JOSH RUXIN

Doctors Without Orders

To improve global health, what we need isn't just Bill Gates' billions, but Microsoft's managers.

Two years ago, I saw a line of 30 people waiting for services at Nyamata Hospital in Bugesera, a rural region in southern Rwanda. Its approximately 300,000 residents live clustered around small villages. It was the epicenter of the 1994 genocide and remains one of the poorest districts in the nation.

The hospital is on a charming plot of land, and its infrastructure is welcoming, impressive, and modern. It has some 60 professional staff and half a dozen doctors, an adequate number of personnel for a district facility. But while a line of 30 people seems long to Americans, it's not to Rwandans. I was surprised to find so few lined up for the sort of high-quality care that this hospital promised, on the surface, to deliver.

When my team asked why so few patients were there, the staff, the patients,

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and the community all pointed to the same cause: a malfeasant and incompetent director. "People go to that hospital to die because the director doesn't care," they told us. Apparently, his attitude and style was such that it seeped into the rest of the staff. No one else cared either, even with state-of-the-art equipment and new facilities.

I wasn't fully convinced of how poisonous the culture had become until two incidents a few weeks later. A nurse, who worked for one of my projects and volunteered at the hospital, told me she was appalled by the shoddy and rancid-smelling mattresses in the patient rooms. After pushing the issue with the staff, she learned that brand-new mattresses had been in a storage room awaiting use for years. Soon after, I bumped into an extremely poor woman who had recently had an emergency caesarean delivery at the hospital. When I asked her when she was returning home, she explained that she had been ready for four days, but that the hospital director insisted on her paying for the ambulance to travel the 30 kilometers to her home. The price demanded was higher than her monthly income, and no one at the hospital seemed willing to figure out how to resolve the dilemma.

Not surprisingly, performance and opinions changed rapidly when a new director arrived. This new manager cleaned up the hospital's accounting, queried staff on major management and resource needs, fired incompetent and corrupt employees, and figured out how to respond in a timely, thoughtful manner to key challenges. Within two months, there were working X-ray machines for the first time in two years. Staff morale improved dramatically. Today the hospital sees more than 100 patients a day, and the community views it as a center for healing, not dying.

The lesson? In public health, just as in any other collective endeavor, management matters. It seems like an obvious point, and yet at the heart of some of the world's worst public health crisis zones, it is one that has yet to sink in—with dire consequences for millions.

The history of public health in the twentieth century can be characterized as a losing battle for resources against a rising tide of epidemics and pandemics. In spite of some breakthrough solutions to massive problems like childhood disease and pandemics like polio, the failure to construct viable public health systems in the developing world has helped create the conditions for the pandemics of today: tuberculosis, AIDS, and cardiovascular disease, among many others. To make things worse, massive health problems predating these remain, from extraordinarily high maternal mortality rates to the scourge of malaria. The numbers are so breathtaking that they obscure the heartbreaking stories each represents. Globally, there are still an estimated 500 million episodes of malaria

every year that claim at least one million lives, and in Africa more than 250,000 women die in childbirth annually. Over the past two decades, these grim statistics have scarcely budged, and in many countries, they have worsened.

If public health planners were business people objectively examining the sector's progress today—particularly in sub-Saharan Africa, where average life expectancy is now 46 years, versus 67 in the rest of the world—the answer would clearly point to a change of strategy. Many international public health programs are so poorly run—or at least achieve such poor results—that they resemble the management quality of a local lemonade stand rather than an Apple or Google.

It's not that public health workers don't have their hearts in their work. It's that the global public health workforce has long had to make do with small initiatives that were perpetually under-funded and training that valued a flair for squeezing results out of miniscule funding. However, we live in an age when immense public and private resources are suddenly available. From major programs like the Global Fund to Fight AIDS, Tuberculosis and Malaria to bilateral ones like the U.S. President's Emergency Plan for AIDS Relief, along with major efforts led by nonprofits like the Bill and Melinda Gates Foundation, global public health is now discussed for the first time in history as a venture warranting and receiving billions.

