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Rollins School of Public Health



On the cover Carla Berg is using tobacco companies' sophisticated market segmentation techniques to try to create anti-tobacco messages that will resonate with college students.

Cover illustration by Sarah Jane Coleman

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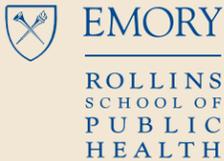
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▲ Touched by cancer

Post-it notes detailing participants' reasons for taking part in an American Cancer Society cancer prevention study line the office of Alpa Patel 97MPH. As director of the study, Patel often looks at the notes to remind her how people are touched by cancer.



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“Long before I knew anything about genetics, I knew I was at risk.”

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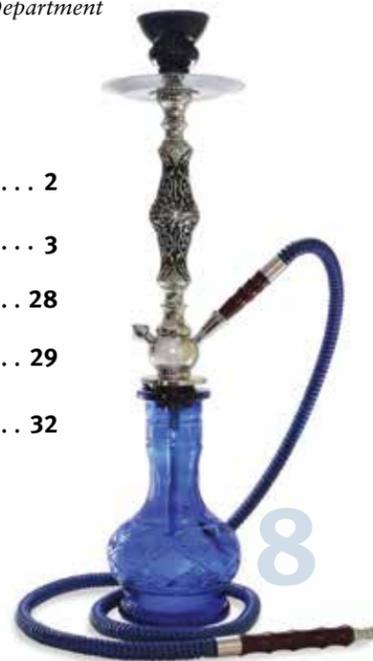
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Not beyond us

The theme of this year's World Cancer Day was "Not Beyond Us." The tagline was used to emphasize that, even though cancer remains the second leading cause of death in the U.S., solutions to the prevention, detection, and treatment of the disease exist and are within our reach. Here at Rollins, we couldn't agree more.

Our researchers are working to advance cancer understanding in innovative ways, including borrowing the sophisticated market segmentation techniques used by tobacco companies to fashion anti-tobacco messages, tracing the connection between sedentary lifestyles and cancer risk, using genetic information to tailor public health interventions, and determining if insurance type influences quality of care.

Rollins is home to the Georgia Cancer Registry, which collects information on each new diagnosis of cancer within the state. This database offers our researchers an incredibly rich resource to mine for their studies in cancer incidence, treatments, and outcomes. These studies range from investigating cancer treatments' impact on fertility in women during their prime reproductive years to assessing which treatment protocols for prostate cancer least impact quality of life. Tomorrow's cancer patients will be better off for the work done at Rollins today.

Tomorrow's cancer patients will be better off for the work done at Rollins today.

Each year the American Association of Schools & Programs for Public Health teams with Pfizer to give five faculty awards recognizing exceptional contributions and achievements. At the recent ASPPH meeting, Rollins faculty claimed two of the five. Solveig Cunningham, assistant professor of global health, received the ASPPH/Pfizer Young Investigator's Award for Distinguished Research in Public Health, which recognizes a single, outstanding research paper published by an early-career investigator. Kara Robinson, associate dean of admissions and student affairs, garnered a new award—the ASPPH Award for Excellence in Student Services, given to an individual who has gone above and beyond in working with applicants and students. Please join me in congratulating these two valuable members of the Rollins team.

In the fall, we celebrated the 50th anniversary of our oldest department, Biostatistics and Bioinformatics. The far-reaching collaborations of this department with scientists all over Emory University and beyond advance the science of medicine and public health on innumerable fronts.

This department's golden anniversary serves as a precursor to our own upcoming milestone. In September, we will be celebrating our 40th year as a program of public health and our 25th anniversary as a school. Watch the Rollins web page, Facebook page, and Twitter feed for more details. I look forward to sharing the celebration of our anniversary with the entire Rollins family.

James W. Curran, MD, MPH

James W. Curran Dean of Public Health

Rollins responds to Ebola

The recent Ebola epidemic brought one lesson home loud and clear. In order to help better confront future outbreaks and epidemics, public health capacity must be shored up in Africa, where new diseases are likely to arise. Toward that end, the Hubert Department of Global Health has been awarded a \$7.43 million, five-year cooperative agreement by the CDC to establish the first African Center of Excellence for Public Health Security.

Initially, the center will provide in-country training for public health professionals in eight West African countries in disciplines including public health surveillance, epidemiology, laboratory, infectious disease, and preparedness. The long-term goal is to create a locally owned and operated public health preparedness center.

"The aim is for the center to be sustainable, to develop the capacity to influence public health policy, and to influence other things, such as data sharing, transparency, trust—the kinds of things that are necessary for early detection of epidemics," says Scott McNabb, global health professor, who is leading the project. Co-principal investigators are Carlos del Rio, Hubert Professor and chair of the department, and Saad Omer, associate professor of global health.

Closer to home, del Rio and Dabney Evans, assistant professor in global health, are teaching a Coursera



class titled "Ebola: An Evolving Epidemic."

The six-week course discusses the state of global health before the epidemic, the care of patients in both developed and developing settings, and treatment for people who may be infected. It will conclude with conversations about the ways in which Ebola is changing public health. The course runs through May 11 and then will be available on an on-demand basis beginning in June. Visit coursera.org/course/ebola ■

Emory admitted as observer to UN climate talks

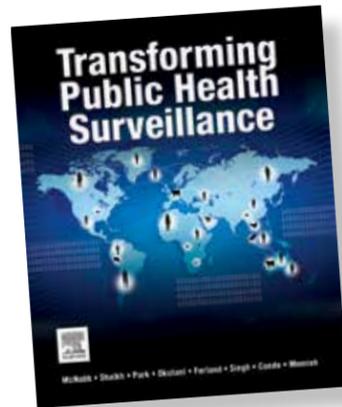
The Conference of the Parties to the United Nations Framework Convention on Climate Change approved Emory University as an accredited, official observer to the UN climate talks, thanks to efforts led by Stefanie Sarnat, Rollins associate professor of environmental health.

The accreditation allows Emory faculty, staff, and students to participate in annual negotiating sessions, such as those that produced the international agreements in Kyoto in 1997 and Copenhagen in 2009. Emory joins more than 35 other universities that hold this status.



"Several thousand non-governmental observers attend these sessions each year, and they provide a great opportunity for the Emory community to present our research and to network, teach, and learn," says Sarnat.

This accomplishment is the first major milestone for Climate@Emory, a new campus-wide initiative designed to advance scholarship, teaching, partnership, and engagement on climate change at Emory and beyond. Visit Climate@Emory at climate.emory.edu ■



The future of public health surveillance

Scott McNabb, global health professor, likes the weather app on his smart phone that can tell him exactly what the weather is in Beijing. He wants a similar app for public health surveillance data—one that could tell him the number of TB cases in Florida within the past week or identify the current most pressing public health issues in Paris.

That vision of the future of public health surveillance is the topic of McNabb's new book, *Transforming Public Health Surveillance*, which is scheduled to be published by Elsevier this spring.

"Public health surveillance is probably the most important area of public health practice, and it needs to be strengthened in the wake of Ebola and MERS (Middle East Respiratory Syndrome)," he says. "This book is an advanced look at the future of public health surveillance and what could be if we used the technology that is currently available." ■

Evaluating school-based health centers

Many children who have a hard time getting to a doctor's office do make it to school on most days. So a movement has sprung up to bring health care to where children spend the bulk of their day.

Emory researchers, including Carol Hogue, epidemiology professor, Kathleen Adams, health policy and management professor, and Veda Johnson, associate professor of pediatrics, received a five-year \$1 million award from



the National Institute of Minority Health and Health Disparities to evaluate school-based health centers in Georgia. Hogue and her colleagues will measure how effective these centers are at improving school attendance, preventing and reducing childhood obesity, reducing emergency room visits, improving asthma management, and encouraging healthy lifestyles.

Georgia ranked 43rd for overall child well-being. More than 237,000 of the state's children are uninsured, with very limited access to routine health care.

Atlanta school, blacks in an Albany school, and whites in a rural northwest Georgia school. The centers may serve as a model to help reduce disparities and raise the bar for care for all children.

It's a bar that could stand being raised. According to a national study on the well-being of America's children, Georgia ranked 43rd for overall child well-being. More than 237,000 of the state's children are uninsured, with very limited access to routine health care.

"We believe that school-based health centers will help establish a system of care that eliminates all barriers to health care, such as cost, hours of operation, transportation, and others," explains Hogue, the Jules and Uldeen Terry Professor of Maternal and Child Health at Rollins. ■

WHAT WE KNOW NOW

From the NIH Stillbirth Collaborative Research Network, which includes Rollins.

WOMEN WHO DELIVER A STILLBORN INFANT—but who have no history of depression—may be at a higher risk for long-lasting depression. The depression may last beyond the six months most people require to recover from a major loss and persist for as long as 36 months.



WaterHub provides hands-on experience for environmental students

As part of the university's commitment to sustainability, Emory has built a new water reclamation facility called the WaterHub, which is projected to help Emory reclaim some 300,000 gallons of campus wastewater daily.

Even as the facility was being constructed, Rollins students began using it for research by monitoring the changing microbiology of wastewater samples as the new project was ramping up.

"It provided the experience of collecting real data, interpreting results, and writing reports," says Christine Moe, Eugene J.

