REWRITING THESE HEADLINES

TEEN BINGE DRINKING DAMAGES THE BRAIN
How partying affects learning and memory forever — MEDICAL DAILY

GUNS, CAMPUSSES AND MADNESS
— NEW YORK TIMES

F-BOMB
A lifelong football fan blasts the game and the hypocritical media machine that feeds it — THE VILLAGE VOICE

BIG DRUNK ON CAMPUS
America’s top colleges have a serious drinking problem — NEWSWEEK

SHAME ON U.S.
Assault weapon bill is dead — DAILY NEWS

HAS EBOLA FOCUS LED TO OTHER KILLER DISEASES BEING IGNORED?
— BBC NEWS
WELCOME TO SPH THIS YEAR, a compendium of what we accomplished during 2015 that points to the directions we shall be taking in 2016. SPH This Year replaces our previous publication, SPHere, and joins our family of communication vehicles that now includes SPH Today, SPH This Week, and SPH This Month, all with the objective of keeping faculty, staff, students, alumni, and friends—our community—apprised of happenings at the School, our collective achievements, and the ideas that our faculty are pushing forward.

Boston University School of Public Health aims to lead the effort to improve the health of the public, now and into the future, by generating ideas, teaching those ideas to the next generation, and translating them for those who can make change happen on a global scale. SPH This Year hopes to illustrate that effort. We highlight our science and scholarship linked explicitly to the challenges in public health. This is consistent with our aspiration to produce top-tier scholarship of consequence while deepening our commitment to engagement with real-world education and practice.

As I conclude my first year at the School, I am ever more enthusiastic about the work we are doing together. We celebrate our 40th anniversary as a school in 2016, and we shall be duly marking this through a series of events and the launch of new programs that endeavor to further deepen our commitment to, and take concrete steps toward realizing, our mission.

Dear colleagues:

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Please join me in thanking the communications team—named on the inside back cover—who lead our effort to clearly showcase our work through SPH This Year and our entire suite of communication vehicles.

Warm regards,

Sandro Galea, MD, DrPH
Dean, Professor
Twitter: @sandrogalea
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A SCHOOL-WIDE EFFORT to redesign the Master of Public Health (MPH) curriculum has resulted in a comprehensive overhaul of the current program that includes changes based on student demographics, expanded public health topics, new teaching methods, and the ongoing evolution of the public health workplace.

The MPH project coincided with a nationwide effort to redesign the MPH by the Association of Schools and Programs of Public Health, which established an MPH Expert Panel that consulted extensively with public health leaders and employers. School of Public Health (SPH) Associate Dean for Education Lisa Sullivan served as a member of the panel; former Dean Robert Meenan served as its chair.

“The Expert Panel focused on [ensuring] that schools and programs of public health produced graduates to fill the growing needs of the field,” Sullivan says. “The timing of the work was key . . . as the national effort was under way, we were fine-tuning our own recommendations for change.”

At SPH, Sullivan headed an MPH Task Force that sought input from multiple stakeholder groups and adhered to a rigorous plan-development process. After two years, it emerged with a redesigned 48-credit MPH degree program with three essential elements:

1. an integrated core curriculum;
2. interdisciplinary graduate certificates; and
3. professional development and practical experience.

“With our new design, we will ensure that every MPH graduate has the professional skills and confidence to make a difference in public health.”

Gone is the longstanding concept of areas of concentration tightly aligned with academic department structure. After students take four foundational core courses, the MPH requires 16 credits in at least one of nine functional areas of study (Community Assessment, Program Design, Implementation & Evaluation; Design & Conduct of Public Health Research; Environmental Hazard Assessment; Epidemiology & Biostatistics; Health Policy & Law; Health Communication & Promotion; Health Care Management; Monitoring & Evaluation; and Program Management). While exploring these functional areas, students can also customize their knowledge via 12 credits taken in specific contextual areas of study (Chronic & Non-Communicable Diseases; Global Health; Infectious Disease; Maternal & Child Health; Mental Health & Substance Use; Pharmaceuticals; Sex, Sexuality & Gender; and Social Justice, Human Rights & Health Equity).

The functional and contextual areas still reflect SPH’s more popular concentrations, Sullivan says, yet also address some of the emerging key facets of public health. The overarching characteristic of the MPH, she says, is its emphasis on current and future relevance for students seeking jobs within the evolving world of public health. The plan’s structure retains and enhances the applied public health focus of the practicum and culminating experience, both key features of the current MPH program.

“We have some unique areas of expertise at SPH, and we will continue to offer training in those areas to students who seek us out above all other schools and programs,” Sullivan says. “With our new design, we will ensure that every MPH graduate has the professional skills and confidence to make a difference in public health.”
Among Elderly Women, Caregiving Lowers Mortality

**AS THEY HELP OTHERS, ELDERLY CAREGIVERS MAY REAP HEALTH BENEFITS THAT COULD PROLONG THEIR OWN LIVES, SUGGESTS A NEW STUDY LED BY SCHOOL OF PUBLIC HEALTH RESEARCHERS.**

In a study published in The Journals of Gerontology, researchers tracked the status of 1,068 women with a mean age of 81 years. Thirty-five percent of the women were actively taking care of a spouse, family member, or friend. Lead author Lisa Fredman, SPH professor of epidemiology, says the study evaluated the association between caregiving and mortality, including treating caregiving as a time-varying event and looking at mortality for up to five years after caregiving ceased.

The potential health benefits from a sustained caregiving relationship have been dubbed the Healthy Caregiver Hypothesis; it proposes that the greater physical activity inherent in performing caregiving tasks appears to be beneficial to the health of older caregivers. Overall, the caregivers in the study had lower mortality rates than non-caregivers in all analyses. These associations were sensitive to the time-lag period. Fredman writes, with a more pronounced reduction in mortality in current caregivers. This benefit diminished over time, indicating that the timing of leaving caregiving does influence this relationship and should be considered in future investigations.

Fredman says previous studies have shown inconsistent associations between caregiving and mortality, possibly because those studies have primarily analyzed caregiver status at a baseline only. Better health may be related to caregivers taking on their responsibilities and continuing in that role for some time, she writes.

