

A photograph of a woman in a patterned shirt and a white turban carrying a baby on her back. She is in a field, possibly a cotton field, and is looking down at something in her hands. The image is overlaid with a blue circular graphic on the right side.

One World Many Challenges

Public Health in the 21st Century

Boston University School of Public Health
Dean's Report 2003–2004

Boston University
School of Public Health
Board of Visitors

Paul M. Gertman

Marcia Angell

Gerald Billow

Tristram Blake '79

Stephen C. Caulfield

O'Dea Coughlin '79

Iris Davis '84

Sally Deane '88

Mary Jane England

Christopher Gabrieli

William E. Halmkin

Thomas W. Janes

Alan Jette

Joel Lamstein

David Margulies

Evelyn Murphy

Kevin C. Phelan

John A. Rich

Jeannine M. Rivet '81

James Sherblom

William C. Van Faasen

Stephen Waters

Alumni Board Members

Julie Ross '00

Charlene Anderson '97

Elizabeth Cohen '02

Jane Craycroft '95

Susan Dodge '99

Cressie Hedgecock '02

Kathryn McBride '02

Julie Wisniewski '00



One World Many Challenges

Public Health in the 21st Century

"BUSPH is expanding its reach by making connections with public health scholars and practitioners worldwide, from Brazil to South Africa to the Philippines. We are training the international public health workers of the future."

—ROBERT F. MEENAN, MD, MPH, MBA, DEAN

I AM PLEASED TO PRESENT the fourth annual Dean's Report of the Boston University School of Public Health. The stated mission of our school centers on two themes. The first is our commitment to excellence and innovation in public health education, research, and service. The second, perhaps even more important, is our emphasis on working with the disadvantaged, underserved, and vulnerable. Traditionally, BUSPH has reached out to these populations in its own vicinity. In recent years we have begun to take a broader approach, including in our purview populations from all over the world.

As the importance of global health and development becomes increasingly apparent, BUSPH is expanding its reach by making connections with public health scholars and practitioners worldwide, from Brazil to South Africa to the Philippines. We are training the international public health workers of the future. We have welcomed fellows from Russia and Mongolia, as well as visiting professors from many countries. We are conducting valuable research while serving populations as diverse as orphans in Uganda and tuberculosis patients in Tanzania.

Twenty-five percent of our students now select international health as their area of study. BUSPH has grown dramatically stronger in global health research in the past few years, thanks to funding from USAID, NIH, and other agencies. We intend to continue to increase our visibility on the world stage in a truly multidisciplinary fashion, putting greater focus on public health as an essential component of both social and biomedical sciences through connections with other Schools and Colleges at Boston University and other partners in this country and abroad.

We intend, in short, to contribute to the advancement of public health in our city, in the United States, and in the world.

"We used to look at global health in terms of problems 'they' have — 'they' being people in other countries. But the proper way of thinking about it is problems we *all* have. Health issues in China or Russia or Europe — global health isn't limited to developing nations — affect us too. Basically, there is no 'us' and 'them' anymore. 'They' are now us."

—GERALD T. KEUSCH, MD
ASSOCIATE DEAN FOR GLOBAL HEALTH



In fall 2003 Gerald T. Keusch, MD, was appointed associate dean for global health and professor of international health at BUSPH. He also serves as assistant provost for global health on the Boston University Medical Campus and as professor of medicine at the Boston University School of Medicine. Prior to his arrival at the University, Keusch was associate director of international research and director of the Fogarty International Center at the National Institutes of Health (NIH), where he played a central role in international health research and policy issues. He has also served as director of the Health Office of the Harvard Institute for International Development and as chief of Geographic Medicine and Infectious Diseases at Tufts–New England Medical Center.

Q It seems as though we're hearing more these days about "exotic" diseases such as West Nile virus, Ebola, and SARS. Are these really a threat to developed nations like the United States?

A Well, diseases don't recognize national boundaries. They don't carry passports. They cross borders with ease, as do vectors like mosquitoes. What's less obvious is there's an ongoing redistribution of people around the world, and migration from developing to industrial nations.

This can be a good thing, except that those people can bring with them diseases that developed nations haven't worried about in decades, or maybe have never worried about. And it's only going to get worse with global warming, as climactic changes broaden the range of the disease vectors. Governments need to deal with these issues in order to best protect the citizens of their own countries.

Q So are you saying there's no difference between industrialized and developing nations, from a public health standpoint?

A I'm saying that we used to look at global health in terms of problems "they" have — "they" being people in other countries. But the proper way of thinking about it is



problems we *all* have. Health issues in China or Russia or Europe — global health isn't limited to developing nations — affect us too. Basically, there is no "us" and "them" anymore. "They" are now us.

Q Are there other reasons we should care about, say, AIDS patients in sub-Saharan Africa?

A There are many reasons for enlightened self-interest regarding such issues. One major reason is that good health is required for people to be educated, to work, to be productive, and to grow an economy. Health is essential to quality of life, which is essential to economic growth and political stability. The fewer civil wars in the world, the better, in all sorts of ways.

Another aspect of self-interest is that what we learn about diseases abroad can often be relevant to treatment of diseases here. A perfect example is the study of cholera, which hasn't existed in the United States for more than a century, in places like Thailand.

Q What kind of impact can the study of cholera have?

A I got interested in cholera in 1965 and discovered that outside the United States, viral disease is not just

an annoyance; it is a major killer. And among the things we learned during several decades of study was the way physical mechanisms are altered by the organism relating to the movement of sodium and chloride across the intestine. Those insights have translated into clues about the altered physiology of individuals with cystic fibrosis, because the same kind of transport mechanisms are affected. It's a very striking example of how a disease that represents a minimal endemic threat has provided a vast benefit for the population of the United States. Similar strides have been made in the study of sickle-cell disease, thanks to new genetic insights into malaria.

Q What happened to simple altruism as a motivator for global public health initiatives?

A Altruism still exists, of course. There is still a willingness among nations and individuals to share resources with those less fortunate, with those who have fewer resources; and there's a satisfaction that comes from helping. I think there's a growing concern for global health among students because they're aware of the world in a way that they have not been probably since the Vietnam War. There's been a change in attitudes from a "me"-centered perspective to a more global view of the world. I think it's a trend that should be encouraged. Higher aspirations and ideals are a good in themselves, but they're essential for our own future survival. As academic leaders we need to think globally and demonstrate by our commitment that there are things that can be done — that we can help. It's wonderful to be involved in that.

Q It sounds like you believe that public health can help to bring the world together.

A Science builds bridges through communication, cooperation, development of friendship. It is probably the least costly type of diplomacy. Also interesting is that scientists and other leaders in the health field often advance to assume the leadership of nations. With its values of seeking truth, honesty, openness, communication, and knowledge, I see science as an essential humanizing force — which, again, we can encourage. Making these links is a value to students and to the nation. A great university leads, and I think Boston University is poised to really take a leadership role in this arena. ■

"We know these chemicals affect the central nervous system, especially prenatally. But downstream effects — such as later behavioral health and academic and occupational achievement — have never been mapped out very well."

—ROBERTA F. WHITE, PhD

Shockingly little is known
about the effect of **pesticides**
on infants and developing fetuses.



In the small farming community of Makhatini Flats in South Africa's KwaZulu-Natal province, people truly live off the land. Huts have dirt floors, and the searing heat makes soil dust a constant companion both inside and out.



Most of the farming here is done by women, who often work barefoot as they plant, tend, and harvest cotton and other crops. They and their children rub dirt on their faces to protect their skin from the sun.

Yet the soil that is so much a part of life here is not as benign as it appears: a buildup of pesticides over the past century has turned the villagers' source of livelihood into a source of concern, as well.

"They use all classes of pesticides — DDT for malaria control, pyrethrins, carbamates, organophosphates," says Roberta F. White, PhD, a neuropsychologist and chair of the Department of Environmental Health. "We know these chemicals affect the central nervous system, especially prenatally. But dose-effect relationships and downstream effects — such as later behavioral health and academic and occupational achievement — have never been mapped out very well."

White and environmental epidemiology professor Richard Clapp, MPH, ScD'89, have joined with colleagues at the University of Cape Town and the University of Natal in Durban, South Africa, to do a pilot study of the region, which is particularly well-suited to research not only because of high exposure rates, but also because the population is relatively homogeneous and stable.

"Our eventual aim is to understand how prenatal exposure to pesticides affects the nervous-system development of children in this area," White says. "The initial funding is for two years, but we hope to follow the women prenatally through delivery, and then to follow the kids as they grow up."

One of the challenges, adds White, is that there are very few neurological exams in Zulu, the primary language

of Makhatini Flats. Along with tests measuring motor skills, reflexes, gaze, and other neurological functions, the team will be adapting language-development and other cognitive analyses. "How many words does a person know at a certain age?" White asks. "How well can a child problem-solve? We have to use Zulu words, obviously, but we also have to use objects and stimuli that are appropriate to the culture."

