Hit the streets of Baltimore with the Back on My Feet running club. Sample injury prevention past and future. Learn what it’s like for a grandfather, a son and a grandson to write a book on saving the world. And more in online extras.
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THREATENED BY AN INVADER like the flu virus, the human body marshals an inflammatory response. It’s a vital defense mechanism, but scientists now link inflammation to cancer, COPD and other diseases. More about our foe/friend in the Fall 2012 edition.
Feverish and often near death, malaria’s most obvious victims have long been the concern of physicians and scientists.

William Moss, MD, MPH, and colleagues in Macha, Zambia, recently approached the disease from a different perspective. They focused on people infected with malaria who don’t get sick.

For every fatal case of malaria, there are perhaps 300 cases that are not. In areas of high transmission, where much of the population is repeatedly infected each year, many adults develop immunity to clinical disease. While these asymptomatic carriers do not have symptoms, their blood still harbors parasites and thus provides a hidden reservoir for sustaining the epidemic.

The interest in asymptomatic carriers is a sign, in some sense, of the recent success in controlling the disease. “When this research site [in Macha] was originally established, this wasn’t on people’s minds,” recalls Moss, an associate professor of Epidemiology. When he first arrived in Macha in 2002, the parasite was the second highest cause of mortality in the country. Since then, because of the widespread distribution of insecticide-treated bednets and the highly effective artemisinin combination therapy, as well as other factors that are not well understood, the incidence of malaria in the area has fallen precipitously. In the year he arrived in Macha, Moss estimates that the hospital had more than 1,000 pediatric hospitalizations for malaria. This year, they have had four.

Moss’ research interests reflect the new conditions. Previously, the driving concern had been to reduce symptomatic disease and prevent children from dying. “The whole focus—at least in these areas where transmission has gone down—has changed to, How do we actually eliminate malaria?” says Moss.

In addition to precipitous declines in the local malaria rates, a renaissance of interest in the possibility of globally eradicating the disease that still causes more than 700,000 deaths each year has elevated this research. “Testing and treating asymptomatic individuals really
only makes sense if elimination is a goal,” explains Moss, “because otherwise it’s a lot of effort and resources to target people who aren’t sick.”

In their Feb. 3 PLoS ONE article, Moss and his colleagues measured the effect on overall rates of transmission when households were proactively screened for malaria—and if necessary, offered treatment. Field teams went house-to-house using rapid diagnostic tests to identify infected individuals, whether symptomatic or asymptomatic, and offering artemisinin-combination therapy to those who tested positive. In areas with high rates of malaria, households visited by a field team every other month for one year had half the risk of infection as those visited only once. In an area of low transmission, the incidence of disease in targeted households fell even further, by more than 80 percent over two years.

While the research offers evidence that treating asymptomatic carriers can reduce population-wide transmission, there is still some uncertainty about the most efficient way to do so. The broadest approach is simply to treat the whole population with antimalarials, but this strategy is very expensive and may foster drug resistance in the pathogen. Reactive case detection, in which health care workers who diagnose cases of malaria subsequently test and treat the patient’s family and neighbors, is a more focused approach. But Moss points out that only a fraction of individuals have clinical illness and seek care in the health system, so many cases would surely be missed. The numerous home visits required might also prove onerous for local clinics, short-staffed as they already are. Moss says his vision falls somewhere in between: using a spatial risk map to test-and-treat those areas that need it most.

Even before the results of the research were published, the Zambian government began implementing test-and-treat in two southern districts, and Moss says they have treated more than 50,000 individuals there, most of whom were asymptomatic. The work conducted by Moss and his colleagues to estimate the effectiveness of test-and-treat is important because this large-scale program does not have a control group for measuring the change in malaria caused by the intervention.

For now, though, Moss believes that eliminating malaria from Zambia is “still a little bit of a pipe dream” because of its resurgence in neighboring countries, particularly Zimbabwe and the Democratic Republic of Congo. Even if the malaria parasite were eliminated from Zambia, the mosquito vector that carries it would not be. A worst case scenario would be for Zambians to lose their immunity and then for malaria to be reintroduced from outside. It would likely spread through the now-naïve population causing disease in most infected individuals. That could “really be a disaster,” says Moss.

Coordinating efforts across the region—and across the African continent as a whole—is thus of enormous importance, he says.