"One of the things we talk about in class is the growing problem of water scarcity around the world—globally, we're running out of water."

Gangarosa Professor of Safe Water and Sanitation and director of the Center for Global Safe Water. "For some students, it may have been the first hands-on lab experience that they've had."

In addition to reducing campus water consumption and costs, Moe sees the facility providing exciting possibilities for research, scholarship, and water conservation applications far beyond campus.

"One of the things we talk about in class is the growing problem of water scarcity around the world—globally, we're running out of water," explains Moe, who worked with Amy Kirby, assistant professor in global health, and Jonathan Lanciani, the WaterHub designer, to arrange the opportunity. "Water scarcity will be one of the defining issues during the lifetime of these students." ■

The unequal burden of HIV

Black men who have sex with men (MSM) in the U.S. have been disproportionately affected by HIV since the beginning of the epidemic. A new study led by Eli Rosenberg, assistant professor of epidemiology, finds that, even in a best-case scenario, this disparity likely will continue for decades.

The unequal burden of HIV has puzzled researchers. Black MSM do not engage in riskier behaviors than white MSM, and they are just as consistent about condom use and HIV testing, if not more so. Why then do they suffer consistently higher acquisition rates?

The study by Rosenberg, in collaboration with amfAR, the Foundation for AIDS Research, found blacks trailed whites in every step along the continuum of care—diagnosis, linkage to care, retention in care, antiretroviral prescriptions, and suppression of viral load.

There are various reasons for such imbalances, but Rosenberg concludes that even if the playing field could be leveled, the disparity in infection rates would narrow only a bit.

"There is an urgent need to improve our rates of HIV testing, linkage and retention in care, and prescription of and adherence to antiretroviral therapy for black men living with HIV," he notes. ■



Claire Peterson receives first Kathleen R. Miner Scholarship

The first Dr. Kathleen R. Miner Scholarship for Public Health Excellence was awarded to second-year MPH student Claire Peterson. The scholarship was established by former students of Kathy Miner 79MPH, associate dean of applied public health, as a way to thank and honor her.

Miner came to Rollins in 1978 as a student and never left. “She is a force in public health,” says Richard Levinson, executive associate dean of academic affairs. “But above all, she is a teacher and a mentor.”

Many former students credit Miner with shepherding them into their current careers. To express their appreciation, a committee led by the self-proclaimed



Kathleen Miner, third from left, with Claire Peterson, fourth from left, and “Kathy’s Kids,” Martha Alexander, Nancy Hunt, Dennis Jarvis, and Moose Alperin.

“Kathy’s Kids”—Dennis Jarvis 88MPH, Martha Alexander 86MPH, Nancy Hunt 87MPH, and Moose Alperin 91MPH—have raised more than \$140,000 to establish the scholarship fund.

Peterson, who was selected as the first recipient, earned her B.S. in genetics with a minor in women’s studies from the University of Wisconsin-Madison. At Rollins, Peterson is working toward her MPH in behavioral sciences and health education with a certificate in maternal and child health. She also works in health promotion at Georgia Institute of Technology, focusing on sexual health, positive body image, and preventing sexual violence. ■



Debunking misperceptions of the HPV vaccine

The first vaccine against human papillomavirus, or HPV, which causes cervical cancer, came out almost a decade ago. However, only 57% of adolescent girls and 35% of adolescent boys currently get the three-dose HPV vaccine series. Why? Parents fear that giving their pre-teens the vaccine will encourage them to be sexually promiscuous, and they think the recommended age for getting the vaccine—11 to 12 years old—is just too young.

A recent *JAMA Internal Medicine* commentary by Robert A. Bednarczyk, an epidemiologist in global health, urged physicians to educate parents and adolescents about the misperceptions and benefits of HPV vaccination. Studies have shown that getting the vaccine does not, in fact, lead to an increase in sexual activity. And the time frame is justified. The antibody response in younger adolescents is greater than it is in older adolescents and young adults. The timing also coincides with the recommended schedule for Tdap and MCV4 vaccines, providing a convenient opportunity to begin HPV vaccination. Finally, studies have shown that 27% of U.S. adolescents have had sexual intercourse by 15-17 years of age, and 63% of those 18-19 have had intercourse.

Says Bednarczyk, “Just as we do not wait until we have been in the sun for two hours to apply sunscreen, we should not wait until after an individual is sexually active to attempt to prevent HPV infection.” ■



A granite marker was placed in front of the St. Louis chemical plant that accidentally shipped flame-retardant chemicals to livestock farms throughout Michigan.

MARK BRUSH, MICHIGAN RADIO

Tracing the toxic legacy of PBB contamination

In 1973, bags of a fire-retardant chemical called PBB, polybrominated biphenyl, were accidentally mixed into livestock feed and sold to farmers throughout the state of Michigan. The tragic mistake was not discovered until a year later, by which point some 70% to 90% of people in Michigan had been exposed by eating contaminated meat, milk, and eggs.

Michele Marcus, a Rollins environmental epidemiologist, has been studying the effects of PBB contamination for the past 15 years. She knows that today, more than 40 years after the accident, some 80% to 85% of Michiganders still have elevated levels of PBB in their blood. Marcus’ most recent study looks at how this exposure has affected the children and grandchildren of people who ate contaminated food.

Marcus found that women who were exposed to PBB were more likely to give birth to infants who scored low on Apgar tests—the first test of a newborn’s health. Mothers who had been exposed before their own puberty were even more likely to have low-scoring babies.

The daughters born to highly exposed women had their first menstrual period a full year earlier on average than girls who were not exposed. When these girls grew into women, they suffered a high rate of miscarriages.

“We know from animal studies that some of these hormone disrupting chemicals can affect up to four and five generations down the line,” says Marcus. “But it’s one thing to be a scientist and study these statistics. It’s quite another to have a mother approach you and tell you her daughter entered puberty at age five.”

Marcus is currently assessing more of the reproductive health and hormone levels of women who were exposed in utero and childhood, and she is also starting to look at adult men who were exposed in the womb and in childhood.

Marcus and her research team have developed strong partnerships with registry members, some of whom formed the PBB Citizens Advisory Board, as well as with the Pine River Superfund Citizens Task Force and the Mid-Michigan District Health Department.

Marcus maintains the Michigan PBB Registry, which was transferred to Rollins from the Michigan Department of Community Health in 2010. Because it is the only database in the nation containing historic exposures of hormone disruptors and multiple generations of participants, maintaining it is essential to advancing our understanding of PBB and other hormone disruptors. For more information go to pbbregistry.emory.edu. ■



Michele Marcus, center, with members of the Rollins PBB research team.

BEATING THEM AT THEIR OWN GAME

Using tobacco's marketing techniques in public health messaging



Carla Berg is trying to think like a tobacco executive. The associate professor in behavioral sciences and health education wants to borrow the sophisticated market segmentation techniques the tobacco industry has used so successfully for decades to lure smokers. **Berg, however, plans to use them to identify young tobacco users and convince them to quit.**



BY MARTHA MCKENZIE

ILLUSTRATION BY SARAH JANE COLEMAN

“Public health professionals are not as good at marketing our product, which is health, as the tobacco industry is at marketing its products,” says Berg, who is currently working toward her MBA in marketing at Emory’s Goizueta Business School. “This is particularly true when we try to target youth, who believe they are going to live forever.”

But immortality and tobacco usage don’t mix. While smoking rates have declined in the 50 years since the Surgeon General’s report on the hazards of tobacco use was released, smoking remains the leading cause of preventable death in the United States. And it’s not just about cigarettes anymore. A host of new products that appeal

particularly to youth have arrived on the scene. Hookahs and water pipes can be enjoyed in trendy, social hookah bars. Smokeless tobacco products, such as Snus and other dissolvable strips and lozenges, don’t require spitting, making them more appealing to image-conscious users. Some cigarette-sized cigars contain enticing flavorings, such as grape or strawberry. The newest arrival, e-cigarettes, come in a dizzying variety of devices, each with a plethora of flavored liquids from which to choose.

“Young people who are starting to dabble in these alternative products, or even in cigarettes, generally don’t even identify themselves as smokers,” says Berg. “They tend to think hookahs,

smokeless products, and the like are not particularly harmful. These kids and young adults are on a slippery slope, and if we could intervene in time, we might be able to stop them before they become addicted to nicotine.”

To achieve this, Berg is taking a page from the tobacco industry’s book on marketing—literally. In the 1990s, many private tobacco industry documents were released to the public as a part of the Master Settlement, in which the largest U.S. tobacco companies agreed to change the way tobacco products are marketed and to pay states more than \$200 billion. The consumer segmentation and marketing that tobacco companies used to lure consumers, particularly youth and

“The industry documents showed that tobacco companies segment along the lines of lifestyle characteristics—attitudes, values, who people hang out with, what kind of music and fashion people enjoy.”

young adults, were revealed.

“In public health, we segment by demographics—gender, age, race, ethnicity. That’s about as sophisticated as we get,” says Berg. “The industry documents showed that tobacco companies segment along the lines of lifestyle characteristics—attitudes, values, who people hang out with, what kind of music and fashion people enjoy. These kinds of things get at who people really are and how they behave, which has allowed tobacco companies to create marketing and advertising that specific sets of consumers can identify with.”

