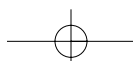




Addressing the HIV/AIDS Pandemic: A U.S. Global AIDS Strategy for the Long Term

Council on Foreign Relations

Milbank Memorial Fund



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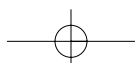
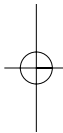
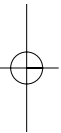
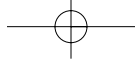
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FOREWORD

At the dawn of the new millennium, there are few threats more dangerous to mankind than the global HIV/AIDS pandemic. Infecting 40 million people and already accounting for 25 million deaths, it could well become the worst health crisis in modern history. While centered today in sub-Saharan Africa, it is spreading rapidly in India, China, Central Asia, and Russia.

In January 2003 President George W. Bush announced a \$15 billion President's Emergency Plan for AIDS Relief (PEPFAR), intended to achieve a series of five-year goals: preventing 7 million new infections, getting 2 million infected people on treatment, and caring for 10 million people with HIV/AIDS.

This report recognizes that PEPFAR is a historic and laudable initiative. But the administration's plan is too near-term in orientation and too narrow in scope to achieve its long-term objectives. This report recommends that the United States adopt a longer-term and broader-based strategy, addressing, in particular, the basic health systems that developing countries need and the critical issues that go beyond health delivery. While this strategy will require more resources, it will be more likely to enable the United States to reach its five-year goals for PEPFAR, and it will enhance the ability of the United States to effect long-term, sustainable progress against this and other diseases.

The report, a Council Special Report and Milbank Memorial Fund Report, is the product of a joint project by the Council on Foreign Relations and the Milbank Memorial Fund, in conjunction with the Open Society Institute. The project convened meetings with specialists and representatives of more than 30 government and private organizations working in this field, with the U.S. Global AIDS Coordinator and his staff, and with numerous individual researchers.

The Council and the Fund have each worked for many years to bring the best available information and ideas to bear on the development and implementation of policy in their respective fields—the Council in foreign policy and national security matters, the Fund in health care and population health. This is our second joint project. In 2001 the Council and the Fund published the report, *Why Health Is Important to U.S. Foreign Policy*. Daniel M. Fox, President of the Fund, proposed that the two organizations collaborate again on the HIV/AIDS crisis and invited the Open Society Institute to collaborate in recognition of its path-breaking work in this field.

Princeton N. Lyman, Ralph Bunche Senior Fellow and Director of Africa Policy Studies at the Council on Foreign Relations, and Daniel M. Fox directed the project. Greg Behrman was the coordinator of the project and is the principal drafter of the report.

The Council and the Fund are grateful to many colleagues who contributed to this report. They are listed in the Acknowledgments.

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The report could not have been written without the intellectual contributions of an exceptional group of people from over 30 organizations. They are listed with their affiliation at the time of their participation.

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We were especially fortunate to hear from leaders in the international HIV/AIDS NGO community. Mr. Modibo Kane of Réseau Africain des Personnes Vivant avec le VIH/SIDA in Kenya and Mr. Henri Mukumbi Masangu of the African Council of AIDS Service Organizations (AFRICASO) in the Democratic Republic of Congo enlightened us with their perspectives. Mr. Ainsley Reid of the Caribbean Conference of Churches in Jamaica spoke eloquently on the need for a balanced approach to the HIV/AIDS problem.

Ambassador Randall Tobias, the U.S. Department of State's Global AIDS Coordinator, met with members of the group and provided a constructive base for the report. Joseph F. O'Neill and Ambassador John Lange of Ambassador Tobias's office contributed their time and insights.

Colleagues at the Council on Foreign Relations contributed immensely to the report. Laurie Garrett gave valuable comments, while James M. Lindsay and Richard N. Haass both provided comments and helped to guide the report to its completion.

Gail Cambridge of the Milbank Memorial Fund and Odette Boya of the Council on Foreign Relations were invaluable in organizing meetings and facilitating communication among members of the group.

EXECUTIVE SUMMARY

The United States has embarked on a major effort to combat the HIV/AIDS pandemic. The success of this effort will be critical. Yet as impressive as the U.S. response has been, more will have to be done on a broader level to achieve the objectives that have been set forth.

The global HIV/AIDS pandemic constitutes one of the most pressing threats known to mankind. Over the past 20 years, more than 65 million people have become infected with HIV/AIDS. More than 25 million have died.¹ Roughly 14 million children have lost one or both parents due to AIDS. By 2010 it is estimated that approximately 100 million people will have been infected and that there will be 25 million AIDS orphans worldwide. A humanitarian catastrophe of incomparable proportions, the pandemic is also a threat to global economic and geopolitical stability and a critical strategic threat to the United States.

On January 28, 2003, President George W. Bush announced the President's Emergency Plan for AIDS Relief (PEPFAR), pledging \$15 billion over the next five years to combat the pandemic, including \$10 billion in new monies for 14 targeted countries. The initiative aims to prevent 7 million new infections, provide treatment for 2 million people, and care for 10 million people. It is the most ambitious plan ever proposed by any single country to battle the pandemic. Congress has been strongly supportive, enacting authorization legislation in 2003 and appropriating \$2.4 billion for fiscal year (FY) 2004. The Senate has confirmed Randall Tobias as Global AIDS Coordinator. His office has been established at the State Department. In late February 2004 the office released the administration's five-year strategic plan (or "strategic statement") for enacting PEPFAR. Congress has suggested guidelines for some aspects of the program—for example, that 33 percent of prevention funds be dedicated to promoting abstinence—and instructed the administration to select a 15th country for the program. Congress also mandated that U.S. contributions to the recently formed Global Fund to Fight AIDS, Tuberculosis and Malaria be matched two for one by all other donors.

The president's initiative constitutes a historic recalibration of the U.S. response to this insidious modern-day plague and places the United States in an excellent position to lead a comprehensive international effort to combat the pandemic. As the title of its program indicates, the administration has chosen to emphasize that the pandemic is an emergency. Fewer than 500,000 of those infected who need antiretroviral (ARV) treatment, estimated at 6 million, have access to these lifesaving drugs. Thus PEPFAR will focus on rapid delivery of health services and an emergency effort to treat persons as quickly as possible. This approach is understandable and justified when looking at the immediate needs. But the current U.S. strategy is near-term and too narrowly focused. It must be upgraded and broadened if it is to reach its near-term goals and achieve long-term success.

The broader and long-term approach that is required must meet the basic health needs of affected developing countries. As urgent and necessary as it is to address the plight of the 20 to 30 percent of a country's population infected by HIV/AIDS, to overlook the health needs of the other 70 to 80 percent with other health needs is neither politically nor financially sustainable as host countries and donors strain to support two separate health systems. African countries are quick to point out that 1 million people die from malaria each year, and other diseases take a vast toll in morbidity and lost productivity.

This competition between HIV/AIDS and other health programs will become particularly intense as the annual cost of treatment grows and as more infected persons receive treatment.

Moreover, it is now clear that it will not be possible to reach the vast majority of people who do not know they are infected by HIV without having basic health facilities that can make HIV testing a routine part of general health services.² Thus the United States must build upon the valuable PEPFAR initiative with an equally strong commitment to leading an international effort to help build the basic health systems of developing countries. This is an extensive proposition, but one that has many rewards.

The World Health Organization (WHO) has estimated that providing basic health services to developing countries will take financial assistance of \$27 billion per year by 2007, and up to \$38 billion annually during the following eight years. While those figures are high, WHO estimates that such an initiative would save 8 million lives per year by 2010 and generate \$186 billion in new economic output per year by 2015.

Nevertheless, we do not recommend that the United States and its international partners commit all of the funds upfront or even funds at the full annual level right away. Much of PEPFAR and other international funding for HIV/AIDS can contribute to this objective if so structured. However, the United States should begin to mobilize international support for broader health systems in the countries that PEPFAR focuses on so that such systems are in place in five years. Otherwise, five years from now, not only will the broader health needs not have been addressed, but PEPFAR investment into programs directed to HIV/AIDS may fail to achieve its goals. But if properly planned, the HIV/AIDS work in these countries can lay the basis, in experience and improved methods, for the larger program envisaged by WHO.

