

# CAROLINA PUBLIC HEALTH

Gillings School of Global Public Health

The University of North Carolina at Chapel Hill

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*Living a Culture of Health!*

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*It is with great sadness that the Gillings School's Advisory Council acknowledges the passing of council member and dear friend Willard (Ward) Cates, MD, MPH, who was Distinguished Scientist and President Emeritus at FHI 360. See an announcement on page 50.*

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'A legacy that honors the values I live by'

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*from*  
**THE DEAN**



Photo by Brian Strickland

Dean Barbara K. Rimer

*To our readers—*

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**Our world is characterized by great disparities in assets between and within countries, regions and communities.**

Health is not only a function of genetics, individuals' behaviors, good health care or good luck – although these factors all are relevant. It's also influenced by context, history (e.g., racism), policies, programs, environment and opportunities. Other nonclinical factors, such as education and income, have a major impact on health.

➤ See an excellent discussion of "The Relative Contribution of Multiple Determinants to Health," in the journal *Health Affairs* ([tinyurl.com/determinants-of-health](https://tinyurl.com/determinants-of-health)).

Our students want us to talk about risk factors and health behaviors in the context of larger social determinants that cause conditions, such as obesity. Health doesn't exist in a vacuum, and our faculty members are collaborating

beyond public health and health care to address root causes of poor health in order to achieve greater health impact. If we focus only on risk factors and conditions, such as obesity, for example, we may miss the larger, underlying factors that must be changed to produce healthier populations.

Numerous faculty members, including several who are highlighted in this issue, have contributed through their research, teaching and practice to eliminating health and economic inequities. Drs. Alice Ammerman, Jo Anne Earp, Geni Eng, Beth Mayer-Davis, Barry Popkin, Vic Schoenbach, Dianne Ward and Steve Wing long have recognized that changing the health of populations requires involving a diverse range of people, sectors and strategies for success.

It also requires authentic partnerships, often with people in communities. They and others at the Gillings School have led in the development of health policy changes that affect health behaviors and health risks, knowledge about causes of diseases and conditions, and effective strategies and programs to improve health. Several have scaled up policies and programs so that hundreds, thousands, even millions of people benefit from their research. That's the domain of implementation or delivery science, an area in which our faculty members excel.

It is this process of moving – from great ideas and innovations to focused evaluations and trials to scaling up and sustaining effective programs – that is one of the Gillings School's hallmarks.

Our faculty and staff members, students and alumni inspire me; I hope that their stories, as told in this issue, will inspire you, as well.

With this issue, we launch a new feature, which we call "Public Health Hero." We start with Steve Wing, PhD, associate professor of epidemiology, who epitomizes awesome qualities of public health—rigorous methods that helped to uncover harms associated with human exposures in areas around hog farms, combined with a passion for social justice and the people affected.

Also in this issue, we feature our collective commitment in the Gillings School to building a culture of health. See the centerfold beginning on page 30 for photos of Gillings School people in action!

You are part of our legacy—helping to achieve significant, sustainable improvements in population health—and, in the process, training our students to achieve that as well. Students become the multiplier effect that magnifies and intensifies our impact. Our donors and friends also are important multipliers.

Thank you for reading – and for supporting the Gillings School!

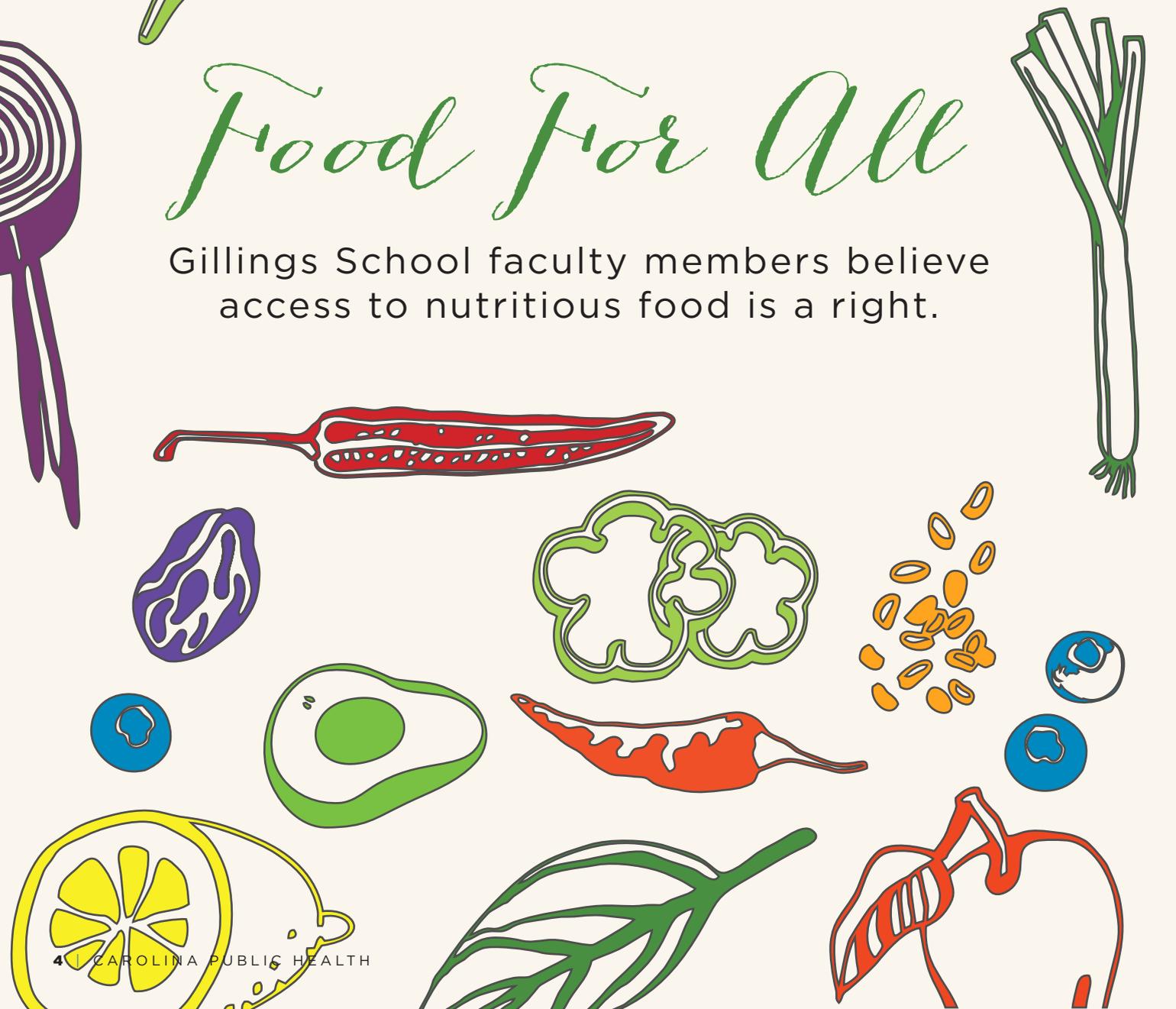
Warm regards,





# Food For All

Gillings School faculty members believe access to nutritious food is a right.





# Alice Ammerman

'People call her an alchemist'

Alice Ammerman, DrPH, believes passionately that everyone deserves access to healthful food. It is no surprise that she was selected, along with Dr. Marcie Cohen Ferris (see page 10), to co-lead “Food for All: Local and Global Perspectives,” UNC’s university-wide 2015-2017 academic theme ([foodforall.web.unc.edu](http://foodforall.web.unc.edu)).

Ammerman—nutrition professor in the UNC Gillings School of Global Public Health and director of UNC's Center for Health Promotion and Disease Prevention (HPDP), one of 26 Prevention Research Centers funded by the Centers for Disease Control and Prevention—is committed to employing the theme to activate the campus community toward changes in food policies and systems.

“Alice was a fabulous choice to co-lead this effort,” says Elizabeth Mayer-Davis, PhD, Cary C. Boshamer Distinguished Professor and chair of the Gillings School’s nutrition department. “She has been engaged in North Carolina communities and with the University for many years, and she excels at facilitating interdisciplinary and cross-cutting efforts.”

Ammerman says the Food for All steering committee, comprised of faculty members, students and community partners, is giving small grants to campus groups to fund food-related projects.

Projects that have received funding or support include the Edible Campus Initiative, the Orange County Food Policy Council, guest speakers on food topics, and a variety of food history and culture initiatives.

“We’re also exploring legacy projects that will continue to have an impact once the campus moves on to another theme,” she says. “Possibilities include establishing a university-wide community-supported agriculture (CSA) effort, which would expand consumer access to and consumption of fresh produce, and supporting student efforts to facilitate a University commitment to the Real Food Challenge ([realfoodchallenge.org](http://realfoodchallenge.org)), with a goal of at least 20 percent ‘real’ food served on campus by 2020.”

“Real” food is local or community-based, fairly priced for producers and consumers, ecologically sound and sustainable, and drawn from humane food sources.



Photo by Brian Strickland

Dr. Alice Ammerman



Dr. Alice Ammerman met up with some of her students at the Carrboro Farmers Market in March. Left to right are Linden Thayer and her daughter Lyra, Jessica Soldavini, Larissa Calancie, Jared McGuirt, Dr. Ammerman and Nate Stritzinger.



Photo by Brian Strickland

The Food for All theme dovetails with Ammerman’s research interests, which she describes as “the intersection between healthy food access for everyone, particularly for more underserved communities, and increasing economic opportunities for farmers, aggregators and distributors in local communities.”

## HEART HEALTHY LENOIR

North Carolina’s Lenoir County is only one of the communities benefiting from Ammerman’s collaborative approach. She is principal investigator for Heart Healthy Lenoir ([hearthealthylenoir.com](http://hearthealthylenoir.com)), a five-year research project funded by the National Institutes of Health.

“Heart Healthy Lenoir’s goal is to find ways to reduce cardiovascular disease (CVD) and CVD health disparities within the county,” says project director Beverly Garcia, MPH, managing director of research at HPDP. “We are trying to help change the norms in the community by making the healthy choice the easy choice.”

The project, which includes three studies ranging from genetics to primary care, also promotes collaboration with area businesses and organizations to improve access to healthy foods and physical activity for people in Lenoir County. Ammerman and colleagues set up a booth at the annual Barbecue Festival on the Neuse, an event that

draws thousands of attendees, and offered free samples of heart-healthy barbecue and hushpuppies made with vegetables and good-quality fats.

“We want to be culturally sensitive and embrace local food,” says Ammerman. “By tweaking the recipes, we can help people see what is good about the diet they already have and not demonize all traditionally Southern foods.”

Ammerman developed recipes for heart-healthy hushpuppies and barbecue. Recently, she also debuted a chili recipe, containing puréed beets and sweet potatoes served over brown rice, for the “Rumba on the Lumber” chili cook-off in Robeson County, N.C. (See her recipe on page 8.)

## ASSISTING SNAP RECIPIENTS

Another of Ammerman’s talents is bringing together people from different backgrounds to show them how the impact of their work can be multiplied through collaboration.

“People call her an alchemist,” says Molly DeMarco, PhD, a key collaborator of Ammerman’s at HPDP and research assistant professor of nutrition at the Gillings School. “She creates synergy and is a leader who can encourage folks to think beyond their small sphere.”

DeMarco directs SNAP-Education implementation and evaluation projects in collaboration with Ammerman.

These efforts assist recipients of the Supplemental Nutrition Assistance Program (SNAP), formerly known as “food stamps.” Funded through the U.S. Department of Agriculture, Ammerman, DeMarco and colleagues conduct applied research to help recipients make healthful food choices and engage in activities such as community gardens and summer meal programs in rural areas to build access to nutritious food. The project currently works with community members in six North Carolina counties to support 18 community gardens.

Through the Southern Regional Nutrition Education and Obesity Prevention Center of Excellence, a collaboration with N.C. State University that is also funded by USDA, Ammerman (principal investigator for the project) and DeMarco are committed to improving the health of low-income Americans through applied research on a range of strategies. These include faith-based health promotion initiatives, smarter shopping at convenience stores and increased access to healthful foods through changes in the environment that make it easier to choose healthy options.

“One of our projects is the development of an online toolkit,” Ammerman says. “Anyone can tap into it and select evidence-based interventions that will help lower-income clients improve the way they eat and increase their physical activity.”

## FEEDING THE COMMUNITY

Members of the UNC housekeeping staff have been able to improve the way they eat, thanks to the Carolina Campus Community Garden, a one-third-acre parcel that has produced and given away more than 25,000 pounds of food since its inception in March 2010.

“The garden has been very much a team effort,” says Claire Lorch, garden manager and education coordinator, “but Alice has been a key team player since day one.”

Lorch says that Ammerman envisioned the garden in response to UNC employees’ economic struggles in 2009, during the Great Recession.

“Alice was instrumental in helping plan the garden – what it would look like, its mission, the important steps toward realization,” says Lorch. “She makes it a priority to attend our monthly advisory committee meetings.”

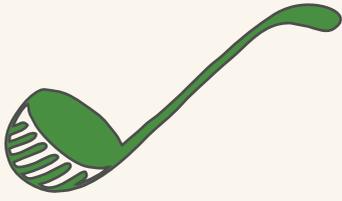
About one-quarter of UNC’s 400 housekeepers – and occasionally, workers in the grounds services division – receive food from the garden, sharing it, on average, with an additional three family members or others.

“The housekeepers say that the food distributions make them feel like the university cares about them as people, not just as workers,” according to Lorch.



Photo by Catherine Rohweder

Dr. Ammerman (left) serves her Sweet Beat Rumba Chili at a chili cook-off in Robeson County in March 2016. See her recipe on page 8.



Alice Ammerman's recipe for

## Sweet Beet Zumba Chili

### GROUP 1 INGREDIENTS

- 4 T.** olive oil
- 2** large onions, chopped
- 4** cloves of garlic, minced
- 1** green pepper, chopped
- 1** small jalapeño pepper, minced
- 2** dried chipotle peppers, minced
- 1 T.** fresh turmeric, minced (or 1 t. dried powder)
- 1 t.** thyme
- 1 t.** oregano
- 1 lb.** lean ground beef
- 1 cup** chicken broth

### GROUP 2 INGREDIENTS

- 2 cups** tomato sauce (unsalted)
- Juice of ½ fresh lime
- 1 T.** chili powder
- 1 t.** cumin
- 1 cup** puréed sweet potatoes and beets (about two beets and two small potatoes)
- 15-oz.** can kidney beans, with juice from can
- 15-oz.** can black beans, with juice from can
- 1 t.** salt (or less)



Sauté all Group 1 ingredients and simmer 10 minutes.



Add all Group 2 ingredients and simmer longer.



Serve on brown rice, topped with grated cheese.

The garden also has benefited the larger community.

“As a result of volunteering with us, many people have learned gardening skills and have become excited about the process,” says Lorch. “Many folks now plant their own gardens because of what they learned with us.”

In her role as educator, Lorch also regularly gives tours to other campus-affiliated garden programs.

### NO KID HUNGRY

Throughout her career, Ammerman has provided leadership and guidance to a wide range of food-related projects. Two years ago, HPDP became the home of “No Kid Hungry North Carolina,” which coordinates with N.C.’s 115 school districts to reduce hunger by increasing participation in the school breakfast program and providing access to summer meals for children.

