

## Strong Medicine by Christopher Murray, MD, PhD

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*Some governments may shun his straight talk, but Chris Murray's prescriptions for global health could help all of us live better and longer.*



Chris Murray. Photo by Mary Levin

Chris Murray says things people don't always want to hear.

When UNICEF announced early in the fall that child mortality rates were at an all-time low, Murray pointed out that they weren't low enough.

"Considering all the tools we have for child survival, we are not doing better at reducing child mortality now than we were three decades ago," Murray, a world-renowned health economist, told the Associated Press. Murray noted that even though child mortality has fallen, it's not falling fast enough to meet the United Nations' target of a 67 percent decline by 2015.

In 2000, when Murray was at the World Health Organization, he and a team of researchers rattled the health establishment by ranking the world's health-care systems. The team compared each population's health to how effectively its government spent money on health and how well the public health systems prevented illness. Japan, which spends \$1,759 per person a year on health care, ranked No. 10, while the United States, which spends \$3,724 per person, was rated 37th in the world (**see chart on web**).

It's Murray's radical way of examining health care, his courage to ask tough questions and the guts to deliver objective—and sometimes unpopular—findings that have made him a leader in global health and founder of the new UW Institute for Health Metrics and Evaluation.

"Chris' assessment of the performance of the public health sector—that was a good way to win no friends. But it had to be done," says Harvard Medicine Professor Paul Farmer, co-founder of Partners in Health and the subject of Tracy Kidder's best-seller *Mountains Beyond Mountains*.

"Chris is a leading innovator of ways of measuring health," adds Julio Frenk, the former health minister of Mexico, now with the Bill & Melinda Gates Foundation.

"Throughout his career, he has never been daunted by taking on enormous tasks.

The Institute of Health Metrics and Evaluation itself is a huge undertaking, and it requires someone who had previous successes in projects of this scope and this scale, which Chris clearly does.”

The University of Washington hired Murray away from Harvard University this past summer to found and lead the new institute, funded in part by a \$105 million gift from the Gates Foundation. Under his direction, the institute’s researchers will monitor global health conditions and health systems, as well as evaluate interventions, initiatives and reforms. The findings may be used by governments to set health-care priorities and policy (see **“Providing the Missing Pieces to the Global Health Puzzle”**). Murray was elected to the prestigious Institute of Medicine in October.

“He’s a great catch for the UW because he is very good technically, and he’s connected to everyone who’s anyone in global health,” says Jim Yong Kim, Harvard professor of medicine, co-founder (with Farmer) of Partners in Health and a good friend of Murray’s.

“Whenever I need a ‘read’ on what’s going on in the global health community, I call Chris.”

### **SUDDEN OPPORTUNITY**

Farmer, Kim and Murray were all residents together at Harvard Medical School. Farmer’s and Kim’s work, particularly in Haiti, was vividly portrayed in *Mountains Beyond Mountains*, last year’s “common book” at the UW (see **“Spreading the Word”**).

Murray could have joined his friends in attacking a specific health problem, but took a different path. “I’ve spent a lot of time wondering how one could make a bigger difference than simply providing care in a particular community, in a particular place,” Murray says.

“The higher up you go in the problems—the broader you look—the less work there is under way up there,” he says. “There is a role for this super generalist looking broadly...There’s a place for this role of stepping back and saying ‘what’s What’s actually happening in the world? Where are we making progress? What are we missing in understanding that? And are there any lessons we can learn from that?’”

“... How do you deal with the fact that different countries—and communities—have different health problems and varying amounts of money?’ ”

“Without the big picture, without measuring our efforts, I don’t think our work has much sense,” Farmer says.

These are tough questions that Murray hopes will be answered through the institute. He had planned to start his institute at Harvard, but funding for the institute abruptly fell through in the summer of 2006.

News of Murray's setback reached UW Medical School Dean Paul Ramsey, who is also CEO of UW Medicine. He had been following Murray's work for many years. "Global health is a high priority for us, and bringing the institute here was an opportunity. I chose to move quickly," Ramsey says. And move quickly, he did.

Ramsey began talking with Murray in November 2006. A month later, Murray bought Emmanuela Gakidou, his wife and colleague, a raincoat. "You might need this," he told her.



Chris Murray and his wife, Emmanuela Gakidou, take time off from global health issues by biking, skiing and other outdoor activities. Above: Murray and Gakidou on their honeymoon in New Zealand. *Photo courtesy of Emmanuela Gakidou.*

By late last spring, a generous \$105 million grant from the Gates Foundation—the largest private donation in UW history—was in place, along with an additional \$20 million from the UW, to fund the institute over 10 years. Murray was hired for \$420,000 a year, a hefty salary by state standards. But Ramsey says Murray is worth it.

"He would be making much more if he did this in a private setting," Ramsey explains. "We needed to pay him a competitive salary. He made a choice to work in a public research university."

Losing Murray was a huge blow to Harvard University, where Murray had been director of the Harvard Initiative for Global Health since 2003. Prior to that, Murray worked as executive director of the Evidence and Information for Policy cluster at the World Health Organization in Geneva, Switzerland.