In this context, the long-term implications of a commitment to universal access to treatment, which host countries are urged to adopt, need to be addressed. Contemplating lifetime treatment for 30 to 40 million people or more represents a commitment for that intervention alone of at least \$9 to \$12 billion a year. Developing countries are deeply concerned about who will bear this cost.

The United States will also have to broaden its use of PEPFAR funds in the next five years to address some of the social and economic factors that contribute to the spread of HIV. The U.S. strategic statement does recognize many of these factors, including the legal, social, and economic forces that increase the vulnerability of women and girls to infection and the vulnerability of children affected by HIV/AIDS. But the statement is ambiguous on how much PEPFAR funding will be devoted to these factors. While PEPFAR itself cannot fund such programs like universal primary education, or address alone the impact of gender factors on HIV/AIDS, it can help build support for such programs and for legal and policy changes affecting discrimination; PEPFAR-supported programs can demonstrate that those programs are essential complements to any health-based effort to combating HIV/AIDS.

The strategic statement gives insufficient attention to the military. The military in Africa is particularly hard hit by the disease and is a key source of its spreading. The U.S. Department of Defense has begun HIV/AIDS programs with many African military forces, and continuation of these programs is vital for PEPFAR's success. However, the strategic statement makes no mention of how these programs will be funded or incorporated into the overall plan.

The strategic statement commendably highlights the importance of scientific evidence in guiding policy decisions. It is imperative that decisions about what prevention programs to implement be buttressed by the strongest scientific evidence available. This is particularly important because there are strong ideological and other differences about how to prevent HIV/AIDS. Sexual abstinence, condom distribution, and programs for sex workers and drug users are all controversial approaches, each advocated by one or more groups. The U.S. strategic statement is correct to assert that science must trump ideology. Ensuring that the United States and its international partners analyze the effectiveness of various interventions at the outset will help provide the evidence to make these consequential policy decisions in the best informed manner possible.

Based on the analysis above, we propose the following:

KEY RECOMMENDATIONS FOR U.S. GLOBAL AIDS POLICY

1. Even as it hastens to meet the president's five-year targets, the administration must launch a long-term effort to build politically and financially sustainable basic health systems. This effort should begin with the 14 or 15 focus countries under PEPFAR, where HIV/AIDS programs should be integrated as much as possible with building such systems. Over the next five years, the United States and other international donors should begin to build support and financing for the World Health Organization's recommendation of \$27 billion per year by 2007 and \$38 billion per year by 2015 to vastly upgrade health infrastructure in the entire developing world. Affected communities must have this infrastructure to wage a sustainable battle against HIV/AIDS and other pressing health crises.
2. The growing commitment of the international community to providing treatment for as many people in need as possible, which is at the heart of PEPFAR and a comparable WHO program, is welcome. But it involves major long-term responsibilities that have not been fully appreciated. The long-term costs of lifetime antiretroviral treatment for all those who need it could reach \$9 to \$10 billion annually for decades to come. This will have significant implications for development strategies and assistance programs, especially in sub-Saharan Africa. We recommend that a high-level international commission be formed to address this long-term issue, examining the respective roles and responsibilities of host countries, donors, pharmaceutical companies, and other possible sources of support in sustaining treatment for as long as necessary.
3. The United States must pursue a comprehensive approach to HIV/AIDS, paying particular attention to factors fundamental to the pandemic's spread, such as the vulnerability of women and girls and the special role of the military in demobilization and peacekeeping operations. PEPFAR funds should be allocated to demonstrating the direct relevance to control of the pandemic of such factors as legal protection and expanded access to education for women and girls. Department of Defense funding should be allocated to work with military forces in acutely affected countries.

4. The best available scientific evidence should guide the administration's policies. The use of science in decision making must be ideology-free, and it must be shared with other donors and countries in which programs are operating. This will be particularly important in assessing the efficacy of prevention programs where controversy exists. It is also important in selection of drug regimens, determination of safe drug sources, and other aspects of the program. From the outset, the Coordinator's Office should work with local partners to vigorously promote operational research, or research on the effectiveness of various interventions, to provide greater scientific insight into which interventions do and do not work in certain settings.
5. Monitoring and evaluation must be structured from the start to serve both short-term and long-term objectives. It is particularly important to monitor resistance and related outcomes of treatment regimens in order to measure compliance, assess the costs and benefits of different regimens, and identify new strains of the virus that may be developing. Because microbial timelines are different from timelines for operations, funding, and even individual health, sophisticated monitoring programs should be employed. It will also be essential to work closely with local program managers, researchers, and community leaders in establishing monitoring and evaluation programs and to make the results available and accessible to them. The Coordinator should work closely with the Institute of Medicine (IOM), which Congress has charged with evaluating PEPFAR after three years, regarding the information systems, data, and other inputs IOM will need.
6. The strategic statement highlights the role of innovation and flexibility. Embassies must engage local people affected by the pandemic, NGOs, and community-based programs in planning and reviewing strategies and in implementing projects. This will not be possible, however, without more flexible funding mechanisms. The Coordinator should examine the innovative techniques for reaching and funding small local groups closest to the problem, which the U.S. Agency for International Development (USAID) instituted and oversaw in South Africa in the early 1990s and in Nigeria in 1999–2000.
7. The strategic statement places great emphasis on “graduation” plans by which U.S. support would phase out. However, combating this pandemic will require decades of international involvement and the funding of programs well beyond the emergency focus of the next five years. “Graduation” plans should be honest about this. Even speaking too glibly of “graduation” could alarm developing countries about the burdens that will fall on them, underestimate the long-term costs, and undermine the public understanding and support necessary for this commitment.

**THE PRESIDENT'S EMERGENCY PLAN
FOR AIDS RELIEF**

BACKGROUND, PURPOSE, AND GOALS

During his State of the Union Address on January 28, 2003, President George W. Bush announced to the world the President's Emergency Plan for AIDS Relief (PEPFAR). Described as "a work of mercy beyond all current international efforts to help the people of Africa," the plan targeted the modern-day scourge that has become one of the most perilous threats known to mankind: human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS).

Almost 70 percent of those infected with the virus now live in sub-Saharan Africa, by far the world's most acutely afflicted region.³ Estimates predict 100 million or more cumulative global infections by decade's end.⁴ The Joint United Nations Programme on HIV/AIDS (UNAIDS) estimates that by 2010 approximately 25 million children will have lost one or both parents to AIDS, creating a generation of orphans, 20 million of whom are likely to reside in Africa's subcontinent.

If Africa is the epicenter of the pandemic, a second wave is projected in Asia and Eastern Europe. The National Intelligence Council (NIC) has estimated that, at the current trajectory, China and India are likely to have 10 to 15 million and 20 to 25 million infected people, respectively, by 2010.⁵ Such levels of infection would reduce economic growth, produce social pressures in various regions and subgroups of the population, and possibly engender some measure of political disaffection. These pressures may very likely render the disease a destabilizing force in the world's two most populous countries, both of which are nuclear powers and both of which have critical strategic relationships with the United States. Already mired in a debilitating demographic crisis elsewhere in Eurasia, Russia is likely to have 5 to 8 million HIV-infected people by decade's end.⁶ That will imperil Russia's tenuous democratic transition and breed economic and political disorder in a nation already struggling to safeguard thousands of nuclear weapons and vast quantities of nuclear materials.⁷

At present, the disease's implications for U.S. and global security are most profound in sub-Saharan Africa. In the landmark 2002 U.S. National Security Strategy,⁸ the administration made the "revolutionary"⁹ assertion that, for the first time in history, weak states pose a greater threat to the United States than strong states. The disease is eroding state capacity in sub-Saharan Africa, an increasingly important front in the war on terror and an increasingly important source of resources and minerals. (The United States is expected to import as much as 25 percent of its oil from this region within the next decade.)¹⁰ For example, the U.N. World Food Programme reports that AIDS has depleted the rural work force in southern Africa so thoroughly that it has seriously eroded the population's capacity to deal with cyclical droughts and food shortages. The growing number of orphans increases the prospect of child soldiers being recruited for rebel armies or militias; child soldiers have already been heavily recruited into nearly all the conflicts on the continent. Infection rates among African military personnel range as high as 50 percent¹¹ with serious implications for Africa's ability to keep the peace and maintain law and order. With reduced ability to deal with either economic development or security, Africa will become increasingly susceptible to conflict and increasingly attractive as a haven for terrorists and transnational criminal elements hostile to the United States.¹²

There is an additional threat to the United States. As treatment programs are introduced in Africa, concern over mutations of the virus will heighten, especially if treatment is not maintained. The spread of a more virulent virus to the United States—one immune to current treatment—would cause major health problems in the United States. Thus, stemming the rate of infection and monitoring treatment programs in Africa are of vital importance to America's own public health.