—Ted Alcorn, MHS ’10

Blowin’ in the Wind

Quinine, chloroquine, artemisinin, DDT and pyrethroids. Over the past century, humans have targeted malaria and the mosquitoes that carry it with an arsenal of chemicals but have yet to fully control the disease. Professor David Smith is taking aim with a different weapon: math.

Smith, PhD, who began his academic career in mathematics and ecology but ended up a professor of Epidemiology, says he is interested in getting into mosquitoes’ heads, or in his words, their “search algorithm”: the basic hardwiring that tells the insect how to move from the pool in which it was born to the house of its human prey and then back to the pool to reproduce. This demands a close reading of the mosquitoes’ behaviors, and the latest factor to catch his attention is the wind.

In a Feb. 14 Nature Communications article, Smith and his coauthors show that wind direction helps predict the homes that mosquitoes are most likely to target, and therefore the children at greatest risk for contracting malaria. During the rainy season when the study was conducted, in nighttime hours when the mosquitoes are biting, the wind was consistently in a southerly direction. This had a significant influence on the spatial distribution of malaria incidence in the study area in Kenya.

The finding may help control the vector in order to curb the disease, but more importantly, it is another small step toward a more complete understanding of the mosquito mind. “The bigger message is that there is a research agenda to try and understand how mosquitoes find humans,” says Smith. “If we can understand those algorithms across species, then we can do a much better job at predicting where humans are at risk, and therefore at doing malaria control.”

—Ted Alcorn, MHS ’10
At a dentist appointment last year, obesity researcher Sara Bleich had an epiphany. “I noticed that [the dentist] had really bad teeth,” recalls Bleich, PhD, an assistant professor in Health Policy and Management, “and I thought to myself, How can this dentist possibly take care of my teeth if his teeth are so bad?”

The thought triggered another question that led to a novel research study: Can heavy doctors provide appropriate care for overweight and obese patients?

Bleich’s leap from a dentist’s teeth to doctors’ weight is the kind of original thinking that drives her research. She’s also examined how race affects obese patients’ care and sought new ways to steer teens away from sugar-laden drinks.

For Bleich, who describes herself as “very practical,” obesity research provides an opportunity to develop innovative solutions to a complex problem. “Because of [the epidemic’s] reach, it’s very policy relevant,” she says, “and because it’s so complicated, there can be lots of creative solutions.” She focuses on devising environmental strategies that help people cut calories—food placement in stores, price incentives, exercise-friendly cities, for example—and improving obesity care.

Her explorations of obesity’s infrequently studied aspects stand out in a field known for dire surveillance studies and standard evaluations of diet and exercise interventions.

“We need to have studies that really are feasible, that we can actually learn from, and we need to find solutions that are practical and reach large numbers of the population,” says Mary Story, PhD, RD, a professor at the University of Minnesota School of Public Health. Story directs the Robert Wood Johnson Foundation’s Healthy Eating Research Program, which supported Bleich’s research on sugar-sweetened beverages.

The sugary drinks study, published in the December 2011 American Journal of Public Health, analyzed the impact on sales of different calorie-information messages. Bleich arranged for corner stores in Baltimore to randomly display signs with different messages: that a bottle of soda or fruit juice has about 250 calories, contains 10 percent of your daily calories or requires 50 minutes of running to work off its calories.

While providing any calorie information significantly decreased the number of teens’ sugary-drink purchases, the sign equating one drink to nearly an hour of running reduced the odds by half.

Such interventions that resonate with teens could easily work in a variety of settings, observes Story. “This is the type of research we really need,” she says, noting that the study is the first to test a calorie-labeling intervention at point-of-purchase settings in stores.

Bleich saw another opportunity in patient care. Following previous research that had shown doctors, in general, do a poor job of diagnosing obesity and providing related care, she embarked on her doctors’ weight study. It found that physicians with normal weight are more likely than overweight doctors to diagnose obesity and discuss weight loss with patients. She is now working to determine whether having an overweight doctor affects a patient’s trust in the physician’s advice.

Another study involving race yielded striking results: Black obese patients are less likely to receive care from both white and black physicians. Bleich speculates that doctors, overall, may have negative perceptions toward black patients or feel that these patients have fewer resources for exercise and healthy eating. “I think that in the short term, physicians need better training in how to care for obese patients,” Bleich says. “They simply don’t have the skills.”

—Jackie Powder

For the “very practical” Sara Bleich, obesity research provides an opportunity to develop innovative solutions to a complex problem.

