

# Carolina

## PUBLIC HEALTH

GILLINGS SCHOOL of GLOBAL PUBLIC HEALTH  
THE UNIVERSITY of NORTH CAROLINA at CHAPEL HILL



The POWER of  
PREVENTION

SPRING 2012 · VOLUME 2 · NUMBER 2



# Public Health Foundation Incorporated BOARD OF DIRECTORS

**Jack E. Wilson, PE, MSEN**  
**President**  
*Member of the Board of Directors*  
TEC Inc.

**Delton Atkinson, MPH, MPH, PMP**  
**Vice President**  
*Deputy Director*  
Division of Vital Statistics  
National Center for Health Statistics  
Centers for Disease Control and Prevention

**Barbara K. Rimer, DrPH**  
**Executive Vice President**  
**Ex Officio**  
*Dean*

*Alumni Distinguished Professor*  
UNC Gillings School of Global Public Health

**Peggy Dean Glenn**  
**Executive Director/Secretary**  
**Ex Officio**  
*Associate Dean for External Affairs*  
UNC Gillings School of Global Public Health

**Charlotte Nuñez-Wolff, EdD**  
**Treasurer**  
**Ex Officio**  
*Associate Dean for Business and Finance*  
UNC Gillings School of Global Public Health

**David J. Ballard, MD, MSPH, PhD, FACP**  
*Senior Vice President and Chief Quality Officer*  
Baylor Health Care System  
*Executive Director and BHCS Endowed Chair*  
Institute for Health Care Research and Improvement

**P. LaMont Bryant, PhD, RAC**  
*Product Director, Global Marketing*  
Ethicon Endo-Surgery  
Johnson & Johnson

**Cynthia H. Cassell, PhD**  
*Health Scientist, Epidemiology Team*  
Birth Defects Branch  
Division of Birth Defects and Developmental Disabilities  
National Center for Birth Defects and Developmental Disabilities  
Centers for Disease Control and Prevention

**Deniese M. Chaney, MPH**  
*Principal*  
Accenture Health and Public Service

**Stacy-Ann Christian, JD, MPH**  
*Associate Director*  
Research Administration and Finance  
Northeastern University

**Michael (Trey) A. Crabb III, MHA, MBA**  
*Managing Director*  
Health Care Mergers, Acquisitions and Strategic Services  
Ziegler Investment Banking

**David Dodson, MDiv**  
*President*  
MDC Inc.

**Cynthia J. Girman, DrPH**  
*Senior Director, Department of Epidemiology*  
Merck Research Laboratories

**Alma (Gibbie) Harris, MSPH, RN**  
*Health Director*  
Buncombe County (N.C.) Department of Health

**Deborah Parham Hopson, PhD, RN**  
*Assistant Surgeon General*  
*Associate Administrator*  
HIV/AIDS Bureau  
Health Resources and Services Administration

**Joan C. Huntley, PhD, MPH**  
*Adjunct Professor of Epidemiology*  
UNC Gillings School of Global Public Health

**Joseph F. John, MHA, FACHE**  
*Administrator*  
Clinical Operations  
The Emory Clinic Inc.

**Mark H. Merrill, MSPH**  
*President and Chief Executive Officer*  
Valley Health System

**Stephen A. Morse, MSPH, PhD**  
*Associate Director for Environmental Microbiology*  
National Center for the Prevention, Detection and Control of Infectious Diseases  
Centers for Disease Control and Prevention

**Douglas M. Owen, PE, BCEE**  
*Executive Vice President*  
Malcolm Pirnie, the Water Division of ARCADIS

**Jonathan J. Pullin, MS**  
*President and Chief Executive Officer*  
The Environmental Group of the Carolinas Inc.

**Roy J. Ramthun, MSPH**  
*President*  
HSA Consulting Services LLC

**Laura Helms Reece, DrPH**  
*Chief Operating Officer*  
Rho

**James Rosen, MBA, MSPH**  
*Partner*  
Intersouth Partners

**Jacqueline vdH Sergeant, MPH, RD, LDN**  
*Health Promotion Coordinator/Health Education Supervisor*  
Granville-Vance (N.C.) District Health Department

**Celette Sugg Skinner, PhD**  
*Professor and Chief, Behavioral and Communication Sciences*  
Department of Clinical Sciences  
*Associate Director for Cancer Control and Population Sciences*  
Harold C. Simmons Cancer Center  
University of Texas Southwestern Medical Center

**Jeffrey B. Smith, MHA, CPA**  
*Partner*  
Ernst & Young LLP

**Paula Brown Stafford, MPH**  
*President*  
Clinical Development  
Quintiles

**John C. Triplett, MD, MPH**  
*Regional Medical Officer*  
Bethesda, MD

**Edgar G. Villanueva, MHA, FACHE**  
*Owner/Principal*  
Leverage Philanthropic Partners  
Winston-Salem, N.C.

**G. Robert Weedon, DVM, MPH**  
*Veterinary Outreach Coordinator*  
Global Alliance for Rabies Control  
*Shelter Veterinarian*  
Champaign County (Ill.) Humane Society

**Alice D. White, PhD**  
*Vice President*  
*(Retired)*  
Worldwide Epidemiology Department  
GlaxoSmithKline

**Chen-yu Yen, PhD, PE**  
*President and Chief Executive Officer*  
TerraSure Development LLC  
*Vice President*  
Gannett Fleming Inc.  
*Senior Vice President*  
Gannett Fleming Sustainable Ventures Corp.

## UNC Gillings School of Global Public Health ADVISORY COUNCIL

**Donald A. Holzworth, MS**  
**Chair**  
*Chairman*  
Futures Group Global

**James Rosen, MBA, MSPH**  
**Public Health Foundation Board Liaison to Advisory Council**  
*Partner*  
Intersouth Partners

**Marcia A. Angle, MD, MPH**  
*Adjunct Professor*  
Nicholas School of the Environment  
Duke University

**William K. Atkinson, PhD, MPH**  
*President and Chief Executive Officer*  
WakeMed

**Mark E. Brecher, MD**  
*Chief Medical Officer and Senior Vice President*  
LabCorp

**Gail H. Cassell, PhD, DSc (hon)**  
*Vice President, Scientific Affairs*  
*(Retired)*  
*Distinguished Lilly Research Scholar for Infectious Diseases*  
Eli Lilly and Co.

**Willard Cates Jr., MD, MPH**  
*President, Research*  
FHI 360

**Michael J. Cucchiara**  
*Managing Partner*  
Graypants Inc. and Pangea Foods

**Leah Devlin, DDS, MPH**  
*Gillings Visiting Professor*  
UNC Gillings School of Global Public Health

**Jeffrey P. Engel, MD**  
*Former N.C. State Health Director*  
*Senior Health Policy Advisor*  
N.C. Department of Health and Human Services

**Ken Eudy**  
*Chief Executive Officer*  
Capstrat

**James R. Hendricks Jr., MS**  
*Vice President, Environment, Health and Safety (Retired)*  
Duke Energy

**Michael E. Kafrissen, MD, MSPH**  
*Research Scientist*  
Massachusetts Institute of Technology

**John McConnell**  
*Chief Executive Officer*  
McConnell Golf

**Jesse Milan Jr., JD**  
*Vice President and Director*  
Community Health Systems  
Altarum Institute

**James Patrick O'Connell, PhD, MPH**  
*Chief Executive Officer*  
Acea Biosciences Inc.

**Jane Smith Patterson**  
*President*  
Jane Patterson & Associates

**Virginia B. Sall**  
*Co-founder and Director*  
Sall Family Foundation

**Markus Wilhelm**  
*Chief Executive Officer*  
Strata Solar LLC

**Louise Winstanly, LLB, MSB**  
*Attorney and Medical Ethicist*  
Chapel Hill, N.C.

**Lloyd M. Yates, MBA**  
*President and Chief Executive Officer*  
Progress Energy

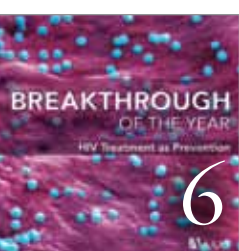
### MEMBERS EMERITI

**Nancy A. Dreyer, PhD, MPH**  
*Chief of Scientific Affairs*  
OUTCOME

**Carmen Hooker Odom, MS**  
*President*  
Milbank Memorial Fund

# contents

## spring 2012



## features & news

**2** FROM THE DEAN'S DESK

**3** PREVENTING ILLNESS,  
PRESERVING HEALTH

**6** PREVENTING THE SPREAD  
OF INFECTIOUS DISEASES

**9** WHAT WORKS TO PREVENT CANCER?

**11** PREVENTING CHRONIC,  
OBESITY-RELATED DISEASES

**14** PREVENTING ACCIDENTS, INJURIES  
AND VIOLENCE

**18** PREVENTING ENVIRONMENTAL  
RISK AND REDEFINING POLICY

**20** PREVENTING RISKS TO WOMEN,  
CHILDREN AND FAMILIES IS AT  
THE HEART OF PUBLIC HEALTH

**23** PREVENTING HEALTH PROBLEMS AND  
BIRTH DEFECTS, COURTESY OF GENETICS

**24** PREPAREDNESS AS PREVENTION

**26** DREAMING OF A TIME

**27** SCHOOL NEWS

**30** AWARDS & RECOGNITIONS

**33** OUR DONORS

**33** *Mark and Terese Merrill*

**34** *World of Difference Dinner*

**35** *Harold Conger*  
*Class of 2012 Scholarship*

**36** *John and Fledra Hatch*  
*Pfizer Innovation Lecture*



Carolina  
PUBLIC HEALTH

DEAN  
Barbara K. Rimer, DrPH

INTERIM COMMUNICATIONS  
DIRECTOR  
Kathy Barboriak, PhD

MANAGING EDITOR  
Ramona DuBose

EDITOR  
Linda Kastleman

ASSOCIATE DEAN FOR  
EXTERNAL AFFAIRS  
Peggy Dean Glenn

DESIGN AND PRODUCTION  
UNC Creative

CONTRIBUTING WRITERS  
Ramona DuBose, Melissa Geil,  
Whitney L.J. Howell, Linda  
Kastleman, Michele Lynn,  
Chris Perry, JB Shelton and  
Angela Spivey

Send correspondence to Editor,  
*Carolina Public Health*, Gillings  
School of Global Public Health,  
Campus Box 7400, Chapel Hill,  
NC 27599-7400, or email  
[sphcomm@listserv.unc.edu](mailto:sphcomm@listserv.unc.edu).

SUBSCRIBE TO  
CAROLINA PUBLIC HEALTH  
[www.sph.unc.edu/cph](http://www.sph.unc.edu/cph)

16,500 copies of this document  
were printed at a cost of \$11,324.65  
or \$0.69 per copy.

*Carolina Public Health* (ISSN 1938-  
2790) is published twice yearly  
by the UNC Gillings School of  
Global Public Health, 135 Dauer  
Dr., Campus Box 7400, University  
of North Carolina at Chapel Hill,  
Chapel Hill, NC 27599-7400.  
Vol. 2, No. 2, Spring 2012.

PHOTO BY CAITLIN KLEIBOER



Dr. Barbara K. Rimer

## If prevention is such a great idea, why don't more people practice it?

Since at least the ancient Greeks, humans have extolled the virtues of prevention.

But if prevention is such a good thing, why will more than 420,000 people in the U.S. die of lung cancer this year, most as a result of cigarette smoking? Why are 66 percent of us in America now overweight or obese, with much of the world not far behind? Why have only one-third of teenage girls in the U.S. received all three recommended doses of HPV vaccine, proven to prevent cervical and other cancers?

Prevention is a great thing, but it's not easy. Changing behavior is challenging, especially addictive behaviors and those that are targeted through marketing and manipulation of our environments (think *junk food*). It is not enough to change individuals—although that's important. We also must change policies and environments.

Removing trans fats from restaurants and vending machines, making stairways attractive and adding signage to cue people to use them, and not providing sugary soft drinks are some of the ways we can re-engineer environments for health. Increasing educational attainment would make people healthier, but that's even more controversial.

