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HALTING THE SPREAD OF HIV/AIDS: FUTURE EFFORTS IN THE U.S. BILATERAL AND MULTILATERAL RESPONSE

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BEFORE THE

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HALTING THE SPREAD OF HIV/AIDS: FUTURE EFFORTS IN THE U.S. BILATERAL AND MULTILATERAL RESPONSE

Wednesday, February 13, 2002

UNITED STATES SENATE,
COMMITTEE ON FOREIGN RELATIONS,
Washington, DC.

The committee met at 11:12 a.m., in room SD–419, Dirksen Senate Office Building, Hon. Joseph R. Biden, Jr. (chairman of the committee), presiding.

Present: Senators Biden, Feingold, Smith, and Frist.

The CHAIRMAN. The hearing will come to order.

Mr. Secretary, who is not here, Madam Secretary, Mr. Natsios, thank you for coming this morning to speak to the committee about what has become one of the most, if not the most, pressing global health concerns of our time, and that is the spread of HIV/AIDS.

As you know, this is the first in a series of hearings that this committee will hold on HIV/AIDS. Senator Feingold will chair a hearing on HIV/AIDS in Africa tomorrow afternoon, and others on this committee will chair hearings on the same issue after the recess as it relates to the problem in other parts of the world.

I do not have to tell any one of you how devastating this epidemic is. The disease has killed more people than the bubonic plague of the Middle Ages. And it is spreading. Five million people were infected with HIV/AIDS in the past year alone. It has ravaged the continent of Africa and is spreading like wildfire.

There are countries in the region that have infection rates of over 30 percent. Africa is not alone. The number of people affected in India could soon be greater than that of any African country. China has recently acknowledged its problem, and the countries of the Caribbean have infection rates second only to those in Africa.

And lest we in the north begin to think that we are insulated from this problem, all we have to do is look at the increase in the infection rate in Russia—up 1,300 percent in the last 5 years—to know that nowhere on the planet are we invulnerable to this disease.

Ladies and gentlemen, we are facing a disaster of epidemic proportions in my view. This disease could wipe out a generation. It has already created millions of orphans in Africa. Who is going to care for those children when the parents and relatives are dead? Who will educate them when their teachers are dying of AIDS faster than universities can train them? Where will they go for medical

attention in countries where the health care system is underfunded, overburdened, and understaffed due to HIV/AIDS?

I do not think that the security, social, and economic implications of the spread of AIDS have been fully appreciated by most. I submit that we must begin taking them much more seriously. The consequences of this disease running unchecked throughout the world are everything from 3 decades of development gains lost to rampant instability and state failure in parts of the world. The potential for political instability due to the deaths of political and military leaders is a cause for concern in newly emerging democracies, according to reports. Gross domestic products are set to decline anywhere from 8 to 20 percent depending on how many years out one calculates the loss.

This cannot be allowed to happen. We must attack this disease on all fronts, using every technique feasible from prevention to care to treatment—or we will fail.

It is imperative that the United States engage in a considered coordinated strategy in its bilateral assistance programs. We cannot afford to waste a single dollar with duplicative, overlapping efforts among various U.S. Government agencies. The problem is big enough for more than one of our agencies to constructively contribute something, but it is far too big for every agency to focus its efforts on doing the same thing.

One important tool to contain the spread of infectious disease and to spot biological terrorism efforts is effective disease surveillance. Senator Helms and I plan to introduce a bill to bolster U.S. assistance to developing nations to improve their national disease surveillance capabilities so that the world can track these outbreaks. I know that Senator Frist and Senator Kennedy have worked extensively on this matter as well regarding the infrastructure.

I have administration promises to work with us on this legislation, and I think it is important that we make a real effort in this area. But that should be only part of the necessary response if we are to have any hope of containing HIV/AIDS.

There is a lot more to say, but I and my colleagues are eager to hear testimony and ask questions about the United States' efforts to stop the spread of HIV/AIDS throughout the world.