Clapp, who has participated in teaching and research at the University of Cape Town since 1991, points out that the results of this research may someday help bring about policy changes that would control pests while reducing the harm to human health. "The more we know about the effects of these chemicals," he says, "the better we can make decisions to use other techniques or even other, less dangerous chemicals to insure the food supply. Integrated pest management is not part of our research, but our research will help point the way to practices that make sense."

In the shorter term, a side effect of the research is educating the women about the dangers so they can lower their risk: Transdermal absorption can be minimized, pesticide containers can be disposed of properly, and the warning label — "should not be use by pregnant women" — can be translated from English into Zulu.

Such efforts would enable residents to use the land more effectively and safely, particularly as the government of South Africa recently unveiled a \$72 million development plan for Makhatini Flats, with agriculture as its centerpiece. "The development of the flats will help restore KwaZulu-Natal to its rightful position as the garden province of South Africa," the province's minister of agriculture, Narend Singh, was quoted as saying in a 2002 article in Durban's *Sunday Tribune*. And the research team will be there to help ensure it's done safely. ■



Women often work in the fields throughout their pregnancies, increasing the risk of harm to their unborn children.

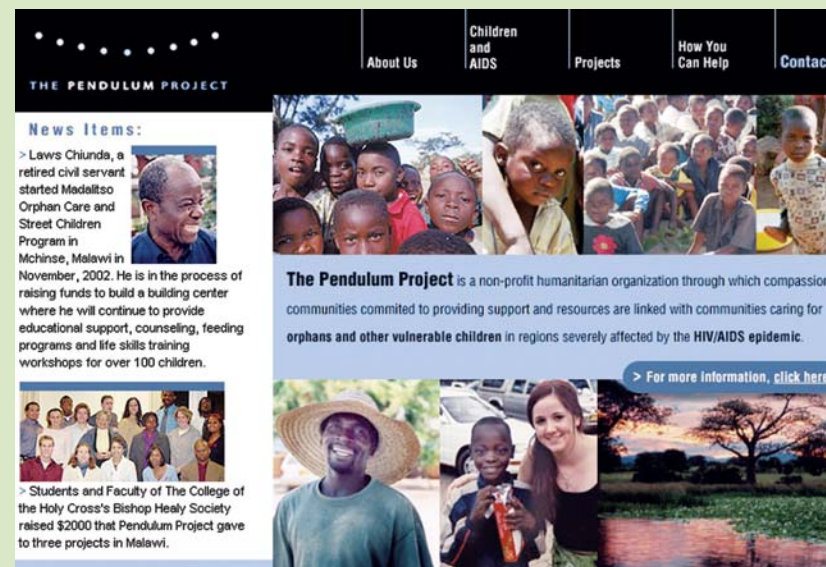
GIVING BACK: THE PENDULUM PROJECT

Ellen McCurley, MPH and MSW candidate, took an unusual route toward public health — through the business world, multimedia, and advertising. After making a six-minute documentary for the Malawian government entitled "Malawi: A Call to Action," about the AIDS pandemic and the rising number of orphans and children at risk, McCurley began to wonder, *What's the best way for me to get more knowledge and contribute?* "After I'd seen the situation firsthand, and experienced the culture and the amazing spirit of the people despite the suffering, I just had to do something."

In 2001 McCurley — along with Suzi Peel of the Family Health Initiative and Rosette Serwanga of the African Health Initiative — started the Pendulum Project, which provides support and resources for Malawian communities caring for orphans and other vulnerable children. "In Malawi, which is about the size of Pennsylvania, 80,000 people a year die from AIDS. When those people die, their extended families take in the orphans — and these families are becoming pretty overburdened. It's really hard to walk around a village in Malawi and not find someone who's supporting an orphan or a child at risk."

Pendulum currently supports six community-based projects in Malawi: a breakfast program, four day-care centers, and the Ministry of Hope, which provides business training

for widows, a nursery school, nutrition education, and other services. In the three years of Pendulum's existence, it has provided school fees, small grants, life-skills training, HIV counseling and support, and primary care for diseases like scabies and malaria to approximately 15,000 orphans and their families. "Malawi's a country that truly values its children," says McCurley. "The spirit of cooperation has been really inspiring." ■



The homepage of pendulumproject.org.

MEASURING PRODUCTIVITY IN THE FACE OF AIDS

Though it is considered a given that the health of a population is inextricably linked to its economic productivity, it can be difficult to take precise measurements of these indicators when data is lacking and criteria are often subjective. That's what makes a Center for International Health and Development (CIHD) study of HIV-infected tea pluckers in Kenya so unusual.

With 10 percent of the global market, Kenya is one of the largest tea producers in the world, and though the average daily wage is \$2.37, the jobs are sought-after because unemployment is high and the tea companies care for their workers by providing housing and medical benefits.

And, says statistical programmer Matthew P. Fox, MPH'02, the study's principal investigator, "the companies keep very good records, including how many kilos of tea were plucked per day, per worker; who was on sick leave; who had retired prematurely; and who was being shifted to day labor, which is what often happens when workers become too sick to do the arduous work of plucking tea."

Without treatment, workers have an average of nine healthy years between becoming HIV-positive and developing



Members of U.S. and Kenyan HIV/AIDS teams with staff at the Mrugua Dispensary, one of four rural mountain clinics that serves surrounding villages in the Taita Hills in Kenya.

Sister Cities International. She wrote a grant accepted by the State Department for \$17,500; with another \$10,000 from the Alliance, she became one of three AIDS prevention workers from Newburyport to visit Kenya in January 2004. "We were a roaming HIV/AIDS awareness team," she says, noting that they talked to children from fifth grade through high school and numerous community groups. "Even though AIDS awareness is fairly high in Kenya, when you come in from another context, people really listen."

A few months later, colleagues she met in Kenya came here to do similar work, and to learn about counseling and home care efforts in the United States. The three — a nurse, a volunteer community leader, and a reproductive health worker — visited service providers on the North Shore and spoke to more than 1,000 schoolchildren about the global AIDS crisis. Rushton, who currently serves as a consultant for World Vision International, recently received funding to do a monitoring and evaluation study of the exchange project this fall.

"I feel we're going to look back at this point in history," she says, "and say there was this horrible disease that wiped out all these people in Africa. We'll ask ourselves, *How was this allowed to happen?* There's something very wrong about it. How can we not do something?" ■

BROADENING PERSPECTIVE

In Laurel Rushton's case, the old adage "think globally, act locally" was reversed: Working locally as client-services coordinator for the North Shore AIDS Health Project in Gloucester, Massachusetts, got her thinking globally about the issue. "People here are living with a horrible illness," says the 2004 graduate, who also received a certificate in International Health, "but they're living. Just knowing that the United States has so much, you can't help but realize that more needs to be done around the world."

While pursuing her degree full time, Rushton volunteered as the AIDS project coordinator at the Greater Newburyport/Bura Alliance, a nonprofit organization affiliated with



AIDS. Once AIDS strikes, most are dead within a year or two. By comparing four years of company records of workers known to have died of AIDS with those who were not known to have the disease, Fox and his colleagues found a drop in productivity of 30 percent to 35 percent in the two years before death.

"What we're seeing," says Fox, "is the devastation that this one epidemic is having on the sizable economic and life-expectancy gains that have been made over time in countries like Kenya. What AIDS might be doing to a nation in terms of lost productivity could be quite significant, and it is probably quite a bit more than we've estimated." ■

On the eve of World Tuberculosis Day, Indian Doctors in New Delhi brief a group of women on TB.

Tuberculosis kills more people worldwide than malaria and AIDS combined.



Participants in the "Tuberculosis in the Era of HIV" conference formed groups and designed a clinical research study with the help of Robert Horsburgh, MD, MUS (right).

"Some people say AIDS is the biggest killer worldwide," says C. Robert Horsburgh Jr., MD, MUS, "but you don't actually die of AIDS. You die of other things, like TB." According to the World Health Organization, more people die from tuberculosis annually than from AIDS and malaria combined.

There are approximately 40 million people living with HIV/AIDS, but 40 million are infected by TB *every year*; it is the number-one killer of women of child-bearing age and of the HIV-positive, particularly in the developing world.

Last September the National Institutes of Health's Fogarty International Center awarded a \$1.5 million grant to a team of



researchers from BUSPH, Dartmouth Medical School, and Muhimbili University College of Health Sciences in Dar es Salaam to begin a five-year collaboration to train Tanzanian scientists in the study of tuberculosis and HIV/AIDS.

"The level of medical training is very good in Tanzania," says Horsburgh, chair of epidemiology and one of the program's three principal investigators, "but they don't have the infrastructure — either the laboratory equipment or the people — to do the kind of specific research they need to address this issue. Most of the money for the AIDS crisis there has gone into treatment, but the country has not yet caught up in terms of research knowledge."

The additional training, Horsburgh believes, will empower Tanzania's health system to safely and effectively use the anti-retrovirals that are finally making their way to Africa; it also will result in improved care and stronger prevention programs. Horsburgh became involved in the International Training and Research Program through his consulting work with the Dartmouth–Muhimbili DARDAR

Health Study, which began in 2000 and included a large-scale randomized trial of a safer TB vaccine than the one currently in widespread use.