Sara Bleich and colleagues showed that signs in corner stores could cut teens’ sugary-drink purchases in half.
For children, there’s no place like home. However, youngsters are injured more often in the home than anywhere else; home injuries lead to more than 4 million emergency room visits by children each year.

For the past 15 years, researchers at the Johns Hopkins Center for Injury Research and Policy (JHCIRP) have been seeking ways to make homes safe for kids. Recently, they visited more than 200 homes in East Baltimore to determine how well kids are protected and identify hazards like stairs without gates, nonworking smoke detectors or water-heater temperature settings that could cause scald burns. During their investigations, they also learned about unsafe housing conditions. “Our data collectors started telling us about broken stairs, broken windows, holes in the walls,” remembers Wendy Shields, MPH ’96. “This suggested to us that the condition of the house itself is often an overlooked injury hazard.”

The comments encouraged the team, led by JHCIRP director Andrea Gielen, ScD ’89, ScM ’79, to consider whether standards for low-income housing could be used to protect children. They reviewed the U.S. Department of Housing and Urban Development (HUD) Housing Quality Standards, a checklist used to certify homes for the Section 8 housing voucher program.

The researchers, with CDC funding, have now launched an effort to determine if children in Section 8–compliant homes have lower injury risks than those in homes that do not meet the criteria. They also want to know if additional criteria would reduce the risks even further. To that end, they have been developing the Children’s Housing Assessment for a Safer Environment (CHASE) checklist that can be combined with the HUD criteria to more fully capture child injury risks associated with the home. While HUD criteria emphasize built environment hazards like broken floors and bad wiring, CHASE adds hazards such as unsafe water temperatures, poison storage and infant sleep environments.

The idea of “breaking down silos” between the healthy housing and injury prevention communities intrigues Gielen. “These two groups should really be talking with each other,” she says.

One way to encourage interaction might be the new use of a standardized tool to help determine the houses that have a risk of injury for kids. “If [CHASE] performs well, then we’ll be ready to suggest to the folks at HUD that they use this to help ensure that federally subsidized housing is as safe as it can be for families with young children,” Gielen says.

Awareness of health and safety issues in homes has evolved rapidly in recent years. Successful campaigns to reduce brain-damaging lead compounds in house paint and yard soil, and asthma-causing indoor allergens, have given way to a broader public health push known as the “healthy housing” movement. “The problem is that most of the researchers in the healthy housing field don’t have experience in evaluating injury risks, and there’s not yet a standard, validated tool that they’re using to assess these risks,” says Shields. “They’re waiting eagerly for us to develop it.”

—Jim Schnabel

Wendy Shields (left) and Andrea Gielen seek to align the healthy housing and injury prevention communities to reduce risks for kids.

Injury Center Marks Silver Anniversary

The Johns Hopkins Center for Injury Research and Policy is celebrating its 25th anniversary with not only a new prospectus and video about its work (magazine.jhsph.edu/extras) but also a public opinion poll about motor vehicle–related policies and a seminar series. “We are extremely pleased that this year also marks the launch of a student scholarship fund in the name of Professor Susan P. Baker, the founding director of the Injury Center,” says Center director Andrea Gielen.
Sub-Saharan Africa is saddled with stubbornly high rates of infant and maternal mortality, widespread poverty and a population expected to balloon from 1 billion to as high as 3.5 billion by the end of this century, further stressing an already resource-poor continent.

A common link for all of these problems? Insufficient access to family planning services.

In much of the world, two-thirds of married women report using contraceptives, while only one in five African women do. Their cost, disapproval of their use and superstitions about side effects have all slowed their adoption there.

But positive signs in recent years suggest that this may be changing, says Amy Tsui, PhD, MA, a professor of Population, Family and Reproductive Health (PFRH) and director of the Bill and Melinda Gates Institute for Population and Reproductive Health. In the past, only a handful of African governments were willing to commit budgetary funds to purchase contraceptive commodities, but more are now doing so. Utilization is rising rapidly in some countries, and across the continent there is increasing interest in the issue, she says.

The International Conference on Family Planning in Kampala, Uganda, in 2009—the largest conference on the topic in 15 years—attributed more than 1,200 (far more than the 350 expected). A second conference in November 2011 in Dakar, Senegal, drew more than 2,200 people. Tsui, who helped organize both events, was thrilled by the interest. “Sub-Saharan Africa has been without for so long, so it’s a very gratifying development,” she says.

