

sphere

FALL 2012 Boston University School of Public Health



TO EMILY ROTHMAN, THIS IS A TEACHABLE MOMENT

A BUSPH Professor Finds the Public Health Implications in Dating Violence

A CONFOUNDING PUBLIC HEALTH CRISIS IN NICARAGUA
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CRACKING THE GENETIC CODE OF LONGEVITY
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Dear Friends,

As I begin my twenty-first year as dean of Boston University School of Public Health, I am proud of our many accomplishments and excited by our numerous opportunities.

The University launched its first-ever comprehensive fundraising effort, the Campaign for Boston University, in September. The School of Public Health is committed to being an active and successful participant in this campaign. Over the next five years, we will raise funds to support student scholarships, faculty development, teaching, and research that will directly advance the School's mission both at home and abroad. To date, we have secured more than 50 percent of the gifts and pledges needed to meet our goal of \$40 million. The generosity of many individuals, foundations, and corporations has contributed to our impressive fundraising momentum.

Funds for student scholarships are a very high priority for the campaign. So, as part of our campaign launch, we were pleased and proud to announce two new \$100,000 student scholarship funds. Joel Lamstein, president of John Snow, Inc. and a member of the SPH Dean's Advisory Board, has established the Lamstein Family/JSI Endowed Scholarship, and I have established the Robert F. Meenan Endowed Scholarship Fund (see page 25).

During the University-wide campaign kickoff weekend, BUSPH's signature event was the thirteenth annual William J. Bicknell Lecture, which is named for and funded by a very important figure in the history of the School who, sadly, passed away earlier this year (see page 4). This fall's Bicknell program offered a provocative presentation on chronic pain, patient care, and drug controls here and around the world with keynote speaker Noreen Clark, PhD, director of the Center for Managing Chronic Disease at the University of Michigan (see page 5).

This fall we also achieved remarkable enrollment results with our flagship MPH program, bringing in the largest and most qualified class in the School's history while simultaneously improving our admission metrics (see page 3). Students are choosing to attend BUSPH in increasing numbers because we offer them an increasingly strong educational experience.

Finally, I am proud to report that the University has accepted an invitation to join the very prestigious Association of American Universities (AAU), a select organization that includes the top 60 research universities in the United States (plus two in Canada). I have no doubt that the substantial growth in BUSPH's funded research program helped the University achieve AAU membership.

I want to thank all the BUSPH constituents, including alumni, friends, faculty, and advisory board members, who continue to support our efforts. Your enthusiasm, wisdom, and philanthropic support are vital to our School's positive impact on the health of vulnerable populations at home and abroad, and to our continuing growth as a leader in public health education and research.

Sincerely,
Robert F. Meenan, MD, MPH, MBA

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Boston University School of Public Health

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WRITE TO US

Sphere is produced annually for the alumni and friends of Boston University School of Public Health. Comments or suggestions? Send all correspondence to Editor, *Sphere*, Communications and Marketing Office, Boston University School of Public Health, 715 Albany Street, E-518, Boston, MA 02118; or email us at sphere@bu.edu.

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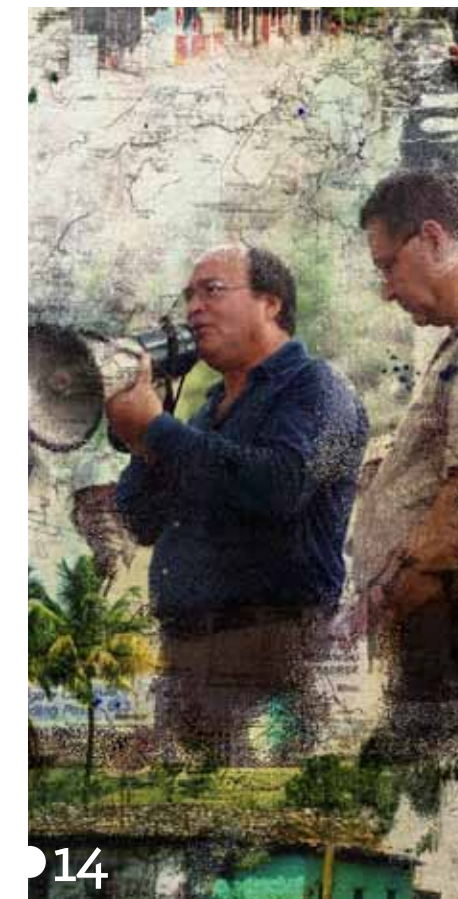
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inside

FALL 2012



WHY I GIVE



“Boston University School of Public Health means so much to me.”

Whether I was in a small class of 10 or one of the large core classes, I always felt valued. The faculty and staff not only taught well, but as importantly, they mentored.

Every year I contribute to the BUSPH Annual Fund because I am grateful for the education and life experience I received while in school. As a student, I benefited from financial aid, partially assisted through Annual Fund support. I am passionate about helping the School give others the opportunity to attend. Giving to the Annual Fund is one important way I can continue to give back, help other students and, in the process, support the School.

As a group, public health professionals are typically passionate people—it’s what drives us to do the type of work we do each day. If alumni think in a comprehensive way about the education they received from the School and how they can continue to benefit through alumni networking and resources, I would encourage them to consider making a gift to the Annual Fund.”

Julie

Please visit www.sph.bu.edu/giving, or call 617-638-4658 or email sphdev@bu.edu to learn more about giving.

Julie Wisniewski (SPH'00), Marketing Product Manager, Maternal & Child Health at Boston Heart Diagnostics

Julie has been a member of the Annual Fund Leadership Giving Society for more than five years. A former BUSPH Alumni Board president, Julie currently serves on the Boston University Alumni Council.

MIKE SAUNDERS

→ [FRONTLINE]

[SCHOOL NEWS]

BUSPH Shares \$10 Million Grant to Study Relationship of HIV Infection and Alcohol Use

BUSPH RESEARCHERS WILL be part of a team using a \$10 million grant to conduct a five-year study on the consequences of alcohol use on HIV and AIDS.

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) awarded the funding to the team to conduct and disseminate interdisciplinary research aimed at understanding how alcohol use impacts people infected with HIV (human immunodeficiency virus) and to develop interventions to reduce alcohol use and alcohol-related consequences in that population.

The project—dubbed URBAN ARCH, for Uganda Russia Boston Alcohol Network for Alcohol Research Collaboration on HIV/AIDS—is a collaboration between the BU School of Medicine (BUSM), Boston Medical Center (BMC), BUSPH, the University of California-San Francisco, and the University of Pittsburgh. Debbie M. Cheng, ScD, professor of biostatistics at BUSPH, is among the lead investigators.

The URBAN ARCH consortium will incorporate the expertise of researchers in epidemiology, internal medicine, addiction medicine, HIV/AIDS, psychiatry, and biostatistics, under the leadership of principal investigator Jeffrey Samet, MD, professor of medicine at BUSM and chief of internal medicine at BMC.

The consortium’s studies will build on three existing HIV-infected cohorts from Boston, Uganda, and Russia with distinctive alcohol consumption patterns. The two international groups will allow study of clinical issues that would not be possible in the United States, researchers say.

Research has shown that people with alcohol-use disorders are more likely than the general population to contract HIV. Similarly, HIV-positive people are more likely to abuse alcohol at some time during their lives. Individuals who abuse alcohol are more likely to engage in behaviors that place them at risk for contracting HIV, such as injection drug use and high-risk sexual behaviors.

According to Samet, even after more than three decades of the HIV/AIDS epidemic, many questions remain about how alcohol use affects clinical manifestations of HIV infection and how approaches beyond antiretroviral treatments might mitigate alcohol-related harms.

“Such questions about the complex relationship between HIV and alcohol need to be addressed in order to accelerate the development of more effective treatments,” Samet says.

People with alcohol-use disorders are more likely to contract HIV.

→ Lisa Chedekel

BUSPH Welcomes Largest-Ever Incoming MPH Class Student Quality Enhanced



SCORES	FALL 2011	FALL 2012
GRE VERBAL %	68.9	69.5
GRE QUANT %	54.5	60.5
GRE ANALYTICAL WRITING %	56.2	61.0
GPA	3.4	3.4

[SCHOOL NEWS]



Professor William Bicknell 1936–2012

WILLIAM J. BICKNELL, the outspoken, inspirational professor of international health who sought to “make people hurt less,” died June 5 after a long battle with cancer. He was 75.

Bicknell was the founder and chair emeritus of the Department of International Health at the School of Public Health and helped grow the department into a globally recognized leader. He held a dual appointment at the BU School of Medicine as a professor and director of international health programs in the Department of Family Medicine.

During a varied career that spanned five decades and merged disciplines of practice and policy, Bicknell held posts as the first medical director of the U.S. Job Corps; Massachusetts Commissioner of Public Health; acting director of the Neighborhood Health Center Program for the U.S. Office of Economic Opportunity; and medical director of health and retirement funds for the United Mine Workers of America.

“Global health is now a major focus of Boston University, and none of that would have been true without Bill Bicknell,” says Dean Robert Meenan. “The mission of the School is to prioritize the disadvantaged, underserved, and vulnerable, and Bill embodied that mission in his life’s work.”

Diagnosed in 2010 with metastatic lung cancer that eventually spread to his brain, Bicknell detailed his fight with methodical precision in blog updates and in a poignant final lecture, “Lessons Learned from a Life in Public Health,” a no-holds-barred personal recap of his experiences furthering public health in 62 countries.

After coming to BU in 1978, Bicknell focused on establishing the curriculum for the nascent Department of International Health and later established the Center for International Health, which eventually expanded into the current Center for Global Health & Development.

