COUNCIL *on* FOREIGN RELATIONS

WORKING PAPER

The Evolution and Future of Donor Assistance for HIV/AIDS

Kammerle Schneider and Laurie A. Garrett
April 2009

This paper was made possible through support from the Costs and Financing Working Group of the aids2031 Project.

The Council on Foreign Relations (CFR) is an independent, nonpartisan membership organization, think tank, and publisher dedicated to being a resource for its members, government officials, business executives, journalists, educators and students, civic and religious leaders, and other interested citizens in order to help them better understand the world and the foreign policy choices facing the United States and other countries. Founded in 1921, CFR carries out its mission by maintaining a diverse membership, with special programs to promote interest and develop expertise in the next generation of foreign policy leaders; convening meetings at its headquarters in New York and in Washington, DC, and other cities where senior government officials, members of Congress, global leaders, and prominent thinkers come together with CFR members to discuss and debate major international issues; supporting a Studies Program that fosters independent research, enabling CFR scholars to produce articles, reports, and books and hold roundtables that analyze foreign policy issues and make concrete policy recommendations; publishing *Foreign Affairs*, the preeminent journal on international affairs and U.S. foreign policy; sponsoring Independent Task Forces that produce reports with both findings and policy prescriptions on the most important foreign policy topics; and providing up-to-date information and analysis about world events and American foreign policy on its website, CFR.org.

The Council on Foreign Relations takes no institutional position on policy issues and has no affiliation with the U.S. government. All statements of fact and expressions of opinion contained in its publications are the sole responsibility of the author or authors.

For further information about CFR or this paper, please write to the Council on Foreign Relations, 58 East 68th Street, New York, NY 10065, or call the Director of Communications at 212.434.9400. Visit CFR's website, www.cfr.org.

Acronyms

ADF	African Development Fund
ARV	antiretroviral therapy drug
BRIC	Brazil, Russia, India and China
DFID	UK Department for International Development
FBO	faith-based organization
GDP	gross domestic product
H8	Health 8
HIPC	heavily indebted poor country
IHP	International Health Partnership
IMF	International Monetary Fund
UNAIDS	Joint United Nations Programme on HIV/AIDS
MARP	most-at-risk population
MDGs	Millennium Development Goals
MAP	Multi-Country AIDS Program
NIC	National Intelligence Council
NGO	nongovernmental organization
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
PEPFAR	President's Emergency Plan for AIDS Relief
PMTCT	prevention of mother-to-child transmission
TRIPS	Trade-Related Intellectual Property Rights
TB	tuberculosis
UNGASS	UN General Assembly Special Session
USAID	United States Agency for International Development
WHO	World Health Organization

Foreword by Laurie A. Garrett

Twenty-seven years ago, doctors in San Francisco, Los Angeles, and New York City took note of a deadly cancer, and a seemingly new form of parasitic pneumonia, striking young, otherwise healthy gay men. Between May and November 1981, physicians in the United States, Canada, and France compared notes, realizing that the cancer and pneumonia were being caused by the same, mysterious agent, and that gay men in all three countries were suffering identical symptoms.

Young adults today find it hard to imagine how confusing and frightening the early days of the AIDS pandemic were. Today the majority of HIV infections are striking heterosexuals, with women bearing the brunt of the pandemic in Africa. What initially was dubbed a "gay plague" has become a highly complex pandemic, afflicting different communities in variant ways: Russia is in the grips of an intravenous (IV) drug use–driven epidemic in young men; India's epidemic is spreading among long-distance truck drivers and their prostitute partners; and the U.S. epidemic has shifted from a predominantly white gay male phenomenon to an overwhelmingly African American crisis. In parts of South Africa girls are infected with HIV at rates exceeding half of their age group.

Twenty years ago, the AIDS epidemic was solely a topic of medical and public health concern in most societies. Today the pandemic and donor support to fight the pandemic are foreign policy, national security, and macroeconomic issues, summoning the attention of ministers of finance and the secretary-general of the United Nations. Presidents and prime ministers debate the nuances of the pandemic in their G8 summits, and military leaders fret over the rates of HIV infection among their troops.

None of this could have been foreseen in 1981, or even in 1991. Public health advocates argue that the early days of the epidemic were marked by complacency and discrimination against those who were infected with the virus. Had political leaders better understood twenty years ago what tragic directions the pandemic would take, their policies might have been better—or so the AIDS advocates argue. On the other hand, even the most optimistic of AIDS activists in 2000 could not have imagined the global political commitment to fighting AIDS and the scale of international HIV treatment activities that would be the norm just eight years later.

It is vital in a global crisis to boldly look forward, developing scenarios for policymakers. But it is also a dangerous exercise, especially when dealing with microbes and human sexual behavior. As the National Intelligence Council (NIC) has demonstrated with its annual forecasts, looking fifteen years into the future of global politics and economics, long-term forecasts better reflect the anxieties and difficulties of the time in which they are written than of the era they are meant to describe. Nevertheless, the NIC reports prove useful, holding up a mirror to the world leadership, revealing its collective fears, concerns, and schemes for the future.

In that spirit, the aids2031 project has aimed at forecasting what the pandemic will look like fifty years after it was first noticed in gay men in the United States—and what critical actions must be taken now and over the next several years in order to create a brighter future for AIDS two decades

from now. A "brighter future" means a world in which the numbers of persons dying from AIDS goes from over two million a year today to near zero, where those becoming newly infected also drops from nearly three million a year today to just a fraction of that number, and where the financial and social costs of AIDS are greatly reduced for households, communities, and governments.

The Council on Foreign Relations' Global Health program was asked to contribute to the aids2031project, focusing on the future of donor financing for HIV prevention and treatment programs. The fight against HIV and AIDS has become a massive exercise, involving an industry that employs hundreds of thousands of people worldwide, doing everything from searching for an HIV vaccine to handing out pills for AIDS treatment. In the wealthy world, an entire generation of health professionals has come of age specializing in HIV treatment, epidemiology, prevention, and research science. In developing countries that are hardest hit by the pandemic, HIV programs are major recipients of foreign assistance, driving not only Ministry of Health budgets, but also their priorities. Crucial UN agencies have made universal access to HIV treatment a global objective, seeking billions of dollars annually from donor nations for implementation. HIV prevention efforts have, in contrast, garnered far less attention, both politically and financially, largely because successfully thwarting infections means confronting controversial issues of sex, narcotics use, women's rights, and family planning. There are no politically neutral facets to AIDS prevention. Treatment is, in contrast, an effort that commences on the moral high ground, in a zone of comfort for most religious and political leaders.

Any 2031 forecast of the pandemic must start with projections related to this prevention conundrum. Will there be a safe and effective vaccine by 2031? Will the same moral and political obstacles stand before effective discussion of the sexual and drug use drivers of HIV transmission? Will sub-Saharan Africa continue to bear the brunt of the pandemic? Will drug discovery and manufacture of affordable anti-HIV formulations stay ahead of the emergence of drug-resistant strains of the virus? As new treatment innovations emerge from the wealthy world's pharmaceutical industry, will the moral imperative currently guiding demand for treatment access extend to them, as well? Will treatment and control of HIV continue to necessitate guaranteed flows of capital (charity) from fewer than twenty wealthy nations to fifty or sixty poorer ones?

In tackling the financing question, Kammerle Schneider (assistant director of the Global Health program) and I were compelled to reach some possibly arbitrary baseline answers to these questions. The assumptions and our forecasts were defended in expert panel meetings convened by the aids2031 costs and financing working group, and will appear in the project's ultimate publication, scheduled for release later this year.

Will there be a safe and effective vaccine by 2031? If a safe vaccine is developed that effectively prevents infection, much as the measles vaccine blocks that virus, the pandemic will be very different in 2031. At this time no such product has emerged from the world's laboratories, despite billions of dollars worth of research. Were that effort to lead to discovery, however, funding mechanisms would still need to exist to facilitate immunizations of hundreds of millions of adults. While an HIV vaccine might one day be integrated into the schedule of infant immunizations, therefore piggy-backing on existent infrastructure, adult vaccination would be required for at least one full generation in order to bring HIV to a halt. No serious infrastructure for adult immunization exists in most countries, and even annual influenza vaccination of adults in the richest nations has proven challenging. Therefore, financing schemes, moving wealth from a small number of donor states to a large number of poorer ones will still be essential to realize vaccine distribution and immunization.

Will the same moral and political obstacles stand before effective discussion of the sexual and drug use drivers of HIV transmission? Issues like homosexuality, prostitution, promiscuity, heroin and narcotics use, rape, coercive sex, women's rights, and adherence to religious principles may bend in a strong wind, but remain rooted to the same soils. Over the last twenty-seven years some forms of tolerance and equity have emerged, but discussing sex in schools, encouraging boys to use condoms, providing sterile syringes to IV drug users, and teaching girls how to say no to unwanted sex remain difficult in most cultures in 2009, and will likely continue so in 2031. Sex remains a deeply private matter, and states tend to take punitive action (e.g., outlawing incest, rape, prostitution, sodomy). When states engage in such things as sex education and condom distribution, they generally face opposition from cultural and religious leaders. Though incremental changes in this algorithm have emerged since HIV appeared in 1981, there is no reason to believe that the fundamental tension will disappear by 2031.

Will sub-Saharan Africa continue to bear the brunt of the pandemic? The highest HIV incidences for children under eighteen years of age are in sub-Saharan African countries. Today's thirteen-year-olds will be thirty-five in 2031, and it seems reasonable to forecast adult prevalence based on current teen trends. Therefore, yes: Africa will suffer the greatest social, cultural, and economic impacts of HIV for decades to come.

Will drug discovery and manufacture of affordable anti-HIV formulations stay ahead of emergence of drug-resistant strains of the virus? The pipeline of HIV drug discovery continues to flow, and dramatic drug innovations will reach the market over the next two to ten years. Among them will be drugs that block the virus's ability to integrate itself into human DNA and prevent its entry into lymphocytes. These will, however, be expensive products, based on enzyme and protein technology, rather than the currently available basic chemistry-based formulations. A profound gap in access to second-line therapy has already emerged, and as resistant strains of HIV become more commonplace in poor countries, demand for third-line therapy will be great. At present, the main obstacles are cost: second- and third-line therapies for HIV are considerably more expensive. But as the pandemic progresses, generic manufacturers may not be able to produce cheap alternative treatments, and resistant viruses will prove lethal. In the wealthy world, a dangerous increase in *initial infection* with drug-resistant forms of HIV has been noted over the past five years, with the percentage of new infections resulting from hard-to-treat forms of HIV increasing annually. If this trend increases in the wealthy world, and is followed in poorer countries, anti-HIV medications can be expected to follow the sorry path of antibiotics, forcing ever-more-expensive drug use, often under more complex medical constraints.

As new treatment innovations emerge from the wealthy world's pharmaceutical industry, will the moral imperative currently guiding demand for treatment access extend to them, as well? The state-of-the-art of HIV treatment is already quite different in the United States and Europe, compared to most of the rest of the world. Entire categories of drugs that are part of the poor world regimen of treatment have largely been abandoned for use in more sophisticated, less cost-constrained settings. Currently available therapies, however, target two main stages in the HIV life cycle: its ability to make a reverse copy of its RNA that can be incorporated into human DNA, and the enzyme step necessary to chop off a protein anchor that holds newly-made HIVs onto the surface of human cells, thereby releasing them into the bloodstream. Soon to enter routine use in American and European medicine are drugs that prevent the virus from getting into the nucleus of human cells, block its integration into DNA, keep the virus from gyrating in a specific way, put decoys in the way of receptors that HIV uses as doorknobs for entry into human cells, and many more. In an absolute sense, the moral imperative that has to date guided the call for global universal access is a call for equity: If a drug keeps a man in San Fran-

cisco alive, the same drug should be available to keep an impoverished farmer in Tanzania alive. As new, expensive drugs enter the marketplace, the degree to which the moral imperative will apply to them, and challenge their pricing and patents, will depend on the political winds of the moment. It is unimaginable that the political atmosphere surrounding demands for universal access in 2009 will be the same, or even similar in 2031.

Will treatment and control of HIV continue to necessitate guaranteed flows of capital (charity) from fewer than twenty wealthy nations to fifty or sixty poorer ones? The numbers of countries acting as donors will likely expand, as emerging-market economies attain greater affluence and global power. China, Brazil, India, and several other countries can be expected to join the ranks of global health donor states. At this time, however, no clear exit strategies have emerged that might humanely shift the cost burden for HIV prevention and treatment to the hard-hit countries, themselves.

Some economists question the overall model of this global health undertaking, insisting that it is not sustainable. Certainly, the level of cash required by 2031 will be enormous, and only a massive political commitment will ensure a steady flow of donor support. In the near term, donors and recipient nations will negotiate conditions, set demands and find solutions to problems year by year. Further on the horizon must be normalization of resources, with predictable flows and greater "ownership" by recipient countries of their own policy directives and needs assessments.

It is foreseeable that donors—both public and private—will set tough conditions on aid, demanding demonstrable achievements on set timetables. The most obvious conditionality will concern prevention: donors will want assurance that the incidence of new infections is declining in countries that have tens of thousands of people on lifelong HIV treatment. Recently, researchers from Harvard University estimated that 330,000 people died in South Africa between 2000 and 2005 as a direct result of AIDS policies under the government of Thabo Mbeki.[1] In the Mbeki case, failure to recognize the overwhelming evidence that HIV causes AIDS and death resulted in years of official denial of both the importance of preventing the spread of the virus and of providing effective treatment. Some countries that have universally provided treatment to HIV-positive people in need, such as the United Kingdom and the United States, are witnessing upward surges in new infections amid social complacency regarding the gravity of infection and AIDS. In the future, donors may well make continued funding for AIDS-related programs conditional on demonstration that recipient governments take the epidemic seriously, and that prevention efforts are aggressive and effective.