"This new program officially kicked off in September 2003," he says, "but it wasn't until March 2004 that we presented our first course in Dar es Salaam." The conference, "Tuberculosis in the Era of HIV," featured specialists in the field from each of the three collaborating universities — Horsburgh spoke about treatment and statistical analysis — as well as a group of lab scientists from the National Public Health Institute in Finland, who presented seminars on how to grow and handle tuberculosis in vitro. "There was so much interest in the course that we had 80 participants," Horsburgh says. "We had only been expecting about 40."

While he was in Dar es Salaam, Horsburgh also reviewed applications for the main phase of the project, in which researchers from Tanzania will do coursework at either BUSPH or Dartmouth, earning an advanced degree or a certificate. He hopes to see two doctoral candidates and one MPH student starting in the fall. "They will then go back to Tanzania and teach and do research," he says. "Everybody has read about the devastation of AIDS in Africa, but they'll be in the thick of what's happening." ■

MONITORING DRUG USE

Every five years, the Center for International Health and Development at BUSPH cosponsors — with the International Network for the Rational Use of Drugs, the World Health Organization, Harvard Medical School, Management Sciences for Health, and the Thai Network for Rational Use of Drugs — the International Conference on Improving the Use of Medicines (ICIUM), in Chiang Mai, Thailand. The conference seeks to review the global body of knowledge on interventions to improve the use of medicine, as well as set the research agenda for the next five years of work.

This year, the conference presented more than 30 studies on health-care provider interventions — including primary care, antimicrobial use in hospitals, and the practices of retail drug sellers; community and household interventions, which aim to improve the treatment of infections



The ICIUM conference in Chiang Mai, Thailand.

by empowering patients and consumers through education; and interventions regarding the impacts of common economic and pharmaceutical-sector policies. ■

A translator and UNHCR-sponsored doctor talk with a refugee boy before his check-up in Kyrgyzstan.



BUSPH researchers work with the former Soviet Republics to reform an ailing health system.

Zdrav means "health" in Russian; *ZdravPlus*, a health-reform project in Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan, means better health care for thousands of residents of the former Soviet Union. Funded by USAID through the Cambridge-based research and consulting firm Abt Associates Inc., the decade-old program aims to improve the quality and efficiency of health services, particularly at the primary-care level.

"When I first got to Central Asia in 1994," says Cheryl Cashin, MS, PhD, "the most striking observation for a researcher was that policy had no basis in evidence or research, no scientific or financial support whatsoever." Cashin, who joined the BUSPH faculty in 2002 as a research associate in the Department of International Health, has been with the project almost since its inception.

"The Soviet system didn't invest in an infrastructure that would support research and better health care models," she continues. "As a result, people had a very passive role in the health-care system, with no choice of provider and little access to information, even about their own health."

Summer Coish, who spent a year on the project while working toward her MPH, cites as an example of the former the prescription of a shot of vodka to cure virtually any ailment. Brenda Waning, MPH,



Summer Coish



RPh, an assistant professor of international health who specializes in pharmaceutical issues, mentions the need to update old, protectionist pharmaceutical practices and policies so that the countries might enter into the international market through the World Trade Organization.

Though they all started from scratch upon independence in 1991, the five countries have varied in degree of improvement over the last 10 years, with Turkmenistan and Tajikistan furthest behind, and Kazakhstan, with its oil-enriched economy, in the forefront.

"We're helping them to implement a completely automated health information system," Waning says, "with demographic information, prescribing information, dispensing information, and insurance information. We've also assisted with World Bank evaluations and loan-preparation activities. A part of the reforms is privatization, which means establishing markets where none existed."

Another big part of the project is helping to develop evidence-based clinical guidelines with Central Asian health staff; Cashin says she has seen "unbelievable changes" in this regard over time. "There is still some opposition from the entrenched medical leadership of the old system," she adds, "but there's been a very strong move toward evidence-based medicine. It's really amazing." In the previous system, she explains, innovation was frowned upon; anyone who deviated from the strict accepted protocols was punished. "It took some time for people to recognize that the new system actually rewards innovators."

Among those innovators are the colleagues with whom BUSPH staff has been working side by side. "The overall approach is to build capacity among current and future leaders of the region's health sector," Cashin says, "so they can sustain it on their own. And through their efforts and the education campaigns of ZdravPlus, residents of the area seem to be taking more responsibility for their own health care. We're definitely looking toward a system that will be able to sustain itself." ■



A CHANGE IN DIRECTION

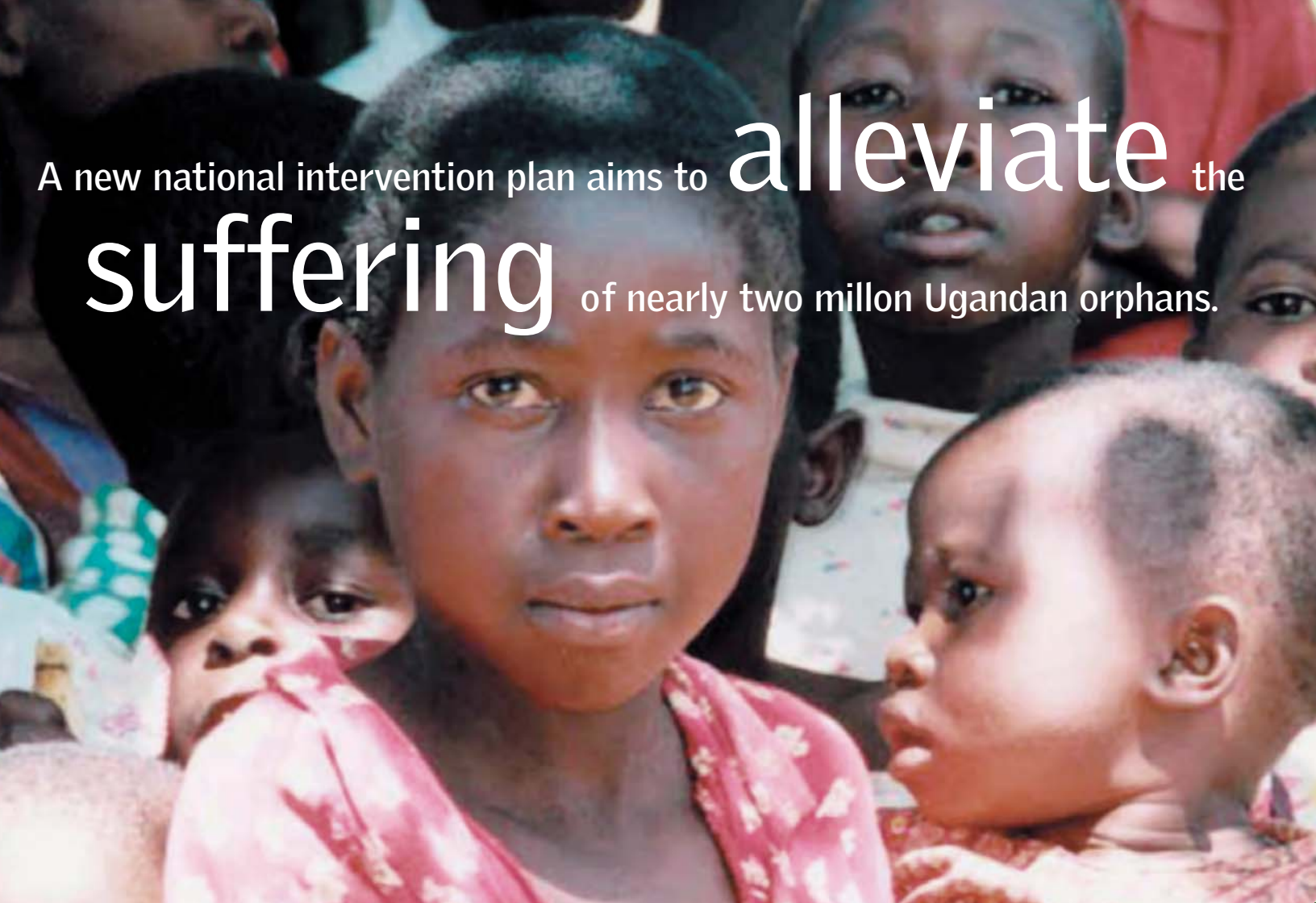
Summer Coish, MPH'04, found herself working in Central Asia by chance. "After my first year at Boston University," she says, "I was supposed to go back to Africa, where I had spent a year as an undergrad; but that fell through at the last minute. One of my professors had consulted for a project in Central Asia, and they needed somebody to work for the summer. I was meant to be there for only three months." She ended up staying a year,

and is now looking for a permanent position in the region.

Coish managed an NGO funded by the ZdravPlus program, the Kazakhstan Association of Family Physicians. She helped to conduct surveys, write grants, plan logistics, and determine the goals, objectives, and activities for the dozen branch offices now established.