“We came to HPDP because Alice had a longstanding commitment to fostering healthy children in our state through good nutrition,” says Lou Anne Crumpler, state director of No Kid Hungry NC. “She saw an opportunity for HPDP to help expand federally funded meals for hungry children and to collaborate on research and evaluation efforts to identify the most effective approaches.

“We are thankful that Alice is a person of courage who took on our program, which has a lot of potential but a fairly short history,” says Crumpler. “Bringing us into UNC (from our original home in the governor’s office) was bold and wonderful. Alice is supportive, wise and a leader in her field; we are very happy to be associated with her.”

### WORKING WITH YOUNG ENTREPRENEURS

Patrick Mateer is also grateful for his association with Ammerman. She has provided him with introductions to funders and community leaders

and offered valuable advice to Seal the Seasons, a local frozen produce start-up company dedicated to improving health and prosperity for North Carolina farmers.

“We work with farmers to freeze their produce and make it available year-round,” says Mateer, chief executive officer of the company. “This allows farmers to grow more food in season and allows consumers to eat local food and support farmers throughout the year.”

The idea for Seal the Seasons began in fall 2013, when company co-founder Daniella Uslan, MPH, took Ammerman’s “Entrepreneurship in Public Health” class. Winning \$800 in an entrepreneurship competition helped Uslan push forward with her idea to help local farmers and consumers, especially those with lower income. The company—which began operations in May 2015—plans to help lower-income people by donating 20 percent of profits to increase access to and affordability of healthy food.

Ammerman says that she became interested in public health entrepreneurship about 10 years ago, before social entrepreneurship was widely embraced.

“The aim isn’t to make a lot of money but to make ventures that ‘do good’ economically sustainable,” she says.

In UNC’s entrepreneurship minor, there is a public health track, led by Ammerman, which teaches tools and techniques for applying entrepreneurial thinking to public health problems.

“The work that Alice has spearheaded and that she leads is making a positive difference in the lives of people in our state and across the country,” says Beverly Garcia. “Alice provides a voice for vulnerable populations and brings attention to their needs so that they’re not forgotten. That’s going to be part of her legacy.”

—*Michele Lynn*



Photo by Brian Strickland

Dr. Alice Ammerman (left) examines fresh eggs from Brinkley Farms, for sale at the Carrboro Farmers Market. Jared McGuirt looks on, while Larissa Calancie studies the produce table.



# Marcie Cohen Ferris

Celebrating the edible campus

Like Alice Ammerman, Marcie Cohen Ferris, PhD, has focused her research on food in North Carolina and the American South. Ferris, professor in the UNC Department of American Studies, is co-leading the university's "Food for All" theme with Ammerman.

"Coming together to partner on this theme is delightful because we have worked together previously on the issues of health, nutrition, food justice, food access and creating food studies on campus and in the larger Triangle community," says Ferris. "We share a lot of the same undergraduate food activists who are interested and involved in the Real Food Challenge ([realfoodchallenge.org](http://realfoodchallenge.org))

and UNC student organizations such as FLO ([flofood.weebly.com](http://flofood.weebly.com)) – for Fair, Local, Organic Food."

Ferris says her most recent book, *The Edible South: The Power of Food and the Making of an American Region*, examines the intersection of

nutrition, Southern food, poverty and public health at the turn of the 20th century.

"There is a history behind the contemporary poverty, malnutrition, diabetes and obesity that we see in the contemporary South which is the result of a shifting economy and agriculture industry in the region," she says. "At the same time, Southern foods are celebrated with celebrity chefs and locally sourced



Dr. Marcie Cohen Ferris

Photo by Kate Medley

"FOOD IS SO MUCH ABOUT JOY, COLOR, TASTE AND TEXTURE; WE WANT TO OFFER A RICH, FULL LANDSCAPE FOR EVERYONE ON OUR CAMPUS."

—Dr. Marcie Cohen Ferris

ingredients. Our region is both loved and maligned."

Ferris is excited about the potential outcomes of the "Food for All" theme.

"One example is the Edible Campus initiative being facilitated by Chancellor's Fellow Emily Auerbach,"

says Ferris. "Emily is involved with

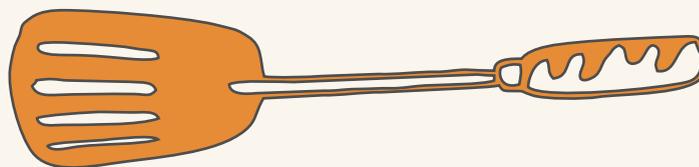
reshaping many areas around campus that will be replanted as edible seasonal campus gardens."

Ferris recounts an entry in the food diary kept by undergraduate Kristen Lee as part of Ferris's class, "Food and American Studies: Cooking Up a Storm."

"Kristen was tired, had no time and had nothing green at home one evening at dinner time," says Ferris. "But she lived close enough to campus to go get kale from a planter box and add it to her pasta. That was exciting to me! Those small changes can increase the quality of life on campus. Food is so much about joy, color, taste and texture; we want to offer a rich, full landscape for everyone on our campus."

—Michele Lynn

SEE AN INTERVIEW  
WITH FERRIS ON UNC-  
TV'S "BOOKWATCH" AT  
[TINYURL.COM/UNCTV-FERRIS](http://TINYURL.COM/UNCTV-FERRIS).



*Marcie Cohen Ferris' recipe for*

## *N.C. Sweet Potato and Apple Latkes*

- 1.5 lbs.** sweet potatoes (about 3 medium), peeled
- 1** large apple (choose your favorite N.C. variety), unpeeled, cut into quarters and cored
- 3** scallions, thinly sliced
- 4** large eggs
- ¾ cup** matzoh meal or all-purpose flour
- 1 t.** kosher salt
- ¾ t.** freshly ground black pepper
- Canola oil for frying

-  Fit a food processor with the grating/shredding blade. Cut the sweet potatoes to fit in the food processor's feed tube. Using the food processor (or by hand, with the coarse side of a box grater), coarsely shred sweet potatoes and apple. Transfer to a large bowl. Add the scallions, eggs, matzoh meal, salt and pepper. Mix well with your hands, until mixture is cohesive.
-  Using about ¼-cup mixture for each, make 2½" to 3" patties, shaping them firmly yet gently, so they don't compact too much, yet don't fall apart. Place patties on a sheet of foil or baking sheet. Heat the oven to 200°F to keep latkes warm.
-  In a large, heavy skillet over medium heat, warm 3 T. oil until hot. Add 4 to 5 latkes (don't crowd the pan) and cook, turning once or twice, until nicely golden and crisp on both sides. (Watch carefully, as these scorch easily.) Transfer cooked latkes to paper towels to drain, and then transfer to a platter to keep warm in the oven. Repeat frying latkes, adding more oil to the pan as needed. Serve warm.
-  Makes 20-22 latkes. Serve with applesauce, cranberry sauce or all by themselves.

*Dr. Ferris and Miriam Rubin developed this recipe for the UNC Press blog.*



# Dianne Ward

Success of NAP SACC means good health for nation's children

**D**ianne Ward, EdD, knows the importance of starting early in a child's life to develop an awareness and culture of health. She helped pioneer the successful Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC), first piloted in 2003 in 19 counties in North Carolina. The program includes self-assessment, action planning and educational tools that help early child-care and education programs set goals and make improvements to their nutrition and physical activity practices.

"We observed that programs could make positive changes in what they gave children in provisions, practices and policies regarding food and physical activity," says Ward, professor and director of the Intervention and Policy Division in the UNC Gillings School's Department of Nutrition. "By connecting young children and their families to the importance and availability of higher-quality diets, we are building an environment that develops healthy eaters in these formative years."

After making its way to nearly every state in the U.S., NAP SACC is now being implemented in the United Kingdom.

The program has evolved into Go NAP SACC ([gonapsacc.org](http://gonapsacc.org)), an online program developed with support from the Blue Cross and Blue Shield of North Carolina Foundation.

"Go NAP SACC is an interactive website with a suite of tools to help child-care programs improve their work

in the area of nutrition and exercise," says Ward. "The site draws traffic from throughout the world."

Go NAP SACC extends the reach of the program to family child-care homes, in addition to the child-care centers targeted by the original program. There are

now standards and resources for children ages birth to five years, extended from the original focus on children ages two to five years. The site also includes information on breastfeeding and infant feeding, screen time and outdoor play.

"One of the newest things under development is an oral health module," says Ward. "Oral health begins before the emergence of baby teeth. Families can be educated about how to implement best practices for oral hygiene, and early childhood education settings are a great place for this to happen."

This element builds on the highly effective oral health programs developed under the leadership of Gary Rozier, DDS, research professor of health policy and management at the Gillings School.

Future plans also include strengthening parent engagement by more closely linking child-care



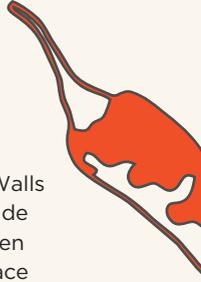
Contributed photo

Dr. Dianne Ward



Photo by Stephanie Lane

Child-care health consultant Terri Walls plays on homemade drums with children at Ms. Jackie's Place Family Child Care Home in Craven County, N.C.



Caregivers at St. Paul's Child Care Center in Franklin County, N.C., interact with preschoolers during lunch, introducing themes related to healthy eating.



Photo by Stephanie Lane



providers and parents and by fostering wellness in child-care providers themselves.

“We also hope to develop, with N.C. State University, a module that will link local farmers with preschools to educate children and families about the roles of foods and farmers in our communities and to provide food for the preschools,” says Ward.

“We are helping child-care programs improve the quality of nutrition environments and physical activity support they give children, and in return, they give children the opportunity to grow and develop optimally. For too long, we have ignored the health component of preparing children for school. Now, the

movement nationally is to see the whole child — mind and body.”

Dean Barbara K. Rimer says that NAP-SACC is a great example of how faculty members at the Gillings School design and test innovations in program delivery.

“But they don’t stop there,” Rimer says. “They work with partners such as Blue Cross and Blue Shield of N.C. to scale up effective programs to benefit millions of people across North Carolina and around the world.”

—Michele Lynn



# Amanda Holliday

Ensuring proper nutrition for seniors

U.S. Census data show that about 20 percent of the U.S. population will be ages 65 and older by 2030 ([tinyurl.com/census-older-adults](http://tinyurl.com/census-older-adults)). Given the increasing needs of that age group, Amanda Holliday, MS, RD, clinical assistant professor of nutrition and licensed dietitian/nutritionist, has dedicated herself to helping ensure proper nutrition for older adults.

“Older people face a lot of nutrition questions that everyone faces: *Where am I going to buy my food? What foods are healthy for me?*” says Holliday. “But some also have unique challenges, such as decreased appetite, having enough strength and stamina to prepare foods, and eating healthy foods while on a fixed budget.”

In addition, older men and women may need particular knowledge about foods that will help them manage health conditions such as diabetes, arthritis and cardiovascular disease.

In her Nutrition 615 class, Holliday raises awareness of practicing in geriatrics, an area of medicine with which most students have no experience. To help students empathize with the challenges of aging and dementia, the class includes a hands-on exercise in which class members prepare food while encumbered

by some of the challenges of aging. Students wear plastic pegs in their shoes to simulate neuropathy, don goggles to simulate cataracts and macular degeneration, use ear buds to listen to sounds that dementia patients report hearing, and wear gloves so they lack dexterity, as is the case with arthritis sufferers.

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SEE A VIDEO OF HOLLIDAY'S CLASS AT  
[TINYURL.COM/UNC-DEMENTIA](http://TINYURL.COM/UNC-DEMENTIA).

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“My hope is that more students will work with older adults,” says Holliday. “But even if they don’t choose a job in which all of their patients are older, they will have, after this class, more knowledge and empathy when working with people of all ages.”

With support from a Health Resources and Services Administration grant, Holliday has helped convene a campus-wide geriatric interprofessional education collaborative, which brings together 170 students in nutrition,

pharmacy, social work, medicine, nursing, dentistry and other health affairs fields (see bullet # 1 on page 15).



Photo by Linda Kastleman

Amanda Holliday



(Top): Amanda Holliday, at center, describes to her students some of the challenges related to older adults' taking in sufficient nutrients.



(Bottom): Holliday, at right, engages her students in a hands-on exercise that allows them to experience physical challenges related to some older adults' healthy eating.

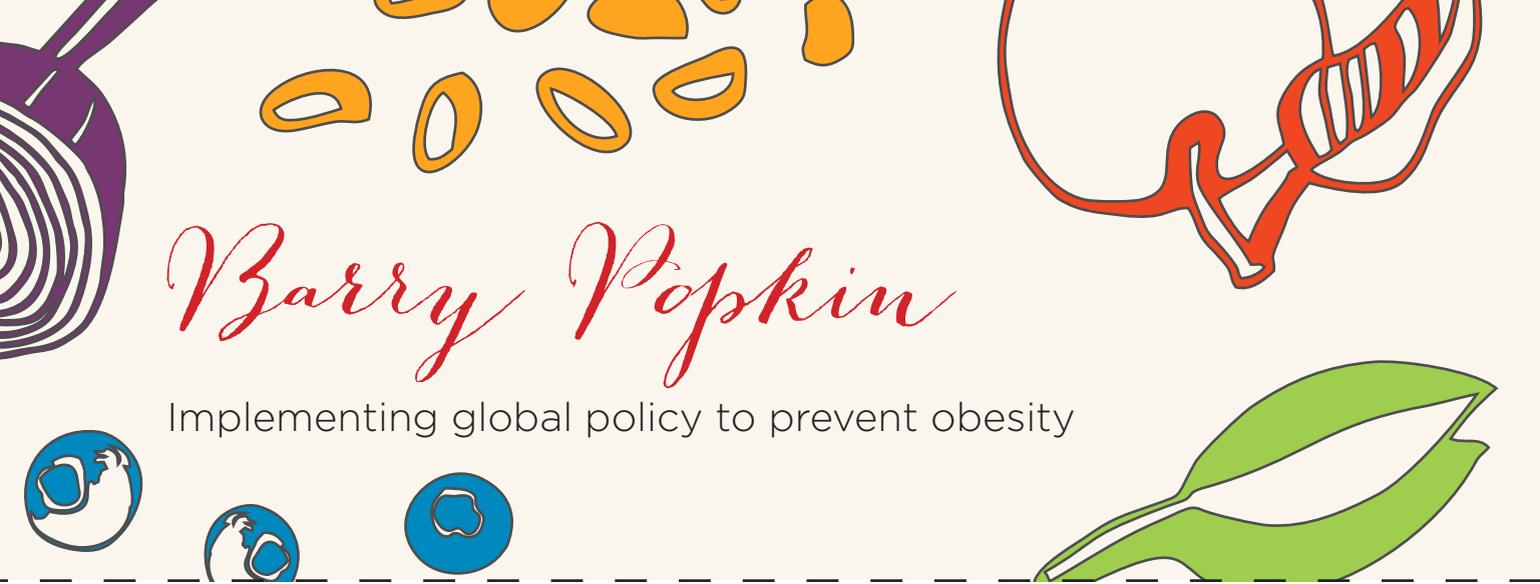


Images from video by Mary Lide Parker

“It’s so important to train providers to work together to provide care for older adults,” says Holliday. “Working in geriatrics is just as complex as working with trauma patients.”

