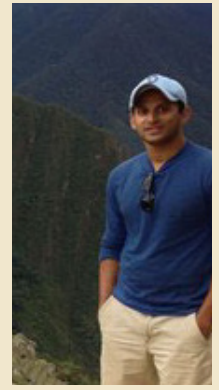


EPISODE



Department of Epidemiology | Gillings School of Global Public Health | The University of North Carolina at Chapel Hill | June 2016

Letter from the chair

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In this issue of the newsletter, we focus on the exciting and impactful work of faculty members, postdoctoral fellows and students working in the infectious diseases program in the Department of Epidemiology.

This program area is the largest of eight programs in the department. Its dramatic growth was initiated by Dr. David Savitz, who chaired the department from 1996 to 2005. Since becoming chair, I have recruited ten new faculty in this area. Our program is highly synergistic on multiple levels – within the department, and collaboratively with other departments in the UNC Gillings School of Global Public Health, the Division of Infectious Diseases in the School of Medicine, the Institute for Global Health and Infectious Diseases, the Carolina Population Center and the UNC Lineberger Comprehensive Cancer Center.

Our portfolio of research in infectious diseases is impressive. It is both domestic and global. The stories in this newsletter provide a sample of the breadth and impact of the program. We provide a glimpse into this work by featuring several global projects. These include MEASURE Evaluation, UNC Project-Malawi South Africa and laboratory research focused on coronavirus and malaria.

Our infectious diseases work engages UNC faculty, students and investigators from around the country and the world who tackle the major infectious diseases problems of our time – HIV, emerging infections (SARS, MERS), malaria, Ebola and human papillomavirus. The research spans surveillance, mechanism of transmission, treatment, prevention and susceptibility, as well as vaccine development and utilization.

This is just a sample, as we do not have room to cover all the phenomenal research and educational opportunities in this area. I very much hope you enjoy this issue and look forward to providing similar stories on our other exceptional programs in future issues.

As always, do not hesitate to contact me (andy_olshan@unc.edu) with questions, comments and any recommendations for future stories.

Best regards,

Andrew Olshan, PhD, Department Chair
Barbara Sorenson Hulka Distinguished Professor in Cancer Epidemiology



Dr. Andrew Olshan

Letter from the alumni co-chairs

Fellow epidemiology alumni,

As your alumni representatives, we are dedicated to providing a way for you to interact directly with fellow alumni, students and the Gillings School of Global Public Health Alumni Association.

The Association has rolled out *WellConnected*, our online alumni community, and it is attracting a lot of attention. WellConnected is an excellent professional networking resource and a great tool for keeping in touch – especially the sections for mentoring and sharing schoolwide and department news and events. Alumni can upload photos, post class notes, update individual profiles, search for jobs and find alumni with common interests.

We urge you to update your contact information in WellConnected as it is the best way to help the Department of Epidemiology stay in touch with you. Also, you can control which emails you receive from the UNC Gillings School using the subscription management function. The same username and password you used to logon to the previous alumni online directory still works. Take a minute to check it out.

In other news, an alumnus from the Department of Epidemiology has been selected to receive the 2015 H.A. Tyroler Distinguished Alumni Award. This award recognizes an individual who has notable breadth of work and has had a substantial impact on the field of epidemiology. All nominees made notable contributions to the practice of epidemiology and represented some of our excellent alumni. The 2015 award will be presented during the monthly seminar series on Wednesday, September 7, and we hope you can join us.

Each year, the Alumni Association also sponsors the Kaplan Student Publication Award for the best student publication of the year. This award, which showcases the high-quality publications from our current students, will be presented at the Tyroler lecture and i

The spring semester's career panel, sponsored by the Epidemiology Student Organization (ESO) and alumni, was well received, and we are planning another one for spring 2017. Panelists will include epidemiology graduates who represent diverse career paths – government (including the Epidemiology Intelligence Service), the research support industry, academia and other areas of practice. Once the academic year is underway, we will email alumni asking for suggestions about panelists. Please consider volunteering to be a resource for current students and to engage with them on epidemiology careers and life after graduation.