In absolute terms the U.S. government is the largest donor, and is likely to remain so well into the future. U.S. government policies are, therefore, enormously influential on the entire global health exercise, and will remain so. The 111th Congress of the United States and President Barack Obama registered strong support in early 2009 for HIV/AIDS programs, committing the nation to spending $48 billion over the period of October 1, 2009, through September 30, 2014, for PEPFAR II (the President's Emergency Plan for AIDS Relief II). Attempts by some members of Congress to restrict this spending narrowly to HIV treatment, or to expand HIV prevention through sexual abstinence programs, failed, amid overwhelming political support for a widening of HIV prevention and treatment efforts. Debate over the future implementation of PEPFAR II, and post-2014 funding, will engage new foreign assistance sectors, including the U.S. Agency for International Development (USAID). In the near term, the Obama administration will struggle to find the appropriate bureaucratic structure for U.S. foreign assistance, and the position of PEPFAR II within that hierarchy. It is not possible at this time to envision the details of a post-2014 U.S. commitment, or whether there will be a PEPFAR III.

Much has been made of the notion of "AIDS exceptionalism," which argues that HIV poses a unique challenge that must be addressed through extraordinary means. But if poor countries are ever going to achieve self-reliance in HIV and other aspects of health, the coming years will see normative standards of prevention, care, and treatment emerge for HIV that are fully integrated into overall healthcare, and are linked to social development schemes and business investment. The comparative wealth of a nation does not ensure it will be spared the scourge of HIV, but poverty does both promote behaviors that spread HIV and sap the medical and public health capacities of a nation. If, by 2031, most of Africa remains outside of the globalized marketplace, participating almost exclusively in commodities trade, it can be predicted that the AIDS epidemic, and its companion tuberculosis (TB), will remain the great plagues of the continent.

A strong, secure nation is one that can provide essential public goods—health, education, transport, energy, water—maintain peace with its neighbors, and offer reasonable levels of stability to its financial markets and social fabric. HIV is one of several new challenges to the state, alongside climate change, terrorism, and resource depletion. Alone, these transnational threats are unlikely to topple a state. But in combination, they weaken state capacities, drain finances, undermine family and community resilience, and ultimately cripple the nation's ability to provide its people with the safe, secure environment they expect. To date, HIV has hit hardest in communities where expectations of the state were low, due to legacies of corruption, colonialism, tyranny, or oligarchy. Unwinding slowly over decades, the AIDS pandemic's impact on nations has been masked by other sociopolitical issues and community adaptation to lost lives and opportunities. Looking out to 2031, however, the pandemic's impact will be felt alongside worsening climate change, dwindling water and energy supplies, increasing population pressures, and food shortages. The political pressures on states and donors will change, reflecting exigencies that result from these new constellations of escalating transnational challenges.

The past twelve years have witnessed a spectacular forty-fold increase in the amount spent on HIV/AIDS efforts in low- and middle-income countries—from a mere $250 million in 1996 to $10 billion in 2007. Although global resources for HIV/AIDS still fall short of meeting the estimated need for a comprehensive response, the creation of innovative funds, unprecedented bilateral programs, and restructured programs within multilateral agencies have fundamentally changed the fight against HIV/AIDS and the way in which the world engages global health. The increase in resources for HIV/AIDS has led to tremendous achievements in providing access to treatment and care. However, this massive infusion of funds has stretched human resources and structural capacities in developing countries to their limits.

Through discussions with national governments and program implementers within countries, donors have come to recognize the importance of strengthening health systems in order to scale up efforts; integrating HIV/AIDS programs with other infectious disease and reproductive health efforts; and renewing focus on prevention strategies to curtail increasing infection rates. There has also been a growing commitment among donors to better align and coordinate efforts to eliminate redundancies and maximize scarce human and financial resources.

The current economic, food, and fuel crises reveal the vulnerabilities of programs reliant on a constant flow of external funding. These crises threaten to erase many of the gains made in global health and development, as wealthy nations turn inward in hopes of rescuing their own economies. The economic downturn also threatens to marginalize health and development agendas, as donor attention is focused on emergency schemes to prevent global financial catastrophe. Although the outlook

is bleak and the full impact of the economic downturn is still unknown, it may provide an opportunity for the donor community to strategically reevaluate what is working and what is not, with an eye to maximizing the value of every dollar, yen, and euro spent in global health and development.

In the near term, donors' efforts and proximity to achieving the Millenium Development Goals (MDGs) in 2015 may further define the levels of commitments to fund health and development. Failure to come close to meeting the goals may lead to donor fatigue. Finding ways to pay for second-line therapies and to continue to expand access to the increasing number of people that will need treatment will be a challenge for national governments and donors.

In the longer term, the rise of new economic powers and growing influence of nonstate actors will shape the world's power structures and global institutions. The effects of climate change, resource scarcities, population growth, youth bulges in developing countries, aging wealthy world populations, and urbanization will pose profound challenges. The future configuration of the donor community may look vastly difference than that of today. China, India, Russia, and Brazil will play a powerful role in the global economic and political agenda. Nonstate actors will also be increasingly influential players within the global system. The rise of new economic powers and increasing clout of new actors may make collective action difficult to achieve and maintain. Growth rates of gross domestic product (GDP) per capita in middle-income countries will outpace that of high-income countries, allowing middle-income countries to assume much of the financial burden of their own social service provision currently funded by external donors.

The pace at which new technologies are developed to slow or stop the spread of HIV/AIDS and mitigate the impact of climate change and resource scarcity will shape the future. There are a number of actions that the donor community and national governments can undertake now to secure sustained funding and transform emergency responses into sustainable engagements through the fiftieth anniversary of the HIV/AIDS pandemic in 2031 and beyond.

The Evolution of HIV/AIDS Resource Mobilization

The global response to the HIV/AIDS epidemic has radically transformed over the years. From 1981 through 1996 no effective treatment for HIV infection existed, and most governments ignored the epidemic or, worse, discriminated against those who were considered at risk of infection or sick with AIDS. As treatment became available, a global mobilization emerged, seeking to provide life-sparing medication to millions of people. The past decade has seen a tremendous expansion in funding and resources for HIV/AIDS funneled through a myriad of innovative and unprecedented initiatives.

FROM APATHY TO ACTION

Throughout the 1980s and early 1990s the world's response to HIV/AIDS was characterized by apathy and inaction. During this time, the world spent less than $300 million annually on AIDS-related activities in developing countries.[2] AIDS was essentially a death sentence, as the medical community had no arsenal to treat those already infected with the virus. But in 1996, all of this changed when researchers discovered a triple cocktail of antiretroviral therapy drugs (ARVs) could slow or block replication of the virus in infected individuals. Although it was not a cure, if taken daily, the triple cocktail of ARVs could significantly prolong the lives of HIV patients. That year, at the at the Conference on Retroviruses and Opportunistic Infections in Washington, DC, Dr. Emilio Emini of Merck Pharmaceuticals announced the spectacular discoveries realized by a vast consortium of public and private sector scientists.[3] Virtually overnight, HIV-positive patients throughout the wealthy world and a few fortunates within the developing world were on life-extending treatment. By mid-1997, many of the visible horrors of AIDS had disappeared from the United States and Europe. However, treatment remained out of reach for the majority of the world's AIDS population, as this cocktail of medications cost approximately $16,000 a year.[4] AIDS patients in wealthy countries saw this inequity in access to lifesaving medication as egregious and immoral, and organized a vast constituency of activists to propel their governments into action to provide treatment for their counterparts in the developing world.

In 1996, the United Nations (UN) created a separate agency to rally support for HIV/AIDS efforts, coordinate UN activities around the disease, collect data on the epidemic, and assist governments in the development of national AIDS strategies. Led by charismatic Belgian physician/researcher Peter Piot, the Joint United Nations Programme on HIV/AIDS (UNAIDS), previously under the purview of World Health Organization (WHO), morphed into the first UN agency dedicated solely to a single disease.

Four years later, when the International AIDS Conference was held in South Africa—the first time in a high-endemicity country—death rates of people with HIV/AIDS in wealthy countries had dropped by 84 percent.[5] At the conference in Durban, President Nelson Mandela gave a stirring speech in which he declared, "In this interdependent and globalized world, we have indeed again be-

come the keepers of our brother and sister. That cannot be more graphically the case than in the common fight against HIV/AIDS." The moral imperative had shifted, as inequities in access to HIV/AIDS medication gave rise to public pressure on governments to provide universal access to treatment.

Also in 2000, the World Bank expanded its response to HIV/AIDS and launched the Multi-Country AIDS Program (MAP) to scale up HIV/AIDS programs in Africa and push recipient governments to focus attention on designing and implementing a national response to the pandemic. MAP has committed funding to recipient countries for three to five years, and funds have been secured from donors' contributions to the World Bank, rather than directly to the MAP program. In most cases, the recipients of the funds have been government entities, usually the National AIDS Council. The MAP structure was created as a way to mobilize and disseminate funds for HIV/AIDS more quickly than standard World Bank operations. Since 2000, the World Bank has provided more than $1.6 billion to more than thirty countries in sub-Saharan Africa to combat the epidemic.[6]

With the signing of the Abuja Declaration in 2001, African countries also agreed to dedicate their own resources to the fight against the disease, pledging 15 percent of their annual budgets to improvements in the health sector.[7] The commitment on the part of African nations compelled wealthy nations to give more. However, by 2008, only Zambia and Namibia have made significant progress toward meeting the 15 percent target—while Kenya is the furthest from doing so.[8]

In June 2001, at the urging of UN secretary-general Kofi A. Annan and U.S. ambassador to the UN Richard Holbrooke, a UN General Assembly Special Session (UNGASS) addressed the security implications and long-term financing efforts of HIV/AIDS, marking the first time in the history of the UN that a disease had been the focus of a General Assembly. Secretary-General Annan called on the international community, national governments, and the private and philanthropic sectors to mobilize funding and resources to effectively combat new infections and provide treatment to those already infected. Macroeconomists helped the secretary-general make his case by defining the needs and economic cost in quantifiable terms. No longer was the need to fight HIV/AIDS described in abstract terms. There was now an empirically derived evidence base outlining financial requirements, which helped to galvanize donor support around concrete goals.

At the UNGASS and in the G8 Summit that year in Okinawa, Japan, the concept of a Global Fund to buy drugs at cost and make them available to the poorest people in the poorest countries was unanimously endorsed. The Global Fund to Fight AIDS, Tuberculosis, and Malaria (the Global Fund) was created to function as a financial instrument, rather than an implementing agency, with the goal of attracting, managing, and disbursing resources to fight AIDS, TB, and malaria. Governments are the primary donors to the Global Fund (95 percent), but some contributions also come from corporations, foundations, and individual donations. Any group or government can submit a grant to the Global Fund for scientific and board review, allowing countries and individuals within countries to set the priorities themselves, rather than having them dictated by an outside agency. Once grants are approved, the fund turns to donors to meet the financial needs of the project. The Global Fund currently provides roughly one-quarter of all international HIV/AIDS funding, two-thirds of TB funding, and three-quarters of malaria funding. As of 2008, the Global Fund had helped provide antiretroviral drugs to two million people, TB drugs to 4.6 million people, and 70 million insecticide-treated nets to prevent malaria. In addition, officials estimate that the Global Fund has helped to prevent 2.5 million deaths from these diseases.[9]

Building on the heightened attention to global health issues, a group of academics, politicians, and UN officials gathered to formulate the Millennium Development Goals, a set of bold targets to reach by 2015 in an effort to reduce global poverty and improve the health of the world's poor. Three of the eight MDGs relate directly to health, and the others address the interconnected nature of poverty, education, and sanitation with health outcomes. As the world confronted the HIV/AIDS pandemic and strived to meet the MDGs, there was a growing sentiment that the traditional bilateral agencies and international organizations serving as the primary actors in global health were insufficient. As a result, in the past decade, there has been an explosion of new global health players. Private foundations, such as the Bill & Melinda Gates Foundation, innovative global funds, such as the GAVI Alliance (formerly the Global Alliance for Vaccines and Immunizations), and various corporate actors have transformed the global health landscape through large amounts of money and their ability to respond more immediately to the perceived needs on the ground.

AN UNPRECEDENTED MORAL IMPERATIVE

In the United States, an unlikely alliance formed, pushing the United States to respond to the pandemic. U2's Bono, leaders from the evangelical Christian community, and Senator Jesse Helms (R-NC) advised the Bush administration that the United States had a moral imperative to stop the spread of AIDS. In his 2003 State of the Union address, President Bush took the world by surprise by announcing a new initiative, the President's Emergency Plan for AIDS Relief (PEPFAR), a $15 billion, five-year plan to expand treatment, prevention, and support for those living with HIV/AIDS in fifteen target countries (twelve of them African), which accounts for more than half of the world's thirty-three million HIV/AIDS infections. After the United States Leadership against HIV/AIDS, Tuberculosis and Malaria Act of 2003 (P.L 108-25) made a long political journey through the U.S. Congress, it was riddled with rigid spending requirements dictating how much money could be used for treatment versus for prevention. In the embedded spending directives, Congress recommended that 20 percent of the funding should be spent on prevention efforts and mandated that 33 percent of the prevention funds must be spent on abstinence-until-marriage programs.[10]

Despite early doubts about the feasibility of such a grand endeavor, PEPFAR did deliver, and earned strong bipartisan support as it continually met target goals of number of patients started on HIV/AIDS treatments. Since 2003, the U.S. government has allocated $18.8 billion to PEPFAR for HIV/AIDS treatment and prevention, the largest spent by any country to combat a single disease. During the first five years, PEPFAR provided ARV treatment to 2.1 million HIV positive people—exceeding the program's initial goal of treating two million.[11] PEPFAR has also been touted as a successful example of "soft power" diplomacy, winning support for the United States at a time when its popularity was waning in the rest of world.