Many public health programs are so poorly run that they resemble the management of a local lemonade stand rather than an Apple or Google.

With so much money being committed and so many lives at stake, it's time to revolutionize global public health. We need less do-goodism, and more do-it-rightism; we need more managers, not more doctors. The billions of dollars in new funds must propel an infusion of new management talent and practices based on private sector experience. We must upgrade the entire health system in countries—and in poor countries with few doctors, that means taking medical doctors out of management positions and replacing them with professional managers. It means encouraging nongovernmental organizations (NGOs) to cast their nets wider when recruiting public health workers in order to pull leaders from the private sector rather than the public sector, and teaching the management of health delivery to soon-to-be minted public health graduates. And it means building new initiatives like we would a business, with rational accounting and delivery systems, while likewise reforming existing efforts.

This is not a popular position; it is, to be blunt, easier to treat the disease than the cause. For instance, programs for childhood health and family planning,

which could revolutionize African public health, have been dwarfed by spending on HIV/AIDS, in spite of the far greater complexity and cost of rolling out such programs. This is not to argue that we should return to the days of limiting interventions based on appallingly small public resources: On the contrary, to fight AIDS effectively, improve maternal and child health, and meet all the other deep-seated public health challenges, we must build out health systems in poor countries. But relying on traditional public health workers will fail. It's time to shake up the public health establishment and do nothing less than completely reinvent it.

The Global Health Status Quo

The application of modern public health practices in wealthy nations dates back to the mid-nineteenth century, when the physicians like John Snow and Robert Koch finally brought germ theory into fashion and into practice. But public health efforts in poor countries is a more recent phenomenon, dating to the founding of the United Nations after World War II and two of its specialized agencies: UNICEF and the World Health Organization (WHO). Until very recently, public health approaches were bold, largely discrete efforts against a backdrop of scarcity. Projects were humble and bare-bones, costing only a few million dollars each at the most. Even what was arguably the greatest and largest health accomplishment of the last century, the certified eradication of smallpox between 1967 and 1979, cost a mere $23 million annually.

Throughout the 1970s and 1980s, sub-Saharan African governments—where the global health needs were the most acute—spent less than 3 percent of national spending on health. Further complicating matters, the World Bank and others pushed the responsibility for payments onto the patients themselves. This caused a contraction in demand, resulted in poorer health, and set a precedent, the impact of which is still reverberating across the continent. Simply put, to this day in much of the developing world the poor are expected to pay for health care, and those who cannot pay simply don't receive it. Furthermore, the World Bank has estimated that half of all donor funds targeting health never reach the health centers and hospitals at the end of the line.

Then, at the close of the twentieth century, something surprising happened. The decade-long fight to deliver AIDS drugs to the developing world began to propel an entire global movement forward, a movement that would finally deliver billions of dollars to that pandemic, and at the same time draw massive media and public attention. The AIDS push soon spilled over into other areas. It was in this climate that the Global Fund to Fight AIDS, Tuberculosis and Malaria was proposed at the G-8 summit in July 2000, after lobbying by U.N. Secretary

General Kofi Annan and a group of heads of state, in large part to address the troubling reality that global public health was failing to deliver off-the-shelf solutions to the poor of the world. Meanwhile, scores of private organizations, including behemoths like the Gates Foundation, began opening the taps for global public health projects, irrigating a vast field of NGOs.

But with more resources did not come new approaches to utilize those resources, and, in spite of some battles won, the war is still being lost. It is not enough to spend money to buy drugs and treatments; the infrastructure to deliver them isn't there. Although the possibility of treating AIDS in resource-scarce environments had been discussed for years (and had already been performed successfully in 2000 by Partners in Health in Haiti and Doctors Without Borders elsewhere), momentum for scaling up AIDS treatment in developing countries was lacking. Resources in sub-Saharan Africa were so poor, and the obstacles so large, that the head of the U.S. Agency for International Development, Andrew Natsios, cynically noted that Africans did not even have the watches needed to take their AIDS drugs at the correct times. Despite the extraordinary efforts placed on the availability of anti-retroviral drugs in poor countries, perhaps 1.4 million people in sub-Saharan Africa receive them while an additional three million annually are in immediate need (two million of whom will die this year) and an additional three million infections occur annually. In short, drugs alone—no matter how good they are—don't solve the problem.