Jotham Musinguzi, Africa region director for the intergovernmental organization Partners in Population and Development, says there was important symbolism in holding the conference in West Africa, an area that even relative to other parts of the continent has been slow to improve access to family planning. “This is the first time the whole world was focused on this region of greatest need, and to me that was very important,” he says. “And the message was very clear: The countries themselves are aware that they are not doing so well, but the international community showed that they were willing to be supportive and to try to sort it out.”

Several East African countries have made dramatic progress increasing access and use of family planning services, among them Rwanda, Malawi and Ethiopia, where the contraceptive prevalence has more than tripled in just 10 years.

In comparison, Musinguzi’s native Uganda has persistently lagged behind in recent decades, with one of the highest population growth rates in the world and no leadership on the issue from pro-natalist President Museveni.

“We really tried to work with him to make strong statements in support of family planning,” says Musinguzi, while acknowledging that if the president has remained aloof on the issue, neither has he openly opposed it. Notably, Uganda’s First Lady has begun advocating for improved family planning services as a means to reduce maternal mortality.

Efforts over the last five years—picking up particularly since the 2009 conference in Kampala—have begun to bear fruit. Duff Gillespie, PhD, a PFRH professor, leads the Advance Family Planning (AFP) project, which works in several countries to regularize funding for family planning and strengthen local policymakers’ commitment to the issue. In Uganda, the project has helped secure new funding for contraceptives from the World Bank, the Global Fund and the government of Uganda itself. Martin Ninsiima, a program manager at the Johns Hopkins Center for Communication Programs who works with AFP, says the 2011 Ugandan Demographic and Health Survey shows a significant increase in the use of contraceptives since 2006, from 18 percent to nearly 25 percent.

Says Musinguzi, “I think it really vindicates that our efforts have worked.”

—Ted Alcorn, MHS ’10
A Global Call for Mental Help

Mental illness takes many prisoners. Its jails hold not only the afflicted, but families, communities and even the economic health of countries.

Yet government and private funding for mental health is tragically inadequate, especially in many developing countries where mental illness carries tremendous stigma and shame. Recent news reports have described the mentally ill being restrained in cages and chains in Somalia and Indonesia. And psychiatric patients languish in prisons worldwide—in both developing and developed countries.

Mental and behavioral disorders affect more than 25 percent of all people at some point during their lives, according to the WHO. By 2020, WHO estimates that these illnesses will account for 15 percent of the total life-years lost due to all diseases and injuries.

Now, an international coalition of health experts and advocates says that it is time for the UN to highlight global mental health issues for officials at the highest levels by convening a General Assembly Special Session. The UN General Assembly has previously held only two health-related special sessions: one on HIV/AIDS in 2001 and a session on noncommunicable diseases last year.

“The call for a General Assembly Special Session is a call for the recognition of the importance of mental health,” says Judith K. Bass, PhD ‘04, MPH, an assistant professor in Mental Health. Bass and colleagues made the case for the special session in a January PLoS Medicine essay. “Part of that agenda,” says Bass, “is advocating for countries to actually have mental health policies, to have humane treatment of people with mental illness, to implement treatment, all the things we know are lacking.”

While the PLoS Medicine essay’s primary aim is to focus world attention on the plight of those affected by mental illness, its authors also highlight the economic costs. The article cites estimates that neuropsychiatric disorders will account for $16.1 trillion in losses over the next two decades. “If a large proportion of a population even has low levels of depression and is functionally impaired, they can’t reach their potential and are literally depressing the ability of a population to economically develop,” says Bass.

Three critical areas—access to evidence-based interventions, new research and human rights protections—need resources. Strengthening mental health research is an essential piece of improving care, says Bass, noting that more than 20 years have passed with no breakthroughs in the field. “Innovation is not focused on mental illness,” she says.

Given the paucity of psychologists and psychiatrists in developing countries, evidence-based mental health services need to be integrated into primary care and community health systems, experts say. Health care professionals need training to screen for and treat basic psychiatric disorders, and research shows that community health workers can be educated to deliver mental health services as well.