—Michele Lynn

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 See “Holliday collaborates with other UNC health affairs schools,” a March 1 article at [sph.unc.edu/news](http://sph.unc.edu/news).
- 
 Holliday’s teaching and research in aging complements that of many other Gillings School researchers. See [sph.unc.edu/cphm/healthy-aging](http://sph.unc.edu/cphm/healthy-aging).



# Barry Popkin

Implementing global policy to prevent obesity

With myriad studies suggesting a link between consumption of sugar-sweetened beverages (SSBs) and obesity and cardiac problems, a critical need exists to guide people toward better dietary choices. UNC's Global Food Research Program (GFRP), housed at the Carolina Population Center, is a world leader in collaborating with countries and communities to design and evaluate large-scale regulatory efforts.

The impact of work by program director Barry M. Popkin, PhD, and colleagues can be seen in countries from Chile to China. In 2011, Mexico, where coronary artery disease and diabetes are the two leading causes of death, had the largest per-capita intake of soft drinks in the world. To address this, the country implemented a 10 percent excise tax on SSBs in January 2014, an effort on which Popkin, who is W.R. Kenan Jr. Distinguished Professor of nutrition, advised.

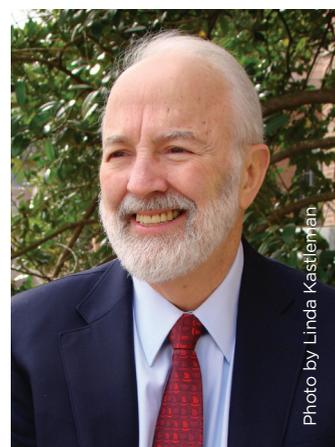
In January 2016, the first peer-reviewed study examining the effects of the Mexican tax was published in *BMJ* (formerly the *British Medical Journal*). The study – co-authored by Popkin, Shu Wen Ng, PhD, research associate professor of nutrition at the Gillings School, and others – found an average 6 percent decline in purchases of taxed beverages during 2014, with a 12 percent reduction by December 2014. The tax had the greatest impact among lower socioeconomic households, with a 9 percent average decline in purchases of sugary drinks over 2014 and a

17 percent decline by year's end.

“The benefits of such a tax will be enormous, particularly in low-income populations which have the largest proportion of untreated diabetes and hypertension,” says Popkin. “The Mexican tax is proof that these taxes have an impact – especially on lower-income households, which are most vulnerable to inexpensive soft drinks and junk food.”

Popkin says that SSB consumption is growing exponentially in every country except Mexico. “The tax in Mexico is having an important effect on people learning about the problem of SSBs,” he says, “but we need the tax to make a change in behavior.”

Popkin's research findings were instrumental in a decision by the Mexican government to continue the tax. Similarly, municipalities in the U.S. and other countries are using the findings to justify the institution of an SSB tax. Popkin estimates that, in 2016, 31 U.S. communities will push for a vote on SSBs, as will a number of countries, including England and New Zealand.



Dr. Barry Popkin

Photo by Linda Kastleman

—Michele Lynn



**Beth Mayer-Davis**

*ADVANCING INTERVENTIONS  
FOR PEOPLE WITH DIABETES*

**Eat better and move more –**

that's the quintessential prescription for what chronically ails most people. It's simple and effective, and it works for many.

*(continued on page 18)*



*SOCIAL DETERMINANTS OF HEALTH ARE CONDITIONS IN THE ENVIRONMENTS IN WHICH PEOPLE ARE BORN, LIVE, LEARN, WORK, PLAY, WORSHIP AND AGE THAT AFFECT A WIDE RANGE OF HEALTH, FUNCTIONING, AND QUALITY-OF-LIFE OUTCOMES AND RISKS.*

– “**Healthy People 2020,**”  
[healthypeople.gov](http://healthypeople.gov)

However, for some, despite their wish to be healthier, the prescription isn't enough. There may be too little money to buy nutritious foods. Parents working two jobs may believe they have too little time to exercise or may need more education about how to implement changes. Because genes also play a key role in the development of chronic diseases such as diabetes, diet and physical activity might not be enough to prevent illness. Attention to lifestyle is critical, however, in preventing many complications of this very serious disease.

These circumstances highlight the need for targeted interventions to promote healthy lifestyles in communities that face more than their share of chronic conditions.

Gillings School of Global Public Health researchers are involved in a number of efforts to prevent or better manage diabetes, from discovery to application. (See [sph.unc.edu/global/diabetes](http://sph.unc.edu/global/diabetes).)

Elizabeth Mayer-Davis, PhD, the Cary C. Boshamer Distinguished Professor and chair of nutrition at the UNC Gillings School, is one of those who are known and respected globally. For 25 years,

Mayer-Davis has led the charge against diabetes, combating it through nutrition.

“I'm engaged to improve population health,” said Mayer-Davis. “Social determinants are central to whether a person can succeed in preventing diabetes, can seek diabetes care if they're diagnosed, and can care for themselves as they live with diabetes.”

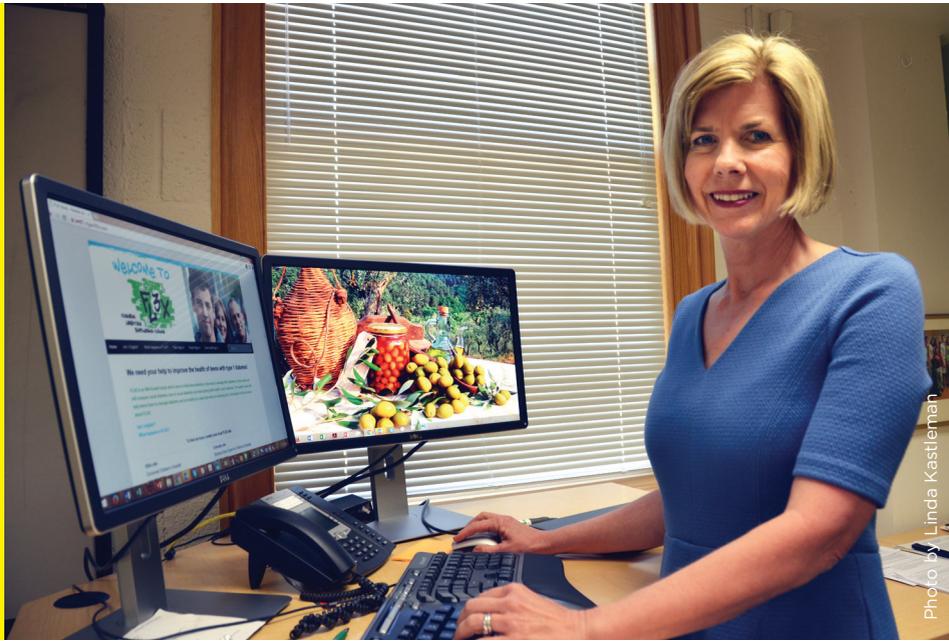
Mayer-Davis has brought together academic, community and professional partners on several projects to fight diabetes.



## **Understanding the culture helps us face the challenge**

Until the 1950s, there was no record of Type 2 diabetes in American Indian populations, but the disease began to surge in the 1960s and '70s. Poverty, poor access to nutritious food, few opportunities and little support for physical exercise, and insufficient health education have added to the challenges.

“Reversing this trend among youth is critical, and the most effective strategy is weight management



**Dr. Beth Mayer-Davis, at her standing desk, reviews the website for her Flexible Lifestyle Empowering Change (FL3X) project.**

through healthful dietary choices and increased physical activity,” Mayer-Davis says.

However, effective interventions for weight management in American Indian youth have not been identified yet. In fact, even a “one-tribe-fits-all” approach won’t work, so Mayer-Davis’ team conducted a community-based participatory research study both with North Carolina’s Eastern Band Cherokee tribe and people from the Navajo tribe in Shiprock, Ariz.

In a two-year, National Institutes of Health-funded study, the team enrolled 61 children and their parents in a multi-component intervention that included a 12-session after-school program. The program offered exercise for children and behavioral-change classes for parents and youth, supplemented by individual child and parent counseling to aid in motivation, goal setting and problem solving.

Mayer-Davis says a wide range of topics are discussed in the sessions, including how to select healthful foods (given local food availability and cost), how to cook and how to make physical activity fun.

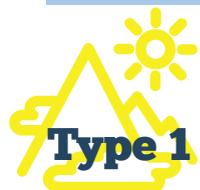
“We tap into local culture in many ways, for example by incorporating native dance and native foods into classes,”

Mayer-Davis says. “Native languages are used in all group sessions, and we celebrate local festivals, as appropriate. We provide opportunities for parents and their children to reflect on diet, physical activity and health and to develop specific goals and strategies to attain their goals.”

Understanding that families may face significant economic, medical or other difficulties, the program also provides resources and referrals when issues arise that are critical to the family’s overall well-being.

Initial results are promising. Children in the intervention have shown improvement in body mass index over time.

*See the sidebar, 'Diabetes and the American Indian Community,' on page 21.*

The logo for Type 1 diabetes features a stylized yellow sun with rays above a yellow outline of a mountain range. The text "Type 1 diabetes" is written in a bold, dark blue font across the bottom of the graphic.

## **Type 1 diabetes**

Traditionally, it was assumed that youth with Type 1 diabetes were invariably thin or of normal weight. Now, the prevalence of overweight and obesity in this group mimics the general population. Individuals with

Type 1 diabetes face the same challenges related to weight management as anyone else, but also face unique challenges related to living with the disease.

Some youths choose not to take insulin to avoid gaining weight, thereby leaving their blood sugar uncontrolled. At the opposite end of the spectrum, low blood sugar requires treatment, typically with simple carbohydrates, and often is associated with hunger and overeating. Fear of low blood sugar can lead to avoidance of physical activity.

Mayer-Davis and colleagues have designed a behavioral intervention to help adolescents with Type 1 diabetes better control their blood sugar and maintain a healthy lifestyle. This intervention, called FL3X ([type1fl3x.com](http://type1fl3x.com)), is being tested in a multi-center randomized controlled trial funded by the NIH.

“Nutrition is complicated for this group,” Mayer-Davis says. “CKD requires complex nutrition management designed to address kidney health, management of blood sugar and management of risk factors for cardiovascular disease.”

Through the Practice and Continuing Education (PACE) division in the nutrition department ([sph.unc.edu/pace](http://sph.unc.edu/pace)), which she established in 2015, Mayer-Davis collaborates with the Department of Medicine in the UNC School of Medicine. Renal dietitian and clinical assistant professor Shaun Riebl, PhD, RD, LDN, uses state-of-the-art behavioral strategies and motivational interviewing to help patients address their unique nutritional needs. The clinic also provides links to needed resources, including those addressing food insecurities.

“Dr. Mayer-Davis’ work at UNC Health Care is novel and provides smart and innovative ways to solve a population health challenge,” says Gillings School Dean Barbara K. Rimer. “By motivating patients with diabetes and helping them manage their individual nutrition needs, she empowers them to avoid rehospitalization.”



## Chronic kidney disease

Chronic kidney disease (CKD) is a common and serious complication of diabetes.

TYPE 1	TYPE 2
Formerly called ‘juvenile-onset’ or ‘insulin-dependent’ diabetes, Type 1 becomes symptomatic in childhood or young adulthood.	Formerly called ‘adult-onset’ diabetes, Type 2 can develop at any age. An increasing number of children are being diagnosed.
The body’s immune system destroys cells that release insulin, eventually preventing all insulin production. Without insulin, cells cannot absorb the glucose (sugar) needed to produce energy.	People with Type 2 produce too little insulin or their bodies use it inefficiently (insulin resistance). As the disease worsens, the pancreas is able to make less and less insulin (insulin deficiency).
5 percent to 10 percent of people with diabetes have this type.	90 percent to 95 percent of people with diabetes have this type.
Not preventable	Can be prevented or delayed with a healthy lifestyle, nutritious diet and regular exercise
Both types increase a person’s risk for a range of serious complications, including blindness, kidney failure, heart disease, stroke and lower-limb amputations.	



Research-based knowledge is critical, but it is not effective unless translated successfully into clinical practice. Mayer-Davis' close relationship with the American Diabetes Association, as board member and past president for health care and education, makes that translation easier.

She helped draft clinical guidelines and practice recommendations (see *Diabetes Care*, January 2014) and led a clinical trial on weight management strategies in rural areas. The trial demonstrated the importance of providing insurance reimbursement for a sufficient number of intervention hours if desired outcomes were to be achieved.

“Our study, ‘Pounds Off With Empowerment,’ highlighted the reality that you may have an effective intervention, but if you can’t pay for it, it will sit on the shelf,” she says.

Overall, her diabetes research has focused upon providing the best possible evidence-based care to solve problems related to diabetes and its complications.

“These experiences inspire my work in population health,” Mayer-Davis says. “We must determine how to integrate clinical care with community and public health services if we are to address the social determinants of health that may have a detrimental impact upon care.”

This is particularly critical for vulnerable populations, including youth and individuals living in under-resourced environments.

“Until the worlds of clinical care and community services meet,” Mayer-Davis says, “we’ll fall short of what we can do to support, care for, and optimize health and well-being for people living with diabetes and other chronic conditions.”

—Whitney L.J. Howell

## DIABETES AND THE AMERICAN INDIAN COMMUNITY

The health-care challenges that American Indians confront run the gamut – from the Indian Health Service's (IHS) being funded for health care costs at one-third per capita compared to the rest of the U.S. population, to the need for daily access to nutritious food (and, in some cases, safe drinking water), to the failure to address adequately the social determinants of health.

Individuals, health care practitioners, educational providers (including those who provide breakfasts and lunches and physical education), American Indian communities and national leaders all must take responsibility for understanding and incorporating social determinants into social, health and education programs and practices.

Research studies such as Dr. Mayer-Davis' illustrate that there are interventions with promise to address the pandemic of diabetes. The challenge now is community sustainability of proven interventions. IHS and American Indian communities always will face difficulties meeting the sustainability challenge alone. The federal government administration and Congress also must live up to their responsibilities as were promised in treaties and established through Indian laws and policies.

—Charles Grim, DDS, MHSA

Deputy Executive Director  
Cherokee National Health Services



Photo by Donn Young

**PUBLIC HEALTH**

**HERO**



**STEVE WING—  
COMMITTED TO  
SOCIAL JUSTICE  
FOR ALL**



**DR. STEVE WING** has been at the forefront in developing environmental justice research and the engagement of communities in that research - work that has had great impact here in North Carolina and elsewhere. Steve's commitment to and respect for people who have experienced adverse health effects resulting from environmental contamination is extraordinary. He continues to inspire community members, his colleagues and a legion of students wanting to follow in his path.

—**ANDREW OLSHAN, PhD**

*Barbara Sorenson Hulka Distinguished Professor in Cancer Epidemiology and Chair, Department of Epidemiology*



People initiate social movements because they want better lives for themselves, their families and their communities. Steve Wing, PhD, believes public health research can make significant contributions to such movements.

The social activists may be workers who organize to demand safer and

healthier conditions on the job. They may be members of civic or faith-based organizations that petition authorities for changes that will improve the air, ground and water where they live, learn and play.