It is of paramount importance, then, that the administration accord this global catastrophe the urgent priority it deserves. HIV/AIDS is not only an unprecedented humanitarian catastrophe but a political and security threat to both U.S. and global interests. Because of the United States' global power and reach, the U.S. response will—as it has throughout the history of the pandemic—set the bar and the standard for the global response at large. It is a role that the United States should not shrink from. American moral and strategic interests demand engagement at the highest level and with the urgency and scale of a high-priority U.S. foreign policy issue.

PROPOSED FUNDING FOR PEPFAR

Against the backdrop of increasing acknowledgment of the magnitude of the crisis and the urgency of the threat, the president's announced plan was met with wide acclaim and enthusiasm around the world. The president pledged \$15 billion over the next five years to fight the pandemic. He aimed to prevent 7 million new infections, treat 2 million people, and care for 10 million infected people.

The authorization legislation that Congress passed in May 2003 fleshed out the president's plan. Congress authorized \$3 billion per year for fiscal years 2004–2008, including \$2 billion for bilateral assistance and \$1 billion for the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) that is contingent on matching funds at a two-for-one ratio from other nations. While not binding, provisions in the legislation recommended that funds be apportioned 55 percent for treatment; 20 percent for prevention (one-third of which was earmarked for “abstinence before marriage”); 15 percent for palliative care; and 10 percent for orphans and other vulnerable children. Under the legislation, \$750 million—including \$300 million, which would be directed to an initiative aimed at reducing mother-to-child transmission—would be directed toward 14 countries: the Caribbean nations of Guyana and Haiti, and the African countries of Botswana, Cote d'Ivoire, Ethiopia, Kenya, Mozambique, Namibia, Nigeria, Rwanda, South Africa, Tanzania, Uganda, and Zambia. In addition, the legislation created a new position at the State Department for a Global AIDS Coordinator, charged with carrying out the president's plan.¹³ The Global AIDS Coordinator's mandate is to lead the U.S. response to combat the worldwide pandemic; the Coordinator's purview is not restricted to the 14 or 15 PEPFAR countries.

After President Bush requested \$2.1 billion for FY2004, Congress appropriated \$2.4 billion. Existing bilateral programs, such as those outside the focus countries, received \$1.258 billion, including \$324 million for research by the National Institutes of Health. For the focus countries, Congress appropriated \$637 million, plus \$547 million for the Global Fund. The appropriators also instructed the president to add a 15th country outside of the Caribbean or Africa.¹⁴

The president's budget request for FY2005 would sharply increase funds for the focus countries to \$1.45 billion, while slightly reducing existing programs elsewhere, and would reduce the contribution to the Global Fund to \$200 million. The president's total request for HIV/AIDS in FY2005 is \$2.7 billion plus \$120 million for tuberculosis and malaria.

The president's initiative constitutes a leap forward in funding and priority. It positions the United States as a global leader on this issue. It should galvanize leaders in affected countries to improve their national efforts and it should catalyze the rest of the international community, particularly donors in the developed world.

KEY ELEMENTS OF THE ADMINISTRATION'S PLAN

With the appointment of a Global AIDS Coordinator and the legislation's enactment, the Coordinator's Office has spelled out key features of the administration's plan:

Goals. The president has provided a clear five-year mandate to the Coordinator's Office. Over the next five years, it aims to prevent 7 million new infections, treat 2 million people, and care for 10 million infected people.

Country-Specific Approach. The Coordinator's Office intends to support each national program, as outlined by that country. U.S. ambassadors will be the point people in each nation and will report directly to the Coordinator. They will be charged with disbursing funds and overseeing each country's national effort. U.S. efforts, then, will cohere with each country's plans and support its specific needs.

Emergency Response. The initiative is an "Emergency" plan recognizing the urgency of the catastrophe and the need to plan and act accordingly.

Responsibility for Coordination. With a global purview, the Coordinator will coordinate U.S. efforts with those of myriad other international actors including bilateral donors, various U.N. agencies, UNAIDS, the Global Fund, and NGOs.

KEY STRENGTHS OF THE U.S. APPROACH

In "The President's Emergency Plan for AIDS Relief: U.S. Five-Year Global HIV/AIDS Strategy" (the "strategic statement"), released in February 2004, the administration spelled out the objectives and operational principles of its plan in detail. The strategic statement's objectives and principles bode well for the prospects of producing near-term results in the targeted countries. Key strengths of the U.S. strategy include:

Evidence-Based Decision Making. The strategic statement emphasizes the importance of scientific evidence as the foundation for making informed policy decisions. Given the plethora of interested parties and their distinct agendas and perspectives—some more ideological than scientific—this is a valuable guiding principle. It will help policymakers identify the most effective interventions possible.

Transparency. The strategic statement highlights the importance of clear, open decision making at

every level. The Office of the Global AIDS Coordinator and other U.S. actors will do their best to make available the criteria for awarding contracts to grantees, updates on the progress of various programs, and other important facets of U.S. activities. The use of a highly transparent, user-friendly Web site will facilitate the sharing of information.

Importance of Socioeconomic Factors. Even though its primary goal is successful health-based actions, the strategic statement recognizes that changes in socioeconomic factors such as education, legal frameworks, and social and economic welfare—particularly as they relate to the vulnerability of women and girls and the plight of children affected by HIV/AIDS—will be essential to stemming the tide of the pandemic. Pursuing these aims will have a powerful impact on the effectiveness of American efforts. Yet the strategic statement is nevertheless ambiguous about the degree to which PEPFAR funds will be used for these purposes.

Coordination on Safety of Drug Regimens. With a plethora of international actors now providing drug treatment to the affected countries, and individual countries making national decisions on regimens and sources of drugs, it is imperative that these entities establish some degree of coordination to make sure that drug regimens provided are not only effective, but safe, and to monitor their use carefully. The strategic statement promises early work with multilateral institutions and other donors on these issues.

Provision of Palliative Care. The strategic statement refers to the need for community-based palliative care. This will be essential both for those with access to ARV treatment and for the many others who are unlikely to have access in the near future. Palliative care is needed for pain management, psychological distress, and opportunistic infections. Patients should be provided with essential medicines, counseling, and caregiving. Such care is also an excellent entrée for encouraging patients to write wills and to deal with inheritance and other succession issues.

Administrative Coordination with Donors. The strategic statement stresses the importance of U.S. coordination with its international partners to standardize paperwork as well as monitoring and information systems. Administrative capacity in affected countries is low, and administrators and health care practitioners often find themselves overwhelmed and exhausted. In addition, disparate monitoring and information systems from nation to nation make it difficult to analyze the effectiveness of various interventions. The statement is especially encouraging about U.S. willingness to adopt some of the systems established by the United Nations or others, rather than insisting on its own.