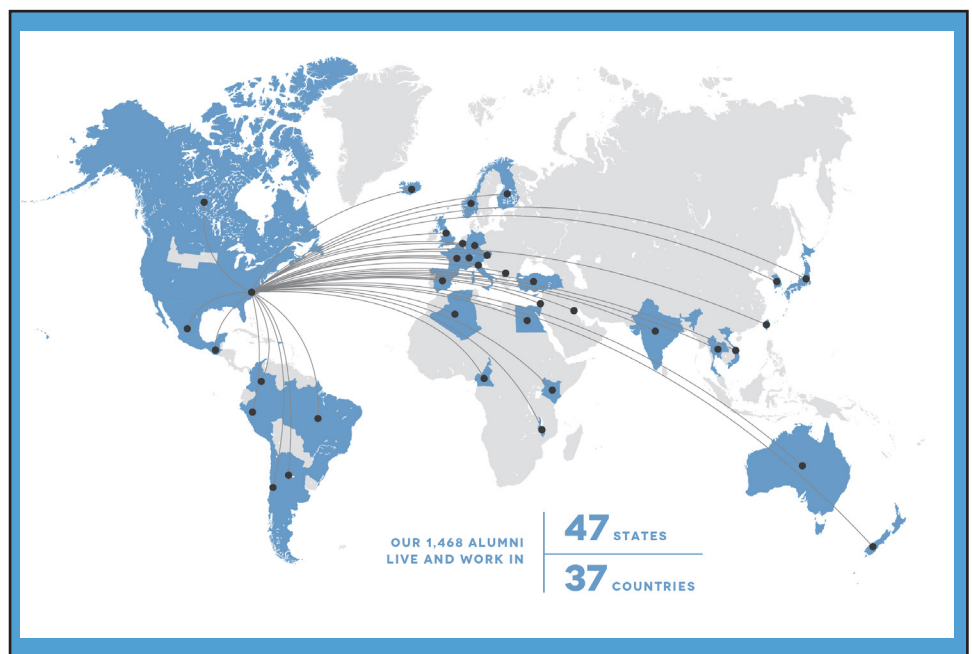
Finally, as our terms of service as your alumni representatives comes to a close, we invite anyone interested in serving as an alumni representative to contact us. Whether you are interested in supporting current activities – e.g. career and mentoring activities or the alumni award selection committee – or proposing new activities, there is ample opportunity to make a difference!

Sincerely,

Elizabeth Hodgson (MSPH, 2000; PhD, 2009)
m.elizabeth.hodgson@gmail.com

Thao Vo (MSPH, 2002; PhD, 2007)
phuong-thao.vo@merck.com

The map shows where our alumni live and work.



Catching up with alumni

Tell us about a recent exciting project?

Being selected as dean of the University of Kentucky's College of Public Health was a homecoming. I was born in eastern Appalachia, where we have the highest cancer and heart disease rates in the country. I have had a successful career as a National Institutes of Health (NIH) researcher, department chair and president of the American Heart Association, and I wanted to bring all I had learned throughout my career to have an impact upon the health of people in Kentucky. I am starting a Center for Population Health, where I will be bringing together our extension services, health departments, hospitals and other groups that focus on the determinants of health to find solutions that address the health disparities in Appalachia and Kentucky.

What was it like to be an epidemiology student at the UNC Gillings School?

My three years at UNC in the doctoral program were the most transformative of my life. I was lucky to be in a cohort of especially innovative scholars who were willing to tackle hard issues and professors who were quite happy to engage with us to solve problems. The faculty members were amazing; while there were many doctoral students, we always had access to our professors. We started the Women in Epidemiology monthly discussion series, and women on the faculty hosted us in their homes. With Dr. Al Tyroler and fellow student Sara Ephross, we started the Future of Epidemiology seminar series, which explored the parameters of the field and considered where modern epidemiology was headed. While we created these opportunities, it was truly the faculty's receptivity to partnering with us as students that provided the truly rich and transformative environment at UNC.

What advice do you have for current and future students?

Embrace ambition: it really is OK to have big dreams. Know that your actions can change the world, and let knowing that give you the courage to step into those uncomfortable places where you might not yet have a solution, but you dare to take the next career step or challenge the status quo. Be fearless in asking for help when you really need it. Asking isn't a sign of weakness; it is a sign of strength, of courage and of faith in those who can help you. There are many public health needs, and epidemiologists have the scientific knowledge to bring solutions for these complex problems to life.



Donna Arnett (PhD, 1991) is dean of the College of Public Health at the University of Kentucky.

Tamera Coyne-Beasley, MD, MPH, FAAP, FSAHM, has been voted president-elect of the Society for Adolescent Health and Medicine (SAHM). She will serve in that capacity for one year and will then become president in 2017. The Society for Adolescent Health and Medicine (SAHM) is an international multidisciplinary organization committed to improving the physical and psychosocial health and well-being of all adolescents through advocacy, clinical care, health promotion, health service delivery, professional development and research. Dr. Coyne-Beasley will serve as president-elect for one year, beginning at the 2016 annual meeting and will then become president at the annual meeting in 2017.



Dr. Tamera Coyne-Beasley (MPH, 1997)

Faculty news



Dr. Christopher Baggett



Dr. Tania Desrosiers



Dr. Nora Rosenberg



Dr. Karin Yeatts

Appointments

Christopher Baggett, PhD – Baggett joined the faculty as a research assistant professor. He has strong credentials as a chronic disease epidemiologist. His research has focused on obesity and physical activity epidemiology, and his graduate assistantship included work on two school-based interventions designed to increase physical activity and reduce obesity in children. His further work has expanded his research interests into cardiovascular disease and pharmaceutical outcomes research.