However, the initiative was not without controversy. There was considerable tension over the spending directives mandating that 33 percent of all prevention funding be spent on abstinence-until-marriage initiatives. Reproductive health groups criticized the lost opportunities of linking their programs to HIV/AIDS activities by using the same facilities to provide family planning and HIV/AIDS medications to prevent transmission of the virus from mothers to babies. The U.S. General Accounting Office in 2006 released a stinging indictment of U.S. prevention, reporting that legislative earmarks for abstinence-only programming were impeding the ability of PEPFAR country teams to devise prevention programs that met national needs.[12] The Institute of Medicine stated in its 2007 re-

port on PEPFAR that it was "unable to find evidence for the position that abstinence can stand alone (as a prevention message)," yet in fiscal year 2006, of the total number of people reached by PEPFAR's prevention programs, eleven million received only abstinence information and an additional twenty-nine million received only abstinence and be-faithful information.[13]

At the same time, former U.S. president Bill Clinton, three years out of office, was looking for ways to engage the global stage and saw a gap in the pricing of ARV drugs. Using the Bahamas as its test country, the newly created Clinton Foundation negotiated with pharmaceutical companies to manufacture generic AIDS drugs. This radical cut in drug prices was held up as a model for other developing countries and for the PEPFAR program, which was currently spending huge amounts of money on nongeneric ARVs. By mid-2001, Indian generic manufacturers were making triple-ARV cocktails for approximately $295.[14] Since then, the price of ARVs for low- and middle-income countries has continued to decline—between 2004 and 2007, the prices for most first-line drugs decreased by 30 to 64 percent, dropping the price for the most common ARV combination to $86 per patient per year.[15]

In 2005, to coordinate the growing number of new initiatives, actors, and commitments, government officials from donor as well as recipient countries convened at the Organization for Economic Cooperation and Development (OECD) headquarters to sign on to the Paris Declaration on Aid Effectiveness. The signatories of the Paris Declaration pledged to work toward indicators to harmonize, align, and more efficiently manage aid efforts. Results to date for the Paris Declaration are mixed. Though more countries have signed onto it, virtually no NGOs, faith-based organizations (FBOs) or private sector elements are on board. Further, a 2006 OECD assessment of country and donor adherence in 2006 to the declaration offers few real rays of hope, as the only enforcement mechanism for assuring achievement of the harmonization and alignment targets is moral suasion.[16]

Another important development in 2005 was the G8 Summit in Gleneagles, Scotland. Then British prime minister Tony Blair and British chancellor Gordon Brown had been formulating the agenda for years to focus on debt forgiveness and poverty alleviation in Africa. Although the outcome of the summit was much less ambitious than Blair and Brown had hoped, it marked the largest commitment ever made to Africa by the wealthy world—a promise to increase aid to Africa by $25 billion by 2010, and cancel 100 percent of debts for eligible heavily indebted poor countries (HIPCs) to the International Monetary Fund (IMF), the World Bank, and the African Development Fund (ADF).[17]

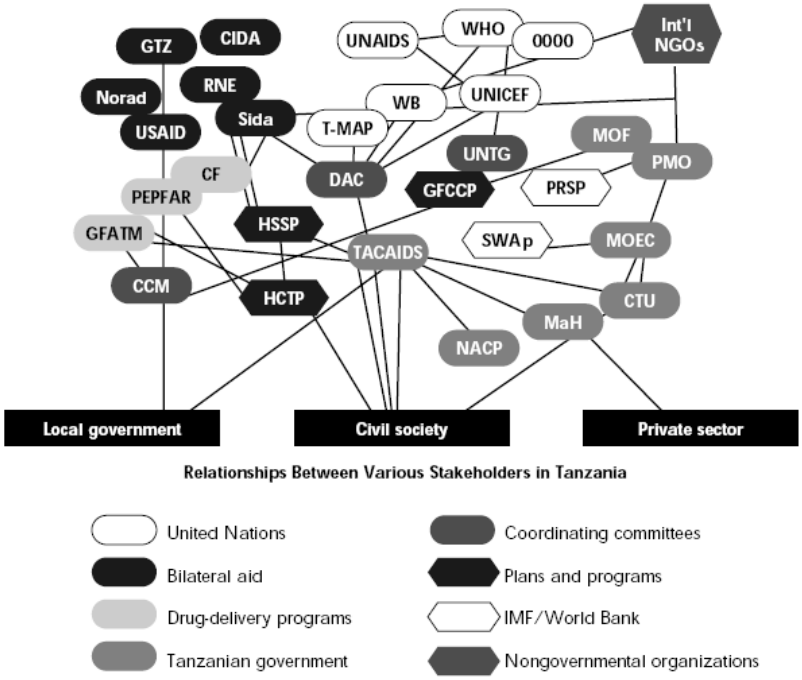
Impact of Increased Resources for HIV/AIDS

Prior to the creation of bilateral and multilateral programs to fight HIV/AIDS, foreign aid for health had traditionally been used to fund public health initiatives, such as clean water and sanitation systems, the building of clinics, and the purchase of medical supplies, or vaccination campaigns. It was rarely used for medical care, and had never been used to fund chronic disease management, which HIV/AIDS programs now focus on. This infusion of money and resources for HIV/AIDS revealed the dire state of health systems and lack of human capacity in the countries hardest hit by the pandemic. Decades of neglect and the effects of austerity programs of the 1980s had rendered hospitals, clinics, laboratories, and health care workers dangerously deficient. The sheer volume of health workers needed to tackle HIV/AIDS—and the health systems needed to support their work—is off the scale of any previous public health campaign.

OVERSTRETCHED AND OVERBURDENED

The aggregation of funding from multilateral and bilateral organizations (including the Global Fund, PEPFAR, UNAIDS, the World Bank, the UK's Department for International Development), private enterprise, and new foundations has put the fight against HIV/AIDS into another league. The unparalleled attention and tremendous mobilization of resources has yielded significant results, but the emergency nature and focus on expanding access to treatment has had unintended consequences. In order to infuse newly acquired funding into dilapidated health systems and scale up HIV/AIDS treatment and prevention services in the most expedient manner, multilaterals, bilaterals, NGOs, FBOs, and foundations have developed parallel health systems to deliver results quickly and efficiently. Each organization has imposed their own set of application and reporting requirements, further burdening already overstretched health facility staff. In addition, separate systems for the procurement and distribution of ARVs were developed to bypass the slow and typically antiquated system used for other medications. Instead of investing in revamping existing systems, the new systems for procurement run in parallel, mandating separate monitoring and reporting guidelines.[18]

Cluster of Agencies That Aim to Help Tanzania with Its HIV/AIDS Epidemic



Source: Cohen, 2006, p.166.

The dearth of trained health care workers has exacerbated challenges in scaling up HIV/AIDS programs. According to the WHO's *World Health Report 2006*, there is a shortage of more than four million health care workers in fifty-seven developing countries. One in four physicians and one in twenty nurses trained in Africa currently work in thirty industrialized countries in the OECD. Although Sub-Saharan Africa has 24 percent of the global disease burden, it has only 3 percent of the health care workforce worldwide and accounts for less than 1 percent of global health care spending. Compare this to the Americas, which have 10 percent of the global disease burden and 37 percent of the health care workers.[19] Local doctors and nurses often grow so exasperated by their dysfunctional health systems that they apply for higher paying jobs abroad, thus accelerating a "brain drain" at home. Internal brain drain has emerged within countries as an outcome of external HIV/AIDS funding, doctors and nurses leave public hospitals and health centers for more lucrative jobs in clinics run by foreign NGOs, bilateral donors, and FBOs. For example, a clerk employed by a PEPFAR-funded program in Zambia makes twice as much as a registered nurse working in the public sector.[20]

MEDICALIZATION VERSUS PUBLIC HEALTH

Because ARV treatment is constantly undergoing refinement, there has been a myopic focus on qualitative aspects of HIV management and complex algorithms of ARV therapy, which are labor intensive and require substantial infusion of resources and donors' time. The wealthy world has dedicated its resources and energies to treatment, but has left prevention efforts, comparatively, by the wayside in pursuit of quick fixes and easily measurable treatment outcomes. For donors, making a commitment to provide treatment comes with a great deal of responsibility and a huge price tag, as more

people are infected and the number of people that require second-line—more expensive—drugs swells.

Few HIV/AIDS initiatives were designed with the thought of an exit strategy in mind. Instead, donors have created programs that are reliant on the constant flow of foreign dollars, with terms and restrictions typically dictated to the recipient country rather than negotiated with them. All too often donors' best intentions to fight HIV/AIDS have increased dependency. In Mozambique, for example, 98 percent of all funding for the country's HIV/AIDS programs comes from outside donors—78 percent from PEPFAR—despite glaring needs in other social/economic sectors. Similarly, Uganda is 95 percent dependent on external donors for financing of its HIV/AIDS programs—73 percent from the PEPFAR program.[21] In both of these cases the nations' extraordinary dependence on external support begs questions regarding the efforts' sustainability and recipient country ownership, control, and accountability.

Funding access to life-extending HIV/AIDS drugs has locked international donors into an open-ended commitment that would be difficult to halt.[22] Now, as the rate of new infections increase, leaders must find ways to expand access to treatment and diminish the long-term financial burden of underwriting the cost of these medications. The only way to accomplish both goals is through a renewed focus on prevention efforts and investment in strong health systems to curtail the spread of the disease.[23] Building strong health systems requires years of sustained investment. Success is measured by the number of infections prevented and lives saved. Donors generally prefer easily measurable advances in specific attention-grabbing diseases, such as the number of people initiated on AIDS treatment. The difficulty of HIV prevention is that it forces political leaders to think in the long term, not just within the scale of their own personal term limits. It is important to find ways to transform emergency initiatives with short-term goals and stopgap solutions into sustainable engagements, ensuring long-term funding streams and a focus on prevention.

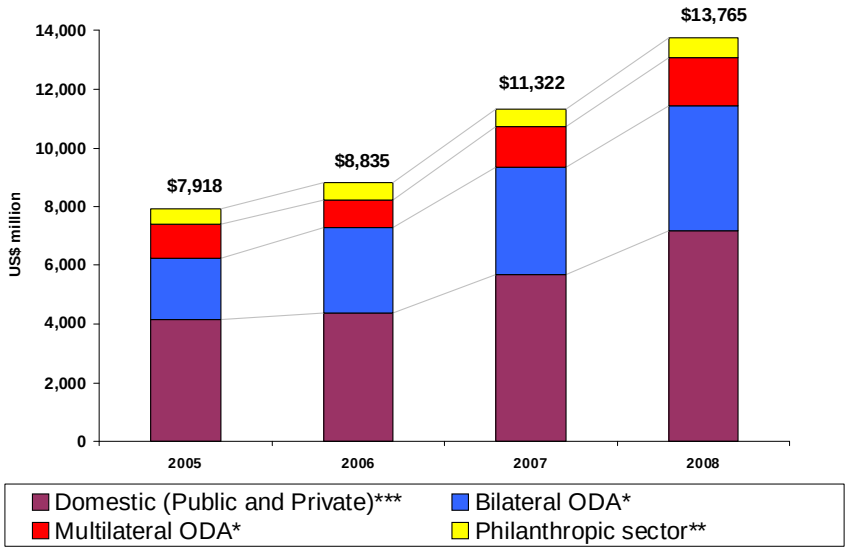
LOSING THE NUMBERS GAME

Significant progress has been made over the past decade in the battle against HIV/AIDS. All told, the three largest HIV/AIDS donors—the Global Fund, PEPFAR and MAP—have spent $20 billion on combating the virus. With increased funding and commitment, the world has made progress toward the goal of universal access to treatment, as the number of people on ARVs has increased from 2 percent to 28 percent over the past four years.[24] Expansion of treatment has succeeded in reversing the direction of AIDS mortality rates—between 2005 and 2007, the number of people who died annually from AIDS declined from 2.2 million to two million. However, in 2007 alone, 2.7 million were newly infected with HIV.[25] Treatment alone will not end the AIDS pandemic. New infections are outpacing treatment. For every two HIV-positive individuals that went on ARVs in 2007, six more contracted the virus.[26] If current trends continue, it is estimated that sixty million more HIV infections will occur by 2015, and the annual number of new HIV infections will increase by 20 percent or more by 2012.[27] With the recent setbacks in vaccine and microbicide research, there is no reason to believe that the HIV prevention tool kit will expand within the coming decade. The onus on governments and NGOs is to better implement existing prevention strategies.

Current Initiatives and Trends

Today, PEPFAR, the Global Fund, MAP, and UNAIDS remain the dominant players in the fight against HIV/AIDS and continue to set the agenda. Within each agency, policies and funding foci have evolved and adapted to lessons learned through the massive scale of AIDS programs over the past five years. Through discussions with partners in the field, the leadership of each agency has come to recognize the importance of health worker training, capacity building, and integration of HIV/AIDS treatment and prevention with the fight against TB and with reproductive health and family planning services to expand access to PMTCT programs. There has also been a renewed focus on prevention in the fight against HIV/AIDS to curb the rate of new infections and move the orientation of programs from emergency stopgap initiatives to long-term sustainable programs. In 2008, the largest sources of funding for HIV/AIDS were domestic expenditures in affected countries (52 percent), direct bilateral contributions (31 percent), multilateral institutions (12 percent), and the philanthropic sector (5 percent). [28] The largest area of growth for HIV/AIDS funding has been from domestic funding sources, primarily from middle-income countries. Despite these positive developments, however, HIV/AIDS programs remain heavily reliant on constant flows of outside funding, for as their programs have grown, so have donor and NGO bureaucratic overhead expenses, chipping away at the amount of resources actually reaching the people in need.