Before we begin, though, let me say this. Without leadership both here and abroad, none of our efforts will be successful. We need strong leadership here in the United States to devote the necessary resources to both our bilateral programs and to the Global Fund. We need leadership from our donor partners for the same reason, and we need leadership from recipient countries. I do not believe for a moment that any assistance program for HIV/AIDS can be successful without committed, sustained public leadership from recipient countries. In the absence of leadership at the highest level, any program that donor countries fund or support will, at best, generate mediocre results, and at worst, be doomed to failure.

Again, I thank you all for coming and I look forward to hearing your testimony.

At one point from the perspective of what we are all focusing on now, I would suggest that—and we will make available a report—

my colleagues and the country look to the fact that even from purely a defense standpoint, purely from the standpoint of U.S. security interests, the Defense Department as well as the CIA, has listed this as one of the great threats to U.S. security. This is not merely a health problem.

Before we hear from our first panel, we have before us submissions from Senators Corzine and Durbin, and without objection, I would like to enter their statements in the record so we can move right to witnesses. There being no objection, it is so ordered.

[The prepared statements of Senators Corzine and Durbin follow:]

PREPARED STATEMENT OF SENATOR JON S. CORZINE,
U.S. SENATOR FROM NEW JERSEY

U.S. BILATERAL AND MULTILATERAL RESPONSE TO HIV/AIDS

Mr. Chairman, I commend you for holding this hearing today on a topic of immense consequence. As this Committee considers how best to respond to the global HIV/AIDS pandemic, I want to bring special focus to the plight of women and their families across the developing world.

Mr. Chairman, two decades after the start of the HIV/AIDS pandemic, AIDS kills more people worldwide than any other infectious disease. And of the 40 million people now living with HIV/AIDS, nearly half are women.

Yet, despite twenty years of experience with this crisis, and at a time when the incidence of sexually transmitted infections (STIs) is reaching epidemic proportions, the only public health messages women receive about the prevention of HIV and other STIs are about monogamy and condom use. While these are critical messages, for many women these messages are, unfortunately, inadequate or unrealistic. They may also be life threatening. Millions of women lack both the power within relationships to insist on condom use and the social and economic resources to abandon partners who put their health at risk. And we also know that due to their biology, women are four times more vulnerable to HIV infection than men.

Given these realities, there is no question that female-controlled HIV prevention methods such as microbicides are vital to controlling the spread of HIV. Microbicides are a new class of products currently under research and development that are topically applied to prevent the transmission of HIV and other sexually transmitted infections. If we want to defeat the AIDS virus, we must be committed to developing new prevention tools, like microbicides, in the same way that we are committed to the development of an AIDS vaccine. Women worldwide need this commitment.

Recognizing this, last year Senator Olympia Snowe and I, along with Senators Cantwell, Leahy, Murray, Kerry, and Dodd, introduced S. 1752, legislation aimed at redoubling federal efforts to develop safe and effective microbicides. Our legislation focuses on microbicides research efforts already underway at the National Institutes of Health and the Centers for Disease Control. However, I know that USAID also does important work in this area, and I hope that this hearing can help ensure greater coordination between relevant federal agencies as they seek to advance microbicide research and development so that we can more quickly get these products to those women in greatest need. With a greater federal commitment to microbicides research, leading microbicide research groups, including the Global Campaign for Microbicides and the Rockefeller Foundation Microbicide Initiative, estimate that a microbicide could be brought to market within the next five years.

Just yesterday, the Rockefeller Foundation released the findings of their two-year study on the science and policy challenges in microbicide research. This new set of studies conclude that even by the most conservative of estimates, microbicides have the potential to dramatically prevent new infections and emerge as a critical tool in our HIV prevention arsenal.

Without increased federal investment in microbicide research, however, we will not achieve this goal. The Rockefeller "Pharmaco-Economics Working Group" of experts estimates that the cost of developing the existing pipeline of products would be roughly $775 million over five years, with the expectation that this investment would generate several safe, effective microbicides by 2010. However, the public and private funding currently estimated to be committed over the next five years is roughly $230 million. This leaves a shortfall of at least $545 million dollars.11If we

could muster public and private sector funds to meet this shortfall, what would be the potential impact of this investment? Using conservative assumptions, researchers at the London School of Hygiene and Tropical Medicine, who worked with the Rockefeller Foundation on these studies, estimate that a 60 percent efficacious microbicide used in 73 lower income countries could avert 2.5 million HIV infections over three years.