Tania Desrosiers, PhD – Desrosiers joined the faculty as a research assistant professor. She is a perinatal epidemiologist and co-investigator with the North Carolina Center for Birth Defects

Research and Prevention. Her research focuses on identifying modifiable risk factors for birth defects, particularly occupational and environmental exposures.

Nora Rosenberg, PhD – Rosenberg joined the faculty as a research assistant professor. She is committed to reducing HIV incidence, supporting HIV care seeking, and promoting sexual health in areas with high HIV prevalence and pregnancy incidence. Her focus is on designing, developing and rigorously evaluating interventions to improve HIV outcomes. With experience and training as a behavioral scientist, she is well positioned to contribute to high-quality evidence-based interventions.

Promotions

Karin Yeatts, PhD – Yeatts was promoted to clinical associate professor. She focuses on respiratory disease and air pollution. She has led large interdisciplinary teams to investigate research questions related to three major themes – air pollution, climate-change-related health effects and respiratory disease.

Daniel Westreich, PhD – Westreich was promoted to associate professor. His research investigates the intersections of HIV with women's reproductive health and chronic disease. His work has elucidated relationships between pregnancy and response to antiretroviral therapy and methodologies to study hormonal contraception and HIV.

Awards



Dr. Daniel Westreich

Daniel Westreich, PhD, associate professor, received the 2014 Society for Epidemiologic Research's Brian MacMahon Early-Career Epidemiologist Award. This award is given annually to recognize early-career epidemiologists who already have made substantial contributions to the field and are poised to become future leaders in epidemiology. Westreich was appointed to the editorial board of *Epidemiology* and invited to serve as a section editor for *Current Epidemiology Reports*. He is associate editor for the *American Journal of Epidemiology*.

Stephen Cole, PhD, professor, received the 2015 American College of Epidemiology (ACE) Award for Outstanding Contributions to Epidemiology.



Dr. Stephen Cole

GIL Award – Beyond associations: causal inference

Stephen R. Cole, PhD, professor of epidemiology, and **Michael G. Hudgens, PhD**, professor of biostatistics, are the co-principal investigators of one of the four Gillings Innovation Lab (GIL) Awards for 2016. [To learn more, see the box below.]

The GIL Award, “Causal Inference Research Laboratory (CIRL),” will advance the field of public health by increasing our ability to draw conclusions about the effects of treatments or exposures on health outcomes from data. These data may come from randomized clinical trials or large observational studies. The GIL will focus in particular on big data and to what extent such data can be leveraged to draw causal inference about exposure effects.

Hudgens and Cole are excited about the ability of the lab to advance knowledge of researchers trying to understand causal relationships. The GIL is based on a mathematical framework that moves beyond recognizing associations in data sets, toward more accurately identifying causes. The project builds upon foundational work in causal inference at the UNC Gillings School that began in 2008 and was advanced in 2015 when the dean’s office and departments of biostatistics and epidemiology allotted physical space in Rosenau Hall to the lab.

Cole and Hudgens stress their vision of a lab based on partnerships that bring together experts in the spirit of equal intellectual contribution. Working

with them are: **M. Alan Brookhart, PhD**, **Jessie Edwards, PhD**, and **Daniel Westreich, PhD**, (epidemiology), and **Stephanie Wheeler, PhD** (health policy and management). To calibrate the goals of the Causal Inference Research Laboratory, Hudgens and Cole have established a four-member advisory board of extraordinary leaders in the field of causal inference.

In May 2017, the lab will host the annual Atlantic Causal Inference Conference here on the UNC campus. This prominent annual event draws about 150 researchers from around the world.

Cole and Hudgens expect the lab to foster development and promotion of the science of causal inference for the improvement of public health.

Gillings Innovation Lab (GIL) Awards are intended to stimulate rapid gains toward solving significant public health challenges through cutting-edge research, effective translation of interventions to high-impact settings, and innovative approaches to teaching and training. Many of the GIL Awards accelerate the move from discovery to practice, spark innovation in user-centered curricular innovation, engage interdisciplinary teams, and build linkages between community and clinical settings. Funding for the GIL awards is provided by the \$50 million Gillings gift. Read more at <http://sph.unc.edu/research/gil/>.



Dr. Stephen Cole



Dr. Michael Hudgens

Daniel Westreich, PhD, associate professor of epidemiology, received the New Innovator Award from the National Institutes of Health. The award is presented to scientists proposing highly innovative approaches to major contemporary challenges in biomedical research.

Westreich’s award, which includes a \$2.28 million, five-year grant, was presented for his proposal, “From patients to policy: innovative epidemiology for implementation science.”

“We proposed to innovate and extend epidemiologic methods to create usable tools for speeding the translation of scientific results of typical epidemiologic studies into public health policy,” Westreich said. “We plan to apply these tools to two specific problems in HIV – the impact of smoking among people living with HIV and how pregnancy and use of hormonal contraception affect women’s response to antiretroviral therapy.”