Wing, associate professor of epidemiology at the UNC Gillings School of Global Public Health, has championed the causes of workers and communities of color for more than 30 years. He does this by meticulously documenting exposure levels to environmental contaminants and making connections to public health impacts. He has published in the field's most prestigious peer-reviewed journals and

earned accolades for scholarship, teaching, mentoring and community work.

"Ultimately, public health is about changing something," says Wing. "I've learned, especially as I began to work with community organizations in North Carolina, that it's my responsibility not only to publish in scientific journals, but to try to communicate the results to vulnerable people."

In that realm, Wing has conducted studies of air and water pollution that have empowered communities of color to organize and confront corporations engaged in industrial hog production in eastern North Carolina. He has involved community members in designing research, collecting data and disseminating results so they can use science to advocate for public health.

"His attitude, his ability to talk with people - not over their heads, but to sit down and have a real exchange - is the reason for his success in partnering with African-American

communities in the eastern part of the state,” says Naeema Muhammad. “He has such humility. He’s very respectful and mingles with people in a real way.”

Muhammad is co-director of the N.C.

Environmental Justice Network. She has worked with Wing since the late 1990s and was instrumental in recruiting community members to participate in data collection about the health effects of air pollution from hog factories. She also recruits community members every spring to come to Chapel Hill and share their experiences with students in Wing’s environmental justice course.

This is part of the critical role Wing plays in training the next generation of scholars and practitioners in epidemiology, occupational safety and health, and environmental justice.

Sarah Hatcher, PhD, now a postdoctoral researcher in environmental sciences and engineering at the Gillings School, first worked with Wing as an undergraduate. As a doctoral student, she did not have a formal advising relationship with him, but she considers him a mentor, especially because of the community-based research she conducted on workers’ exposure to antibiotic-resistant bacteria in confined animal feeding operations.

“He probably has played the biggest role in my career and personal development,” says Hatcher. “His work serves as an incredible example of the importance of doing meaningful public health research, communicating results to – and partnering with – community members.”

Kenda Freeman, a research and communications specialist for MDB Inc., who holds a Master of Public Health in environmental sciences and engineering from the School, says Wing’s class inspired her interest in environmental justice, particularly in occupational health.

“His teaching style brought life to the discipline of environmental health and made me realize that I was in the right field,” says Freeman.

Today, part of her job involves working with staff in the National Institute of Environmental Health

Sciences’ Worker Training Program to communicate and translate information that emphasizes the importance of worker safety, training and education.

Wing’s early career focused on occupational epidemiology in nuclear weapons production. There, he saw the conflict between corporate profits and worker health outcomes related to radiation exposure. Early on, he recognized the inequity that employers, but not workers, could hire scientists to conduct research and testify on their own behalf.

As he believed that workers also deserved access to scientific information, he has made himself available to those who normally could not afford the kind of help he offers, including being a longtime consultant to survivors of Hiroshima.

In 1995, communities exposed to fecal waste from industrial hog operations sought his input. At the time, he knew nothing about the issue. Upon further study, he found that much of the academic research on the subject focused on animal nutrition, breeding or waste management, but not on public health, he says.

North Carolina’s hog production is concentrated in the coastal plain in low-income communities of color. As a product of segregation-era New Orleans, Wing was outraged by the racial injustice involved in the placement of the farms. As a child, he had been unable to reconcile the “Whites Only” signs throughout his city with learning in school that “all people are created equal.”

Wing remains concerned about the role wealth plays in politics – how it prevents citizens from getting redress from the government when they are harmed by industry and how it affects the funding of research.

“If one theme connects my research, public service and teaching,” says Wing, “it’s that our universities are increasingly beholden to corporate interests. Research funding often comes from industry, nonprofit trade associations and government agencies that are influenced by campaign contributions and armies of lobbyists.”

— *Elizabeth Witherspoon*



Rebecca Fry and Jackie MacDonald Gibson –

# Bridging Troubled Waters

*Until the Flint, Mich., water crisis, some in the U.S. may have thought access to clean water was a concern only in developing countries. The situation in Flint shows how lack of transparency and shortsighted, uninformed decisions about the city's water supply caused life-altering, negative impacts on the health of community residents. In Flint, children from poor families, many of them African-American, were affected disproportionately by exposure to lead in the water.*

**G**illings School of Global Public Health faculty members say that we face problems with unsafe drinking water in many places in the U.S., including here in North Carolina. Duke Energy's 2014 coal ash spill into Virginia's Dan River, for instance, sent between 50,000 and 80,000 tons of toxic coal ash more than 70 miles downstream into North Carolina, causing public health threats to humans and wildlife. (Read more at [sph.unc.edu/superfund/coal-ash](http://sph.unc.edu/superfund/coal-ash).)

Poor, rural and minority communities are more likely to have water that is substandard and not connected to municipal water systems. More than

two million people in the U.S. depend upon private wells as the source of drinking water, and those wells are not regulated by state or federal law. Likewise, as many on our faculty, now and earlier, have stressed, even municipal water infrastructure systems in the U.S. are old and require serious examination and upgrades.

Rebecca Fry, PhD, associate professor of environmental sciences and engineering (ESE), has found the

presence of arsenic, manganese, cadmium and lead in private wells across the state, in levels rivaling those in developing countries. Fry's team has shown that high levels of the metals may have negative impacts upon the health of pregnant women and their infants, including risk for preeclampsia and birth defects.

"This is a big problem," she says, and her lab and the N.C. Center for Environmental Risk Analysis (NC-CERA) are addressing it on multiple fronts. Through the NC-CERA, her team has developed websites and informational materials for consumers; they also are working directly with county health directors to raise awareness about the issue.

In collaboration with the UNC School of Medicine, Fry is working on changes to ensure that data captured by the electronic medical record system during prenatal visits includes information about women's sources of drinking water. Such data could provide important insights about the effects of different levels of contaminants in water on human health.

Jackie MacDonald Gibson, PhD, also an associate professor in ESE, was funded by the Robert Wood Johnson Foundation to examine racial disparities related to water access and quality. She focused especially on the safety of well water and found high levels of microbial pathogens and human fecal waste in wells that were located in African-American communities at the edge of urban areas in the state.

Her team also found racial disparities related to which homes are given access to municipal water, and MacDonald Gibson aims to raise awareness about why some households are offered city water while others aren't. Last fall, she presented study findings in a keynote address at a conference hosted by the N.C. Research Triangle Environmental Health Collaborative. The event brought together executives from state agencies and the Environmental Protection Agency to discuss solutions.

MacDonald Gibson notes that exclusion from municipal water is a vestige of the Jim Crow era, when African-American communities within urban areas



Drs. Rebecca Fry (left) and Jackie MacDonald Gibson

*"Communities with higher population densities may be at higher risk of water contamination, but if they have lower incomes, they are less able to take action, such as installing home treatment systems, to reduce the risk."*

– Dr. Jackie MacDonald Gibson



were denied access to all municipal services, including water, sewer, street lighting and paved roads. Because these neighborhoods are surrounded by historically white communities within the city limits, she refers to them as “doughnut holes.”

MacDonald Gibson and other Gillings School students and faculty members have engaged in research, service and advocacy in one such local neighborhood – the Eubanks-Rogers Road community in Chapel Hill, where an adjacent landfill has caused health risks related to air and water pollution. Gillings School students who were members of Engineers Without Borders answered the call of neighborhood

leaders in 2009 to assess potential hazards and have retained a working relationship with the community since then. At the time of their first involvement, nine of 11 wells in the community did not meet EPA water quality standards.

“Communities with higher population densities may be at higher risk of water contamination, but if they have lower incomes, they are less able to take action, such as installing home treatment systems, to reduce the risk,” MacDonald Gibson says.

– Elizabeth Witherspoon

Fry is also director of the UNC Superfund Research Program (SRP), funded by the National Institute of Environmental Health Sciences. The program aims to improve how environmental and health risks around hazardous waste sites are determined and communicated – and to help devise strategies that minimize exposures and health risks. Fry’s article about cadmium and preeclampsia risk was published online Sept. 30, 2015, in the journal *PLOS One*.

MacDonald Gibson’s article about disparities in access to municipal services was published Aug. 13, 2015, in the *American Journal of Public Health*.

Read ‘Global health is local public health,’ Dr. Peggy Bentley’s article about the Rogers-Eubanks neighborhood, in *N.C. Medical Journal* (Sept./Oct 2010) at [tinyurl.com/NCMedJ-local-is-global](http://tinyurl.com/NCMedJ-local-is-global).



**Public health and social justice advocate Crystallee Crain, PhD, presented the 2016 Minority Health Conference’s William T. Small Jr. Keynote Lecture on “Mending the Wounds of Incompetence: Justice at the Intersection of Academia and Activism.”**

Hear her comments about Flint in the online video of the lecture, at [tinyurl.com/crain-unc-mhc](http://tinyurl.com/crain-unc-mhc).



**Philip C. Singer, PhD, professor emeritus of environmental sciences and engineering, serves on a committee appointed by the Michigan Department of Environmental Quality to provide guidance on long-term solutions to Flint’s water quality issues.**

Read more at [tinyurl.com/singer-in-flint](http://tinyurl.com/singer-in-flint).

Mark Sobsey –

# ANTIMICROBIAL RESISTANCE POSES MAJOR THREAT TO HUMAN HEALTH

*In his acceptance speech for a 1945 Nobel Prize, Dr. Alexander Fleming, co-developer of penicillin, warned that overuse of the life-saving drug could lead to a bacterium's ability to withstand the killing effects of antibiotic drugs.*

According to the World Health Organization (WHO), we have reached the point of antibiotic resistance, resulting in a major public health threat in every region of the world. For that reason, in May 2015, WHO endorsed a global action plan “to tackle antimicrobial resistance, particularly antibiotic resistance, the most urgent drug-resistance trend.”

Many are aware of efforts by hospitals to reduce transmission of microorganisms, dubbed “super bugs,” because they are resistant to many treatments, even to drugs of last resort.

Mark D. Sobsey, PhD, Kenan Distinguished Professor of environmental sciences and engineering, has found these antimicrobial-resistant organisms in discharges of waste from industrial agricultural operations, particularly hog farms, and in nearby waterways in North Carolina, as well as in hospital and community raw sewage.

“We’re seeing the same problems in animal agricultural waste as we see in hospital waste, where we know that antibiotic use is very high,” says Sobsey.

“It was typical to find that between 10 percent and 100 percent of bacteria in the animal waste is resistant to antimicrobials,” he says. “They were not only resistant to one antimicrobial, but multiply resistant to as many as six or seven, meaning there were few to which they were *not* resistant.”



Dr. Mark Sobsey designed the Compartment Bag Test, a simple, portable water-quality test. The CBT has made it easier to determine whether drinking water is safe in low-resource areas.

Sobsey, along with colleagues at Colorado State University, and in Nicaragua, Singapore and Mexico City, are finding the same bacteria throughout the world in environmental waters affected by these types of waste sources.

He says the best way to determine the origins of the bacteria – and work to minimize them – is for researchers to determine exactly which contaminants are in a given environment.

“While a lot of work has been done on antimicrobial-resistant bacteria in the environment, not enough attention has been given to those most resistant and of highest priority,” says Sobsey. “Where are the bacteria coming from? What hotspots do we suspect? How do we decide the best approaches to minimize their release from those sources?”

Sobsey is continuing the work, but finds it difficult to obtain funding for it.

Following Hurricane Floyd in 1999, which caused environmental devastation resulting from flooded

waste lagoons on industrial hog farms, the State of North Carolina declared a moratorium on expansion of such farming operations. Two of the largest corporations with operations in the state supported a \$13 million study of pathogens, odorants and excess nitrogen – and potential solutions to such contamination from industrial hog farming.

As Sobsey explains, even though the study produced recommendations for cost-effective ways to reduce the levels of environmental impacts, the companies chose not to implement any of the methods in North Carolina. Instead, they expanded their operations in states without a moratorium.

*– Elizabeth Witherspoon*



EMBRACING

*a Culture of*

HEALTH

AT THE GILLINGS SCHOOL

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Penny Slade-Sawyer, a retired rear admiral in the U.S. Public Health Service, former assistant surgeon general in the U.S. Department of Health and Human Services and former director of the N.C. Division of Public Health, has built a career on promoting and modeling good health practices.



**Penny Slade-Sawyer**

She runs, bikes, plays tennis. She has taught aerobics classes and played on a championship basketball team. She walks her dog between two and four miles each day. Only rarely is she standing still.

She joined the staff of the UNC Gillings School of Global Public Health in February 2015, when she was hired to lead a “Culture of Health” ([sph.unc.edu/culture-of-health](http://sph.unc.edu/culture-of-health)) initiative at the School, to help encourage those who work, teach or study here to make as many daily healthy choices as possible.

“Risa Lavizzo-Mourey, MD, president and chief executive officer of the Robert Wood Johnson Foundation (RWJF), began using the phrase ‘culture of health’ a while ago,” Slade-Sawyer says. “RWJF began an initiative ‘to encourage individuals, businesses, government and organizations to foster healthy communities and lifestyles,’ and Dr. Lavizzo-Mourey foresaw a vibrant American ‘culture of health’ in which all of us would try a few new things to preserve and improve our health.”

Slade-Sawyer says that Barbara K. Rimer, DrPH, dean and Alumni Distinguished Professor at the Gillings School, responded to RWJF’s challenge, supporting the School community in developing its own culture of health. “In this way,” Slade-Sawyer says, “we’re all able to play a part in developing a healthier America.”

Since her arrival, Slade-Sawyer has taken on a number of initiatives.

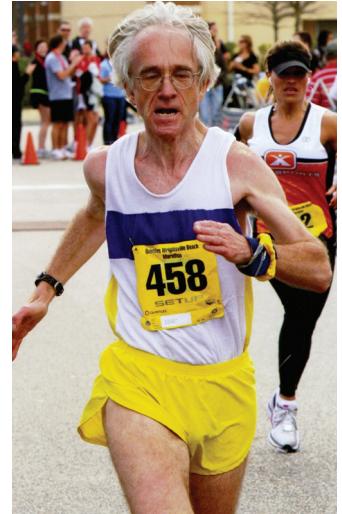
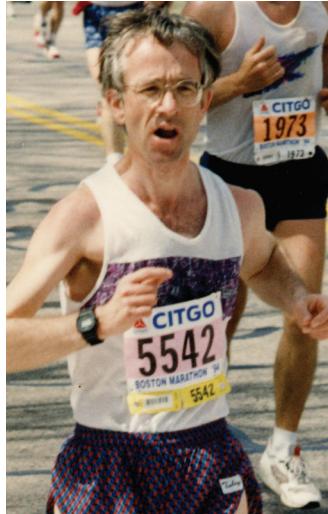
She has mapped out – and leads – regular 10-minute walking breaks for people at the Gillings School, guaranteeing that they leave their desks and computers periodically. She has instituted regular yoga classes and mindfulness sessions during the work day and held events at which members of the Gillings School community can sample nutritious snacks and take home the recipes.

“The response from faculty and staff members – and students – has been so positive,” Slade-Sawyer says. “Many are already engaged in healthy lifestyles, and they have expressed strong support for our efforts to spread the word about the benefits of exercise.”