"In the former Soviet Union," she says, "there was no concept of family medicine; all the doctors and hospitals were specialized, so there were a lot of wasted resources and a lot of misdiagnoses. As part of the general health reform package, the project conducted training in family medicine for doctors and nurses at the systematic level. But the real challenge is in changing people's behavior, which had become ingrained after years of communist rule. Under the Soviet system people received everything they needed, so it's hard to get them to see why this transition could be good in the long run."

Coish says she found the experience quite different from working in Africa, where the people — who "don't have access to the most basic services" — tend to welcome public health interventions. "Having had both experiences really gave me a broader understanding of the provision of public health," she says, "and how its context changes in the field." ■



A new national intervention plan aims to alleviate the suffering of nearly two million Ugandan orphans.

"The stories we heard were so tragic" says Lora Sabin, PhD, of a legal-issues study done as part of the Ugandan Orphans Project, a three-part research initiative undertaken by BUSPH's Center for International Health and Development, UNICEF-Kampala, Makerere University in Kampala, and the government of Uganda.

"It was really difficult for these researchers to do the research and then leave the children. The children would frequently make incredible personal appeals. 'Can you please help me?' and the researchers just couldn't. They didn't have the resources."

The researchers' help may not have been apparent at the time, but the interviews being conducted were part of

the multistage effort that would ultimately result in a national mandate, called the Strategic Programme Plan of Interventions for Orphans and Vulnerable Children in Uganda, designed to alleviate the problems of children orphaned by war and AIDS. It's being funded in part through a \$47 million grant from the Global Fund — "probably the largest grant for orphan care in the world from a global fund," according to Frank G. Feeley, JD, a clinical associate professor in international health.

Uganda is usually cited as a success story of AIDS prevention, says Feeley, who assisted the government in applying for the Global Fund grant. Still, more than two million children have been left without one or both parents; these orphans are absorbed into their extended families or remain in child-headed households, which further traumatizes the children and stresses the families to the breaking point, and weakens the economy.

The first stage of the project was a situation analysis that found, in most cases, the 25 percent of Ugandan



households that care for these children are loving and work hard to do their best; often, however, the orphans in such families are treated as second-class citizens. Unscrupulous relatives may grab their property, deny them an education, turn them into servants, beat them, or sexually abuse them. Children left on their own may live on the streets, panhandling and prostituting themselves.

"The situation is pretty dire," says H. Kristian Heggenhougen, PhD, professor of international health, who has been heavily involved with the project since its inception.

To help gauge just how dire, the second phase of the project is collecting the stories behind the numbers through a series of six research studies on orphans that examine factors such as psychosocial problems, legal issues, and risky sexual behavior. The final phase, due this year and written in conjunction with the Ugandan government, is the national plan, which will offer a set of specific interventions, including financial assistance for secondary education, emergency food support, income-generation training and microloans for orphan households, and psychosocial support for the orphans.

Researchers hope that the lessons learned will help children not only in Uganda but also in other developing countries, particularly other African countries that have not yet peaked in their number of AIDS cases.

"Even in Uganda," says Heggenhougen, "where AIDS incidence has decreased, those who contracted HIV some time ago are still dying of AIDS. It will be another decade or so before the orphan population starts to decline."

The enormity of the problem "boggles the mind," he adds. "It's almost as if they lose meaning and we don't recall that these are not just numbers but human beings who are suffering in very dramatic and terrible circumstances. You can't take them all home, but we're trying to help as many as we can."

Clearly, the dispassion often ascribed to researchers is lacking in those involved in the Uganda Orphans Project. Heggenhougen recalls the story, told by Michel Sidibe, MD, the former head of UNICEF-Uganda, of a little girl walking along the beach where thousands of starfish had washed up and were drying in the sun. "She was picking them up and throwing them back into the sea," he says, "when an old man came along and asked her, 'What difference is that going to make?' And she said, 'Well', as she tossed another starfish into the ocean, 'it's going to make a difference to this one.'" ■



THE WRITE STUFF

As part of the Uganda Orphans Project, the Center for International Health and Development enlisted the assistance of Lucy Honig, associate professor of international health and the IH department's writing specialist. "It was such a unique opportunity," she says. "I love working with international students."

In March 2004 Honig — who specializes in teaching researchers and BUSPH students how to write clear research papers, study designs, policy analyses, and so on — traveled to Entebbe to meet with two members of each of the six research teams being sponsored by the Applied Research in Child Health

Lucy Honig (second from left) and Kris Heggenhougen (third from right) with participants in the Ugandan Writing Project in Entebbe.

(ARCH) project. The participants spent the next five days in an intensive workshop setting, learning how to best exploit search engines, critiquing one another's data interpretations, and attempting to edit themselves as ruthlessly as a professional editor would, all in an effort to complete a research paper to be published in a peer-reviewed journal. Separate workshops were held on proposal writing and data analysis.

"People perceive a bias against researchers in developing countries," Honig says, "but once they overcome the obstacles and limits they have faced in getting published, that bias should diminish." That is, observing the conventions of research-paper style and structure and the requirements for submission, will put Ugandan researchers on more equal footing. "For example," says Honig, "the gracious, expansive African-style introduction just doesn't work in Western scientific journals. That's the kind of stuff Americans just absorb through years of reading the literature, but many Ugandans haven't had access to the same breadth of literature." ■

BRIDGING WORLDS

The MPH degree that Terry Jo Bichell received from Boston University in 1997 has come in handy not only in her work, but in her personal life as well.

After her husband accepted a job in cardiothoracic surgery at Children's Hospital of San Diego, Bichell, a midwife, realized she needed to learn Spanish, since it was the primary language of about half of her clients. She accepted a teaching position at a school of midwifery that was being started by the Centro de Adolescentes San Miguel de Allende (CASA) in Guanajuato, Mexico. In exchange for her birthing expertise, she would have a place to stay while she took Spanish lessons.

Bichell never got to the Spanish lessons — learning the language on the fly in the hospital instead — but she did have a hand in educating some of the first women to subsequently be licensed as professional midwives by the



Terry Jo Bichel (left) and a midwife, mother, and child at CASA.

Mexican government since the country began officially discouraging the practice in the early 1990s.

Today, Bichell's involvement with CASA is limited to sitting on the scientific advisory board, because she is putting the research skills she learned at Boston University to use in studying Angelman syndrome, a genetic form of mental retardation that affects her youngest son, Louie. She's a co-investigator on research being conducted by Arthur L. Beaudet, MD, a geneticist at Baylor University, into a possible link of the disease to autism and folic acid.

"I went to Boston University to become a midwife," she says, "and that was the only reason I went. But while I was there I was required to take statistics, epidemiology, grantwriting, program development. Those skills have all been invaluable. As soon as I learned my son had this syndrome, I was able to jump right in, and not only help him on an individual level, but also take it to the level of public health and contribute to this clinical genetic study that we hope will help so many other kids as well." ■

TAKING AN MPH TO WORK

"Health is a universal right," says Kevin Fiori, MPH'03, "and it is unacceptable that health care is often distributed in accordance with geographic borders, political climates, economic status, religious persuasion, gender, age, and so forth. But that statement means little without a link to action." It was this conviction that led Fiori to apply to the Peace Corps through BUSPH's Master's International Program, which allows students to earn up to five credits during 27 months of service and directed study.

He is stationed in Kara, Togo, with AED, or Association Espoir Pour Demain (Hope for Tomorrow), a nonprofit NGO established in 2001 to provide comprehensive HIV/AIDS services at the community level.

"AIDS, malaria, and tuberculosis are not a Togolese or an African problem," Fiori says. "Viruses, bacteria, and parasites do not respect borders, cultural differences, religious creeds, or political systems. Although I'm only 24, I know enough about epidemiology and international health to understand that the health of one nation affects others, and it is our choice whether that effect is positive or negative in nature."



Kevin Fiori, left, talks with members of AED after a meeting on the group's new nutrition program.

Fiori will be a busy man in the next few years, as he hopes to begin medical school after completing his tour of duty, and also to begin, with his brother, Thomas Fiori, AED-USA, a stateside fundraising and advocacy campaign for the Togo group. "Any AIDS initiative must be comprehensive," says Kevin Fiori. "It must address all of the many issues that are associated with this pandemic, including poverty, by creating community-based initiatives coordinated on a global scale. I hope that the work I'm starting here is just the beginning." ■

STUDYING THE CULTURE

"There's always been this assertion about the differences in alcohol consumption and behavior between Europe and the United States," says Lee Strunin, PhD, associate professor of social and behavioral sciences. "People say that because alcohol is more integrated into European culture, European youth learn to drink more responsibly. But this assumption hasn't been examined much. That's one of the reasons we're undertaking this study."

In November 2004, Strunin and her colleagues at the Permanent Observatory on Youth and Alcohol in Italy will begin collecting data on the only international pilot study being done under the auspices of BUSPH's Center to Prevent Alcohol-Related Problems Among Young People, which in February 2004 was awarded a \$10 million grant from the NIH's National Institute on Alcohol Abuse and Alcoholism.