While global programs continue to increase in scope and funding, substantial resources continue to fuel the quixotic search for magic bullets. We continue to seek vaccines, simple-to-administer solutions, and panaceas like rapid state-of-the-art diagnostics, technology-driven surveillance systems, and other breakthroughs to solve global health's ills. These efforts are reflected in the priorities of the Gates Foundation and National Institutes of Health, which recently launched their annual "grand challenges in global health to harness the power of science and technology to dramatically improve health in the world's poorest countries." Today's goals are lofty, and clearly scientifically driven: the search for new vaccines and nutritional improvement through promoting a single staple plant capable of delivering all optimal bio-available nutrients, for instance. But while few would contest the notion that the eradication of AIDS will require an effective vaccine, such magic bullets on their own have never changed the course of public health history. To name but one example, oral rehydration therapy—a simple solution of sugar and salt and water that can rehydrate even desperately ill people—has taken decades to gain widespread utilization in spite of its simplicity. There are no simple solutions to global health challenges. Tools may be improved—and that's laudable work—but what is most needed is

improved training for the technicians who are currently unable to make use of the effective interventions already in hand.

Keen observers of the state of public health have noted this for decades. Larry Brilliant—best known today as the head of Google.org, the company's non-profit arm—worked in India in the 1970s on smallpox eradication. His book on the subject, *The Management of Smallpox Eradication in India*, points out that while experts had the ability to wipe out smallpox for decades before eventual eradication, it took responsive monitoring and evaluation, strict corporate-like implementation principles, and coordination to complete the job. That change in focus, according to Brilliant, was challenging because the public health establishment was accustomed to jumping from catastrophe to catastrophe, rather than focusing on the underlying burden of specific diseases such as smallpox. Too few people, however, seem to grasp the long-view nature of the challenge. As Pulitzer Prize-winning public health chronicler Laurie Garrett recently commented, "Few donors seem to understand that it will take at least a full generation (if not two or three) to substantially improve public health—and that efforts should focus less on particular diseases than on broad measures that affect populations' general well-being."

Today's public health and development landscape is littered with thousands of initiatives, most of which operate in independent silos. There are water projects, primary school projects, specific disease-oriented health projects, and much more. The key now is to enlighten local health programs to the potential of approaches that build the essential management and capacity required for sustainable and significant progress. Today we can see that in the poorest places, only integrated approaches—those that take into account water, sanitation, economic opportunity, education and infrastructure along with health—sustainably and adequately address public health needs. To make this sort of integration happen will require continued, increasing investment as well as a new class of global health workers with an entirely different set of skills than their predecessors. Figuring out how to bring the complex matrix of development together requires systems knowledge, financing, and superb management.

Getting Down to Business

There is tremendous variability in the quality of aid and public health programs around the world. But while prosperity and health are lifting up vast swaths of Asia and Latin America, virtually the entirety of sub-Saharan Africa remains mired in crushing poverty and abysmal health conditions. The advent of insulin in 1928 and its rapid provision to desperate patients, many of whom were at death's door, as well as anti-retroviral drugs for AIDS in 1996 and 1997 in developed

countries show how the simplest solutions are rolled out fastest where systems are already in place. In contrast, in sub-Saharan Africa the life expectancy for a child diagnosed with Type 1 diabetes is still as short as one year, and AIDS drugs still scarcely reach 20 percent of those who need them.