"We lost one of the world leaders in global health," says Kim. "It was a personal loss for Paul Farmer and me as we had plans for major collaboration. We'll still work together, but the distance will be an issue."

The UW—a public institution—is the ideal setting for the health metrics and evaluation institute, Ramsey says, because it offers academic freedom to researchers and total transparency, meaning that all research becomes public information.

For the Gates Foundation, it was important to back an institute that will provide objective research on how money is being spent worldwide on global health and how effective those efforts are, says Tachi Yamada, president of the foundation's global health division. The institute, he notes, is not funded by the health organizations it evaluates.

The Gates Foundation last year donated \$30 million to begin the UW Department of Global Health. That previous commitment, along with the strong commitment from the state of Washington, the UW School of Medicine and the UW School of Public Health, made the university an ideal location for the institute, Yamada says.

And for Murray, Seattle was the perfect place.

“The attraction of doing it in Seattle is that increasingly over the last five or six years, Seattle has become an alternative hub for global health—an alternative to Geneva,” Murray says. “Five or six years ago anybody who wanted to start anything in global health wanted to be based in Geneva because that’s where the World Health Organization is.”

He cites the growth in research at the UW and affiliated institutions like Seattle Biomedical Research Institute; PATH, a non-profit that helps deliver health care around the world; the Infectious Disease Research Institute, a non-profit biotech group; the Fred Hutchinson Cancer Research Center and the Gates Foundation.

“It was an ideal fit to establish the institute as part of the University of Washington,” he says.

## **SEARCHING FOR ANSWERS**

Wearing an ice blue dress shirt with a pen in the front pocket and flat-front dark blue slacks, Murray sits at a round table spread with a woven table cloth in his temporary office on Eastlake Avenue. The institute will move to the Belltown neighborhood in several months. His office is sparse; one wall has a whiteboard with formulas scribbled in black. A couple of coffee mugs sit next to his computer on a desk. His window overlooks a parking lot and Eastlake.

A 1983 Rhodes Scholar with his bachelor’s and medical degrees from Harvard and a doctorate from Oxford University, Murray is measured and intense when describing his work and his motivation.



Murray on his mountain bike.

*Photo by Clare McLean.*

“The questions for which I’m still searching for answers are: How do you make a big difference?” he asks. “How do you get beyond just direct provision of services? How do you have a bigger impact on people’s health?”

The youngest of four children, Murray spent most of his childhood in New Zealand and Minnesota. Murray’s father is from New Zealand and was doing a stint in the United States when Murray was born; therefore, Murray holds New Zealand

and United States citizenships. He has the faintest New Zealand accent—"I've been gone too long," he explains.

When he was 12, he and two of his three siblings moved to Africa with their parents to run a hospital in Diffa, Niger.

"Our career paths were predetermined by that experience," says Megan Murray, the sister of Chris Murray and a Harvard epidemiologist who specializes in tuberculosis.

Chris Murray, 45, agrees. "In some ways, I didn't really make a career choice. I just sort of assumed I would do something on health in developing countries."

Their brother is a physician in New Zealand who oversees the largest health system in that country, and Megan Murray studies tuberculosis and drug resistant tuberculosis.

While her work and her brother's may seem similar, Megan Murray focuses on the biology and transmission of one disease, while her brother steps back to take a look at the entire health care picture.

"I focus on one disease because that's what I can handle well," Megan Murray says. "To take on the effectiveness of [the world's] health efforts may seem grandiose, but I think the capacity to conceptualize problems in a big way and think of big solutions is quite special."

Kim's work begins with projects on the ground in small settings, while Murray starts with data sets that are often on a macro level, Kim says.

Harvard's Kim agrees. "He first brought much-needed measurement and evaluation in global health and then he proceeded to innovate ... making it possible to evaluate programs in a way that we had not thought possible," Kim he says.

Health efforts, large or small, "can't proceed without a much sterner set of metrics," adds Farmer. Murray is very creative in finding ways to gather data, he says. While talking recently with Murray, Farmer said gathering data in areas without electricity—such as rural parts of Africa or Haiti—would be too difficult. Murray asked about using cell phones as a way to gather data—a viable alternative, Farmer says.

"He isn't afraid to get his brain dirty."

Although shy in high school, Murray gained focus and confidence early in college. "Chris is just quite sure of what he wants to do and how he wants to do it," Megan Murray says. "He's quite sure of himself."

“Chris is exceptionally bright,” says Kim, who, along with Farmer, went to medical school and interned with Murray. “His most important strength as an academic is his willingness to take chances and look at data and even methods in completely new ways.”

Murray was a professor at Harvard and Gakidou, born and raised in Athens, Greece, was an undergraduate when they met at Harvard in Cambridge. They worked together on Murray’s 1990 Global Burden of Disease report outlining the devastating effects of chronic obstructive pulmonary disease. And they’ve collaborated ever since. Gakidou and Murray worked together, at the World Health Organization, along with Frenk, before moving back to Harvard in 2003.

Gakidou, who holds bachelor’s, master’s and doctoral degrees from Harvard, loves the variety that global health offers. On one project, she may study the effects of a disease in a community and on another, examine health-care financing.