Kate Mitchell (SPH’09), a former student and teaching assistant of Bicknell’s, recalls that he began each semester with his unique definition of public health: “The art and science of deciding who dies, when, and with what degree of misery.” But Bicknell also said public health could easily be defined as “the art and science of deciding who lives a longer, less miserable, happier life.”

→ Lisa Chedekel and Mike Saunders



Bicknell Lecturer Noreen Clark: Pain Is a Public Health Problem

Noreen Clark, PhD, co-chaired a 2011 Institute of Medicine (IOM) committee that examined the extent of pain in America and called for a “cultural transformation” in the way chronic pain is managed. Clark, director of the Center for Managing Chronic Disease at the University of Michigan, brought her call for coordinated, national efforts to address pain and its management to BUSPH as the 2012 William J. Bicknell lecturer. She talked with *Sphere* about the public health implications of pain.

SPHERE: YOUR IOM REPORT FOUND THAT MORE THAN 100 MILLION AMERICANS EXPERIENCE CHRONIC PAIN, AT A COST OF UP TO \$635 BILLION A YEAR—MORE THAN THE AMOUNT SPENT ON CANCER, HEART DISEASE, AND DIABETES COMBINED. IS PAIN AN EPIDEMIC?

Clark: I personally never expected our study to illustrate such a dramatic prevalence of pain and the high costs associated with it. We undertook an exhaustive review of the research literature and heard testimony from over 2,000 people, and we found that the magnitude of pain in America is staggering. We found that pain could be better managed, and also that very particular groups experience more pain and worse outcomes than others—that is, minority people, women, and the elderly. So the

disparities we worry about in many areas of health care are very much evident in pain.

WITH THOSE KINDS OF COSTS, HOW CAN YOU SAY WE’RE NOT PAYING ENOUGH ATTENTION TO PAIN?

We’re not paying the right kind of attention. When we think about relieving pain in America, we have to think about a cultural transformation. Essentially, the problem of alleviating pain requires not simply a medical conception—diagnosing a problem, giving someone a treatment, and the problem is solved. It requires an understanding of how complicated pain is. Pain is a biologic, psychological, and social problem. It can’t be dealt with as a public health issue unless it’s recognized as the complicated, multifaceted problem it is.

WHY ARE THERE SO MANY DIFFERENCES IN THE WAY CLINICIANS TREAT PAIN? SOME ARE AGGRESSIVE IN PRESCRIBING OPIOIDS, WHILE OTHERS AREN’T. WHY?

The issue of opioids is very complicated and deserves a study of its own. But our findings suggest that it is more likely for clinicians to undertreat pain than to overtreat it. Part of the problem is that many clinicians fear the censure of medical and drug authorities, and they just don’t want to get into problems of treating patients with opioids. On the other hand, there are certainly physicians who overprescribe.

There are two related points here. One of the problems we identified is that the health system often overlooks other means of treating pain—physical therapy, rehabilitation, meditation, and moderate forms of exercise. They’re not reimbursed, and they are overlooked. That needs to change.

The other issue is with education about pain. We found that in most medical schools, pain is allotted a very small window in the training program, and it’s mostly oriented to the use of pharmaceuticals. Most clinicians understand pain as associated with a condition they recognize, but pain that becomes a parallel condition to a chronic disease, or where the source is not identified, that concept is missing.

WHEN YOU TALK ABOUT A CALL TO ACTION ON PAIN, WHAT DO YOU MEAN?

Besides improvements in education and more comprehensive approaches to pain control, we need a national effort to understand pain. From a public health perspective, some countries are far ahead of us. In places like Australia, for example, the public health system mounted a national strategy to prevent and manage back pain.

We look at cancer as a public health problem. We look at asthma as a public health problem. We look at stroke as a public health problem. We need a national effort, involving a wide range of stakeholders, to understand pain as a public health problem. → Lisa Chedekel

[SCHOOL NEWS]



Sophie Godley (left) and Lauren Wise

Two BUSPH Professors Receive National ASPH/Pfizer Awards

Sophie Godley, a clinical assistant professor of community health sciences, and **Lauren Wise**, an associate professor of epidemiology, each won national teaching and research honors last fall from the Association of Schools of Public Health (ASPH).

Godley received the 2011 ASPH/Pfizer Early Career in Public Health Teaching Award, which recognizes one full-time public health faculty member from an accredited school of public health who is in the early stages of his or her career and notable for teaching excellence.

"Sophie is a skilled educator and mentor," says Lisa Sullivan, BUSPH associate dean for education and chair of biostatistics, who nominated Godley for the award. "Her extensive experience working in public health departments and organizations inspires her to teach theory—but more importantly, how to apply theory to solve public health problems."

Godley, who has worked in the public health field since 1993, joined the BUSPH faculty in July 2010. She was previously an adjunct faculty member in the Department of Community Health Sciences.

Wise was selected to receive the 2011 ASPH/Pfizer Young Investigator's Award for Distinguished Research in Public Health. The award honored an outstanding research paper published in 2010 by a young investigator who was a full-time faculty member from a full ASPH-member, CEPH-accredited school of public health.

"Dr. Wise is a young investigator who has, in a very short time, established herself as a world expert on the epidemiology of uterine leiomyomata, commonly known as uterine fibroids," says Roberta White, professor and chair of environmental health. She nominated Wise's paper, "A prospective study of dairy intake and risk of uterine leiomyomata."

The paper, based on data from more than 22,000 premenopausal participants from the Black Women's Health Study, documented an inverse association between dairy consumption and risk of uterine fibroids.

Wise is co-investigator of the Black Women's Health Study, a nationwide prospective cohort study of more than 59,000 African American women, and the Smart Gravid Study, an Internet-based prospective cohort study of fertility in Denmark. → **LC and MS**



Professors Weigh Supreme Court Decision in *The New England Journal of Medicine*

Three BUSPH professors have argued in *The New England Journal of Medicine* that the U.S. Supreme Court's decision upholding the core of the Affordable Care Act (ACA) gives the federal government "remarkably broad" powers to tax people "for doing nothing," while also limiting its power to impose conditions on federal funding that is offered to the states.

Wendy Mariner, Leonard Glantz, and George Annas, professors of health law, bioethics & human rights at BUSPH, wrote that instead of attempting to limit the federal government's power to regulate interstate commerce, the Supreme Court "seems to have expanded federal power to tax people for 'doing nothing,' the primary fear that brought this case to court."

"It was not surprising that the Chief Justice found no Commerce Clause authority for the individual mandate. The surprise was that he saved the individual mandate by determining that it was a constitutional tax," Mariner and her colleagues wrote. The Court's rationale was broad enough to

permit Congress to tax people for not buying broccoli, the professors said, in essence regulating people "in a way the Court said was beyond the power of Congress to regulate 'inactivity' under the Commerce Clause."

Beyond allowing the government to tax for inaction, the "most unsettling" aspect of the Court's decision, according to the professors, was its conclusion that the federal government could not pull existing Medicaid funds from states that failed to comply with new rules expanding Medicaid eligibility. They questioned the Court's characterization of the federal government's power to withhold federal funding to non-compliant states as "coercive."

"The Court had never before found a federal spending program to be coercive, and most scholars believed coercion to be an illusory standard that the Court would not apply," they wrote. "It is remarkable that the Court could conclude that states have no choice but to accept the new Medicaid conditions with their Medicaid funding." → **LC**

MIKE SAUNDERS



Simon Honored with Inaugural Knox Professorship

PROFESSOR JONATHON SIMON was named the first Robert A. Knox Professor, a newly created endowed professorship designed to support a Boston University faculty member who has an outstanding record of scholarship and teaching in public health and management.

The professorship was established through a \$2.5 million gift from The Robert and Jeanne Knox Foundation, a philanthropic entity cofounded by BU Board of Trustees Chair Robert Knox (CAS'74, GSM'75) and his wife Jeanne Knox, who heads the BU Parents Leadership Council.

School of Public Health Dean Robert Meenan says, "I know that I speak for the entire School in expressing our appreciation to Bob and Jeanne Knox and their family for this outstanding gift, which will support a leading faculty member in our community."

Simon is chair of the Department of International Health and professor of international health at BUSPH, and he also directs the BU Center for Global Health & Development (CGHD). He has worked in more than 20 developing countries, with extensive experience in Africa and South Asia. For much of the last decade, Simon has been part of a CGHD team evaluating the social and economic impact of the HIV/AIDS epidemic in developing countries. He has also maintained an active role in the center's ongoing child survival research work.

"I am honored to be named the inaugural holder of the Robert A. Knox Chair at Boston University," Simon says. "I deeply appreciate that Bob and Jeanne Knox have made such a generous commitment to promoting the Center for Global Health & Development and the School of Public Health in our efforts to address challenging global health problems." → **LC**





FINDING THE TEACHABLE MOMENTS

By delving into sensitive topics such as group sex, alcohol abuse, and pornography, Emily Rothman has unveiled the public health implications of dating violence and associated behaviors.

→ BY LISA CHEDEKEL PHOTOGRAPH BY CYDNEY SCOTT

When R & B star Chris Brown was charged with beating up his girlfriend, the singer Rihanna, Emily Rothman saw a teachable moment in the national headlines.

Citing a survey of 200 Boston youth by the city's public health commission that showed nearly half believed Rihanna had brought the problem on herself, Rothman sounded the alarm.