2.5 million fewer infections translates into a cost savings of $3.7 billion for already over-burdened governments in developing countries—$2.7 billion in averted health care costs and $1 billion in productivity benefits.

So, Mr. Chairman, where are we now? The short answer is: not even close. In FY 2001, the National Institutes of Health invested only $34.6 million in microbicide R&D—less than 2% of the Institute's AIDS-related research budget. My bill—and its companion legislation in the House—would greatly strengthen the federal commitment to microbicide research at NIH and elsewhere. Microbicides will give women in this country and around the world one more way of protecting themselves against the ravage of HIV/AIDS. We need to act now.

Thank you for your interest in this important matter.

PREPARED STATEMENT OF SENATOR RICHARD J. DURBIN

Mr. Chairman, I commend you for calling this very important hearing to discuss U.S. efforts to address the global HIV/AIDS pandemic. Thank you for permitting me to testify today. I look forward to working with the Committee to develop a strong response to this crisis that will clearly state the Congressional commitment to halting the spread of this devastating disease around the world. I would like to present to the Committee a comprehensive legislative proposal that I have developed in the hope that we can begin in earnest a dialogue that moves this issue forward before the year is out.

Yesterday, I introduced the Global Coordination of HIV/AIDS Response Act, known as the Global CARE Act. As we all know, HIV/AIDS is a national security issue, an economic issue, a health and safety issue, and most importantly a moral issue. My bill will not solve all of the problems caused by the AIDS pandemic. But it does set the bar where the need is, and I believe it does offer some innovative ideas to address the global AIDS crisis in a strategic, coordinated, and accountable manner.

It is critically important that we demonstrate the political will to act on this issue. I think it would be productive for Congress to establish clear policy goals and funding targets that represent the real need. It is also our job to ensure that there is accountability for the money that we appropriate, and that we are able to articulate the results of our U.S. investment. It is my hope that by doing this we will secure a serious, effective financial commitment that to date has been woefully inadequate.

The Global CARE Act is grounded in the principles of leadership and accountability.

The policy goals I have set forth in this bill are the following: better coordination among the myriad of U.S. agencies active in the global AIDS fight; a more focused strategic planning initiative that makes the best use of U.S. bilateral assistance; increased accountability for the health and policy objectives we seek to achieve with our financial and human investment in AIDS-ravaged countries; the ability to mobilize the most effective human and capacity-building tools to provide some of the building blocks that are needed; and a clear articulation of the broader issues that need to be addressed to have a real impact on HIV/AIDS, including not just prevention but treatment and care, and not just health initiatives but also economic investments.

The Global CARE Act provides specific funding authorizations for the key agencies working on global AIDS, as well as for the Global Fund. Both bilateral and multilateral assistance is needed to address this problem. Before the Leadership and Investment in Fighting and Epidemic (LIFE) initiative authorized USAID to conduct activities specifically focused on global AIDS in FY2000, there was little direction from Congress on this issue. And up until the United Nations and President Bush specifically requested money for the Global Fund, there was little agreement about what was needed. It is now time for Congress to step up to the plate and provide some direction.

The authorized funding levels in the Global CARE Act represent a need that has been well documented. The World Health Organization's Macroeconomics and Health Commission has determined that by 2007, the international community—donor and affected countries—should be spending $14 billion in response to the

AIDS pandemic. Last year, the United Nations called for roughly $10 billion annually.

America has by far the greatest giving capacity, yet we devote the smallest percentage of our overall wealth to efforts aimed at alleviating global poverty and disease. Last year the United States gave one-tenth of 1 percent of its GNP to foreign aid—or $1 for every thousand dollars of its wealth—the lowest giving rate of any rich nation. By comparison, Canada, Japan, Austria, Australia and Germany each gave about one-quarter of 1 percent—or $2.50 for every thousand dollars of wealth. Many other countries give even more, at rates 8 to 10 times higher than the United States. Based on its share of global GNP, the United States should contribute at least 25 percent of the total AIDS response cost in 2003. Twenty-five percent of the estimated $10 billion needed next year would be $2.5 billion. Hundreds of civic groups and religious leaders have joined together, calling on Congress to provide at least $2.5 billion to combat the pandemic.