From patients to policy



MEASURE Evaluation



Dr. Jim Thomas

Photo by Alan Dehmer/
www.woodsedge.net.

The world generally agrees that strong health systems are essential to control infectious diseases, reduce health burden, achieve the 2030 Sustainable Development Goals and lift the quality of life for people around the world.

MEASURE Evaluation, a \$180 million project of the Carolina Population Center, works where epidemiology meets human systems: research to strengthen data collection and use, improved evidence-informed tools and methods, and increased country capacity to manage information and conduct rigorous evaluations.

This is a thoroughly modern concern. The world is small. People move about. The climate changes. Research helps describe relationships among diseases, people and systems. HIV and Ebola are prime examples. The Ebola epidemic in West Africa focused attention upon the devastating effects of health systems that don't work: disease surveillance breaks down, data are not analyzed and people die.

Toward the epidemic's end, MEASURE Evaluation took on addressing information challenges: assessing how to strengthen health systems in several countries, including Sierra Leone, Liberia and

Guinea. MEASURE embedded experts within largely non-functional systems to help overcome poor quality data, scant data transmission to a national system and even the absence of any official health information platform.

HIV, with effective antiretroviral therapy, is now like a chronic disease that responds to epidemiological research on human behavior and systems that exacerbate or mitigate its transmission. The seminal PLACE (Priorities for Local AIDS Control Efforts) method developed by **Sharon Weir, PhD**, research associate professor of epidemiology, and a fellow at the Carolina Population Center who works with MEASURE Evaluation, provides strategic information on infections that occur in sexual and injecting drug user networks. PLACE enables prevention strategies tailored to each and recommendations to address gaps in prevention. The method also helps countries extrapolate findings to calculate more precisely their overall HIV burden among key populations.

"I see many benefits from the relationship between MEASURE Evaluation and the epidemiology department," said Dr. Weir. "These include collaborative relationships with faculty in the department,



MEASURE Evaluation personnel review data from project activities.

engagement with students in the classroom, support from stellar students working as research assistants on PLACE studies and general guidance from the chair.”

Jim Thomas, PhD, associate professor in the department and project director for MEASURE Evaluation, also works in HIV. Thomas and colleagues published their analysis of whether referrals could be increased by strengthening networks in April 2016 in *Health Policy Planning*. They found the network density of referral connections increased by more than 50 percent over six months in the intervention network while decreasing over the same time in the control network.

A blend of classroom study and real-world work through the department is part of the appeal for **Lisa Albert, MS, MPH** is a predoctoral fellow with MEASURE Evaluation. Albert examines HIV prevention targeting orphans and vulnerable children. Her dissertation focuses upon adolescent women in South Africa, to understand whether orphan status affects HIV incidence and adolescent pregnancy. With MEASURE Evaluation, she has worked with survey tools and training manuals. “This,” she said, “has helped me understand – from an epidemiological perspective – the influence of individual, household, social and political factors that will help model the orphan status-HIV relationship and determine potential confounders and modifiers.”

Exploring the host pathogen interface

Timothy Sheahan, PhD, research assistant professor, is a microbiologist whose current research focuses upon the long-term goal of developing new antiviral therapies to treat and prevent coronavirus.

Coronaviruses have a proclivity to jump into new species to cause new disease. Both the SARS coronavirus and the MERS coronavirus emerged from bats – SARS in China, and MERS in the Middle East – to cause devastating respiratory infections in humans. With SARS, researchers saw a lack of pre-existing immunity, coupled with the air travel of infected persons fuel the rapid spread of the virus throughout the world. The emergence of SARS ushered in a new era in the spread of global epidemic infectious diseases. Therapeutic countermeasures to treat or prevent these new infections would provide a great benefit to global public health.

Sheahan, who works in the lab of **Ralph Baric, PhD**, epidemiology professor, brings together molecular epidemiology and molecular virology to reconstruct viruses found in bats. Because bats are reservoirs of novel coronaviruses with human epidemic potential, it is likely that future emerging

viruses also will come from bats. Sheahan and colleagues aim to assess the human epidemic potential of these viruses in the lab by studying their biology in human cells and mouse models of disease. They have developed a panel of genetically diverse coronaviruses of human and bat origin, and they use the panel to triage vaccine, therapeutic antibody and drug candidates. The goal is to develop broad antiviral therapies that most likely would protect against coronaviruses yet to emerge.

Many human viral diseases, including HIV, influenza and malaria, are thought to have originated in animals. There is an intimate and unpredictable overlap of human and animal ecologies that can cause viral diseases to “jump” from one population to the other.

Sheahan is working to develop therapies for potentially emerging viral diseases before they jump to human populations. “To diminish the global disease burden,” he said, “we must look beyond diseases that currently plague human populations and prepare now to prevent the emergence of novel diseases of the future.”