"Boston parents need to be aware that our children are facing a crisis," the associate professor of community health sciences at the Boston University School of Public Health said publicly at the time. "The consequences of dating violence can be severe and long lasting. Teen dating violence victimization can be a precursor to adult violence victimization, and can increase risky behaviors during adolescence."

Rothman also saw a research opportunity; with coauthors from BUSPH, she led a first-of-its-kind study that examined media coverage of the Chris Brown–Rihanna incident. The study, published in the *Journal of Health Communication*, concluded that while the majority of articles about the couple's conflict contained antiviolence messages, most also communicated mixed messages about abuse, framing it as romantic, normal, or even the victim's fault.

Probing the public health implications of dating violence and associated behaviors has become Rothman's trademark in her eight years as a teacher and researcher at BUSPH.

Since 2004, she has coauthored more than 30 papers that have examined the links between alcohol use and dating abuse; the incidence of coercive sexual experiences for teenage girls; health outcomes for gay and lesbian adults who come out to their parents; and perceptions among intimate partner abusers about the effects of their violence on their children.

Recently, Rothman has ventured into a largely uncharted—and somewhat controversial—territory: pornography. She has launched a project examining the impact of porn exposure on the sexual risk behavior of low-income minority youth, a topic she says she stumbled upon during a dating-violence study, when exposure to pornography emerged as one of the indicators for coercive group-sex experiences.

"We didn't go looking for it—it just sort of popped out as a strong predictor," Rothman explains. "It wasn't a eureka moment, but it presented a eureka hypothesis, that pornography may have some relevance to risky sexual behavior. Are young people, and the way they treat each other as sexual partners, influenced by their exposure to porn? Is it affecting their sexual behavior? It seems to me something we ought to look at, now that pornography is so widely available on the Internet."



Rothman acknowledges that group sex, dating abuse, and porn are not typical areas of scientific inquiry, but all have potentially important public health implications, including mental health, violence, and disease. Hers is a practical approach: You can't design interventions to reduce risk without first understanding the roots of the risky behavior.

She feels fortunate that her interests now have traction in public health.

"Domestic violence wasn't really discovered as a public health issue until 1995, so it's still an emerging field of study," Rothman says. "I've always been fascinated by trying to see inside the minds of people who are controlling—or being controlled by—their partners."

"I've been lucky," she adds. "I happened to catch the wave."

RIDING THE WAVE

Rothman became interested in public health after graduating from Wesleyan University in 1994. While living in Vermont, she worked in a domestic violence shelter and in a batterer intervention program, where she counseled men who had abused their partners. The dynamics of intimate partner violence intrigued her.

RICARDO MARTINS

Another study found that drinking-related attitudes and behaviors were predictive of dating violence, while still another found that adolescents who had been physically violent toward a sibling or peer were more likely to perpetrate dating violence.

What to do with that information?
“We wanted to find ways to intervene,” Rothman says. With collaborators at Boston Medical Center, Rothman is now testing an intervention on adolescents who come into the emergency department and screen positive for alcohol use and dating violence. The intervention—a 30-minute motivational interview—seeks to break the cycle of drinking and abuse and “prevent these kids from using violence in their future intimate partnerships,” she says. The study will follow participants over time to see if their behavior changes: “The hope is, if we can get to them early, even in a half-hour conversation, we might be able to set them on a different path.”

Through a separate grant, Rothman also is tracking about 80 young adults who have perpetrated violence against a partner. For three months, the participants report in daily on how much alcohol and marijuana they use and whether they have been abusive towards partners. That study aims to further explore the link between substance use and dating violence.

“Causality, while it looks highly probable, hasn’t been conclusive,” Rothman explains. “This is another way of gathering evidence.”

Deborah Bowen, assistant dean for research at BUSPH and former chair of the School’s community health sciences department, praises Rothman’s tireless pursuit of the public health implications of intimate partner violence, in ways that have practical use.

According to Bowen, Rothman’s research is notable for its powerful combination of rigorous design and measures with a direct application to public health practice. “She is engaged with difficult-to-reach populations, raising important, community-pertinent

questions. Her innovation lies in the idea that one can combine solid research with relevant questions,” Bowen says.

FOLLOWING THE CLUES

Like a detective working all angles of a crime, Rothman has followed her research interest in sexual behavior and violence along winding detours and into dark alleys.

In a 2011 study, she and several colleagues reviewed and analyzed volumes of research into sexual assault victimization involving lesbian, gay, and bisexual (LGB) individuals. They reported that lesbian and bisexual women may be up to three times as likely as

“I’ve always been fascinated by trying to see inside the minds of people who are controlling—or being controlled by—their partners.”

heterosexual women to report having been sexually assaulted in their lifetime, and that gay men were about 15 times as likely as heterosexual men to report the same.

Rothman says the results of that study underlined the importance of medical providers, teachers, and parents being aware that a high percentage of LGB people may have experienced sexual violence. That understanding, she says, “can be critically important for survivors’ well-being.”

Rothman has examined other experiences of LGB adults, including whether they received support from their parents after coming out to them. A 2012 study she led found that the incidence of mental health and substance abuse problems was significantly lower for LGB adults who reported receiving positive support from their parents than for those who did not. Again, a lesson: Positive support can have health implications.

Rothman also has explored the sexual experiences of adolescent girls, including the incidence of those who have engaged in multi-person or group sex, either consensual or forced. In a highly publicized 2011 study, she and her coauthors found that 1 in 13 teenage girls in their sample, ages 14 to 20, disclosed having had a group-sex experience, with more than half reporting that they were pressured to engage in the situation.

Buried in the data was the finding that girls who had seen pornography in the past month were nearly five times as likely as those who had not seen pornography to report having had a group-sex experience. Rothman had not anticipated such a correlation.

“We were getting responses like, ‘He watched porn and then turned around and made me do things I didn’t want to do,’” Rothman says. “Those kinds of responses are hard to ignore.”

Curious about the finding, Rothman followed the trail. She is now at work on a study that will attempt to gauge both the prevalence of porn exposure among low-income minority youths and the associations between that exposure and sexual risk behaviors. She notes that most past research on youth porn exposure predates the advent of the hard-core, violent pornography that is now widely available on the Internet.

“As far as I know, there are no empirical data on if, how, and to what extent hard-core porn exposure may be influencing the sexuality of low-income, urban youth,” she explains. “This would be a first step in understanding the meaning that youths place on porn and its relevance to their sexuality.”

Rothman acknowledges that her foray into pornography has raised a few eyebrows among fellow researchers and associates, some who have questioned whether she is following an “anti-porn” or “sex-negative” agenda. Her response comes fast and firm:

“We were getting responses like, ‘He watched porn and then turned around and made me do things I didn’t want to do.’ Those responses are hard to ignore.”

“I am not anti-porn,” she says. “If it’s ethically produced, ethically sourced, and viewed voluntarily by adults, it’s fine with me. My question is with adolescents—what kind of porn are they seeing, and how is it affecting their sexual behavior?”

Rothman—who is married to a Boston public high school teacher and has two young daughters—did not expect that she would have to proclaim herself “not anti-porn” when she entered the public health field a decade ago. But if public health is going to keep up with the times, she insists, public health researchers have to keep up with rapidly changing social behavior. She credits mentors at the BU Schools of Medicine and Public Health—Robert Vinci, Richard Saitz, Jeffrey Samet, and Edward and Judith Bernstein, among others—with encouraging her to follow her sometimes unconventional research trajectory.

“I don’t go out looking for these topics,” she says. “But if they emerge from the research and have public health implications, of course I’ll take them on. Why wouldn’t I? This is what I wanted to do—take on sexual behavior and intimate partner violence in a public health setting. I’m in the right place at the right time.”



“we had no idea what the cause was”

BUSPH researchers spent three years investigating a mysterious kidney ailment striking thousands of manual laborers in northwestern Nicaragua. In the process, the team helped shine a light on a multinational epidemic.

BY LISA CHEDEKEL, ELANA ZAK, AND MEAGHAN AGNEW ILLUSTRATION BY BRIAN HUBBLE

It was a compelling public health mystery: thousands of people in northwestern Nicaragua were dying from chronic kidney failure, and no one knew why. “The disease was essentially a death sentence once you got it,” says BUSPH researcher Daniel Brooks, an associate professor of epidemiology, adding, “We don’t often have public health epidemics where we really have no idea what the cause is.”

So in June 2009, Brooks led an interdepartmental team of BUSPH researchers to two regions of Nicaragua—Chinandega and León—to investigate the phenomenon. It would be the first of more than a dozen trips to the area in pursuit of what Brooks calls “the most meaningful work” he’s ever undertaken. It would also help to spotlight a multinational epidemic that continues to draw in researchers from around the globe.

A Growing Impetus

According to the Pan American Health Organization, the number of annual deaths from chronic kidney disease more than doubled in Nicaragua in a decade, rising from 466 in 2000 to 1,047 in 2010. Put another way, the rate of incidence of chronic kidney disease there was more than 10 times greater than in the United States.

Chronic kidney disease, or CKD, can lead to end-stage renal failure that can only be treated with dialysis and—eventually—a kidney transplant, treatment options rarely available in low-income countries. Previous research had

found that the deaths were more common among men than women and that the disease was striking substantial numbers of people as young as 20 or 30 years old, an atypical profile for CKD. In fact, in some municipalities, 30 percent of the men showed signs of the disease. And the repercussions were enormous. Sick workers were unable to provide for themselves and their families; if death prevailed, those same families were left without critical familial support.