Berg recently published a study that looked at whether the same tactics could be used to identify specific groups at elevated risk for tobacco use and, ultimately, to fashion anti-tobacco messages that would resonate with each segment.

Students from six colleges and universities in the Southeast filled out questionnaires that used psychographic measures adapted from tobacco industry documents. They were asked to rank their personality characteristics, such as extraversion, emotional stability, and agreeableness, as well as the characteristics of their friends, such as ‘My friends drink,’ or ‘My friends get good grades.’ In addition, participants noted their feelings about future career and family success and their religious services attendance.

Ultimately, respondents were segmented into three groups—safe responsables, stoic individualists, and

Targeting youth



Hookahs are water pipes that create flavored tobacco vapor. Most people use hookahs at bars and cafes to socialize.



Cigars and cigarillos come in flavors like chocolate, vanilla, and cherry. They are often sold next to the candy aisle.



SNUS is a smokeless tobacco developed in Sweden. Users place it under their lip, but it doesn’t require spitting.



E-cigarettes are smokeless electronic devices that look like cigarettes. Users inhale a flavored vapor of liquid nicotine similar to the way a smoker puffs on a cigarette.

thrill-seeking socializers.

Among each group, Berg measured the use of cigarettes, hookahs, Snus, cigarillos, and other tobacco products. She did not include e-cigarettes since they were too new when she initiated the study.

As might be expected, the **safe responsables**, characterized by high levels of agreeableness, conscientiousness, emotional stability, high academic achievement, and regular attendance at religious services, reported the lowest levels

of tobacco use. Fifteen percent used cigarettes, under 3% used hookahs, and hardly any used smokeless tobacco or Snus.

Thrill-seeking socializers, characterized by high levels of sensation seeking and extraversion, had the highest tobacco use. More than a quarter used cigarettes and almost 6% used hookahs.

Stoic individualists, characterized by low ratings of extraversion, sensation seeking, and openness and a pessimistic outlook of future occupational and family success, saw different use patterns between the sexes, with women having lower tobacco use rates than men.

“We can take this information and tailor public health messages to each specific segment,” says Berg.

For example, while safe responsables are generally at low risk for tobacco use, they might be receptive to messages warning of the dangers associated even with very low levels of tobacco use and the risk of progressing to higher levels of use.

Messages targeting thrill-seeking socializers could emphasize the unattractive aspects of heavy tobacco use to counter the tobacco industry’s image of smoking as fun and attractive.

Campaigns speaking to stoic individualists could target the sexes differently. For men, public health campaigns could emphasize other ways to cope with pessimism, such as exercising. For women, messages could suggest talking with family and friends to overcome low self-esteem.

“I would like to see us infuse our work with the same sophisticated marketing strategies used by the tobacco companies,” says Berg. “We can take lessons from them to beat them at their own game.” ■

Sit at your own risk

BY MARTHA MCKENZIE

Alpa Patel wants you to stand up. The strategic director of the Cancer Prevention Study (CPS)-3 for the American Cancer Society, Patel 97MPH has focused her research on the role of physical activity in cancer prevention and obesity as a risk factor for cancer. More recently, she has begun looking at possible links between sitting and cancer risk.

That's right. What you are probably doing right now as you read this article may be increasing your risk for developing diseases, including cancer. And you're not alone. Between working at a desk, watching TV, and driving around town, the average American spends more than eight hours a day sitting.

In an earlier study, Patel found that people who sat a lot, particularly women, tended to die earlier. Women who sat for more than six hours a day were 37% more likely to die during the 13 years of the study than those who sat for less than three hours a day. Men who sat more than six hours a day were 18% more likely to die than those who sat less than three hours. She estimates two years of life can be gained by reducing sitting to less than three hours a day.

Surprisingly, this level of risk applied even to people who religiously went to the gym but sat at desk jobs the rest of the day—people Patel likes to call “active couch potatoes.”

Studies have shown that sitting for long periods of time, even when combined with meeting public-health guidelines on physical activity, is associated with high blood pres-

sure, elevated lipid levels, chronic inflammation, and abnormal cholesterol—any of which could contribute to an increased cancer risk.

One study has already been published showing an association between the amount of time spent sitting and the risk for multiple myeloma. Another study looking at the association with other forms of cancer is currently being reviewed for publication, so Patel cannot yet discuss those findings.

And even when she can, she will have more questions than answers. “These are observed associations, and there is not yet a full understanding if the culprit is sitting time or if that could be a proxy measure for something else,” says Patel. “It may be that sitting time, especially when watching TV, is associated with unhealthy snacking, which is why it is associated with elevated cancer risk. The bottom line is, we are still trying to understand what all of this means.”

Patel was drawn to her current line of research by a personal interest. “I was one of those active couch potatoes,” says Patel, who is an adjunct faculty member in epidemiology at Rollins. “I went to the gym regularly and did twice as much as the minimum level of recommended physical activity. I ate well. But I had a little weight that I wanted to get off that I simply could not.”

So Patel started thinking about how she spent the 15 hours of the day when she wasn't at the gym or sleeping. She got a pedometer and tracked her steps to see if she was

getting close to the recommended 10,000 steps a day. She wasn't. When Patel didn't go to the gym, she logged about 1,800 steps a day. “I was shocked,” she says. “I had no idea I was that sedentary.”

Patel made what she considers minor changes in her day-to-day activities. She continues to watch the same amount of TV, but instead of curling up on the couch, she stands and folds laundry or does small chores as she watches. She got rid of the printer in her office so she walks down the hall anytime she prints anything. She now works at a sit-stand desk and tries to do all her work on her feet. In five months Patel has lost the 20 pounds she had been trying to shed.

“It does not take the place of being physically active, but for the two-thirds of our population who are not meeting physical activity



ACS researcher Alpa Patel 97MPH now spends most of her day standing. She is researching the link between sitting and cancer risk as well as directing the Cancer Prevention Study-3. Volunteers recruiting the cohort for CPS-3 jotted down their reasons for becoming involved. Patel keeps those notes posted in her office to remind her how people are touched by cancer. “It is my motivation,” she says.

guidelines, there is tremendous public health value in saying, ‘If you don't do anything, there is benefit in simply standing up and starting to move,’” says Patel.

Looking ahead

Patel's continuing work on the effects of sitting draws from the vast database of CPS-2, which was actually the third of the American Cancer Society's huge cohort studies on cancer. These studies, which began in 1952 and have enrolled millions of participants, have shaped the public health landscape by tracing the progression of the tobacco epidemic and the emergence of the obesity epidemic in the U.S.

As the principal investigator of

CPS-3, Patel will help build the scientific basis for the next generation of cancer control and prevention. The study, which concluded enrollment in December 2013 with just over 304,000 participants, includes a new element—a bio bank to store blood samples from every individual.

“We really want to exploit new technologies and use the blood samples to extend our understanding of what contributes to cancer risk,” says Patel. “We are equipped now to look at the genetic contribution to cancer risk, the lifestyle or environmental contribution to cancer risk—including sitting—and now these markers that we can measure through blood and see how they are associated with cancer risk.” ■

The Rollins connection

When Alpa Patel goes to her downtown office at the American Cancer Society's epidemiology research program, it's almost like going to a Rollins alumni reunion. Her program, which conducts the ACS's huge cohort studies, has a total staff of 35. Of the nine doctoral-level researchers, two studied at Rollins—Patel and Lauren Teras 00MPH 10PhD. The other doctoral-level staff are all adjunct faculty at Rollins. And of the 16 master's level researchers, eight are from Rollins.

“The vast majority of our research staff has some connection to Rollins,” says Patel. “Of course, it helps that we are in the same city, but I think it goes beyond that.”

“The epidemiology program at Rollins offers some of the best epidemiology training in the country,” she continues. “I think that's a large reason why we have brought on so many. Not only are we local and can collaborate with Rollins, but there is a very strong foundation in research methods that is built into that curriculum, and it has led to a lot of great research done not just at the American Cancer Society, but broadly.”

CANCER BY THE NUMBERS

GEORGIA CANCER REGISTRY, A RICH RESOURCE FOR RESEARCHERS

BY MARTHA MCKENZIE

Is a woman's ability to have children compromised after cancer treatment, and should she be counseled to freeze her eggs? Is robotic prostate surgery less likely to result in impotence? Are women with breast cancer who are on Medicaid getting the recommended treatment? Help in answering these and other important questions can be found within an immense database: the Georgia Cancer Registry.



The Georgia Cancer Registry puts a wealth of data at the fingertips of Rollins researchers. Pictured l-r: Tim Lash, Joe Lipscomb, Michael Goodman, Kevin Ward, and Penelope Howards.

Housed in the Rollins Department of Epidemiology, the Georgia Cancer Registry collects information on each new diagnosis of cancer within the state and contributes these data to two national databases—the National Cancer Institute’s Surveillance, Epidemiology, & End Results Program and the Centers for Disease Control and Prevention’s National Program of Cancer Registries.

“The major mission of the registry, or any surveillance system for that matter, is to do descriptive epidemiology,” says Kevin Ward, who oversees the registry as director of the Georgia Center for Cancer Statistics. “It allows us to follow cancer trends over time and identify cancer patterns in various populations within Georgia.

“But the real value of the registry is how it’s used for research,” Ward continues. “I’m not sure everyone realizes what an incredibly rich resource we have here.”