Slade-Sawyer notes that a goal should be about 2.5 hours each week of moderately intense aerobic activity, such as brisk walking or tennis.

“Physical activity is essential,” she says, “but a number of elements lead to our having a ‘culture of health.’ Eating nutritious food, learning to handle stress, getting enough sleep – these things profoundly affect our health now and in the future. Poor diet, lack of physical activity and high stress are associated with many of the chronic diseases that kill us.”

OPEN THE CENTERFOLD TO SEE SOME OF  
THE MANY WAYS WE STAY ACTIVE!



Above: Engaging in health-promoting activities throughout the life cycle has important long-term benefits.

**Richard Smith, PhD**, biostatistics professor, has run a marathon annually for the last 35 years. Here, he is shown (l-r) in 1986 in the Ranelagh Harriers run in London; in 1994, at the Boston Marathon; and in 2010, at a Quintiles-sponsored run in Raleigh, N.C.

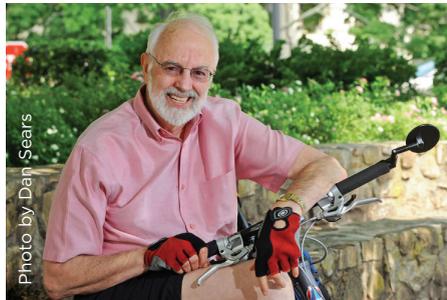
Right: (L-R) Environmental sciences and engineering faculty members **Dr. Mike Aitken** (chair) and **Drs. Marc Serre** and **Will Vizuete** (associate professors) bike to work except on days when weather makes the long trips less safe.



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LEARN MORE ABOUT THE WAYS  
THE GILLINGS SCHOOL COMMUNITY KEEPS FIT, AT  
[SPH.UNC.EDU/NEWS/CULTURE-OF-HEALTH-1](http://SPH.UNC.EDU/NEWS/CULTURE-OF-HEALTH-1).

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Below: **Wake Harper**, assistant student services manager in environmental sciences and engineering, began playing cricket as a child in New Zealand. He now plays in a league based in Morrisville, N.C.



Top left: **Barry Popkin, PhD**, W.R. Kenan Jr. Distinguished Professor of nutrition, often rides his bike to school. (See page 16 to learn more about Popkin's obesity research.)

Bottom left: **Dr. Avram Gold**, professor of environmental sciences and engineering, enjoys sculling. He's shown here, competing in the Masters' Nationals sculling event in fall 2014.

Right: In-school yoga classes initiated by **Penny Slade-Sawyer** give staff members an opportunity to exercise and meditate during the work day.



Below: **Dean Barbara K. Rimer** debuts the new Gillings Bike in March 2016.



Contributed photo



Above: (L-R) **Meghan Miller, Elle Glenny, Chani Hodonsky, Adrien Wilkie** and **Cory Keeler** play on an interdepartmental Ultimate (Frisbee) team.



Above: **Dr. Alison Stuebe** practices yoga on the beach.



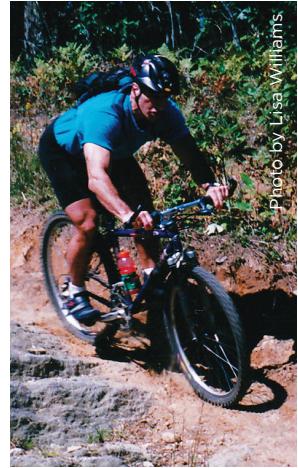
Above: Nutrition Research Assistant **Dr. Itzel Vazquez-Vida** they teach in Kannapolis. **Dr. Itzel Vazquez-Vida** the NRI, is pictured with her medal after completing a 5K.

Left: **Dr. Jon Hussey**, research assistant professor of maternal and child health, loves running – from 5K races to marathons.

Below: **Sarah Smith**, accounting technician in epidemiology, enjoys weight training and competing in triathlons. Here, she is shown flipping tires on the beach.



Below: **David Pesci**, Gillings School communications director, finds that mountain biking calls for intense focus, a skill that transfers to other areas of his life.



Research Institute (NRI) staffers practice what they preach in Chapel Hill, N.C.

... (left), postdoctoral research associate at the Gillings School of Public Health, works with her community running club partners in Chapel Hill in May 2015.



Left: **Dr. Kant Bangdiwala**, research professor of biostatistics, walks 1.5 miles each day to the bus stop nearest his house, which is outside the city limits, so he can take advantage of Chapel Hill's great transit system (and not have to park on campus). "I'm helping save the environment – and getting my exercise, too," he says.

# CAROLINA GLOBAL BREASTFEEDING INSTITUTE

CELEBRATING  
10 YEARS  
OF RESEARCH,  
TEACHING  
AND SERVICE





Why breastfeed? Miriam Labbok, MD, MPH, IBCLC, Professor of the Practice of maternal and child health at the Gillings School, can give an evidence-based list of reasons. (See some of them on page 34.) Besides being a priceless opportunity for early bonding, she says, breastfeeding offers essential health benefits for both babies and their mothers.

That knowledge — and the belief that women and infants everywhere deserve to experience those health benefits — inspired an anonymous donor in 2006 to make a transformational gift to the UNC Gillings School of Global Public Health to establish the Carolina Global Breastfeeding Institute (CGBI). The Institute is the only one of its kind in the world housed within a school of public health and within a maternal and child health department.

“A visionary and most generous gift allowed us to build a world-class breastfeeding institute to improve the lives of mothers, children and families—both in North Carolina and globally,” says Herbert Peterson, MD, Kenan Distinguished Professor and former chair of maternal and child health. “We were doubly fortunate to recruit Dr. Labbok as Institute director. Her prior experience at UNICEF and USAID has been invaluable, as has her ability to link the worlds of research and practice.”

As CGBI celebrates its 10th anniversary, its founding director is pleased with the Institute’s established

research and implementation programs, but says there’s more work to be done.

“What’s really needed now is more implementation,” says Labbok. “The deaths of more than 3,500 children could be prevented every day — if current breastfeeding recommendations were implemented globally.”

From the outset, CGBI focused upon issues of equity in services and health outcomes.

“In the U.S. and in North Carolina, the diseases that can be prevented by breastfeeding were the ones causing



Left to right are CGBI staff members Kathleen Anderson, Catherine Sullivan, Dr. Miriam Labbok, Dorothea Calhoun-Smith and Kathy Parry.

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WHAT'S REALLY NEEDED NOW IS MORE IMPLEMENTATION. THE DEATHS OF MORE THAN 3,500 CHILDREN COULD BE PREVENTED EVERY DAY IF CURRENT BREASTFEEDING RECOMMENDATIONS WERE IMPLEMENTED GLOBALLY.\*

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—DR. MIRIAM LABBOK

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the disparate disease and mortality in the African-American community,” Labbok says.

Using data from the Carolina Breast Cancer Study ([cbcs.web.unc.edu](http://cbcs.web.unc.edu)), Labbok worked with the late Robert Millikan, PhD, and colleagues in the Gillings School's Department of Epidemiology to prove that breastfeeding reduced the risk of basal-like breast cancer, which is more common among African-American women. These findings led the Institute to focus on increasing the number of black women who breastfeed.

With the cooperation of the UNC Women's and Children's Hospital staff, the Institute also established The Mary Rose Tully Training Initiative, named in memory of Tully, a former Gillings School faculty member and career-long breastfeeding advocate. (See [sph.unc.edu/tully-obit](http://sph.unc.edu/tully-obit).)

## WHY BREASTFEED?

*It's good for babies!*

Reduces respiratory and gastrointestinal infections

Reduces risk for obesity and chronic conditions such as diabetes and celiac disease

Decreases risk of sudden infant death syndrome (SIDS) by half

Is convenient and easily accessible

Provides better antibody response to vaccines

*It's good for moms!*

Reduces risk of postmenopausal osteoporosis, obesity, breast and ovarian cancers

Helps post-delivery healing

Is sustainable, convenient and less expensive

Reduces moms' time away from work to care for babies who are ill



The program, which requires 300 hours of clinical experience under direct supervision of an International Board-Certified Lactation Consultant (Labbok is an IBCLC) and 90 hours of classroom study, is accredited by the Commission on Accreditation of Allied Health Education Programs — and is the only accredited university-level lactation training program in the world. (See [sph.unc.edu/news/cgbi-accredited](http://sph.unc.edu/news/cgbi-accredited).)

The Institute's local, national and global impact grows steadily. Its partnerships with N.C. agencies are longstanding, and now CGBI also collaborates with Abt Associates and Population Health Improvement Partners on the Centers for Disease Control and Prevention-funded EMPOWER Breastfeeding Initiative. The initiative has supported essential maternity care practices in 94 hospitals in 23 states across the U.S., predominantly serving minority populations.

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## CGBI ACCOMPLISHMENTS AT A GLANCE

Founded in 2006, CGBI is the only lactation program in the world accredited by the Commission on Accreditation of Allied Health Education Programs.

CGBI faculty and staff have published more than 100 scientific articles and have made hundreds of state, national and international presentations about their research.

Faculty and staff members serve on many national and global boards and expert panels.

CGBI is known for strong collaborations, especially with North Carolina agencies, including public health departments, and also works with nonprofits and federal and international agencies.

The Institute was awarded more than \$2.8 million in grants (excluding the gift that established it).

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In June 2015, Alison Stuebe, MD, was named Distinguished Scholar of Infant and Young Child Feeding at the Gillings School and in UNC's School of Medicine. (See page 36.) Stuebe's appointment, funded by the same anonymous donor, extends CGBI's reach by focusing on the development of prenatal and postnatal care programs that help all parents improve their own health and the health of their children.

"Miriam Labbok and her team have transformed CGBI into a preeminent Institute, which has had remarkable influence and impact in the translation of our best science into policies, programs and practices, here and around the world," Peterson says. "What an amazing decade it has been!"

—Elizabeth Witherspoon

### *In the next issue*

**Another anniversary is coming soon — Health Policy and Management (HPM) will celebrate 80 years!**

**Basic sanitation and management of county health departments and local hospitals were the primary concerns in 1936, when 46 students took the first classes within the UNC School of Medicine's Department of Public Health Administration — four years before the founding of what is now the UNC Gillings School of Global Health.**

**Now, HPM faculty members train leaders and researchers in management and policy; students pursue 17 degrees (including dual ones); and alumni lead and manage health systems, influence federal policy, work on National Institutes of Health research initiatives and study effective methods of health-care delivery around the world.**

**Save the dates — Sept. 15-17 — and learn more about the celebration at [sph.unc.edu/hpm](http://sph.unc.edu/hpm).**



# Alison Stuebe

*Few health interventions are even 'in the ballpark' with breastfeeding*

In June 2015, Alison Stuebe, MD, was named Distinguished Scholar of Infant and Young Child Feeding at the Gillings School of Global Public Health. Her work in the Gillings School's Department of Maternal and Child Health and the Carolina Global Breastfeeding Institute is supported by a generous gift from an anonymous donor, with the aim to advance – locally and globally – the science and practice of breastfeeding.

“I am thrilled to have this opportunity to forge collaborations with colleagues across the University,” she says. “By supporting more women in achieving their breastfeeding goals, we can improve health across two generations and around the world.”

Stuebe, who also is associate professor of obstetrics and gynecology in the UNC School of Medicine, calls breastfeeding “the ultimate public health behavior.” Babies who are breastfed have lower risk of ear, respiratory and gastrointestinal

infections, she says, and of sudden infant death syndrome and leukemia. Mothers who have breastfed have lower risks of diabetes, heart attacks, and cancers of the breast and ovaries. (See a longer list of health benefits on page 34.)

“Given these benefits, why wouldn't we want to help every mother to achieve her breastfeeding goals?” Stuebe asks. “What if all children had an optimal chance to grow, thrive and reach their full potential, and all mothers could experience pregnancy, birth and parenting as an empowering and health-giving experience? If you look at all the things that medicine and public health can do to improve people's well-being, few are even in the ballpark with breastfeeding.”

In January 2016, Stuebe and colleagues were selected by the Patient-Centered Outcomes Research Institute (*pcori.org*) to receive a Eugene Washington PCORI Engagement Award to define

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Every mother deserves comprehensive support to recover from birth and develop confidence to care for her baby.

- Dr. Alison Stuebe

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”

unmet patient-centered health-care needs during the three months after a mother gives birth.

“The Fourth Trimester Project” will do just that. The project brings together mothers, health-care providers and other stakeholders to determine what mothers and infants need during the trimester *after* birth.

Many women experience considerable challenges during this period, including fatigue, pain, breastfeeding difficulties, depression, lack of sexual desire and incontinence. Postpartum care may be fragmented among maternal and pediatric providers; between 20 percent and 40 percent of women do not attend a postpartum visit. Rising maternal mortality and morbidity in the U.S. have made this work an even greater priority.

“In standard maternity care, we see a mother weekly in the month before her due date – and then, once the baby is born, we go six weeks without seeing her,” Stuebe says. “Every mother deserves comprehensive support to recover from birth and develop confidence to care for her baby. With this project, we will partner with mothers to discover the support they need.”

“This project was selected for funding not only for its commitment to engaging patients and others, but also for its potential to increase the usefulness and trustworthiness of the information we produce and facilitate its dissemination and uptake,” says

Jean Slutsky, PCORI’s chief engagement and dissemination officer. “We look forward to following the project’s progress and working with UNC to share the results.”

Stuebe says that UNC-Chapel Hill, as a premier university, has an obligation to serve the people of North Carolina.

“We want to see reductions in infant mortality in our state,” she says. “We want reductions in obesity and the chronic conditions, such as diabetes, associated with obesity. I feel fortunate to help extend the bridges from our world-class breastfeeding institute to communities in North Carolina and around the world.”

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*Joining Stuebe as lead investigators for The Fourth Trimester Project are Sarah Verbiest, DrPH, clinical associate professor at the School of Social Work and executive director of the Center for Maternal and Infant Health in the UNC School of Medicine, and Kristin Tully, PhD, research associate at the Carolina Global Breastfeeding Institute in the Gillings School’s Department of Maternal and Child Health.*

*Hear Stuebe discuss the bright future of the Carolina Global Breastfeeding Institute at [tinyurl.com/stuebe-video-WOD](http://tinyurl.com/stuebe-video-WOD).*

# TRAJECTO

PROFILES BY JENNIE SAIA

Photo by Sara Forhan



Leigh Tally (right) reviews information with staff members at Murara Health Center, in Rwanda.

## MATERNAL AND CHILD HEALTH

# Leigh TALLY

Helping local governments in Africa use data better

Leigh Tally, MPH, has a record of public health service that spans the globe.

As a graduate student, she served as a consultant to the Department of Health and Human Services in Raleigh, N.C., and volunteered as a malaria program specialist with the Peace Corps in Kisumu, Kenya.

These days, the 2014 alumna of the Gillings School's maternal and child health department works full time at the Centers for Disease Control and Prevention (CDC) in Atlanta. As a member of a monitoring and



It's not strategic information unless you are using it.

—LEIGH TALLY

evaluation team in the Division of Global HIV/AIDS and Tuberculosis, Tally spends nearly half her time in sub-Saharan Africa.

There, she supports the CDC's country teams and local governments in strengthening monitoring and evaluation systems.