The Global CARE Act establishes broad policy goals and activities that are embodied in an international HIV/AIDS Prevention and Capacity Building Initiative and an International Care and Treatment Access Initiative. These goals and activities, which range from education, voluntary testing and counseling to helping preserve families and ameliorate the orphan crisis, are not parceled out to the various agencies we know are actively engaged in this issue such as the U.S Agency for International Development (USAID) and the Centers for Disease Control and Prevention (CDC). Rather this legislation generally relies on the existing authorities of the agencies to carry out these broad activities with the requirement that they coordinate their activities with each other and with host country needs and host country plans.

The development of a coordinated, effective, and sustained plan for U.S. bilateral aid in relation to multilateral aid and other nation's bilateral aid is paramount. The U.S. has the opportunity to provide the requisite leadership in this global effort though operating strategically, and in an accountable and transparent manner.

To provide an incentive for such coordination, the bill establishes an interagency working group charged with ensuring that global HIV/AIDS activities are conducted in a coordinated, strategic fashion. Members of this working group include agencies within the Department of State, specifically USAID; agencies within the Department of Health and Human Services, including the Centers for Disease Control and Prevention, the Health Resources and Services Administration, and the National Institutes of Health; the Departments of Defense, Labor, Commerce and Agriculture, and the Peace Corps.

It is my intention to create a policy working group with representatives from the agency programs doing the real work. The working group will help to ensure that the various agencies we fund to provide bilateral assistance are making the most of the money we appropriate; that they are not duplicating efforts; that they are learning from each others' programmatic experience and research in order to implement the best practices; and that they are accountable to Congress and the American people for achieving measurable goals and objectives. In fact, the function of this group is very similar to the interagency working group established in H.R. 2069, legislation that passed the House of Representatives last year.

The Global CARE Act very specifically directs the working group to report back to the Senate Committee on Foreign Relations, the Senate Committee on Health, Education, Labor and Pensions, and the Senate Appropriations Committee, and the corresponding Committees in the House of Representatives, with the following information: 1) the actions being taken to coordinate multiple roles and policies, and foster collaboration among Federal agencies contributing to the global HIV/AIDS activities; 2) a description of the respective roles and activities of each of the working group member agencies; 3) a description of actions taken to carry out the goals and activities authorized in the International AIDS Prevention and Capacity Building Initiative and the International AIDS Care and Treatment Access Initiative set out in the legislation; 4) recommendation to specific Congressional committees regarding legislative and funding actions that are needed to carry out the activities articulated in the bill; and 5) the results of the HIV/AIDS goals and outcomes as established by the working group. In my view, only by requiring very specific reporting requirements will the working group actually work.

The Global CARE Act includes a number of other provisions. Some have been discussed on the Hill, others have not. It authorizes a Global Physician Corps to utilize the human capital we have in our working and retired physicians by providing a mechanism for them to serve overseas where their expertise is so needed.

The bill authorizes a small amount for USAID to work on developing and implementing initiatives to improve injection safety. According to the World Health Organization (WHO), each year the overuse of injections and unsafe injections combine

to cause an estimated 8 to 16 million hepatitis B virus infections, 2.3 million to 4.7 million hepatitis C infections and 80,000 to 160,000 HIV infections. Together, these chronic infections are responsible for an estimated 10 million new infections, more than 1.8 million deaths, 26 million years of life lost, and more than $535 million in direct medical costs.

It includes a new pilot program to provide a limited procurement of antiretroviral drugs and technical assistance to programs in host countries. And it includes a very important orphan relief and microcredit component that acknowledges that addressing the AIDS problem requires both an economic and social investment in women and families.

