarosa celebrated his 90th birthday surrounded by his family, friends, and colleagues. Attendees toasted Gangarosa's immense contributions to RSPH and to the cause of safe water, sanitation, and hygiene worldwide.