With Tally's help, the organizations can make more informed decisions by improving the application of data they collect.

"It's not *strategic* information unless you are using it," she notes.

"Not surprisingly, I am learning a lot in this role and really enjoying the challenge," Tally says. "My experiences at the Gillings School inform my work on a daily basis. The School was great because I was surrounded by people who care about each other *and* the world around them."

# R I E S

Alumni from all eight academic units at the UNC Gillings School of Global Public Health prove themselves as local and global public health leaders.

Contributed photo



Amy Richardson takes a break at her workplace.

## BIOSTATISTICS

# Amy RICHARDSON

An internship led to a great career

Public health led Amy Richardson, PhD, to Google.

It wasn't her expected career path, but the 2014 alumna of the Gillings School's biostatistics department landed a job after an internship with the technology giant during the final year of her doctoral program.

As a quantitative analyst in Google's offices in Mountain View, Calif., Amy has a unique work environment. Her typical day involves a few hours of writing and testing code changes and updates

to forecasting software, a few hours of data analysis to support decisions about back-end search algorithms and — naturally — a quick break to play a round of pool or an arcade game.

"I'd always believed Google had a positive impact on the world," Richardson says. "I thought it would be fulfilling to work for such an organization, but I never really considered it as a possibility until my adviser, Dr. Michael Hudgens, encouraged me to pursue an internship. It turns out that a

successful career at Google was very possible with my background in biostatistics."

I never really considered it as a possibility [to work for Google] until my adviser, Dr. Michael Hudgens, encouraged me to pursue an internship.

—AMY RICHARDSON

Contributed photo



Marie Callahan (right) accepts a diploma at her Defense Language Institute graduation.

## HEALTH POLICY AND MANAGEMENT

# Marie CALLAHAN

### Helping veterans access health care

**M**arie Callahan, MSPH, RT(R), exemplifies personal passion for public health.

As administrative officer for care in the community at the Veterans Affairs (VA) Medical Center in Durham, N.C., Callahan coordinates care for veterans through the Veteran’s Choice Program ([va.gov/opa/choiceact](http://va.gov/opa/choiceact)). Through the program, veterans enrolled in a VA health-care system can receive medical services in their own communities rather than having to travel to distant VA health centers.

Callahan chose her career based upon first-hand experience with veterans’ needs. From 2006 to 2008, she was a senior airman working as a Korean linguist in the U.S. Air

Force — until an injury cut short her service. Experiencing chronic pain, she sought medical care through the VA — but was frustrated repeatedly by the system’s bureaucratic tangles.

Eventually, Callahan reached her limits. She applied to study in the Department of Health Policy and Management (HPM) at the UNC Gillings School.

“My goal,” she says, “was to put myself in a position to prevent fellow veterans from experiencing what I went through.”

Bruce Fried, PhD, HPM associate professor and director of the residential master’s program, says that active military personnel and veterans have studied in the department for more than 25 years; 24 active or veteran service people

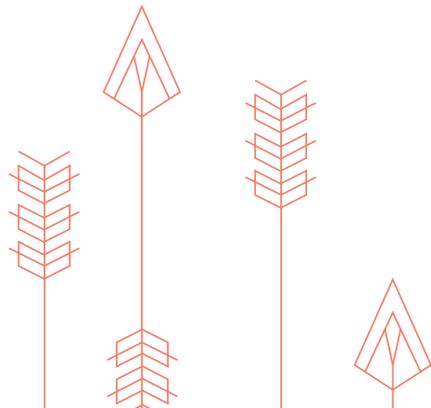
became HPM graduates in the last five years alone.

“During that time,” he says, “we have seen consistently how these individuals enrich the education of their fellow students.”

Callahan graduated from the Gillings School in May 2014. Today, it’s clear she has landed exactly where she needs to be.

My goal was to put myself in a position to prevent fellow veterans from experiencing what I went through.

—MARIE CALLAHAN





Dr. Kiyah Duffey (left) poses with her children.

## NUTRITION

# Kiyah DUFFEY

Empowering families to make healthful choices

**K**iyah J. Duffey, PhD, brings her entrepreneurial spirit to the field of nutrition.

Together with Lisa Sutherland, PhD, a fellow alumna of the Gillings School's nutrition department, Duffey founded a company that aims to promote healthy lifestyles for families.

Announcing ... *Kizingo!* (See [www.kizingokids.com](http://www.kizingokids.com).)

The company's flagship product is a toddler spoon that helps children succeed at self-feeding. The idea for the spoon originated during Duffey's years at the Gillings School.

In 2009, she completed her

doctoral studies with adviser Barry Popkin, PhD, W.R. Kenan Jr. Distinguished Professor of

nutrition. Together, they examined the relationship between diet and long-term health outcomes in adults. When Duffey began raising



My vision is a world in which families are empowered to make food-related decisions that promote the health of the environment, their communities and their relationships.

— KIYAH DUFFEY

her family, she realized she would have more impact by focusing on *children's* eating habits, as childhood is when adult patterns become engrained.

These days, Duffey writes for a number of blogs and

websites, including Mind Positive Parenting ([drdavewalsh.com](http://drdavewalsh.com)) and Smart Eating for Kids ([smarteatingforkids.com](http://smarteatingforkids.com)), translating the latest nutrition science related to feeding young children. She also has founded Kiyah J. Duffey Consulting ([kiyahduffey.com](http://kiyahduffey.com)), which focuses on policy research that improves the health and well-being of children, their parents and caregivers.

"My vision," she says, "is a world in which families are empowered to make food-related decisions that promote the health of the environment, their communities and their relationships. And we are doing this [at Kizingo] — one product at a time!"



Scan QR code for more info.



Jed Hinkley holds a sweet potato, one product of the farms and markets he often visits.

HEALTH BEHAVIOR

Fed HINKLEY

Serving the people of northeastern North Carolina

Jed Hinkley, MPH, is the “go-to” person if you want to talk about healthy food access in northeastern North Carolina.

As the healthy foods coordinator for Albemarle Regional Health Services, working with the Partnerships to Improve Community Health grant, Hinkley promotes equitable access to food. His efforts include initiatives that increase the number of local produce vendors and encourage vendors to accept the Supplemental Nutrition Assistance Program (SNAP).

A 2015 graduate of the Gillings School’s Department of Health Behavior, Hinkley now divides his time between the office and the field. He’s often in the car, visiting

farms, markets and roadside stands throughout the 17 counties he supports.

“I wanted to work in a rural part of the state where significant health disparities exist, particularly in the areas of food access, physical

I wanted to work in a rural part of the state where significant health disparities exist, particularly in the areas of food access, physical activity, obesity and diabetes.

—JED HINKLEY

activity, obesity and diabetes,” Hinkley says.

He felt compelled to apply to his current job out of desire to make a positive impact in a region where 15 of the 17 counties he serves are economically distressed. Almost all have obesity rates higher than 30

percent, and childhood poverty rates exceed 40 percent in some areas.

Hinkley says that every day at work, he applies the skills he learned as a master’s student.

“My studies at UNC Gillings gave me a good foundation in evaluation, methods and theory,” he says. “They also taught me the importance of ‘soft skills’ such as emotional intelligence and working with different types of people.”

When not on the road, Hinkley relaxes by spending time with his two young daughters. On nice days, he enjoys biking through the beautiful farmland he knows so well.

Contributed photo



Dr. Zachary Kerr (left) discusses football injuries with host Bill Benner on Inside /N/diana Business Television.

## EPIDEMIOLOGY

# Zachary KERR

### Finding support for himself and his skills at the NCAA

Zachary Y. Kerr, PhD, was always picked last for sports teams at school. He finds that funny now that he works in the field of sports injury prevention.

Kerr is director of the National Collegiate Athletic Association (NCAA) Injury Surveillance Program at the Datalys Center for Sports Injury Research and Prevention ([datalyscenter.org](http://datalyscenter.org)).

“The job has provided me with a different outlook and a much greater respect for

athletes, coaches and team medical staff,” he says.

After graduating

in 2014 from the Gillings School’s Department of Epidemiology, he saw the posting for his current job and knew it would allow him to play a key part in the development of data-driven, evidence-based sports policy and programming.

Kerr has come a long way from the north shore of Maui, where he grew up. In addition to his professional achievements, he is personally proud to represent the LGBT community in a field with few LGBT-identified individuals.

“I have received respect and support from the NCAA and the Datalys Center,” says Kerr. “It’s the same supportive environment that made UNC so great. I was given the opportunity to enrich my experience in sports injury research

in an environment that allowed me to be confident in my abilities and never feel ashamed of who I am.”



I have received respect and support from the NCAA and the Datalys Center. It’s the same supportive environment that made UNC so great.

— ZACHARY KERR

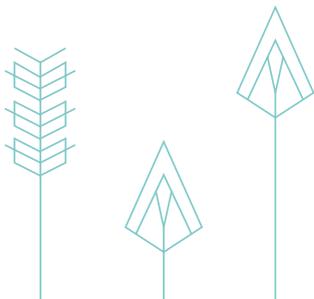


Photo by Jennie Saia



Manish Kumar works in his MEASURE Evaluation office in Chapel Hill, N.C.

## PUBLIC HEALTH LEADERSHIP PROGRAM

# Manish KUMAR

### Making a difference at MEASURE Evaluation

**M**anish Kumar, MPH, a native of India, has found a second home at UNC.

A seasoned public health professional, Kumar already had 12 years' experience in project implementation and conducting activities to strengthen health systems at the point a Rotary Peace Fellowship brought him back to school

for a master's degree.

After graduating from the Gillings

School's Public Health Leadership Program (PHLP) in 2015, he accepted research and teaching positions at UNC-Chapel Hill.



People are the reason that I work to strengthen health systems.

—MANISH KUMAR

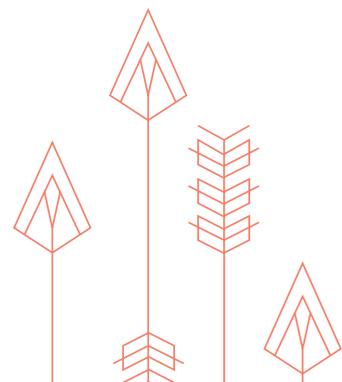
Kumar is senior technical specialist for health systems strengthening with MEASURE Evaluation ([cpc.unc.edu/measure](http://cpc.unc.edu/measure)) — a USAID-funded global health

information systems project housed within UNC's Carolina Population Center.

In this role, he provides technical and capacity-building support for the Data for Accountability, Transparency and Impact Monitoring System managed by the United States government for teams in 50 developing countries.

As an adjunct assistant professor in the PHLP, Kumar also guides students through coursework, practicum activities and job searches.

His motivations are simple: "People are the reason that I work to strengthen health systems," he says.





Dr. Alice Wang (left) shows a young woman in Mwanza, Tanzania, how to use a portable test for drinking water quality.

## ENVIRONMENTAL SCIENCES AND ENGINEERING

# Alice WANG

Solving the puzzle  
makes public health fun

**A**lice Wang, PhD, has a great elevator speech.

“Have you seen the movie *Contagion*?” she asks. “Kate Winslet’s character was an epidemic intelligence service officer — that’s what I do!”

Wang, who graduated from the Gillings School’s environmental sciences and engineering program in May 2015, began working for the Centers for Disease Control and Prevention (CDC) that July. Her position is a two-year fellowship with a focus on applied epidemiology.

Her placement on the CDC’s disaster epidemiology and response team, part of the health studies branch of the National Center for Environmental Health, has afforded Wang the opportunity to engage with a variety of different projects

and enhance her statistical analysis system (SAS) and geographical information system (GIS) skills.

On her latest international deployment, Wang traveled to



When limited by resources, hindered by politics and bogged down by logistics, the simplest tasks become challenges. Solving that puzzle is what makes public health fun.

—ALICE WANG

Tanzania to help with cholera outbreak response. She spent two weeks in Dar es Salaam, working

with the Ministry of Health and nonprofit partners to develop a water, sanitation and hygiene plan for rapid-response teams to share with local health offices.

Wang also traveled to the city of Mwanza for two weeks and visited households and cholera treatment centers to ensure that prevention and control measures were in place.

“A lot of what we did is common sense,” she explains, “but when limited by resources, hindered by politics and bogged down by logistics, the simplest tasks become challenges. Solving that puzzle is what makes public health fun.”

Most recently, the CDC deployed Wang to Flint, Mich., as part of the water response. “Responding to public health crises in our own country is very important, too,” she says.

December 2015 - April 2016  
**SCHOOL NEWS**

Read more at [sph.unc.edu/news](http://sph.unc.edu/news).

## Selected Publications

Student-led publications are marked with ✦.

### HUMAN BIOLOGY

In a study published in the May 2016 issue of *Psychoneuroendocrinology*, **Allison Aiello, PhD**, EPI professor, and **Lydia Feinstein, PhD**, postdoctoral research associate in EPI, reported that people affected by post-traumatic stress disorder (PTSD) also may experience an unnatural decline, or “aging,” of their immune systems.

**John Anderson, PhD**, adjunct professor of NUTR, co-authored two articles related to older adults’ calcium intake. One, published Nov. 19, 2015, in *Nutrients*, found that high intake of dietary phosphorus, relative to calcium, may have

adverse health effects including arterial calcification and bone loss. A second, published in the Jan./Feb. 2016 issue of *Nutrition Today*, suggests adults may not need more than 700-800 mg. of calcium daily and that the nutrient is best delivered through calcium-rich foods, not supplements. The Institute of Medicine’s recommendation for women 51 and older is for 1,200 mg. daily.

### mHEALTH AND OTHER TRACKING

**Antonia Bennett, PhD**, research assistant professor, **Bryce Reeve, PhD**, professor, and **Ethan Basch, MD**, professor, all in HPM, showed

that activity trackers (e.g., Fitbits) may be a valuable tool for assessing patient symptoms in clinical research. Their findings were published Nov. 17, 2015, in *Quality of Life Research*.

**Kelly Evenson, PhD**, research professor of EPI and RTI University Scholar, reviewed activity trackers to determine which metrics were best measured by the devices. Researchers found the devices best at counting steps and less accurate in measuring energy expenditure and sleep. Evenson’s study was published Dec. 18, 2015, in the *International Journal of Behavioral Nutrition and Physical Activity*.



Dr. Allison Aiello



Dr. John Anderson



Dr. Ethan Basch



Dr. A. Bennett



Dr. Kelly Evenson



Dr. Bryce Reeve

### KEY TO DEPARTMENTS

- BIOS** Biostatistics
- EPI** Epidemiology
- ESE** Environmental Sciences and Engineering
- HB** Health Behavior
- HPM** Health Policy and Management
- MCH** Maternal and Child Health
- NUTR** Nutrition
- PHLP** Public Health Leadership Program



Dr. Jamie Bartram



Dr. Barry Popkin



Dr. Kurt Ribisl



Dr. Jennifer Smith



Dr. Sally Stearns

## POLICY

**Jeanne Luh, PhD**, program coordinator, **Ryan Cronk**, ESE doctoral student, and **Jamie Bartram, PhD**, Don and Jennifer Holzworth Distinguished Professor and director, all of The Water Institute at UNC, proposed a new way to track country-level performance on health, human rights and international development goals. Their findings were published Jan. 26, 2016, in *PLOS ONE*.