As Trust for America's Health (<http://healthy-americans.org/reports>), Surgeon General Regina Benjamin and others have recommended, we must change the way we live—how we eat, play and work—to become a healthier society. (See <http://tinyurl.com/RWJF-synthesis-project>.)

Prevention may be challenging, but it's not impossible. Millions of people have stopped smoking, lost weight, reduced heavy drinking and taken up exercise. Prominent voices for prevention, such as Thomas

Frieden, MD, MPH, director of the U.S. Centers for Disease Control and Prevention (CDC), argue that we should restructure policies and environments to make the healthier choice the easy one. (*Easier* is probably more accurate.) Some major food companies have agreed to lower sodium in food in an agreement led by the Robert Wood Johnson Foundation (RWJF).

Many schools are putting the health back into their lunches. Alice Ammerman, DrPH, is working with a local school to use texting as a strategy to enable adolescents to select healthier lunches. (See an article in UNC's *University Gazette* at <http://tinyurl.com/text-your-lunch-order>.) Communities across the U.S., working with RWJF-funded Active Living By Design ([www.activelivingbydesign.org](http://www.activelivingbydesign.org)), based in our School, are re-engineering their communities to facilitate exercise. (See [www.healthykidshealthycommunities.org](http://www.healthykidshealthycommunities.org).) We must do more—much more.

Stories in this issue paint a picture of the exciting work our faculty members and students are doing to prevent diseases and decrease risk factors. The breadth of work is amazing and awe-inspiring. We are making a difference. It will take a lot more people working together consistently, intentionally and on a large scale to make the even larger changes needed in the U.S. and around the world.

Let's get moving even faster! Our future is at stake.

Barbara K. Rimer



# Preventing illness, preserving health

“

**“We know that preventing disease before it starts is critical to helping people live longer, healthier lives and keeping health-care costs down. Poor diet, physical inactivity, tobacco use and alcohol misuse are just some of the challenges we face. We also know that many of the strongest predictors of health and well-being fall outside of the health-care setting. Our housing, transportation, education, workplaces and environment are major elements that impact the physical and mental health of Americans. This is why the National Prevention Strategy helps us understand how to weave prevention into the fabric of our everyday lives.”** —DR. REGINA BENJAMIN, U.S. SURGEON GENERAL

”

**T**he epicenter of public health is prevention—vaccinations to avoid diseases, hand washing to stop germs from spreading, nutritional guidelines to keep bodies strong.

Today, the definition of public health must be even broader and deeper as people become more aware of the benefits of staying healthy, says Elizabeth Mayer-Davis, PhD, professor of nutrition in the UNC Gillings School of Global Public Health.

“We know more about prevention now,” she says. “It’s not just about vaccines. It’s about lifestyle—nutrition, activity levels, avoiding drugs and tobacco. The cost of health care is a big factor, too, making prevention even more critical.”

Mayer-Davis is a member of the President’s Advisory Group on Prevention, Health Promotion and Integrative and Public Health. (Sharon Van Horn, MD, MPH, alumna of the School’s epidemiology department, also is a member.) The group, headed by U.S. Surgeon General Regina Benjamin, MD, is debuting the recently completed National Prevention Strategy. (See <http://tinyurl.com/prevention-strategy>.)

Schools of public health—especially ours—are well positioned to leverage the momentum toward greater prevention.



Dr. Jennifer Smith, Dr. Peggy Bentley (holding Anneliese Bell) and former N.C. state health director and Gillings Visiting Professor Dr. Leah Devlin conduct prevention activities locally, across the state and around the world.

“Much of our research is consistent with the National Prevention Strategy,” Mayer-Davis says. “We find ways to improve health—like making better food choices to prevent or control diabetes—and then develop ways to translate that research into practice in our communities. As we move across the spectrum from basic research to implementation, we think about the entire context of improved health. Prevention is a huge part of that.”

This issue of *Carolina Public Health* focuses upon prevention advances being made by our faculty members and students. It features our work in infectious diseases; cancer; chronic, obesity-related illness; accidents, injuries and violence; environment; reproductive and family health; genetics; and preparedness. Other significant prevention activities include:

- **Tobacco use**—Kurt Ribisl, PhD, professor of health behavior and health education,

has shown that stricter enforcement of laws banning online purchase of cigarettes will keep more teens from smoking, preventing long-term health consequences.

- **Breastfeeding**—Mother’s milk increases immunity to various diseases and helps prevent conditions, including asthma, as children age. Professor of the Practice and director Miriam Labbok, MD, and others in the Carolina Global Breastfeeding Institute advocate for rights of mothers to breastfeed.





PHOTO BY LINDA KASTLEMAN

- **Access to clean water**—Jamie Bartram, PhD, environmental sciences and engineering professor, directs the School's Water Institute at UNC, which partners with diverse others to solve critical global issues in water and sanitation. The institute's annual conference brings together world experts to share research and brainstorm solutions for public health challenges, including global climate change.
- **Better vaccines**—Drs. Noel Brewer and Jennifer Smith conduct research on and advocate for cervical cancer prevention and screening. Studies of the human papillomavirus (HPV) vaccine have shown it to be a safe and effective preventive



Dr. Kurt Ribisl



Dr. Noel Brewer



Dr. Jamie Bartram



Dr. Beth Mayer-Davis

for cervical cancer. (Read more about their Cervical Cancer-Free NC program at [www.ccfnc.org](http://www.ccfnc.org).) Brewer is associate professor of health behavior and health education; Smith is research associate professor of epidemiology.

- **Dental health**—Health policy and management professor Gary Rozier, DDS, has shown that when physicians screen for caries in youngsters and apply fluoride, they can prevent several poor health outcomes that start with early-onset tooth decay.
- **Healthy Spaces**—Active Living By Design, directed by Sarah Strunk, MHA, collaborates with local and national partners to build a culture of active living and healthy eating. Whether it's a playground in Burnsville, N.C., or a corner store providing healthy food in Baldwin Park, Calif., this program collaborates with communities to find specific ways to improve health. Established by the Robert Wood Johnson Foundation, ALBD is part of the School's North Carolina Institute for Public Health.

Carla Smith Chamblee Distinguished Professor of Global Nutrition Margaret (Peggy) Bentley, PhD, associate dean for global health, has conducted nutrition projects with children in India, Malawi, Peru, eastern North Carolina and many other places.

"I have been so privileged to study infant feeding, growth and development across cultures, both within North Carolina and around the world," Bentley says. "This has given me a unique perspective for understanding the problems and how to address them through prevention. What we learn locally makes us smarter as we approach similar problems globally. Part of prevention is learning from experience in one place and avoiding the same problems in another."

—Ramona DuBose

*Editor's note: Managing editor Ramona DuBose leaves UNC as this issue goes to press. We are grateful for her leadership and guidance and wish her well.*

**"We find ways to improve health—like making better food choices to prevent or control diabetes—and then develop ways to translate that research into practice in our communities."**

—ELIZABETH MAYER-DAVIS, PhD, PROFESSOR OF NUTRITION





# Preventing the spread of infectious diseases

Dr. Mike Cohen (right) greets UNAIDS executive director Michel Sidibé outside the World Bank in New York City.

Identifying proper treatments for eradicating infectious diseases is often “the easy part.” The hurdle is to deliver effective prevention protocols to affected populations. UNC public health researchers are overcoming this challenge with some of the world’s most contagious viruses.

## Malaria

Malaria causes almost a million deaths per year. Around 30 percent of adults in the Democratic Republic of the Congo are infected with malaria, according to epidemiology professor Dr. Steve Meshnick. Meshnick has worked closely with UNC geography professor Dr. Michael Emch to map the disease and

identify factors responsible for its geographic spread. Read more about Meshnick’s work at [www.sph.unc.edu/cph/tropical\\_disease](http://www.sph.unc.edu/cph/tropical_disease).

## SARS

Airborne viruses are also dangerous. A National Institutes of Health (NIH)-funded team led by epidemiology professor Dr.



Dr. Steve Meshnick



Dr. Ralph Baric

Ralph Baric investigates why SARS infection is more lethal among individuals over age 50. Using a mouse model, the team tests how new vaccine platforms induce robust protective immunity in older adults. Furthering their work, Baric and a team from UNC and Vanderbilt University have reconstructed synthetically the bat variant of the SARS





PHOTO PROVIDED BY MICHEL SIDIBÉ

## Breakthrough of the Year

A UNC-led team has identified a protocol that prevents the transmission of HIV, the AIDS-causing virus—a feat once considered an impossible dream.

In a National Institute of Allergy and Infectious Diseases-funded study of 2,000 couples, epidemiology professor Dr. Myron Cohen and colleagues found starting antiretroviral therapy in infected partners with relatively healthy immune systems reduced HIV transmission by 96 percent. The one identified transmission likely occurred close to the time of study enrollment.

The findings were lauded as *Science* magazine’s “Breakthrough of the Year” in December 2011 (<http://tinyurl.com/cohen-breakthrough>).

“As researchers in labs, we can discover pills to improve individual health, but it’s different to develop a strategy that touches public health,” Cohen says. “This work is an unbelievable example of bench to bedside to public health.”



REPRINTED WITH PERMISSION FROM AAAS

In April, Cohen’s research won top honor in the Clinical Research Forum’s inaugural Top 10 Clinical Research Achievement Awards. The forum is a non-profit organization dedicated to providing national leadership in clinical research and is comprised of the nation’s most prestigious academic medical centers and health systems.

Read more at <http://tinyurl.com/UNC-spotlight>.

—Whitney L.J. Howell

*Myron Cohen, MD, is J. Herbert Bate Distinguished Professor in UNC’s medical school, professor of epidemiology in the public health school and director of the UNC Institute for Global Health and Infectious Diseases.*

coronavirus that caused the SARS epidemic of 2003. “By reconstructing the synthetic bat SARS virus, we have a model that will allow us to design better vaccines and drugs that will treat any strain of this virus that infects humans,” Baric says.

## HIV prevention in Africa

Africa’s HIV statistics fueled Dr. Frieda Behets’ interest in reducing mother-to-child transmission of the virus.

In the Democratic Republic of the Congo (DRC), Behets’ PEPFAR\*-funded team trains HIV-positive mothers as lay counselors. The counselors teach pregnant women who have HIV how to use treatments that prevent virus transmission to their infants. It is significant, Behets says, that the number of HIV-positive

women contacting the community lay counselors is increasing. Her research shows that pregnant women with HIV are twice as likely overall not to return to clinics, where they could receive antenatal treatment, delivery support and postnatal care. Those who interact with lay counselors are more likely to utilize the clinics. Behets’ team helps train an interdisciplinary group that works in 44 maternities and two treatment centers in Kinshasa, DRC.

Dr. Suzanne Maman also studies whether prenatal and postnatal counseling with the same nurse prevents mother-to-infant transmission or new infections. In a five-year, 1,500-woman study in South Africa, Maman’s team examines how counseling may have affected infant

feeding, contraception use and HIV testing.

Dr. Audrey Pettifor studies whether giving South African adolescent girls and their families a monthly cash transfer equivalent to \$10 per month, conditional on school attendance, prevents HIV infection. The 2,900-girl randomized controlled trial will follow young women and their parents/guardians over three years to look at the impact of the program on HIV incidence.

“The theory is that keeping girls in school will reduce their risk of HIV infection,” Pettifor says. “There are many ways that schooling may be protective for young women, but providing money to them also may be protective.” Although study results will not be available until 2015, Pettifor says cash transfers seem to be a promising

intervention. A study published in *The Lancet* on Feb. 15, for which she wrote a commentary (<http://tinyurl.com/lancet-commentary>), found cash transfers reduced HIV risk.

In a two-year, NIH-funded study, Maman's team implemented microfinance interventions in "camps" in Dar es Salaam, Tanzania, where 15- to 19-year-old males socialize. By giving 19 men \$100 loans each, researchers tested whether professional goals would deflect men from risk-taking behaviors. Although there were too few participants in this pilot study to determine impact upon behaviors, a positive outcome was that the majority of the men have repaid their loans.