Among those with the disease were a large number of former agricultural workers at a sugarcane plantation owned by the largest employer in the area, Nicaragua Sugar Estates Limited (NSEL). A group of former NSEL employees alleged that the company was exposing workers to something that was causing the epidemic, a claim disputed by the company. The workers formed a group, ASOCHIVIDA, and lodged a complaint in 2008 with the World Bank’s Office of the Compliance Advisor/Ombudsman (CAO). (The World Bank’s private sector arm, IFC, had provided a \$55 million loan to the sugarcane operation in 2006.)

In December 2008, ASOCHIVIDA and NSEL agreed to initiate a mediation process managed by CAO in order to address the concerns raised in the complaint. One of the main priorities of both parties was to figure out what was causing so many cases of CKD, so they solicited proposals from groups of scientists to conduct research on the causes of the epidemic. BUSPH’s submission was selected by consensus from a pool of nine applicants.

“I was elated and I was daunted,” remembers Brooks. “Even then, I don’t think I had a picture of how it would unfold over time.”

More Questions Than Answers

Brooks assembled an interdisciplinary BUSPH team that included Ann Aschengrau, professor of epidemiology; Michael McClean, associate professor of environmental health; Madeleine Scammell, assistant professor of environmental health; Kate Applebaum, assistant professor of epidemiology; Bruce Cohen, adjunct assistant professor of epidemiology and director of research and epidemiology at the Massachusetts Department of Public Health; and James Kaufman, MD, a renal specialist at the BU School of Medicine. Also working with the team was Daniel Weiner, a renal specialist at Tufts University School of Medicine, and Oriana Ramirez, a specialist in preventive medicine studying at Universidad Autónoma de Madrid.

“Often our research projects are designed to add to a body of knowledge, but our [proposed] work in Nicaragua was different in that we were responding to a specific public health emergency,” McClean recalls. “That aspect made the pending work especially exciting, but also carried with it a greater sense of responsibility.”

The team connected with Juan José Amador, a preeminent public health professional in Nicaragua with an international reputation. Amador, says Brooks, “wanted to devote himself to finding the cause of this epidemic, which was devastating areas of his country.”

“This may be the most challenging, and also the most meaningful, work I’ve undertaken.”

For his part, Amador was pleased that a prestigious scientific panel was about to investigate this problem in Nicaragua. “I felt an ethical obligation to support the staff in all ways possible,” he says.

But the team was starting with a *tabula rasa*.

“The things that we know cause chronic kidney disease—such as diabetes and high blood pressure, which are the main causes worldwide—didn’t seem to be going on there,” Brooks says. Thus, the researchers were on the hunt for “some factor that has not been linked to chronic kidney disease before.”

After an initial scoping study to develop a research strategy, the BUSPH team spent the next six months in northwestern Nicaragua, studying everything from the NSEL work processes to the agrichemicals used on crops to the quality of the local drinking water.

The initial goal was straightforward—to determine whether an agrichemical was responsible for the epidemic.

But the team’s initial findings proved frustrating: The causes of CKD in the western zone of Nicaragua remained unknown, as did whether there was a relationship between the disease and work practices at the sugarcane growing and production facility. These initial results were met with frank disbelief from the former workers, who expressed their frustrations at a series of contentious community meetings.

“They feel it absolutely was brought about from working at this company and even more specifically from exposure to agrichemicals,” says Brooks. “Their hope was we would come down, take their blood, measure the soil and water, and in six months we would be able to confirm that. It was a bitter pill for people who were suffering economically and felt they did not have that much longer to live. Those were some of our most difficult moments.”

Eventually, however, the dialogue participants agreed to continue supporting research activities, and in January 2010, CAO prepared the terms for further research by the BUSPH team.

A Broader Trend, a Developing Theory

As the team continued its work, it did so with the knowledge that a bigger epidemic could be at play.

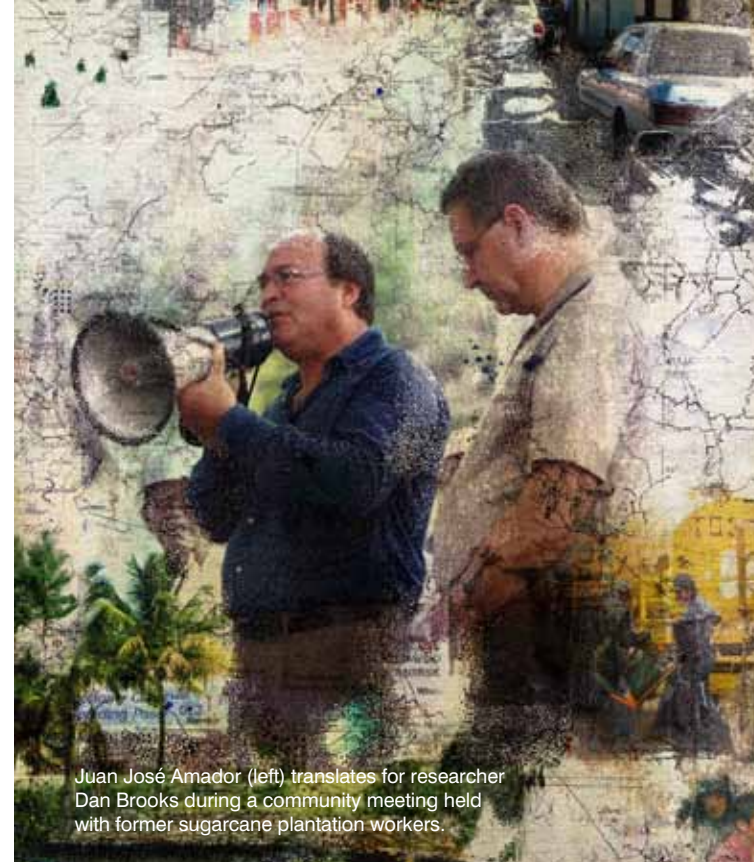
“I wish there were an ‘aha’ moment, but [the knowledge] came up on us a bit at a time,” says Brooks. A study published in El Salvador some years prior had identified a similarly troubling trend among manual laborers. (Indeed, the country has the highest mortality rate in the world due to CKD.) In 2010 the Associated Press reported that El Salvador’s health minister, Dr. Maria Isabel Rodriguez, appealed for international help, saying the epidemic was undermining her country’s health systems.

Via the Internet, the BUSPH team also connected with other researchers around the globe, unearthing both published and unpublished studies in Mexico, Costa Rica, Sri Lanka, India, and Egypt that also indicated higher-than-normal rates of kidney disease in workers.

And Brooks doubts the epidemic ends there. “I think that this is under-identified around the world,” he says. “We don’t know how big it is.”

But the team did have a new theory as to its cause.

“What I remember is flying down on the first trip,” Brooks recalls. “Dan Weiner, one of our kidney specialists, was sitting in the seat in front of me, and all of a sudden he turns around and says, ‘I have an idea of how all of this could happen.’ Thirty minutes later, he had



Juan José Amador (left) translates for researcher Dan Brooks during a community meeting held with former sugarcane plantation workers.

drawn out a biological mechanism on a napkin, and we’ve been using that idea ever since.”

Weiner’s thought was that the combination of strenuous manual labor and high ambient temperatures—commonalities in the affected regions—was making the kidneys more vulnerable to other agents.

“It made sense that, given the strenuous work in very hot conditions, likely resulting in volume depletion, that the kidney could suffer repeat injuries—or that this volume depletion could be a susceptibility factor that made the kidney very vulnerable to other toxins,” Weiner says. “This sort of mechanism, whether from acute kidney injury itself or another insult superimposed on susceptible kidneys, would result in progressive scarring and the clinical picture of kidney failure that we’re seeing in Nicaragua.”

Interest in dehydration is not new—local researchers in Costa Rica and Nicaragua first began to investigate it as a cause in 2006—but it has recently gained traction across research teams. In a 2011 *BBC* article, Professor Aurora Aragon of Nicaragua’s National University in León expressed her support for the theory.

“This way of working forces people to do more than they are able to do, and this is not good for their health,” she said.

Underscoring the point, McClean led an analysis of samples collected from workers and found that miners, port workers, and construction workers in Nicaragua—all unexposed to agrichemical agents—were falling ill, too. Moreover, when his team tested the blood and urine of sugarcane workers with different duties, they found more kidney damage in the workers who worked outside, in the most strenuous jobs.

“Workers performing the high exertion tasks in the hottest environments experienced the most damage, whereas

the workers who apply agrichemicals were among those who experienced the least damage,” McClean says.

An Ongoing Investigation

Brooks cautions that much more research is needed. “People have been looking for an answer for a number of years, and they haven’t found one,” he says. “It’s still very much a mystery.”

And thus, the BUSPH team continues its work.

“Given that we feel pretty strongly that it’s likely to be more than one thing [causing the epidemic], we’re also looking at other causes that would work synergistically with heat stress,” Brooks says. “We might not be looking for one thing, but a combination of things.”

Current agents being investigated include anti-inflammatory medicines, particular infectious diseases, naturally occurring arsenic, and genetic susceptibility.

In 2011, the team returned to conduct qualitative interviews with physicians and pharmacists to assess their perceptions regarding renal disease in the region; the same year, a pilot cohort study assessed the feasibility of conducting a complete retrospective evaluation of the relationship between work practices at ISA and CKD. The team has also investigated evidence of sub-clinical kidney damage among adolescents in different areas of Nicaragua.

Even as the search for answers continues, the investigation itself has had a positive impact on the affected communities in Nicaragua. A hospital with renal dialysis capacity is being built in one of the hardest-hit areas through a public-private partnership. High-visibility media coverage has led to increased attention from governments and international development and global health organizations, which will hopefully translate to increased medical interventions for victims of the disease and research dollars for teams throughout Central America.