When I attended public health school in the early 1990s, my coursework included biostatistics, epidemiology, AIDS, and demography. These are all "issues" in public health, but less so in public-health delivery. Little of it helps me in the public health work I conduct today. Even at the time, I had spent enough time in the field to know that the study of these discrete areas was no match for the problems faced by implementers every day. Ironically, it wasn't until I spent a few years working as a private-sector management consultant that I obtained skills that would be helpful in the public health arena. I wanted to understand how the world's best companies strategized and implemented their strategies. How did they measure success and constantly improve? How did they bring their ideas and products to scale?

When I returned to public health in 2002, I worked to build out teams to aid in the preparation of Global Fund proposals for African countries. But instead of just picking people with strong public health resumes, I looked for MBAs and others with business acumen. I was often viewed skeptically by the public health establishment. My mentor and the dean emeritus of Columbia University's Mailman School of Public Health, Allan Rosenfield, initially balked at my first hire for Rwanda, a senior manager from McKinsey, the global management consulting firm.

But attitudes changed quickly: By the time that manager had helped expand AIDS testing services from two clinics to 65—in the course of a year—the tide had already begun to shift (and so had Rosenfield's opinion). His experience building professional management, deepening the pools of local capacity, and rapidly achieving results helped set Rwanda's experience apart from other nations which were ostensibly better financed and positioned for success.

Today there is, from my own perspective at least, a new willingness to consider merging private-sector thinking with public health priorities. But the shift is incomplete. For too long, doctors have run the public health establishment. Their exclusiveness and insularity has crowded out those with other, equally needed, skills. Epidemiologists—perhaps the next-largest class of the public health cognoscenti—are taught a much different and more liberal way to think, but only by a matter of degrees. While doctors and epidemiologists are vital to global public health efforts, what's missing is the sort of perspective economists, sociologists, management consultants, and even politicians can bring, a new and enlightened way of answering the question public health specialists and doctors

ask: What do people die from? What is needed today is a spectrum of others with varied backgrounds in business, management, and public policy who can offer new, creative diagnoses that require far more complex approaches.

Public health professionals are latter-day martyrs—and, for better or worse, they know it. The dirty little secret of global public health is that the focus has always been on how to gallantly do as much as possible with as little as possible. That central fact of professional life for public health workers—dating back to Cicely Williams's work on childhood nutrition in the Gold Coast in the 1920s and 1930s—has been the model into which all public health experts have been indoctrinated. This perspective has pushed public health to remarkable achievements given the funds invested. But it has also stifled the ambitions long advocated by the community, dreams like the 1978 Alma Ata declaration of "Health for All by the Year 2000" and today's more tempered but still ambitious Millennium Development Goals to "have halved by 2015 and begun to reverse the spread of HIV/AIDS" and to "reduce by two-thirds" the "under five mortality rate." More contentious, system-reinforcing efforts like providing family planning and maternal health services are notably absent from the Millennium Development Goals, thanks to lobbying by an unlikely group that includes Iran, the Vatican, and the Bush White House. Such idealism and ambiguity can only lead to unrealized dreams (with some exceptional successes in countries that manage to put together the right business plan and team for achieving this success).

Narrow public health education simply does not produce the leaders and managers desperately needed today.

Perhaps one of the leading drivers of poor performance—or at least acceptance of poor performance—is that unlike a corporation, which is clearly motivated by profits, NGOs' and donors' motives are less defined. Larry Diamond has noted in these pages that after spending $500 billion on aid in Africa, the continent is largely worse off for the expenditures ["End Foreign Aid as We Know It," Issue #8]. That critique is often rejected for failing to consider some small accomplishment or another, as well as the relatively small amount of "good" aid that has gone to programs that deliver results. Correctly, however, Diamond joins a chorus of others who conclude that the way in which aid is given must be radically restructured, along with the way that aid is used.

The failure of aid in the past for global public health has influenced today's approaches enormously. In part, we focus on AIDS today because counting people on AIDS medicines is an inarguably objective criteria hard to match in more complex endeavors such as comprehensive health systems' improvements. Alas, this

singular focus on AIDS and related pandemics means that doctors and nurses who previously focused on primary health care and childhood and maternal health have been lured away by higher wages for AIDS work, offered by donor-funded initiatives. Some countries, such as Rwanda, have attempted to steer disease-specific funds toward overall health advances by using investments to improve infrastructure where possible and to focus on diseases other than AIDS, many of which are easily treatable but have been largely ignored. Nevertheless, the Rwandan experience and other nations' progress continue to demonstrate that developing countries need an across-the-board upgrade of their health systems and that the management to get that job done does not yet exist.