Dr. Sharon Weir participates in the USAID-funded MEASURE Evaluation project based in UNC's Carolina Population

Center. She helps establish international guidelines to monitor and evaluate HIV programs for gay men, transgendered individuals, sex workers and intravenous-drug users.

"These groups suffer from stigma and inadequate access to prevention services," Weir says. "Guidelines give countries and providers tools to track coverage and identify gaps in information, counseling and treatment access."

### HPV

Human papillomavirus (HPV) is the main cause of cervical cancer, which remains the leading cause of cancer death among women in many countries in Africa. HIV-positive women are at a notably higher risk, says Dr. Jennifer S. Smith. Using PEPFAR\* funding, her team works in Kenya and South Africa

to increase cervical cancer screenings, particularly among HIV-positive and higher-risk women. Smith and Dr. Noel Brewer are leading programs to eradicate cervical cancer in North Carolina and in the U.S., too.

"HIV-positive women with a lower count of CD4 cells (a type of white blood cell) have a higher risk of high-grade cervical lesions that are more likely to lead to cancer," Smith says. "That's important when thinking about increasing screening for HIV-positive populations."

—Whitney L.J. Howell

\* U.S. President's Emergency Plan for AIDS Relief (PEPFAR)

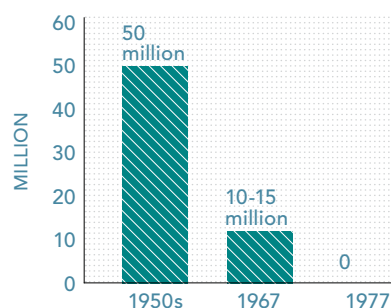
Researchers featured in this article include:

- Ralph Baric, PhD, professor of epidemiology
- Frieda Behets, PhD, professor of epidemiology
- Noel Brewer, PhD, associate professor of health behavior and health education
- Michael Emch, PhD, professor, geography; adjunct professor of epidemiology
- Suzanne Maman, PhD, associate professor of health behavior and health education
- Steven Meshnick, MD, PhD, professor of epidemiology
- Audrey Pettifor, PhD, assistant professor of epidemiology
- Jennifer Smith, PhD, research associate professor of epidemiology
- Sharon Weir, PhD, research assistant professor of epidemiology

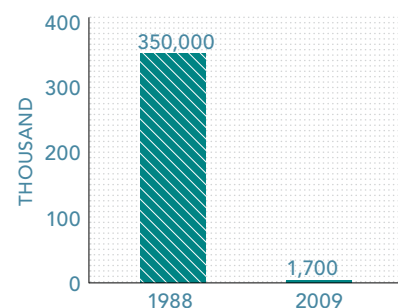
## THE WORK STILL AHEAD

References: [www.who.int](http://www.who.int) and [www.avert.org](http://www.avert.org).

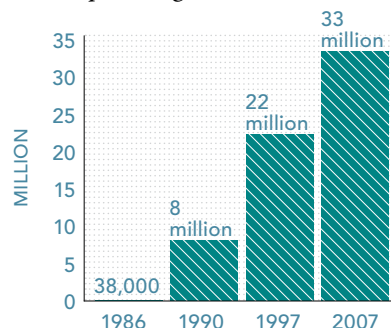
**SMALLPOX**  
Worldwide, by year



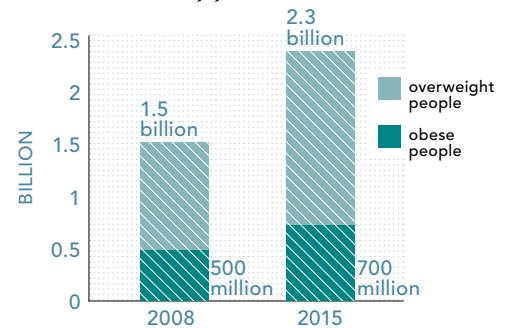
**POLIO**  
Cases in 125 endemic countries



**HIV/AIDS**  
People living with HIV



**OBESITY**  
Worldwide, by year





# What Works to Prevent Cancer?

PHOTO BY DAN SEARS

Changing human behavior, combined with increased monitoring of environmental exposures, can help prevent cancer.

Many preventable cases of cancer happen because human behavior is so difficult to change. With cervical cancer, for instance, nearly 100 percent of cases could be prevented using available tools, including vaccination against the human papillomavirus (HPV), screening and follow-up of abnormal Pap smears, says Dr. Jennifer Smith. “With all of this together, we can approach eradication of cervical cancer,” Smith documents disparities in screening and vaccination and works to increase those rates, from North Carolina to Kenya. “We should no longer

accept that cervical cancer exists,” she says.

Emerging literature suggests that what prevents most parents from getting their children vaccinated against HPV isn’t concern about side effects, but rather cost, lack of access and lack of doctor recommendation, says Dr. Noel Brewer. “We need to offer the HPV vaccine in schools and in pharmacies, to make it more accessible outside the doctor’s office,” he says.

Public policy can reduce lung cancer deaths by preventing cigarette smoking. “But the difficulty is in getting policy makers to

enact policies that we know work,” says Dr. Kurt Ribisl. Major effective policies include taxes, bans on public smoking and curtailing marketing. Online marketing is difficult to control, but Ribisl showed that bans on use of credit cards to buy cigarettes online and on commercial shipping of cigarettes purchased in the U.S. have reduced the number of online cigarette retailers and the popularity of those that remain ([bit.ly/A24BSV](http://bit.ly/A24BSV)).

Increased monitoring of toxic substances in the environment and exposures to individuals also may help prevent cancer. Arsenic in drinking water has been linked to cancer, and though the U.S. Environmental Protection Agency has published limits for public drinking water, no such standards exist for private wells.

Recently, Dr. Rebecca Fry found that certain North Carolina counties have arsenic levels above the EPA standard and need increased monitoring (see [bit.ly/w8XGYp](http://bit.ly/w8XGYp)) and that individuals in North Carolina are exposed to toxic metals (see [bit.ly/yn6BeX](http://bit.ly/yn6BeX)). In a separate study, she showed epigenetic effects of arsenic exposure in individuals ([bit.ly/yTwyx5](http://bit.ly/yTwyx5)). “We showed an association between arsenic exposure and biological effects that can have many different consequences that could include cancer,” Fry says.

—Angela Spivey

**“We need to offer the HPV vaccine in schools and in pharmacies to make it more accessible outside the doctor’s office.”**

—NOEL BREWER, PhD, ASSOCIATE PROFESSOR OF HEALTH BEHAVIOR AND HEALTH EDUCATION



*Researchers featured in this article include:*

- Noel Brewer, PhD, associate professor of health behavior and health education
- Rebecca Fry, PhD, assistant professor of environmental sciences and engineering
- Kurt Ribisl, PhD, professor of health behavior and health education
- Jennifer Smith, PhD, research associate professor of epidemiology





PHOTO BY JUSTIN SMITH

# Preventing chronic, obesity-related diseases

Eating right for better health is a good idea based on good science.

We have good evidence that eating fruits and vegetables, watching weight and treating diabetes are critical to good health. Those data are changing policies and practices worldwide.

## **Alice Ammerman:** **Motivating children and teens to eat healthful foods**

Do children's diets improve when parents provide locally grown fruits and vegetables? The Child Health Assessment and Monitoring Program (CHAMP) survey measures children's health behaviors. Dr. Alice Ammerman, director of the UNC Center for

Health Promotion and Disease Prevention, found that 50 percent of children surveyed ate five or more nutritious food servings when supplied by nearby producers.

Can we motivate high-school students' wise food decisions in a chaotic cafeteria? Yes, Ammerman says—by having them pre-commit to healthy food choices via text on a Web-based system. Read more at <http://tinyurl.com/text-your-lunch-order>.

## **Myles Faith:** **Offering hope in treating childhood obesity**

Dr. Myles Faith, associate professor of

nutrition, studies familial influences on childhood obesity and prevention and treatment strategies. When he chaired an American Heart Association committee, parents and adult caregivers were identified as "agents of change" for obese children.

"Health professionals help children grow into healthier body weights by adopting good nutrition, physical activity and lifestyle habits," he says. "Measurable goals, self-monitoring in writing, and daily routines to reinforce behavior changes *motivate*. The body of research on family-based interventions for childhood obesity offers hope to families."



Dr. Myles Faith





Dr. Alice Ammerman, second from left, meets with David Cavallo, nutrition doctoral student, and Chapel Hill High School kitchen staff to discuss the pilot project 'Taste Texting.'

### **Ed Fisher:** **Peers for Progress—management of diabetes improves outcomes**

"Diabetes self-management is essential to reducing risks of associated disabilities, but it is difficult to sustain," notes Dr. Ed Fisher, global director of Peers for Progress, an American Academy of Family Physicians Foundation program. "Peers provide social and emotional support and help implement daily living plans developed in clinicians' offices."

Peer support programs have thrived in varied settings, including Cameroon, South Africa, Thailand, Uganda and China. They improved health behavior, clinical indicators and quality of life.

In China, a 61-year-old woman discouraged by having diabetes said, "The peer sup-

port program helped me see that my 80-year-old parents are thriving and that I, too, can live a long and healthy life."

Fisher and colleagues have documented both the feasibility and early impacts of peer support, as well as how each project adapted to its unique population, health-care system and organizational setting. Their report is in the January 2012 issue of *Health Affairs* (<http://tinyurl.com/peer-support-diabetes>).

### **Beth Mayer-Davis:** **Treating adolescents with type 1 diabetes**

Beyond typical teen body image and peer-pressure angst, adolescents with type 1 diabetes face perpetual reminders that they are different. Their lives require blood-sugar testing, insulin shots, diet management and physical activity to prevent long-term complications and remain healthy.

Dr. Beth Mayer-Davis is principal investigator for NC SEARCH for Diabetes in Youth, part of the largest study of childhood diabetes in the U.S. She developed the FL3X pilot project for adolescents with type 1 diabetes. About half of participating youth were

socio-demographically at risk (low family income, single-parent households or minority race/ethnicity) and all had poor glycemic control. The teens took part in motivational interviews, problem-solving skills training and family therapy sessions.

Forty-one percent of youth in the intervention improved blood-sugar control substantially (HbA1c was reduced by at least 0.5 percent), compared to the control group, in which less than one-fourth (24 percent) reduced blood-sugar control substantially. Future work will test this in a large, randomized trial. One hundred percent of teens and 91 percent of parents would recommend the program to other families.

### **Barry Popkin:** **Global advocate for nutritional common sense**

Sugar-sweetened soft drinks and juices and full-fat whole milk aren't nutritionally wise. Dr. Barry Popkin passionately argues against their consumption.

In Mexico, as senior member of a beverage guidance panel established by the Minister of Health, Popkin developed guidelines resulting in removal of sugar-sweetened beverages and switching to low-fat milk in schools. Twenty million people on government programs benefited.

In 2011, he chaired a panel for the Mexican Ministry of Health and U.S. Food and Drug Administration that recommended a front-of-the-package labeling scheme for the country. By simplifying package labels, consumers learned to make sensible food choices, including fruits, vegetables and whole-grain products.

In China, Popkin organized a national conference on health and beverage consumption for the Chinese Nutrition Society.

He proposes similar policies in the U.S., based on research results showing improved health, and he has had much success influencing nutrition policies.

Popkin's research examines health implications of policies and lifestyle changes, and his findings have been published in more than 300 articles in peer-reviewed journals.



In Thailand, village health volunteers helped residents establish a community garden. The bicycle, connected to a generator and water pump, irrigates the garden and provides a source of exercise.



## Community-supported fisheries: an innovative model

Between 1999 and 2006, more than half of commercial fishers in eastern North Carolina stopped working, as they could no longer support themselves and their families. Why? Cheap seafood. About 90 percent of shrimp available in the U.S. was caught elsewhere, causing prices to plunge 40 percent.