Since, as Strunin points out, "drinking can lead to positive or negative behaviors depending on where and when and with whom it occurs," she will be asking two groups of 80 men and 80 women — aged 16 to 18 and 25 to 30 — the age at which they began drinking and the context in which they drink, as well as their demographic and cultural backgrounds, including family history, family and other social networks, education, work history, norms, and beliefs.

"The data will show a complex picture," Strunin says, "that can then be applied to other contexts. We know that in the U.S., for example, drinking at an early age has been associated with frequent heavy drinking patterns and development of dependence. If we find that drinking in other cultural contexts can produce moderating effects, we can adapt these lessons to meet the U.S. environment." ■

...AND EFFECTS OF ALCOHOL

Carrie Grundleger, MPH'04, and Jacey Bloom, MPH'04, both worked full time in the School's Department of Social and Behavioral Sciences while getting their master's degrees. But unlike many project coordinators, they were not chained to their desks.

"We've learned how to develop protocols, recruit subjects, run the protocols, and analyze the data," says Grundleger. "We've also learned a lot about Sweden."


She has been to that country four times — and Bloom has been there once — while working with Jonathan Howland, MPH, PhD, chair of the Department of Social and Behavioral Sciences, on alcohol-related research at the Kalmar Maritime Academy. The first study measured the effects of residual alcohol on maritime professionals; that is, whether drinking the night before active duty would affect performance. The second looks at legal low doses of alcohol in cadets. But why go to Sweden? Because the academy has many high-quality bridge simulators, which it is willing to share. "It's really just more efficient," says Howland. "And if you want to demonstrate to policymakers that there are detriments in performance — and we suspect there will be, based on previous studies in other industries — you can't use abstract psychometric tests. You know, if you say to a congressman, 'Well, mariners don't do as well on a Stanford-Binet intelligence scale after drinking,' he's going to say, 'Who cares?' But when these guys are hitting buoys in a simulated portion of Halifax Harbor, all of a sudden it gets their attention."

Coincidentally, it makes for happy research assistants. "Fortunately for us, there's no hardship in going to Sweden," Grundleger concedes.

Howland considers the bigger picture. "It's nice for students to see a country for which social justice is very important," he says, "and nice to see nations be able to organize themselves in a relatively fair way, and still have a high quality of living. It's educational from a public health perspective, where disparity is such a huge issue, to see a country where disparities are not such a big issue and realize that they don't have to be." ■



Jonathan Howland, MPH, PhD, with Alissa Almeida, the Department of Social and Behavioral Science's academic coordinator, and Carrie Grundleger, one of the department's research project coordinators.

A close-up photograph of several Indian women and children. In the center, a woman in a pink sari looks down with a concerned expression at a young child in a yellow patterned shirt. To her left, another woman in a red sari looks on with a similar expression. To the right, a young boy in a white patterned shirt looks towards the camera. The background is slightly blurred, showing other people.

In response to the outbreak of a "mysterious disease" that has killed more than 30 children, Indian mothers bring their children to a medical center in Nasipar village, India, for checkups.

BUSPH departments team up to teach **maternal** and **child health**

— and engage students with a variety of perspectives.

It's not often that a course gets a teaching award its first semester out, but that's what happened in the Summer '03 term, when professors Lois McCloskey, MPH, DrPH; Eugene Declercq, MBA, PhD; Ken James, MBBS, MPH; and Donald Thea, MD, MSc, were rated highest by students for the Global MCH course they co-taught that semester.

"The students were really enthusiastic," says McCloskey, a course co-director with, this year, Mary Bachman, ScD. "So many students and prospective students in both the maternal and child health (MCH) and (IH) departments have told us of their interest in working internationally in the field of MCH — including in less-developed countries and low-income communities in the United States and the rest of the developed world. We decided it was time to help them streamline those two interests."



About three years ago, faculty from both departments got together to conceive a program that would meet students' interests in a way that would not require a dual concentration. The program is still in its design phase, with a proposed core curriculum for Global MCH, a management course, a research/evaluation course, and a culminating seminar.

In addition to being co-taught, the course is unusual for its cross-cultural and cross-economic examination of issues. "We're looking at countries at all economic levels," says Bachman, "and we're using a comparative approach, so that for every issue we talk about, the student looks at how that issue is being handled in two countries." Examples of recent student projects include work on obesity in the United States and Japan, maternal mortality in Afghanistan and Mongolia, and child trafficking in Thailand and Benin.

"This aspect, of comparative inquiry," McCloskey continues, "is critical to what we want to educate students to do. They need the critical-thinking skills to help them apply lessons to different contexts. Approaches are different, countries are different, and no one size fits all."

"Yet you might take one country's approach and use it in another," Don Thea, MD, says, "trying the sorts of community-based health promotion that developing countries do so well right in the neighborhood where you live, for example."

Each professor contributes something particular from his or her training. McCloskey, for instance, might talk to students about the social context of the public-health problem and how policy can be used to effect change, while Thea

might focus more on clinical concerns and how health services are delivered at the grassroots level.

According to the syllabus, this allows for "diverse expertise and perspectives across a wide range of issues and regions of the world covered." According to students, though, it just makes the course more fun.

"It was definitely one of the best classes I've taken at the School of Public Health," says Jemima Talbot, a current MPH student. "I really enjoyed the professors' sharing their backgrounds. It's pretty unusual to get all the different viewpoints at the same time. There was a lot of give and take."

A lot of give and take between students and professors, too; during a recent class, students split up into groups to discuss various published research papers, and later presented their findings to the class. They commented frequently, freely questioned assumptions, and sat in rapt attention listening to guest speaker Rondi Anderson, CNM, talk about her experiences as a midwife teaching traditional birth assistants in Somalia. She was just one of the many lecturers to visit during the two semesters the course has been in existence; others have talked about topics ranging from safe abortion in Kenya to family planning in Bangladesh.

"Since taking this class I definitely have a better understanding of what a cross-country comparison means," Talbot says, "and how to do it in a way that isn't superficial. It's easy to compare hospital capacity and doctors and child mortality and all those numbers; but what's actually more interesting is to compare the practices and beliefs that create those numbers. This class really taught me to look at things in a deeper way." ■



In a recent Global MCH class, participants discussed their research projects. From left: Professor of Maternal and Child Health Lois McCloskey; Anita Tonakarn (IH); Abdi Momin Ahmed (IH); Anel Marchena-Suazo (MCH); Professor of International Health Kenneth James; and Tabisa Bata ('03; IH).

DISASTER RELIEF

More than ever, today's public health professionals need to be prepared to work with refugees and populations displaced by war and natural disasters. In response to this need, the Department of International Health created the 12-week certificate program Managing Disasters and Complex Humanitarian Emergencies.

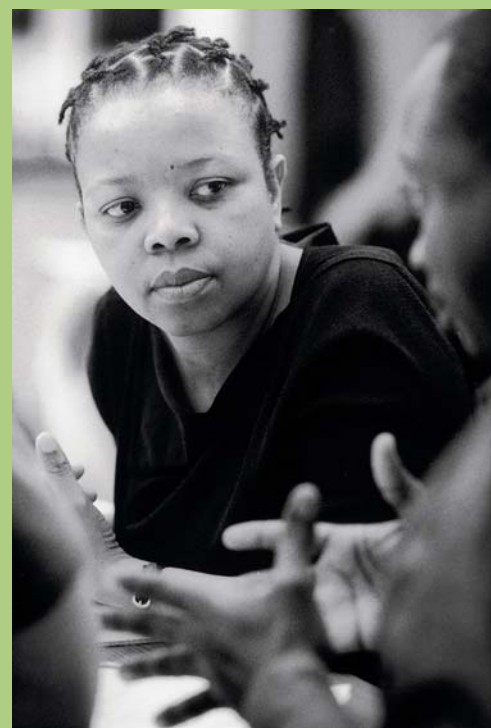
"Students were asking for this course," says Monica Onyango, RN/M, DAN, MPH'99, a lecturer in international health and a founding codirector of the program, along with Luigi Migliorini, MD, MPH'98. "There really is no other school that has a certificate program quite as intensive as this one."

The program, which grants 16 credits toward an MPH, and meets six days a week for six hours a day, covers the causes and consequences of complex humanitarian emergencies, or CHEs, with topics as diverse as rapid response, morbidity and mortality, assessment and surveillance, basic health services, media and public relations, grant writing and budgeting, nutrition and food aid, field management, conflict resolution, and living and working in relief situations. It examines cultural factors, ethical challenges, politics, and international law and

policies in situations from civil war, genocide, and ethnic cleansing to large-scale flooding and earthquakes.

"People who've worked in refugee camps know the magnitude of the suffering," Onyango points out, "but often new graduates going to work for an NGO will find themselves thrown into a situation for which they weren't prepared in school. This certificate program gives them an advantage by exposing them to the issues before they have firsthand experience."