**Mobile Phones: Connecting Homeless Vets to Health Care Providers**

**MOST HOMELESS VETERANS HAVE MOBILE PHONES** and regularly go on the internet, making mobile technology an effective tool for engaging them in health care and improving adherence to treatment, according to a study coauthored by a School of Public Health researcher. In a study published in the *Journals of Gerontology,* researchers tracked the status of 1,068 women with a mean age of 81 years. Thirty-five percent of the women were actively taking care of a spouse, family member, or friend. Lead author Lisa Fredman, SPH professor of epidemiology, says the study evaluated the association between caregiving and mortality, including treating caregiving as a time-varying event and looking at mortality for up to five years after caregiving ceased.

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THE GENOME-editing technique known as CRISPR is not new—but using it to change the genetic letters of a human embryo is. Following rumors that scientists in China used CRISPR to try to modify the genetics of nonviable human embryos, two US scientific groups called for a moratorium on this use. Why?

Primarily because there is both public and scientific consensus that it is unsafe and unwise to attempt to make a “better baby” by altering the genetics of a human embryo. This is unethical human experimentation on the resulting—and unconsenting—child. It is also an unethical and unconsented experiment from a societal point of view, because it changes the nature of what it is to be human and what we mean by human evolution.

The CRISPR debate involves a call for a moratorium on a particular kind of dangerous research, and it asks us to draw a line between using a new technology to make medicine and attempt to cure human disease, and using it to try to make a “better” human baby. At least some scientists see the Chinese activity as an indication that the latter is inevitable and unstoppable.

To the extent they are right, it means a scientific moratorium is not enough. To confront the challenges of CRISPR, as well as climate change and species-endangering experiments, we will need to develop what Vaclav Havel suggested, a “species consciousness” that enables us to transcend concerns simply for ourselves, our families, and even our country.

Scientists Should Not Edit Genomes of Human Embryos

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Among Children, Asthma Linked to PD Risk

CHILDREN WITH ASTHMA are twice as likely to suffer from pneumococcal disease (PD), which can result in pneumonia, and children with asthma and another underlying comorbidity are even more likely to develop PD, according to a study led by Kimberly Shea, School of Public Health assistant professor of epidemiology.

The research team used data from Danish medical registries that included 2,253 cases of childhood PD among more than 888,000 children born between 1994 and 2007, before the introduction of the 7-valent pneumococcal conjugate vaccine. They assessed the impact of having asthma as well as the biologic interaction between asthma and other underlying health conditions on the development of PD.

Children with an asthma diagnosis had increased rates of PD compared with those who never had an asthma diagnosis; the rate of cases per 100,000 child-years was highest among children aged 6 to 24 months (91.2 cases), followed by children under 6 months (78.8 cases) and children 2 to 5 years (21.5 cases).

The study also found the rate of PD was especially high among asthmatic children with other comorbidities such as cardiac disease, renal disease, or type 1 diabetes. Among children aged 2 to 5 years, the unadjusted incidence rate of PD was 75 times the rate in children with asthma alone; among children aged 5 years and older, those who had both asthma and comorbidity were 14 times more likely to develop PD.

“The evidence presented here [supports] the addition of asthma to the list of pneumococcal vaccine–eligible conditions for older children,” the researchers say in the journal Clinical Epidemiology, urging that children with both asthma and another underlying comorbidity be carefully assessed when presenting with bacterial illnesses.
Underage

DRINKING:
a grown-up problem

WHAT ADULTS CAN CONTROL ABOUT DRINKING, FROM AVAILABILITY TO ADVERTISING, HAS ENORMOUS INFLUENCE ON HOW UNDERAGE DRINKERS IMBIBE

Legislators, policymakers, colleges, and the alcohol industry can all do more to address a major public health problem in the US: alcohol use by underage youth. School of Public Health researchers came to this conclusion—and provide powerful analysis for like-minded advocates—after taking a look at contributing factors as well as prevention strategies.

For two studies, researchers from SPH and the Johns Hopkins Bloomberg School of Public Health’s Center on Alcohol Marketing and Youth teamed up to investigate reasons behind choices made by underage drinkers, using the results of a 2012 internet survey of 1,031 people between the ages of 13 and 20 who reported having consumed alcohol in the previous 30 days.

Published in the Journal of Adolescent Health, the first study examines the five principal reasons youth reported for drinking different brands, to determine if those reasons were associated with problem drinking behaviors. The findings show that underage youths who cite either alcohol marketing or the influence of adults, movies, or other media as the main reasons for choosing a specific brand of alcohol are more likely to drink more and report adverse consequences than youths who report other reasons for selecting a specific brand. The findings add to a growing body of research suggesting youths’ exposure to alcohol advertising affects their drinking behavior and support a widespread call to the alcohol industry (which is primarily self-regulated in the US) to strengthen its standards.

The second study is believed to be the first to document an association between the consumption of different kinds of premixed, ready-to-drink flavored alcoholic beverages—also known as alcopops—and risky drinking behaviors.

continued on p. 12
related to alcohol consumption. The study, published in the American Journal of Public Health, shows heavy episodic drinking was reported by nearly 70 percent of alcopop users, by about 75 percent of “supersized” alcopop users, and by almost 80 percent of those who consumed more than one type of alcopop—compared with 45 percent of non-flavored alcohol users.

SPH researchers also looked at factors that might reduce underage drinking. A first-of-its-kind study by an SPH and Boston Medical Center team reveals that US states with stronger alcohol policies have lower rates of youth overall drinking and binge drinking. The study’s results, published online in Pediatrics, further suggest that the link is largely a result of policies intended mostly for adults. Each 10 percentage point increase in the strength of a state’s policy environment was related to an 8 percent reduction in the likelihood of youth drinking any alcohol, and a 7 percent reduction in the likelihood of drinking past the point of intoxication. “Parents and adults must be a key target of strategies to reduce and prevent underage drinking,” the authors conclude.