**Barry Popkin, PhD**, W.R. Kenan Jr. Distinguished Professor of NUTR, **Shu Wen Ng, PhD**, NUTR associate professor, and colleagues co-authored a study showing that a soda tax implemented in Mexico reduced soda consumption by an average 6 percent in 2014. Published Dec. 14, 2015, in *PLOS ONE*, the research was funded by Bloomberg Philanthropies. In a 'personal view' paper published in *The Lancet Diabetes & Endocrinology* in February 2016, Popkin highlighted

the global increase in sugar-sweetened beverages, which are associated with major health risks, and described a reduction in consumption in countries that tax the drinks (e.g., Mexico, Finland, Hungary and France).

★ **Andrew Brian Seidenberg, MPH**, HB doctoral student, conducts research on tobacco control policy and skin cancer prevention. An article co-authored with HB doctoral student **Elizabeth Orlan** and HB professor **Kurt Ribisl, PhD**, and published Feb. 5 in the *Journal of Policy Analysis and Management*, proposes a regulatory framework to address the major public health challenges raised by e-cigarettes. In an article published Feb. 18 in *Translational Behavioral Medicine*, Seidenberg and colleagues found that Twitter data provided insight into tanning bed injuries, e.g., eyelid burns, which are not reported through traditional surveillance.

A study by **Sally Clark Stearns, PhD**, professor of HPM, reported that earlier use of hospice services can lower costs and improve care of Medicare patients. Findings were published Dec. 11, 2015, in *The Journals of Gerontology*.

## CANCER

**Jennifer S. Smith, PhD**, associate professor of EPI, and colleagues determined that urine testing to detect high-risk human papillomavirus, which causes most cervical cancers, is a simple, effective, noninvasive screening method for those cancers. Her study was published Nov. 5, 2015, in *Journal of Clinical Virology*.

## Selected Grants

### BILL & MELINDA GATES FOUNDATION

**Sian Curtis, PhD**, research associate professor, and **Ilene Speizer, PhD**, research professor, both in MCH, received a three-year, \$4.5 million Gates Foundation grant to evaluate family planning services in Nigeria and the Democratic Republic of Congo. UNC's Carolina Population Center will administer the grant.

### ROBERT WOOD JOHNSON FOUNDATION

RWJF selected UNC to serve as the National Program Leadership Center for establishing a New Clinical Scholars program. Initiated with a \$750,000 planning grant, the program, led by **Claudia Fernandez, DrPH**, clinical assistant professor of MCH, and **Giselle Corbie-Smith, MD**, Kenan Distinguished Professor of social

medicine in the School of Medicine, is part of a \$400 million, decade-long plan by RWJF to train leaders to build a "Culture of Health" in the U.S.

### NATIONAL INSTITUTES OF HEALTH

**Penny Gordon-Larsen, PhD**, NUTR professor, was awarded \$2.5 million from NIH to examine whether gut microbiota and plasma metabolites differ depending upon precisely when individuals in China transitioned from traditional to Western diets.

**Stephen Hursting, PhD**, NUTR professor, received a National Cancer Institute (NCI) Outstanding Investigator Award. The grant provides more than \$5 million over seven years to further Hursting's research on links between obesity and cancer.

**Elizabeth Mayer-Davis, PhD**, Cary C. Boshamer Distinguished Professor and chair of NUTR, and **Christina Shay, PhD**, NUTR assistant professor, received NIH funding for a collaborative two-year grant to examine the incidence and prevalence of diabetes in youth and young adults in India and the U.S. The project is an example of the intersection of global and local health.

**Jennifer Smith, PhD**, research associate professor (EPI), **Melissa A. Troester, PhD**, associate professor (EPI), and **Laura Linnan, ScD**, professor (HB), are among N.C. researchers awarded NCI funding to eliminate cancer disparities for African-Americans in the state. The award supports a 14-year partnership between N.C. Central University and UNC-Chapel Hill's Lineberger Comprehensive Cancer Center.



Dr. G. Corbie-Smith



Dr. Eugenia Eng



Dr. C. Fernandez



Dr. Ed Fisher



Dr. P. Gordon-Larsen



Dr. Stephen Hursting



Dr. Laura Linnan



Dr. E. Mayer-Davis



Dr. Mark Sobsey



Dr. Ilene Speizer



Dr. Anissa Vines



Dr. S. Wheeler

Two three-year funding awards from NCI, totaling about \$725,000, will address disparities in cancer incidence and mortality in three Southern states. **Stephanie Wheeler, PhD**, assistant professor of HPM, serves as site director for a project with Medical University of South Carolina, working with **Ethan Basch, MD**, professor of HPM, and others to build cancer disparities-focused training programs in N.C., S.C. and Tennessee. **Edwin Fisher, PhD**, professor of HB, working with **Eugenia Eng PhD**, HB

professor, and **Anissa Vines, PhD**, research assistant professor of EPI, will use the second grant to emphasize peer support and lay health adviser approaches to cancer prevention and care enhancement in underserved communities.

### ENVIRONMENTAL PROTECTION AGENCY

A team of students working with **Mark Sobsey, PhD**, Kenan Distinguished Professor of ESE, including ESE master's student **Katy Brown** and undergraduate



Megan Lott (left) and Katy Brown

**Megan Lott**, received a \$14,569 EPA grant to develop and evaluate a new test to detect cholera bacteria in drinking water in low-resource and disaster settings.

## Other News

**The 37th annual UNC Minority Health Conference**, “In Solidarity: The Role of Public Health in Social Justice,” drew more than 800 participants in Chapel Hill on Feb. 26, 2016. Crystallee Crain, PhD, educator and activist, and Miriam Zoila Perez, who writes about issues of health, race and gender, presented the keynote addresses. HB master's students **Anna Dardick** and **Giuliana Morales** led planning for the conference.

**Jessica Southwell, MPH**, research associate at N.C.



Giuliana Morales (left) and Anna Dardick

Institute for Public Health, and **Naya Villarreal, MPH**, program coordinator for the Gillings Global Gateway™,



Naya Villarreal (left) and Jessica Southwell

collaborated to launch a podcast called “Public Health Behind the Scenes.” Hear the episodes at [publichealthpodcast.com](http://publichealthpodcast.com).

## *in* MEMORIAM



Dr. Ward Cates Jr.

**Willard (Ward) Cates Jr., MD, MPH, 73**, distinguished scientist, president emeritus of FHI 360 and adjunct professor of epidemiology at the Gillings School, died March 17, 2016. Cates had a long and storied public health career, championing the causes of HIV/AIDS research and women's reproductive health

and inspiring two generations of leading scientists, public health officials and clinical practitioners.

A valued member of the Gillings School's Advisory Council and a beloved colleague, friend and mentor to many in the School and around the world, Cates collaborated with the School's Office of Global Health in 2005 to establish the FHI 360 – UNC Fellowship Program. Now in its 11th year, the program has provided 27 Gillings School graduate students the opportunity to work directly with experienced scientists on real-world global health projects in Africa and Asia.



Dr. Robert Hamer

**Robert M. Hamer, PhD, 65**, research professor of BIOS at the Gillings School and professor of psychiatry in UNC's School of Medicine, died in Chapel Hill, N.C., on Dec. 28, 2015. A 1979 alumnus of UNC, he joined the faculty in 2001.

December 2015 - April 2016

# AWARDS & RECOGNITIONS

Read more at [sph.unc.edu/news](http://sph.unc.edu/news).

## APPOINTMENTS

**Laura Linnan, ScD**, professor of HB, was named the UNC Gillings School's new associate dean for academic and student affairs.

Linnan, who joined the UNC faculty in 1999, will facilitate planning, administration, evaluation and continuous improvement of academic programs at the Gillings School.

**Amy Herring, ScD**, BIOS professor, was named the Carol Remmer Angle Distinguished Professor of Children's Environmental Health, effective Dec. 1, 2015.

**Todd A. Nicolet, PhD**, formerly associate dean at the UNC School of Government, was named senior

associate dean at the Gillings School in January 2016. Nicolet leads strategic initiatives and special projects that advance the School's mission.

## GILLINGS SCHOOL AWARDS

**Kathy Biancardi**, communications specialist in MCH and assistant to the director of UNC's WHO Collaborating Center, was selected for the Gillings School's Staff Excellence Award in fall 2015. The award recognizes staff members whose work demonstrates impact and a focus on the core values of the School.

Four teams of researchers were awarded funding for Gillings

Innovation Labs in spring 2016.

They are **Stephen Cole, PhD**, EPI professor, and **Michael Hudgens, PhD**, BIOS professor, for a project to apply big data analysis and causal inference to HIV and renal disease; **Mark Sobsey, PhD**, Kenan Distinguished Professor of ESE, **Jamie Bartram, PhD**, and **Lydia Abebe, PhD**, postdoctoral fellow, to develop a water treatment technology to overcome waterborne viruses including rotaviruses, noroviruses and Hepatitis E and A viruses; **Miroslav Styblo, PhD**, NUTR professor, and **Praveen Sethupathy, PhD**, assistant professor of genetics at UNC, to study population exposure to arsenic in Mexico as a unique cause of diabetes; and **Deborah Tate, PhD**, professor of HB and NUTR, and **Carmina Valle, PhD**, HB research assistant professor,



Photo by Jennie Saia

Kathy Biancardi (left) accepts the Gillings School's Staff Excellence Award from Dr. Herbert Peterson.

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Dr. Margaret Bentley



Dr. Stephen Cole



Dr. Amy Herring



Dr. Michael Hudgens



Dr. Pam Silberman



Dr. Miroslav Styblo



Dr. Deborah Tate

to develop new electronic health measures to individualize communications about exercise and diet in ways that meet participants' unique needs. The awards, established through the \$50 million Gillings gift, advance innovative research and support translation of scientific findings into workable solutions locally and globally.

Eight innovative teachers were honored Feb. 22 with the fifth annual Teaching Innovation Awards. They are **Geni Eng, DrPH**, professor (HB), **Amy Herring, ScD**, Carol Remmer Angle Distinguished Professor

of Children's Environmental Health and associate chair (BIOS), **Amanda Holliday, MS**, clinical assistant professor and director of the Practice Advancement and Continuing Education Division (NUTR), **Brian Pence, PhD**, associate professor (EPI), **Anna Schenck, PhD**, Professor of the Practice (PHLP), **Christine Tucker, PhD**, research assistant professor (MCH), **Howard Weinberg, PhD**, associate professor (ESE), and **Aimee McHale Wayling, JD, MSPH**, adjunct instructor (HPM).

**Margaret (Peggy) Bentley, PhD**, and **Pam Silberman, JD, DrPH**, received the Gillings School's

Greenberg and Barr awards at a ceremony preceding the 48th annual Fred T. Foard Jr. Memorial Lecture on April 14. Bentley, Carla Smith Chamblee Distinguished Professor of Global Nutrition and associate dean for global health, received the Greenberg Award for excellence in teaching, research and service. Silberman, Professor of the Practice of HPM and director of HPM's doctoral program in health leadership, won the Barr Award, which recognizes achievements of alumni and their contributions to public health. Silberman earned her doctorate at the Gillings School in 1997.



Photo by Jennie Sata

Teaching Innovation Award winners included (l-r) Drs. Amy Herring, Howard Weinberg, Geni Eng and Brian Pence; Amanda Holliday (front, center); Dr. Anna Schenck, Aimee McHale Wayling and Dr. Christine Tucker.



Dr. Danyu Lin



Jeffrey Simms



Dr. Philip Singer



Dr. Barbara Turpin



Dr. Carmina Valle

## EXTERNAL AWARDS - FACULTY

**Peggy Bentley, PhD**, Carla Smith Chamblee Distinguished Professor of Global Nutrition and associate dean for global health, was named secretary/treasurer of the Consortium of Universities for Global Health (*cugh.org*). She also was honored with the American Society for Nutrition's 2016 Kellogg Prize for International Nutrition Research and Lecture at the ASN's annual meeting on April 4 in San Francisco.

**Sheila Leatherman, MSW**, HPM research professor, was named lead adviser for a new unit on universal health coverage and quality in the World Health Organization's Department of Service Delivery and Safety.

**Alexandra Lightfoot, EdD**, research assistant professor in HB, received the 2015 Tom Bruce Award for leadership in the field at the fall 2015 meeting of the American Public Health Association.

**Danyu Lin, PhD**, Dennis Gillings Distinguished Professor of BIOS, was honored by the International

Chinese Statistical Association with its 2015 Distinguished Achievement Award, which recognized Lin's overall body of work.

**Hans Paerl, PhD**, William R. Kenan Jr. Distinguished Professor at UNC's Institute of Marine Sciences in Morehead City, N.C., and of ESE at the Gillings School, was honored Dec. 16, 2015, for his election to the American Geophysical Union, one of the most prestigious communities of geophysicists and marine scientists in the world.

**Jeffrey Simms, MSPH**, HPM clinical assistant professor, was recognized for his contributions to the training of future health-care leaders with the 2016 American College of Healthcare Executives' Higher Education Network Regent's Award at the Feb. 19 meeting of the N.C. Hospital Association.

**Philip C. Singer, PhD**, ESE professor emeritus, and **John Young, MSEE**, Gillings School alumnus and former president of American Water, were invited by the Michigan Department of

Environmental Quality to serve on a committee providing guidance on long-term solutions to water quality issues in Flint, Mich.

**Barbara Turpin, PhD**, professor of ESE, was appointed for a three-year term on the Environmental Protection Agency's Particulate Matter Review Panel, part of the EPA's Clean Air Scientific Advisory Committee. The committee provides independent expert advice to EPA regarding review and revision of the National Ambient Air Quality Standards, designed to protect public health.

**Bharathi Zvara, PhD**, research assistant professor of MCH, was invited to serve on the Centers for Disease Control and Prevention's National Health Interview Survey Expert Panel, the primary source of data on health statistics in the U.S., widely used to monitor trends in illness and track progress toward national health objectives.

## EXTERNAL AWARDS - STUDENTS/ALUMNI

**Jingxiang Chen** and **Alex Wong**, BIOS doctoral students, won two of 20 Distinguished Student Paper Awards accorded annually by the International Biometric Society's Eastern North American Region (ENAR). Wong and Chen presented their research at ENAR's March 2016 meeting in Austin.

**Chen** and BIOS colleague **Lu Mao** received travel awards to present research at the ASA Joint Statistical Meetings in Chicago in August 2016.

**Samantha Croffut**, NUTR graduate student, was selected as a delegate to the CDC's 2016 Millennial Health Leaders Summit, based upon her potential to meet the challenge of eliminating health disparities in diverse populations. The summit was held March 31-April 1, 2016.

**Mugdha Gokhale, MS**, doctoral candidate in EPI, was selected as one of *Forbes* magazine's "30 under 30" people to watch in health care. Gokhale provided the first evidence that the risk for pancreatic cancer was not elevated in patients taking a particular class of oral antidiabetics. *Forbes* representatives screened 15,000 entrepreneurs to select winners in 20 categories.

**Andrew Keimig, Nicole Murrell** and **Marie Olsen**, second-year HPM Master of Healthcare Administration students, won third place in the 10th annual Health Administration Competition at the University of Alabama at Birmingham. The Feb. 25 competition included 38 university teams from across the U.S.