Most recently, the BUSPH team was awarded a grant in partnership with the National University of León to build an occupational and environmental health research center in northwestern Nicaragua, where training and resources can create a cadre of researchers from Nicaragua and throughout Central America. The center will address the CKD epidemic and a broad range of health issues that face workers and communities in that region.

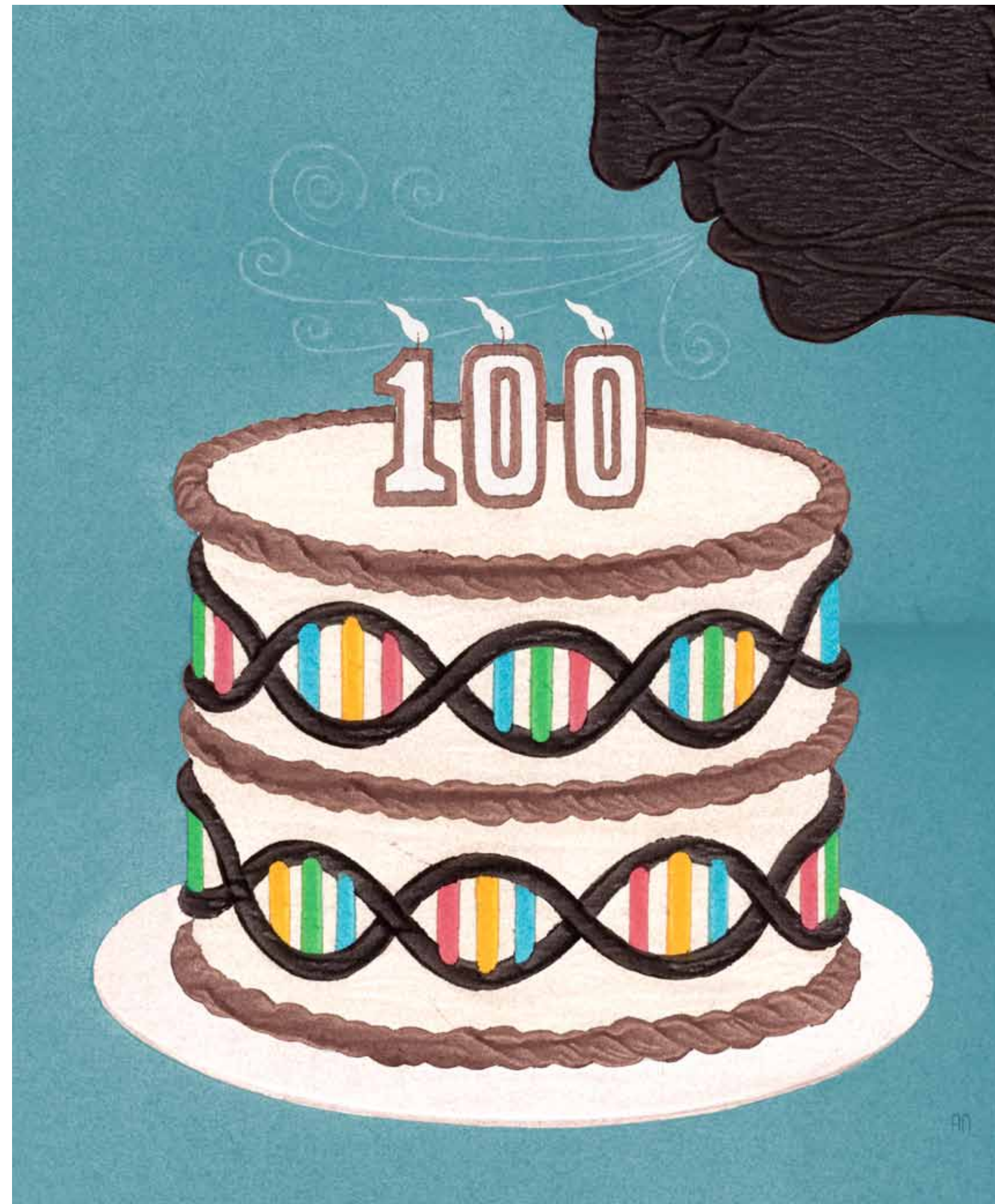
Meantime, Brooks is hopeful that definitive answers will eventually emerge.

“This may be the most challenging, and also the most meaningful, work I’ve undertaken,” he says. “It’s not often that we have a chance to do work that could have such a profound and direct impact on people’s lives, and that requires us to use all our training and experience as both scientists and public health professionals.”

A LONG AND HEALTHY LIFE

TRIPLE-DIGIT BIRTHDAYS INSPIRE AMAZEMENT, ADMIRATION, AND ONE ESSENTIAL QUESTION: WHAT'S THE SECRET? A BUSPH RESEARCHER IS PLUMBING THE GENETIC DEPTHS OF CENTENARIANS.

BY MIKE SAUNDERS ILLUSTRATION BY ALEX NABAUM



HAVING ENDURED WARS, ENJOYED BOOMS, AND LIVED THROUGH VAST CHANGES IN TECHNOLOGY, POPULAR CULTURE, POLITICS, AND JUST ABOUT EVERYTHING ELSE, THE VERY OLD HAVE MUCH TO SAY. →

AND PAOLA SEBASTIANI IS LISTENING. THE BUSPH professor of biostatistics is part of a team of researchers trying to decipher the secrets of extreme life spans in people living past age 100.

Exceptional longevity is not a random roll of the dice, they say, but a combination of discrete genetic factors that may provide fundamental protection from the typical ailments that shorten life spans.

The central question for researchers, Sebastiani says, is the same one that many of us have when we encounter extremely old people: How do they manage to get so old? “To get to these very old ages, there must be a strong genetic component,” Sebastiani says. “There are some people who can live to their late 80s just based on their lifestyle, but to reach very old age, you have to have good genes.”

To some degree, the exceptionally old have a bit of good fortune on their side for getting the hereditary bonus of good genes. But might their experience benefit the rest of us? According to Sebastiani, that’s the other part of the question.

“If we understand the genes that allow these people to live healthy and to very old ages, can we use this information to help other people? The goal isn’t to become immortal or to live to be very, very old,” she says, “but to live healthy. How can you maximize your life span and compress the morbidity until the very end of your life?”

For most of the past decade, Sebastiani has considered these questions as part of her collaboration with the New England Centenarian Study (NECS) at Boston Medical Center. Directed by gerontologist Thomas Perls, NECS is the world’s largest comprehensive study of centenarians, with a database of about 2,000 subjects aged 89 to 119.

“I was shocked when I first started working with the study because I thought that when you hit the mid-70s or 80, you’re done. That’s it. And then I started meeting these incredible people,” Sebastiani recalls. “I met someone 110—the oldest person I met was



Sebastiani: “To get to these very old ages, there must be a strong genetic component.”

114—and it really opens your mind when you see this incredible history.”

The life histories of the centenarians in the study fall predictably into several similar patterns. Someone who lives to a very old age tends not to have heart disease or diabetes, and they’re physically stronger than their age might suggest. They usually keep their full mental faculties for longer than most and delay dementia until they are very old, often more than 100.

An examination of their lifestyles tends to read like the common-sense health advice dispensed by any doctor: Don’t drink to excess, don’t smoke, and keep the weight down (although a few extra pounds on women may convey a slight benefit). Also, stay active with lots of walking and other moderate exercise, with the emphasis on moderate.

According to Sebastiani, this prescription for healthy living plays an important role in public health regardless of what genetic advantages someone may enjoy: “If you live healthy, you can age in a good way, you can still play a role in society, and you can feel good about yourself for much longer.”

But it’s at the genetic level that centenarians start to reveal their real secrets, Sebastiani says.

“When you look at the genetics of people who live very long lives, they don’t lack disease-associated variants. If you compare them to healthy people of average age,

genetically they’re no different, but they’re enriched with something that protects them. In terms of the science, it means a whole different way of looking at aging.”

Teasing out the mysteries of this genetic enrichment drives Sebastiani’s research.

In 2009, Sebastiani and Perls coauthored a study of genetic signatures of exceptional longevity. In an analysis of genetic samples from 1,055 centenarians and 1,267 controls, the team used several different DNA microarrays, or DNA chips, to identify differences in single-nucleotide polymorphisms (SNPs). These infinitesimal variations in a DNA sequence can be used to distinguish the subtle differences, or commonality, among individuals.

The results of their genome-wide association study showed that an extremely long life could be predicted with a high degree of accuracy—about 77 percent—by using a genetic model that searched for a defined set of 150 SNP associations. The team submitted the study in late 2009 to the influential peer-reviewed journal *Science*, which published it online in July 2010 to a flurry of mainstream media attention.

After some concerns arose among geneticists familiar with specific quirks of one of the microarrays used to test the samples, the team voluntarily retracted the study and added additional validation measures to eliminate bias between array tests and to increase the confidence in the eventual analysis.

“We acted right away,” Sebastiani says. “As soon as we had criticism, we brought

independent people on board to review what we had done.”

Using a model similar to the one they initially developed, the researchers were able to predict exceptional longevity with 60 to 85 percent accuracy, depending on the average age of the study subjects. The age-dependent increase in the model’s sensitivity reinforced the team’s central hypothesis of a strong genetic component in the extended life spans of centenarians. The corrected study was published in January 2012 in *PLOS ONE*, an open-access, peer-reviewed journal.

Sebastiani is planning to examine the immediate family members of centenarians next, to see how their genetic makeup might enable them to be healthier for longer, delaying the illness and frailty of old age until the very end of their long lives.