And what strategies can help colleges? A report authored by SPH Professor David Rosenblom to summarize a daylong workshop with 17 experts in college-age drinking says social media messaging, screening, and interventions, when used as part of a comprehensive approach, offer colleges new tools to help prevent and reduce excessive drinking. The report says programs using this approach that have been shown to be effective in small trials should be further tested because “emerging technologies offer an almost unprecedented opportunity to build and implement effective prevention and treatment interventions at scale.”

In Early Pregnancy, Caffeine May Pose Miscarriage Risk

before pregnancy does not appear to affect the risk of miscarriage, but consumption during early pregnancy is associated with a small increased risk, according to a study led by School of Public Health researchers.

Published in the journal Human Reproduction, the study is the largest to date of prospectively measured, preconception caffeine consumption and risk of miscarriage. Caffeine has been hypothesized as a risk factor for miscarriage since the 1980’s, but previous studies of this topic, our findings are still subject to various interpretations because there was no evidence of a dose-response effect with increasing consumption of caffeine in early pregnancy.”

There were 732 women (44.3 percent) identified as having miscarriages. In the preconception period, caffeine consumption was not materially associated with miscarriage risk, the study found. But in early pregnancy, the risk associated with consuming 100–299 mg/day, 200–299 mg/day, and more than 300 mg/day was elevated, compared with consumption of less than 100 mg/day.

Kristen Hahn, a research fellow in epidemiology and lead author of the study, says, “The results indicate that caffeine consumption in early pregnancy may be associated with a small increase in risk of miscarriage. Although our study is larger and improves on prior studies of this topic, our findings are still subject to various interpretations because there was no evidence of a dose-response effect with increasing consumption of caffeine in early pregnancy.”

“The results indicate that caffeine consumption in early pregnancy may be associated with a small increase in risk of miscarriage.”

CAFFEINE CONSUMPTION

Researchers at the School of Public Health have uncovered the link between caffeine consumption and risk of spontaneous abortion. In a recent study, published in the journal Human Reproduction, the team revealed that caffeine consumption during early pregnancy was associated with a small increased risk of miscarriage. The team’s findings suggest that caffeine consumption during the preconception period may not be associated with increased risk of miscarriage. However, during early pregnancy, consumption of 100–299 mg/day or more than 300 mg/day was associated with a slightly increased risk of miscarriage, compared to those who consumed less than 100 mg/day.

The team conducted a prospective cohort study of 732 women who were enrolled in a Danish study between 2007 and 2010. They measured caffeine consumption in the preconception period and during early pregnancy using a validated food frequency questionnaire. The results showed that women who consumed more than 300 mg/day of caffeine during early pregnancy had a small increased risk of miscarriage, compared to those who consumed less than 100 mg/day. The study also found that women who consumed 100–299 mg/day of caffeine during early pregnancy had a slightly increased risk of miscarriage compared to those who consumed less than 100 mg/day.

The team noted that their findings need to be interpreted with caution due to the small increased risk observed. They also highlighted the need for further research to better understand the mechanisms underlying the association between caffeine consumption and risk of miscarriage.
COULD A FOCUS on Ebola provide opportunity for other lethal pathogens? That’s a risk, according to a study coauthored by a School of Public Health researcher. The researchers caution that clinicians looking for Ebola among sick travelers coming from West African countries might miss more common deadly illnesses, especially malaria.

The study by David Hamer, SPH professor of global health, and colleagues in the GeoSentinel Surveillance Network cautions that evaluating travelers for malaria and other life-threatening conditions should not be delayed while looking for Ebola.

Patients with Ebola virus typically present with fever, fatigue, myalgia, headache, and gastrointestinal symptoms—nonspecific symptoms shared by many other frequently encountered infectious diseases. “The differential diagnosis of illness in travelers arriving from the region must include not only [Ebola] but also malaria and other more common infections,” says the study, published in the Annals of Internal Medicine.

Researchers reviewed records from 57 travel clinics in 25 countries in the GeoSentinel Surveillance Network—a clinic-based global surveillance network that tracks adverse health outcomes in travelers—to define the spectrum of illness seen in ill travelers returning from countries with widespread Ebola virus transmission. The researchers suggest that clinicians should use these data to develop a differential diagnosis and care plan for febrile travelers arriving from the region.

Kidney Disease Epidemic among Sugarcane Workers: Study Finds Occupational Link


The results provide evidence that one or more risk factors for the disease are occupational, the authors say, and are “consistent with the hypothesis that heat stress and dehydration may play a role.” The study did not find support for a widely held belief that extensive use of agrichemicals has caused the epidemic.

The research team is planning a new study to quantify exposure to both heat and agrichemicals among manual laborers in Central America, including sugarcane workers, to determine whether those exposures are associated with kidney injury.
The daily news cycle is punctuated by reports of tragic and saddening firearm violence, some high profile and dramatic, and many not. An extraordinary prevalence of firearm-related violence in the US stands in harsh contrast with our peer nations. There have been 142 school shootings in the US since the December 2012 massacre at Sandy Hook Elementary School in Newtown, Connecticut. In 2003, the US had the highest rate of firearm homicide (6.9 times higher) and firearm suicide (5.8 times higher) among 23 populous high-income nations.

It seems worthwhile to ask: what is the role of public health in an issue that has clear public health consequences?

Extant studies on the risks of firearm availability on firearm mortality have provided clear evidence of an increased risk of both homicide and suicide. A recent meta-analysis of 16 observational studies, conducted mostly in the US, estimated that firearm accessibility was associated with an odds ratio of 3.24 for suicide and 2.0 for homicide, with women at particularly high risk of homicide victimization (odds ratio 2.64) compared to men (odds ratio 1.32). A 2013 study led by School of Public Health researcher Michael Siegel that covered 30 years (1981–2010) found that US states with higher estimated rates of gun ownership experienced a higher number of firearms-related homicides. In the case of firearm suicide, adolescents appear to be at particularly high risk, relative to adults.

Another recent study examined the association between firearm legislation (using a “legislative strength” score based on five criteria) and US firearm deaths by state between 2007 and 2010. Higher legislative strength scores were associated with lower firearm mortality for both homicide and suicide. These studies are roundly supportive of causal relationships between firearm availability and firearm mortality, and conversely, of firearm legislation as protective against firearm deaths.