“In most parts of the world, it is simply not feasible, or affordable, for a health system to achieve coverage of mental health care through mental health specialists alone,” says Vikram Patel, MSc, PhD, a professor in International Mental Health at the London School of Hygiene and Tropical Medicine. “Use of alternative human resources [such as primary care doctors, community health workers], is not only a solution when there are no specialists, it can also, in fact, be effective in cutting costs and improving access in places that are relatively better resourced. It is important to note the key roles that mental health specialists need to play such as supervision, quality assurance and providing referral pathways.”

Patel, one of the essay’s coauthors, says that enhanced access to care, research advances and economic development won’t be realized until the human rights of the mentally ill are recognized. “I don’t think there’s any community in the world today that has seen the systematic denial of basic human rights as [have] people with mental illness, and there are very few champions speaking out for these individuals,” he says. “It’s probably the most important issue in global mental health.”

—Jackie Powder

Recognizing Humanity

For his quarter-century of advocacy on behalf of refugees worldwide, actor Sam Waterston (left) was presented with the Goodermote Humanitarian Award on May 9. Joining him at the ceremony were PhD candidate and Goodermote Humanitarian Scholarship awardee Anjalee Kohli and entrepreneur/philanthropist Dean Goodermote.
A Running Start

It’s quiet and dark in front of Christopher Place Employment Academy. The residential and educational program for homeless men sits between the imposing Baltimore City Jail and Scores strip club.

People in workout clothes trickle into the parking lot from the streets, and men in tracksuits emerge from Christopher Place’s brightly lit lobby.

By 5:30 a.m., two dozen people have exchanged hugs and formed a circle that’s chatty, cheerful and loud, despite the chill and the grim surroundings. They’re a mix of professionals, the unemployed, the recently homeless, graduate students and those in recovery from substance abuse.

After some announcements—Jerome got a second job, David got into medical school—the group circles arms, says the Serenity Prayer and takes off running.

Similar scenes play out in eight other cities across the U.S. several mornings each week as runners of all levels from disparate backgrounds come together through Back on My Feet (BoMF), a nonprofit that uses running as a means to build self-confidence, discipline and, most importantly, a community and support network among the homeless and other underserved populations.

“A lot of these guys haven’t felt the sense of belonging or had expectations on them to commit to something,” says Jaclyn Truncellito, a longtime runner, Bloomberg School MPH student and director of communications and corporate relations for BoMF’s Baltimore chapter.

Truncellito’s faculty advisor at the School, Kevin Frick, PhD, a professor in Health Policy and Management, runs with the Christopher Place group as one of its 60 active volunteer or nonresident members. “These guys just really want to get control of their lives, and the training and consistent goal-setting gives them a sense of control they may have never had before” he says.

George Johnson, 38, who came to Christopher Place in August 2011 after completing an alcoholism rehabilitation program, originally joined BoMF to lose weight, but found that shedding pounds wasn’t the only payoff. “I instantly loved the energy, the camaraderie,” says Johnson, who plans to apply for a BoMF grant to buy a laptop when he goes back to school, and hopes to become an X-ray technician.

Johnson, who is training for a half marathon, says that his running progress and support from his team members help him to weather the “frustrations and stresses” of job hunting.

Back on My Feet offers additional services to members with 30 days’ active participation and a 90 percent attendance record. The Next Steps phase provides help with acquiring job skills training, writing resumes, enrolling in school, preparing for job interviews and a grant of up to $1,250 to aid in the transition to independence. It might pay for tuition, a computer or a security deposit.

Dean Michael Harrod, who stayed in a homeless shelter before coming to Christopher Place, has a decade of experience working on cars and trucks, and hopes to become certified as a diesel mechanic. The soft-spoken team captain says that running with the team helps to build his self-confidence and discipline—and, it’s fun.

“It’s like a party once you get out there,” Harrod says.

Based on BoMF surveys, the program is a success across its chapters, in terms of improvements in self-esteem, setting goals, trusting others and other subjective assessments.

However, from a public health perspective, says Frick, such attitudinal surveys aren’t especially useful because they don’t measure long-term program outcomes. BoMF recently hired an internal evaluator to enhance the process. A fundamental question is whether BoMF members achieve better outcomes—more success finding employment and housing and furthering their education—than individuals who don’t take part in the program.

“I think an organization like this may be able to demonstrate a whole new way of thinking about integrating people into the community,” says Frick.