Dr. Timothy Sheahan

Student news

Forbes '30 under 30' list of rising stars



Dr. Mugdha Gokhale

Mugdha Gokhale, PhD, 2016 epidemiology alumna of the UNC Gillings School, was selected as one of *Forbes* magazine's "30 under 30" people to watch in health care. Magazine representatives screened more than 15,000 entrepreneurs, creative leaders and bright stars younger than 30, and selected 600 winners in 20 sectors, including art and style, sports, music, science, education, commerce and others, in addition to health care.

Gokhale provided the first evidence that the risk for pancreatic cancer was not elevated in patients taking a particular class of oral antidiabetics. Her discoveries alleviated previously raised concerns stemming from less rigorous study designs.

Malawi, the warm heart of Africa



Marie- Josèphe Horner

Marie-Josèphe Horner, doctoral student in the Department of Epidemiology, is spending the 2015-2016 academic year in Malawi, where students and faculty members in the department have been working since 1990.

Her words below are adapted from her letter, *Malawi, the Warm Heart of Africa*.

The opportunities offered to me through the UJMT Fogarty Global Health Fellowship and the Gillings School's Department of Epidemiology are unsurpassed.

My dissertation research on trends in HIV-associated cancers has brought me to Lilongwe, where I am living and working as a Fogarty Scholar during this academic year, but I first came to UNC Project-Malawi in 2013.

I recall talking with Irving Hoffman, U.S. Director of UNC Project-Malawi, about public health projects in Malawi some years ago. We traded stories, and he began to tell me about Dr. Satish Gopal, a recently arrived oncologist and the only medical oncologist in a country of 17 million.

Malawi faces an HIV epidemic with 10 percent to 11 percent prevalence and an enormous burden of HIV-associated cancers compared to more developed countries. With effective HIV treatment increasingly available in this part of the world, the high burden

of malignancies is now gaining increasing attention from researchers, public health officials and policy makers.

The work is academically stimulating, and as a graduate student, I find it so rewarding to collaborate with a multidisciplinary team of clinicians, laboratory scientists, biostatisticians and epidemiologists in our Malawi cancer studies. In these short three years, not only has research increased, local cancer advocacy groups have gained momentum and are making cancer issues more visible. Now cancer awareness is featured frequently in the local press. Times are changing for cancer in Malawi.

Malawi is called the Warm Heart of Africa, and I can see why. Its people are kind-hearted and friendly. I do sometimes miss the graduate student vibe of haunts in Carrboro.



Horner (right) is shown here with collaborators in Malawi.

Malaria in pregnancy

Jaymin Patel, PhD, 2016 epidemiology alumnus at the UNC Gillings School, worked with **Steven Meshnick, MD, PhD**, professor and associate chair, in UNC's Infectious Diseases, Epidemiology and Ecology Lab (IDEEL@UNC). Together, they studied the effects of malaria upon pregnant women and their fetuses. [To learn more about IDEEL, see the box below.]

Malaria caused by the parasite *Plasmodium falciparum* is one of the most common preventable causes of poor birth outcomes globally. The adverse effects of the malaria parasites on pregnancy are in part due to VAR2CSA, a parasite protein that enables the parasite to sequester in the placenta.

Patel is studying the protein's genetic variability and attempting to determine whether specific types are more pathogenic than others. His work on the variability also is helping the development of a vaccine. Patel's work uses an integrative approach – epidemiology, next-generation sequencing and population genetics.

After graduating from UNC with a Bachelor of Science in biology and environmental studies, Patel

lived, worked and volunteered with community-based health-care organizations in Uganda. He also volunteered with the health team of a nongovernmental organization working in urban slums in Ahmedabad, India.

While working in Uganda and India, Patel completed online UNC's Certificate in Field Epidemiology and decided to pursue a career in epidemiology. He received a Master of Public Health degree at Emory University and then returned to UNC to earn a doctoral degree.



Dr. Jaymin Patel

Infectious Diseases, Epidemiology and Ecology Lab at University of North Carolina IDEEL@UNC was formed in 2015 with a vision of improving the health of the poorest populations in the world by improving our understanding of the infectious diseases that impact them most. The lab is a platform to promote collaborative interdisciplinary research to tackle issues about how pathogens interact with human hosts.



Dr. Steven Meshnick

HPV vaccine effectiveness in Japan

Nadja Vielot, doctoral candidate in the Department of Epidemiology, is completing her dissertation research on the possible associations between human papillomavirus (HPV) vaccines and complex regional pain syndrome (CRPS) in adolescents. Vielot is guided by her academic adviser, **Jennifer Smith, PhD**, associate professor. Smith is a globally recognized expert in HPV and cervical cancer prevention.