International students explore solutions to complex problems.



A LIVELY EXCHANGE

Since 1998, BUSPH's Department of International Health has been involved with the Edmund S. Muskie/FREEDOM Support Act (FSA) Graduate Fellowship Program, which is funded through the U.S. Congress, and the Mongolian Professional Fellowship Program, funded through the Open Society Institute and Soros Foundation. Both initiatives bring outstanding young Eurasian professionals to the United States to study for their master's degrees.

"Boston University is an international university," says assistant professor and fellowship coordinator Sarah Richards, PhD. "And as an international university, it is incumbent upon us to share our knowledge. But, also, we benefit a great deal by having people from this area of the world at our school. They have different perspectives on public health, different experiences, and a different worldview. It's critically important for all students to be exposed to different ideas. And when the fellows go out into the world, we have that many more contacts for potential collaborations."

Most of the half-dozen or so students who come every year for their MPH are physicians, though there are also

psychologists, social scientists, and scholars from various other disciplines. The screening process is rigorous, but worth it, according to Sergei Muratov, a doctor from Karagenda, Kazakhstan, who has just completed his first year at BUSPH and is beginning his required summer internship, working with CIHD professor Brenda Waning on a pharmaceutical quality-assurance and accessibility program to be implemented in his country.

"When I complete my studies," he says, "I will have gained knowledge and skills that are somewhat unique for my country." He also cites the many contacts he has made as a huge benefit, though many would argue that the connections work both ways: Former Muskie fellows have gone on to positions at high levels in government or international agencies or to set up their own NGOs. One — Mikheil Saakashvili, a fellow who received his master's of law at Columbia University in 1999 under the program — became the second president of the Republic of Georgia in January 2004.

"The real story," says Frank G. Feeley, JD, a clinical associate professor and an advisor for the Muskie program, "is what these fellows do when they go back." ■

DEDICATED TO PEACE

Many public health professionals know what it's like to work in tough conditions, but few find themselves jailed for their beliefs. "Political activism for peace has its own risks and costs in a conflict-ridden country like Nepal," writes Mahesh Maskey, MD, ScD'01, in an e-mail. Less than a year after he returned to his home country after completing his doctorate at BUSPH, Maskey — along with a journalist and a human-rights activist — was arrested by Nepali military en route to a peace meeting in New Delhi.

With the country in a state of emergency after Maoist rebels killed more than a hundred people in four days of violence, the government "viewed anyone who was not 100 percent supportive as a threat," says Lois McCloskey, MPH, DrPH, who got to know Maskey during his stay in the United States. "And these people were advocates for negotiation and peace-making, as opposed to promoting the agenda of one side or the other."

"When Mahesh and his colleagues were arrested," McCloskey adds, "the police gave no excuse. They threw them in the back of a car, blindfolded them, and detained them for

11 days." As soon as they got word, McCloskey and other BUSPH faculty members, in collaboration with several of Maskey's colleagues in Nepal — began an international letter-writing campaign to secure the prisoners' release, partly because, according to McCloskey, "we have such a strong feeling about Mahesh. He's very single-minded and dedicated to his country and his role as physician and educator. He's honestly invested in using every ounce of intellectual, emotional, and spiritual energy he has to bring about peace in the country and to promote public health." Their imprisonment lasted only 11 days because of the intense international advocacy.

But how does peace activism relate to public health? "In a country where 12 people die every day from armed conflict," writes Maskey, an international councilor of Physicians for Social Responsibility, "and the health services are devastated by war, restoration of peace has become the part of the public health agenda — indeed, it is now the greatest challenge for public health. And I intend to do everything possible to make it happen." ■



LEARNING TO TEACH

Most public health professors have taken a few students with them on research trips overseas, or set up opportunities for students to go on their own. But few have brought an entire busload of young people across national borders.

As a health promotion and behavioral sciences professor at San Diego State University, John Elder, MPH'84, PhD, has

done so many times, setting up clinics, introducing public health interventions, and conducting research in labor camps for indigenous workers and their families 150 miles south of the Mexican border.

"The initial idea came from a colleague at the medical school

in Tijuana, the Autonomous University of Baja California (UABC)," he says. "He approached us in 1997 to see how we could give our students — who are working on the same issues at the same time — a chance to work together cross-culturally."

At the end of a half-semester of preparatory classroom work, American public health students get together with their Mexican medical-student colleagues to attend bilingual seminars. Then they all spend a week in a migrant community. The medical students provide a variety of screening, immunization, and clinical services, while the public health group works on databases, patient-management, and educational activities. They see approximately 300 workers a week, and witness firsthand the sort of poverty that most college students never encounter.

But Elder has his own reasons for wanting to continue. "First, at a personal level, it lets me get to know my students as people," he says, "which is tough to do when you only see them in classes for an hour or two at a time. Second, there's just no substitute for real, on-site, hands-on training. What I teach in the classroom has to be validated in the real world; I have a corrective feedback loop built in to the teaching." ■



A new grant takes public health
research into the

real world

A mother awaits treatment for her baby at a public health facility in Nicaragua.

"Ten to 12 million children die each year of avoidable death. We actually know a lot about how to save children's lives, but we're not doing as good a job as we should be at applying the tools and techniques we have."

— JONATHON SIMON, ScD, MPH

Though the 10-year Applied Research for Child Health (ARCH) project officially ends in September 2004, the Center for International Health and Development (CIHD) will not be severing its relationship with USAID's Office of Health, which funded the initiative. The center has been awarded a major five-year cooperative agreement with USAID to undertake country-specific research activities on a variety of child-health topics.

d.

The new program, called the Child and Family Applied Research Project (CFAR), will focus on testing the feasibility of proven interventions for child health in many countries throughout the world.

"In other words," says Paul Bolton, MBBS, MPH, MSc, associate professor of international health, "somewhere in the world somebody has demonstrated that something could work. Our interest is in taking that intervention into new areas to see whether it will actually work in the field, under normal working conditions, as opposed to under research conditions only."

Jonathon Simon, ScD, MPH, is director of CIHD and principal investigator for CFAR. "All science is done locally," says Simon, "but the implications are clearly global, particularly when dealing with children. Ten to 12 million children die each year of avoidable death. We have a moment in time when we actually know a lot about how to save children's lives, but we're not doing as good a job as we should be at applying the tools and techniques we have."

The research — which can be "pretty much about anything that affects child health," according to Bolton — will be done in cooperation with Johns Hopkins University and CORE, the Child Survival Collaborations and Resources Group, which consists of about three dozen U.S.-based non-governmental organizations dedicated to improving

the health and well-being of children and women in developing countries. Among the projects currently in development:

- training community-based health workers to treat malaria and pneumonia, and making the necessary drugs accessible to those who do not live near a clinic;
- teaching local, nonclinic-based prescription-drug sellers the correct dosages for malaria, pneumonia, and diarrhea treatments, making effective intervention accessible to a wider population;
- designing a package of simple interventions — resuscitation, reducing infection, providing antiretroviral drugs to children at the time of birth, and giving antibiotics to mothers if a child stops feeding, has a fever, or has difficulty breathing — that can be done around the time of birth to lower neonatal deaths; and
- assisting organizations in 10 countries to better assess the impact of their programs for victims of torture.

"We're all very excited about this project," Bolton says, "because we feel that though there's a lot of basic science being done in public health, there's not enough emphasis on applied interventions, which is the only way the basic science can have an impact in the real world. We really think this project could put Boston University on the national stage in terms of applied research in this country in global health."

The national stage and beyond, according to Jon Simon. "We'd like to create an evidence base that would influence global treatment recommendations," he says. "That would have a profound impact beyond the little village in Uganda that actually generated the information." ■

APPIS

As one facet of the decade-long Applied Research for Child Health (ARCH) project, the Amoxicillin, Penicillin, Pneumonia International Study (APPIS) brought together twelve researchers from eight countries — Colombia, Ghana, India, Mexico, Pakistan, South Africa, Vietnam, and Zambia — to study the efficacy of oral versus injectable antibiotics in treating acute respiratory infection, which is one of the leading causes of morbidity and mortality in children under age five in developing countries. The World Health Organization currently recommends the latter treatment, though injectable antibiotics can cause more severe

side effects and are often inaccessible to people in remote regions.

"Our research showed that a course of oral antibiotics works just as well as a series of shots," says Don Thea, MD, MSc, a professor of international health and a principal investigator and scientific coordinator of the ARCH project. "We hope this finding will result in a change in WHO's recommendation for the global treatment of pneumonia with injectable antibiotics, thus saving costs, decreasing complications, and providing a treatment alternative for children who cannot be referred." ■

HIGHLIGHTS 2003-2004

SPH has received official notice that it was reaccredited by the Council on Education for Public Health. The School earned a full seven-year period of reaccreditation and was deemed free of any requirements for corrective actions or interim reports.

At the request of **George Annas**, chairman, the Department of Health Law has been renamed the Department of Health Law, Bioethics, and Human Rights, by action of the Boston University Board of Trustees at their fall 2003 meeting. The new name is more descriptive of the key areas of interest that are being addressed by the department faculty's educational, scholarship, and service activities.