Resource Availability for HIV/AIDS, 2005–2008



Source: UNAIDS, 2009.

PEPFAR II

On July 24, 2008, Congress, with bipartisan support, reauthorized PEPFAR at levels higher than the original White House request, with an unprecedented $48 billion over the next five years budgeted to support HIV/AIDS treatment for 2.5 million people, prevent more than twelve million new HIV infections, and care for more than twelve million people living with HIV, including five million orphans and vulnerable children. The reauthorization makes a number of changes to address previous critiques and gaps in implementation. It increases U.S. contribution to the Global Fund, proposes the use of compacts and other framework agreements between the United States and recipient governments, and removes the 33 percent spending requirements on abstinence prevention efforts, as well as the 20 percent spending requirements on prevention methods overall. Additionally, it establishes an office for the Global Malaria Coordinator in USAID and supports the strengthening of health care systems in recipient countries.[29] Although none of these programs will become self-sustaining in the near future, an important element in changing the focus from emergency to long term is making sure the metrics used for evaluation of success are in line with the long-term intended outcomes. For example, beyond just tracking the number of patients started on HIV medications, it is important to follow patients' adherence to drug regimens over a number of years to ensure quality of care, prevent spread of drug resistance, and provide evidence to American taxpayers that their dollars are being used effectively and are having a sustainable impact.

DEBT2HEALTH

In addition to now funding applications for health worker training, capacity building activities, and health system strengthening, the Global Fund has created new programs to raise funding through nontraditional schemes, such as its "Debt2Health" initiative. The aim of Debt2Health is to create new domestic resources for health by converting old bilateral debt into increased funding to support the health sector. The initiative was launched in September 2007 and negotiated the first agreement between Germany and Indonesia to convert a share of Indonesia's debt into funding for their domestic health services.[30]

THE FUTURE OF UNAIDS

UNAIDS has made a tremendous contribution to the fight against AIDS. It is the most effective umbrella agency ever created by the UN system and has been highly useful in harmonizing AIDS policies across agencies. It has also played a valuable role in monitoring the epidemic, forecasting future needs, and influencing national governments to develop their HIV/AIDS policies accordingly. Much of this success can be attributed to the era in which it was created and the desperate void in leadership that needed to be filled. But now that this void has been filled by numerous agencies, advocacy groups, increased surveillance, and movement toward integration of HIV/AIDS efforts into larger health and development goals, many question the role of a standalone agency dedicated to single disease.[31]

Crowding of the Moral Landscape

As HIV/AIDS programs have evolved, so has the moral landscape in which they gained traction. No longer is the scourge of HIV and access to treatment the dominant issue thrust upon leaders of wealthy countries. Today, there is a wide range of concerns, such as food and fuel shortages, effects of climate change, stagnating progress toward the MDGs, and other disease priorities competing for world leaders' attention and funding. Overwhelming all is the current economic downturn. Discussions of health and development are now overshadowed by the looming collapse of the world economy.

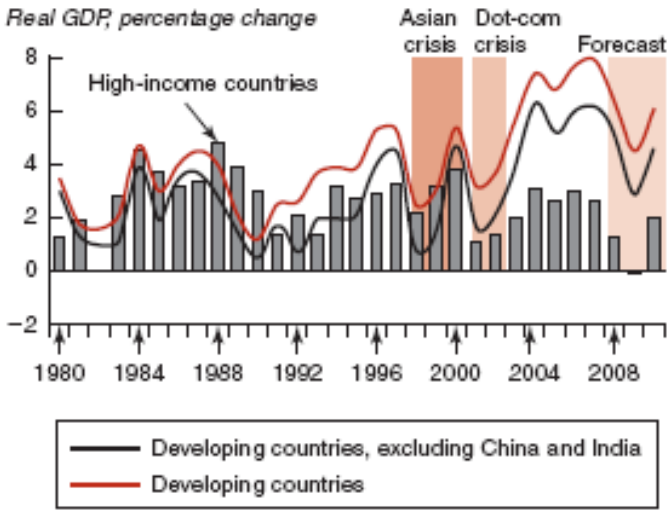
THREAT OF ECONOMIC CRISES TO GLOBAL HEALTH GAINS

The world is currently in the grips of the most severe economic downturn since the Great Depression. Over the past six months, more than $6.9 trillion has disappeared from the world economy, according to the World Bank's December 2008 estimate, and the global economy is predicted to shrink for the first time since World War II. The economic crisis, combined with rising food prices and growing resource scarcity due to climate change, threatens to erase many of the gains that have been achieved in poverty and disease alleviation over the past decade. The fuel, food, and financial crises of 2008 are estimated to have pushed more than one hundred million people back into poverty. In October 2008, World Bank president Robert B. Zoellick warned, "While people in the developed world are focused on the financial crisis, many forget that a human crisis is rapidly unfolding in developing countries. It is pushing poor people to the brink of survival." The number of malnourished people globally grew by forty-four million to 967 million in 2008, after several countries experienced double-digit food inflation.[32]

International institutions and governments that rely heavily on the steady inflow of foreign donor funding are now frantically trying to resolve how to continue the operations of their health programs, while wealthy nations are spending trillions to rescue the world's financial industry. Undoubtedly, the economic crisis will crimp humanitarian aid and international efforts to fight disease and alleviate poverty, though the severity of its impact cannot be judged until the depth of the global economic crisis is better appreciated. If the downturn is slowed by government stimulus programs and bank sector control, averting a full depression, the impact on developing country programs may be slight. In contrast, a deep, prolonged global depression would surely find the former donor nations focused internally, spending to save domestic jobs, homes, and governance. In such a scenario a profound political mobilization would be required to garner continued and adequate support of all types of foreign assistance, including HIV/AIDS treatment programs. Even in the less grim scenario, philanthropic giving from governments, foundations, and corporations is expected to sharply decline as the world tightens its belt in a global recession. The OECD forecasts that in 2009, the U.S. economy will contract by 0.9 percent, the EU's by 0.6 percent, and Japan's by 0.1 percent, adding increased pres-

sure to tight domestic budgets. In November 2008, the OECD urged all of its member states to take an "aid pledge," promising to fulfill all foreign assistance commitments, despite the worsening global economy.[33] OECD secretary-general Angel Gurría warned, "Unless we act decisively now, we may not be able to prevent the financial crisis from generating an aid crisis. Let us not repeat the mistakes we made following the recession of the early 1990s when many OECD governments let aid efforts decline, with the consequent impacts on developing countries in such areas as agricultural production, infrastructure, social welfare and political stability." During the previous economic downturn between 1992 and 1997, official development assistance (ODA) fell by one-third as a share of national income, the equivalent of $30 billion today.

GPD Growth, 1980–2008



Source: World Bank, 2009.

Within the United States, the Congressional Budget Office is projecting a $1.7 trillion deficit.[34] Congressional authorization does not equal appropriations, and this may be the case for the $48 billion PEPFAR reauthorization. It may be more realistic in this climate to assume stagnation among all foreign aid projects—and growth in foreign aid, only to occur once the economic crisis is fully behind us.

Funding for the Global Fund is also in flux, as the 2009–2010 budget was projected to be $8 billion; however, only $3 billion is currently available, including donor governments' existing commitments. The Global Fund has made a desperate plea to the donor community to sustain funding commitments in order to close the organization's $5 billion funding gap.[35]

For all HIV/AIDS programs, it is essential that prevention efforts do not fall by the wayside as donors focus limited funding on already existing obligations to support treatment. As discussed in a January 2009 WHO report on the financial crisis and global health: "Curative care attracts more political attention and it is tempting for prevention activities to be sacrificed in the face of budgetary pressures."[36]

As past experience has shown, a decrease or stagnation in donor commitments will have a dramatic effect on the health of families and communities in developing countries. Private financial flows are currently falling, remittances are decreasing, and exports from developing countries are slumping in

terms of price and volume.[37] These declines put households and governments in a position of vulnerability in terms of their ability to cover their own health needs. Over the course of the next year, the amount of household income allotted to healthcare may also dry up as food and fuel prices increase. The costs of medicines are likely to rise due to currency devaluations. Patients may switch from private to public sector health care, placing an increased burden on already stretched services. Women and girls are predicted to bear the brunt of these cutbacks; as unemployment rises, economic independence will erode and families will reduce spending on education for girls. Economic uncertainty may also increase competition on the ground between health programs, pitting one program against another for limited funding and human resources. In the worst-case scenario, the breakdown of health services in developing countries could lead to social unrest and political instability.[38] To meet this growing demand for public services, low- and middle-income countries will increasingly look to wealthy nations to provide increased financial support for social and health programs in the interim.

Despite the bleak outlook, the economic crisis may provide opportunities to reexamine current global health efforts and to engage in difficult conversations about what is working, what is not, and what the most effective mechanisms are for continued engagement. The financial crisis may also provide an opportunity for the international donor community to rethink the ways in which it operates and to pursue ways to eliminate duplications of efforts, increase multilateral cooperation, better align programs with recipient countries' priorities and needs, and find ways to more effectively collaborate with and better leverage the resources of foundations and corporations that have a growing role the global health landscape.

Immediate Future: Opportunities and Challenges

The next five to ten years will be critical in shaping the long-term future response to HIV/AIDS. The success or failure of a number of new initiatives aimed at mitigating the pressures of the current economic downturn, decreasing the funding burden of treatment-based programs as the number of newly infected grows, and finding ways to fund more expensive second- and third-line HIV drugs will decide the mechanisms, fiscal space, and long-term sustainability of HIV/AIDS efforts.

DONOR COORDINATION EFFORTS

Despite and maybe because of the economic crisis, the international community is in a moment ripe for historic changes in global health. Committed agency leaders, NGOs, faith-based groups, and corporate actors are working collectively to think about new ways to break out of patterns of charitable giving and move toward real sustainable investments in health—utilizing the wealth of resources and technical expertise available both on the ground and within international agencies. A number of promising initiatives, declarations, and programs are beginning to emerge in an effort to improve global health funding efficacy through longer-term commitments, more coordinated accountability measures, and collaboration at the highest levels. The donor community is in a critical moment, as their successes or failures will determine the future trajectory of health and development aid for decades to come. However, because these reforms are in nascent stages now, their full impact will not be realized for at least another five years.

Inside the UN system, efforts are underway to improve relations and coordination among the major players in global health: the health-related UN agencies, the Global Fund, the GAVI Alliance, and the Bill & Melinda Gates Foundation. The Health 8 (H8), composed of the WHO, UNICEF, UNAIDS, UNFPA, World Bank, Global Fund, GAVI, and Gates, is a loose alliance created to clarify the core responsibilities of each agency and bring coherence and alignment to their activities to eliminate duplication of efforts and competition for funding. The H8 process is still new, and its future is uncertain. Nevertheless, among UN agencies the process has received significant support.

UNAIDS, together with the Global Fund, bilateral donors, and other international institutions, has similarly committed to harmonization and alignment of global HIV/AIDS efforts specifically through the concept of the "three ones": one agreed HIV/AIDS action framework for coordinating the work of all partners; one national HIV/AIDS coordinating authority with a broad-based multisectoral mandate; and one agreed country-level system for monitoring and evaluation. Although implementation of this initiative has been slow at the national level, it remains a promising model for national coordination.

At the donor-country level, many wealthy governments have embarked on new initiatives to make aid more effective. In September 2007, a consortium of wealthy governments and private donors announced the creation of the International Health Partnership (IHP). The IHP seeks to redesign the relationship between donors and recipient nations, to improve transparency, accountability, and mutualism in the programs executed by typically rival agencies. If the IHP succeeds,

country governments will have much more control over what outsiders do with and for their people, and will in return improve all aspects of strategic planning, civil society engagement, and financial processing. The IHP promises longer-term financial commitments—up to a full decade—in exchange for accountability from recipient governments for money spent at the country level. The goal is to vastly improve the kinds of strategic developments that developing countries most desperately need—physical infrastructures of health provision, water filtration systems, health and human resources training and support, and microfinance schemes that set realistic long-term goals for individual and community health progress. In January 2009, the United States, under the new Obama administration, expressed interest in joining the IHP.

Wealthy nations across the world are currently reexamining their foreign aid structures—especially in light of the financial crisis—to find ways to execute programs more efficiently and make foreign aid dollars go further. In the future, a push toward multilateralism is predicted—as a means of both leveraging resources and freeing countries from shouldering the burden of bilateral engagements. Even before the financial crisis began, many G8 countries were off track to meeting aid goals set in Gleneagles. The failure of G8 nations to fulfill previous promises for health and development support threatens the institution's credibility and questions its purpose in a world where the G20 may be a more accurate representation of the new geopolitical alignment.

Signed in 2007 by over one thousand participants from fifty-seven countries, the Kampala Declaration calls for increased funding to mitigate health worker shortages in Africa. The declaration also calls for increased investments in health infrastructures to fight the spread of diseases, including HIV/AIDS, in developing countries. It proposes that developing countries allocate 15 percent of their annual budgets to the health sector to reduce the migration of health workers to wealthy nations. For donor countries that actively recruit health personnel from developing countries to fill their own national shortages, the declaration proposes that poacher countries pay a fee to countries whose health workers are recruited.[39]

Additionally, a Taskforce on Innovative International Financing for Health Systems was launched in September 2008 under the chairmanship of UK prime minister Gordon Brown and World Bank president Robert Zoellick.[40] The task force aims to identify new funding streams and build better ways to use existing resources. The final report from this task force will be launched in September 2009 at the UN General Assembly.