What would a new, management-oriented approach to developing world public health look like? Ask Jim Yong Kim, a co-founder of Partners in Health, a public health NGO, and a professor at both the Medical School and School of Public Health at Harvard University. Kim has long been a fervent advocate for applying business acumen to the public health sector and to teaching public health much the way business is taught today: by case studies. He often jokes that there should be a collection of case studies on public health failures. He recently asked, "What can we learn from business and communications experts that will help us better deliver healthcare? How can we ensure that the lifesaving products and technologies are as available in poor countries as imported soft drinks?"

In response, Kim is putting together the Global Health Delivery Project (GHD), a new initiative out of Harvard in which global health meets the business world. Led by Kim, physician Paul Farmer, and business professor Michael Porter, GHD addresses the implementation gap between good plans and good execution by studying successes and failures in global health care delivery and the design and management of health care delivery systems in low-resource settings. According to them, "Practitioners of health care worldwide need effective care delivery models, support, training, information, and tools to utilize new resources in a way that will provide the best-possible care; yet no comprehensive effort currently exists to address their needs." They plan to focus Harvard's program in four key areas: education to teach effective methods of health delivery; interdisciplinary "communities of practice" to leverage the Internet to disperse these ideas; research to unite clinical research, operational research, and engineering science; and innovation centers, located across Africa, to provide on-the-ground research, learning, and teaching for Harvard's affiliates and others.

This is, of course, just one effort, not a wholesale reform; on the other hand, there is no governing body of public health, and so any change will have to come through the effective demonstration of new approaches by groups like Kim's. The key is figuring out the right curriculum and case studies to train the talent

required today. The intersection of the private and public sectors is a challenge for any discipline, and public health implementation anywhere—the United States being a glaring example—has an extraordinarily difficult time getting it right. A true business approach in global public health demands that clear metrics, interventions, incentives, and feedback mechanisms be put in place to focus on health improvement just as the private sector focuses on profits. Practitioners need not have an understanding of the minutiae of health challenges. They simply need to be great managers, trained in the basics of public health, with superb strategic, organizational, and implementation skills. The next step for Kim and Harvard needs to be satellite programs across Africa; even with innovation centers, the project is still rooted in Cambridge. As Kim and others in GHD know first-hand, learning management techniques thousands of miles from the health centers of Africa risks irrelevance.

The Rwandan Model

In recent years Rwanda—not Harvard—has been at the forefront of bringing management techniques to its public health system. In light of its history of genocide and war, Rwanda seems an unlikely candidate for a rapidly expanding professionalized health care system. However, during the decades prior to the genocide, hundreds of thousands of Rwandans spread across the world in a massive Diaspora. They were exposed to new approaches and developed new expectations about health care, all the while longing to return and rebuild the nation. Their return in the 1990s coincided with the rise in international interest and, eventually, funding for specific diseases, particularly AIDS. Furthermore, the relatively transparent government, combined with its can-do attitude, has made it a haven for donor dollars seeking speedy results.

Millions of health dollars—from governments, the Global Fund, NGOs, and family foundations—began flowing in 2003, but the limitations of the country's remote health centers often kept these resources from reaching a substantial portion of the country's population. While funds for international health issues increased, on-the-ground success lagged behind. In response, the Access Project, an initiative to deliver management talent to far-flung health centers, began working in health centers in Rwanda with business-style metrics and private-sector expectations of sustainability and scalability.