Willingness to Purchase “Safe” Drugs at Lowest Possible Price. The United States recognizes the importance of pursuing the most effective approach to treatment methods. The strategic statement implies at least that if “generic” drugs, or those produced by non-pharmaceutical companies based on off-patent drugs, are safe and the least expensive, the United States will buy them. This will allow assisted countries to purchase as many drugs and treat as many people as possible for the dollars available. However, the qualifier is that PEPFAR will insist on adherence to the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement, which may limit purchases to patented drugs in some cases.

Emphasis on Community Involvement. Almost every part of the strategic statement stresses the importance of responding to local conditions. The United States welcomes the chance to build upon

local capacity and to work with local officials and those affected, including HIV/AIDS patients and children affected by HIV/AIDS, to ensure that U.S. efforts suit local needs as much as possible. This will help produce successful results.

Innovative and Flexible Approach. The strategic statement recognizes the need to be innovative and flexible in identifying and supporting the most effective programs available. Most disbursement decisions will be made “close to the ground” in affected countries. This, too, will be a key ingredient of success.

Supporting National Strategies. Rather than pursuing its own agenda, the United States has specified that it will serve the national strategy of each affected country. This will foster coordination and ensure that U.S. efforts meet national and local needs whenever possible.

Recognition of Enormous Lack of Health Infrastructure. Throughout the strategic statement, the administration recognizes the crippling deficit in health care infrastructure as a fundamental impediment to fighting the pandemic. It highlights the dearth of physical infrastructure, like health centers, clinics, equipment, and delivery systems, and the lack of human infrastructure in the form of health care workers and administrators. The strategic statement explains that the United States will work to enhance health care systems and capacity, primarily with respect to delivery systems for HIV/AIDS drug treatment and recruiting and training health care workers to treat and care for HIV/AIDS patients. These will certainly be essential elements—though health infrastructure, as detailed below, must be addressed much more broadly to realize the program’s longer-term goals.

IMPROVING THE ADMINISTRATION'S STRATEGY

The strategic statement is commendable. All of its objectives and guiding principles noted above will help produce short-term results. The plan in its present form, however, is too near-term in orientation and too narrow in scope. In order both to meet the president's five-year targets and to achieve longer-term success in battling the pandemic, a broader plan of attack is necessary.

To begin with, the United States should pursue a two-track approach to building improved health delivery systems. The first track would be a five-year strategy with an emergency posture and time horizon equal to PEPFAR. Concomitantly, though, the United States should move just as rapidly and vigorously to enact the long-term strategy of building health infrastructure in the most affected regions and in the rest of the developing world. ("Health infrastructure" is used in the comprehensive sense here to include building health delivery systems from hospitals to health centers to community-level clinics; support systems to provide drugs and supplies; and trained health workers at all levels.) This long-term strategy requires a greater financial commitment.

In addition, both tracks will require an extensive response beyond health delivery systems if they are to succeed. The United States and its international and local partners must tackle pressing social and political issues that are fundamental to the spread of HIV/AIDS. Finally, within the parameters of the strategy statement, there are certain principles and practices that require further emphasis and elaboration.

It should also be noted that while this report strongly advocates that the United States lead a global response, some of the specific recommendations below focus on U.S. policy vis-à-vis the 14 or 15 countries highlighted in the president's initiative, although most of the recommendations contain principles with wider applicability.

Specific recommendations on these points follow.

BUILDING HEALTH INFRASTRUCTURE: THE KEY TO WAGING A LONG-TERM, SUSTAINABLE BATTLE

Building health infrastructure is perhaps the most important part of a successful, sustainable attack on the pandemic and of improved long-term health in the affected countries. As the strategic statement recognizes, most of those countries and many other countries in the developing world have appallingly weak national health systems. The absence of hospitals, health centers, clinics, delivery services, and other physical infrastructure has been crippling and will constitute a major obstacle to progress. The deficit in human capital—the health care workers necessary to treat, counsel, and care for patients, and to manage and administer health systems—has been debilitating, and it continues to worsen. Many sub-Saharan countries and impoverished countries elsewhere in the world devote only a few dollars per capita per year to health; Ethiopia, for example, currently spends approximately \$1.

The pandemic severely compounds the infrastructure problem. It weakens economic conditions, which in turn lower the amount of money available for health systems and services. In addition, the disease is killing doctors, nurses, and other health care workers, who are already scarce. This is part of

the tragic impact of AIDS: It has hit people in their most productive stages of life and those who should be in the forefront of prevention programs. Furthermore, sickness and death are so prevalent, working conditions so poor, misery so acute, and resources so scant that many health workers, already insufficiently compensated, suffer from depression and are unable to cope and perform.

PEPFAR's short-term emergency approach is essential. Therein, the United States should be as aggressive as possible in meeting treatment and care targets. The strategic statement addresses the deficit in health care infrastructure in three primary ways. First, it stresses a "network model,"¹⁵ whereby the United States would embark on a near-term process of shifting health systems from the center (i.e., hospitals, clinics, labs, and other institutions) out to the community level (house visits, volunteers, ad hoc care in the targeted countries). Second, it highlights the need to build out delivery services for antiretroviral drugs. Third, it notes the need to recruit and train health care workers in order to make up for the deficit in human capital. These measures are sensible and should yield important near-term results.

But there are five critical reasons why this approach will fail to yield long-term success in the battle against the disease.

First, whereas the five-year U.S. goal aims to get 2 million people on treatment, there are currently 20 million infected people in the 14 countries selected for PEPFAR. A much more robust health infrastructure will be necessary to treat tens of millions of infected people in the years ahead. The same argument holds true for testing. Ninety-five percent of Africans and 95 percent of people infected globally do not know their HIV status. Tens of millions of people will need to be tested in order to get on treatment and to be counseled to abet prevention. Part of the reason for the lack of testing is the stigma attached to going to HIV/AIDS-specific centers for this purpose. Vast increases in health facilities, clinics, and health care workers will be needed to provide the setting to test, treat, counsel, and care for all who need to be reached.

Second, a preoccupation with AIDS threatens to cause other pressing health challenges to be neglected. The strategic statement's noted intention to build delivery services for ARV drug treatment, while vital, is a perfect example. Such a delivery system might provide a robust and sustainable part of the overall health system, whereby other drugs for other purposes could also be delivered over time. However, if these services are designed solely to deliver ARV, they will drain resources from other areas of the health system and create a parallel structure. In fact, even where the administration emphasizes integrating HIV/AIDS into every aspect of existing or new components of health systems, history shows that the net effect will be to divert more attention and resources within those systems to HIV/AIDS. The concerted campaign to fight malaria in the 1960s and 1970s drew resources from the larger health systems and from other vital health problems. For the smallpox eradication campaign of the 1970s and 1980s, a separate delivery system was developed and then allowed to dissolve, leaving no infrastructure for later vaccination campaigns. Fighting HIV/AIDS in the same way would have a negative effect on health systems' capacity to meet other health needs, and it would have disastrous consequences for the long-term health and development of affected countries.

Third, HIV/AIDS flourishes in conditions in which health is generally poor. When people are sick—particularly with serious diseases such as TB or malaria—their immune systems are compromised, and HIV thus hits them hardest. Improving general health conditions is part and parcel of battling HIV/AIDS.

Fourth, although the strategic statement laudably recognizes the dearth of health care workers and other human resource problems, such as the “brain drain”—the flight of health care workers to other fields or geographic areas—it is unclear how much impact PEPFAR will have on this enormous problem, given the administration’s extremely long list of objectives and limited funds. To truly tackle the human capacity problem, the United States will need to provide a large pool of funds over a long time horizon for wide-scale recruitment and training efforts, which will take many years to produce large-scale results.

Fifth, it is doubtful that it will be politically possible for recipient countries to sustain a health delivery system that is largely geared to the needs of 20 to 30 percent of their populations, however dangerous HIV/AIDS is. There is the likelihood, therefore, of political backlash against donor insistence on this priority and a weakening of host countries’ commitments.