Anna Child, master's student in health behavior and health education, has found a way to help these fishers while providing fresh, local seafood to North Carolina communities. In March 2010, she established Core Sound Seafood, an environmen-

tally responsible community-supported fishery (CSF) that works much like a community-supported agriculture program. Shareholders make an investment at the start of the season, allowing fishers a premium price for their product, and are rewarded with several deliveries of a variety of fresh fish. "Shares," which translate into 2- to 4-pound deliveries weekly or biweekly, range from \$112 to \$450 for the season. Details are available at [www.coresoundseafood.org](http://www.coresoundseafood.org).

Child sees potential for similar CSFs across the U.S. and in developing countries. Read her article in the January 2012 issue of *Infofish International* ([www.sph.unc.edu/cph/infofish](http://www.sph.unc.edu/cph/infofish)).

—Linda Kastleman



Anna Child shows off fresh clams that will be sold through Core Sound Seafood.

His most innovative work, say colleagues, has been to develop the concept of "nutrition transition," a way of understanding long-term nutritional status changes by looking at shifts in the stages of eating, drinking and activity underlying societal shifts and resulting effects on body composition.

### Chongben Zhang: Insulin signals connecting human obesity and diabetes

Human obesity and diabetes are linked, but

scientists don't understand precisely how. Insulin normally controls the liver's production of glucose and the amount of glucose that muscles use. In diabetes, insulin is ineffective. The liver makes too much glucose, and muscles do not use it well. Insulin's poor signaling is strongly associated with the amount of triglyceride (fat) that is present in liver and muscles.


Dr. Chongben Zhang, a postdoctoral fellow mentored by nutrition professor Dr. Rosalind Coleman, discovered how

triglyceride production blocks insulin signaling, directly linking fatty liver to its overproduction of glucose. This is a major challenge in diabetes. When glucose metabolism is uncontrolled in a person with diabetes, complications can include high blood pressure, heart disease, stroke, kidney disease, sight and hearing loss, amputations and other health risks.

—JB Shelton

*Researchers featured in this article include:*

- Alice S. Ammerman, DrPH, professor of nutrition and director of the UNC Center for Health Promotion and Disease Prevention
- Rosalind Coleman, MD, professor of nutrition
- Myles Faith, PhD, associate professor of nutrition
- Edwin B. Fisher, PhD, professor of health behavior and health education and global director of Peers for Progress
- Elizabeth Jane Mayer-Davis, PhD, professor of nutrition, American Diabetes Association's Vice President for Health Care and Education, member of the President's Advisory Group on Prevention, Health Promotion and Integrative and Public Health
- Barry M. Popkin, PhD, W.R. Kenan Jr. Distinguished Professor of nutrition
- Chongben Zhang, PhD, postdoctoral fellow in nutrition



# Preventing accidents, injuries and violence

Every child on the playground thinks she's invincible. Watch one swinging skyward; another, rock climbing. In our adult lives, despite accidents, injuries and violence, we all too often live as if we were invincible, too. But through all stages of life, we need protective policies and practices to reduce chances of harm.

## **Injury Prevention Research Center: PREVENT Institutes**

What could be more sensible than stopping violence before it starts? The PREVENT (Preventing Violence Through Education, Networking and Training) Institutes have

trained more than 900 violence prevention practitioners nationwide. Since PREVENT's inception in 2003, the Institutes' curriculum has covered the National Training Initiative's core competencies in injury and violence prevention.

"These institutes have infused key public health skills into our nation's violence

prevention workforce," says Dr. Stephen W. Marshall, Injury Prevention Research Center (IPRC) interim director. "They created a network of violence prevention practitioners equipped to engage in primary prevention."

IPRC's reach is nationwide. Members have supported efforts that led to a statewide enactment of legislation banning corporal punishment in Ohio schools. They

worked to legislate a million-dollar budget increase to implement school bullying prevention programs in Illinois and establish a statewide partnership in New York that disseminates information about parenting



Dr. Stephen Marshall





Dr. Kant Bangdiwala

concepts through a multistate planning process.

**Shrikant I. Bangdiwala: Resilience despite abuse**

Dr. Shrikant I. (Kant) Bangdiwala has focused his efforts at the IPRC on intimate partner violence and on children who suffer from maltreatment and neglect.

“One of my most professionally rewarding research projects at IPRC was the Longitudinal Studies of Child Abuse and Neglect (LongSCAN),” he says. “It involved the first longitudinal study of children at

risk for maltreatment or neglect and factors related to its occurrence and to children’s resiliency. LongSCAN led me to study intrafamily violence and child maltreatment in the U.S. and intimate partner violence internationally. The latter was known as the World Studies of Abuse in the Family Environment (WorldSAFE). These two large, multicenter studies have led to important violence prevention policies.”

The IPRC is affiliated with the World Health Organization (WHO) Collaborating Center for Safety Promotion, through which Bangdiwala conducts safety workshops for community groups worldwide.

**Shelah S. Bloom: Measuring violence against women**

As part of an international collaborative process including multiple U.S. government agencies and U.N. agencies, Dr. Shelah S. Bloom, senior gender specialist of the MEASURE Evaluation Project, authored “Violence against women and girls: A compendium of monitoring and evaluation indicators.” (See <http://bit.ly/FOo2W1>.)

The publication is used worldwide by hundreds of managers, organization leaders and policy makers and by the U.N. High Committee for Refugees to revise its international guidance on sexual- and gender-based violence.

**“Prevention promotes healthy adolescent development and stops family violence cycles.”**

—VANGIE A. FOSHEE, PhD, PROFESSOR, HEALTH BEHAVIOR AND HEALTH EDUCATION

**Carri Casteel: Danger behind the counter**

Dr. Carri Casteel, research associate professor of epidemiology, develops and tests evidence-based programs designed to reduce robbery and related crimes in retail settings.

“Such programs feature employee training, good visibility and lighting, and minimum cash in registers,” she explains. “Inexpensive for businesses to implement, the programs especially benefit small, independently-owned establishments.”

Casteel’s successful and well-received programs continue to provide vital information to business owners.

**Vangie Foshee: Teen dating abuse—prevalent, preventable**

Here are frightening statistics for parents of teen girls and boys: one in ten has experienced physical dating violence; one in three, psychological dating abuse. Resultant health risks include substance abuse, depression and suicide.

Dr. Vangie Foshee, professor of health behavior and health education, studies factors that predict teen dating abuse and develops and evaluates prevention programs. “Prevention,” she says, “promotes healthy adolescent development and stops family violence cycles.”

Foshee's school-based *Safe Dates* program has achieved global success, reaching 600,000 people. Her *Families for Safe Dates* program enhances communication between teens and adults. Both programs dramatically decreased teens' acceptance of dating abuse and, more importantly, had effect upon preventing teen abuse behaviors.



Dr. Jonathan Kotch and his grandson Daniel

### **Jonathan Kotch:** **Giving children a head start**

Head Start serves more than one million low-income children in the U.S. Since 1964, the program has educated young children, empowered families and changed communities.

In 2011, the American Academy of Pediatrics received funding for the Head Start National Center on Health. Dr. Jonathan Kotch, in collaboration with other experts in emergency management, public health preparedness and response in child care, leads efforts to adapt curricula on Emergency Preparedness and Response for Child Care for use in Head Start and Early Head Start.

Read a *Carolina Public Health* feature about Kotch at [www.sph.unc.edu/cph/kotch](http://www.sph.unc.edu/cph/kotch).

—JB Shelton

### **STAY CONNECTED WITH US!**

**Like us on Facebook**  
[www.facebook.com/  
uncpublichealth](http://www.facebook.com/uncpublichealth)

**Follow us on Twitter**  
[www.twitter.com/  
uncpublichealth](http://www.twitter.com/uncpublichealth)

**Check out our students' "flash mob" dance**  
[www.youtube.com/  
uncpublichealth](http://www.youtube.com/uncpublichealth)

**Here are frightening statistics for parents of teen girls and boys: one in ten has experienced physical dating violence; one in three, psychological dating abuse.**



## WHO Cares

### **Sandra Martin works with the World Health Organization (WHO) to assure optimal care for women survivors of domestic violence and sexual assault.**



Dr. Sandra Martin

Dr. Sandra Martin's career has been devoted to preventing violence and helping violence survivors recover from trauma. Martin's research has focused on violence during pregnancy, the role of substance abuse in violence, and the impact of domestic violence and sexual assault programs for violence survivors, among other topics.

She knows well that domestic violence and sexual assault are common global problems that result in extensive health problems.

Women violence survivors rely on health-care services more often than do other women as they deal with the physical, emotional and mental health problems associated with this trauma.

Research shows that recovery from domestic violence and sexual assault should be grounded in comprehensive, gender-sensitive health-care services addressing survivors' many needs. Such comprehensive care includes crisis intervention, social work and legal services, which are beneficial in helping women reclaim their lives.

Many health-care professionals do not have sufficient training to care for women violence survivors. Therefore, the World Health Organization (WHO) aims to develop appropriate guidelines. Such guidelines will help raise awareness and educate health-care providers and policy makers about the need to initiate strong, relevant responses to violence against women.

Martin serves on the six-person Guideline Steering Group for the project. The group's work is based on extensive, systematic reviews of scientific literature and input from international professionals who study violence against women.

"It has been a true honor to work with WHO and the global experts who have helped develop these guidelines," Martin says. "We all hope that this collaborative undertaking will help to improve the health and well-being of millions of women worldwide whose lives have been touched by violence."

—JB Shelton

*Sandra L. Martin, PhD, is professor of maternal and child health and associate dean for research at the School.*

#### *Researchers featured in this article include:*

- Shrikant I. Bangdiwala, PhD, research professor, biostatistics
- Shelah S. Bloom, ScD, research assistant professor, maternal and child health and senior gender specialist, MEASURE Evaluation Project
- Carri H. Casteel, PhD, research associate professor, epidemiology
- Vangie A. Foshee, PhD, professor, health behavior and health education
- Jonathan Kotch, MD, MPH, Carol Remmer Angle Distinguished Professor of Children's Environmental Health, maternal and child health
- Stephen W. Marshall, PhD, professor, epidemiology, and interim director, UNC Injury Prevention Research Center





# Preventing environmental risk and redefining policy

For more than 70 years, UNC environmental scientists and engineers have helped implement programs and policies that improve people's lives by preventing illness and disease. They now face new and greater challenges resulting from overpopulation, limited access to clean drinking water and sanitation facilities, an excess of human-made toxins and the rapid onset of global climate change.

Examples include:

- In August 2000, ozone levels in Houston, Texas, surpassed those in every other U.S. city. Government and industry officials turned to Dr. Harvey Jeffries

for help. Jeffries and a team that included Dr. William Vizuete discovered two key causes of ozone, one common to other cities and the other unique to Houston's mix of industries. "Their work led the

state agency to implement targeted emissions controls," says doctoral student and researcher Evan Couzo. "Houston now has the lowest ozone observed in 40 years."

- In the United Arab Emirates (UAE), Dr. Karin Yeatts and colleagues studied health effects of indoor air pollutants including incense and tobacco smoke. Results, recently published in *Environmental Health Perspectives* (<http://tinyurl.com/UAE-indoor-air>), indicate that family members with measurable air pollutant concentrations in their homes were twice as likely to report asthma and wheezing symptoms. Yeatts' work is part of the UNC-UAE National Strategy for Environmental Health Project.





**“Globally, around 2.4 million deaths (4.2 percent of all deaths) could be prevented annually if everyone practiced appropriate hygiene and had good, reliable sanitation and drinking water.”**

—DR. JAMIE BARTRAM, DIRECTOR, THE WATER INSTITUTE AT UNC



Dr. Mark Sobsey



Dr. William Vizuete



Dr. Karin Yeatts

- Drs. Jamie Bartram and Mark Elliott explain how water technologies and practices—such as rainwater harvesting and improved infrastructure integrity—can make water and sanitation systems

more resilient to climate change. In the guidebook *Technologies for Climate Change Adaptation—The Water Sector* (<http://tinyurl.com/water-handbook>), co-authored with Institute researchers Joseph LoBuglio and Andrew Armstrong, Bartram and Elliott suggest how climate change can be seen as an “opportunity for focus upon, and gains in, health development and water resources sustainability.” The guidebook, funded by United Nations Environment Programme (UNEP) Risoe Center, has been distributed to more


than 500 stakeholders worldwide.