The Access Project is just one local initiative, and yet its success illustrates the possibility for similar efforts elsewhere. This is not a stand-alone effort, but one that complements existing programs. Financed by technology maven and businessman Rob Glaser, the CEO of Real Networks, it builds on the Global Fund's success by delivering on-the-ground assistance with its implementation. Blaise

Karibushi—a medical doctor and MBA who currently directs the Access Project in Rwanda—insists that with proper guidance and systems, any health center can improve its operations to the point where it can sustainably deliver quality health care to the community. The interventions his team has implemented fall into ten categories of management, none of which sound as sexy as delivering AIDS drugs to desperately ill children, but all of which improve health—including management of data, planning and reporting, human resources management, and financial management, including local insurance schemes. This is the stuff that most donors want nothing to do with, but it is the stuff that the future of public health must be built on.

Unlike other organizations that immediately move into a health center and choose a specific need (X-ray machines, water, electricity, training), the Access Project begins by diagnosing the management needs of health centers. It has found centers where there are plenty of nurses, but because there is no proper scheduling, they are deployed inefficiently and as a result deliver terrible results. In other centers it has found that just three nurses are expected to manage the delivery of care to a population of 25,000, procure medicine, handle community insurance, and maintain the facility, all on a total budget of a few thousand dollars per year. The results are predictable: no health care delivered, low morale, and few patients. But with a proper management structure—merely by providing sufficient accounting systems, drug procurement guides, and basic management training—these centers have been able to get on their feet quickly. And while donors have proved hard to corral before Access Project begins work on a particular facility, once it has completed its overhaul, they tend to become suddenly interested in making investments. In one dramatic case, a health center that had been seeing five to 10 patients a day was seeing over 150 patients six months after management reforms were implemented, and as a result it qualified for other donor financing to offer AIDS services.

Global Health at a Crossroads

There is a true revolution in global public health funding going on. The Gates Foundation has become the most prominent force financially and ideologically in the sector, spending nearly $3 billion in 2008, but thousands of smaller foundations are also engaged. There are more than 71,000 foundations in the United States today, and with over $40 billion donated last year (albeit only a small percentage for global health), their giving is accelerating and great opportunities are in the offing.

This outpouring provides a window for action; many in the global public health community, from doctors to donors, are opening up to the idea of a managed,

systems-wide approach. In 2006, having seen the limitations of disease-specific approaches particularly in countries with weak health systems, the Global Fund to Fight AIDS, Tuberculosis and Malaria announced that it would accept proposals for improvements in health systems. Advocates for anti-retroviral drugs (ARVs) are today at the forefront of demanding that health workers be trained and placed in the hills and deserts, not just in the urban and peri-urban areas where delivery of ARVs is easier. They are beginning to address health not by focusing on a limited slate of diseases, but rather by focusing on every aspect of life that contributes to health, from the management of care programs to agricultural productivity to telecommunications improvement and the provision of clean water.

For all this to occur fully, however, new leadership must emerge, especially in Africa itself. Ideally, that means indigenous public health leaders who have the management skills needed to lead the charge. At the same time, the community needs to start stealing talent from the private sector and integrating business principles into public health education. Harvard's innovative approaches to teaching global health delivery need not remain in Cambridge; public health schools across the world—particularly in developing countries—must quickly adopt similar pedagogy. Narrow public health education simply does not produce the leaders and managers desperately needed today. By the same token, all public health servants should not come from public health backgrounds. There is also room to have MBA programs in global health delivery to really shift the paradigm and start putting adequate resources in the field.

The massive effort to combat the global AIDS pandemic, with its billions of dollars and hundreds of individual programs, may yet prove to be the springboard needed for the creation of new systems, accountability, and financial resources. For the public health elite, however, it will be critical to dramatically update our approaches and metrics to meet the demands and manage the expectations of these new foundations. Building management capacity takes effort and time, but that need not be a ten-year undertaking; in the case of thousands of facilities world-wide, it can be a ten-week process. While the sheer human scope of public health calamities demands urgent action, such responses can no longer be rolled out within the confines of a do-gooder vision. Now, to do right, we must also do it well. If not, all the billions the public health establishment plan to spend will be for naught. **D**