WHO has developed plans and funding estimates for a more broad-based basic health system in developing countries. The costs are significant but also need to be put in context. Health spending in high-income countries averages more than \$2,000 per capita per year. WHO estimates that essential health interventions in the developing world require expenditures of \$34 per capita per year.¹⁶ Even at that level, however, considerable funding must come from the donor community. Most African countries currently spend less than a third of that amount, many far less.¹⁷ WHO estimates that the total additional funding required is \$27 billion annually by 2007 and \$38 billion by 2015. If the United States were to provide one-third of it—i.e., \$9 billion per year by 2007—it would be a significant increase in foreign assistance. However, it would still amount to less than 0.1 percent of GNP, or less than ten cents per every \$100 of GNP. However, all of this need not come from foreign aid. African countries today, despite their poor economic condition, pay \$11 billion annually in debt service. Canceling or substantially lowering this debt would allow these countries to direct those funds to basic health services. The results of the Highly Indebted Poor Countries (HIPC) debt reduction program demonstrate this potential (e.g., the rising health and educational expenditures in Uganda and Mozambique).

The returns from this investment would be substantial. First, according to WHO, it would save 8 million lives per year by 2010. Second, WHO estimates that these countries’ economic output would grow by \$186 billion per year by 2015, making for a much sounder global economy. Third, while this investment would require a long-term commitment of up to 20 years, WHO estimates that the gains in health and economic output will finance ongoing health efforts in a self-sustaining fashion following that period.

Despite these potential benefits and the desirability of meeting these important health needs, we are not recommending that the United States immediately accept the entire WHO plan. Coming on the

heels of the administration's commitment of \$15 billion for the campaign against HIV/AIDS, it is not politically feasible to obtain such funding from Congress. Moreover, much can be done by using PEPFAR and by beginning such work in the 14 or 15 focus countries in which these funds are to be spent. Programs in these countries would also provide the experience and methods that could be later adapted to a broader set of countries.

Recommendations for a Sounder PEPFAR

Integrate HIV/AIDS Infrastructure with Overall Health Systems. Because of the emergency at hand, PEPFAR should pursue immediate and opportunistic measures to promote testing, treatment, prevention, and care. However, the long-term ability of affected countries to deal with the pandemic will depend upon the strength of their overall health systems. Therefore, the administration should do its best to integrate PEPFAR's infrastructure-related investments with the overall national health systems. The same approach should be taken in United States bilateral HIV/AIDS programs in other countries. This would mean training health workers to deal with a broad range of health problems; developing delivery systems that can accommodate drugs other than ARV; enhancing the testing, treatment, and counseling capacities of existing health centers and clinics as much as possible before establishing separate ones for HIV/AIDS; providing incentives to retain health professionals who are leaving for developed countries; and helping national governments develop comprehensive health systems, rather than drawing resources from those systems purely for HIV/AIDS work. The Coordinator should encourage a similar approach by multilateral and other bilateral donors.

Address the TB/HIV Co-Pandemic More Broadly. Of those infected with HIV, 30 percent are estimated to be co-infected with TB, the leading cause of death among HIV-positive people in the affected countries. As a result, the incidence of TB among the overall population in those countries is also at an alarming level. Although the strategic statement does call for treatment for people with TB, it refers primarily to those also infected with HIV; this treatment will be critical to keeping people with HIV/AIDS alive longer and to raising the plummeting life expectancy rates. Yet a broader approach, in which non-HIV-infected TB patients are treated, is imperative and responds to the needs of the general population indirectly affected by the HIV/AIDS pandemic. This is also a natural way to integrate the HIV/AIDS investments with broader health responses. The administration should promote successful models such as the Directly Observed Treatment Short-Course (DOTS), the internationally recommended TB-control strategy. DOTS combines five elements: political commitment, microscopy services, drug supplies, surveillance and monitoring systems, and use of highly efficacious regimens with direct observation of treatment. All these elements are similar to, and therefore compatible with, the conditions for a successful ARV treatment program.

Incorporate Malaria into the Strategy. The strategic statement gives little mention to malaria. Yet this disease kills more than 1 million Africans per year. It is also one of three diseases targeted by both the president's initiative and the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) that is funded under the president's program. Focusing on HIV/AIDS, or even on the TB/HIV

co-pandemic, will drain resources from anti-malaria efforts. This would meet resistance from Africans and would fail to improve their overall health. Malaria outreach programs—such as provision of treated bed nets—are not as technically integrated with health delivery systems as TB programs, but they can be part of a national health system, and counselors and community workers can be cross-trained to deal with HIV/AIDS, TB, and malaria.

Develop a Broader Health Program for the Focus Countries for 2006. The State Department Office of International Health should work with the Coordinator's Office to develop a program for achieving a longer-term and broader set of goals with respect to health in the focus countries. This program should be developed in conjunction with WHO and with other donors for introduction into a global health strategy for 2006. The administration should request additional funding for this purpose in its next annual HIV/AIDS report and in the 2006 budget.

Such an approach would enlarge general health objectives in countries where the United States will be most heavily committed to HIV/AIDS programs, and it would lay the groundwork for international support of the longer-term goals of the WHO plan.

PLANNING FOR LIFETIME PROVISION OF ANTIRETROVIRAL DRUGS: THE KEY TO MOBILIZING RESOURCES FOR LIFETIME TREATMENT

Now that the administration and other authoritative international actors—such as WHO and UNAIDS—have accepted the principle that treatment is a critical pillar in a comprehensive long-term effort to battle the pandemic and that it should be provided for all of those who need it, the international community must begin to anticipate how to fund that treatment. The international community has assumed responsibility for people's lives, because once treatment begins it cannot be stopped without causing death. The cost of lifetime treatment for all those who will need it could rise to as much as \$9 to \$12 billion annually—more than is currently being provided from all sources for all HIV/AIDS programs. Neither the administration's estimates nor the international agencies' estimates has addressed this long-term commitment. It is, however, a major concern of the developing countries that are being urged to introduce treatment programs. It is imperative that escalating costs for HIV/AIDS not drive down investments in other health or development programs. That would be self-defeating for the developing countries. Interrupting or reducing treatment programs later, because of a lack of continued funding, on the other hand, would be a death sentence for those being treated. This is a difficult issue to face now, when so much effort is going into the introduction of treatment programs. But facing it is morally imperative. Here is an excellent way to begin:

- Form a high-level international commission, the members of which should have wide, interdisciplinary professional and governmental experience. They should examine the scientific aspects of and probable trends in treatment regimens; the likely costs of treatment over time; the variables in epidemiology, treatment adjustments, etc. that would affect those costs; the ethical questions surrounding choices that may have to be made among competing priorities, such as

prevention investments versus treatment; the shared responsibility; and the economic and political issues.

- Based on its analysis, the commission should make specific recommendations on how these long-term costs should be supported, taking into account affected countries' different economic capacities, the ways, including appropriate incentives and other measures, to keep drug prices at or below cost levels, and international mechanisms for assisting the poorer countries. The commission might consider recommending a long-term fund for this purpose, perhaps under the Global Fund, to which contributions would be made each year on a steadily rising scale. Such a fund would help isolate these costs from other development financing. The commission should also examine ways in which treatment programs can strengthen prevention programs and ways to assure that treatment costs do not drive out funding for prevention. Finally, the commission should examine how ancillary development programs, such as the longer-term investment in health proposed in this report, would increase affected countries' own economic and managerial capacity for taking over prevention and treatment of HIV/AIDS.
- The commission should make its recommendations to the international community within two years.

BEYOND HEALTH: ISSUES THAT REQUIRE CONCERTED FOCUS AND ENGAGEMENT

The United States and its international partners must tackle other issues fundamental to the spread of this disease. They affect large populations that have been particularly hard hit by HIV/AIDS and its aftershocks. Because these issues are critical obstacles to a successful response, a concerted effort to deal with them must be incorporated into both the administration's near-term and long-term strategies.