- Dr. Mark Sobsey and his former student Dr. Joe Brown evaluated effectiveness of household water treatment interventions in Cambodia. They found that use of a low-cost ceramic filter to treat drinking water in more than 100,000 households reduced *E. coli*, a key indicator of diarrhea, by about 98 percent (See <http://tinyurl.com/cambodia-water>.)

—Melissa Geil

*Researchers featured in this article include:*

- Andrew Armstrong, doctoral student, environmental sciences and engineering (ESE)
- Jamie Bartram, PhD, professor, ESE; director, The Water Institute at UNC
- Joe Brown, PhD, PE, UNC alumnus; assistant professor, London School of Hygiene and Tropical Medicine, U.K.
- Evan Couzo, doctoral student, ESE
- Mark Elliott, PhD, postdoctoral research associate, The Water Institute at UNC
- Harvey Jeffries, PhD, professor emeritus, ESE
- Joseph LoBuglio, ESE doctoral student and program manager, The Water Institute at UNC
- Mark Sobsey, PhD, Kenan Distinguished Professor, ESE
- William Vizuete, PhD, assistant professor, ESE
- Karin Yeatts, PhD, research assistant professor, epidemiology



# Preventing risks to women, children and families is at the heart of public health

UNC's maternal and child health department has a long history of field work aimed at preventing problems related to pregnancy, prenatal health, infant feeding problems, and maternal safety and health.

Maternal and child health chair Dr. Herbert Peterson is excited about the department's focus on implementation science—the study of methods to promote uptake of research findings into routine health care in both clinical and policy contexts.

Implementation science is an integral part of the School's work as the World Health Organization (WHO) Collaborating Center

for Research Evidence for Sexual and Reproductive Health, which Peterson directs.

"We know that 99 percent of all maternal and newborn deaths now occur in developing countries," Peterson says. "This is largely because the interventions needed to prevent those deaths, used widely in developed countries, are difficult to implement in low-resource settings where most deaths now

occur. Addressing these challenges is a new direction that holds great promise."

## **Nutrition**

Among the strongest new research findings are those in support of achieving exclusive breastfeeding. Four major preventable causes of infant mortality (premature infant death, Sudden Infant Death Syndrome, respiratory disease, infection), as well as obesity and diabetes, can be reduced by breastfeeding, says Dr. Miriam Labbok, director of the Carolina Global Breastfeeding Institute (CGBI). Labbok and her team study and support the "10 Steps to Successful Breastfeeding" (<http://tinyurl.com/10-breastfeeding-steps>), a system of hospital practices promoted by UNICEF and WHO for quality of care. CGBI research





Dr. Herbert Peterson



Dr. Ilene Speizer



This infant and her mother participated in a UNC clinical trial for a malaria vaccine in Malawi.

PHOTO BY CAITLIN KLEIBER

has identified subsets of the steps most associated with achievement of exclusive breastfeeding and has illustrated the positive relationship between the steps and exclusive

breastfeeding at the local and global levels. CGBI also has developed and tested a new “10 Steps for Child Care Settings” (<http://cgbi.sph.unc.edu/child-care>).

Dr. Margaret E. (Peggy) Bentley focuses on feeding styles and behaviors that lead either to optimal or maladaptive growth and development. Bentley’s research with first-time African-American mothers, led by Dr. Megan Slining, then a nutrition doctoral student, was published in 2009 in the *Journal of Pediatrics* (<http://tinyurl.com/overweight-babies>). The research found that overweight and obese infants have motor development delay. Another study, published in *Pediatrics*

and led by current doctoral student Heather Wasser, found that mothers who believed their infants were ‘fussy’ were more likely to feed them foods and liquids at three months of age. (See <http://tinyurl.com/fussy-baby>.) “The key message,” Bentley says, “is that it’s important to look at very early caregiver/parenting factors—such as responding to the cues of babies about hunger and satiety and the types of food provided.”

## Reproductive Health

Dr. Ilene Speizer knows that family planning is key in preventing maternal deaths. “If you can avoid unintended pregnancies,

### Researchers featured in this article include:

- Margaret E. Bentley, PhD, Carla Smith Chamblee Distinguished Professor of Global Nutrition and associate dean for global health at UNC’s public health school and associate director, Institute for Global Health and Infectious Diseases
- Stephanie Engel, PhD, associate professor of epidemiology
- Carolyn Tucker Halpern, PhD, professor of maternal and child health
- Jon Hussey, PhD, MPH, research assistant professor of maternal and child health and fellow, Carolina Population Center
- Miriam Labbok, MD, MPH, IBCLC, Professor of the Practice and director of the Carolina Global Breastfeeding Institute
- Herbert Peterson, MD, Kenan Distinguished Professor and chair of the Department of Maternal and Child Health, Gillings School of Global Public Health, and professor of obstetrics and gynecology in the UNC School of Medicine
- Liana Richardson, PhD, MPH, postdoctoral fellow in sociology and at the Carolina Population Center
- Megan Slining, PhD, research assistant professor of nutrition
- Ilene Speizer, PhD, research associate professor of maternal and child health
- Kelly Strutz, MPH, doctoral student in maternal and child health



PHOTO BY LINDA KASTLEMAN

Dr. Carolyn Tucker Halpern (foreground) and Dr. Jon Hussey study reproductive health issues for mothers, infants and adolescents.

you can avoid some maternal deaths,” she says. In her role as co-principal investigator and technical deputy director of the Measurement, Learning and Evaluation (MLE) Project, Speizer identifies effective urban reproductive health approaches and interventions likely to have the biggest impact in sub-Saharan Africa and South Asia. MLE is the evaluation component of The Urban Reproductive Health Initiative, a Bill & Melinda Gates Foundation-funded project. The project is in place in Kenya, Nigeria, Senegal and the state of Uttar Pradesh in India.

Reproductive health is important not just for the mother but also for her offspring, says Dr. Jon Hussey. He conducted a study with postdoctoral fellow Dr. Liana Richardson and maternal and child health doctoral student Kelly Strutz, published August 2011 in *Annals of Epidemiology* (<http://tinyurl.com/birthweight-blood-pressure>), which revealed an association for males between birth weight and blood pressure in early adulthood.

Dr. Carolyn Tucker Halpern examines adolescent sexual behavior patterns and how those patterns relate to reproductive

well-being in the transition to adulthood. She draws data from approximately 16,000 people who have been followed from high school to their late 20s and early 30s in the National Longitudinal Study of Adolescent Health.

Data presented at the Society for Research on Adolescence in March 2012 showed that teenagers who began their sexual activity with oral sex but waited at least one year before vaginal sex had a 9.5 percent chance of teen pregnancy. That compared with a significantly higher 28 percent probability of teen pregnancy for teens whose first sexual experience was vaginal sex, controlling for multiple potential confounders. These findings point to the value of comprehensive sex education.

Dr. Stephanie Engel considers impact of environmental exposures on adverse pregnancy outcomes and neurodevelopmental impairment in children. At Mt. Sinai Medical Center and now at UNC, she investigates the role of exposure during pregnancy to chemicals commonly found



Dr. Stephanie Engel

in consumer products such as shampoo, deodorant, medications and cosmetics. A 2010 study published in *Environmental Health Perspectives* (<http://tinyurl.com/prenatal-exposures>)

links prenatal exposure to phthalates commonly found in personal care products to more ADHD-like behavior in children ages four to nine.

“The literature is still very new,” Engel says, “and we don’t know yet whether these chemicals will cause harm or not. The good news from a public health perspective is that you can limit exposure to them until you know they are safe.”

—Michele Lynn





PHOTO BY CHAD MITCHELL

Dr. Steve Zeisel (second from right) meets with colleagues at the Nutrition Research Institute.

The nutrient choline is essential for normal brain development in babies, and adults need it for normal liver and muscle function. Now UNC public health researchers find that some people need more of this nutrient than others, and a specific gene, called PEMT, may determine that need. Dr. Steven Zeisel led the UNC team that discovered this connection.

Most of the choline needed by the body must be consumed in the diet through eggs, meats, grains and similar foods. Under best circumstances, the body can make about 30 percent of the choline it requires.

“The PEMT gene is the only mechanism the body has to make choline. The more estrogen one has, the more the gene can be

upregulated to tell one’s body to make choline, if you are not eating enough,” says Dr. Kerry-Ann da Costa. Therefore, people with lower estrogen, such as men and postmenopausal women, would have greater need for dietary choline.

Dr. da Costa and colleagues found that women with a variation in the PEMT gene

do not upregulate the gene to make more choline, so they need more of it in their diets to prevent liver or muscle dysfunction than do those who did not have the variant. She suspects the same would be true for pregnant women, to help prevent birth defects in their babies.



Dr. Kerry-Ann da Costa

These discoveries have importance beyond choline. Zeisel and da Costa envision being able to analyze a person’s genetic profile, then design a diet for them to prevent specific health problems, such as birth defects.

—Angela Spivey

*Researchers featured in this article include:*

- Steven Zeisel, MD, PhD, Kenan Distinguished Professor of nutrition at UNC’s public health school and director of the Nutrition Research Institute, in Kannapolis, N.C.
- Kerry-Ann da Costa, PhD, research assistant professor of nutrition



## Preparedness as prevention

When a natural or human-caused disaster strikes, public health practitioners spring into action. Some may work to prevent spread of diseases or reduce injuries. Others survey the community to determine needs or directly provide safe food, water and shelter. After initial response and recovery efforts, communities and states sometimes turn attention to the next phase in the disaster cycle—mitigation.

Mitigation activities are long-term projects, often structural, that can save lives and reduce property damage if another disaster occurs.

“Every 10 years or so, mitigation draws attention,” says Bill Gentry, MPA, director of the Community Preparedness and Disas-

ter Management program at UNC Gillings School of Global Public Health. “But it’s very hard politically to fund mitigation now that won’t save lives until three, four or five years from now.”

After Hurricane Floyd in 1999, North Carolina used mitigation dollars to purchase destroyed homes in flood zones, converting the land into parks or recreation facilities. “With Hurricane Irene [in 2011], not as many people were in harm’s way,” Gentry says. “We lowered the risk of disease and death by removing people from the equation.”

While acquiring mitigation funding can be difficult, Gentry says collaboration is essential. “This year, all preparedness funding applications require collaboration,” he





(Above) Dr. Jen Horney (standing, left) and Bill Gentry supported a recent student-led farmers market, held in the School's Armfield Atrium. (Left) Gentry addresses a group of people in Vance County (N. C.) who participated in a preparedness exercise.

says. "When this was announced, my phone started ringing. Everybody is scrambling to forge new partnerships."

In recent months, Gentry conducted preparedness exercises with the North Carolina Jaycee Burn Center, the Orange County (N.C.) Schools and Vance County, N.C. He also was contacted by the N.C. Office of Emergency Medical Services for an agency assessment.

"I think we're going to see an uptake in those kinds of requests," Gentry adds. "Everyone is going to have to work together."

Jennifer Horney, PhD, interim director of

the UNC Center for Public Health Preparedness, says she sees an increased interest in collaboration, too. Her office, along with the North Carolina Preparedness and Emergency Response Research Center, recently developed an online resource guide (<http://cphp.sph.unc.edu/resources>) to help local health departments build community partnerships as they make preparedness plans for growing, at-risk populations.

"Counties are having trouble documenting vulnerable populations," Horney says. "They need to work with established groups, where people already are receiving services."

Users of the resource guide answer a series of questions and then receive a customized report of resources, recommendations and potential collaborators.

"The tool has a national appeal because it's based on census data," Horney adds. "But Congress' elimination of funding for Centers for Public Health Preparedness in fiscal year 2013 may threaten our efforts to expand the tool."

A webinar showcased the tool to a national audience on May 10.

—Chris Perry

*Gentry is also a lecturer in the Department of Health Policy and Management. Horney is also a research assistant professor of epidemiology. The UNC Center for Public Health Preparedness is dedicated to improving the capacity of public health agencies and their staff members through research, educational programs and technical assistance.*

# Dreaming of A Time

Prevention was the seed from which North Carolina's public health school grew.