This “compression of morbidity” is the focus of a study currently being written and reviewed, possibly for publication in early 2013.

“About 25 percent of people develop signs of heart disease by the age of 65,” Sebastiani says. “Among centenarians and their offspring, the age of heart disease onset is delayed by 20 years. What is happening with these people?”

One suggestion is that the children of centenarians may live in a healthy environment and have an example of healthy aging, adding psychological reinforcement to their existing good genes. The reasoning, Sebastiani says, is that the offspring of centenarians—“we call them the kids, but they’re in their 80s!”—likely have a positive view of aging and will live longer and healthier lives.

In the meantime, the biostatistician relishes the qualitative element of her research work.

“As a computational person, you typically deal with data. You never deal with people,” Sebastiani says. “[It’s nice] to get to meet the participants and hear all their personal stories.”

BUSPH Awarded \$1.7M Grant to Test Treatment for Gulf War Illness



THE U.S. DEPARTMENT of Defense has awarded a BUSPH research team \$1.7 million over four years to test whether intranasal insulin helps to alleviate Gulf War illness (GWI), a multi-symptom condition marked by fatigue, headaches, joint pain, and memory loss and other cognitive problems.

Headed by Kimberly Sullivan and Maxine Krengel of the BUSPH Department of Environmental Health and Julia Golier of the Mount Sinai School of Medicine in New York City, the research team will evaluate the efficacy of two different doses of intranasal insulin on memory and attention, overall physical health, mood, and other symptoms associated with chronic multi-symptom illness among Gulf War veterans.

“To date, there are no treatments that have been shown to significantly improve the health or cognitive difficulties of GW veterans,” says Sullivan, a BUSPH research assistant professor. “Gulf War veterans have been waiting for 20 years for a treatment for their multi-symptom illness. There is an urgent need to establish effective, safe, and cost-effective treatments now.”

The treatment trial comes more than three years after a committee of scientists and veterans issued a comprehensive report asserting that Gulf War illness is a “real condition” affecting at least one in four U.S. veterans of the 1991 Gulf War. The group, of which BUSPH Environmental Health Chair Roberta White is the scientific director, cited numerous studies showing that the condition was linked to exposure to toxic chemicals, including pesticides and pyridostigmine bromide (PB), a drug given to troops to protect against nerve gas exposure.

As many as 175,000 to 210,000 Gulf War veterans are believed to have experienced the pattern of symptoms that include joint and muscle pain, and sleep, memory, and gastrointestinal problems.

Sullivan, who is associate scientific director for the congressionally directed Research Advisory Committee on Gulf War Veterans Illnesses, says she hopes that the study will be a step towards a cure for affected veterans. “Gulf War veterans have been ailing for many years without effective treatments for their illness,” she says. “We believe we have identified a novel treatment for GWI that we hope will provide them relief.” → **LC**

Socioeconomic Status Linked to Risk of Obesity in African American Women

Socioeconomic status across one’s lifetime is related to weight gain and risk of obesity in African American women, according to a new study led by researchers from BU’s Slone Epidemiology Center.

The researchers followed 23,601 African American women under the age of 55 from 1995 to 2009. The women were participants in the Black Women’s Health Study, a follow-up study of the health of African Americans conducted by the center.

The researchers found that women whose parents had not completed high school gained more weight and more often became obese in adulthood than women who had a parent with a college degree. However, “if the woman herself had completed college, she was not at higher risk of obesity regardless of her parents’ educational level,” explains lead author Patricia Coogan, senior epidemiologist at Slone and associate professor of epidemiology at BUSPH.

According to the researchers, lower levels of parental and current education were associated with greater weight gain and higher obesity risk. Over a lifetime, women at the highest level of current education—college graduates—had the lowest weight gain and risk of obesity, regardless of their parents’ educational achievement.

“Our results suggest that women who were disadvantaged in childhood, as indicated by low levels of parental education, have greater weight gain as adults, but this tendency can be largely overcome if the woman herself has a high level of education,” Coogan says. → **LC**

Searching for the Health Impact of High Levels of Oil Contamination in Nigeria

VAST OIL DEPOSITS that enrich Nigeria are both a blessing and a curse for its people, who have endured decades of water, soil, and air contamination as the unwanted by-products of oil wealth.

“I’ve worked on contaminated sites for more than 20 years, and I’ve never seen anything on the scale that I saw in Nigeria,” says Donna Vorhees, an adjunct assistant professor of environmental health at BUSPH. “They’re not just exposed—these people are actually living in petroleum.”

Vorhees was part of a multinational United Nations Environment Programme team that examined more than 200 locations and conducted detailed soil and groundwater contamination investigations at 69 sites in the Ogoniland region of Nigeria. More than 4,000 samples were analyzed, including



water from 142 groundwater-monitoring wells and soil from 780 boreholes.

While oil processing in Ogoniland may have slowed, Vorhees says lingering problems contribute to ongoing contamination, including poor waste disposal, pipeline fires, illegal refining, failed pipes, and damaged wellheads.

One air-monitoring site was set up on the banks of an oil-blackened waterway that reeked of volatile compounds strong enough to sting the researchers’ eyes after a few minutes. “After cupping my hand and smelling it, and feeling almost knocked backward by the fumes, I looked over to see a man calmly brushing his teeth with it,” Vorhees says.

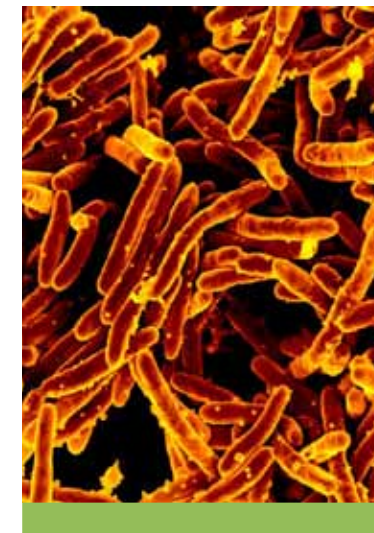
Water samples from that well later showed benzene levels of 9,000 micrograms per liter. The U.S. drinking water standard is 5 micrograms per liter.

Vorhees and the team have proposed a new study that would set a baseline for health data to enable more accurate longitudinal data collection. In this way, Vorhees says, “What we saw in Nigeria could possibly help us understand what’s happening in other areas affected by oil spills.” → **MS**

Shorter TB Treatment Found to Be as Effective as Standard Regimen

According to a study coauthored by BUSPH researcher C. Robert Horsburgh and published in *The New England Journal of Medicine*, a three-month course of two medications is as effective in preventing tuberculosis (TB) as the standard regimen of administering one of the medications for nine months.

“Our study showed that directly observed, once-weekly therapy for latent TB infection with rifapentine plus isoniazid for three months was as effective as self-administered daily



isoniazid for nine months, with the rate of tuberculosis in the combination-therapy group approximately half that in the isoniazid-only group,” says Horsburgh, co-senior author of the study and chairman and professor of epidemiology at BUSPH.

Researchers from the BU School of Medicine assisted with the study, funded by the Centers for Disease Control and Prevention. The findings show that the combination-therapy group had higher treatment completion rates and a comparable toxicity profile to that of the isoniazid-only group, with lower rates of adverse events.

“This simple, effective new regimen has a potential public health benefit,” the research team concluded.

Horsburgh and other TB experts are part of a large scientific consortium working to promote studies on drug efficacy and treatment shortening for drug-resistant tuberculosis. Tuberculosis results in nearly 2 million deaths annually worldwide. More than 2 billion

people are infected with *Mycobacterium tuberculosis*, which can lead to active tuberculosis disease. → **LC**

[RESEARCH NEWS]

Partnership Launches \$6.6 Million Study of Fertility-Enhancing Treatments

A PARTNERSHIP BETWEEN BUSPH and Michigan State University has resulted in an ambitious \$6.6 million research collaboration that BUSPH childbirth experts hope will shed light on how assisted reproductive technology influences health outcomes for women and children.

Gene Declercq, professor of community health sciences at BUSPH, and Barbara Luke, a reproductive epidemiologist at Michigan State, helped forge the partnership, termed the Massachusetts Outcomes Study of Assisted Reproductive Technologies. The partnership is funded by a five-year grant from the National Institute of Child Health and Human Development.

Declercq was one of the founders of a Massachusetts database that contains

all Massachusetts birth certificates, fetal death, and hospital discharge records since 1998. The longitudinally linked data allow researchers to follow children from birth through early childhood. Luke is a research consultant to the Society for Assisted Reproductive Technologies, which collects detailed clinical data on assisted reproduction from clinics across the country, including seven in Massachusetts.

Luke and Declercq realized that if they could merge their two datasets, it would be possible to develop the most comprehensive study of assisted-reproduction outcomes yet devised.

The research team—which now spans six institutions—has begun an in-depth investigation of how in vitro fertilization

procedures affect health outcomes for women and children.

Prior studies have shown that assisted reproductive technology (ART) increases the risk of preterm delivery, low birth weight, and birth defects, but it remains unclear whether the higher risks are fueled by the incidence of multiple pregnancies, the older average age of mothers, or infertility factors separate from the ART procedure.

“The tricky thing is, ART is bound up with a lot of other issues,” says Declercq. “We’re not just looking at a ‘yes’ or ‘no’ as to whether ART increases risk. If there are risks, we want to know what they are, what causes them—and is there something that can be done better?” → LC

Global Study Supports Home-Based Pneumonia Treatment

Pneumonia is the leading cause of death worldwide for children under 5 years old, but a breakthrough study coauthored by a BUSPH researcher found that community health workers can effectively treat severe pneumonia in a child’s home.