Anne Aschengrau was named associate chair of the Department of Epidemiology. She will take a leadership role in developing the department's academic curriculum.

Sister Barbara Brilliant ('90, Health Services), addressed the United Nations in February 2004 regarding critical humanitarian concerns in Liberia. She is currently the dean of the Mother Patern College of Health Services in Monrovia, Liberia.

John Hermos was awarded a Fulbright Lecturing Award in Public Health and will journey to Manipal Academy for Higher Education in Karnataka, in southwest India.

Ralph Hingson was appointed director of the Division of Epidemiology and Public Policy at the National Institute on Alcohol Abuse and Alcoholism.

Daniel Merrigan announced the addition of a practicum requirement to the MPH curriculum, beginning this academic year. The SPH Public Health Practicum provides students with the opportunity to integrate and apply classroom learning in a public health work environment.

Gerald Keusch was appointed to the newly created positions of associate dean for Global Health at SPH and assistant provost for Global Health at BUMC. Dr. Keusch formerly served as the associate director for International Research and

director of the Fogarty International Center at the NIH.

The National Institute of Allergy and Infectious Diseases (NIAID) has selected **Gerald Keusch** as the U.S. Chairman of the bilateral Indo-U.S. Vaccine Action Program (VAP). An enduring feature of the U.S.-India relationship, the program is an important reminder that vaccines are among the most cost-effective health technologies.

Anita King retired as assistant dean of administration and finance. She had been with the School since 1978 and had held virtually every financial and administrative job at SPH. Widely admired and deeply appreciated over these many years, she will be truly missed.

Martin E. Marty delivered the fifth annual William J. Bicknell Lecture. Dr. Marty spoke about "Religion and the Health of the Public: Fundamental Synergies or Fundamental Conflicts?"

Mark Prashker, chair of the Department of Health Services, was named associate dean for research. He will focus on the School's research program, which will exceed \$35 million in awards this year. Also, he will help foster intra- and inter-school research applications that cross disciplinary and department bounds. In addition, he will collaborate closely with BUMC associate provosts for research and clinical research, to enhance SPH's role in campus-wide planning.

The Dzidra J. Knecht Award for Distinguished Service to the School of Public Health was given to **Marilyn Ricciardelli**, Social and Behavioral Sciences' department administrator. The award is presented annually to a member of the staff who has made outstanding and sustained contributions to the operations of the School.

The McKinsey Foundation for Management Research presented its 45th annual award to coauthors **Sydney Rosen**, **Jonathon Simon**, **William MacLeod**,

Matthew Fox, and **Donald Thea**. The award recognizes significant articles published in the *Harvard Business Review*. The award winning article, "AIDS is Your Business," appeared in the February 2003 issue.

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) awarded a five-year, \$10 million grant to the School to establish a Center to Prevent Alcohol-Related Problems Among Young People. **David Rosenbloom** was named director of the center. Associate Director **Richard Saitz** will work closely with Professor Rosenbloom on all aspects of center planning and management.

David Satcher, director of the National Center for Primary Care, Morehouse University School of Medicine, and former Surgeon General of the United States, gave the School's Commencement speech.

Meg Stone, student speaker at Commencement, received her MPH in social and behavioral sciences.

The Norman A. Scotch Award for Excellence in Teaching was presented to **Kenneth James**, assistant professor of international health, at Commencement.

The Dean's Award for Student Research went to **Donald Thomas Davies Jr.** for his project on "Self-Reported Body Image and Unsafe Anal Intercourse Among Men Who Have Sex with Men."

Mary Drake and **Amy Sanborn** were the recipients of the John Snow Inc. Award in International Health.

The Rex Fendall Award for Excellence in Public Health Writing in the Department of International Health was presented to **Stephanie Ettinger de Cuba**.

Hannah L. Green and **Cindy Tin Chen** shared the Allan R. Meyers Memorial Prize for Excellence in Health Services.

The Herb Kayne Prize for Excellence in Epidemiology and Biostatistics was awarded to **Osasumwen Osayande Osayimwen**. ■

DONORS 2003-2004

The School depends on the generosity of alumni and friends to support its mission of teaching, research, and service. The School thanks all of its donors for their financial support. The following list acknowledges gifts made from July 1, 2003, through June 30, 2004.

It is important to us that we acknowledge your gift properly; please let us know of any omissions or errors in listing your name or gift, by calling 617/638-5291.

Corporations and Foundations

Amazon.com
 American Cancer Society
 American Nurses Foundation
 Atlantic Philanthropies
 The David Bohnett Foundation
 The Boston Foundation
 Computer Associates International, Inc.
 Connecticut Health Foundation
 Dreyfus Health Foundation
 Entango Trust For Nonprofits
 Fannie Mae Foundation
 Fidelity Investments Charitable Gift Fund
 Flight Attendant Medical Research Institute
 The Ford Foundation
 Health System Strategies LLC
 Healthy Andros Login
 Hollingsworth and Vose Company
 Jenna Foundation
 Robert Wood Johnson Foundation
 The Joyce Foundation
 Kellogg Foundation
 MADD (Mothers Against Drunk Driving)
 The Merek Company Foundation
 National Multiple Sclerosis Society
 New York Community Trust
 North American Fund For Environmental Cooperation

Open Society Institute
 Public Responsibility in Medicine
 Rockefeller Foundation
 The Kenneth B. Schwartz Center
 John Snow Incorporated

\$10,000 plus

Anonymous
 William Bicknell and Jane Hale
 Charles Donahue
 Jonathan Howland

\$1,000 – \$9,999

Anonymous
 L. Adrienne Cupples
 Richard and Gail '88 Douglas
 Frances Drolette
 Stanley Eisenberg
 Gail Feldman
 Christopher and Hilary Gabrieli
 Paul and Marianne Gertman
 Leonard Glantz
 Anne Graw
 C. Robert Horsburgh
 Joel Lamstein
 Robert Meenan
 Allan R. Meyers Family
 Kevin Phelan
 Marianne Prout
 Jeannine Rivet '81
 Ilga Wohlrab '99

\$500 – \$999

Marcia Angell
 Patricia Cook '81
 Sally Deane '88
 Michael Grodin
 Elizabeth Hatch
 Sheldon Krimsky
 Nancy Maxwell '96
 Tara O'Toole
 Kenneth Rothman
 Alan Sager
 Nadia Shalauta '99
 Roberta White

Up to \$500

Sisay Akalu '95
 Monica Allen '85
 Shelley Allison '84
 Myron Allukian
 Barbara Alpert '79
 Raghavan Amarasingham '93
 J. W. Anderson
 Jennifer Anderson
 G. David Annas '01
 Lynn Armstrong '93
 Ann Aschengrau
 Amy Aulwes '94
 Alison Badger
 Bethany Baker '90
 Diane Baker '90
 Doreen Balbuena '03
 Alan Balsam '82
 Cynthia Barber '89
 Thomas Barker '85
 Patricia Barry '87
 Diane Beliveau
 Toby Bernstein
 Judith Besoff '82
 Terry Jo Bichell '97
 Robert Bienkowski '85
 Nina Biller
 Gerald Billow
 Richard Bird '83
 Tristram Blake '79
 Suzanne Marie Blood '93
 Nancy Bloom '87
 Leslie Boden
 Jennifer Bohn '01
 Carol Bois '83
 Melissa Marie Bottrell '95
 Thomas Bradley '85
 Daniel Brooks '88
 Valerie Buckley '03
 Margaret Buckley '94
 Charlotte Burgess
 Julie Buring
 Joan Caldwell
 Maura Callahan '92
 Cristina Cann '92
 Ruth Carretta '88
 Susan Casper
 Dorothy Castro '03
 Martin Charns
 Richard Clapp '89

Constance Clarke '95
 Jane Cormuss
 Carolyn Cotsonas
 Linda Cottler '80
 Cathy Coyne '86
 Jane Craycroft '95
 M. C. Cremens '83
 Theodore Cronin '80
 Lewis Dabney
 Terri Davidson '82
 Hania Dawani '86
 Patricia Demers '88
 Laura Derby '85
 Lena Deter '96
 J. Michael Devlin '87
 Ronald Dobbin
 Linda Doctor '85
 Susan Dodge '99
 Almas Dossa '97
 Josée Dupuis
 Joline Durant
 Daniel Eccher '99
 Murray Eden
 Merrill Elias '96
 Andrew Ellingson
 Barbara Epstein '96
 Ikechukwu Eriator
 Merrily Evdokimoff
 Victor Evdokimoff
 Ellen Faden '82
 Arthur Faden
 David Felson '84
 Barbara Ferrer '88
 Anne Fidler
 Leonard and Carolyn Finn
 Susan Fish '92
 Susan Flanagan '83
 John Flynn
 Susan Frayne '92
 Lisa Fredman
 Praveena Gadam '01
 David Gagnon '89
 Alan Geller '90
 Sarah George
 Brian Gibson
 Brenda Gleason '99
 Deborah Glotzer '90
 Sandra Goodenough '81
 Brigid Goody '86
 Robert Green

