In developed countries, antiretroviral (ARV) treatments have turned AIDS from a death sentence into something more like a chronic disease, extending the active lives of many of those living with HIV/AIDS by ten years or more. But these revolutionary treatments have reached only a few thousand of the more than 25 million Africans infected with HIV or suffering from full-blown AIDS.

The popular view—embraced by many aid agencies and nongovernmental organizations, as well as some African politicians—blames this problem on the high cost of ARVs. There have even been calls for African governments to override the pharmaceutical companies’ patents and encourage the local manufacture of ARV drugs—an action that some people believe has been sanctioned by the World Trade Organization in countries facing national emergencies. Pharmaceutical companies, which price these treatments at $1,000 to $1,500 a month in the United States, defend their intellectual
property by arguing that a return on their R&D investment is essential to finance the continuing development of AIDS treatments and that African countries lack the infrastructure to administer ARVs effectively, no matter what the price. On the latter point, the risks are indeed great: improperly administered ARVs could hasten the mutation of the AIDS virus into treatment-resistant forms.

Responding to the challenge

Out of this seemingly intractable situation arose the Accelerating Access initiative, a recent collaboration between the Joint United Nations Program on HIV/AIDS (UNAIDS) and four of its cosponsors, plus five pharmaceutical companies and a number of African governments. The leaders of this initiative want to move beyond polarized debate to a more practical and collaborative drive against the disease. To this end, they have won commitments from everyone involved.

Five pharmaceutical companies have individually agreed to reduce the prices they charge for their AIDS drugs by up to 100 percent. The five pharmaceutical companies have individually agreed to reduce the prices they charge for their drugs. Two of the companies have publicized price reductions from some 25 percent to a full 100 percent, depending on the product, the company, and the country. The others are also reported to be offering significant reductions.

Meanwhile, the governments of the participating countries have agreed to develop sustainable national strategies to counter the spread of HIV and to expand treatment for the infected. Given the difficulties of educating people about the disease and of overcoming cultural taboos that discourage infected persons from acknowledging their illness, this national commitment is vital. More important still, the Accelerating Access initiative has given rise to a concerted effort against two AIDS treatment problems that are much thornier and more complicated than the price of drugs: Africa’s limited medical infrastructure and the difficulty of distributing drugs securely.

McKinsey has worked (on a pro bono basis) with the Accelerating Access initiative in Uganda to help ameliorate these two problems in that country. As in most of Africa, progress there is difficult because of the sheer scale of

1The World Bank, the World Health Organization (WHO), the United Nations Children’s Fund (UNICEF), and the United Nations Population Fund (UNFPA) are the cosponsors. The pharmaceutical companies are Boehringer Ingelheim, Bristol-Myers Squibb, GlaxoSmithKline, Hoffmann-La Roche, and Merck; the countries are Botswana, Burkina Faso, Burundi, Cameroon, the Central African Republic, Chile, Ethiopia, Gabon, Ivory Coast, Kenya, Nigeria, Senegal, Swaziland, Uganda, Ukraine, and Zimbabwe.
the problem and the resources required to solve it. Even optimistically, only a minority of Ugandans with HIV/AIDS can be helped. But Uganda’s experience so far suggests that a practical, sustainable effort to expand access to drug treatment can be mounted even in a very poor country if there is a clear national commitment to that effort. Also, a genuine and enduring public-private partnership is essential to making it work.

Uganda: Hope amid devastation

Certainly, Uganda is poor: its per capita gross domestic product is only around $25 a month. And with some 1.4 million HIV/AIDS cases (Exhibit 1), representing 10 percent of the population aged 15 to 49, the country has one of the highest rates of infection in the world. AIDS has had a devastating human and economic impact. The life expectancy of economically productive Ugandans dropped from 48 years in 1990 to 38 in 1997. The country is losing its teachers, doctors, and other professionals to the disease, and tremendous resources are pouring into terminal care. Even so, by the end of 2000, only about 1,500 Ugandans were able to access ARV treatment. Unless treatment becomes available to many more people, the disease will cripple the country’s development for years to come.