In fact, having the registry here helped Winship Cancer Institute of Emory University earn and retain its distinction as an NCI-designated cancer center. “The registry is an invaluable resource for Winship and our investigators,” says Walter J. Curran Jr., Winship’s

executive director. “But it goes far beyond that. Investigators from around the country turn to it. The Georgia registry is uniquely diverse and aligned with experienced faculty researchers at Rollins. This alignment creates a powerful tool in the fight against cancer.”

The diversity to which Walter Curran refers reflects the demographics of Georgia, with its large, diverse population—both urban and rural as well as poor, middle-class, and wealthy. The Georgia registry is one of the few with a large African American cohort as well, making it an invaluable resource when studying racial disparities in cancer incidence, care, and outcomes.

Beyond surveillance, the registry offers researchers a pool from which to draw participants for studies. “When researchers recruit subjects from a cancer center or hospital, they just get a sample that reflects that particular center’s population,” says Ward. “The registry, however, mirrors the general population, so researchers are able to generalize their findings.”

The Georgia registry can also be linked to other data sources, such as Medicare and Medicaid. Such links allow researchers to look at things such as cost of care, quality of care, and outcomes other than mortality.

INSIDE THE REGISTRY

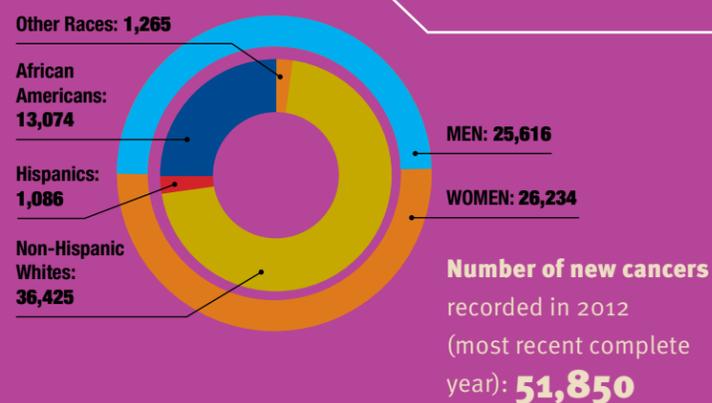
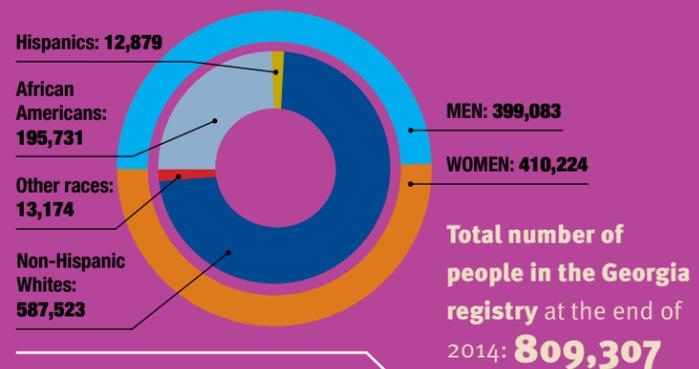
THE SCOPE AND VALUE OF GEORGIA CANCER DATA

48 the number of publications by Rollins faculty using registry data in the past 5 years

18 the number of funded studies at Rollins drawn from the registry in the past 5 years, responsible for **\$7.9 million** in funding

32 the number of Rollins students using registry data for their theses in the past 5 years

9 the number of new or ongoing funded studies at Rollins drawn from the registry during 2014, responsible for **\$2.7 million** in funding



“Because of the registry, we know the frequency of each type of cancer, whether it is going up or down, who is most affected, and how quickly and accurately cancers are diagnosed and treated,” says Rollins Dean James Curran. “It gives us clues as to the causes of cancer and also to the causes of bad outcomes of cancer. The registry does all of this for every citizen of the state, and that’s a very valuable resource to the doctors who care for people, to the researchers who study cancer, and to the patients themselves.”

Fertility fallout

When Penelope Howards wanted to look at how cancer treatments impact fertility, she turned to the registry. Through it, she was able to identify every woman in Georgia who had been diagnosed with cancer during her prime reproductive years—between ages 20 to 35. Each of the women who allowed the cancer registry to release her name was invited to complete an interview.

A large number of the nearly 1,300 women who agreed to participate were childless at the time of diagnosis, and many of those who did already have a child said they would like to have more.

Though Howards, associate professor of epidemiology at Rollins, is still analyzing the data, early results hint that cancer survivors are, in fact, less likely to have children after treatment than women of the same age who did not have cancer. That may seem obvious—the trauma and expense of going through cancer treatments could well discourage having children. But Howards is also testing participants’ post-treatment ovarian reserves to see if they remain able to have children if they want to.

She also identified a hole in pre-treatment care. Only half of the women who were childless at cancer diagnosis remember being counseled about how their treatment could affect their fertility. And they weren’t told about options that could preserve their ability to start a family.

“We’ve been able to freeze sperm before cancer treatment to use in the future for quite a while now,” says Howards. “The ability to freeze eggs and embryos is more recent. If women are not even having this conversation with their doctors, they won’t know they have these options.”

Since Howards looked at all types of cancers and all types of treatments, she hopes eventually to be able

to discern differences in the way they impact fertility. “A woman who is facing cancer might have a choice of different treatment regimens, where one is preferred but will definitely affect her fertility and another that is potentially less effective but would leave her more likely to be able to have children later,” she says. “We hope this study will illuminate those types of choices.”

Informing treatment choices

The landmark Prostate Cancer Outcomes Study (PCOS) of the mid-1990s combined registry data from six regions, including Georgia, to determine how prostate cancer treatments impacted quality of life. Quite negatively, it turns out. Fifteen years out, most men suffered impotence, whether they had surgery or chemotherapy, and about one fifth had bladder or bowel trouble.

Treatments, however, have progressed markedly since the PCOS study. Men can now choose from options such as robotic surgery and new types of radiation. And many men choose active surveillance—forgoing radical treatment for the time being, while tumor progression is closely followed. Michael Goodman, an associate professor in epidemiology at Rollins, is using registry data to see how these newer treatments impact quality of life.

“The unique thing about prostate cancer is that there

from Medicare, Medicaid, the State Health Benefit Plan (SHBP), and Kaiser Permanente to look at treatment patterns for breast and colorectal cancer patients over a four-year period.

He found some differences in care by insurer. For example, 92% of patients with stage III colon cancer who were covered by SHBP or Kaiser Permanent got the recommended chemotherapy treatment, but only 75% and 77% of those covered by Medicaid and Medicare, respectively, did. He also found that across all plans, only 82% of women with a certain type of breast cancer were getting the recommended treatment.

His study did not look at why some cancer patients got standard of care and some did not, but he expects epidemiology students will do just that for their master’s theses. Race, ethnicity, age, and location could be factors.

“The cancer registry was originally created for cancer surveillance—in particular, to track trends in disease incidence, stage at diagnosis, and deaths,” says Lipscomb. “But we are seeing it can be used for so much more.”

Recording recurrence

All cancer registries record only population-wide primary cancer occurrences. That design was fine when a cancer occurrence was almost always a death sentence.

THE REGISTRY WAS CREATED FOR SURVEILLANCE BUT WE ARE SEEING IT CAN BE USED FOR SO MUCH MORE.

is no standard of care,” says Goodman. “With breast cancer or colon cancer, it’s basically a cookbook—use this treatment for this cancer at this stage. With prostate cancer, it’s between you and your doctor, so the results of this study will likely help thousands of men make an informed decision.”

Goodman is particularly interested in following patients who choose “active surveillance,” which is a relatively new option. “In some cases the treatment is undeniably worse than the disease,” he says. “That can make active surveillance a viable option, but we don’t know much about it. How widely practiced is it? How is it handled in small hospitals where most cases are treated? It’s important to answer questions like these.”

Links to quality of care

Joe Lipscomb wanted to determine if cancer patients were receiving the recommended quality of care. Lipscomb, a Georgia Cancer Coalition Distinguished Cancer Scholar in Rollins, linked the registry with data

Tim Lash, epidemiology professor, thinks it’s not so fine anymore. “Today, when more people are surviving their cancer and perhaps even being cured, it’s no longer acceptable to focus only on mortality,” he says.

He and his colleagues want to augment the Georgia Cancer Registry so it will be a first-of-its-kind registry to track recurrence. “I don’t want to overstate where we are in the process—it’s a goal at this point,” says Lash. “But if you’re an epidemiologist trying to study the course of cancers, what groups are more at risk for recurrence, or what factors predict good outcomes, you’re out of luck. All of that could be studied if we had population-wide information on recurrence.”

Lash contends that Georgia is the perfect place for one. The state’s population of 10 million is large enough to make data meaningful. Georgia has a long-established, high-quality cancer registry and an NCI-designated cancer center. Says Lash, “The fact that the registry and Winship are both here at Emory creates a powerful synergy for launching this addition to the registry.” ■



Colleen McBride, the new chair of the Department of Behavioral Sciences and Health Education, plans to build on her previous work at the National Human Genome Research Institute, where she was the founding chief and senior investigator of the Social and Behavioral Research Branch.