**Christine L. Gray, MPH**, EPI doctoral student, was recognized as author of an article having the sixth greatest impact and number

of research citations of all articles published in 2015 in *Global Health: Science and Practice*.

**Brian W. Pence, PhD**, associate professor of EPI, was co-author of the longitudinal study finding that orphans in low- and middle-income countries are as vulnerable to sexual and physical abuse when living in families as orphans living in institutions.

**Larry Han**, a senior in BIOS, and **Max Seunik**, a 2015 HPM alumnus, were among inaugural recipients of the Schwarzman Scholars program. Modeled after the Rhodes Scholarship, the innovative master's degree program supports the study of public policy, economics and business or international studies at China's Tsinghua University. The two were selected from more than 3,000 applicants.

**Han** also was among 35 Americans awarded scholarships to pursue



Jingxiang Chen



Samantha Croffut



Mugdha Gokhale



Christine Gray



Blake Hauser



Alex Wong



(L-R) Marie Olsen, Nicole Murrell and Andrew Keimig

full-time graduate studies at the University of Cambridge, in England. The Cambridge Scholarship, funded by the Bill and Melinda Gates Foundation, supports students with demonstrated interest in social leadership and responsibility.

**Blake M. Hauser**, a senior student at the Gillings School, received the Churchill Scholarship, a research-focused award that provides funding for one year of master's-level study in science, mathematics and engineering at Churchill College, University of Cambridge (U.K.).

**Theodore J. Mansfield**, doctoral student in ESE, received a 2015 Best Paper Award from the Society of Risk Analysis. The paper,

published Dec. 9, 2014, in the Society's journal *Risk Analysis*, is a study of ambient air pollution and public health risk in Raleigh, N.C.

**Jennifer L. Moss, PhD**, 2015 HB alumna, received the Society of Behavioral Medicine's Outstanding Dissertation Award for 2016. Moss conducts research on geographic disparities in cancer prevention behaviors. The focus of her dissertation was on uptake of human papillomavirus vaccination.

#### PROGRAM ACCREDITATIONS

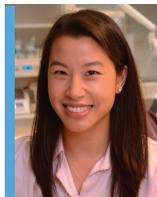
In January 2016, The Mary Rose Tully Training Initiative, based in the Gillings School's Carolina Global Breastfeeding Institute and led by **Catherine Sullivan, MPH, RD, IBCLC**, became the first

breastfeeding training program in the world to be accredited by the Commission on Accreditation of Allied Health Education Programs.

Also in January, the Gillings School's Master of Healthcare Administration (MHA) program, directed by **Bruce Fried, PhD**, associate professor, and **Bill Gentry, MPA**, lecturer, received the inaugural Commission on Accreditation of Healthcare Management Education (CAHME)/Cerner Award for Excellence in Healthcare Management Systems Education. In fall 2015, the MHA program had received a glowing review from CAHME, with a rating previously achieved by only two other of the 85 programs in the U.S.

## Our Impact Awardees...

Student researchers at the Gillings School were presented with seven of UNC's 17 Graduate Education Advancement Board Impact Awards on April 14. The annual Impact Awards are presented to graduate students whose research benefits people and communities in North Carolina. Awardees are **Jacqueline Burgette** (HPM), **Elizabeth Christenson** (ESE), **Anna Cope** (EPI), **Sara Hatcher** (ESE), **Brooke Nezami** (HB), **Pasquale Rummo** (NUTR) and **Christine Tucker** (MCH).



Jacqueline Burgette



Elizabeth Christenson



Anna Cope



Sara Hatcher



Brooke Nezami



Pasquale Rummo



Christine Tucker



# Dreyer Professorship in Epidemiology

*Intended to accelerate solutions to public health challenges and mentor new leaders*

We recently talked with Nancy Dreyer, PhD, Global Chief of Scientific Affairs and Senior Vice President for Real-World and Late-Phase Research at Quintiles. Dreyer, a Gillings School of Global Public Health alumna who earned master's and doctoral degrees at the School, is also an adjunct professor in epidemiology.

In 2015, she established The Nancy A. Dreyer Distinguished Professorship Fund. Distributions from the fund will support an endowed chair to attract or retain a distinguished teacher and scholar in epidemiology.

## **GILLINGS SCHOOL (GS):**

What led you to establish a professorship in epidemiology at the UNC Gillings School?

## **NANCY DREYER (ND):**

I was fortunate to receive a great education in a fascinating field. My training at UNC has enabled me to engage in a broad spectrum of applied research

activities, including studying the health effects of environmental contamination from ionizing radiation in Bikini Atoll, mobile phone use, and residential proximity to electric power lines. I've also studied injuries resulting from participation in professional football and basketball.

I had no idea that any of that research was ahead of me when I did my epidemiology training, but

the skills I learned at UNC allowed me to pursue these various activities and make contributions to improving health.

**GS:**

As you carved out your career path, what role did mentorship play? Who were your mentors, and what did you learn from them that you still carry with you?

**ND:**

I have been very lucky. I've had a series of mentors who stimulated my creativity, urged me to aim higher and helped me learn basic principles of good business practice and good science. Many of my mentors were professors who were also superb teachers. Some of the things they taught me still resonate, such as, 'Do the right thing, even though it may not be easy,' 'Don't take shortcuts,' and 'Put yourself in the other person's shoes; consider a resolution that solves both their needs and yours.'

**GS:**

What advice would you give students at the Gillings School and young professionals who are beginning their careers?

You don't know where your career will take you, so keep an open mind to learning things that may not appear to be useful immediately. Pay attention to the lessons and to the teachers. Then, look beyond school and see how applied epidemiology is practiced elsewhere, including in industry and research-focused companies such as Quintiles.

## THE POWER OF MENTORSHIP



*Christina Mack, two-time Gillings School alumnus (MSPH, 2010; PhD, 2013), first met Nancy Dreyer in 2006 when Mack was a*

*project manager at Outcome Sciences on Dreyer's study of avian influenza. Although she had never considered a career in epidemiology, Mack was inspired by Dreyer and the science she was leading. Since then, Mack says, "I've never looked back."*

Nancy has mentored me in several areas. She has shown me how to be effective in science and business, how to build and lead a team, and that it is important and okay to have both a strong professional career and a great family life. Her advice has been useful time and again, and will stick with me throughout my career.

At Quintiles, Nancy's leadership has given me continuing on-the-job-education. She brings an innovative and practical approach to science, teaching her mentees to think clearly about what is meaningful and how results are best communicated. Her input on research spans many levels, from high-level thinking to technical details and client management.

On a personal note, Nancy has coached me through some important decisions, including pursuing a degree in epidemiology at the Gillings School, and deciding where to focus my career along the way. She has been a role model and mentor whose support is constant.

*—Christina Mack, PhD*  
Director, Epidemiology and Health Outcomes, Quintiles



# The Jo Anne Earp Distinguished Professorship in Health Behavior

*Honoring an exemplary mentor*

*That Jo Anne Earp mentors with such care and caring is a mark of her intellect and commitment to learning – but is also a true indication of her deep and positive involvement in the development of her students’ careers.*

So said Gillings School Dean Barbara K. Rimer when Earp, professor of health behavior, was presented with the Carolina Women’s Leadership Council Mentoring Award in 2008.

When Earp retired in 2013, dozens of former students and friends celebrated with her at the “fun party” she had requested (dubbed “EarpFest”) and immediately began to send donations to a tribute fund in her honor.

The ripple effect of her impact continues. Now, that tribute fund holds nearly \$250,000 – and is well on its way to becoming The Jo Anne Earp Distinguished Professorship in Health Behavior. The professorship, which will honor Earp’s legacy of mentorship by creating new opportunities for exemplary mentors at the Gillings School, will be the first of its kind for the Department of Health Behavior.

“I am, of course, delighted to have my name associated with this professorship,” Earp says. “But even more importantly, I’m excited about what this funding can accomplish in the department I love. Health behavior research is at the heart of public health interventions. That this professorship will support in perpetuity the research of world-class faculty in that department makes me very happy.”

To be awarded, a professorship fund must reach \$333,000. About \$80,000 must still be raised.

Please consider honoring Dr. Earp – or your own mentors – by making a gift to the fund today. Use the remittance envelope in the center of this magazine, or make a gift online at [giving.unc.edu/gift/sph](http://giving.unc.edu/gift/sph).

Learn more at [sph.unc.edu/gift/earp-distinguished-professorship](http://sph.unc.edu/gift/earp-distinguished-professorship).

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**If you have questions or would like more information, please contact the advancement office at [sph\\_advancement@unc.edu](mailto:sph_advancement@unc.edu) or (919) 966-0198.**



Dr. Dennis Gillings, CBE



# Smith Anderson Fellowships

*How one gift keeps giving*

When Smith Anderson, a Raleigh, N.C., law firm, considered a way to honor Dennis Gillings in 2009, the firm decided on a gift close to Dr. Gillings' heart – support for young biostatisticians. As a member of the UNC biostatistics faculty for 17 years and co-founder of Quintiles in 1982, Gillings became a role model for success in the field. Now, the Smith Anderson Biostatistics Fellowship Endowment supports one biostatistics student each year at the UNC Gillings School of Global Public Health.

In 2015, when Gillings retired as executive chairman of Quintiles, Smith Anderson again sought a way to honor Gillings' impressive career. The firm elected to establish the Dennis Gillings Leadership Endowment Fund, which will expand upon the support first pledged to the Gillings School with the establishment of the biostatistics fellowship. The new fund aims to encourage innovation Schoolwide and accelerate solutions to a variety of public health issues that demand nimble responses.

"Smith Anderson has worked with Dennis Gillings and his executive team for almost 25 years," says managing director Gerald Roach. "During that time, we have seen North Carolina – and the Research Triangle Park, in particular – become a global commercial center. Dennis and Quintiles were a big part of that evolution.

"In North Carolina – and the world – Dennis has created jobs, innovative health solutions and new business successes. He cares deeply about patients, employees and making the communities of the world better through health-care innovation.

"When he stepped down as executive chairman at Quintiles, it seemed a perfect time, once again, to honor his creativity and impact. We want more public health students, inspired by Dennis, to be able to make a difference in North Carolina, the U.S. and the world."

Briana Stephenson, doctoral student in biostatistics at the Gillings School, is a recipient of the Smith Anderson fellowship.

"This fellowship allowed me the flexibility to explore the many research opportunities The Gillings School has to offer," Stephenson says. "I am so grateful for the financial support that has allowed me to pursue my interests in biostatistics – where I hope to make my mark furthering methodological research in public health."

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**Watch a video of Stephenson talking about her experience at the Gillings School at [tinyurl.com/BIOS-briana](http://tinyurl.com/BIOS-briana).**

# Annual Fund Scholarships

*Supporting future public health leaders, problem solvers and innovators*



*Obtaining a master's degree at the Gillings School has been a goal that I have worked toward diligently. My undergraduate studies gave me a **solid foundation** and taught me how to deliver tools to promote healthier lifestyles within a community. By earning this graduate degree, I will be able to **act as a leader** in improving quality and access of care for all.*

*Thank you for allowing me to continue my education and obtain the knowledge necessary to give back to a growing population.*

—ALEXA JONES

2015-2016 Annual Fund Scholar  
2016 Master of Healthcare Administration candidate,  
health policy and management



*It's amazing to have individuals believe in me and in the work I'm most **passionate** about. There are no words to describe the depth of appreciation I have for you all. Thank you so much for your continued support! You are bringing me one step closer to my goal of **conducting meaningful work** that may help improve interventions and policies in the United States and abroad.*

—LUIS E. MALDONADO

2015-2016 Annual Fund Scholar  
2016 doctoral candidate, nutrition

More than 1,500 students are pursuing their public health education and training at the UNC Gillings School. Research conducted by this diverse and passionate group spans all areas of public health, but our students share a common goal – a desire to make the world healthier and safer.

Since 2009, we have offered more than 100 Annual Fund scholarships. These investments make a difference in the lives of our students and their mission to improve the health and well-being of people across North Carolina and around the world.

***Make your Annual Fund gift today.*** These immediate-impact dollars provide scholarships that allow our departments to recruit, retain and support future public health leaders, problem solvers, pioneers, educators and innovators.

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**Learn more about this year's Annual Fund Scholars, and make your gift at [sph.unc.edu/gift/annualfundscholars](http://sph.unc.edu/gift/annualfundscholars).**



Caroline Rourk (left) is congratulated at her 2014 commencement by Dean Barbara K. Rimer.

# Caroline Davis Rourk

*A legacy that honors the values I've lived by*

“

A degree in public health is the perfect marriage - an exceptional education and the skills to change the world for the better. For me, that is something worth supporting and nurturing in any way possible.

- Caroline Rourk, MBA, MPH

”

I am fortunate to have been raised in a home by parents who valued education and nurtured my intellectual curiosity. That may explain why I think of myself as a perpetual student – and why I made the decision to include the Gillings School of Global Public Health in my estate planning.

My work in Duke University's Division of Occupational and Environmental Medicine and my commitment, through volunteer work, to provide assistance to those in need, made my decision to pursue a Master of Public Health degree an obvious choice. In the Gillings School's Public Health Leadership Program, I met knowledgeable, world-renowned educators and was excited by conversations between faculty members and students across multidisciplinary lines. Those collaborative endeavors fostered didactic and practicum learning that translates smoothly into a profession in public health anywhere in the world.

Estate planning and preparing a will are not at the top of anyone's to-do list. However, it is critical that such decisions be made and recorded so that one's intentions are communicated clearly.

Several years ago, my parents and I planned a trip to Paris. I thought it was way too early to be thinking about a will, but since we all would be traveling together, I decided to put something in writing before the trip. It was important to me to recognize the people and organizations that mean the most to me, so I planned for a gift to my undergraduate school (Davidson College) and the Gillings School of Global Public Health.

People, places and experiences throughout our lives create the tapestry of who we become. My family and friends, my Church and my education have made me the person that I am today – and for that I am very grateful. I never thought of myself as having a legacy. However, if I look at what I value in my life – my work in the community to help end homelessness and improve access to health care for those who are underserved; my planned gift to allow others to pursue their potential through education – then maybe that *is* a legacy? I like to think so.



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**Dean Barbara K. Rimer (5) joins students and staff members at the UNC Gillings School to try out the School's new fleet of bicycles. The bikes are available free of charge to members of the Gillings School community for use on campus.**

Pictured are (1) **Lorenzo Hopper**, doctoral student, maternal and child health, with epidemiology minor; (2) **Jazra Standley**, undergraduate, health policy and management; (3) **Shekinah Fashaw**, master's student, health policy and management; (4) **Katelyn Liu**, undergraduate, School of Media and Journalism, communications assistant; (5) **Dean Barbara K. Rimer**; (6) **Marisa Martini**, volunteer yoga instructor; (7) **Kate Soliman**, undergraduate, School of Media and Journalism, communications assistant; (8) **Johnston King**, admissions coordinator, Office of Student Affairs; (9) **Blair Mason**, audiovisual services; (10) **Jennie Saia**, communications specialist; (11) **Brent Wishart**, facilities manager; and (12) **Penny Slade-Sawyer**, former U.S. Assistant Surgeon General and leader of the Gillings School's 'Culture of Health' initiative.