Despite the clear evidence that guns pose a threat to health, the public health community has been unable to get traction as an effective voice on this issue. Unfortunately, instead of quality scholarship and policy efforts to map and respond to the risks of guns, we have seen the silencing of gun researchers, health practitioners, and policymakers intent on addressing these problems. The typical mechanisms that support scholarship—extramural funding chief among them—have been actively discouraging of this work.

It seems to me that it falls to academic public health to organize itself in a way that will allow us to be a clear and compelling voice against the legal widespread availability of a pathogen—firearms—that other nations have long conquered. An activist academic public health community needs to play a central role in engaging policymakers and legislators by offering clear and compelling data-driven research, translating scholarship, and fully engaging in the public conversation on this issue. It is only then that we have any hope of turning the tide on what is truly a preventable epidemic.
Josée Dupuis, professor and interim chair of biostatistics at the School of Public Health, has been named president-elect of the International Genetic Epidemiology Society (IGES). As president-elect, Dupuis will be part of a team heading a collaborative international community of leaders in genetics, epidemiology, statistics, biology, and related biomedical disciplines, all with a keen interest in and intense enthusiasm for solving complex scientific problems in genetic epidemiology and statistical genetics.

Her term as president-elect began on January 1, and she will serve in that position for a year before stepping into the role of president for a one-year term in 2016. Following that, she will serve a year as past-president.

In 2013, Dupuis was named a fellow of the American Statistical Association (ASA), the nation’s preeminent professional statistical society. In November 2014, she was named a fellow of the American Association for the Advancement of Science (AAAS), honored for her “distinguished contributions to the field of statistical genetics,” which have led to the “discovery and improved understanding of the genetic basis for common human diseases.”

In addition to her work at SPH, Dupuis serves as faculty on BU’s interdisciplinary graduate program in bioinformatics. The program, one of the first of its kind in the US, offers unique interdisciplinary training in the science, engineering, medicine, and ethics of 21st-century cell biology. She is also involved with research associated with the Framingham Heart Study, collaborating on projects to identify genes influencing diabetes-related traits, pulmonary function, and biomarkers of inflammation.
Recreational Weekend Drug Use Bears Watching

They get high only on weekends. No cause for concern... or is it? Vigilance is wise, study authors urge.

According to a study by School of Public Health and School of Medicine researchers, more than half of patients who report “weekend-only” drug use end up expanding their drug use to weekdays, too—suggesting that primary care clinicians should monitor patients who acknowledge recreational drug use.

The study, published in Annals of Family Medicine and led by Judith Bernstein, SPH professor of community health sciences, recommends that clinicians use “caution in accepting recreational drug use as reassuring,” and that they conduct “continued episodic monitoring” of patients who report weekend-only drug use.

The study analyzed data on 483 patients at Boston Medical Center who reported using drugs in the previous month and who completed a follow-up visit six months later. Of the 52 patients who reported weekend-only use initially, only 19.2 percent retained that pattern, while 54 percent were using drugs on other days of the week.

The authors note that weekend-only users had lower odds of increasing drug-use frequency and severity than people whose drug use was not limited to weekends. They also say because study participants were inner-city residents with recent drug use, the findings might not be generalizable to the population as a whole.

Bernstein says the findings indicate that weekend-only drug use “frequently progresses into daily use, and warrants continued monitoring” by clinicians. “The real message of this paper is a monitoring message,” she says. Primary care providers “are in a position to support positive behavioral change, as well as to address increases in drug use intensity as an integral part of their role.”

Violent reinjury and mortality highlights the need for a comprehensive care approach to youth presenting for assault-related injury.

The list of chronic conditions should grow. Based on new data, a School of Public Health professor has concluded that violence victimization requires a standard of care similar to other chronic conditions. “Medical care for youth violence victims should change,” writes Emily Rothman, associate professor of community health sciences, in her commentary in the journal Evidence-Based Medicine.

Rothman notes that a 2015 study by University of Michigan researchers showed that youths treated for assault-related injuries in an urban emergency department had higher rates of repeated violent injury within two years, as compared with youths who were treated for non-assault-related injuries. The probability of reinjury was higher for females, as well as for youths with drug-use disorders and post-traumatic stress disorder.

Based on the study data, Rothman concludes that “long-term violence management action plans” should be developed for victims, and that merely treating acute care wounds is inadequate to prevent future violence-related morbidity and mortality. “Violence is costly and a chronic condition, but yet the standard of care for violence victimization is not comparable with those for other chronic medical conditions,” Rothman says. “For example, no management plan is provided to patients or their families when patients are discharged, and care other than treatment of the acute care wounds is not offered consistently or covered by insurance plans.”

“Comprehensive mental health, substance use, and other advocacy services should be offered,” she writes. “For female victims of youth violence, partner and/or sexual violence–related advocacy should be offered as a matter of course.”
The School of Public Health now ranks among the top-10 public health schools in the country, according to the latest U.S. News & World Report graduate school rankings. The rankings, published in March, place SPH at #10 among all schools of public health. This represents the School’s third consecutive rise up the U.S. News rankings, which assess the quality of schools accredited by the Council on Education for Public Health. All the health rankings are based on the results of peer assessment surveys sent to deans, other administrators, and/or faculty at accredited public health degree programs or schools.

Dean Sandro Galea, who joined SPH in January from Columbia University’s Mailman School of Public Health, says he and the SPH community were honored by the consideration as a top-10 school. "I think this reflects the extraordinary work of our faculty, students, and staff over the School’s history," Dean Galea says. "It also represents a recognition of our commitment to be both a global leader in public health scholarship and to train the next generation of the public health workforce with a ‘real world’ approach to empowering communities, locally and globally." SPH is home to some of the most prominent public health scholars and best public health students in the world. The School community includes 357 faculty, 250 staff, and 1,000+ students from more than 40 countries, together with 6,500 alumni living all over the world. In 2015, SPH faculty attracted a research portfolio of $47 million, with a current grant portfolio of $180 million. The School continues to pursue a dual focus on excellence in research and scholarship and a deep commitment to boots-on-the-ground public health education, aiming to train the next generation of public health practitioners.