THE FINAL PUSH TOWARD THE MDGs

2008 marked the midway point for the achievement of the MDGs. In September, the Office of the UN Secretary-General concluded that both funding and program development were falling far short of those needed to reach the 2015 MDGs, and at least six of the eight targets were on course to fail. MDG 5—maternal survival—has not shown significant improvement and no region is on track to achieve the goal at current rates.[41] The target of MDG 1—to reduce the proportion of people who suffer from extreme poverty and hunger—is in reverse. A report by the World Bank in March 2009 predicts that the economic crisis will be a major setback to progress toward the MDGs, as the long-term impact of the crisis may be more severe than that of the short term. The World Bank also warns that infant deaths in developing countries may be 200,000 to 400,000 higher per year between 2009 and the MDG target year of 2015 than they would have been in the absence of the financial downturn.

Progress toward the MDGs has been stilted by shortfalls in funding, inefficient use of resources, and fragmented funding flows. From 2002 to 2006, more than 50 percent of donor funding for health was absorbed by commitments to MDG 6, leaving only $2.25 per capita to fund progress toward the other health goals.[42] In recognition of the unequal progress in achieving the health-related MDGs, there has been a significant push toward funding horizontally focused investments in health systems strengthening, as opposed to vertically funded, disease-specific initiatives. HIV/AIDS advocates have been proactive in addressing this trend, arguing that HIV/AIDS programs have, in fact, strengthened the health systems in many low-income countries. Leaders of some multilateral agencies seem to be embracing this shift in funding and implementation. In March 2009, the leaders of GAVI and the Global Fund wrote to the chairs of IHP and the High-Level Taskforce on Innovative Financing of Health Systems, Gordon Brown and Robert Zoellick, seeking an expansion of the mandate of the two organizations to cover all the health related MDGs. The letter, from GAVI's chief executive officer, Dr. Julian Lob-Levyt, and the Global Fund's executive director, Dr. Michel Kazatchkine, concludes: "It is time to take a comprehensive approach with the necessary support from key donors to refocus on all of the health-related MDGs as a renewed commitment to meeting the basic health service delivery needs in poor countries." Moving forward over the course of the next five to ten years, there will be a strong shift toward funding programs that ensure access to universal health coverage for all, rather than focus on access to treatment for a single disease. How HIV/AIDS advocates position themselves in this sea change will have an important impact on the level of attention and funding donors give HIV/AIDS. It is critical that HIV/AIDS advocates promote access to HIV/AIDS treatment and prevention activities as integral components of health systems strengthening and toward the achievements of *all* health related MDGs in order to secure sustained and steady funding.

FINANCING NEEDS

Preliminary reports released in March 2009 from the Taskforce on Innovative International Financing for Health Systems working group outlined the minimum and maximum costs of putting in place the health systems necessary to support the achievement of the MDGs in low-income countries. Their analysis includes probable increases in funding from 2009 through 2015 from private, donor, and domestic government sources and the resulting funding gap. Strengthening governance, financing, and delivery of health services needed to enable rapid progress toward the health-related MDGs is projected to cost an additional $36 billion to $49 billion per annum in 2015.[43] In the chart on page 22, the "commitments met scenario" assumes that donor governments will reach the 0.7 percent of GNI target and recipient countries will meet the 15 percent of government expenditures to health target. The "no charge scenario" assumes that current ODA and government health expenditures will remain the same.

Financing Needs to Meet the MDGs

Increasing Financing 2015 (in $ billions)				**MAXIMUM COST 2015**		**MINIMUM COST 2015**	
				Funding Need	**Funding Gap**	**Funding Need**	**Funding Gap**
COMMITMENTS MET SCENARIO							
Government *26*	*ODA* *12*	*Private* *4*	***TOTAL*** ***42***	49	7	36	-6
NO CHANGE SCENARIO							
Government *5*	*ODA* *3*	*Private* *5**	***TOTAL*** ***13***	49	36	36	23

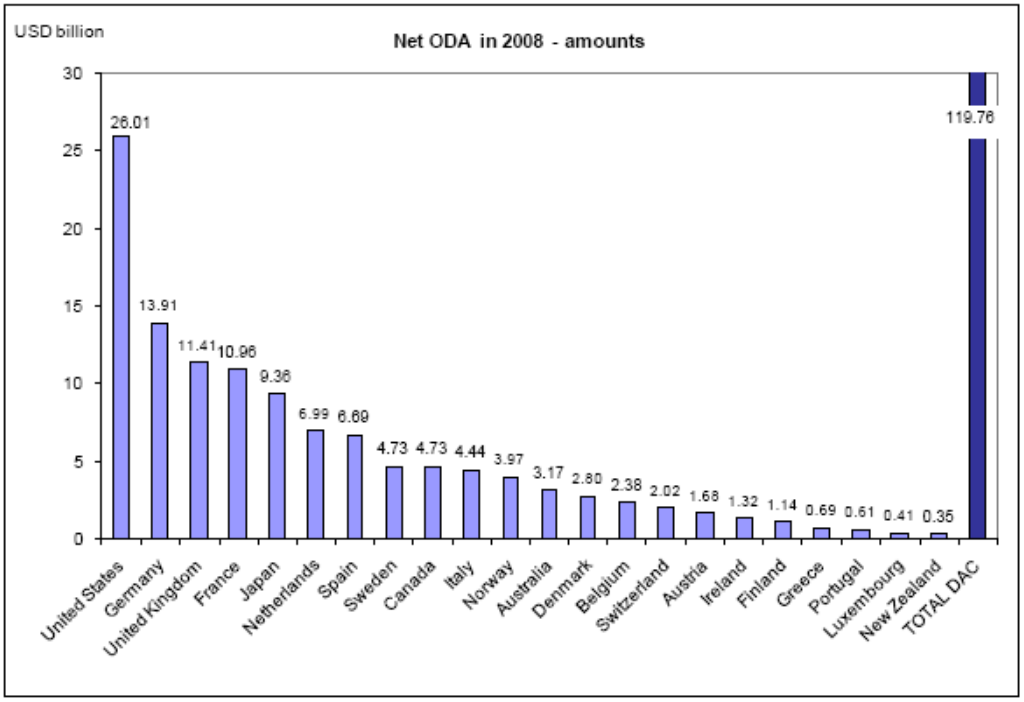
Source: Taskforce for Innovative International Financing for Health Systems, Working Group 1 report, March 11, 2009.
*The increase in private expenditure assumes that countries are able to develop domestic financing polices that are able to capture such spending through insurance arrangements or domestic taxation strategies.

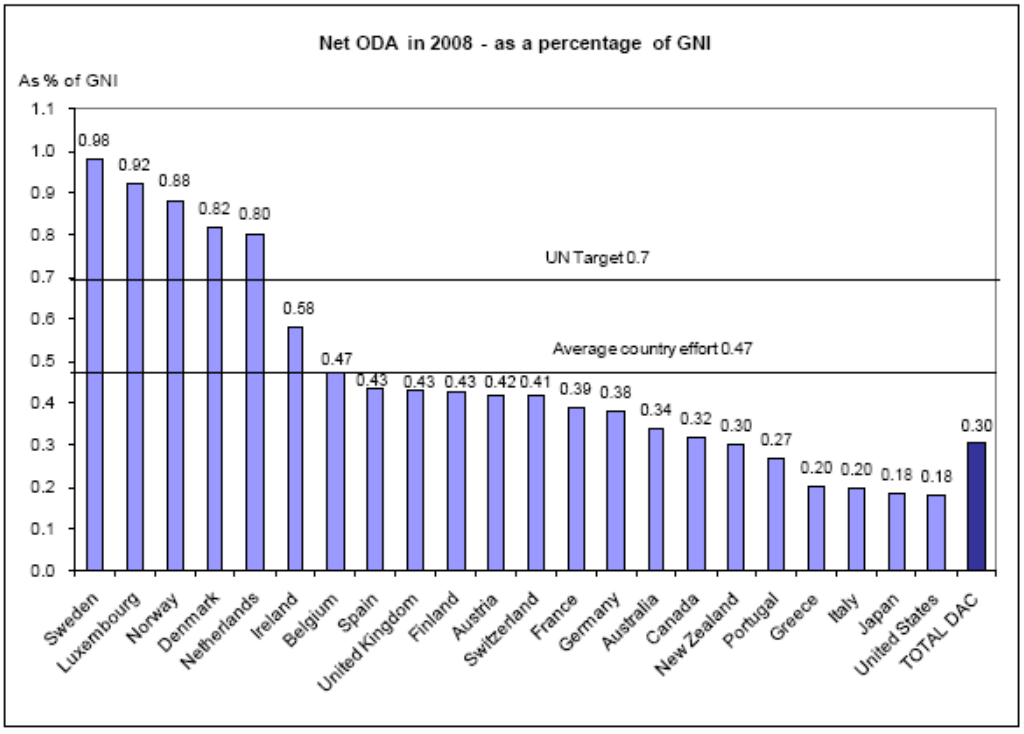
The projected financing gap in 2015 is a maximum of $7 billion if current donor and country spending targets are met, or $23 billion to $36 billion if funding levels from governments, donors, and the private sector remain unchanged.

MEETING THE 0.7 PERCENT TARGET

Despite increases in donor assistance over the past decade, ODA is on average about 0.3 percent of GNI in OECD countries—still far short of the illusive 0.7 percent of GNI target set by the UN in the 1970s and reaffirmed at the Monterrey Conference in 2002. Before the current economic recession hit, many OECD countries reaffirmed their commitment to increasing ODA. The UK government, under Prime Minister Gordon Brown, committed to increasing foreign aid from its 2007 level of 0.36 percent of the British GNI to 0.7 percent in 2013, two years ahead of the EU schedule for reaching that donor target.[44] Similarly, in Germany, the Bundestag recently approved a 2009 foreign assistance expenditure of approximately $1.2 billion, based on December 2008 currency valuations, marking a 12 percent increase from Germany's 2008 budget. In the United States, President Obama's maiden budget request for FY2010 reaffirmed his commitment to doubling foreign assistance—although no specific timetable for the increase was outlined.

Net Official Development Assistance in 2008





Source: OECD, March 2009.

Unfortunately, these encouraging efforts have not been mirrored across the other donor countries. The Italian parliament responded to the global economic crisis by cutting 2009 ODA by nearly 55 percent. ODA spending also decreased in Austria and Greece in 2008.

OECD-DAC Secretariat Simulation of DCA Members' Net ODA Volumes in 2008 and 2010

In constant 2008 USD million

The data below are not forecasts, but Secretariat projections based on public announcements by member countries of the OECD's Development Assistance Committee (DAC). The key figures from such announcements are shown as "Assumptions". To calculate net ODA and ODA/GNI ratios requires projections for GNI for 2010. For 2009 and 2010, the projections of real growth are taken from the OECD Economics Department interim projections to be published on 31 March. Pending updated country specific figures which will be available in June 2009, country specific real growth projections are available and used for each G7 country, whereas Euro area or total OECD real growth projections are used for most other countries. While calculations have been discussed at technical level with national authorities, the DAC Secretariat is responsible for the methodology and the final published results.

	2008 (preliminary)		Assumptions (ODA/GNI ratios)	2010			
						Real change in ODA compared with 2008	
Country	Net ODA (2008 USDm)	ODA/GNI		Net ODA (2008 USDm)	ODA/GNI	(2008 USDm)	Per cent
Austria	1 681	0.42%	0.51% in 2010	1 945	0.51%	264	16%
Belgium	2 381	0.47%	0.7% in 2010	3 361	0.70%	980	41%
Denmark [1]	2 800	0.82%	Minimum 0.8%	2 623	0.80%	- 177	-6%
Finland	1 139	0.43%	0.51% in 2010	1 300	0.51%	161	14%
France	10 957	0.39%	0.51% in 2010 and 0.7% in 2015	13 909	0.51%	2 952	27%
Germany	13 910	0.38%	0.51% in 2010	17 687	0.51%	3 777	27%
Greece [2]	693	0.20%	0.35% in 2010	1 145	0.35%	452	65%
Ireland	1 325	0.58%	0.6% in 2010 and 0.7% in 2012	1 307	0.60%	- 17	-1%
Italy [3]	4 444	0.20%	0.51% in 2010	10 866	0.51%	6 423	145%
Luxembourg	409	0.92%	0.93% in 2010 and 1% in following years	395	0.93%	- 14	-3%
Netherlands	6 993	0.80%	Minimum 0.8%	6 647	0.80%	- 346	-5%
Portugal	614	0.27%	0.51% in 2010	1 119	0.51%	505	82%
Spain	6 686	0.43%	0.56% in 2010 and 0.7% in 2012	8 271	0.56%	1 585	24%
Sweden	4 730	0.98%	1%	4 625	1.00%	- 105	-2%
United Kingdom [4]	11 409	0.43%	0.56% in 2010-11 and 0.7% in 2013	14 243	0.56%	2 834	25%
DAC EU members, total	**70 168**	**0.42%**		**89 441**	**0.56%**	**19 273**	**27%**
Australia [5]	3 166	0.34%	See footnote 5	3 266	0.37%	100	3%
Canada [6]	4 725	0.32%	See footnote 6	4 875	0.34%	150	3%
Japan [7]	9 362	0.18%	See footnote 7	13 310	0.28%	3 948	42%
New Zealand [8]	346	0.30%	See footnote 8	415	0.35%	69	20%
Norway	3 967	0.88%	1% over 2006-09	4 295	1.00%	327	8%
Switzerland [9]	2 016	0.41%	See footnote 9	1 862	0.40%	- 154	-8%
United States [10]	26 008	0.18%	See footnote 10	27 647	0.20%	1 639	6%
DAC members, total	**119 759**	**0.30%**		**145 110**	**0.39%**	**25 351**	**21%**

[1] Over the coming years, the Danish government will strive to increase ODA as a percent of GNI from the current level of 0.8%.