Phase III clinical trial data and post-licensure surveillance demonstrate the human safety of HPV vaccines. Yet in Japan, more than 40 adolescent cases of CRPS, a peripheral nervous system disorder causing pain in the limbs, were reported by the Japanese media in March 2013 to be caused by HPV vaccination.

Public anti-vaccine sentiment was raised by activism on the part of the patients' families. Responding to public pressure, the Japanese government rescinded its national recommendation for HPV vaccination in June 2013.

Vielot's research relies upon mining health-care utilization databases to assess the safety of HPV vaccines, specifically electronic health records and commercial insurance claims. The results of this work could translate into improved and evidence-based recommendations for HPV vaccination. The findings have potential to rebuild trust in the safety of HPV vaccines in Japan and globally.



Nadja Vielot



Dr. Jennifer Smith

Herpes and uterine fibroids



Kristen Moore

Kristen Moore, doctoral student in the Department of Epidemiology, has research interests including infectious diseases and women's health. She received a predoctoral Intramural Research Training Award (IRTA) from the National Institute of Environmental Health Sciences (NIEHS). Moore's adviser is **Jennifer Smith, PhD**, associate professor.

Moore conducted research to see whether there is a connection between uterine fibroids – one of the most common gynecological conditions affecting women in their reproductive years – and herpes simplex virus-2. Her work provides the first analyses to investigate the relationship between a sexually transmitted infection and uterine fibroids using both an immunological measure of infection and ultrasound diagnosis of fibroids.

In her work, Moore analyzed data from the Study of Environment Lifestyle and Fibroids, a study of almost 1,700 African-American women in the Detroit area, conducted by Donna Baird, PhD, principal investigator at NIEHS. This dataset provides a standard and valid measure of the outcome with a large sample size. The researchers contracted with the Infectious Diseases Laboratory at Johns Hopkins University to perform serologic testing.

The analyses uncovered no evidence of an association between herpes simplex virus-2 and uterine fibroid presence, number, size or volume.

Vaccine effectiveness in the United States



Dr Ruth Link-Gelles

Ruth Link-Gelles, PhD, 2016 epidemiology alumna of the UNC Gillings School, is an epidemiologist with the bacterial Respiratory Diseases Branch at the Centers for Disease Control and Prevention (CDC) in Atlanta, Ga., where she studies *Streptococcus pneumoniae* vaccine effectiveness and group A *Streptococcus*. She will join CDC's Epidemic Intelligence Service in July 2016.

Under the direction of her adviser, Daniel Westreich, PhD, associate professor, Link-Gelles investigated the role of socioeconomic status (SES) in the validity of estimates of pneumococcal conjugate vaccine effectiveness (VE) in the United States.

Thirteen-valent pneumococcal conjugate vaccine was licensed for use in children in the U.S. in February 2010, and a post-licensure vaccine effectiveness (VE) study was initiated in 13 surveillance sites around the country shortly afterward.

Cases were identified through active surveillance. Controls were matched by age and zip code. Investigators used birth certificate and geocoding information to assess the role of SES in the study.

The investigators found small differences between enrolled cases and enrolled controls. However, these differences did not change the estimated VE, and the data supported the validity of published VE estimates.

Tiyani Vavasati (strong women) in South Africa

In 2015, **Stephanie DeLong, doctoral student**, and **Audrey Pettifor, PhD**, associate professor in the Department of Epidemiology, conducted Tiyani Vavasati, an educational empowerment intervention and pilot study in rural Mpumalanga Province, South Africa.

Tiyani vavasati is a local expression that means *strong women*. The phrase reflects the purpose of the intervention – to help young women address and respond in a healthy way to some of the challenges that make life difficult in this region (e.g., high prevalence of HIV, gender-based violence, few opportunities for educational or economic advancement, and male-dominant gender norms that limit women’s power and hinder their decision making).

More than 300 women ages 18 to 23 enrolled and participated in the study. All of the young women previously participated in the HIV Prevention Trials Network Study 068 (HPTN 068), more commonly known as The Conditional Cash Transfer Trial (CCT). [To learn more about the CCT, see the box below.]

Tiyani Vavasati’s study design is built upon CCT. The present study enrolled intervention women from



DeLong (right) poses with collaborators from Sonke Gender Justice, South Africa.

CCT, and these women were randomized to either receive or not receive the present study’s educational and empowerment intervention. However, women from the CCT control arm who were enrolled in the present study did not receive the training.

Training was held one day per week for four weeks. Each training day consisted of classroom sessions in the morning and field trips in the afternoon. Training modules focused upon self-esteem, goal setting, sexual/reproductive health, HIV, gender-based violence and financial education.

The project team evaluated Tiyani Vavasati using acceptability and feasibility assessments, in-depth interviews, process evaluation and baseline/endpoint quantitative surveys. Initial results showed the intervention to be acceptable and feasible among those young women who participated in the training. Analyses of the in-depth interviews, study implementation and quantitative surveys are ongoing.