Inclusion in the top-10 public health schools has given SPH a benchmark for the future. Says Dean Galea, "It certainly helps to motivate us to continue to expand our research and educational efforts, and encourages us to look ahead to further engaging the public health challenges of the next decade, and the next."

The full list is available on the U.S. News website.

Dean Sandro Galea, who joined SPH in January from Columbia University’s Mailman School of Public Health, says he and the SPH community were honored by the consideration as a top-10 school.

Rising to the challenge. And in the RANKINGS.

SPH has moved up to #10 in the U.S. News & World Report ranking of public health schools. That reflects the challenge we’ve given ourselves to create, share, and use knowledge and make change happen on a global scale.
SPH BY THE NUMBERS

SPH CAMPAIGN UPDATE

$43 M
TOTAL RAISED BY SPH SO FAR

107% OF 2017 GOAL

NEW CAMPAIGN GOAL

$60 M
BY 2019

RANKING

10
U.S. NEWS & WORLD REPORT
BEST GRADUATE SCHOOLS OF PUBLIC HEALTH

APPLICATION NUMBERS

2,661 TOTAL APPLICATIONS, FALL 2015

1,060 STUDENTS AT SPH

STUDENTS

FACULTY

151 FULL-TIME

206 PART-TIME AND ADJUNCT

2014 GRADUATE EMPLOYMENT

91% EMPLOYED FULL-TIME OR PURSUING ADVANCED EDUCATION WITHIN 6 MONTHS OF GRADUATION

80% EMPLOYED IN DOMESTIC PUBLIC HEALTH POSITIONS

20% EMPLOYED IN GLOBAL HEALTH POSITIONS

SCHOLARSHIPS

$6,787,638 SCHOLARSHIPS AWARDED

$47 M RESEARCH AWARDS IN 2015

$180 M CURRENT GRANT PORTFOLIO

SPH BY THE NUMBERS

TOTAL RAISED BY SPH SO FAR

107% OF 2017 GOAL

NEW CAMPAIGN GOAL

$43 M
$60 M

U.S. NEWS & WORLD REPORT
BEST GRADUATE SCHOOLS OF PUBLIC HEALTH

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EMPLOYED IN GLOBAL HEALTH POSITIONS

SCHOLARSHIPS AWARDED

RESEARCH AWARDS

CURRENT GRANT PORTFOLIO
A YEAR BEFORE 9/11, as a student at the School of Public Health, Kathryn Brinsfield (MPH’01) already had bioterrorism on her mind. Her career has since centered on how to prepare for, respond to, and recover from this and comparable health threats, leading to her appointment as head of the Office of Health Affairs (OHA), the principal authority advising the Department of Homeland Security (DHS) on medical and public health issues related to national security and long-term policies.

Alan Sager, SPH professor of health law, policy & management, recalls when, in 2000, he asked all students to write their professional interests on index cards, and Brinsfield surprisingly wrote “boosting citywide interest in bioterror preparedness.” She was “clearly ahead of the pack in anticipating problems we might face down the road,” Sager says.

The White House announced Brinsfield’s appointment as OHA assistant secretary of health affairs and chief medical officer in February. Also a physician, she had been associate chief medical officer and director for workforce health and medical support at DHS, in addition to serving as acting director since 2013.

From 2012 to 2013, Brinsfield worked directly for the White House national security staff as the director of medical preparedness policy. She joined DHS in 2008 as the associate chief medical officer and director for workforce health and medical support. Previously, she held leadership roles for the Emergency Medical Services of the City of Boston Public Health Commission. Brinsfield has also held associate professorships at the Schools of Public Health and Medicine, and was an attending physician and director of resident education at Boston Medical Center.

White House Names SPH Alumna Brinsfield Assistant Secretary at DHS

THE CIA’S TORTURE of prisoners at “black sites,” or secret prisons, was enabled by collaboration between physicians and lawyers who led them to overcome professional inhibitions and “rationalize” acts of violence and sexual abuse, two School of Public Health medical ethicists argue in a “Perspective” piece in the New England Journal of Medicine. George Annas, William Fairfield Warren Distinguished Professor of Health Law, Ethics & Human Rights, and Sondra Crosby, associate professor of health law, ethics & human rights, as well as of medicine, referenced the US Senate Intelligence Committee’s 600-page report on torture, released in December 2014.

Annas and Crosby say that CIA and US Justice Department attorneys enabled the role of medical professionals in torturing prisoners by assuring them that they would not be held legally responsible for violating US and international law against torture, as long as they used “enhanced interrogation” techniques approved in legal memos crafted by the Justice Department and would be present to prevent permanent harm to prisoners. Confining torture to legally defined methods is impossible, the professors argue. In reality, they say, physicians and lawyers “consistently gave themselves permission to do whatever they agreed among themselves was important to do (to ‘save lives’).” They write that there are indications that the physicians involved initially had “mixed feelings about direct involvement in torture” but evolved into active participants.

“Whether torture ‘works’—like whether slavery ‘works’—is simply the wrong question,” they conclude. “Both are internationally recognized as crimes against humanity that have no justification,” and “attorneys will have to stand with physicians who want to maintain their ethics.”
HEALTH INEQUALITIES in Boston by T Stop

The following is an edited, abbreviated version of Sandro Galea’s Dean’s Note of March 29, 2015.

A nation-leading doctor:population ratio and a low percentage of residents without health insurance (4.4 percent) suggest that Boston should be a tremendously healthy city. And, in many ways, it is. But, Boston also has some extraordinary differences within its borders. Using a simple device, the T, we ask: What do health indicators and the drivers of health look like there?

First, to get oriented, the map (right) shows the stops we’ll discuss. Note that the distances separating them are not great. It’s also worth noting that in a city extraordinarily rich in health care facilities, none of the T stops are particularly far from at least one of them. But, as you will see, although the T stops are practically down the street from one another, they are “health worlds apart.”