[2] Due to budgetary constraints, Greece has deferred its EU ODA target of 0.51% to 2012. Greece estimates it will reach an ODA/GNI ratio of 0.35% in 2010.

[3] The Italian authorities advise that Italy's ODA trend will be influenced by the constraints on Italy's public finance.

[4] This Secretariat simulation of 2010 ODA applies its previous estimate of the ODA/GNI ratio in 2010 (0.56%) to its current projections of UK GNI in 2010, expressed at 2008 prices and exchange rates.

[5] Australia expects to continue increasing its ODA. Australia has announced it intends to reach an ODA/GNI target of 0.5% by 2015-16 and in 2008 the Australian Government announced interim targets of 0.35% in 2009-10, 0.37% in 2010-11 and 0.38% in 2011-12. The figure here is discounted for inflation.

[6] Canada intends to double its 2001 International Assistance Envelope (IAE) level by 2010 in nominal terms. The Canadian authorities estimate ODA (composed in large part from the IAE) will be 5.1 billion Canadian dollars in 2010. The ODA figure shown here is adjusted for inflation and converted to USD at the 2008 exchange rate.

[7] Japan intends to increase its ODA by USD 10 billion in aggregate over the five years 2005-2009 compared to 2004. The Secretariat's estimate assumes USD 4.39 billion extra in 2009, compared to 2004, and uses this figure for 2010, supposing that the volume of net ODA in 2009 will be maintained. No adjustment is made for inflation.

[8] New Zealand has indicated an intermediate target of NZD 600 million. The Secretariat estimates an ODA/GNI ratio of 0.35% in 2010.

[9] The Swiss Parliament (the Council of States in September 2008 and the National Council in December 2008) has decided to increase ODA to 0.5% of GNI by 2015. The provision of additional resources to meet this objective will be decided after the approval of the additional frame credit in 2009. In the actual financial plan, the ODA/GNI ratio of 0.40% will be maintained from 2009 onwards.

[10] The United States does not issue or approve forecasts on projected ODA. The amount shown here is purely a Secretariat estimate. It is based on 2004 ODA plus USD 5 billion nominal per annum to cover the Gleneagles G8 commitments on increased aid to sub-Saharan Africa, Millennium Challenge Account, and initiatives on HIV/AIDS, malaria and humanitarian aid.

Source: OECD, March 2009.

According to the OECD figures for 2008, the current outlook suggests that at least $10 billion to $15 billion must still be added to current spending plans for donors to meet the 0.7 percent target by 2010. The 2009 OECD projections are optimistic that with continued commitment it will be possible for donors to meet the 2010 targets and that donors that are already giving 0.7 percent will continue to do so in the future. In March 2009 the OECD reported that, according to a new survey of donors' forward-spending plans, an increase of 11 percent in programmed aid is expected between

2008 and 2010, including disbursements from some multilateral agencies.[45] The 2015 MDG target year may give donor countries the extra push necessary to find ways to meet the 0.7 percent target or to pursue innovative financing mechanisms to make their contributions go further.

INNOVATIVE FINANCING MECHANISMS

Developing countries face an estimated gap in financing of $270 billion to $700 billion depending on the duration and severity of the economic crisis and success of interventions to mitigate the impact.[46] The World Bank has proposed the creation of a "vulnerability fund," where high-income countries would contribute 0.7 percent of the money they spend on stimulus packages (the G20's fiscal stimulus collectively amounts to almost $1 trillion for 2008 through January 2009, with an estimated additional $650 billion in 2010). The fund would be used to help developing countries mitigate the shocks of the financial crisis. Other mechanisms that could be employed by the international community to increase and diversify funding for health and make it more sustainable and predictable include: the Tobin tax, airline ticket taxation to fund HIV/AIDS efforts, or frontloading of HIV/AIDS financing to halt and reverse the spread of the pandemic.[47]According the World Bank, a new mechanism to finance international development aid must be evaluated on the basis of five criteria: revenue adequacy, efficiency, equity, ease of collection, and minimum required collation size.[48] Despite the potential benefits of each proposal, reaching consensus among donor countries is likely to be an arduous process with limited success.

Domestically, within developing countries, there are a host of financing mechanisms that could be employed to increase the fiscal space available for health spending, including innovative indirect taxes, taxation reform to minimize evasion, introduction of social health insurance, and prepayment schemes to reduce inequality of out-of-pocket expenditures, more effective channeling of remittance flows, and creation of public-private partnerships to maximize resources of the private sector.

ACCESS TO SECOND-LINE DRUGS

As global access to ARVs increases and resistance to first-line therapies becomes more widespread, the high price of second-, third-, and even fourth-line therapies will become a major challenge. Approximately 10 percent to 15 percent of people that take ARVs will develop resistance to their current combination of drugs after four to five years.[49] The growing need for second-line drugs threatens to bankrupt the ministries of health of many developing countries. For example, in 2006, Brazil's ministry of health estimated that more than 80 percent of its HIV/AIDS budget was spent on imported HIV/AIDS drugs and projected that this cost would increase twofold by 2011.[50]

Some countries such as Thailand and Brazil have taken measures to secure lower-cost second-line therapies. But countries without equivalent political capital and financial stability will find it difficult to follow the same path. Some have suggested abolishing the Trade-Related Intellectual Property (TRIPS) agreement of the WHO replacing it with a system that rewards pharmaceutical companies for innovations and research. But any change to the agreement is unlikely in the near future given the 2008 collapse of the Doha negotiations. Another potential solution forwarded by UNITAID is the creation of a "patent pool" that would hold licenses on various patented medicines, granting production rights to generic companies that guarantee sales exclusively to low-income countries.[51] Until radical change to the system occurs, the poorest countries with the highest concentrations of

HIV/AIDS will be reliant on a constant flow of foreign funding to pay for their ever-growing need for more costly, sophisticated treatment.

As the number of people receiving treatment increases, and the percentage of those requiring second-line therapies grows, questions of donor fatigue may arise. The wealthy world has given a lot to the battle against HIV/AIDS and significant results have been achieved. But now donors are locked in a cruel formula: The more money given today, the greater the amount required tomorrow. If the economic crisis continues without abatement for years to come, there may be a push to limit the number of those treated to ensure funding and delivery of their medications.

Many promising drug innovations are in the R&D pipeline, targeting aspects of the HIV life cycle not blocked by therapies currently in use in Africa. Some of these drugs, such as integrase inhibitors, show promise of knocking HIV viral loads down to undetectable levels swiftly and holding them there, with few dangerous side effects for the patient. Other innovations offer hope of less frequent dosing needs, easier dietary compliance, and overall improvements in ease of medication. These innovations will, however, be more costly than current ARVs, and will probably be more difficult to safely render in generic manufacturing. As patients in the wealthy world abandon the ARV regimens used in poor countries, with better outcomes, the moral imperative to broaden access to new patented pharmaceuticals may ensue. If so, costs and pressure on donors will undoubtedly rise. Just as the protease inhibitor enzyme formulations have proven difficult to produce safely in generic manufacturing sites, it is probable that these new classes of compounds will remain exorbitantly expensive for many years after their initial licensing. Questions of global equity will arise. What will happen to the moral imperative argument, which has been so effective in attracting attention and funding to HIV/AIDS, if drugs available in New York are not accessible in Abidjan? Will the advocacy efforts of the HIV/AIDS groups be as compelling if they are pushing for substandard care for the poor?

Longer-Term Future: Opportunities and Challenges

The rise of new economic and political powers and the growing influence of nonstate actors will, over the next twenty years, transform the world's power structures and global institutions. The donor community's ability to respond to challenges posed by climate change, resource scarcities, youth bulges in developing countries, aging populations in developed countries, urbanization, and migration will be shaped by the way they are able to adapt to changes within the global governance structure, to build partnerships with new players, and to engage newly powerful nations in global health and development. Low-income countries will remain dependent on external funding of HIV/AIDS efforts, as rapid population growth and mediocre GDP increases inhibit their ability to meet the financial costs of providing health to their populations. Significant GDP growth in middle-income countries may alleviate part of the funding burden of HIV/AIDS efforts, as governments take on the financing of their own domestic health programs. The effects of climate change and resource scarcity could be devastating. If HIV/AIDS patients are unable to find food and water, donors' efforts to provide universal access to treatment will be negligible.

CLIMATE CHANGE, RESOURCE SCARCITY, AND POPULATION BOOM

According to the U.S. National Intelligence Council (NIC) 2025 report, population growth over the next twenty years will be concentrated in Asia, Africa, and Latin America.[52] If current trends continue, 57 percent of the world's population will live in urban centers by 2025. The effect of climate change will exacerbate resource scarcities. Access to clean water, energy, and food sources will become more pressing issues during the next twenty years, as the world's population expands by a billion. The World Bank estimates that the demand for food will increase by 50 percent by 2030, due in part to population growth, rising middle class, and a shift toward Western dietary preferences.[53]

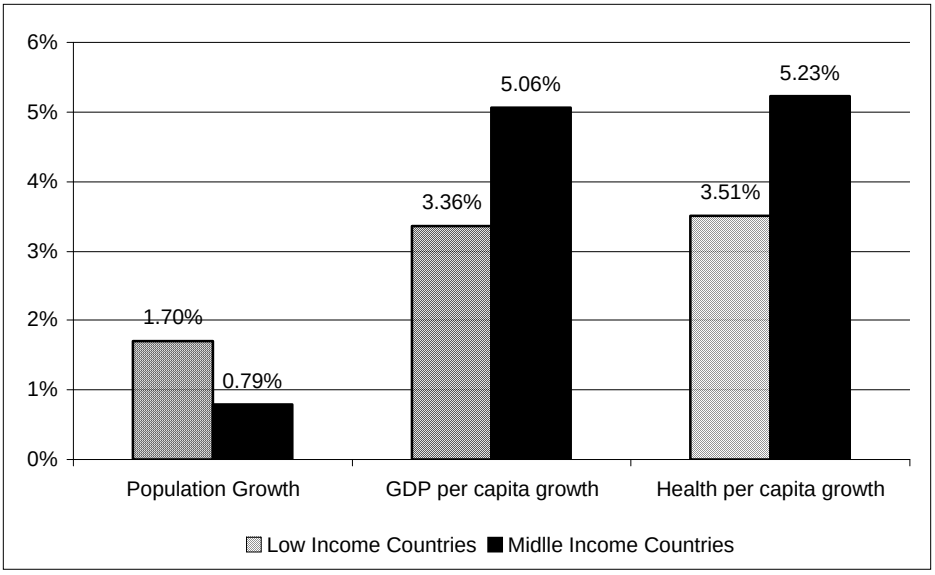
Climate change, like HIV/AIDS, is a long-wave event that will require a sustained, long-term, multifaceted response from the international community.[54] Similar to HIV/AIDS, the response to climate change, thus far, has been characterized by denial, and short-term, emergency-oriented responses. The international community has yet to agree upon policy responses and financing mechanisms that confront its long-term and expansive impact. Over the course of the next twenty to thirty years, climate change will be both a competing and possible complicating problem for HIV/AIDS. Low-income countries will be among the most acutely affected by changes in climate, and will require external funding to respond; possibly co-opting funds previously designated for HIV/AIDS efforts. Increases in temperature and resource scarcity may also complicate or compromise the effectiveness of current HIV/AIDS treatment regimes.

FINANCING POSSIBILITIES IN LOW- AND MIDDLE-INCOME COUNTRIES

Meeting the Abuja goals for health spending will remain out of reach for most low-income countries due to rapid population growth coupled with mediocre GDP growth. Even if low-income countries were able to increase the share of government spending dedicated to health to 15 percent, and donors were able to meet the 0.7 percent commitment, preliminary reports from the Taskforce for Innovative Financing for Health Systems working group estimate that they would still not be able to ensure universal access to health services or reach the health-related MDGs. Low-income countries in sub-Saharan Africa and southeast Asia will continue to be reliant on external funding to support their HIV/AIDS efforts and overall health system functioning.

Sub-Saharan Africa will remain the region most vulnerable to conflict, economic downturns, pressures of population growth, and political instability. By 2025, the population of sub-Saharan Africa is expected to exceed one billion, despite the effects of HIV/AIDS. There will continue to be a youth bulge in the region, with over one-half of the population under the age of twenty-four. There will likely be continued out-migration, as many in their most productive working years emigrate in search of economic opportunities or to escape to conflict, effects of climate change, or widespread unemployment. Sub-Saharan Africa will also be the region most acutely affected by climate change, leading to shortages of water, food, and arable land.

Predicted Population, GDP and Health Per Capita Growth in Low and Middle-income Countries, 2005–2030



Source: World Bank Global Economic Projections, 2008, and data from health expenditures from WHO, as included in the World Bank's World Development Indicators 2008.

While low-income countries struggle to raise sufficient resources to fund the provision of social services, middle-income countries are projected to significantly increase health spending per capita due to relatively low population growth and rapid increases in GDP per capita. Middle-income coun-

tries are forecasted to more than triple domestic spending on health per capita by 2030. The ability of middle-income countries to take on an increasing amount of their own domestic programs will free up donor funding that may be shifted to fill financing gaps in low-income countries.