—Jackie Powder
The AIDS-causing retrovirus HIV is a marvel of insidious efficiency. With a toolkit of just 19 different proteins, it easily thwarts the defenses of its vastly more complex *H. sapiens* hosts by infiltrating the very immune cells that should attack it. But HIV’s simplicity also means that its secrets won’t long withstand scientific scrutiny.

“After three decades of work, we’ve learned a lot about this retrovirus,” says Xiao-Fang Yu, MD, DSc, a professor in the Bloomberg School’s W. Harry Feinstone Department of Molecular Microbiology and Immunology. Yu is the senior author of a report in *Nature* in January that reveals a key detail of one of HIV’s most important survival strategies—a strategy that may soon be blockable with drugs.

The new finding concerns the HIV protein Vif (viral infectivity factor), a sort of bodyguard molecule that the virus needs to thrive and spread.

A decade ago, scientists discovered that human cells normally contain antiretroviral enzymes, known as APOBEC3 enzymes, that can bind to retroviral genes and mutate them destructively—except when Vif is present. As Yu and his colleagues reported in *Science* in 2003, Vif shields HIV by cleverly co-opting several normal proteins within infected cells, and using them to form a ubiquitin ligase—a complex enzyme that marks APOBEC3s for destruction by the host cell’s own housekeeping systems.

In the new study, Yu and his students discovered that Vif can coordinate this counterattack only with the added assistance of a host-cell protein called CBF-. “When we blocked CBF-’s interaction with Vif, we removed nearly all Vif’s ability to thwart the relevant APOBEC3 enzymes,” Yu says.

A key point for drug development purposes is that CBF- uses one part of its structure for binding to its normal protein partner in cells, and a different part for binding to Vif. Thus, it should be possible to block the Vif-CBF- interaction without disrupting CBF-’s normal function. Drug companies are already knocking on Yu’s door.

**Scientist Xiao-Fang Yu’s latest discovery involves a “bodyguard” molecule for HIV called Vif and its partner in crime, the CBF- protein. Stop the pair from interacting, and you weaken HIV.**

CBF- normally works in cells as a transcription factor that enhances the expression of certain genes, and research in the 1990s showed that two other viruses use this basic functionality of CBF- to enhance their own replication within infected cells. “It’s intriguing to see that CBF- has yet another pro-viral function, this time with HIV,” says Nancy Speck, a professor of cell biology at the University of Pennsylvania who did much of that earlier CBF- research.

Yu thinks it’s possible that CBF- serves as HIV’s partner in crime on yet another level, since in immune cells its job as a transcription factor effectively makes it a regulator of the broad immune response. “It’s easy to imagine that HIV might be co-opting CBF- in one way to combat APOBEC3s, and in another way to manipulate immune cell activity so as to benefit its own replication and survival,” he says.

Existing anti-HIV drugs can hold the virus at bay, but generally can’t remove it from the body. If Yu’s suspicion proves correct, then fully blocking Vif’s subversions of CBF- might at last enable the eradication of the virus.

“It’s an interesting hypothesis, and a testable one,” says Speck.

—Jim Schnabel
Protecting health care workers in armed conflicts has been a veritable black hole of human rights.

When ambulance drivers in Gaza told Leonard Rubenstein about being delayed at checkpoints and blocked from hospitals, and when doctors in Kosovo described arrests and torture for providing care for rebels, they echoed the stories of multitudes in Mexico, Libya, Burma and beyond.

"Health workers are trying to do their jobs, consistent with their ethical responsibilities, and are vulnerable because of it," says Rubenstein, JD, LLM, a senior scientist at the Berman Institute of Bioethics, and Human Rights and associate faculty of the Johns Hopkins Center for Public Health and International Health who died in 2010.

Rubenstein told Congress that greater leadership is needed from the U.S. government to protect physicians and health facilities, represent one extreme according to Rubenstein. Equally troubling are the lower-level unreported violations that simmer for decades in places like Burma (also called Myanmar), where targeted kidnappings, obstructions, invasions and lootings put health workers at risk.

He and colleagues have been working to develop an international system of documentation, prevention and accountability, as well as to drum up support for these efforts from WHO. At a special briefing held March 7, Rubenstein told Congress that greater leadership is needed from the U.S. government to protect physicians and health facilities.