Gender Vulnerability

Throughout the developing world, girls and women are particularly hard-hit by and vulnerable to the pandemic. In sub-Saharan Africa, they comprise 58 percent of those living with HIV/AIDS. In some of the worst affected countries in southern Africa, HIV is four to seven times more prevalent among girls aged 15 to 19 than among boys their age.⁸⁸

The strategic statement does an excellent job of outlining the reasons why women and girls are vulnerable. It stresses the need to support specific programs directed toward them, as well as toward some males, to modify behavior that infects women and girls. But while the strategic statement highlights the socioeconomic factors—such as education, legal reform, justice, economic empowerment, and other social services—it is unclear about what PEPFAR will do to deal with those factors. For example, after discussing these and other nonhealth issues, the strategic statement says: “The United States will focus its interventions on health care and human services approaches to HIV/AIDS

prevention, treatment, and care. . . . Many multilateral organizations have vital expertise in specific [other] areas.”¹⁹ Here the strategic statement seems to imply that the United States recognizes the need for these important services and will cooperate with other actors but will leave the bulk of the burden on their shoulders.

To combat gender vulnerability, it is imperative that the United States:

Combat Gender Vulnerability through PEPFAR. Where socioeconomic factors (again, such as education, legal reform, justice, economic empowerment, etc.) are considered necessary to prevention, treatment, and care—as the strategic statement suggests they often are—the United States must make it clear to other countries that PEPFAR will support such programs financially and/or summon the appropriate international partners to help.

Improve Access to Education. The World Bank and other authoritative sources have demonstrated that keeping girls and children affected by HIV/AIDS in school reduces their vulnerability significantly.²⁰ Effective HIV/AIDS prevention messages should be incorporated in school curricula. Local authorities must then ensure that schools remain safe for girls. Enhanced access to education should be pursued as a matter of policy. PEPFAR should fund programs that demonstrate the positive impact on HIV/AIDS of greater access to education.

Increase Funding for Education. Improving education—even universal primary education—in the developing countries demands significant increases in international funding. UNESCO estimates that an additional \$5.6 billion annually is needed to achieve the goal of universal primary education in the developing nations by 2015. This report does not try to address the strategy or timing for reaching that goal. It is already enshrined in the U.N.’s Millennium Development Goals, which the United States pledged to support in 2000. But given the importance of education in containing HIV/AIDS, the United States should build on the data and experiences of programs relating education and HIV/AIDS and within the next five years lead a large-scale international effort to realize that objective. It would be extremely helpful if the Coordinator would discuss the relationship of education to PEPFAR’s goals in the annual reports to Congress.

The Military

Unfortunately, the strategic statement pays very little attention to the military. The annex shows that the administration has eliminated separate funding for Department of Defense (DOD) HIV/AIDS programs in 2004 and 2005. DOD funding outside of PEPFAR is not described.

Members of the armed forces, primarily young men away from their families, are at exceptionally high risk of contracting and transmitting HIV/AIDS. It is difficult to obtain statistics because national governments put a lid on such information years ago after realizing the severity of the problem and their consequent military vulnerability. Experts suggest that in some nations military incidence may be 50 percent or higher. Military incidence of 30–40 percent in sub-Saharan Africa is “not unusual,” says one expert,²¹ and infection rates are rapidly growing among militaries in Asia and the former Soviet Union. The disease also tends to affect a disproportionately high number of senior officers.

In acutely affected regions, HIV/AIDS is eviscerating national military forces. It is rendering acutely affected countries increasingly unable to safeguard their national interests and to participate in regional peacekeeping. This is especially important to the United States, which is relying more and more on African peacekeepers to address regional conflicts, like those in Liberia, Cote d'Ivoire, the Democratic Republic of Congo, and Burundi. Where highly infected armies do participate in peacekeeping operations, they spread the disease; where uninfected soldiers practice high-risk sex, they take the disease back home. The disease must therefore be recognized as a threat to regional, global, and U.S. national security.

On the other hand, because it is often the strongest and most centralized institution in acutely affected countries, the military is an excellent area to focus on in combating the disease. Experts in the impact of HIV/AIDS on security assert that national militaries must assume "command control," so that everyone from the chief of the army to platoon commanders and in between assumes responsibility for those directly under their command.²² Most military forces already conduct mandatory testing; all must do so. Furthermore, testing must be followed up with treatment, counseling, and, if need be, employment assistance. When test results are negative, the military should use education, counseling, and other measures to help prevent infection of health service members. Senegal, for example, has done an impressive job controlling HIV/AIDS within its military, enabling it to be a reliable partner in regional peacekeeping.

Very few military forces have instituted these straightforward and very powerful measures. The United States is one of them. U.S. strength, breadth, and its own military model make it a prime candidate to lead on this issue. Exceptional cases, such as that of Bangladesh, where military infection is near zero, should be reviewed for programmatic ideas. To help military forces in acutely affected nations with this critical security issue, the United States should use several measures:

Appeal to Affected Countries through Diplomatic Engagement. High-level U.S. political and health officials and top-rank military leaders should highlight the importance of this problem, the feasibility of taking steps to combat it, and its urgency as a matter of national, regional, and international security. The United States should lend strong support to the U.N. effort to assure that countries participating in U.N. peacekeeping missions test their soldiers before and during deployment and minimize the danger of peacekeepers spreading the disease.

Provide Technical and Financial Assistance. Acting through the Coordinator's Office or the Defense Department, the administration should ensure that national governments have the resources necessary to control HIV/AIDS in the military. The U.S. strategic plan should include technical and financial assistance with testing, treatment, counseling, and employment assistance, as well as general guidance on effective programs.

Increase Funding. From 2000 to 2004, the Defense Department spent \$35 million for military-to-military advice and training on HIV/AIDS. The DOD has now worked with 27 countries and made significant progress in helping institute testing, counseling, and treatment programs. Viable requests for further U.S. assistance now exceed available funds. Rather than having the DOD obtain funds from

PEPFAR, which already faces nearly overwhelming demands, Congress should directly fund at least \$30 million annually for U.S. military assistance for HIV/AIDS. This will give the DOD the incentive and ability to pursue these programs aggressively.

SCIENTIFIC EVIDENCE AS THE PARAMOUNT GUIDE FOR POLICY: THE KEY TO A SOUND APPROACH

With the influx of funding and the impetus to move quickly to meet the president's five-year goals, there will be much pressure to devise, initiate, and support interventions as rapidly as possible. In addition, because of the high profile of the effort and the strong feelings and viewpoints about it in many quarters involved, there is likely to be a good deal of pressure on the Coordinator's Office to support certain interventions and avoid others. This is especially true regarding the prominent emphasis in the strategic statement on sexual abstinence and faith-based programs and the statement's limitations regarding the use of condoms ("when appropriate and correctly used").

The strategic statement should be commended for recognizing the critical importance of basing interventions on the strongest scientific evidence available. Evidence-based interventions are likely to be the most effective. To ensure that science guides policy, there are several important principles to which the administration must adhere:

Put Science before Ideology. Ideology has no place in this decision-making process. In devising, advocating, and implementing various interventions, those best supported by unbiased scientific evidence should be chosen. Policy should be unhindered by ideology. Specifically, abstinence programs, which are highlighted in the strategic statement, as well as those for condom promotion and other measures, should be judged strictly on their scientific merit. Where good evidence is still lacking, as may well be the case for several years to come, the United States should support a variety of well-conceived HIV/AIDS prevention programs, using different approaches according to the local context.

Be Sensitive to Local or Indigenous Faith-Based Groups. The strategic statement emphasizes the role of faith-based organizations (FBOs) as critical partners in prevention, treatment, and care interventions. Scant distinction, however, is made between organizations based in the United States and other foreign countries and local and indigenous organizations. While U.S. and foreign FBOs have a widespread and powerful presence in the targeted countries and elsewhere in the developing world and must indeed take part in PEPFAR and the greater effort called for in this report, great care must be taken to ensure that local and indigenous FBOs are enfranchised as partners. The increased presence and role of the foreign organizations must not impinge on the integrity of local customs and values. Such encroachment will produce a backlash that can harm not only U.S. global AIDS policy but U.S. foreign policy and interests at large. The United States must be particularly sensitive to local religion, customs, and values in areas like Muslim-populated Nigeria. The recent rejection by some Nigerian Muslim leaders of a polio vaccination program, because they feared it was a plot to render Muslims infertile, is an example of the suspicions that can arise.