We can start with a core health indicator: premature death rates per 1,000. In the area around the Arlington stop, the premature death rate is more than 50 percent lower than for Dudley Square. This is linked, in no small part, to health indicators like violence.

For another core indicator, low birth weight, the health differences reach the order of 25 percent. There are similar differences, of similar magnitudes, for adult non-communicable disease indicators such as diabetes.

The T map shows these health indicators are inexorably linked to a broad range of social indicators: poverty is a frequently used summary indicator of socioeconomic position. It is then not surprising, given the data, that poverty rates in some parts of Boston are four to eight times higher than those surrounding the healthier stops on the T. Other measures of socioeconomic position, such as education, track accordingly.

This, then, tells a story of a city richly characterized by top-of-the-line medical resources and overall health indicators that are enviable good, but that has, within it, substantial heterogeneity in those same health indicators, associated in large part with variation in the fundamental socioeconomic circumstances that produce health in populations. The challenge to public health is apparent and vivid—how do we contribute to the generation of knowledge that can bridge these health gaps, and to the creation of conditions that produce health not just for some but for all, across a city like Boston?
For a very long time, our practice as it related to people with substance abuse issues was based on our understanding of—or really our misunderstanding—about drug abuse. For a long, long time we saw this as kind of a moral failure, that this was about bad people doing bad things. Policy and practice reflected that. We thought if we arrested and incarcerated our way out, that would be the solution to our problems. Thank God that we now have a lot of scientific evidence and data to show that addiction is a disease. It has all the classic components of many other chronic diseases like diabetes or hypertension. We need to come at this from a classic public health standpoint.”

“—MICHAEL BOTTICELLI, DIRECTOR OF THE US OFFICE OF NATIONAL DRUG CONTROL POLICY.

Botticelli was the featured speaker at the SPH Public Health Forum in April, where he discussed “The Future of Treating Substance Use Disorders: What Is the Role for Health Care Professionals?”

Read the rest of SPH’s interview with Botticelli at bu.edu/sph/public-health-forum/michael-botticelli.

JAMES BURGESS was honored as the 2015 winner of the John M. Eisenberg Excellence in Mentorship Award by the Agency for Healthcare Research and Quality (AHRQ), an agency of the Department of Health and Human Services. Burgess is a School of Public Health professor of health law, policy & management and director of the School’s Health Economics Program. To be nominated for the award, according to the AHRQ, faculty members in an AHRQ-supported National Research and Service Award institutional training program should demonstrate a variety of traits, including a long-term commitment to mentorship; sponsoring students in the academic or professional communities; nurturing talent and advocating for students; and a belief in the value of the study of health services research, health policy, or primary care research.

Burgess is a health economist with more than 25 years of experience putting health services research into practice in diverse transdisciplinary settings. He is a founding co-editor of Health Economics Letters, the first fully electronic peer-reviewed journal in health economics, and is an associate editor of its parent journal, Health Economics. He also serves as a senior associate editor of Health Services Research, one of the journals of AcademyHealth, where he is the vice chair of the Methods Council, a member of the Education Council, and chair of its Health Services Research Learning Consortium. He is also treasurer for the International Health Economics Association and is chairing the effort to bring the World Congress of Health Economists to BU in July 2017.

Dave Green
HIV-POSITIVE PATIENTS who drop out of antiretroviral therapy (ART) in a South African clinic have double the death rate of those in treatment; yet one-year mortality among patients in care remains high, and most patient deaths occur while they are still in care, according to a study coauthored by a School of Public Health researcher.

In the study, published in the *Journal of Acquired Immune Deficiency Syndromes*, Matthew Fox and colleagues found the rate of mortality was higher in patients who were lost to treatment—defined as at least three months late for a scheduled visit—than for those in care.

The study says the high mortality early in treatment “suggests that death is more likely to lead to loss from care than the reverse, yet what happens in the short window around loss remains unknown. It is possible that critically ill patients, sensing that death is near, simply leave care to return home or are unable to make it to the clinic.”

The authors stress the need for continued, careful monitoring of the relationship between mortality and retention in ART care.

Does most mortality in patients on ART occur in care or after lost to follow-up? Evidence from the Themba Lethu Clinic, South Africa. J Acq Immun Def Synd. Accepted 2015 July. Published online ahead of print.
WHEN TALLYING the societal benefits to Botswana of secondary education, add a health-related advantage to the list. A School of Public Health study found that extra school years spent past grade 9 substantially cut the risk of HIV infection—especially in girls.

A team headed by Jacob Bor, SPH assistant professor of global health, examined countrywide educational reforms of the grade structure of secondary school that expanded access to grade 10. In a country with one of the world’s highest HIV infection rates, about 25.5 percent, researchers found that each additional year of secondary school led to an absolute reduction in the cumulative risk of HIV infection of 8.1 percentage points. Among females, researchers found a drop of 11.6 percentage points.

The study was published online in *The Lancet Global Health*.

“Our study is among the first to link secondary schooling causally, not just to risk behaviors but to HIV infection itself,” Bor says. “The fact that our findings are consistent with the literature on behaviors in many other settings suggests that investments in secondary schooling might be a good strategy to reduce HIV risk in many countries with large, generalized HIV epidemics.”

In 1996, Botswana decided to move grade 10 from senior secondary schools to the more numerous junior secondary schools. The simple change in grade structure triggered a cascade of follow-on effects, Bor says.

“By shifting grade 10 from senior secondary to junior secondary, the policy increased the benefit of grade 10 education, because now grade 10 was required to attain a junior secondary certificate, where previously it was only grade 9,” Bor says. “It also reduced the cost of attending grade 10 because it brought grade 10 closer to people, so they did not have to travel as far to get to school.”

The change also reduced the number of people ending their formal education after grade 9. Instead of the previous natural exit point after grade 9, that natural exit point became after grade 10. “There was a huge jump in grade 10 completion, and one of the other impacts of that policy is that students who stayed on to grade 10 likely discovered that they liked school and wanted to stay on until grades 11 and 12. So this led to a very sharp increase in educational attainment,” Bor says.