In the early 20<sup>th</sup> century, the ravages of poverty and lack of education in the mostly rural southern state made its people vulnerable to hookworm, smallpox, typhoid, tuberculosis, venereal diseases, and diseases of nutritional deficiency, including rickets. This was in addition to unnecessary deaths from influenza, childhood diseases and other illnesses that preyed on an undernourished population often living in unsanitary conditions.

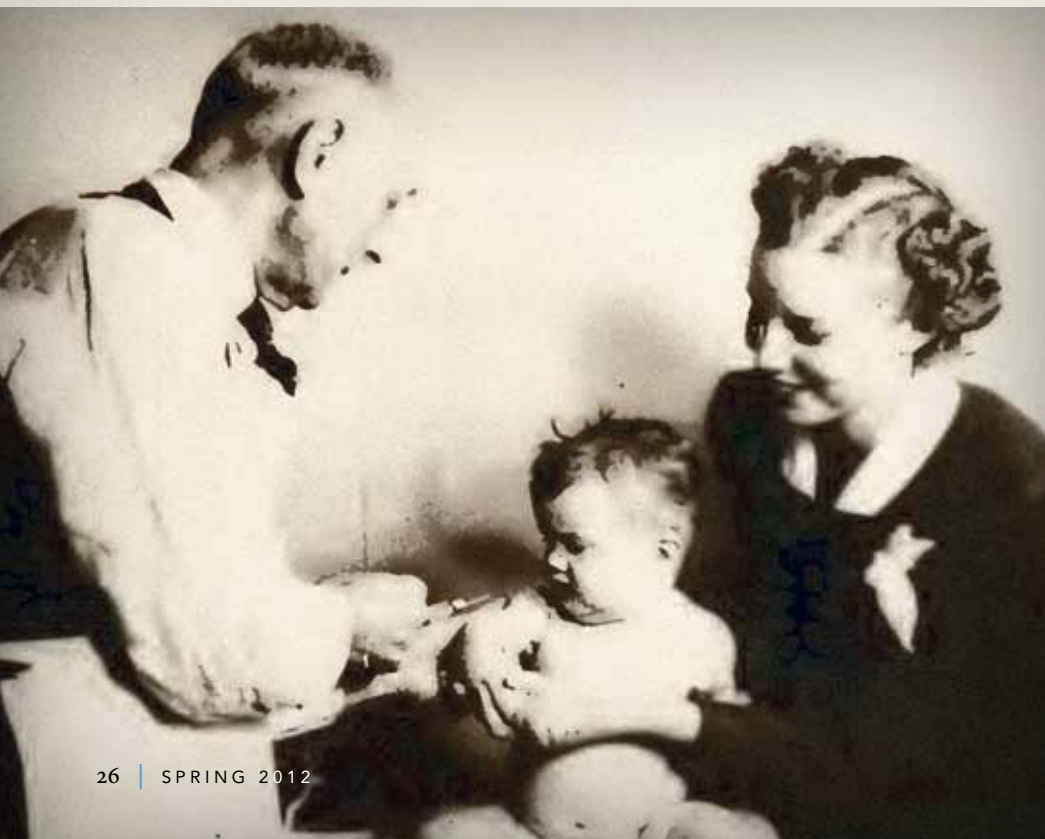
Thanks to the vision of a few dedicated medical and public health professionals and educators in the state, and with support from early benefactors that included the Rockefeller and Z. Smith Reynolds foundations, the University of North Carolina and the N.C. State Board of Health developed collaborations that served the state's communities. UNC's contributions also confirmed the need for a state school at which more public health workers could be trained to make a difference at the county level.

Former Harvard professor Milton Rosenau, MD, often called the modern "Father of Preventive Medicine," agreed in 1936 to direct what was then the division of public health within UNC's medical school.

Under his leadership, and that of subsequent deans, the UNC public health school has advanced prevention efforts across North Carolina and around the world. Whether in health education, nutrition best practices, epidemiological discoveries or other public health areas, the commitment to our state remains firm. Our goal here and throughout the world is to promote health and prevent disease for *all* people.

Read more about the first 50 years of the School's illustrious history at <http://tinyurl.com/dreaming-of-a-time>.

—Linda Kastleman



This skeptical infant appears on the cover photo of *Dreaming of a Time*, a history of the School's first 50 years.



# UNC GILLINGS SCHOOL OF GLOBAL PUBLIC HEALTH SCHOOL NEWS

JANUARY — MAY 2012

For more information on these topics and other news, please see [www.sph.unc.edu/news\\_events](http://www.sph.unc.edu/news_events).



Dr. Noel Brewer



Anna Child



Dr. Jo Anne Earp



Dr. Howard Koh



Dr. Robert Sandler



Dr. Stephanie Wheeler

## Behavioral economics of colorectal cancer screening

A NEW STUDY from UNC's Center for Health Promotion and Disease Prevention examines behavioral factors that may influence whether people pursue colorectal cancer screening and identifies strategies that might increase screening rates in disadvantaged communities.

Stephanie Wheeler, PhD, assistant professor of health policy and management, and Michael Pignone, MD, MPH, professor of medicine in the UNC School of Medicine, lead the study, along with Kristen Hassmiller Lich, PhD, assistant professor of health policy and management.

Colorectal cancer is the third most common cancer diagnosis and second leading cause of cancer-related death in the U.S. Overall screening rates have increased in recent years, but rates for uninsured, minority and rural-dwelling people are lower than for the rest of the population.

Related research led by UNC epidemiologists Robert Sandler, MD, and Nicholas Shaheen, MD, found that during the current recession, continuously insured Americans

underwent fewer screening colonoscopies, a cost-effective, recommended preventive service. The study appears in the March issue of *Clinical Gastroenterology and Hepatology* (<http://tinyurl.com/colonoscopies>).

## HBHE will change its name

EFFECTIVE JULY 1, the School's Department of Health Behavior and Health Education will have a new name—Health Behavior. The shortened name, says professor and chair Jo Anne Earp, ScD, “celebrates the common ground that we share as a department of behavioral scientists, health behavior interventionists and health education practitioners.” The change is the result of a 15-month deliberation by faculty members, alumni and others.

## Directory connects women to cervical cancer services

THE N.C. CERVICAL CANCER RESOURCE DIRECTORY ([www.ccreourcedirectory.org](http://www.ccreourcedirectory.org)) helps connect women to information about life-saving screening and HPV vaccination

services. Dr. Noel Brewer, associate professor of health behavior and health education, directs Cervical Cancer-Free NC ([www.ccfnc.org](http://www.ccfnc.org)), a School-based initiative that developed the directory.

Each year, more than 4,000 women in the U.S. die of cervical cancer. Experts say a majority of deaths could be avoided through regular cervical cancer screenings, commonly known as Pap tests, and timely HPV vaccination.

## Koh speaks at May commencement

HOWARD K. KOH, MD, MPH, assistant secretary for health in the U.S. Department of Health and Human Services, presented the School's commencement address on Saturday, May 12.

“Howard Koh is one of the most exemplary figures in public health today,” said Dean Barbara K. Rimer. “Dr. Koh's work on tobacco control and health disparities is important and widely cited. His current leadership in HHS is setting a new standard for excellence.”



# WATER IN OUR WORLD

## Switching to water, diet drinks save calories

SUBSTITUTING WATER OR DIET SOFT DRINKS for caloric beverages can help people lose four to five pounds, says a study published in March in *The American Journal of Clinical Nutrition* (<http://tinyurl.com/switch-to-water>). Deborah Tate, PhD, associate professor of nutrition and of health behavior and health education, led the study, along with nutrition professors June Stevens, PhD (chair), and Barry Popkin, PhD. If the substitution took place on a large scale, Tate says, we could “significantly reduce the increasing public health problem of obesity.”

## Undergrad develops educational program for Ugandan women

HEALTH POLICY AND MANAGEMENT major Jen Serdetchnaia was instrumental in establishing Empower U ([www.empoweruganda.org](http://www.empoweruganda.org)), a nonprofit organization that promotes women’s rights in rural Uganda by giving women tools and opportunity to finance their own post-secondary educations. Serdetchnaia’s background in entrepreneurship and her time as an APPLES Social

Entrepreneur Fellow also inspired her to provide financial skills training to empower Ugandan women with little education.

## February was ‘Celebrate Teaching!’ Month

A DECISION TO HOLD a series of events to celebrate innovative teaching grew out of SPH2020 ([www.sph.unc.edu/sph2020](http://www.sph.unc.edu/sph2020)), a planning process that aims to develop a vision for public health learning and teaching at the School in the next decade. Three speakers, including alumnus Dr. David Kleinbaum of Emory University, presented talks about innovative teaching methods. One faculty member from each academic unit was selected by students to receive awards for effective teaching. (See page 30.)

## Minority Health Conference focused on translational research

THE SCHOOL’S MINORITY STUDENT CAUCUS hosted the 33rd annual UNC Minority Health Conference (MHC) on Feb. 24. Themed “Translational Research: The Road From Efficacy to Equity,” the event included the William T. Small Jr. Keynote

Lecture, delivered by Dr. Ana V. Diez-Roux (University of Michigan) and an afternoon keynote by Dr. Nina Wallerstein (University of New Mexico).

For details about the conference, visit <http://studentorgs.unc.edu/msc>. Read Dean Barbara K. Rimer’s impressions of the event in her blog, <http://mondaymorning.web.unc.edu/MHC>.

## Water designated as two-year campus theme

BY ADOPTING “WATER” as a campus-wide theme for the 2012–2013 and 2013–2014 academic years, the UNC Faculty Council provided a unique opportunity to enhance interdisciplinary research and practice around real-world issues related to water and sanitation.

“Water provides so many opportunities to improve the lot of humankind—whether in North Carolina or for the world’s poor,” said Dr. Jamie Bartram, environmental sciences and engineering professor and director of The Water Institute at UNC. Bartram quoted U.S. Secretary of State Hillary Clinton’s description of water as one of the “great diplomatic and development opportunities of our time.”





Dr. Jamie Bartram greets U.S. Secretary of State Hillary Clinton at the launch of the U.S. Water Partnership in March.



Dr. Regina Benjamin



Dr. Dorothy Cilenti



Dr. Beth Mayer-Davis



Dr. Deborah Tate



MHC co-chairs Kea Turner (left) and Turquoise Griffith (right) pose with UNC President Thomas Ross. Turner and Griffith were awarded the 2011-2012 Lucy S. Morgan Fellowship. Griffith also was a Hatch-Barnhill Scholar this year.

“The University is remarkably well prepared to take on a theme of this kind,” Bartram said. “Our focus will promote a unifying dialogue across campus and throughout the world.”

### Symposium: ‘What about the children?’

THE SCHOOL’S North Carolina Institute for Public Health (NCIPH) partnered with the nonprofit agency Our Children’s Place to host the symposium “What About the Children?” on Feb. 14. The event gave professionals, students and others a chance to collaborate and consider the impact of a parent’s incarceration upon children.

“Far too often, children whose parents are sentenced to prison are overlooked, vulnerable and without a voice,” said Dr. Dorothy Cilenti, NCIPH’s deputy director and chair of the Our Children’s Place board of directors.

### Student leads conference on food politics

THE SYMPOSIUM “SHARED TABLES,” held Feb. 28-29 at UNC and Duke, examined wide-ranging connections between food and

politics, the environment, security, culture and faith. The event was planned by health behavior and health education master’s student Anna Child, whose interest developed when she was a teaching assistant for a public health class about the politics of food. Read more about the event at <http://sharedtablesymp.wordpress.com>.

### Older women may not need repeated bone density screening

A NEW STUDY led by UNC researchers found that women age 67 and older with normal bone mineral density scores may not need screening again for 15 years.

Results of the study, co-authored by Jason P. Fine, ScD, and John S. Preisser, PhD, research professors of biostatistics at UNC Gillings School of Global Public Health, were published in the Jan. 19 issue of *The New England Journal of Medicine* (<http://tinyurl.com/NEJM-bone-density>).