Project collaborators included the MRC/Wits Rural Public Health and Health Transitions Research Unit (Agincourt) of the University of the Witwatersrand and Sonke Gender Justice, South Africa. The Rising Initiative at the Population Council provided funding for the study.

Data from this pilot will inform future initiatives to help young women in South Africa manage healthy transitions.

The Conditional Cash Transfer Trial (CCT) explored whether giving young women and their parents or guardians a total cash payment of approximately \$30 per month would decrease the number of new cases of HIV among the young women receiving it when compared with controls not receiving it. The cash payment was conditional upon school attendance.



Stephanie DeLong



Dr. Audrey Pettifor

Ebola vaccine development in Sierra Leone



Melissa Arvay

Melissa Arvay, doctoral student in the Department of Epidemiology, has worked as an epidemiologist with the Centers for Disease Control and Prevention (CDC) for the past twelve years.

During the Ebola outbreak that killed more than 11,000 people in 2015, Arvay worked with the CDC in an effort to test the safety and immunogenicity of an Ebola vaccine candidate. That effort, the Sierra Leone Trial to Introduce a Vaccine against Ebola (*STRIVE*), is a collaboration of the College of Medicine and Allied Health Sciences (COMAHS), the University of Sierra Leone, the Sierra Leone Ministry of Health and Sanitation (MoHS), and the U.S. CDC.

STRIVE is an unblinded, individually randomized study with a candidate Ebola vaccine, conducted in

five districts in Sierra Leone.

In Sierra Leone, Arvay was responsible for several aspects of setting up the laboratory component of the trial. Among her duties were working with international diagnostic laboratories to prepare them for the introduction of the vaccine trial, developing a specimen transport system, training locally hired staff and establishing standard operating procedures and lab manuals for specimen testing at the CDC lab in Bo. Bo is the second largest city in Sierra Leone and largest city in Southern Province.

“Helping to establish a clinical trial for a potential Ebola vaccine during the epidemic,” Arvay noted, “was the most timely and impactful work I’ve ever done.”

[Learn more about Sierra Leone Trial to Introduce a Vaccine against Ebola (cdc.gov/vhf/ebola/strive/qa.html)]



Melissa Arvay (right) poses with colleagues in Sierra Leone.

New staff

Andrea Carden, social research assistant
Kelly Musty, finance manager
Sarah Leist, postdoctoral associate
Brittany Bogle, postdoctoral scholar
Lauren Zalla, research associate
Whitney Ewing, research associate
Ellen Young, research associate
Sara Jones, project manager

Service milestones

Five Years

Martha Kepner
Trevor Scobey
Joy Kloetzer
Rebecca Rohde
Virginia Pate

Ten Years

Crystal Daniel

Fifteen Years

David Kleckner

Staff Excellence Award

When asked to describe Kim Ludwig, one of her colleagues summed it up this way: “Though she be humble, she be fierce.” Kim approaches every technical challenge with grace and calm, comes to every meeting prepared and engaged, and provides insightful, constructive feedback.

“A gem to work with,” as one nominator said, “Kim is effective, efficient and impactful.” Another colleague pointed out not only Kim’s willingness to step in to lead, but also her ability to learn “on the fly” and apply her new knowledge in leading others. Kim has the initiative and talent necessary to pull a team together and work toward a common goal. In summary, Kim is an extraordinary asset who exemplifies technical skill and leadership.



Kim Ludwig

Star Heel Award

Crystal Daniel was described as someone who would never say “I don’t know” and leave it at that. She always has a solution in mind and is ready to take action. She gently but firmly makes sure work gets done. Her attitude is a model for us all. If it’s broken, Crystal can probably fix it; if she can’t, she definitely will lead the way in making it happen.



Crystal Daniel

Valerie Hudock was called an “effective and compassionate leader” and “creative problem-solver” who takes responsibility while always having an open and positive attitude. Valerie has an ability to organize people and address important issues, all with a sense of humor that makes it enjoyable to work with her.



Valerie Hudock

Molly Wen was recognized as a dedicated worker who always makes sure that she has explored every angle to a problem to get the best answer. She does it with a smile and supportive attitude, Molly was described as someone who excels at teamwork, never complains about challenges or deadlines and is always willing to learn.



Molly Wen

Gifts to the department

(September 1, 2015 – March 31, 2016)

Stay Connected

Do we know how to reach you?

Please visit the Gillings School's *WellConnected* page to log on, explore the community and connect with alumni, students, and faculty and staff members.

The Department of Epidemiology welcomes and appreciates support from alumni, foundations, corporate donors and others. Your support helps us provide an outstanding education to our students and maintain a roster of brilliant and committed faculty. Your donation is greatly appreciated.