I hope that the Committee will consider the framework and policy that I have developed as we work to introduce a unified proposal to address this problem. Tackling this pandemic will take more than one good bill—it will take a concerted effort to combine the best ideas and realistic initiatives to get the job done.

The CHAIRMAN. I would also like to acknowledge the presence of a contingent from the African ambassadorial corps here today. As you know, that continent has been ravaged by this disease and their presence indicates a commitment by their countries to acknowledge and to deal with the spread of this disease.

Lastly I will say because of the diplomatic—how can I say—as Kofi might say, the diplomatic niceties that have to be observed, Kofi Annan, who has been leading in this area as well on the international stage, has been extremely cooperative with this committee. He was going to testify before the committee, but quite frankly, I think it would have put him in a difficult position as the head of the United Nations sitting down and being asked questions by Senators.

So, we have come up with a diplomatic solution. He is going to come and speak to us at 3 o'clock this afternoon at a coffee I have invited many of my colleagues to attend, and we will treat it as we would treat a head of state and/or a foreign minister coming, not in terms of him being in a position of answering our questions, but in terms of sharing with us his incredible sense of urgency about what we must do and the part he thinks that we and others have to play.

With that, let me yield to my good friend, the good doctor from Tennessee, who has been a genuine leader, along with Senator Feingold, on this issue.

Senator FRIST. Thank you, Mr. Chairman. I would just ask unanimous consent that my remarks be made a part of the record as well.

The CHAIRMAN. Without objection.

Senator FRIST. But let me briefly thank both of my colleagues who are here, the chairman for bringing this issue, HIV/AIDS, the global pandemic, to this level with the presenters and the witnesses before us today, and also the chairman of the Africa Subcommittee. Over the last several years, we have worked side by side in addressing this issue and many issues. He is holding the hearing tomorrow which, in many ways, is a sequel and will build upon the foundation today, again representing the commitment of this committee, the Foreign Relations Committee, in addressing what is the most devastating, destructive public health challenge that we will have clearly had since the 1300's, but probably of all time.

Before coming to the United States Senate, I was a physician, and because I did heart transplants and lung transplants, all of my

patients were on immunosuppression. The risk is not of heart rejection or of lung rejection, but because of the medicines we gave, it was infectious disease. When a patient, after a successful transplant, got an infection, the infection would set in, he or she would stop working, he or she would have to drop out of school, would lose income to support the family, could no longer support their children, could no longer participate in the community, a family would become less secure and lost hope became the dictum. Well, with that, all normal life would dissolve. That is one patient. That is what I had the opportunity to see.

Two weeks ago, three weeks ago, I was in Africa once again, and as we went from Uganda to Tanzania to Kenya, looking at HIV/AIDS programs, exactly what is happening to that patient, that individual patient whose life is destroyed by this infectious disease, this virus, is happening to a continent. That is really what we are struggling to address. We will hear much more about how it is being done structurally from our witnesses today.

Let me just close my opening remarks by really taking what we all have to do and that is putting real faces on what we are addressing when we talk of statistics and 3 million people and 40 million people and the staggering growth.

In Nairobi, Kenya, I went to the Kabarro slum. Many people in this room have been to the slum. It is right there, right in the city itself, a population of over 750,000 people there. One out of five of those are HIV/AIDS-positive. As you walk through the crowded streets with all the shanties and the tin roofs, you are amazed that you see just young children. You literally do not see people of middle age. You see some older people and you see 20, 30, or 40 young people around them, but this whole middle generation is being wiped out. We will hear more about the details, but it is just remarkable when you walk into that slum and you see that there is nobody there middle-aged.

Teachers are gone. The military has been destroyed in many countries. The workers, the providers.

In Arusha, Tanzania, I met Nema whose name means grace. She sells bananas to survive and to provide for her year-and-a-half-old son Daniel. When Daniel cried from the hunger, Nema kissed his hand because she had nothing to give him but love, again suffering from the ravages of HIV/AIDS.

Also in Arusha, there was Margaret whose symptoms first came in 1990. When her husband died, despite her illness, she found the strength to fight his family because of cultural norms there. The property automatically goes to the husband's, who has died, family. Automatically it is stripped away. Thanks to her brother, she has a house for her six children.