Personalized PUBLIC HEALTH

Using genetic discoveries to change behaviors

WHEN A RESEARCH COLLEAGUE ASKED COLLEEN MCBRIDE IF SHE'D LIKE TO JOIN HIM ON A SAILING TRIP ALONG THE TURKISH COAST, SHE ACCEPTED IMMEDIATELY. No matter that she did not know the other four people who were taking the trip. Or that she didn't know how to sail. Or that she is prone to seasickness.

So why would she go?

"Why not?" says McBride, a behavioral epidemiologist.

McBride, whose sailing adventure turned out just fine, brings that venturesome spirit to her new post as chair of the Department of Behavioral Sciences and Health Education. She plans to build on her previous work as the founding chief and senior investigator of the Social and Behavioral Research Branch of the National Human Genome Research Institute (NHGRI). In that position, McBride was among the first to focus on using genetic information to inform public health interventions—the public health equivalent of personalized medicine.

BY MARTHA MCKENZIE

“All the discoveries coming out of basic science, particularly genetics, are shaking up other fields, but they are not making a lot of changes in the way things are done in behavioral science,” says McBride. “I would like to see us apply scientific imagination in bringing the worlds of genetics and behavioral sciences together.”

Specifically, McBride would like to put that scientific imagination to work in addressing a vexing problem for behavioral scientists—relapse rates. “We can get people to lose weight, but they gain it back,” she says. “We can get people to exercise, but they fall off. We can get people to stop smoking, but they start again. And we don’t pay a lot of attention to why that happens.”

Genetics can provide some answers, she believes. How people react to behavior change interventions is influenced by their genetic makeup. Some people get a “runner’s high” when they exercise, for example. Others take more effort to get the same high or do not get one at all. Some people suffer mood

dips when they are calorie deprived, and others don’t. If people could be grouped by different traits, perhaps interventions could be tailored to provide a better fit.

“I’m not envisioning that we could customize interventions to each individual’s genome,” says McBride. “But if we could identify phenotypes—groups of people who share similar traits—we could get away from the one-size-fits-all interventions and move toward customization.”

Early adopter

The daughter of an Army sergeant, McBride moved 15 times during elementary school. “I think that’s why I’m not afraid to try new things,” she says. “When you are thrown into a new situation every six months, things that may seem risky to other people don’t seem that risky to you.”

She was the first in her family to go to college, and once she started, she didn’t stop. She earned her MA in sociology at the University of Arizona and her PhD in behavioral epidemiology at the University of

Minnesota in the department founded by Ancel Keys, who is famous for showing the health benefits of the Mediterranean Diet.

McBride was wrapping up her formal education in the very early days of genetic discovery. The Human Genome project was just beginning. Around that same time, researchers identified the BRCA1 and BRCA2 genes as indicators of increased risk of breast or ovarian cancers. The HNPCC gene was linked to colon cancer.

“There was this enthusiasm and excitement about genetics as a susceptibility indicator,” says McBride. “So I started thinking about using genetic susceptibility as a tool in behavioral interventions.”

She pursued this interest at Duke University Medical Center, where she became the director of the Cancer Prevention and Control Research Program and chief of the Division of Prevention Research.

In 2002, Francis Collins, then head of the Human Genome Project and now director of the National Institutes of Health, called her to

talk about starting a social behavioral research unit at the NHGRI. “I was astonished,” says McBride. “It was sort of like coming home to find Brad Pitt had left you a voice mail and wanted to get together.”

True to form, McBride didn’t let the fact that she had no formal genetics training deter her. She had done a lot of self-study and considered herself bilingual. “I could get myself to the bathroom in genetics,” she says. “And I was really intrigued by the challenge of the intramural experience, which was very much about high-risk, high-reward research that couldn’t get funded in the extramural world.”

Collins gave her carte blanche to set the research agenda for her new program and figure out how behavioral sciences and genetics could be merged. At that point, the field was dominated by questions rather than answers. Do people even want to know their genetic risk for various diseases? What is the best way to communicate this information? How will this information affect people’s health behaviors and medical decisions?

McBride set out to find some answers. She and a basic science colleague devised a study to look at the effects of genetic susceptibility testing for eight common health conditions.

She enrolled 1,599 people at the Henry Ford Health System in Detroit, instructing them to go online to learn about the genetic tests offered and decide whether or not they wanted to participate. Those who opted to participate submitted a blood sample and got their test results in the mail. A follow-up caller discussed what the results meant to them and how they planned to use the information.

McBride also accessed participants’ electronic medical records to see if they used more medical services after getting the results. “This was at a time when people were saying this kind of direct-to-consumer genetics testing information would be damaging to the general public,” says McBride. “They would misunderstand it. They would misuse it—‘Oh, I’m not at risk for heart disease, so I can eat whatever I want.’ And they would want it in droves—so badly that it would overwhelm the system.”

McBride’s results proved such suppositions wrong. By and large, the general public didn’t want to learn their genetic risk information—only about 13% of those approached elected to take the genetic test. The ones who did take it understood the results, and their health care usage did not change after the testing.

The study also showed participants were not likely to make any behavioral changes as a result of their findings. “I’m puzzling about where I’m going with the relationship between genetics and behavioral science,” says McBride. “I do think providing risk information is necessary, but I don’t think it’s powerful enough to make a lot of difference in what people do. We have so many psychological defenses to protect us from something that is scary, and those defenses diffuse the motivational impact of genetic risk information.”

Intramural in extramural world

McBride, who was recently awarded the Society of Behavioral Medicine’s 2015 Distinguished Scientist Award, left her mark on the NHGRI. “Dr. McBride was a visionary leader during her 10 years here,” says Eric

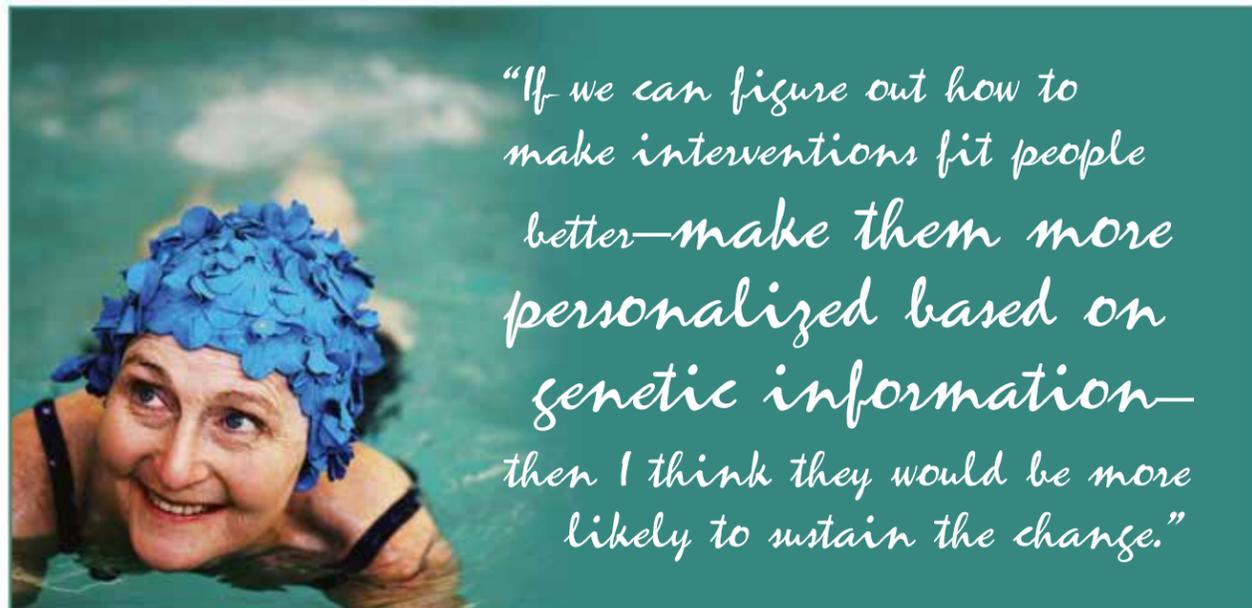
Green, director of the NHGRI. “She fostered new and important areas of genomics research and made critical contributions to the field of genomics, especially those related to how new genomic technologies are being introduced to society and integrated into health care.”

McBride now brings her musings and her intramural sensibilities to her new post at Rollins. While genetic information may not make much difference in initial adoption of a behavioral change, it might be useful in tailoring interventions so people stick with them.

“If we can figure out how to make interventions fit people better—make them more personalized based on genetic information—then I think they would be more likely to sustain the change,” she says. “We might be able to make some headway into reducing our relapse rates.”

McBride is ready to start testing her hypothesis even though some in the extramural world think it’s premature. “Discovery researchers are still identifying associations between different genetic variants and traits,” says McBride. “The discovery culture says, ‘Wait until we get this all figured out and then we can start to do some translation research.’ I say, ‘Why wait?’ If there are some conceptually credible associations between genetics and some traits, such as exercise or smoking, what’s the harm in trying to ask these questions now?”

“It’s a gamble,” she continues. “I know I can’t do what I did at the Genome Institute—it wouldn’t get funded. But I want to bring that sensibility of focusing research on areas that meet a pressing need rather than on what can get funded. It’s a delicate balance, and I’m trying to find it.” ■



“If we can figure out how to make interventions fit people better—make them more personalized based on genetic information—then I think they would be more likely to sustain the change.”