The study, based in the Haripur district of Pakistan, found that home-based treatment of severe pneumonia by a corps of “lady health workers” armed with training and five days’ worth of oral amoxicillin reduces treatment delays and failures compared to the standard practice of administering one dose of antibiotics and referring a child to a hospital or clinic for intravenous drugs.

“This really is the capstone in a 10-year portfolio of research in which we were trying to provide a scientific rationale for community-based case management of pneumonia,” says study coauthor Donald Thea, a researcher with BU’s Center for Global Health & Development and professor of international health at BUSPH.

The study compared outcomes between 1,857 young children treated at

home with oral amoxicillin for five days and 1,354 children in a control group who were given one dose of cotrimoxazole and referred to the nearest health center. Researchers looked at treatment failure at six days, as well as relapse within 14 days.

With failure defined as the continued presence of fever or lower chest in-drawing on Day 6, the results were clearly in favor of home-based therapy, which had a 9 percent failure rate, versus 18 percent.

Thea says he hoped the study would help to sway the World Health Organization (WHO) to revise its recommended hospital-referral guidance for severe pneumonia to allow for community management of the disease in areas where there are “trained and well-organized community health workers,” as there are in parts of Pakistan.

“Changing the standard of care will be hugely beneficial, especially for the many children who are referred to hospitals but never reach them,” Thea says. → LC

BUSPH Announces Two New Endowed Scholarships; Pledges Advance Campaign

TWO ENDOWED scholarships of \$100,000 each were announced at the BUSPH Dean’s Advisory Board meeting in September.

Board member Joel Lamstein, president and co-founder of John Snow, Inc. (JSI), a Boston-based public health management consulting and research organization, established the Lamstein Family/JSI Endowed Scholarship to help deserving BUSPH graduate students.

“Global health recently has gained wide popularity in academic settings and has attracted terrific students throughout the world. We are pleased to contribute to BUSPH to help further the aspirations of these future leaders of public health,” Lamstein said.

To recognize his 20 years as BUSPH dean and 35 years on the BU faculty, Dean Robert Meenan established the Robert F. Meenan Endowed Scholarship Fund. As with the Lamstein Family/JSI Scholarship pledge, Dean Meenan’s pledge will establish a permanently endowed fund, the income from which will provide annual scholarship awards to BUSPH students.

“I am pleased and proud to support BU School of Public Health,” Dean Meenan said. “The School is a wonderful institution with a compelling mission and a positive culture.”

BU launched its first-ever comprehensive fundraising campaign in September during Alumni Weekend. At that time, the University announced it has secured gifts and pledges amounting to 42 percent of its campaign goal of \$1 billion. The campaign will run for the next five years.

BUSPH will be an active participant in the University campaign and has established a goal of \$40 million, a target that will help ensure our ongoing efforts to address the challenges of affordable, quality health care; a clean environment; health disparities; and global health. At the time of the Dean’s Advisory Board meeting, the BUSPH campaign had secured gifts and pledges amounting to more than 50 percent of the goal.



MELODY KOMTEROV



SPREADING THE WEALTH

A Conversation with Do Something Award Winner Katia Gomez

By Meaghan Agnew

Will Ferrell, Ben Affleck, Olivia Munn... and BU School of Public Health Student Katia Gomez. The MPH candidate found herself in star-studded company this August when she took top prize at the nationally televised Do Something Awards, which honored young adults age 25 and under for their social change projects. Gomez won a \$100,000 grant—and a winged shoe trophy—for creating Educate2Envision (E2E), a nongovernmental organization that helps build schools and educate impoverished children in central Honduras. “This is going to Honduras,” said Gomez as she accepted the award. “Things are going to improve for those girls, and they’re going to do something big, too.” During her first visit to Honduras in 2009, Gomez saw the effects of extreme poverty in a country where many residents live on \$2 a day. Children in the region rarely receive more than a few years of formal education; many end up working in their family’s fields, or marrying and getting pregnant as early as age 14. Here, the San Leandro, Calif., native reflects on what inspired her to launch E2E, what the grant money will mean to her outreach work, and how her mother inspired her.

COURTESY OF KATIA GOMEZ

SPHERE: WHAT WAS YOUR REACTION WHEN YOU FIRST HEARD YOUR NAME CALLED—BY BEN AFFLECK, NO LESS?

GOMEZ: If you’ve had the chance to see my expression on TV, that really says it all. I was completely shocked. And to add to that amazement, Ben Affleck pronounced my name correctly! It felt like an eternity from the time he opened the envelope until he said my name. It’s actually hard for me to remember what happened in the seconds after he read the winner because I felt so overwhelmed with emotion. The times I have watched the video clip since the show, I still get butterflies in my stomach when he’s about to name the winner, even though I know the answer now.

HOW DID YOU END UP SUBMITTING YOUR WORK FOR CONSIDERATION? WHAT WERE YOUR EXPECTATIONS GOING IN?

I won a \$500 seed grant from Do Something early last year to help get us off the ground, and even that was a lot of money for us, so you can imagine how we felt applying for \$100,000! I was optimistic about possibly making it to the semifinals, but going past that level seemed very unlikely, considering how small and low-budget we were. Luckily for us, the judges saw the impact we were making and gave us this priceless opportunity.

IN YOUR ACCEPTANCE SPEECH, YOU TALKED ABOUT YOUR FIRST VOLUNTEER VISIT TO HONDURAS AS AN UNDERGRADUATE AT THE UNIVERSITY OF CALIFORNIA, SAN DIEGO, AND THE LITTLE GIRL WHO EVENTUALLY INSPIRED YOU TO CREATE EDUCATE2ENVISION.

Her name is Jenny, and when I left to head back home after my spring break trip to Honduras, I felt this need to sponsor her through school. I didn’t know why, at the time, she stuck in my mind so much, but I found out shortly after that her parents had been murdered when she was much younger and that she lived with her grandmother, who had pulled Jenny out of school to work. The group working down there sent me a picture of Jenny in her new school uniform and backpack with a big smile on her face. For me, seeing that picture and hearing that story was the catalyst. I told myself I needed

to find out if there were other kids like her who were practically having their futures stripped from them through no fault of their own. As a young person fortunate enough to have gotten to this level in my education, I felt a sense of responsibility to help those who could barely make it past sixth grade.

AT WHAT POINT DID YOU REALIZE YOUR WORK WAS HAVING A REAL IMPACT?

I think, in particular, of when a survey was handed out to the girls in high school, asking at what age they wanted to have their first child. Each girl increased her previous answer by nearly four years—all wanted to wait until around their mid-20s instead of 16, 17, which was the common answer before. [I was also inspired] when I found out that primary school enrollment rates were doubling, showing me that because high schools now existed, parents were prioritizing education like never before.

“To do this kind of work, you definitely need compassion, but you also need to train yourself to think in a structured way.”

HOW HAVE YOUR EDUCATION AND EXPERIENCES AT BUSPH HELPED YOUR WORK?

I think it’s crucial to think critically about your next move before you implement it, and BUSPH does a good job of reminding its students of this. One of my favorite quotes

comes from the essay collection *In the River They Swim*: “Many people have a heart for the poor, but there are few who have a mind for them.” To do this kind of work, you definitely need compassion, but you also need to train yourself to think in a structured way so that you are always keeping the needs of your community at the forefront. Many classes that I have taken thus far stress this, and it was a great help to me. I was also awarded a Santander Fellowship for my practicum this past summer, which enabled me to continue my fieldwork.

WHAT ARE YOUR PLANS FOR THE \$100,000 GRANT? HOW DOES THIS CHANGE THE SCOPE OF YOUR MISSION?

This grant is a complete game-changer for Educate2Envision. We have our sights set on investing in nearly 10,000 students to become first-generation high school students throughout Honduras. We are also working to create a mobile “Girls Leadership” unit that will travel and set up shop throughout hundreds of communities to propel our mission of decreasing teen pregnancy rates and nurturing confidence and self-worth in thousands of young girls. And next year, we’re planning our first U.S. college campus tour to jump-start Educate2Envision chapters nationwide!

YOU OFTEN SPEAK ABOUT GROWING UP IN A SINGLE-PARENT HOME, AND YOU CREDIT YOUR MOTHER FOR INSTILLING THE VALUES YOU CARRY FORWARD TODAY.

Well, my mom herself wasn’t able to reach the level of education she would have liked to, but instead had to enter the workforce earlier on. So from as early as I can remember, she reminded me how important it was to apply myself in school. She didn’t want me to struggle as we had financially when I was younger, and for her the answer was education.

SHE LOOKED SO PROUD OF YOU AT THE AWARDS SHOW. WHAT DID SHE SAY TO YOU WHEN YOU FINALLY CAUGHT UP WITH HER?

Oh yes, the cameras caught her sobbing with joy! She reminded me again of how proud she is of me, and she can’t wait to see what my next steps are with E2E. ☺



Dear Friends,

Thank you for supporting Boston University and the School of Public Health this past fiscal year. Each and every gift listed on the following pages makes a difference. As chair of the Dean's Advisory Board, I can assure you that your investment will greatly strengthen our public health education and research mission.

With the exciting launch of the first-ever, University-wide Campaign for Boston University on September 21, I am pleased to inform you that in the past two years—during the quiet phase of the campaign—we at BUSPH have raised more than 50 percent of the gifts and pledges needed to reach our School's robust campaign goal of \$40 million. While we have made impressive progress, it will take great effort and participation by many to reach our goal by the end of the campaign in 2017.