Tabu, a 28-year-old prostitute, met, talked, spent a couple hours with in Arusha. She was going back to her village to die. She stayed an extra day just so she could meet with us, and I will never forget that smile, the cheerful demeanor, as we met in a small, stick-framed hut no more than 12 by 12.

Well, these are the real faces. As we talk about the big issues, it is that little virus. There is no cure today. There is treatment, but there is no cure. Nine out of 10 people in the world do not even know that they have it. As we talk about the big numbers, the big

programs, again we have got to remember it translates down to those individuals that are now in the millions in Africa.

With that, Mr. Chairman, I will close and mention some of my other things in my opening statement as we go forward. Thank you.

[The prepared statement of Senator Frist follows:]

PREPARED STATEMENT OF SENATOR BILL FRIST

AIDS IS THE HEALTH CRISIS OF OUR TIME

Before I became a Senator, I was a heart and lung transplant surgeon. To increase the effectiveness of the surgery, I gave my patients powerful immunosuppressant drugs—drugs that allowed the heart to survive but which made one highly prone to infections. I was an infectious disease expert—to do the actual transplant operation took only about 5 hours; the real challenge required never ending vigilance and action of beating back every infection so that my patients could lead normal and fulfilling lives. That is what I did every day for hundreds of patients.

I had the honor of giving my patients, suffering from fatal diseases, a second chance at life. But if an infection set in—an infection I could not control—my patient stopped working, he dropped out of school, he lost income to support his family, he could not be the parent he wanted to be for his children, his family became less secure, he could not participate in his larger community, he lost hope. All normal structure to his life would dissolve. Life around him would crumble.

Now, as I sit on the Foreign Relations Committee, I see regions of the world where the scourge of HIV and AIDS is destroying the lives of millions. Just like that patient with fatal heart disease who can either get better with appropriate intervention or who will die, now is the critical moment to intervene to address this epidemic—the health crisis of our time.

We are all aware of the chilling state of the global AIDS pandemic. Each year, a staggering 3 million persons die of AIDS and an additional 6 million more are infected with HIV—mostly in poor countries. Over the next ten years, AIDS will have claimed the lives of more people than all those, both civilian and military, killed in World War II. Globally, nearly 37 million are infected, with 23 million more having already died.

Particularly hard hit is the continent of Africa. In January, I traveled to East Africa and witnessed first hand the toll HIV and AIDS is taking on that continent. Africa is losing an entire generation as 40 million children will be orphaned by AIDS in the next decade—a number equivalent to all children living east of the Mississippi. Trained personnel—teachers, health care, military and police—are in some countries dying faster than they can be trained. The orphans of Africa are left without parents, without teachers, without role models and without leaders making them susceptible to recruitment by criminal organizations, revolutionary militias, and terrorists. AIDS is destroying entire societies.

In Nairobi, Kenya, I visited the Kibera slum. With a population of over 750,000, one out of five of those who live in Kibera are HIV/AIDS positive. As I walked the crowded, dirty pathways sandwiched between hundreds of thousands of aluminum shanties, I was amazed that everyone was a child, or very old. The disease had wiped out the parents—the most productive segment of the population—teachers, military, workers, the providers.

In Arusha, Tanzania, I met Nema whose name means "Grace." She sells bananas to survive and provide for her year-and-a-half-old son, Daniel. When Daniel cried from hunger, Nema kissed his hand because she had nothing to give him but her love.

Margaret, also in Arusha, whose symptoms first came on in 1990. When her husband died, despite her illness, she found the strength to fight his family to keep the family property. Thanks to her brothers, she has a house for her six children.

And Tabu, a 28-year-old prostitute, who was leaving Arusha to return to her village to die. She stayed an extra day to meet with us, and I will never forget her cheerful demeanor and mischievous smile as we met in her small stick-framed mud hut, no more than 12 by 12. Her two sisters are also infected, another sister has already died. Tabu will leave behind an eleven-year-old daughter, Adija.

These stories of a lost generation—of young mothers and their children are—sadly—not unique to Africa.