All through high school and college, Jennifer Mullé remembers waking up each morning and thinking, “Is today the day I start hearing voices?”

One of Mullé’s aunts had schizophrenia, and another had psychosis. “I would hear my parents talking about them. Long before I knew anything about genetics, I knew I was at risk,” says Mullé, assistant professor of epidemiology at Rollins.

Gene, interrupted

How a family history of schizophrenia shaped a career

BY MARTHA MCKENZIE

The knowledge that she was vulnerable to developing the disease that plagued her family shaped Mullé’s young adulthood and career. Schizophrenia is a mental disorder characterized by delusions and/or hallucinations that leave sufferers unable to distinguish between what is real and what is not. It generally strikes young adults, with the risk for developing the disorder peaking between ages 20 and 25 and dropping off by age 30.

During her early to mid-20s, Mullé did little but wait for the onset. Although she attended college, she did not apply herself. She did not allow herself to become entwined with boyfriends. She did not plan a career.

“My future seemed so uncertain, I just couldn’t commit to anything,” she says.

But as she neared 30 with no signs of schizophrenia, she decided it was time to start her life in earnest. She had become interested in public health while volunteering at an emergency room during college. One night a baby was rushed in who appeared to have been thrown against a wall. Mullé watched as the neurosurgeons painstakingly removed a small section of the baby’s skull to relieve the pressure.

“I remember thinking, ‘These surgeons are doing this incredibly complex, lifesaving procedure, but what if the baby hadn’t been thrown against the wall in the first place?’ I decided that I wanted to be on that end of the equation,” she says.

Mullé combined that interest in public health with her fascination in genetics and earned an MPH in genetic epidemiology. She went on to get a PhD in human genetics, and then turned her attention to discovering the

genetic underpinnings of schizophrenia.

She soon found a clue. In a small collaborative study she was leading, Mullé noticed one participant was missing a set of genes from a particular chromosome. She was intrigued.

She scoured other schizophrenia studies. The 3Q29 deletion turned out to be very rare—Mullé thinks it affects one in every 30,000 births, or about 2,000 people in the U.S. under the age of 18. But people who have it are 40 times more likely to develop schizophrenia than the general population. (The name 3Q29 is sort of an approximate address for the deletion. The “3” stands for chromosome 3, the “Q” is the long arm of chromosome 3, and 29 is the area on the chromosome where the genes are missing.)

“That’s huge,” says Mullé. “After we discovered that, I wanted to know everything I could about that region on the chromosome.”

It turns out doctors had been diagnosing children with 3Q29 deletion syndrome for some time. The deletion in children leads to mild to moderate intellectual disability and is associated with autism.

“This really complicated things for me, because these young children were getting diagnosed with 3Q29 deletion, and I knew something about them that no one else did,” says Mullé. “At that time, there were two published studies, which described a total of 15 patients in the world. That was the sum total of what we knew about the 3Q29 deletion syndrome. Nobody had linked the deletion to schizophrenia yet, but now I knew these kids were at increased risk.”



So Mullé created an online registry to provide information and support to the children and their families and to collect information to learn more about the rare syndrome. Now just over a year old, the 3Q29 Deletion Registry (at 3Q29deletion.org) has 48 members, and Mullé has already gleaned a wealth of information.

Most of the children in the registry were diagnosed before age 5. They all have some form of intellectual disability, and more than a quarter have autism. But the registry has revealed much more.

“The average age of the registry population is 11, so these are young kids. Yet already six have been diagnosed with an anxiety disorder,” says Mullé. “We have depression and bipolar disorder. Almost a third have recurrent ear infections. One quarter have heart defects. And more than 70% had feeding problems as babies—some children ended up with feeding tubes for several years. I think it helps parents to know that other children with 3Q29 deletion are having the same problems—they are not alone.”

Judging by emails sent to Mullé by the families, it does help. Parents’ messages include

- “No one seems to know about it... except perhaps you.”
- “I would like to thank you for taking the time to do this study. It means a lot to our family.”
- “My family feels so fortunate to have you on our team. The work and research you do is amazing, and we are most grateful to you for your efforts.”
- “The clinic told us our child was the first case they had ever seen.”

In an attempt to understand the underlying biology of the syndrome, Mullé is working with doctors at Emory School of Medicine’s Department of Human Genetics to create a mouse model.

“I hope we learn how many people with this deletion are going to develop schizophrenia, and among those who do, if there is a particular treatment regimen that can be recommended,” she says. “The 3Q29 deletion is the biggest clue we have. ■



FACULTY COMMENTARY

A tale of two epidemics

Dean James Curran
on HIV/AIDS vs. Ebola

James Curran was chief of the research branch of the Division of Sexually Transmitted Diseases at the Centers for Disease Control in Atlanta in 1981 when some unusual cases of fatal pneumonia were reported among gay men in California and New York. The mysterious disease, of course, would come to be known as AIDS. Now dean of Rollins and co-director of the Emory Center for AIDS Research, Curran reflects on the AIDS epidemic as compared with the recent Ebola epidemic.

What stands out in your mind from the early days of the epidemics? When Ebola first appeared in what is now the Democratic Republic of Congo in 1976, it was relatively easy to identify the causal virus. It looked like other hemorrhagic viral illnesses, and it grew rapidly in the blood.

With HIV/AIDS, of course, the epidemic was identified based upon the unusual occurrence of rare

cancers and fatal opportunistic infections, which were the outcomes of a damaged immune system. It took about two years to identify the virus, HIV, and prove it was the cause of AIDS.

What are the most striking similarities and differences between the viruses? Both are newly discovered diseases. Both originated in Africa, and both came from non-human species to humans—bats with Ebola and chimpanzees with HIV.

The most significant difference is the incubation period. With Ebola, the period between infection and illness is seven to 21 days. Ebola is much easier to transmit than HIV, but there are very few human carriers because in six weeks after infection, the person either dies or their immune system wipes the virus out. There have been 26 previous Ebola outbreaks in Africa in the nearly 40 years since it was discovered. Each of the outbreaks, while devastating to individuals, was able to be contained with infection control procedures.

HIV, on the other hand, is mostly silent for many years after infection. A person may not show any symptoms for 10 years or more. So by the time the virus was first discovered in the early 1980s, there were already millions of people carrying it who could infect others, largely through sexual contact or exposure to blood. We have not been able to control its spread—about 50,000 people in the U.S. and nearly 2 million throughout the world become infected each year. As a result, we now have a hyperendemic situation with 25 to 30 million people currently infected in the world.

How would you describe the public health response to the epidemics? Oftentimes with new public health problems, there is a period when the situation is ignored and there is complacency. With AIDS, since it was only occurring in New York and California in a handful of gay men, it was hard to get anyone’s attention—that’s the story of the book *And The Band Played On*. It really wasn’t until it became apparent that the epidemic was more widespread and that there could be heterosexual and bloodborne transmission that public interest picked up.

Ebola was also seen first as a problem only occurring among distant others, in this case, in small limited outbreaks in Africa. There was virtually no concern about Ebola epidemics from 1976 until 2014. The occurrence of cases in the U.S., including the transmission to health care workers here, and the

widespread and less controllable nature of the current epidemic changed the scale of concern here to the more appropriate level.

How would you characterize other responses? When you look at the scientific response, the big difference was that HIV/AIDS was discovered occurring in the United States and other developed countries even before it was recognized as being more common in Africa. The very high mortality rates and its spread within the U.S. caused the scientific infrastructure to build up around AIDS that you wouldn’t see with Ebola, which infected very few people in our country and was relatively short-run.

The public response to both epidemics was characterized by shunning and panic. In the early days of AIDS, people were afraid to go to restaurants with gay waiters, they were afraid to eat dinner with someone who had AIDS, and in many instances, providers were afraid to provide care for someone with the disease.

The hysteria happened more quickly with Ebola. Compared to when I started in public health, the world is an even smaller place. With social media and around-the-clock news, information about new infectious strains travels even faster than the people who might be carriers.

What do you see ahead for Ebola and for HIV/AIDS? We have reason to be optimistic about Ebola. As fearful as it is, the virus triggers a human immune response that seems at least partially successfully among those who survive. The people who do survive are probably not infected by the same strain again, which means a vaccine should work. I feel optimistic that we will find an effective vaccine for Ebola. And since humans can’t carry the virus without symptoms and the infection runs its course so quickly, Ebola epidemics can be controlled with timely and sufficient infection control measures.

With HIV, of course, there is no completely successful human immune response, so developing a vaccine has been a real struggle. Worldwide HIV transmission has been reduced to slightly less than 2 million people per year. Great progress has been made in the discovery and application of effective therapy and prevention methods. But all persons currently on therapy will require lifelong treatment with antiretroviral drugs and millions more have yet to be diagnosed and treated. So, in the long run, HIV remains a very large continuing threat to mankind. ■

BY MARTHA MCKENZIE

Fifty and counting

Biostatistics and Bioinformatics Department celebrates golden anniversary



The department's first home was in the Uppergate House, which was rumored to be haunted.

CHAIR - 1963-1967; 1969
Malcolm E. Turner, Jr.