ROLE OF TRADITIONAL DONORS—TODAY'S G7

Populations of the wealthy world will continue to age—the most rapid increase in the ratio of seniors to working-age adults will occur from 2010 and 2020—increasing the financial burden of medical and social security programs.[55] According to the 2008 Financial Report of the U.S. Government, for example, if Medicare expenditures continue to increase at the current rate, Medicare, Medicaid, and Social Securitywill account for 65 percent of U.S. government expenditures by 2030.[56] Donor countries will have to find ways to meet their domestic health care needs, while also continuing funding for low-income countries, despite their own declining tax bases. GDP per capita growth and revenues per capita will be much slower in high-income countries, as compared with middle-income countries. Therefore, contributions from traditional donor countries may play less of a role in future funding of international HIV/AIDS efforts. The rise of new economic powers and nonstate actors may play a more influential role in dictating the terms and guiding the flow of health aid.

THE NEW GLOBAL GOVERNANCE ARCHITECTURE

The traditional configuration of donor governments and multilateral institutions will yield to vastly different models in the coming decades. A single "international community" composed of nation states will no longer exist by 2025, predicts the NIC 2025 report. Instead, power will be dispersed among new players and nonstate actors (including businesses, tribes, religious organizations, and criminal organizations) that will experience a rise in power and influence. According to the report, global governance will become "a patchwork of overlapping, often ad hoc and fragmented efforts, with shifting coalitions of member nations, international organizations, social movements, NGOs, philanthropic foundations, and companies."[57] Nonstate actors may be able to play a complimentary role to efforts of donor governments by tackling more controversial issues that donor governments often shy away from, such as funding of targeted interventions for the most-at-risk populations (MARPs) in low- and middle-income settings.

In addition to the rise of new actors, a new configuration of countries is projected to become the dominant player in the global marketplace. Analysts predict that growth in China, Brazil, Russia, and India will collectively match the original G7's share of global wealth by 2040 to 2050.[58] By these same projections, the eight largest economies in 2025 will be the United States, China, India, Japan, Germany, the UK, France, and Russia. The decisions made by China, Russia, India, and Brazil regarding how and to what degree they will choose to engage in external health and development endeavors will shape the future of health and development funding.

If current behavior offers a glimpse of future engagement, two divergent models of foreign aid engagement may emerge from donor countries over the next twenty years. Among traditional G7 leaders, a renewed momentum toward multilateralism has emerged, as well as a move away from funding disease-specific initiatives toward more holistic health systems strengthening, as outlined in the 2008 G8 Summit documents drafted in Toyako, Japan.[59] The engagement of new emerging powers Brazil, Russia, India, and China (the BRIC countries) in health and development efforts have been incre-

mental and mostly focus on domestic issues, rather than on aiding neighboring nations. Responses to HIV/AIDS, in particular, have varied tremendously among the BRIC countries, from proactive, targeted prevention strategies and access to free ARV treatment in Brazil; to heavily stigmatizing MARPs and refusing to fund targeted prevention programs in Russia; to increasing Chinese engagement in confronting their domestic HIV/AIDS epidemic and financial commitments to structural development in African nations; to India's highly decentralized system of providing health and social services—all offer some of the best and worst in HIV/AIDS care. From this vantage point, it is difficult to forecast the direction and level of engagement each rising powerhouse will play in funding their own HIV/AIDS efforts and as a potential donor nation over the next twenty years. At minimum, BRIC nations will be compelled, as regional powers, to provide support to neighboring nations. Regional engagement in HIV/AIDS efforts will be in their best strategic and security interests to prevent waves of migrants from crossing their borders in search of care. BRIC countries may also create their own bilateral health initiatives to provide aid. Bilateral initiatives seem more probable, at this junction, as the majority of rising powers are hesitant to fully engage in the traditional multilateral structures designed by G7 powers. Achieving and maintaining collective action to tackle global challenges may be difficult in this new governance structure.

TECHNOLOGICAL PROGRESS AND WANING INDUSTRY SUPPORT

Experts forecast that if treatment and prevention strategies for the AIDS pandemic remain roughly status quo until 2025, approximately fifty million people will be living with the disease, and about thirty million of them will require daily treatment with ARV drugs.[60] The pace of technological innovations over the next several decades will be critical, not only for mitigating the impact of HIV/AIDS, but also for alleviating pressures of population growth and resource scarcities.[61] Beyond research for an effective vaccine or microbicide, effective behavioral strategies for prevention are desperately needed. If the global community is able to fund and implement fully scaled-up prevention microbicide strategies by 2015, the NIC estimates that HIV infection rates would peak and then fall to around twenty-five million by 2025, cutting in half the number of people needing HIV medications in 2025.

By 2031, most patents on existing drugs will have expired, cutting into pharmaceutical company profits. If prevalence rates in wealthy countries fall over the next decades and markets for third- and fourth-line HIV drugs shrink, there is concern that the pharmaceutical pipeline for research and development of new drugs to fight the virus will slow to a trickle and new generations of drugs will appear in less and less frequent intervals.[62] "We have to make sure the drug development remains in step with the evolution of the virus and that industry continues to invest," Peter Piot cautioned at the 2009 Mexico City International AIDS Conference. "There are worrying signs that that isn't the case and that is something we have to put on the table."

Recommendations

Given the anticipated changes in the global landscape, both natural and geopolitical, there is much that the donor community and national governments can do now to build a foundation to ensure steady, long-term funding for HIV/AIDS and alleviate the impact of future challenges, including: increase coordination at the donor and national levels and with the private and NGO sectors; sustain funding and attention for research and innovation; solidify linkages with the MDGs and the larger health and development agenda; build the capacities and physical numbers of skilled health workers within developing and developed countries; and encourage strong leadership at all levels.

COORDINATION

At the Donor Level

Ramping up efforts to implement the Paris Declaration is vitally important in light of the economic crisis. In times of uncertainty, it is particularly critical for recipient countries to have access to predictable and flexible funding that is in line with their national priorities to ensure that the aid is used in the most efficient and sustainable manner. Steps must be taken to address the increasingly exorbitant amount of overhead costs that are skimmed off program initiatives to support burgeoning donor bureaucracies. A push toward greater adherence to the declaration will help to eliminate donor-driven interventions and ensure sustainability, ownership, and capacity building within recipient countries. It will also be increasingly important over the next several decades to have coordination mechanisms in place, as global governance structures continue to shift to include a growing number of nonstate actors. These sentiments were echoed in January 2009 at a high-level meeting convened by the WHO to discuss the potential impact of the economic crisis on the health sector. At the meeting, several countries and panel members stressed the importance of longer-term commitments from donor governments to ensure the predictability of external financing and to facilitate planning and efficiency. Fragmentation was also acknowledged as a major problem at the country level, and country representatives urged for more rapid progress in initiatives like the IHP, which seeks to implement the principles of the Paris Declaration and the Accra Agenda for Action.[63]

Part of the process of harmonization, alignment, and coordination will require greater collaboration with the private and philanthropic sectors to better leverage resources. Partnering with foundations and corporations has allowed a wide range of innovations to take shape and provides promise in times of fiscal uncertainty. When traditional donors are focused on salvaging their own economies, the resources of nonprofits and private corporations can fill gaps in funding and implementation. For example, in his 2008 annual letter for the Bill & Melinda Gates Foundation, Bill Gates reaffirmed his commitment to fund global health and development projects despite the economic crisis and hoped to "set an example" for western governments by increasing the foundation's spending by 2 percent

despite a drop in the value of its assets.[64] An example of a partnership between donors and the private sector that leverages each actor's comparative strengths was announced in January 2009 by Africa's Standard Charter Bank. The bank has offered to provide free advisory help to countries receiving grants from the Global Fund. Their first collaboration will be with four African governments to manage and report on recently received funds to implement AIDS, TB, and malaria programs.[65] Building a strong foundation for donor coordination with national governments and the private and philanthropic sectors now will not only enhance aid efforts today, but will also ensure long-term partnerships as nonstate actors gain more influence in the future.

At the Recipient Level

Coordination among programs and initiatives is desperately needed at the national level. Recipient countries are often left out of the loop in program design and are inundated with a variety of health initiatives guided by donors' priorities and political leanings. The "three ones" and the Abuja Declaration provide mechanisms for recipient countries to take ownership and play a stronger role in guiding their country's HIV/AIDS policies and programs. They also place more responsibility on recipient countries to ensure that programs are context-specific and that recipient countries bear part of the onus of providing sustained financial and technical support.

Currently, in thirty African countries, 30 percent of health spending comes from donors and NGOs. In Rwanda this figure is over 50 percent.[66]There are some nations that will not, in the foreseeable future, be able to fully fund their health systems without significant infusion of foreign funding. But there are also countries that have strong potential and growth capacity that can, and should, commit more of their own resources to the health of their people. It is the responsibility of both donors and recipient countries to ensure that these discussions happen in order to support growth where potential is possible, to create exit strategies for country ownership, and to make a sustained commitment to long-term, predictable funding for those countries that will be reliant on external aid for decades to come.

INTEGRATION AND LINKAGES

HIV/AIDS is a disease without precedent, with the capacity to reverse decades of progress and derail the economic growth capacity of a nation. However, a separation must be made between addressing the exceptional nature of the disease and isolating the disease and funding it at the expense of other health and development objectives.[67] Pressing issues such as the food crisis, maternal mortality, and access to universal education do not need to be seen as competing interests to the fight against HIV/AIDS. The MDGs provide a blueprint for integrating HIV/AIDS into larger health and development goals. The linkages between each goal must be demonstrated, funded, and evaluated as a holistic package. In the current economic climate, it is no longer practical to lobby donors with disease-specific requests; instead, it is essential to empirically illustrate to donors the interconnectedness of HIV/AIDS to the achievement of larger health and development goals. "Unless we develop programs that interlink in thoughtful ways, using not the constituencies of contractors or companies of advocacy groups, but rather the customers as people living in poverty in the developing world as the focal point and recognizing that the family and the community is where the focal point rest, we're going to

wind up tearing ourselves apart in difficult budgetary times," Dr. Nils Daulaire commented at a Council on Foreign Relations meeting on foreign aid reform.[68]

Although achievement of all MDGs in regions around the world by 2015 seems unlikely, there is a dramatic difference between being on a trajectory toward achievement in 2015 and being completely off track. Utter failure might compromise the willingness of the public and donors and to continue to provide support for global health and development.[69] A concentrated push now to meet the MDGs will provide a foundation for funding and implementation of HIV/AIDS treatment and prevention efforts within larger health and development projects that can be expanded into the future regardless of whether the MDGs are met in 2015 or 2031.

RESEARCH AND DEVELOPMENT

The battle against HIV/AIDS has demonstrated the wonderment of science and innovation. Never before has a virus mobilized the research establishment to produce a treatment at such a rapid pace, thereby transforming a 100 percent fatal illness into a chronic disease. Continued investment in research and innovation will be crucial over the next several decades and it will shape future engagement with the epidemic.

The only way to curb the rate of infection and bottomless pit of spending is through the development and implementation of new prevention technologies, such as microbicides, male circumcision, postexposure prophylaxis, and, most importantly, HIV vaccines. Beyond a humanitarian imperative, better prevention technologies are critical to capping costs. A safe, effective, globally accessible, inexpensive HIV vaccine remains the best hope to control, and ultimately end, the pandemic.

The United States is the largest supporter of innovation for health, currently funding over half of the world's health research budget.[70] In 2008, U.S. public and private support accounted for more than 90 percent of the global HIV vaccine research effort. It is imperative that other donor countries step up to the plate and commit significant resources to research and innovation.

Donors must also focus on ways in which to ensure access to emerging technologies. Investments must be made now to build the foundations needed for an effective rollout of new technologies.

CAPACITY BUILDING

Given the scale of the world's human-resource crisis, compounded by physician and nurse brain drain, no strides can be made in the development of serious health services if models continue to be doctor-based. Even if the world commits today to the most massive medical training exercise in world history, the deficiency would not be overcome for more than two generations.

Only a substantial commitment to building genuinely viable health infrastructures based on paramedic, community-based workforces can guarantee that the treatment of HIV will not only spare millions of deaths to AIDS, but also save hundreds of millions from deaths due to childbirth complications, pediatric diarrheal diseases, malaria, tuberculosis, and newly emerging chronic diseases.

The Kampala Declaration is an important mechanism to galvanize momentum behind the importance of health worker training and to press donor countries to take action against their poaching practices. The future of the declaration and the potential impact it may have on the behavior of developed and developing countries is unknown, but the shortage of health workers will only become

more dire in the future as populations continue to grow in developing countries, and as the wealthy world continues to age.

LEADERSHIP

Strong leadership at all levels—from multilateral agency leaders to hospital administrators—is necessary to enact any of the actions recommended above and to mitigate future disaster. Strong leadership within the advocacy community, affected nations, donor governments, multilateral agencies, the private sector, and NGOs is what inspired a massive mobilization of resources and attention to a single disease. Strong leadership may be even more critical to the battle against HIV/AIDS as economic crisis, climate change, and other urgent concerns crowd out political attention to the pandemic.

At the national level a new generation of leaders is required that are willing to confront head-on the structural and behavioral determinants of the spread of the disease. Leaders will be needed who can challenge traditional power structures and cultural norms that are harmful to the empowerment of women and further marginalize the vulnerable. Within donor nations, bold visionaries will be required to reevaluate the traditional form of foreign aid giving and to what end. Further, there is need for donor leadership that is willing to push aside politically popular programs in order to fund those that are based on sound science and long-term vision (versus short-term wins). Leaders of multilateral agencies will play a crucial role in finding ways to make their bureaucracies more flexible and responsive to change. This will require leaders who are willing to make unpopular decisions and challenge current power structures that are resistant to reform.