Grounds for hope lie in the Ugandan government’s sustained commitment to prevention. AIDS education in schools, the mass distribution of condoms, and advertising have reduced the rate of HIV infection in working-age adults from 18.5 percent in 1995 to the current 10 percent. More than 60 percent of the adult population now knows that condoms prevent transmission—an unusually high percentage in Africa. Uganda is one of only a handful of countries outside the West where the spread of the epidemic has stalled (Exhibit 2, on the next page).

Of course, Uganda must make some difficult trade-offs in allocating scarce resources: it has to make progress in treating AIDS without jeopardizing its successful prevention efforts. These trade-offs will be even tougher in
countries that have made less progress on prevention. But the political will and practical application that Uganda has brought to the challenge of prevention will serve the country well in its drive to expand treatment.

Building the infrastructure

The five pharmaceutical companies are reported to have offered significant discounts on ARV drugs in Uganda. But without a substantial improvement in the country’s health care infrastructure and a reliable distribution system, little progress will be made in getting the drugs to more people.

ARV drugs must be administered through so-called highly active antiretroviral therapy (HAART) combining two to five ARVs, which are taken as often as five times a day. HAART is tailored, under medical supervision, to a patient’s needs and viral-resistance profile. The therapy is monitored with frequent blood tests, and sometimes there are side effects, which also have to be treated.
The health infrastructure in most African countries, including Uganda, can provide these services to only a few people with HIV/AIDS. In the past, many donated drugs failed to reach their intended recipients. Often, drugs have been used inappropriately, thus helping to make the disease more resistant to treatment—as has happened, for example, with tuberculosis. Sporadic supply, a lack of medical oversight, or inappropriate use of ARVs not only harms the health of patients but may also encourage drug-resistant strains of HIV, posing a substantial public-health risk.

In addition, the absence of a secure distribution system for these valuable drugs encourages theft, substitution, and parallel trade. Besides posing risks to public health, these activities threaten the commercial markets of the pharmaceutical companies in the developed world, thereby jeopardizing their support for the scheme.

Before large numbers of low-cost ARVs could be used and monitored effectively in Uganda, many locals would need to be trained to administer and track the therapy, to counsel patients, and to perform diagnostic tests. Moreover, equipment would have to be purchased to monitor the therapy. We found that Uganda’s existing medical infrastructure had the capacity to treat 5,000 to 10,000 people with AIDS—many more than were receiving care, but still less than 1 percent of the total number of sufferers. To treat 50,000 patients, additional referral centers would be needed, as well as extra capacity for counseling, testing, and monitoring, at a cost of some $5 million. Reaching more than 50,000 patients would require even more dramatic improvements, including expanded access to clean water and basic medical services. That goal therefore appears to be unrealistic in the near future.

Distribution has become less of a problem in Uganda, thanks to an existing United Nations effort: the Drug Access Initiative. Since 1998, Medical Access (Uganda) Limited, a private not-for-profit company financed by four pharmaceutical companies, has worked with another not-for-profit company called Joint Medical Store to handle inventory and distribution for the initiative’s small ARV program in Uganda. Medical Access has been responsible for procuring and managing inventory, as well as for ensuring the secure and reliable distribution of products to specially equipped pharmacies in five approved centers. The system, which is reliable, secure, and

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2Abbott Laboratories, Bristol-Myers Squibb, Hoffmann-La Roche, and GlaxoSmithKline.
reasonably cost-efficient, adds 15 percent to the end-user cost of bringing medicines from factory to patient.

But Medical Access lacks the capacity to meet a 50-fold increase in the number of people undergoing HAART, and the company’s reach is limited to the area surrounding Uganda’s capital, Kampala. To cope with the large-scale distribution of ARVs, Medical Access would require additional capacity and security systems and might also have to supplement its operations with entirely new approaches to distribution.

Using cost to release pent-up demand

Our recommendation to the Accelerating Access initiative and the Ugandan government was to use the out-of-pocket cost of treatment to the patient—the cost of ARV treatments, of the blood tests required to monitor them, and of medical care, less contributions by companies, foundations, and governments—to manage pent-up demand for AIDS treatments while the country’s medical infrastructure and distribution capacity were improved. The team working in Uganda projected demand at different cost levels by using an analysis of purchasing power and of demand for other goods and services (such as rent and school fees) that Ugandans pay for out of pocket (Exhibit 3). The team then suggested that out-of-pocket costs to the patient should decline in phases to regulate demand and to match it to the supply of infrastructure.