Dina Green
Martha Groton '89
Julia Gunn '91
Carolyn Hardin '89
Anne Hatcher
Judith Hearst '80
Cressida Hedgecock '02
James Heffernan '92
John and Rosalie '91 Hermos
Jonathan Holder '03
Constance Horgan
Kenneth Housman
Pat Hynes
Nancy Ellis Ice '87
Samuel Ihemdi '85
Rovshan Ismailov '01
Amber Jamanka '98
Marie-Charles Joseph '98
Neda Joury-Penders '00
William Kannel
Ruth Karacek '90
James Kaye
Christine Kearns '93
Denise Kenneally '99
Sharon Kernan '85
Mark Keroack '00
Stefan Kertesz '02
Douglas Kiel '86
Anita King
Patricia Kludt '88
Dzidra Knecht
Lisa Kodmur '94
Howard Koh '95
Milton Kotelchuck
Jaime Krasnitski '02
Daina Krastins
Wayne LaMorte '94
Michelle Land '04
Philip Landrigan
Joan Lane '80
Lee Lanza '80
Adam Lebowitz '92
Seymour Lederberg
Anne Lefavre
Samuel Lesko
Suzette Levenson '84
Maria Levis Peralta
Mary Lisbon
Barbara Mahon
Dorcas Mansell '91
Fran Manzella
Sharon Marable '92
Marlene Matosky '98

Sandra McCormack '81
Mary McGarigle '03
Kathryn McBride '02
Moirra McDade '03
Maryann Medeiros '88
Douglas Mesler '97
Peter Mirandi '93
Ruth Montgomery '80
Julie Mottl-Santiago '01
Peter Moyer '03
Suzanne Muchene '01
Charles Munn
Susan Murray '83
Jessica Musiak '03
Parul Nanavati '96
Dipesh Navsaria '95
Ali Noorani '99
Mary O'Brien '84
Susan Oliveria '89
Elizabeth Ollen
Deborah Osber '99
Frances Osman '85
Julie Palmer
William Patterson '90
Louisa Paushter '90
Ted Perhanidis
Barbara Perry '83
Richard Plotz '92
Gay Plungas '93
Annie Polcari '72
Margaret Polito '93
Munro Proctor '92
Susan Proctor '92
Robert Quinn '82
Maria Rangel '02
Peter Reich '79
Marilyn Ricciardelli
Julia Riseman
Elena Rivero '91
Whitney Robbins '88
Jacob Robinson
Julie Ross '00
Kathleen Rowlings '96
Jonathan Rutchik '97
Jeffrey Samet '92
Maria Sanchez '87
Linda Saunders '84
Norma Schatz
Ira Schlosser '03
Paul Schroy '98
Norman and Freda '80 Scotch
Joanne Scott '87
Janet Shahood '89

Emily Shea
Elizabeth Shearer '80
David Sherr
Gary Shostak '81
Sheila Shulman '87
John Sikes '00
Rebecca Silliman
Koundinya Singaraju '02
Craig Slatin '86
Heidi Smith '98
Toni Snow '86
Deborah Socolar '89
Guna Spalvins
Beryl Spencer '80
Roseanna Spizzirri '80
Barbara St. Onge
Krista Stark
Theodore Stefos
Linda Jo Stern '84
Jean Stowell '01
William Strohsnitter '03
David Stuchiner
Jose Suaya
Kristin Sullivan '02
Charles and Susan Sulzman
Elise Tamplin '87
Saloni Tanna '04
E. M. Tarazi
T. A. Taylor
Andrew Thompson
Ralph Timperi '83
Thelma Tisdale '90
Dina Traniello '84
Taturo Udagawa
Heidi Urich
Carla Van Bennekom '86
P. Y. Vanbeuzecom '91
Louis Vernacchio '01
Alan Waker '93
Diana Chapman Walsh
Tara Weckstein '93
Miriam Weil '90
Bruce Weinstock '97
Wanda Wetlesen '01
Brian Williams
Julie Wisniewski '00
James Wolff
Marvin Wool '82
Steven Yood
Anne Zawacki '88
Yuqing Zhang '93
Suzanne Zipes
Ralp Zschoernig

Supporting Public Health and BUSPH

The varied educational, research, and service activities of Boston University School of Public Health as a whole reflect the School's enduring commitment to working with disadvantaged, underserved, and vulnerable populations, both domestically and internationally. The important contributions made by faculty, researchers, and other talented public health professionals take many forms, but the overall goal remains the same in the School's effort to train tomorrow's leaders in public health.

In general, this effort requires ongoing support from a variety of individuals, community organizations, and governmental and nongovernmental agencies, to ensure the effectiveness and relevance of the study and practice, of public health in today's world. In particular, financial support of BUSPH allows qualified students access to the financial assistance they need in order to learn and practice public health, for the benefit of all.

Almost every gift to Boston University School of Public Health is completely tax-deductible from federal (and, often, state) income tax.

For more information, contact Elizabeth M. Ollen at 617-638-4290.

Credits

Design: Sawyer Design Associates, Inc. www.sawyerdesign.net

Text: Elizabeth Gehrman

Photography:

Cover: Earth image courtesy of NASA

Pages 1, 2, 17, 18: Tom Kates

Page 10: Jonath Barth

Page 12: Arthur J. Ammann, MD

Page 14 (left): Anna Summa

Page 15: Boston University Photo Services

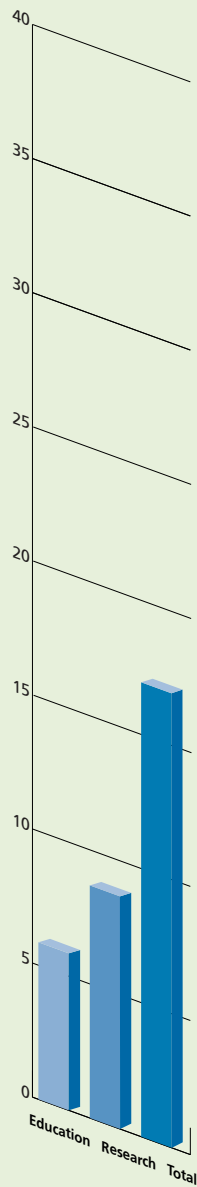
Other images from Getty Images news archives, and courtesy of researchers and students pictured

BOSTON UNIVERSITY SCHOOL OF PUBLIC HEALTH

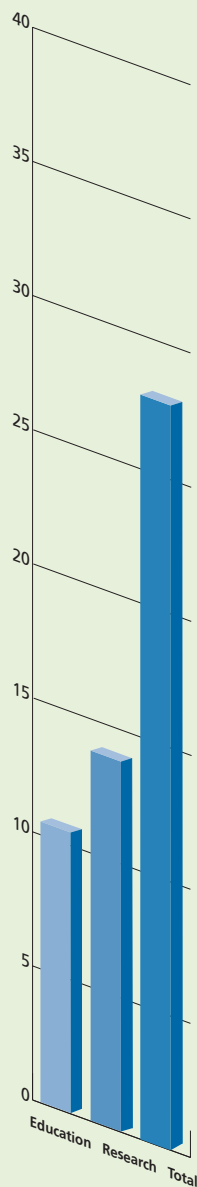
By the Numbers: A Ten-Year Perspective

INCOME (in millions)

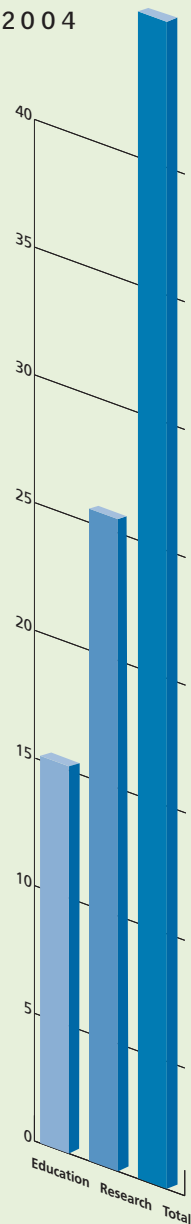
1994



1999



2004



INCOME

1994

1999

2004

Education

Tuition and Fees
Other

\$5,853,474
\$475,675

\$10,461,800
\$481,860

\$15,161,827
\$175,000

Research

Direct Costs
Indirect Costs

\$8,674,997
\$1,940,270

\$13,793,780
\$3,032,885

\$25,531,871
\$4,821,228

Total Income

\$16,944,416

\$27,770,325

\$45,689,927

FULL-TIME FACULTY

61

88

147

MATRICULATED STUDENTS

505

618

655

STUDENT SCHOLARSHIP PROGRAM

\$423,075

\$920,683

\$1,743,379



School of Public Health
715 Albany Street
Talbot Building
Boston, Massachusetts 02118

Phone: 617/638-4640

www.bu.edu/sph