The study authors conclude that increasing progression through secondary school could be a cost-effective HIV prevention measure across different HIV-endemic settings, in addition to yielding the expected societal benefits of better education.

“From the perspective of HIV prevention, schooling has to be part of the conversation, because it is at least as cost-effective as some of the other things already being considered,” Bor says. “This suggests that it might not be some fancy new program to help us fight the prevalence of HIV. It might just be expanding access to something that we already know how to do, which is secondary education.”
A study led by the School of Medicine and coauthored by School of Public Health researchers points to a possible increased risk of cognitive impairment from playing youth football. The study, published in the journal *Neurology*, finds that former National Football League (NFL) players who participated in tackle football before the age of 12 are more likely to have memory and thinking problems as adults. The study contradicts conventional wisdom that children’s more plastic brains might recover from injury better than those of adults. The study’s lead author, Julie Stamm, a PhD candidate in anatomy & neurobiology, says that while sports offer “huge benefits to kids . . . there’s increasing evidence that children respond differently to head trauma than adults.” In the study, researchers reexamined test scores of 42 former NFL players ages 40–69 who had experienced memory and thinking problems for at least six months, using data from BU’s ongoing DETECT (Diagnosing and Evaluating Traumatic Encephalopathy Using Clinical Tests) study. Half the players had played tackle football before age 12 and half had not; the total number of concussions was similar between the two groups. Researchers found that the players exposed to tackle football before age 12 had greater impairment in mental flexibility, memory, and intelligence—a 20 percent difference in some cases. Both groups scored below average on many of the tests.

THE AFFORDABLE CARE ACT (ACA) has been described as a sort of Rube Goldberg device shaped by political constraints. But David K. Jones, School of Public Health assistant professor of health law, policy & management, unraveled its complexities so well that he won an award for his “innovative research and an outstanding scientific contribution to health services resource centers research or health policy in a doctoral thesis.” AcademyHealth, one of the nation’s leading health policy organizations, awarded Jones its annual Outstanding Dissertation Award for his thesis, “Implementing ObamaCare: Intergovernmental Battles over the Creation of Health Insurance Exchanges,” at its Annual Research Meeting in June 2015. Jones joined the Department of Health Law, Policy & Management in September 2014 after completing his PhD at the University of Michigan School of Public Health. He received a master of arts in political science from the University of Michigan in 2012 and a master of science in public health from the University of North Carolina at Chapel Hill in 2009. His research examines the political and policy issues surrounding the ACA’s implementation, including how states made decisions about what type of health insurance exchange to establish—or not. He has also written about Medicaid, the Children’s Health Insurance Program (CHIP), and health reform in Europe. Jones is a member of multiple organizations that focus on disseminating research on the ACA and regularly speaks to clinicians and administrators at grand rounds, continuing medical education seminars, and medical society meetings.
HOSPITAL COMPETITION is an important and significant driver of quality and outcomes improvements, a School of Public Health researcher argues in the Journal of the American Medical Association.

In an article that looks at the United Kingdom’s National Health Service (NHS), Austin Frakt, SPH associate professor of health law, policy & management and a health economist in the VA Boston Healthcare System, writes that competition can exist in both a private health care system, like that of the US, and in the UK’s nationalized health care system.

Since 2006, NHS practitioners have been required and paid to ensure that their patients are aware of five choices of hospitals. Data on hospital quality are available to patients to help them make choices. Those choices affect hospital revenue, which encourages hospitals to compete for patients on quality, Frakt says.

“‘The only way for a hospital to thrive is to improve its attractiveness to patients…. And failing hospitals are at heightened risk of closure,’” he writes.

Frakt, who is also an associate professor of psychiatry at BU’s School of Medicine, cites a number of studies that have found that greater competition is associated with better management—which has been tied to better outcomes, including reduced lengths of stay, lower infection rates, shorter wait times, and even lower mortality. Research also shows that quality diminishes when hospitals consolidate and competition is reduced, he says.

“Today, US health care markets are going the other way—they’re consolidating, reducing competition. Perhaps the United States has something to learn from the UK’s nationalized health system after all.”

When Aware of Option, More Opt for Mammograms

“‘Our findings support the notion that SDM has yet to be fully realized in clinical practice,’” the study says. “‘When patient values are in conflict with expert recommendations, it is an opportune time for physicians to engage in discussions with patients’ and to support informed decisions. Patient-provider communication—which was measured using a seven-item scale—had no significant association with mammography utilization. The study, led by Christine M. Gunn, a research assistant professor at BU’s Schools of Medicine and Public Health, and Marina Soley-Bori, an SPH PhD candidate and research assistant, originated with a paper done for an SPH course, Advanced Health Services Research Methods.

When women under 50 years feel they have a choice about whether to have mammograms, they are three times more likely to undergo the screening than those who don’t perceive that they have a choice, and improved patient-provider communication does not influence their mammography rates, a study led by School of Public Health researchers says.

In 2009, the US Preventive Services Task Force issued updated guidelines recommending that regular breast cancer screening start at age 50, rather than 40, paired with a call for shared decision making (SDM) between doctors and patients, especially for women younger than 50. The study examined the effect of two elements of SDM on the use of mammogram screening: patient-perceived choice and patient-provider communication.

Published in the Journal of Health Communication, the study found that only 31 percent of women under age 50 perceived having a choice to undergo mammography. But when they did, they were more likely than others to opt for the screening.

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A SIGH OF RELIEF came from the White House and at least 6.4 million households when the US Supreme Court upheld federal tax credits for people who buy health insurance through the federal health insurance exchange. As President Obama said, the Affordable Care Act (ACA) is here to stay.

Chief Justice Roberts wrote the decision for the majority, once again saving President Obama’s signature legislation. But, this time, the court only needed to interpret the statute. This would be a rather ordinary task for the justices, were it not for the enormous economic and political consequences hinging on the outcome.