Promote Operational Research. Much more operational research—research measuring the effectiveness of various interventions—is needed. The administration must promote a vigorous operational research effort from the outset so that much more might be gathered on what does and does not work.

In an example of effective operational research, a team of researchers from the Horizons Program teamed with AIDS workers in eastern and southern Africa, the MTCT (mother-to-child-transmission) Working Group in Zambia, and UNICEF to do operations research at UNICEF-sponsored PMTCT pilot sites. The team asked a series of questions about service delivery in Kenya and Zambia: What type of staff training would be needed? Would the services be acceptable to clients? How would the new services affect existing services? What would the programs cost? What effect would programs have on HIV transmission? Over the course of four years, the research answered these and many other questions. The answers have helped to inform UNICEF's PMTCT efforts around the world and have resulted in practical guidelines that have made programs more productive and cost-effective.²³

Put More Emphasis on Social Science Research. The research annex of the strategic statement places a great deal of emphasis on biomedical research and on measuring process results (e.g., number of people reached), but not very much on social science research that would assess the impact of various messages on behavioral change. The Global AIDS Coordinator's Office should draw on the Social Science Research Council and other sources of expertise to develop measures that evaluate impact under various circumstances and within differing cultural contexts.

Ensure Transparency. Every stage of the research and policymaking with respect to the science should be transparent. The administration should disclose to donors and the public the science it is and is not considering. All research results should be available and disseminated to the broader scientific community. Research needs to be conducted in cooperation with local researchers, program managers, and other people directly involved in or affected by the programs.

Use Standard Definitions and Evaluations. Descriptions of various interventions need precise definitions in ways that permit the scientific community to evaluate them, unimpeded by ideology or preconceptions. Abstinence, for example, may be an effective tool for reducing the infection rate. But it is essential to specify the meaning of "abstinence" in order to understand and evaluate its place in an overall strategy. The word can mean "delayed onset of sexual activity," which may not necessarily have long-term effectiveness if U.S. evidence is indicative, or the term can mean "abstinence until marriage," which may be more effective than delayed onset but take longer and be harder to trace and evaluate.

Create an Independent Scientific Council. It would be advantageous to the administration, the international community, and all the actors with a stake in this issue to organize an independent body to review the quality and significance of available evidence and recommend priorities for new research. Such a "council" should be independent of the administration but should seek to collaborate with it.

Employ Scientific Tools. The administration should consider using systematic reviews and emerging technological tools:

- *Systematic Reviews.* Systematic reviews use a scientific, unbiased method to assess and analyze all available studies on a given question and then determine what the science says about what

does and does not work. Though more primary research must be done, systematic reviews are a highly effective way to synthesize existing science and eliminate bias in the research findings that inform policy decisions. The value of systematic reviews for policymaking will grow as more primary research data are collected. Excellent sources for systematic reviews are the Cochrane Collaboration²⁴—though based mainly on data from the United States and other industrialized countries; the “Guide to Community Preventive Services” published by the Centers for Disease Control and Prevention; and the work of the Evidence-Based Practice Centers designated by the U.S. Agency for Healthcare Research and Quality. (At the request of the Council on Foreign Relations and the Milbank Memorial Fund, the Cochrane Collaborative Review Group on HIV Infection and AIDS summarized the findings from systematic reviews pertinent to PEPFAR as of December 2003. This document, “Evidence Assessment: Strategies for HIV/AIDS Prevention, Treatment and Care,” is available at http://www.igh.org/Cochrane/pdfs/HIV_AIDS_Evidence_Assessment.pdf.)

- *Emerging Technological Tools.* Models such as Archimedes—a mathematical model capable of simulating randomized controlled trials and filling some of the gaps in the available scientific data²⁵—will become increasingly useful as more studies, operational research, and randomized controlled trials are completed. Additional mathematical modeling, social network analyses, rapid assessment techniques, and geographic information systems will all be valuable technical tools in applying science to guide policy.

MONITORING AND EVALUATION: THE KEY TO IMPROVED PERFORMANCE

The strategic statement highlights the importance of incorporating monitoring and evaluation from the outset to help produce results efficiently and serve the administration’s focus on near-term targets. But monitoring and evaluation, like other aspects of this challenge, must be designed to meet both short-term and long-term objectives.

Three keys will be:²⁶

Treatment Programs. The monitoring of resistance and related outcomes of treatment will be very important. From the standpoint of the immunologist or microbiologist, issues such as outcomes monitoring, evolving patterns of resistance, and compliance will significantly affect the cost-benefit analysis of any interventions under consideration as part of the larger social and political context. The results will also be critical in being able to promptly identify new strains of the virus that may be developing. The microbial timelines—such as mutation or newly developing strains—are different from operational, funding, and even individual health timelines and extend over decades. Treatment programs will thus require a sophisticated set of monitoring programs that respond to different decision points but continue gathering essential data over long periods of time.²⁷

Work with Local Efforts. The Coordinator’s Office must ensure that monitoring and evaluation are conducted in concert with local program managers, researchers, and community leaders. All results must

be made available to these local participants so that every stakeholder in programs and interventions can assess the data and use lessons learned to improve upon programs and interventions. This will help overcome rumors, interruptions in local support, and loss of cooperation.

Work with the Institute of Medicine from the Outset. The legislation stipulates that in three years the Institute of Medicine (IOM) will have to produce a report assessing PEPFAR's success. The Coordinator should work with IOM on the information systems, data, and other inputs that IOM will need to make its assessment.

INNOVATION AND FLEXIBILITY: THE KEY TO EFFECTIVE INTERVENTIONS

The strategic statement highlights the importance of innovation and flexibility in each facet of the U.S. response. This will be particularly significant in identifying and supporting the best programs and partners available.

Enfranchise Local NGOs and Community-Based Organizations. Embassies must engage local people affected by the pandemic, including NGOs and community-based organizations, in the planning and reviewing of strategies and programs. All aspects of in-country activity should be open to members of civil society, ensuring their enfranchisement in decision making on the ground. Those with local, grassroots experience have much expertise and must "own" the long-term effort to combat HIV/AIDS.

Examine the South African and Nigerian Examples. USAID developed innovative techniques for getting its funds to small, local NGOs in its anti-apartheid programs in South Africa in the early 1990s and again in the wake of the restoration of civilian rule in Nigeria in 1999–2000. These administrative innovations should be examined as models, so that the United States can get HIV/AIDS funds out to community-based NGOs and civic groups, which are indispensable to a successful program. Without some of USAID's flexible mechanisms, it will be extremely difficult for U.S. funds to reach and empower the communities targeted.

FLEXIBILITY IN "GRADUATION" PLANS

The strategic statement places great emphasis on "graduation" plans, or the plan by which the United States would phase out its support of various programs. The impulse to want to achieve the program objectives soon and extricate the United States from further financial responsibility is understandable. However, containing this pandemic will require decades of international involvement and funding far beyond the emergency focus of the next five years.

Even speaking glibly of "graduation" could undermine public understanding of the costs of this pandemic and support for the necessary commitment. It could also alarm developing countries about the burdens that will fall on them once these programs are introduced. Thus when planning "graduation" dates, the United States should employ great flexibility to ensure that humane objectives are not subject to rigid and imprudent deadlines. This also underscores the need for a thorough assessment of long-term requirements to support universal or wide-scale access to treatment.

CONCLUSION

Senator Bill Frist (R-Tenn.), majority leader of the U.S. Senate, has said: “History is going to record what we do when we face the terrible waste of life and hope that is the global AIDS epidemic today. Our grandchildren will ask us what we did to fight it.”²⁸ Senator Patrick J. Leahy (D-Vt.) agreed: “When future generations look back at this time and place, I believe they will judge us, more than anything, on how we responded to AIDS. It is the most urgent, the most compelling moral issue of our time.”²⁹ It is that and more. Global AIDS is also changing the social, economic, and geopolitical landscape of our world, threatening to beget dislocation and instability. It is a humanitarian issue, a social issue, an economic issue, and a political issue, and it is a threat to global and U.S. national security.