About the Authors

Kammerle Schneider is assistant director of the Global Health program at the Council on Foreign Relations.

Laurie A. Garrett is senior fellow for Global Health at the Council on Foreign Relations.

Endnotes

1. Pride Chigwedere, George R. Seage III, Sofia Gruskin, Tun-Hou Lee, and M. Essex, "Estimating the Lost Benefits of Antiretroviral Drug Use in South Africa," *Acquired Immune Deficiency Syndrome,* vol. 49, no. 4, December 1, 2008
2. P. Alagiri, C. Collins, T. Summers, et.al, "Global Spending on HIV/AIDS: Tracking Public and Private Investments in AIDS Prevention, Care, and Research," extracted from background material prepared for *the Leadership Forum on HIV Prevention*, June 22, 2001.
3. David Brown, "With fanfare, Global AIDS Conference gets underway in Vancouver' 1996," *Washington Post*, July 8, 1996.
4. R. Wilson, "Health plans to cover new AIDS drugs but issues of cost, treatment remain," *Wall Street Journal*, July 12, 1996.
5. K. Porter, A. Babiker, K. Bhaskaran, J. Darbyshire, P. Pezzotti, K. Porter, A. Walker, CASCADE Collaboration, "Determinants of survival following HIV-1 seroconversion after the introduction of HAART," *Lancet,* vol. 362, no. 9392, October 18, 2003, pp. 1267–1274.
6. World Bank, Multi-Country HIV/AIDS Program, see http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/EXTAFRHEANUTPOP/EXTAFRREGTOPHIVAIDS/0,,contentMDK:20415735~menuPK:1001234~pagePK:34004173~piPK:34003707~theSitePK:717148,00.html.
7. African Summit on HIV/AIDS, Tuberculosis and other Related Diseases, "Abuja Declaration on HIV/AIDS, Tuberculosis and other Related Diseases," Abuja, Nigeria, April 24–27, 2001. http://www.un.org/ga/aids/pdf/abuja_declaration.pdf.
8. Veloshnee Govender, Di McIntyre and Rene Loewenson, "Progress towards the Abuja target for government spending on health care in East and Southern Africa." *Equinet* Discussion Paper 60, April 2008, http://www.equinetafrica.org/bibl/docs/DIS60finABUJA.pdf.
9. The Global Fund to fight HIV/AIDS, TB and Malaria, see http://www.theglobalfund.org/en/.
10. K. Moss, "CRS Report for Congress: International HIV/AIDS Tuberculosis and Malaria: Key Changes to U.S. Programs and Funding," *Congressional Research Service*, updated August 25, 2008.
11. U.S. President's Emergency Plan for AIDS Relief, "Celebrating Life: Fifth Annual Report to Congress on PEPFAR," 2009, http://www.pepfar.gov/press/fifth_annual_report/index.htm
12. United States Government Accountability Office, "Global Health: Spending Requirements Presents Challenges for Allocating Prevention Funding under the President's Emergency Plan for AIDS Relief," April 2006.
13. Institute of Medicine, "PEPFAR Implementation: Progress and Promise," March 30, 2007; press release, "First Lady Laura Bush Supports Waiver of Abstinence-Until-Marriage Earmark," July 3, 2007.
14. Medecins Sans Frontier, "A matter of life and death: The role of patents in access to essential medicines," 2001.
15. World Health Organization, "Towards universal access: Scaling- up priority HIV/AIDS interventions in the health sector," 2008, http://www.who.int/hiv/pub/towards_universal_access_report_2008.pdf
16. OECD, "Paris Declaration on Aid Effectiveness: Ownership, Harmonisation, Alignment, Results and Mutual Accountability," March 2005, http://www.oecd.org/dataoecd/11/41/34428351.pdf
17. Gleneagles Summit, Official Documents, July 6–8, 2005. http://www.g7.utoronto.ca/summit/2005gleneagles/index.html.
18. Michael Bernstein and Myra Sessions, "A Trickle or a Flood: Commitments and Disbursement for HIV/AIDS from the Global Fund, PEPFAR, and the World Bank's Multi-Country AIDS Program (MAP)," Center for Global Development, March 2007, http://www.cgdev.org/content/publications/detail/13029/.
19. World Health Organization, "The World Health Report 2006: Working together for health," 2006, http://www.who.int/whr/2006/en/index.html
20. Nandini Oomman, Michael Bernstein, and Steven Rosenzweig, "Seizing the Opportunity on AIDS and Health Systems," Center for Global Development, August 2008, http://www.cgdev.org/content/publications/detail/16459/.
21. Nandini Oomman, Michael Bernstein, and Steven Rosenzweig, "Following the Funding for HIV/AIDS," Center for Global Development, October 10, 2007, http://www.cgdev.org/files/14569_file_FollowingFunding.pdf.
22. Mead Over, "Prevention Failure: The Ballooning Entitlement Burden of U.S. Global AIDS Treatment Spending and What to Do About It," Center for Global Development, Working Paper 144, 2008, http://www.cgdev.org/content/publications/detail/15973/.
23. Ibid.

24. UNICEF, WHO, UNAIDS, "Towards Universal Access: scaling up priority HIV/AIDS interventions in the health sector: Progress Report," April 2007, http:// www.who.int/hiv/mediacentre/universal_access_progress_report_en.pdf.
25. United Nations, "The Millennium Development Goals Report 2008," 2008. http://www.undp.org/mdg/.
26. UNICEF, WHO, UNAIDS, "Towards Universal Access: scaling up priority HIV/AIDS interventions in the health sector: Progress Report," April 2007, http://www.who.int/hiv/mediacentre/universal_access_progress_report_en.pdf.
27. Global HIV Prevention Working Group, "Bringing HIV Prevention to Scale: An Urgent Global Priority," June 2007.
28. UNAIDS, "What Countries Need: Investments Needed for 2010 Targets," February 2009.
29. K. Moss, "CRS Report for Congress: International HIV/AIDS Tuberculosis and Malaria: Key Changes to U.S. Programs and Funding," *Congressional Research Service*, updated August 25, 2008.
30. The Global Fund, "Debt2Health: The Debt Conversion Initiative of the Global Fund," http://www.theglobalfund.org/documents/publications/other/D2H/Debt2Health.pdf.
31. P. Das, U. Samarasekera, "What next for UNAIDS?" *Lancet*, vol. 372, no. 9656, December 20, 2008, pp. 2099–2102.
32. World Bank, "Building Public-Private Partnerships to Invest in Infrastructure," October 8, 2008, http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:21935582~pagePK:34370~piPK:34424~theSitePK:4607,00.html.
33. OECD, "OECD calls for Aid Pledge from donor countries," October 30, 2008, http://www.oecd.org/document/2/0,3343,en_2649_33721_41601282_1_1_1_1,00.html.
34. Robert A. Sunshine, "The Budget and Economic Outlook: Fiscal Years 2009 to 2019," testimony before the Committee on the Budget, United States Senate, January 8, 2009, http://www.cbo.gov/ftpdocs/99xx/doc9958/01-08-Outlook_Testimony.pdf.
35. Donald G. McNeil Jr., "Global Fund Is Billions Short," *New York Times*, February 2, 2009, http://www.nytimes.com/2009/02/03/health/research/03glob.html?ref=health.
36. World Health Organization. "The Financial Crisis and Global Health: Report of a High-Level Consultation," January 19, 2009.
37. Ibid.
38. Richard Horton, "The Global Financial Crisis: An Acute Threat to Health." *Lancet*, vol. 373, no. 9661, January 31, 2009, pp. 355–356.
39. Global Forum on Human Resources for Health in Kampala, "Health Workers for All and All for Health Workers: The Kampala Declaration and Agenda for Global Action," March 2–7, 2008, http://www.who.int/workforcealliance/forum/2_declaration_final.pdf.
40. International Health Partnership, High-Level Taskforce on Innovative International Financing for Health Systems, http://www.internationalhealthpartnership.net/taskforce.html.
41. World Bank, "Progress on the MDGs: September 2008 Update: Global Monitoring Report," 2008, http:// web.worldbank.org/WBSITE/ EXTERNAL/ EXTDEC/ EXTGLOBALMONITOR/ EXTGLOMONREP2008/0,,contentMDK:21901842~menuPK:47380 69~pagePK:64168445~piPK:64168309~th eSitePK:4738057,00.html.
42. Taskforce for Innovative International Financing for Health Systems, "Working Group 1: Restraints and Costs," March 11, 2009, http://www.internationalhealthpartnership.net/pdf/IHP%20Update%2013/Taskforce/london%20meeting/new/Working%20Group%201%20First%20Report%20090311.pdf.
43. Ibid.
44. UK in the USA: Foreign and Commonwealth Office, "UK Keeps Aid Promises to the World's Poor," October 2008, http://ukinusa.fco.gov.uk/en/newsroom/?view=News&id=6831836.
45. OECD, "Development Aid at its highest level ever in 2008," March 2009, http://www.oecd.org/document/35/0,3343,en_2649_34487_42458595_1_1_1_1,00.html.
46. World Bank. "Swimming against the Tide: How Developing Countries are coping with the Global Financial Crisis," background paper prepared by World Bank staff for the G20 Finance Minister and Central Bank Governors meeting, Horsham, UK, March 13–14, 2009.
47. John Serieux, "Managing the Exchange Rate Consequences of an MDG Scale-Up in HIV/Aids Financing," conference paper for the Global Conference on Gearing Macroeconomic Policies to Reverse the HIV/Aids Epidemic, jointly sponsored by IPC and the HIV/Aids Group of UNDP, 2007.
48. P. Gottret and G. Schieber, "Health Financing Revisited," World Bank, 2006.
49. "Zambia: Manufacture of anti-AIDS drugs set to begin," *IRIN Plus News*, 2004; "Ghana: Government ploughs ahead with plans to produce AIDS drugs locally," *Guardian,* 2005; "Tanzania Firm to Start Manufacturing AIDS Drugs," BBC, 2007; "Uganda opens first HIV drug plant," *Independent Online*; "Ethiopia begins Aids drug production," *Indepdendent Online,* 2004; "Zim starts producing anti-Aids drugs," *Independent Online*, June 8, 2004.
50. J. Cohen, "Brazil: Ten years after," *Science,* vol. 313, 2006, pp. 484–487.
51. "UNITAID moves towards a patent pool for medicines," Geneva, July 9, 2008, http://www.unitaid.eu/en/NEWS/UNITAID-moves-towards-a-patent-pool-for-medicines.html.
52. National Intelligence Council, "Global Trends 2025: A Transformed World," November 2008.

53. World Bank, "Global Economic Prospects 2009: Commodities at the Crossroads," December 2008, http://web.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTDECPROSPECTS/GEPEXT/EXTGEP2009/0,,menuPK:5530510~pagePK:64167702~piPK:64167676~theSitePK:5530498,00.html.
54. T. Barnett and A. Whiteside, *AIDS in the 21st Century: Disease and Globalization* (New York: Palgrove Macmillian, 2002).
55. National Intelligence Council, "Global Trends 2025: A Transformed World," November 2008.
56. U.S. Government Accountability Office, "Fiscal Year 2008 Financial Report of the United States Government," http://www.gao.gov/financial/fy2008financialreport.html.
57. National Intelligence Council, "Global Trends 2025: A Transformed World" November 2008.
58. Ibid.
59. Task Force on Global Action for Health System Strengthening, "G8 Hokkaido Toyako Summit Follow-Up Report Global Action for Health Systems Strengthening: Policy Recommendations to the G8," 2009.
60. National Intelligence Council, "Global Trends 2025: A Transformed World" November 2008.
61. Ibid.
62. UNAIDS, "AIDS in Africa: Three Scenarios to 2025," 2005, http://www.unaids.org/unaids_resources/images/AIDSScenarios/AIDS-scenarios-2025_report_en.pdf.
63. World Health Organization, "The Financial Crisis and Global Health: Report of a High-Level Consultation," January 19, 2009.
64. The Bill & Melinda Gates Foundation, "2009 Annual Letter from Bill Gates," January 2009, http://www.gatesfoundation.org/annual-letter/Pages/2009-economic-crisis.aspx.
65. The Global Fund to Fight HIV/AIDS, TB and Malaria, "The Global Fund Partners up with Standard Bank," press release, January 26, 2009, http://www.theglobalfund.org/en/pressreleases/?pr=pr_090126.
66. United Nations Development Programme and Government of Rwanda, "Turning vision 2020 into reality: From recovery to sustainable human development," National human development report, 2007; D. E. Logie, M. Rowson, and F. Ndagije, "Innovations in Rwanda's health system: Looking to the future," *Lancet,* vol. 372, July 19, 2008.
67. UNAIDS, "AIDS in Africa: Three Scenarios to 2025," Geneva, 2005.
68. "Creating Coherence in the Health Component of U.S. Foreign Aid: A Guidance for the 2009 Congress and President," a Council on Foreign Relations roundtable series, January 22, 2009, http://www.cfr.org/project/1381/creating_coherence_in_the_health_component_of_us_foreign_aid.html.
69. G. Schieber, L. Fleisher and P. Gottret, "Getting Real on Health Financing," *Finance and Development*, vol. 43, no. 4, December 2006.
70. Institute of Medicine, "The U.S. Commitment to Global Health: Recommendations for the New Administration," December 2008, http://www.iom.edu/CMS/3783/51303/60714.aspx.