A Tri-Generational Take on Saving the World

For a hopeful book, it had a fiery beginning. Three generations—public health legend Carl Taylor, his son Daniel and grandson Jesse Oak—fought passionate battles through more than 20 drafts of the recently published Empowerment on an Unstable Planet (Oxford University Press, 2011). Their diverse backgrounds—Carl in community health, Daniel in education and Jesse in literary theory—sparked divergent views and many fierce discussions. The book may represent a final testament to community-based solutions long advocated by Carl Taylor, the founder of the Department of International Health who died in 2010. The Taylors coalesced around a strategy for improving communities and health by relying on the people themselves and not costly development projects. "You can run projects, or you can mobilize people to take collective action," says Daniel Taylor. "That's the core idea of the book."

During the week of May 21, he’ll be in Geneva, working at the World Health Assembly (the decision-making body of WHO) to promote passage of a resolution mandating the systematic collection and dissemination of documentation of attacks on health care.

On the heels of that event, he’ll travel with colleagues to Mae Sot on the Thai-Burma border. Their goal: to develop a uniform questionnaire that’s reliable, sensitive and specific enough to be used as a reporting tool by health workers and provide a baseline of evidence. They’ll be piloting the project with health workers who originate from and work inside Burma but regularly cross the porous border for retraining and resupplying. By providing emergency and basic health care to refugees fleeing poverty and ethnic fighting, these workers are at constant risk. The potential democratic opening in Burma raises the possibility of a negotiated settlement of its armed conflict with ethnic groups, with guarantees of protection of health care from interference; if so, the tool can then be used as a monitoring device, says Rubenstein, who recently received the American Public Health Association’s Sidel-Levy Award for Peace.

Rubenstein and his colleagues envisage the questionnaire as a global tool. "Say you are running a clinic in the countryside, and you've been trained that if a violation happens, you can fill out the form and send it to the WHO country office, which is collecting and collating data," Rubenstein says. "In such a system, the report of the violation may generate action to pressure perpetrators to stop. That's empowering."

—Maryalice Yakutchik
For many cultures, a newborn’s umbilical cord comes attached to something more than the placenta—it has deep and spiritual meanings. And with this belief follows a host of customs meant to honor the cord and ensure its sanctity, such as the application of special oils or spices.

Often forgotten is that the site of the recently cut cord is an open wound, making it an easy portal for infection. That reality contributes to astoundingly high infant mortality rates in many developing countries. Abdulrah Baqui, MBBS, DrPH ’90, MPH ’85, a professor of International Health, has been studying cord care practices in Bangladesh in hopes of reducing newborn child deaths worldwide. He has found that incorporating a common antiseptic called chlorhexidine into postnatal cord care could decrease mortality by about 20 percent, findings that confirm other studies, including one conducted by Johns Hopkins researchers in Nepal.

“If you look at data from countries with a high newborn mortality setting, about half come from infection,” Baqui says. “It’s a very important cause of death, and many of these infections come from cord infection, when the methods of cutting and tying don’t include clean instruments.”

Funded by USAID and Save the Children, Baqui’s research is a direct outgrowth of the UN Millennium Development Goals, one of which seeks a two-thirds reduction to the 1990 child mortality rate by 2015. Most countries are not on track to meet that goal, Baqui says, though under-5 mortality did come down to about 8 million from 12 million in the last 20 years. That decrease, however, is mostly from a reduction in older children’s deaths.

Unfortunately, Baqui says, many countries take at face value WHO recommendations to just keep the cord clean and dry, even though they include a caveat that antiseptics should be considered for babies born in unclean conditions. Now, Baqui and his colleagues at Johns Hopkins, USAID and Save the Children are working with WHO to reevaluate the recommendations—including how they might be revised to better include developing countries where cord care is often not a priority.

“Cut the Cord… Cleanly”

“Newborn deaths from preventable causes such as cord hygiene have been a longstanding global tragedy that we know can be prevented. Dr. Baqui and the group at Hopkins have really opened the eyes of the world to a solution that appears cost-effective and simple.”

—Lauren Glenn Manfuso

Paul Meier, PhD, MS, an assistant professor in Biostatistics from 1952 to 1957 whose work revolutionized medical statistics, died on August 7 at age 87. He was one of the first proponents of randomized clinical trials and, with Edward Kaplan, developed the Kaplan-Meier curve, the standard research tool to estimate patient survival rates.

Donna Feeley, MPH, RN, who taught the course “Complementary, Alternative, Indigenous and Traditional Medicines” in the School’s Winter Institute, died on October 23 at age 58. She also worked at the American National Red Cross in Washington, D.C.