### Callahan and Harris co-author IOM report

DR. RUSSELL HARRIS AND DR. LEIGH CALLAHAN co-authored an Institute of Medicine report that calls for immediate

action to reduce the nation’s burden from all forms of chronic illness. The report, released Jan. 31, “shows how important it is for us to close the gap between public health agencies and medical care institutions so as to form a seamless system of ongoing support and care for individuals and families affected by chronic conditions,” Harris said.

Harris is director of the health care and prevention concentration in the School’s Public Health Leadership Program. He and Callahan are adjunct professors of epidemiology.

### Surgeon General speaks at state health conference

NORTH CAROLINA helped showcase the new National Prevention Strategy (NPS) when state health directors met in Raleigh Jan. 26-27. NPS was established by the Obama administration’s Affordable Care Act and developed by U.S. DHHS’ National Prevention, Health Promotion and Public Health Council. U.S. Surgeon General Regina Benjamin, MD, director of the Council, gave the conference’s keynote address. Beth Mayer-Davis, PhD, nutrition professor, is a member of the NPS advisory group.

# UNC GILLINGS SCHOOL OF GLOBAL PUBLIC HEALTH AWARDS & RECOGNITIONS

JANUARY — MAY 2012

Read more at [www.sph.unc.edu/recognitions\\_and\\_awards](http://www.sph.unc.edu/recognitions_and_awards).



Dr. Peggy Bentley



Dr. Leah Devlin



Dr. Peggye Dilworth-Anderson



Dr. Virginia Thompson Guidry



Dr. Gary Koch



Dr. Miriam Labbok

## **Devlin to lead nonprofit board**

DR. LEAH DEVLIN, Gillings Visiting Professor of health policy and management, was elected to serve a two-year term on the Action for Children North Carolina board of directors. The organization, a nonprofit policy research and advocacy group, aims to ensure that children in the state are healthy, safe and well educated.

## **Bentley, Miller awarded**

### **distinguished professorships**

DR. MARGARET (PEGGY) BENTLEY AND DR. CASS (CASEY) MILLER, professors in nutrition and environmental sciences and engineering (ESE), respectively, were designated distinguished professors by UNC's Board of Trustees on Jan. 1. Bentley, associate dean for global health at the School, was named Carla Smith Chamblee Distinguished Professor of Global Nutrition for the duration of her tenure. Miller was named Okun Distinguished Professor of Environ-

mental Engineering through 2021. His professorship memorializes Daniel A. Okun, PhD, a world-renowned water researcher and longtime ESE professor at UNC.

## **Rusyn appointed to NRC committee**

DR. IVAN RUSYN, professor of environmental sciences and engineering, was appointed to the National Research Council's (NRC) Committee on Toxicology. The group oversees toxicology and risk assessment projects sponsored by the U.S. Department of Defense.

## **BIOS article wins 'Best Paper in Biometrics'**

YINGQI ZHAO, biostatistics doctoral student, won the "Best Paper in Biometrics" award, presented by the International Biometric Society, publisher of the journal *Biometrics*. "Detecting Disease Outbreaks Using Local Spatiotemporal Methods," published in the journal in December 2011, was

co-authored by biostatistics faculty members Drs. Donglin Zeng, Amy Herring and Michael Kosorok (chair) and Dr. David Richardson (epidemiology).

## **Four receive Presidential Management Fellowship**

RECENT ALUMNI Sara Crocoll (PHLP) and Paul Ebohon (ESE) and current students Laura Tison (PHLP) and Kea Turner (HBHE) were selected as 2012 Presidential Management Fellows by the U.S. Office of Personnel Management. (See [www.pmf.gov](http://www.pmf.gov).) More than 9,100 graduate students applied to the program, which offers leadership and training opportunities through the federal government.

## **Students select innovative teachers**

AS PART OF FEBRUARY'S "Celebrate Teaching!" events, eight faculty members were selected by students as innovators in the classroom. Awardees were Dr. Linda





Dr. Cass Miller



Dr. Ivan Rusyn



Dr. William Rutala



Dr. P. K. Sen



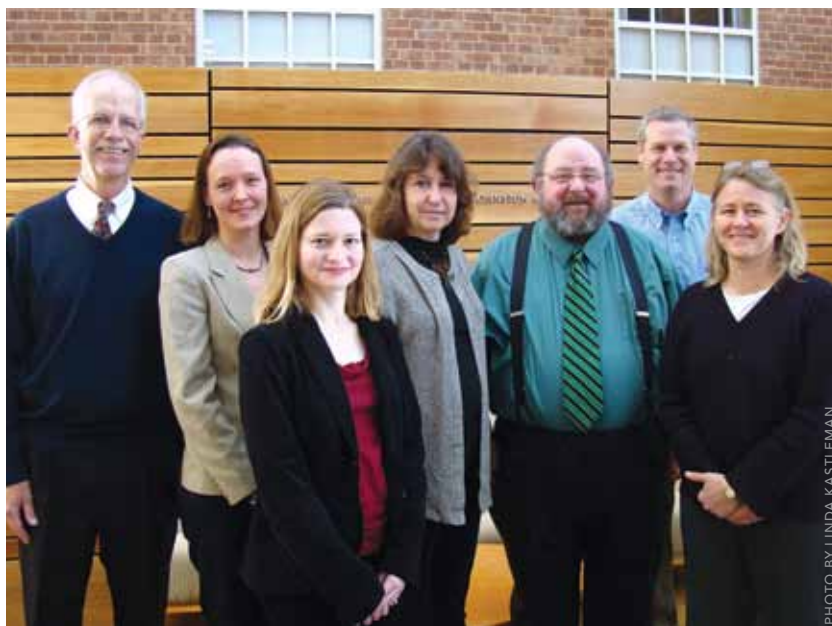
Dr. June Stevens



Dr. Dianne Ward



Kathy Parry and Emily Taylor accept Bryan Awards on behalf of Carolina Global Breastfeeding Institute.



Celebrate Teaching! awardees were (l-r) Drs. John Paul, Rebecca Fry, Amy Herring, Linda Adair, Charles Poole, Kurt Ribisl, and Sherri Green. Not pictured: Dr. Diane Kelly.

Adair (NUTR), Dr. Rebecca Fry (ESE), Dr. Sherri Green (MCH), Dr. Amy Herring (BIOS), Dr. Diane Kelly (PHLP), Dr. John Paul (HPM), Dr. Charles Poole (EPID) and Dr. Kurt Ribisl (HBHE).

#### **Guidry selected as Science Communication Fellow**

DR. VIRGINIA (GINGER) THOMPSON GUIDRY, postdoctoral fellow in epidemiology, was named a 2012 Science Communication Fellow by Environmental Health Sciences (EHS). EHS is a not-for-profit organization that aims to increase public understanding of scientific links between environmental factors and human health. Fellows will spend the year learning effective ways to inform media and the public about new research findings.

#### **Dilworth-Anderson honored for mentoring**

DR. PEGGYE DILWORTH-ANDERSON, professor of health policy and management, received the Carolina Women's Leadership Council faculty-to-faculty mentoring award on March 1. She has mentored more than 20 doctoral students and many junior and mid-career faculty members since she joined the School's faculty in 2002.

#### **Stevens chosen for ASN's Centrum Center Award**

DR. JUNE STEVENS, nutrition department chair and American Institute for Cancer Research/World Cancer Research Fund Distinguished Professor of nutrition, received the American Society for Nutrition's 2012 Centrum Center Award, for investiga-

tive contributions to the understanding of human nutrition.

#### **CGBI receives Bryan Award for service**

CAROLINA GLOBAL BREASTFEEDING INSTITUTE (<http://cgbi.sph.unc.edu>), based in the maternal and child health department and led by Dr. Miriam Labbok, has won the Carolina Center for Public Service's 2012 Robert E. Bryan Public Service Award. The Institute was honored for its Breastfeeding-Friendly Health Care Project and its student group, Carolina BEBES (<http://studentorgs.unc.edu/bebes>).

#### **Barr and Greenberg awards presented**

WILLIAM A. RUTALA, PHD, MPH, AND GARY G. KOCH, PHD, were honored with the UNC Gillings School of Global Public

Health's most prestigious awards for alumni and faculty members at a ceremony preceding the Fred T. Foard Jr. Memorial Lecture on April 17.

Rutala, who earned a master's degree at the School in 1977 and doctorate in 1979, received the Harriet Hylton Barr Distinguished Alumni Award. Koch, a biostatistics faculty member at the School for more than 40 years, was selected for the Bernard G. Greenberg Alumni Endowment Award.

The 2012 Foard Lecture was presented by Joseph Coughlin, PhD, director of the Massachusetts Institute of Technology AgeLab. Learn about Coughlin's work at <http://tinyurl.com/agelab-at-mit>.

#### **NAP SACC receives BCBSNC award to expand program**

THE NUTRITIONAL AND PHYSICAL ACTIVITY SELF-ASSESSMENT FOR CHILD CARE (NAP SACC) program

recently received a \$600,000 grant from Blue Cross Blue Shield of North Carolina Foundation. NAP SACC will use the grant to develop an engaging and interactive online tool that can be used directly by child-care providers.

NAP SACC, begun in 2001, aims to promote healthy eating and physical activity in young children in child-care and preschool settings. Dianne Ward, EdD, professor of nutrition and research fellow at the UNC Center for Health Promotion and Disease Prevention, serves as project director.

#### **Six win Impact Awards**

PUBLIC HEALTH STUDENTS AND RECENT ALUMNI won six of 22 Impact Awards presented by The UNC Graduate School at an April awards ceremony. The awards recognize students whose research may improve the lives of people in North Carolina and beyond. Awardees were Peter Balvanz, alumnus, health

behavior and health education, for *Effects of Land Loss on African-American Farmers and Their Hope for the Next Generation*; Brooke Hoots, alumna, epidemiology, for *Developing Practical Tools to Inform Allocation of North Carolina's Limited HIV Resources*; Mehul Patel, doctoral student, epidemiology, for *Prehospital Notification by Emergency Medical Services is Crucial to Timely Evaluation of Stroke*; Meagan Vaughn, doctoral student, epidemiology, for *Preventing Tick Bites Among North Carolina's Outdoor Workers*; Catherine Vladutiu, doctoral student, epidemiology, for *Motor Vehicle Crashes and Expectant Moms*; and Stephanie Watkins, doctoral student, epidemiology, for *Early Breastfeeding Experiences and Postpartum Depression*.

Ten more students from the School were recognized at the event for other research awards or honorary society inductions, and more than 50 were recognized for receiving prestigious external fellowships.



Peter Balvanz



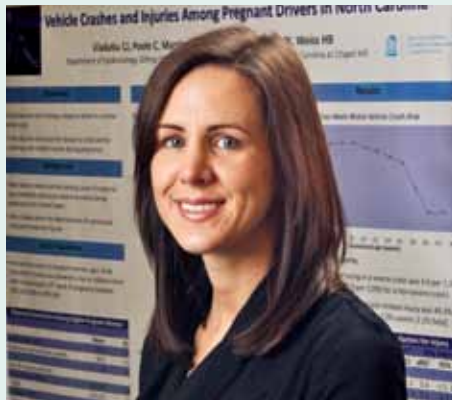
Brooke Hoots



Mehul Patel



Meagan Vaughn, Sandra Winn  
Green Scholar (2010–2011)



Catherine Vladutiu, Robert Verhalen  
Scholar in Injury Prevention and Trauma  
Management (2008–2009)



Stephanie Watkins



# OUR DONORS

## We're glad we can say 'thanks!'

*Mark Merrill, MSPH, has been an active alumnus of the School for more than 25 years, serving several terms on the Public Health Foundation Board and winning a 1994 alumni leadership award. He is now president and chief executive officer at Valley Health System, a nonprofit health-care organization that operates six hospitals and various care centers serving nearly one million residents in Virginia, West Virginia and Maryland.*

Still, his heart is a little farther south.