Jill J. Blacharsh
Mary T. Boatwright
William F. Boyer
Christine Branche (MSPH, 1985; PhD, 1988)
Joe M. Braun (MSPH, 2008; PhD, 2010)
Louise A. Brinton (MPH, 1973)
Greta A. Bushnell (MSPH, 2013)
Roger C. Byrd
Caleb's Feet Foundation Inc.
Lourdes Calvo
Douglas S. Campbell (MPH, 1985)
Daniel J. Caplan (PhD, 1995)
Terri A. Caplan
Richard A. Carter (MPH, 1967)
Luenda E. Charles (PhD, 2000)
Joann C. Cook
Ralph R. Cook
David H. Cooper
Aart J. De Geus
Angela M. DeVeough-Geiss (PhD, 2008)
Kimon Divaris (PhD, 2011)
Nancy A. Dreyer (MPH, 1976; PhD, 1979)
Melinda Eaton (PhD, 2010)
Charles Edelman
Sara A. Ephross (MSPH, 1989; PhD, 1994)

Paul J. Feldblum (MSPH, 1979; PhD, 1994)
Fidelity Charitable Gift Fund
Jo-David Fine (MPH, 1992)
Lisa Fredman (PhD, 1986; MSPH, 1984)
GlaxoSmithKline Matching Gifts
Geraldine G. Guess
Minghua He
Penelope P. Howards (PhD, 2004)
Barbara S. Hulka
Christine M. Hunt
Vernon B. Hunt (MPH, 1975)
Joan C. Huntley (MPH, 1962)
Barbara J. Ingram
Robbin F. Itzler
Mary E. James
Huntley Charitable Foundation
Esther M. John (MSPH, 1988; PhD, 1991)
Thomas V. Jones (MPH, 1990)
Mattias Jonsson
Michele Jonsson Funk (MSPH, 2000; PhD, 2003)
Mary B. Joyner
William H. Joyner
Deanna L. Kepka



Here are scenes from the Winter Music Fest, a tradition of the Department of Epidemiology. Do you see anyone you know?

Joanne Klevens (PhD, 1995)
 John Kuntz
 Clara N. Lee
 Linda C. Levitch
 Duanping Liao (MPH, 1991; PhD, 1994)
 Wendy Liebling
 Chris B. Lillie
 Laura R. Loehr (PhD, 2008)
 Stephen P. Loehr
 Stephen W. Marshall (PhD, 1998)
 William C. Miller (MPH, 1997)
 Maria C. Mirabelli (PhD, 2005)
 Patricia G. Moorman (MSPH, 1989; PhD, 1994)
 Hal Morgenstern (PhD, 1978)
 Mark E. Moss (PhD, 1994)
 Heather Munroe-Blum (PhD, 1983)
 Network for Good
 Lisa T. Newman (MSPH, 1988)
 Andrew F. Olshan
 Lou D. O'Shea
 T. Michael O'Shea (MPH, 1990)
 Edith T. Peterson
 Kathryn M. Rose (MSPH, 1990; PhD, 1994)
 David S. Rubenstein
 Patricia D. Saddier (MSPH, 1992; PhD, 1997)
 Leah B. Sansbury (MSPH, 2002; PhD, 2004)
 Sara M. Sarasua (MSPH, 1990)
 Anna P. Schenck (PhD, 1997)
 James S. Schenck
 Maria I. Schmidt (MPH, 1981; PhD, 1983)
 Marion E. Schoenbach
 Victor J. Schoenbach (PhD, 1979)

Schwab Charitable
 Carl M. Shy
 Eve Shy
 Ilene C. Siegler (MPH, 1988)
 Silicon Valley Community Foundation
 Lola V. Stamm
 Paul E. Stang (PhD, 1991)
 Gregg M. Stave (MPH, 1990)
 Leslie T. Stayner (PhD, 1989)
 Cheryl R. Stein (MSPH, 2002; PhD, 2006)
 Robert W. Steiner (MPH, 1988; PhD, 1998)
 David S. Strogatz (MSPH, 1978; PhD, 1983)
 Jane S. Stutts (PhD, 1996)
 Monroe J. Stutts
 Sharon Sullivan
 The Sanofi Foundation for North America
 Rosalind P. Thomas
 Karen Thompson
 Theodore T. Thompson (MPH, 1994)
 Barbara J. Tyroler
 William J. Tyroler
 Edward H. Wagner (MPH, 1972)
 Patricia H. Wagner
 Wake Forest Baptist Medical Center
 Anna E. Waller
 Ganesa R. Wegienka (PhD, 2002)
 Carolyn A. Williams (PhD, 1969)

New Resource

Be sure to check out the video and audio recordings of interviews with some of our illustrious former chairs and faculty members at epidemiologyweb.unc.edu/epidemiology-interviews



Graduates and members of the faculty assembled for the Gillings School's 2016 commencement ceremony on May 7.



Students admitted to the Gillings School for the 2016-2017 academic year enjoyed "Experience Gillings!" in April.



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Addresses for all faculty and staff members are on our [faculty and staff page](#).

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