During phase one, 5,000 to 10,000 people with AIDS would receive ARVs almost immediately; the existing infrastructure can support such an expansion. This would require the reduction of the out-of-pocket cost to the patient—currently $500 to $800 under the UNAIDS-supported program—to roughly $200 a month. Also during
phase one, swift action could prepare the system to serve 10,000 to 20,000 patients in phase two. To bring demand up to this level, the out-of-pocket cost to the patient would have to fall to about $150 a month. Referral centers capable of diagnosing HIV would need to be established in three outlying regions to serve a broader range of patients, and health care workers and counselors would need to be trained at the new sites. In phase two, the existing Medical Access system would have to be modified to expand distribution. To encourage patients to adhere to HAART’s demanding drug regimens, a public-education campaign targeting the relevant areas would be required as well.

Phase three would expand the system to reach roughly 50,000 patients—some 65 percent of them in rural areas—by reducing the monthly out-of-pocket cost to the patient to $50 to $100. Achieving this expansion would require a change in the program’s scope and complexity. Uganda would have to provide about seven more centers where health workers could initiate treatment and monitor the clinical response to it. The country would also have to expand laboratory services and the distribution system to cope with the considerable complexity of covering many sites spread out over long distances. In addition, the government would have to implement even broader centrally coordinated education and communications efforts, as well as a program to monitor patients to measure and ensure their adherence to the therapy.

Who pays?

Our analysis of the price sensitivity of demand suggests that treating 50,000 Ugandans with HIV/AIDS would require the cost to the patient of ARV treatment to drop by upward of 90 percent. Since the gross margins of pharmaceutical companies are reported to be about 64 percent, and they might have to invest in additional manufacturing capacity to meet higher levels of demand, it is inconceivable that they could support such a reduction in out-of-pocket costs to patients on their own.

If ARV treatment is to expand to that extent, other organizations will have to play a role in subsidizing the cost of treatment. International agencies, charitable foundations, and donor governments must agree to subsidize drug purchases and to go on investing in the significant but necessary expansion of infrastructure.
Public-private partnership

The Accelerating Access initiative was created in response to a call from leaders of the UN and other international organizations—including UN Secretary General Kofi Annan, WHO Director-General Dr. Gro Harlem Brundtland, and World Bank President James D. Wolfensohn—for a multi-sector response in the global fight against AIDS. The potential benefits of a successful partnership are tremendous. In practice, however, bringing the pharmaceutical companies and international agencies into partnership is difficult. Many people in the field mistrust the motives of the companies and believe that they are trying to maximize the profits they make from sales to African countries. Practical action is hampered by stark philosophical disagreements between those who regard access to medication as a universal human right and others who argue that the shareholders of pharmaceutical companies are entitled to a return on their investment in research.

As for the pharmaceutical companies, they feel aggrieved that they get no credit for the hundreds of millions of dollars they donate each year in the form of grants, services, and free products. In their view, the consensus and consultative processes that characterize many international agencies are an obstacle to efficient decision making and the idea that access to all pharmaceuticals is a universal human right undermines the basis for investment in scientific innovation.

For the Accelerating Access initiative to work, everyone must set these issues aside and contribute actively to a solution. An important first step was taken when all participants agreed to a set of underlying principals. The pharmaceutical companies have agreed that the affordability of their products is a problem and that they must individually reduce prices. The aid agencies, foundations, and donor governments need to invest in infrastructure and to help further reduce the cost of treatment. National governments must not only build up the medical infrastructure but also tackle some of the social, educational, and cultural problems that fuel the epidemic.

Furthermore, the partnership must add up to more than the sum of its parts. The pharmaceutical industry and the private sector more broadly have a

3See the joint statement of intent signed by all participants at www.ifpma.org/pdf/ifpma/AIDSstatintent.pdf.

Some see access to medicine as a human right; others think that pharmaceutical companies have a right to a return on their investment.
greater role than merely discounting drugs. Many companies have expertise, beyond their specialized medical knowledge, that could help control AIDS in developing countries: the distribution capacity to reach remote areas, the mass-marketing capabilities to improve awareness and overcome the social stigma associated with prevention, and the project-management and planning skills to establish and maintain access programs. In nations wracked by AIDS, these business strengths can literally be lifesaving.

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