Daughter Madeline, now studying in Madrid for a semester, is a junior at Carolina, where her dad received his public health master's degree in health policy and management in 1984.

"We're all Tar Heels here," Mark's wife Teri says. "I'm not Tar Heel 'born and bred,' but with Madeline at Carolina, at least I can say I bred a Tar Heel!"

"I had a wonderful academic experience at UNC's public health school," Mark says. "I met colleagues with whom I still stay in touch. My training there launched a happy and successful career."

Several years ago, Mark and Teri were instrumental in establishing a scholarship that bears the name of William Zelman, PhD, professor of health policy and management. "Bill Zelman not only provided me with excellent didactic training during my time at UNC, he was also an excellent mentor and counselor," Mark says.

When Mark looked for a way to give



The School will always claim the Merrills as Tar Heels, even though they live in Virginia. Pictured (l-r) are Hamilton, Teri, Mark and Madeline (UNC class of 2013).

back to the School, he decided to honor his mentor. After making a lead gift, he sent letters to classmates, inviting them to give. The efforts resulted in a \$50,000 endowed scholarship in Zelman's name.

Now, Mark and Teri have honored the School through The Terese S. and Mark H. Merrill Endowed Fund in Health Policy and Management, which will provide money for scholarships and professional development opportunities at the discre-

tion of the department chair.

"During my service on the foundation board, I've been impressed and pleased with all that the School accomplishes—on the global front, in maternal and child health issues, water and sanitation, statistics and many other areas," Mark says. "We know the School has been under severe budget restraints lately, and I feel so fortunate that we can give back. Our entire family is happy to show our appreciation."

CONTRIBUTED PHOTO

## World of Difference Dinner: Celebrating locally produced foods

Jelly jars filled with wildflowers and dried herbs atop burlap tablecloths. Hay bales cushioning baskets of locally grown fruits and vegetables. A five-star meal made all the better by the guests' awareness of where all the food was grown or raised—within 50 miles of Chapel Hill, N.C.

On Nov. 10, 2011, the School hosted the fifth annual World of Difference dinner to honor its generous supporters. The evening celebrated the Carrboro Farmers Market, which has provided the Chapel Hill area with nutritious locally grown foods for more than 30 years.

Locally familiar businesses—Brinkley Farms, Danan Farms, Maple View Farm (which provided ice cream for all), Perry Lowe Orchards, Ray Family Farms, Sunburst Trout Farms—made the meal delicious and nutritious.

Few people know of the long relationship between the School and the farmers market. In 1979, alumna and current staff member Barbara (Bobbi) Wallace, MPH, co-founded the market with local physician Dr. Bill Dow. Wallace organized the network as part of her master's degree project, and it continues as an example of a community

asset that grew out of a student project at the School.

During the dinner, Dean Barbara K. Rimer recognized Pranab K. Sen, PhD, Cary C. Boshamer Distinguished Professor of biostatistics. A revered scholar, teacher and humanitarian, Sen has established the Pranab K. Sen Distinguished Visiting Professorship in Biostatistics. He began his own association with UNC as a visiting professor in 1965, and now hopes his gift will allow biostatisticians from around the world to exchange ideas with the UNC statistics community.



(Above) Dr. P. K. Sen and wife Gauri Sen

(Left and below) The annual World of Difference dinner celebrates the School's most generous donors.



PHOTOS BY TOM FULDNER



## Conger bequest helps educate new public health leaders



CONTRIBUTED PHOTO  
In 1962, Conger received a medal for service from the mayor of Canar, Ecuador.

When Harold Conger finished his engineering degree at Massachusetts Institute of Technology, he was eager to see the world. Through the U.S. Agency for International Development, he traveled to Guatemala City, where he helped build Roosevelt Hospital, the country's largest public medical facility.

Perhaps it was there he began to think about the importance of water and sanitation and other public health issues. He obtained a Master of Public Health degree in health policy and administration from UNC in 1958. After the degree, Conger quickly utilized his new skills when USAID assigned him to Quito, Ecuador, as director of health services for the U.S. Operations Mission. His responsibilities included

evaluating water supplies and improving existing water systems.

In 1971, Conger retired after 35 years of government service. In 2003, at age 93, he returned to Guatemala to work on a Habitat for Humanity project.

When Mr. Conger died in October 2011, he left a gift of \$50,000 to UNC's public health school for a "Class of 1958 Fund." The fund will be used to establish the Class of 1958 Scholarship, which will be awarded annually. Other members of the class are invited to participate.

"Harold deeply appreciated the education he received at The University of North Carolina," says his son-in-law, Elwood ("Woody") Hughes, "and he spoke fondly of his time in Chapel Hill."

Now, more than ever, the School's future depends upon gifts made by today's alumni and friends to benefit the public health students of tomorrow. If you make us part of your estate plan, please let us know so we can thank you.

For more information, contact Lyne S. Gamble Jr., director of major and planned gifts, UNC Gillings School of Global Public Health, 135 Dauer Dr., Chapel Hill, N.C. 27599-7407, (919) 966-8368, [lyne\\_gamble@unc.edu](mailto:lyne_gamble@unc.edu).

## Class of 2012 Scholarship

Our alumni can lay claim to every superlative adjective—Motivated! Dedicated! Generous! *Involved!*

Current Alumni Association president Joseph John, MHA, and incoming president Priscilla Guild, MSPH, have committed more than \$21,000 for the School's Alumni Association Scholarship. The association is now matching, dollar for dollar, a student government initiative to establish a Class of 2012 legacy scholarship. Thanks to students, staff and faculty members, and alumni who joined in their efforts, student government leaders already are funding a second \$5,000 scholarship.

"Working with the class of 2012 Annual Fund Scholarship has been one of the most rewarding experiences I have had at the School," says Clayton Velicer, student government co-president. "As a current student, I know how difficult it can be to secure financial aid. It is a wonderful feeling to know that through the generous support of current students, faculty members and alumni, a UNC public health student will have this kind of support."

To learn more about the Class of 2012 initiative, purchase a T-shirt or make a donation, visit <http://studentorgs.unc.edu/subsph>.



PHOTO BY LINDA KASTLEMAN  
Clayton Velicer shows off the 2012 Annual Fund Scholarship T-shirt.

## Looking toward the future: John and Fledra Hatch

John W. Hatch came to UNC in 1970 to work at the Cecil G. Sheps Center for Health Services Research. Soon, he was enrolled as a doctoral student at UNC's School of Public Health. He became a professor of health behavior and health education, retiring in 1995 as Kenan Professor emeritus.

Now, after other instances of generosity, Hatch and wife Fledra will benefit the School through a gift annuity, which provides long-term scholarship funding for a health behavior student.

"This gift reflects the value Fledra and I place on public health, especially public health education," Dr. Hatch says. "I've had the opportunity to teach students who have gone on to do great things. I've visited the School's graduates at work in South

America, Europe, Africa, and of course, all across the United States. I know we share a common value and tradition with the Gillings School of Global Public Health—that of the importance of public health practice at home and around the world."

Dr. and Mrs. Hatch attended recent World of Difference dinners, at which they met a student whose scholarship bears their name.

"When John asked me about the School's gift annuity program," Mrs. Hatch says, "and whether it would be a good choice for us, I said, 'What a wonderful idea!' It had been so energizing to speak with this student and to hear about her career goals and all she wanted to accomplish with her life. It means something to be able to provide a little something to people who need it."



PHOTO BY TOM FULDNER

An annuity is an excellent way to guarantee income for a donor or family members while making a long-term commitment to Carolina and to public health. Annuities can generate as much as 7.5 percent annually.

For information about this and other ways to give to the Department of Health Behavior and Health Education or other departments at the School, contact Steve Couch, associate director of development, at (919) 966-0219 or [spcouch@email.unc.edu](mailto:spcouch@email.unc.edu).



PHOTO BY LINDA KASTLEMAN

Dr. Joe DeSimone (left) greets Pfizer representative Carmine Novembre.



## Pfizer supports Innovation Lecture

Pfizer knows about innovation. The pharmaceutical company has a leading portfolio of more than 30 products and medicines that support wellness and prevention, as well as treatments for cancer, cardiovascular diseases and a broad range of other therapeutic areas.

As a generous sponsor of the School's Innovation Lecture Series, Pfizer supported an April 3 talk by Joseph M. DeSimone, PhD, Chancellor's Eminent Professor of Chemistry at UNC, about "The Cost-Effective Design of Vaccines and Therapeutics."

"Pfizer is committed to finding sustain-

able solutions to the most pressing health-care challenges," says Carmine Novembre, MPH, CPH, MSc, of Pfizer's External Medical Affairs. "Vaccines play an essential role in disease prevention and preservation of public health, and we are proud to support the UNC Gillings School of Global Public Health in bringing together thought leaders to promote discussion and innovation in this important area."

Thanks to Pfizer and other donors for bringing learning opportunities to the School! Learn more at [www.sph.unc.edu/giving](http://www.sph.unc.edu/giving).



# UNC public health faculty and staff members conduct prevention research respected around the world.

## **Pictured on the front cover (l-r) are:**

**Jamie Bartram, PhD**, professor of environmental sciences and engineering and director of The Water Institute at UNC. Bartram focuses on connections between water (including sanitation and hygiene) and health, including ways to make drinking water safer and to cope with emerging issues such as water scarcity and climate change. In the photo, he holds a container of the sort many women in developing countries use to transport (not always pristine) water to their households.

**Steven Marshall, PhD**, professor of epidemiology and interim director of the UNC Injury Prevention Center. Marshall's interests in sports medicine, occupational injury and violence have led him to study baseball and anterior cruciate ligament (ACL) injuries, deaths from violence, and prevention and management of concussions and occupational homicide. A New Zealander born, he's a Tar Heel at heart.

**Alice Ammerman, DrPH**, professor of nutrition and director of the UNC Center for Health Promotion and Disease Prevention. Ammerman explores how innovative clinical and community-based nutrition and physical activity intervention approaches reduce chronic disease risk, especially in low-income and minority populations. Her recent interests are school nutrition policy associated with childhood obesity and sustainable agriculture as it relates to improved nutrition. Kale, anyone?

**Herbert Peterson, MD**, Kenan Distinguished Professor and chair of maternal and child health and professor of obstetrics and gynecology at UNC's medical school. Through research, teaching and practice, Peterson bridges the gap between medicine and public health, working to prevent illness and improve the lives of mothers and children around the world, especially around reproductive issues.

## **On the back cover (l-r) are:**

**Sarah Strunk, MHA**, director of Active Living By Design (ALBD) at the School's N.C. Institute for Public Health and clinical instructor in the Department of Health Policy and Management. Under Strunk's leadership, ALBD collaborates with neighborhoods around the country to prevent obesity by developing programs that increase physical activity and bring attention to the importance of good nutrition. She stays fit by training for and running in marathons.

**Noel Brewer, PhD**, associate professor of health behavior and health education and director of Cervical Cancer-Free NC. Brewer educates women about the importance of regular screening; vaccination to prevent HPV, the virus that causes cervical cancer; and prompt treatment to prevent cervical cancer deaths. The colorful letters, H-P-V, are in his office to remind him about the focus of his important work.

**Kurt Ribisl, PhD**, professor of health behavior and health education and director of the UNC Coordinating Center in the Cancer Prevention and Control Research Network at UNC's Center for Health Promotion and Disease Prevention. Ribisl aims to decrease tobacco-related cancer deaths through regulation of illegal sales of cigarettes to minors, especially online. He also has designed innovative applications of information technology to promote healthy behaviors and has developed community-based cancer prevention and control interventions. He holds one of the nine graphic labels approved by the U.S. Federal Drug Administration for use on cigarette packaging beginning September 2012.

**Tom Fuldner** photographed the panoramic cover.







UNC

GILLINGS SCHOOL OF  
GLOBAL PUBLIC HEALTH

*The UNIVERSITY  
of NORTH CAROLINA  
at CHAPEL HILL*

CAMPUS BOX 7400  
CHAPEL HILL, NC 27599-7400

Nonprofit  
organization  
US postage  
**PAID**  
permit #177  
Chapel Hill, NC