The PEPFAR initiative is a landmark attempt to recalibrate the erstwhile meager U.S. and international response to what the *Washington Post* has called perhaps “the most underestimated enemy of all time.”³⁰ The essential elements, the objectives, and most of the operational strategies for effecting the plan are sound and laudable. Yet they mark only the beginning of what must be a truly comprehensive effort to fight this scourge.

The United States must lead a broad-based, long-term international effort to combat HIV/AIDS. This report presents seven major recommendations and makes additional recommendations in the body of the report. The recommendations offered in the body of the report will be essential to the attainment of the president’s five-year goals. More than that, they will be critical to the key U.S. strategic priority of waging an effective long-term battle against the pandemic.

Global HIV/AIDS is undoubtedly one of the greatest contemporary threats to mankind. With a long-term and broad-based strategy, the United States has a historic opportunity to save tens of millions of lives and to safeguard the world from widespread suffering and instability. U.S. moral and strategic interests are very much at stake. To meet the magnitude of the threat, the response by the United States must be ambitious, thoughtful, innovative, and comprehensive from the outset. Much hangs in the balance. We must not fail.

NOTES

1. "AIDS Epidemic Update" (Geneva, Switzerland: UNAIDS and World Health Organization, Dec. 2003).
2. Richard Holbrooke and Richard Furman, "A Global Battle's Missing Weapon," *New York Times*, Feb. 10, 2004.
3. Ibid.
4. National Intelligence Council, "The Next Wave of AIDS: Nigeria, Ethiopia, India, Russia and China" (prepared under the auspices of David F. Gordon, Washington, D.C., Sept. 2002). The NIC estimates between 50 and 75 million infections for the five next wave countries and between 30 and 35 million for southern and central Africa, yielding a total estimated range between 80 and 110 million collectively by 2010. This does not include Latin America, North America, most of Southeast Asia, Eastern Europe, Western Europe, the Middle East, and elsewhere, where there are likely to be millions of additional infections. This would place 100 million infections at the low end of the NIC range.
5. Ibid.
6. Ibid.: Jon Tedstrom, "Russia Must Tackle AIDS without Delay" (editorial), *Financial Times*, Sept. 17, 2003.
7. Nicholas Eberstadt, "The Future of AIDS: Grim Toll in Russia, China and India," *Foreign Affairs* 81 (Nov.-Dec. 2002): 22-45; Peter Baker, "U.N.: AIDS a Crisis in Eastern Europe," *Washington Post*, Feb. 18, 2004. In his "intermediate" and "severe" scenarios, Eberstadt estimates that there may be as many as 193 to 259 million new infections just in Russia, India, and China from 2000 to 2025. Such levels of infection will cut these countries' economic production dramatically.
8. Office of the White House, "The National Security Strategy of the United States of America" (Washington, D.C., Sept. 2002).
9. Colin Powell, "A Strategy of Partnerships," *Foreign Affairs* 83 (Jan.-Feb. 2004): 22-34.
10. James Dao, "In Quietly Courting Africa, U.S. Likes the Dowry: Oil," *New York Times*, Sept. 19, 2002.
11. Interview with Alex de Waal, Justice Africa, Dec. 2003.
12. The International Crisis Group, *HIV/AIDS as a Security Issue* (Washington, D.C./Brussels, June 19, 2001); Princeton N. Lyman and J. Stephen Morrison, "The Terrorist Threat in Africa," *Foreign Affairs* 83 (Jan.-Feb. 2004): 75-86.
13. Zoe Hudson, "Global HIV/AIDS Bill" (memorandum, Aug. 2, 2003).
14. Office of the Global AIDS Coordinator, "The President's Emergency Plan for AIDS Relief: U.S. Five-Year Global HIV/AIDS Strategy" (Washington, D.C., Feb. 23, 2004), 83.
15. Ibid.; Randall Tobias, "Comments Made at Conference Held at Center for Strategic and International Studies" (Washington, D.C., Feb. 12, 2004).
16. "Macroeconomics and Health: Investing in Health for Economic Development" (Geneva, Switzerland: World Health Organization, Dec. 20, 2001), 11.
17. David Peters, Kami Kandola, Edward Elmendorf, and Gnanaraj Chellaraj, *Health Expenditures*,

Services, and Outcomes in Africa, in the World Bank Health Development Network, Health, Nutrition and Population Series (Washington, D.C.: World Bank, 1999).

18. Janet Fleischman, *Fatal Vulnerabilities: Reducing the Acute Risk of HIV/AIDS among Women and Girls* (Washington, D.C.: Center for Strategic and International Studies, 2003), 1.
19. Office of the Global AIDS Coordinator, "The President's Emergency Plan for AIDS Relief," 58.
20. Fleischman, *Fatal Vulnerabilities: Reducing the Acute Risk of HIV/AIDS among Women and Girls*, 6–7.
21. Interview with Alex de Waal, Justice Africa, Dec. 2003.
22. Ibid.
23. Interview with Andy Fisher, Horizons Program at Population Council, Feb. 2004.
24. Interventions to interrupt heterosexual transmission among commercial sex workers that have been found effective include male condom distribution when coupled with peer-led education on safe sex behaviors for commercial sex workers, sexually transmitted disease (STD) treatment for commercial sex workers, and/or distribution of educational materials in hotels frequently used for commercial sex.

Other interventions that work for high-risk groups—including commercial sex workers and their clients, IV-drug users, serodiscordant couples, and sexually transmitted infection (STI) patients—are peer-led educational workplace interventions for men who are clients of commercial sex workers; voluntary counseling and testing (VCT) for STI clinic attendees, IV-drug users, and serodiscordant couples; and notifying the sexual partners of persons at elevated risk of contracting HIV.

Effective interventions for interrupting transmission among the general heterosexual population include mass distribution and promotion—or “social marketing”—of condoms, combined with comprehensive HIV/AIDS education and improved management and treatment of bacterial STIs, as well as school-based programs for youth (peer-led education and youth-friendly prevention and treatment services) and VCT for the general population, and specifically for pregnant women.

Interventions, on the other hand, that have been found to be of limited effectiveness or of possible harm in the general population include HIV education through mass media when not combined with other approaches (measures such as condom distribution and peer education must also be involved for education to be effective), abstinence programs that weren't accompanied by condom distribution (they resulted in only limited, temporary success), and the use of nonoxynol-9 microbicide (which may, in fact, increase the risk of HIV transmission). (Gail Kennedy and George Rutherford, “Cochrane Collaboration HIV/AIDS Review Group” [memorandum, n.d.])

25. David M. Eddy and Leonard Schlessinger, “Archimedes: A Trial-Validated Model of Diabetes,” *Diabetes Care* 26 (Nov. 2003): 3093–101; “Innovative Archimedes Model Primed to Fill Some Evidence Gaps,” *Health Technology Assessment News* (Plymouth Meeting, Pa.: ECRI, Dec. 2003).

26. Interview with Patrick Kelley, Institute of Medicine, Dec. 2003.
27. François Clavel and Allan J. Hance, "HIV Drug Resistance," *New England Journal of Medicine* 350 (March 4, 2004): 1023–35; interview with Daniel Steinberg, Allergy and Asthma Center of Massachusetts, Feb. 2004.
28. John Donnelly, "U.S. Urged to Fund AIDS War in Africa," *Boston Globe*, March 16, 2001.
29. Patrick Leahy, "We Need a Plan to Stop AIDS" (speech delivered in U.S. Senate, Nov. 19, 2002).
30. "Denial Here at Home" (editorial), *Washington Post*, Dec. 23, 2002.

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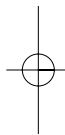
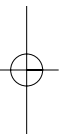
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