Our campaign for the School of Public Health is aimed at supporting our outstanding students and faculty. Endowed scholarships, student financial aid, and funding to support faculty teaching and applied research activities are our top priorities. For details on the impact we seek to achieve in public health through the campaign, please visit the BUSPH website at <http://sph.bu.edu> and read our campaign case statement, *Investing in a Healthier World: The Campaign for the Boston University School of Public Health*, or call the Development & Alumni Relations office at 617-638-4658 to request a printed copy.

Again, every gift—from annual contributions to endowed funds—makes a difference as we move forward to fulfill our mission. Thank you again for your generous support of Boston University and the School of Public Health.

Sincerely,

Jeanne M. Rivet, SPH'81
Chair
Dean's Advisory Board
Boston University School of Public Health
Rivet is the executive vice president of the United Health Group.

New Dean's Advisory Board Appointments

ANDREW DREYFUS

Andrew Dreyfus, president and CEO of Blue Cross Blue Shield of Massachusetts, has been appointed to the BUSPH Dean's Advisory Board to help the School's leadership team bolster strategic planning and identify development opportunities.

Dreyfus heads one of the largest independent, not-for-profit Blue Cross Blue Shield plans in the country, Blue Cross Blue Shield of Massachusetts (BCBSMA), serving nearly 3 million members. Prior to being named CEO in September 2010, Dreyfus served as executive vice president of Health Care Services for Blue Cross. He also led the company's collaborative efforts to improve the quality and safety of health care in Massachusetts, including the development of BCB-SMA's Alternative Quality Contract.

Dreyfus previously served as the first president of the Blue Cross Blue Shield of Massachusetts Foundation, which works to expand access to health care for Massachusetts residents. During his tenure, the foundation launched a series of policy initiatives, including the "Roadmap to Coverage," which contributed to the successful passage of the state's landmark 2006 Health Reform Law.

DONATO TRAMUTO

Donato J. Tramuto, CEO and vice chairman of Physicians Interactive, has been appointed to the BUSPH Dean's Advisory Board, in which role he will assist the dean and School in strategic planning and resource development.

Tramuto was central to the growth of Physicians Interactive from its beginnings as a small, web-based health care marketing company to its current state as "a market-leading provider of comprehensive multichannel clinical services and resources solutions for health care professionals and life science companies."

In 2011, Tramuto and the Robert F. Kennedy Center for Justice and Human Rights cofounded and launched Health eVillages, which provides clinicians with mobile health care technology that enables them to "deliver safe and efficient medical care in the most challenging clinical environments, anywhere in the world."

Thank you, donors!

We are most grateful to the following alumni and donors who have invested in Boston University and the School of Public Health in support of faculty research, scholarships, student activities, and curriculum development.

Donor support is critical to ensuring that the University maintains its rigorous standards of academic excellence, recruits and retains the best faculty, and educates the highest caliber of student. On behalf of the

Dean, faculty, staff, and students of the School of Public Health, we thank all alumni and friends who have invested in this work.

This roster recognizes supporters who gave during fiscal year 2012, between July 1, 2011 and June 30, 2012. We strive to list all donor contributions as accurately as possible. Should you have any questions regarding the listing, please contact the Development & Alumni Relations office at BUSPH at 617-638-4658.

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Public health must rebrand and reposition itself in the public sphere, and it must have a voice—a big voice.

— 2012 BUSPH Commencement Speaker Paul Grogan,
 President and CEO of The Boston Foundation

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Leonard Glantz, professor of health law, celebrates a moment at the Student Awards Ceremony reception with Delta Omega Honor Society members (left to right) Melinda D'Ippolito, Carmenleah Ascencio, and Lisa Schottenfeld, who also received the Allan R. Meyers Memorial Prize for Excellence in Health Services.

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 Fiona M. Rice (SPH'01)
 Claire Y. Ridge (SPH'94)
 William J. Riley (SED'68, '72, '99)
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 Margaret L. Robbins (SPH'88)
 Whitney K. Robbins (SPH'88)
 Richard A. Robin (SPH'97)
 Carissa Rodrigue (LAW'09, SPH'10)

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 Kathleen M. Rowlings (SPH'96)
 Vincent J. Russo (MED'64, SPH'83)
 and Sheila K. Russo
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 and Celia M. Schaefer
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 George R. Seage (SPH'83, '91)
 Robert B. Segan (GSM'11, SPH'11)
 Neyha Sehgal (CGS'04, SAR'06, SPH'07)
 Kimberly A. Shaffer (SPH'04)
 Hetal S. Shah (SPH'10)
 Catherine B. Shain
 Stephen J. Shelton (SAR'83, SPH'89)
 and Amy M. Shelton (SPH'90)
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 Mary B. Shupe (SPH'90) and Jeffery Shupe
 Elaine Silverman (SPH'97)
 Jeffrey J. Sine (SPH'87)
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 Tiffany Skogstrom (SPH'12)
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The following people have generously
 included BUSPH in their will, trust, or
 estate plans:
 Laura A. Armstrong (SPH'81)
 Patricia O'Dea Coughlin (SON'73, SPH'79)
 Priscilla J. Elliott (SPH'90)
 Robert F. Meenan (MED'72, GSM'89)
 Kurt Trampusch (SPH'87)

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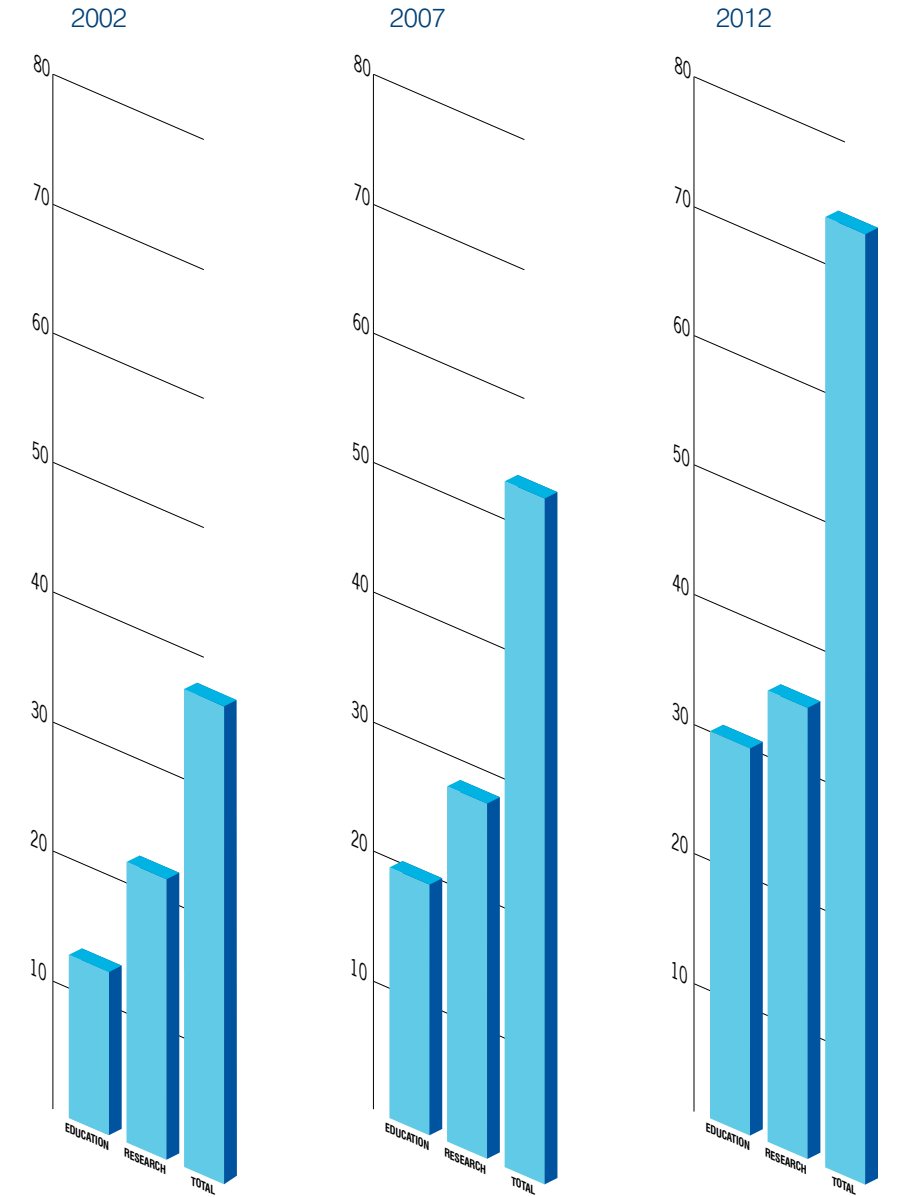
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SPECIAL PURPOSE FUNDS

Community Scholars Fund
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BY THE NUMBERS: A TEN-YEAR PERSPECTIVE

INCOME (IN MILLIONS)



Income	2002	2007	2012
Education			
Tuition & Fees	\$12,680,975	\$19,167,144	\$29,854,356
Other	\$304,585	\$523,943	\$246,641
Research			
Direct Cost	\$21,936,110	\$27,318,779	\$34,823,371
Indirect Cost	\$4,041,595	\$6,022,451	\$8,496,889
Total Income	\$38,963,265	\$53,032,317	\$73,421,257

People	2002	2007	2012
Full-Time Faculty	144	159	149
Matriculated Students	572	669	925
Student Scholarship Program	\$1,515,215	\$1,980,999	\$6,234,368



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