The plaintiffs argued that people who buy insurance on the federal exchange were not eligible for tax credits to help pay premiums because the ACA states that the credits are calculated based on the premium of a plan purchased through “an Exchange established by the State.” This would mean that people using the federal exchange would not receive tax credits, because their states have not “established” a state exchange. The plaintiffs were from Virginia, which uses the federal exchange. They did not want to buy health insurance or pay a penalty. If they were not entitled to tax credits, they would be exempt from the individual mandate (and penalty), because their premiums would exceed 8 percent of their incomes.

The chief justice rejected this hyper-literal reading, writing, “It would be implausible that Congress meant the Act to operate in this manner.” His opinion recognized that, absent the tax credits, not enough healthy people could afford to buy insurance, and insurers would have to raise premiums or drop out of the market—defeating the Act’s purpose. The chief justice wrote, “Congress passed the Affordable Care Act to improve health insurance markets, not to destroy them.”

It is the court’s assumption of responsibility to interpret the ACA that is key to this decision. It means that even under a future administration, the IRS cannot redefine the meaning of “established by a State.” The court agreed with the IRS interpretation of the disputed phrase, but found that interpretation was not the prerogative of the IRS. The majority held that Congress did not delegate interpretive authority to the IRS on this “question of deep ‘economic and political significance’ that is central to this statutory scheme.”

Instead, it was the court’s responsibility to “determine the correct reading” of the text. Now, only Congress can change the result.

“Congress passed the Affordable Care Act to improve health insurance markets, not to destroy them.”
—CHIEF JUSTICE JOHN G. ROBERTS

Justice Scalia, who wrote a characteristically hyperbolic dissent, joined by Justices Thomas and Alito, called the majority opinion “jiggery pokery” and “pure applesauce,” concluding, “We should start calling this law SCOTUScare.” The court did indeed insist on having the last word. But, in this case, the majority justices acted more like a court of law than politicians.
Hanson, a 2013 School of Public Health graduate with an MPH in global health, worked in Namibia for her practicum. While there, she started a project for her culminating experience that evolved into a short film, Clinic on the Move, which took top honors in a World Bank–sponsored contest for depictions of innovative public–private partnerships in health in low-income countries.

Hanson’s practicum was with PharmAccess, a group of nonprofit organizations dedicated to providing access to affordable, quality health care in Africa by stimulating investments through partnerships with private sector and government institutions. She worked for Mister Sister, PharmAccess’ program whose mobile clinics provide primary health care services to remote areas and underserved people in Namibia.

The semester before her practicum, Hanson had taken a narrative radio class, her first exposure to journalism. She brought a recorder to Namibia and in the evenings would practice her interviewing skills. This activity mushroomed when Mister Sister turned to Hanson for help with a video intended to kick-start a demand-creation campaign. She began the project with photos and audio collected during her initial practicum, and then returned to Namibia in 2014 to collect additional footage.

“To have ownership of a project like that was a really transformative experience,” she says. “It gave me something to stand on in terms of building a career in public health communications.”

Hanson’s video can be viewed on YouTube at youtube.com/watch?v=3zuyrJ0NNM8.

Role of Genes Is Greater as People Live to Older Ages

LONGEVITY is in our genes, increasingly so for those of us who live to be really old. That’s the conclusion of School of Public Health and School of Medicine researchers after looking at more than 1,900 sibling relationships in which at least one person reaches the age of 90.

The study, published online in the Journal of Gerontology: Biological Sciences, finds that for people who live to age 90, the chance of their siblings also reaching age 90 is relatively small—about 1.7 times greater than for the average person born around the same time. But for people who survive to age 95, it is 3.5 times greater—and for those who live to 100, it grows to about 9 times greater. At age 105, the chance that a sibling will attain the same age is 35 times greater than for people born around the same time.

Study leaders Paola Sebastiani, SPH professor of biostatistics, and Thomas Perls, MED professor of medicine, say the findings advance the idea that genes play “a stronger and stronger role in living to these more and more extreme ages,” and that the combinations of longevity-enabling genes that help people survive to 95 years are likely different from those that help people reach the age of 105.

“These much higher relative [chances of survival] likely reflect different and more potent genetic contributions to the rarity of survival being studied,” the authors conclude. “And strongly suggest that...”


Dalton S, Reilly P, O’Connell DM, Al-Dulaimi K, Smith JA. Mifepristone and misoprostol compared with surgical abortion in women seeking an abortion within the first 9 weeks of amenorrhea: a randomised controlled trial. BMJ. 2014 Dec 17; 349:g6114.

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BOSTON UNIVERSITY SCHOOL OF PUBLIC HEALTH | SPRY 13 | 5

faculty publications


BOSTON UNIVERSITY SCHOOL OF PUBLIC HEALTH | SPRY # 16

faculty publications

Here's the plain text representation of the document:


LaValley MP, Patton AP, Durant JL, Brugge D, Durant JL.


A total of 3,817 cases of invasive adenocarcinoma of the lung were screened for rare variants in 13 genes known to be associated with AD. Of these cases, 112 cases were found to have rare variants in ADRK1, APOE, C9orf72, EGFR, ERCC1, ERCC4, FANCA, KIF1B, LRP1, NDRG1, NUP2141, or TERT.

Whether rare variants in genes known to be associated with AD increase the risk for lung cancer will require additional study.

In the paper, we also discuss the potential for using lung cancer to screen for neurodegenerative disease risk and the potential for using genetic association findings from lung cancer to advance our understanding of AD.

Lung Cancer, 2013, 87:162-70

The study included 3,817 patients with invasive adenocarcinoma of the lung and 6,618 matched controls. 112 cases were found to have rare variants in one or more of 13 genes known to be associated with AD.

Lung Cancer, 2013, 87:162-70

A total of 3,817 cases of invasive adenocarcinoma of the lung were screened for rare variants in 13 genes known to be associated with AD. Of these cases, 112 cases were found to have rare variants in ADRK1, APOE, C9orf72, EGFR, ERCC1, ERCC4, FANCA, KIF1B, LRP1, NDRG1, NUP2141, or TERT.

Whether rare variants in genes known to be associated with AD increase the risk for lung cancer will require additional study.

In the paper, we also discuss the potential for using lung cancer to screen for neurodegenerative disease risk and the potential for using genetic association findings from lung cancer to advance our understanding of AD.