If her husband is somewhat reserved, Gakidou is the opposite. She has a warm handshake, bright eyes and an easy laugh. With her dark hair cascading past her shoulders and her black fitted jacket, T-shirt and olive pants, she looks younger than her 33 years.

Emmanuela is both a great scholar and a really terrific teacher of young people,” Kim says. “She got rave reviews from the undergrads and graduate students at Harvard and will be sorely missed.”

Gakidou says she’s always been judged on the quality of her own work. “You can’t really fake it. I can’t live off Chris’ grants,” she says.

“Global health is large enough. There’s enough space for both of us,” she adds. “What attracts people to global health is more than technical skills; it’s a mentality of wanting to make a difference.”

Her sister-in-law notes that Gakidou is very flexible and has done a good job of pursuing her own career and interests, while remaining a vital part of Murray’s.

“She’s a graceful and extremely accomplished person on her own,” Megan Murray says.

Living by the adage “work hard, play hard,” Murray and Gakidou draw a clean line between work and home life. While Gakidou says she might be able to sit still long enough to spend a couple of days on a beach reading a book, Murray could do it for five hours—at most.

They love taking long bike rides on trails and are avid skiers. When the couple lived in Geneva, they frequently flew to Whistler, British Columbia, to ski because they prefer the skiing in B.C.

The two have adapted quickly to Seattle life, settling in the Magnolia neighborhood. They own REI cards and are coffee drinkers. Nearly every weekend, they explore a new biking or hiking trail.

While the couple blends into a quiet life in Seattle, they continue to be major players on the global health stage, particularly because of the hard facts they deliver.

### **BAD NEWS CAN BE GOOD NEWS**

Nobody wants to be ranked last in anything. But even bottom-of-the-list rankings can result in some good. "How you deliver the news is sometimes most important," Gakidou says. "If you don't make public health information about health, nothing will improve. Somebody has to hold governments accountable.

"Bad news doesn't have to be received badly."

Many ministers of health worldwide have used Murray's information to argue for bigger budgets and changes to health-care policies. In 2000, Health Minister Frenk reformed Mexico's system by providing health insurance to everyone, regardless of income—a move that increased access to medical care. Murray's evaluation of the changes proved the efforts are working. By 2006, maternal mortality had fallen more than 20 percent, and Mexico was one of only seven countries to be making significant progress toward reaching the United Nations' goal of reducing child mortality by two-thirds by 2015.

"Chris has an extremely strong track record, and I believe in his originality and the quality of his science. This is what our field needs. Good intentions need to be backed by hard science," the Gates Foundation's Yamada says.

Murray seems very capable of taking the criticism that comes in the wake of his research findings and his observations about health care. He was widely quoted last summer when the Census Bureau and domestic numbers from the National Center for Health Statistics ranked Americans 42nd in the world for life expectancy.

"Something's wrong here when one of the richest countries in the world, the one that spends the most on health care, is not able to keep up with other countries," he said in the press. Americans could improve their health by improving efforts to reduce tobacco use, control blood pressure, reduce cholesterol and regulate blood sugar, he points out.

"The starting point is the recognition that the U.S. does not have the best health-care system," he says. After his study was released, he received e-mail from people challenging that assertion.

One e-mail read simply: "Get a real job."

"I kept that one," Murray says with a grin. • *Elizabeth Lowry holds a bachelor's degree in journalism from the University of Oklahoma and is a media relations manager for Health Sciences/UW Medicine.*

## **PROVIDING THE MISSING PIECES TO THE GLOBAL HEALTH PUZZLE**

Global health encompasses everything from obesity in the United States to malaria and tuberculosis in sub-Saharan Africa to the HIV/AIDS epidemic worldwide. It is the worldwide study of disease and treatment and the search for cures.

The new UW institute evaluates and measures the effectiveness of health systems so that health care can be provided to the greatest number of people. Chris Murray and Emmanuela Gakidou, director of education and training for the institute, hold faculty positions in the UW Department of Global Health for their teaching duties. An international board, headed by Julio Frenk, former health minister of Mexico, Gates Foundation senior fellow and longtime collaborator with Murray, will oversee the institute.

"The institute is a unique resource for rich and poor countries," Frenk says. "It fills a missing piece in the global health architecture as an independent source to document what's happening on the ground."

The institute will focus on three main areas:

**Health monitoring:** Collecting and analyzing data on health indicators and trends, such as the prevalence of major diseases and the availability of health services.

**Program evaluation:** Conducting independent, rigorous evaluations of the results and effectiveness of health programs.

**Dissemination:** Making health data and information freely available to decision-makers, researchers and the public.

When fully operational, the institute will consist of 130 faculty and staff. It will also establish an international network of collaborating research centers, and provide fellowships to train junior researchers. Also in the works are a master's program in health metrics and eventually a doctoral program in that field.

"When we wrote the grant for the Gates Foundation, we had to list what we would do in 10 years," Gakidou says. "That was overwhelming. But you need challenge to be creative."—*Elizabeth Lowry*