CHAIR - 1970-1986
E.C. Hall

CHAIR - 1988-1990
Raymond S. Greenberg

CHAIR - 1986-1988, 1990-1991 AND 2001-2009
Michael Kutner

CHAIR - 1992-1994
Donna J. Brogan

CHAIR - 1995-2001
Vicki S. Herzberg

CHAIR - 2009-PRESENT
Lance Waller

WHEN THE DEPARTMENT OF BIOSTATISTICS AND BIOINFORMATICS OBSERVED ITS 50TH ANNIVERSARY LAST FALL, THE MILESTONE EVENT DREW MORE THAN 170 PEOPLE, INCLUDING ALL BUT ONE OF THE DEPARTMENT'S PAST CHAIRS AND ITS FIRST DOCTORAL GRADUATE.

The large number of attendees is a testament to the close, enduring ties that bind the department. This is a department where Rollins Professor and Chair Lance Waller and Senior Associate Paul Weiss are apt to perform popular songs that they have rewritten rife with biostatistical humor.

A department where professors give back. Donna Brogan, former professor and chair, endowed an annual lecture created by colleagues in her name when she retired, and Michael Kutner, Rollins professor, former department chair and associate dean, endowed one fund to support

outstanding doctoral students and another to honor former graduates of the department.

And a department where rarely a week goes by without a festivity celebrating the fact that some student has passed their dissertation proposal, or that someone is having a baby, or that it's Friday.

"We are a very collegial department and always have been," says Kutner. "We all work well together, respect each other, and have a lot of fun together."

Vicki Herzberg, another former department chair, agrees. "When I think back on my years in the department, what really stands out are the memories of good times—the annual graduation celebration, the annual holiday party, and the mini-golf tournament," she says. "For a bunch of left-brain nerds, we are the most social department in the school."

And the most collaborative.

Biostatistics and Bioinformatics researchers collaborate extensively with scientists in all of the other Rollins departments, the Emory Schools of Medicine and Nursing, the Winship Cancer Institute, and a seemingly endless list of other organizations, including the Centers for Disease Control and Prevention, the Atlanta Veterans Affairs Medical Center, and the American Cancer Society.

The department's beginnings were modest. The Department of Statistics and Biometry was established within Emory University School of Medicine in 1963-1964 with a handful of faculty charged with providing collaborative support to medical researchers. The new department resided in Uppergate House, a former residence of the architect for Emory's Atlanta campus. It was rumored to be haunted.

E.C. Hall took the reins from the now deceased Malcolm E. Turner, Jr.,

to chair the department in 1970. In short order, Hall brought on Kutner and Brogan to strengthen research. "Donna showed up a day earlier than I did, so she selected a plush front office with nice views. I got the much smaller back office with a view of a parking deck," says Kutner.

In the late 1980s the department merged with the epidemiology program and came under the leadership of Raymond Greenberg, who would

Tom Sellers, chair of the Department of Preventive Medicine and Community Health in the medical school, to create "the gang of four" to push for the formation of a school of public health.

In 1990, their efforts were realized. Biostatistics and Epidemiology split back into separate departments and became part of the newly formed School of Public Health.

"Those were the halcyon days,"

garner national awards for teaching and research. The biostatistics graduate program has emerged to be among the best in the country, with graduates going to work in government, industry, and academia.

"What is remarkable is the wide scope of work that is being done here today, from clinical trials to genetic imaging to bioinformatics," says Greenberg. "This is a very diverse and talented group of people."

The biostatistics graduate program has emerged to be among the best in the country, with graduates going to work in government, industry, and academia.

go on to become the inaugural dean of the school. The merged department moved to a floor in the newly completed American Cancer Society building, sharing this space with the Masters of Public Health (MPH) program. Greenberg and Kutner soon teamed with Eugene Gangarosa, director of the MPH program, and

says Kutner. "The spirit of the day was extremely positive. We had an amazing growth spurt. It was like Camelot revisited."

Today, Biostatistics and Bioinformatics has become, in the words of Greenberg, a destination department within a destination university—"a meta-destination." Faculty routinely

Waller couldn't agree more. "As long as there are data and questions, our department will play a leading role in research at Rollins, at Emory, and beyond," he says. "I am inspired by all the department has accomplished in the past half century and am excited to see where we will go in the next!" ■



2014

Every living past chair attended the Biostatistics and Bioinformatics 50th anniversary celebration in the fall. Pictured l-r: Lance Waller, Michael Kutner, Donna J. Brogan, E.C. Hall, Raymond S. Greenberg, and Vicki S. Hertzberg.

Hilton grant funds new chair in global health ethics

Should childhood vaccinations be mandatory to prevent incidents like the recent measles outbreak in California?

In Liberia, where a military presence has long been associated with civil war, what steps are needed to assure citizens that U.S. troops are there to help by building Ebola treatment facilities? How can health experts develop interventions for diabetes and obesity that are ethically sound for diverse populations?

A new endowed chair funded by a \$2 million gift from the Conrad N. Hilton Foundation will help explore such questions through teaching and research. Recruitment is under way for the Conrad N. Hilton Chair in Global Health Ethics, a joint faculty appointment in the Hubert Department of Global Health at Rollins and the Emory Center for Ethics.

“Building our expertise and capacity in global health ethics is imperative,” says Rollins Dean James Curran. “The challenges in public health today are daunting. How do we extend the lives of people in sub-Saharan Africa, where the average life expectancy is 55? How do we provide fair and affordable access to health care in this country? What principles should guide the distribution of scarce resources, such as an Ebola vaccine? The scholar who holds the Hilton chair will broaden our thinking and our ability to work through these complex issues.”

The new chair links Rollins closely with the Emory Center for Ethics, whose faculty come from disciplines across the university. Among them are Ruth Berkelman, Rollins professor and director of the Center for Public Health Preparedness and Research, and Dabney Evans 98MPH, assistant professor of global health and director of the Institute for Human Rights.

As ethics center director Paul Root Wolpe notes, the Hilton Chair in Global Health Ethics is part of a long-term plan to collaborate more with Rollins, the Centers for Disease Control and Prevention, the Carter Center, and other Atlanta-based health partners.

“Given our connections with the public health community in Atlanta and our national visibility, Emory is poised to develop a premier program in global health ethics,” says Wolpe, Asa Griggs Candler Professor of Bioethics. “Establishing the Hilton Chair is a step in that direction.”—*Pam Auchmutey*



Julie Smith



Karla Ruggiero

Smith, Ruggiero join development

The Rollins development team has welcomed two new members. Julie Smith joined as director of development and Karla Ruggiero as director of annual giving and stewardship.

Smith comes to Rollins from Georgia State University where she led the school’s corporate and foundation fundraising efforts as senior director of corporate and foundation relations. Prior to that, she served as the first director of development for Georgia State’s new school of public health.

Before her stint at Georgia State, Smith spent 10 years at the CDC Foundation as director of public-private partnerships.

An Atlanta native, Smith holds a Master of Science in Urban Policy Studies from Georgia State University.

At Rollins, Smith focuses on foundation and corporate giving and has responsibility for a portfolio of individual donors. “My skill set is not being in a lab or in the field, but what I can do is make connections around resources so people who have those skills have

the funding to do what they do best,” says Smith.

Ruggiero comes to her new post from the Center for the Visually Impaired, where she served first as business development director and more recently as a member of the CVI development team.

Prior to CVI, Ruggiero spent nine years with the Arthritis Foundation as development director, manager of cultivation and stewardship, manager of membership and the mid-level donor program, and manager of customer service and direct marketing.

Ruggiero also spent nine years at Georgia Institute of Technology, where her positions included director of academic relations and manager of student programs.

Ruggiero holds a Master of Science in Education from Indiana University.

At Rollins, Ruggiero focuses on the Annual Fund and on stewardship.

“I enjoy determining what a person is passionate about and then finding a way to connect with them around that,” she says. ■

Rollins Alumni Association Awards

Two professionals honored for exemplary contributions

Matthew Lee Girvin Award

KATIE WOOTEN DEAL 05MPH first became interested in suicide prevention when a college professor presented a case study that captivated her imagination. At Rollins, she strengthened that interest while working at the Carter Center Mental Health Program and focusing her thesis work on suicide prevention.

Deal is now working for the American Institutes of Research, providing technical assistance on youth violence prevention and on improving education services for children and youth who are neglected, delinquent, or at risk. She began her career at the Suicide Prevention Resource Center (SPRC) in Washington, D.C.

Deal’s early work at SPRC involved building the capacity of grantees, coalitions, and other organizations to take a public health approach to suicide prevention. She provided technical assistance and training and developed resources designed to enhance the nation’s suicide prevention workforce.

After nearly five years, she became the deputy secretary of the National Action Alliance for Suicide Prevention (Action Alliance). In this role, she was charged with overseeing the operations of the alliance, the 200-member public-private partnership providing leadership to advance the national strategy for suicide prevention.

Deal’s approach has been described as unique, and her nominators praised her for turning “research and science into effective practice at the national, state, and local levels ... to significantly advance the nation’s public health approach to prevention in a burgeoning and historically treatment-oriented field.” In 2013, she was nominated as a White House Champion for Change for public health and prevention.

Deal sees her move to the American Institute for Research as pushing her work upstream. “In my current role, I address the factors that put people at risk for suicide down the road,” she says. “I’m looking at preventing violence, promoting mental health, and improving education services for children and youth who are at risk. The content area may be different, but the ultimate goal is the same.” ■

Distinguished Achievement Award

ALAWODE OLADELE 93MPH MD has spent more than 20 years as a public health advocate for social justice through economic and community development, environmental justice, human rights, and social change. The medical director for the DeKalb County Board of Health’s Tuberculosis Program and the CEO and president of Premiere International Health Care Inc., Oladele has a long legacy of far-reaching service.

In the DeKalb post, Oladele responded to the county’s huge refugee community by co-founding the Refugee Stress Clinic and the

Center for Torture and Trauma Survivors. Called “Dr. O” by his patients, he is the creative force behind DeKalb County’s “Public Health Student Adopt a Refugee Family” program.

With Premiere International Health Care, Oladele oversees a variety of HIV and community health projects in West, East, and Central Africa. He co-founded the Global Initiative for the Advancement of Nutritional Therapy in Africa—an initiative to help eliminate hunger and malnutrition through improved nutrition, better food access, and clean water across the continent.

He is an active adviser to several national and international non-profit organizations and serves on the Board of Directors for MedShare International, where he facilitated the establishment of a \$1 million medical assistance program through the Federal Ministry of Health for Nigeria. He is also a sponsor and supporter of the Women of Hope Project, which provides free medical consultation and drugs for those infected with HIV/AIDS.

His contributions to both his local and international communities, including his home country of Nigeria, have been recognized on numerous occasions. Perhaps the most notable accolades were the Nigerian Consulates Appreciation Award and the Alliance of Nigerian Organizations in Georgia Image Award.

A respected researcher, physician, and published author, Oladele is a deserving recipient of the 2014 Rollins School of Public Health Distinguished Achievement Award. ■





Edwin Trevathan 82M/MPH



Mark Kashdan 95MPH



Sherene Cora 00MPH



Ali Khan 00MPH



Chris Duggar 02MPH



Jennifer Smith 02MPH



Melissa Creary 00C 04MPH 15G



Nicholas born to Melissa Cheung Miller 04C 06MPH and Robert Jonathan Miller 05C

1980s

EDWIN TREVATHAN 82M/MPH has been appointed executive vice president and provost of Baylor University in Waco, Texas. He was dean of the College for Public Health and Social Justice at Saint Louis University.

1990s

MARK KASHDAN 95MPH is chair of the Health Law Section for the State Bar of Georgia for 2014-2015. He is also a senior attorney for the CDC and lives in Decatur, Ga.

2000s

SHERENE CORA 00MPH is a commander in the Public Health Service Commissioned Corps and is currently working with the CDC, Division of Global HIV/AIDS in Botswana.

ALI KHAN 00MPH is dean of the College of Public Health at the University of Nebraska in Lincoln.

CHRIS DUGGAR 02MPH is a senior public health adviser for

the CDC and lives in Decatur, Ga.

JENNIFER C. SMITH 02MPH is a health services officer in the Public Health Service Commissioned Corps. She is currently stationed at the CDC in the National Center for HIV/AIDS, Viral Hepatitis, Sexually Transmitted Diseases, and Tuberculosis Prevention Division.

GREGORY FOSHEIM 03MPH has joined McKenna Long & Aldridge LLP's Atlanta office. He is in a class of eight new associate lawyers who have recently joined the firm.

DAVID BRAY 01C 04MPH 08G, visiting associate on cyber security and culture at the University of Oxford and chief information officer for the Federal Communications Commission in Washington, D.C., was named a 2015 USA Eisenhower Fellow.

MELISSA CREARY 00C 04MPH 15G received the 2014 Champion Award from the Sickle Cell Disease Association of America.

WENDY SLAVIT 05MPH is a social scientist in the Center for

Tobacco Products at the Food and Drug Administration in Washington, D.C.

BORN: Nicholas to **MELISSA CHEUNG MILLER 04C 06MPH** and **ROBERT JONATHAN MILLER 05C**, on Feb. 12, 2015.

BORN: Maya Willow to **MAURICE JOHNSON 07MPH** and **ALEXIS CLEMENTS JOHNSON 08MPH**, on Feb. 7, 2015.

EMILY LYNCH 07MPH is enrolled in the PhD program at Temple University's Department of Geography and Urban Studies. She is concentrating on medical geography and the digital divide.

KATHERINE WARD 07MPH was elected to the Association for Professionals in Infection Control and Epidemiology Board of Directors. The three-year term began in January. She is an infection preventionist at Roper St. Francis Healthcare in Charleston, S.C.

BORN: Gregory Robert to **JILL BRAY LLOYD 02OX 09M/MPH** and her husband, Justin Lloyd, on Dec. 12, 2013.

MARRIED: ERICA SCHULTZ 09MPH to Kenneth Sercy on Sept. 27, 2014, in Lexington, S.C. She also started working as a program coordinator in the cancer prevention and control program of the Arnold School of Public Health at the University of South Carolina in Columbia.

2010s

MICHAEL DIRKS 10MPH is a senior account manager for the Water Research Foundation in Denver. He travels to Atlanta semi-annually for the job.

OLU KOLA-KOROLO 10MPH is a senior consultant at Pricewaterhouse Coopers.

CALLIE SIMON 10MPH was promoted to senior technical adviser in applied learning for the Technical Services Unit of Pathfinder International. She joined Pathfinder in 2010. She has provided technical support to several programs in West Africa, a new priority region for the organization. She will work closely with other technical advisers in the areas of contraception, maternal and newborn health, and HIV.

JESSICA RENO 11MPH is a mental health epidemiologist at the New Mexico Department of Health.

RYAN WOODSON 11MPH is the program manager in the integrative medicine, dental, and special clinical projects at Venice Family Clinic in Los Angeles.

CATHERINE BULKA 10C 12MPH is now enrolled in the EPI PhD program at the University of Illinois-Chicago.

DEBBIE COLLISON 14MPH is a nutrition research associate on the food and nutritional assistance project with fhi360, a nonprofit human development corporation in Washington, D.C.

JACQUELINE M. CUTTS 14MPH has received the Jay S. Drotman Memorial Award from the American Public Health Association. She is the founding president and CEO of Safe Mothers, Safe Babies.

ROICE FULTON 14MPH has accepted a consultancy with Gavi Vaccine Alliance in Geneva, Switzerland. She will work with the development group to support the 2016-2020 fundraising campaign.



Wendy Slavitt 05MPH



Maya Willow, born to Maurice Johnson 07MPH and Alexis C. Johnson 08MPH



Emily Lynch 07MPH



Katherine Ward 07MPH



Olu Kola-Korolo 10MPH



Debbie Collison 14MPH



Danielle Gilliard 14MPH



Kimberly Mann 14MPH

DANIELLE GILLIARD 14MPH is a health educator of youth engagement at Mecklenburg County Health Department in Charlotte, N.C.

JENNIFER KLINE 12C 14MPH is a scientist/evaluation fellow with the CDC's National Center for Chronic Disease Prevention and Health Promotion in the Applied Research and Translation Branch.

KIMBERLY MANN 14MPH is an experienced associate at PwC Health Industries Advisory in Atlanta.

EMILIA MATTHEWS 14MPH is now a senior program coordinator with the research and evaluation team at Tufts University.

In Memoriam



RITA M. VARGA 99MPH of Duluth, Ga., on Dec. 3, 2014, at age 65. Born in Philadelphia, she taught high school for 14 years in New Jersey, teaching biology, chemistry, earth science, and physics. Later, she worked for CDC for 23 years, serving in Indianapolis, Fulton County, Ga., Boston, Chicago, Los Angeles, and

New York. She ended her career as a training supervisor in the Tuberculosis Elimination Division at CDC headquarters in Atlanta.

Survivors include her brother Michael, an aunt, three nephews, and one niece.

FROM THE WOODRUFF HEALTH SCIENCES CENTER

Taking on cancer

Cancer still takes far too much from far too many, but thanks to advances in prevention, early detection, and treatment, more people than ever before are surviving the disease long-term. It's easy to attribute these gains solely to the discoveries being made in laboratories and clinical settings. But cancer is a complex adversary, and the worldwide fight against



it has been so successful because it encompasses a wide variety of disciplines—including social and behavioral sciences, statistics, and marketing.

Some of the features in this issue of *Emory Public Health* highlight a few of the many ways in which faculty in the

Rollins School of Public Health are advancing our understanding of cancer's causes and prevention, as well as some of the active steps they're taking through education and outreach to help people worldwide reduce their risk. Alumna Alpa Patel directs the American Cancer Society's Cancer Prevention Study, CPS-3, which follows more than 300,000 volunteers in order to identify lifestyle factors that increase cancer risk. Associate Professor Carla Berg is exploring ways to use the tobacco industry's own marketing methods against it—by employing strategic marketing techniques to convince young smokers to quit.

These groundbreaking efforts, along with many others being pioneered across the Woodruff Health Sciences Center, are immeasurably valuable to our continued progress against cancer and to our ability to provide help and hope to the people whose lives cancer touches.

S. Wright Caughman, MD

*Executive Vice President for Health Affairs, Emory University
CEO, Woodruff Health Sciences Center*

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Ms. Anne Kaiser, *Chair*

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Biostatistics and Bioinformatics Department celebrates 50th anniversary

Every living past chair attended the Biostatistics and Bioinformatics 50th anniversary event. The close-knit department celebrated the milestone with a conference, alumni reunion, and banquet. See page 26