Africa has suffered the most but it is not alone—India, with well over 4 million cases, is on the edge of an explosive epidemic, which could result in 50 million cases in the next 10 years if awareness and prevention campaigns are not rapidly implemented. The Caribbean currently has the second highest rate of infection of any region in the world—2.3% of the adult population. And Russia had the biggest increase in rate of new cases last year.

AIDS is truly a global crisis.

LEADERSHIP AND COORDINATION

The good news is we know a lot about how to reverse the epidemic. And as a first step, it takes strong leadership at all levels, but as with most things in life, that leadership must start at the top.

President Museveni in Uganda, with whom I spent some time on my trip, has not been bashful about speaking very publicly to citizens of his country about HIV/AIDS. Bakili Muluzi, President of Malawi, was in my office here in Washington just a few days ago. He told me that he opens every speech to his countrymen with an admonition about HIV/AIDS.

These two presidents underscore the need to bring the disease out into the light, helping to eliminate the stigma often associated with the disease, and opening the way for public education.

With leadership, we must also coordinate our efforts, understanding the importance of enlisting all stakeholders in the fight against HIV/AIDS. From governments, to the U.N. and the World Bank, to world leaders, corporations and philanthropies, each has an important role to play.

An effective strategy to combat HIV/AIDS must coordinate within national governments as well as across them to ensure that our resources are leveraged and put to best use by avoiding duplication of effort. Each national sector—agriculture, labor, finance, health, education—can contribute unique expertise and resources. For example, the education ministry can develop programs that target the younger generation, teaching them how to avoid risky behavior. The labor sector can resolve difficult employment issues; the financial sector can mobilize national resources.

Each level of society has a role to play—political, ethnic, and religious leaders can coalesce national support and reduce stigmas attached to the disease. And, as I learned in East Africa, many of the best ideas come from those working in the trenches to fight this disease. Local community participation is indispensable.

PREVENTION AND TREATMENT

We must fight this battle on two fronts: by improving primary prevention and expanding access to treatment.

Until science produces a vaccine, prevention through behavioral change is the key. Even in HIV ravaged Africa, most of those who come in to be tested will test negative. This presents a real opportunity to save countless lives. I believe we should increase investments in rapid HIV testing kits and counseling for developing countries. Access to inexpensive and rapid HIV testing can help reinforce prevention messages and guide treatment options. And as I saw in Africa, testing centers become centers of hope for the community, a place where those struggling with HIV/AIDS can share ideas, support each other, learn important coping strategies, and receive medical treatment and nutritional support.

Treatment is an important part of the mix. When persons with AIDS receive medical and nutritional support, they live longer and healthier, avoiding opportunistic infections such as tuberculosis; providing income for themselves and their families; and ensuring a better future for their dependents. There are other potential public health advantages to treatment that require further research and evaluation. Treatment with antiretroviral drugs lowers the amount of virus in the blood, potentially decreasing the risk of transmission, both among adults and among mother to child transmissions.

New treatment regimes may make an even bigger difference in extending life and holding families together. Just as importantly, the hope of some kind of treatment will encourage more people to have themselves tested. The more people know about infection; the more likely they are to do something about it. Finally, support of health care delivery systems including personnel training is essential to effective programs.

I would like to take this opportunity to thank Secretary Thompson and Administrator Natsios and compliment them for the great work that USAID and the Centers for Disease Control for their efforts in prevention and treatment in East Africa. When I was in Uganda in January, I witnessed firsthand the cooperation between USAID and the Centers for Disease Control at such centers of excellence as the

AIDS information center and TASO (The AIDS Support Organization) outreach program.

WHERE DO WE GO FROM HERE?

I believe we must focus our efforts around eight main goals:

- We must continue our efforts to unite the political, religious, and business leaders of the world in the international commitment to provide financial and human resources to halt the spread of HIV/AIDS; and to help those who are afflicted with the disease.
- We can lend support to the Global Fund for HIV/AIDS, TB and malaria in its critical start-up phase and assist in the Fund's efforts to meet the challenges ahead with financial and political support. The Global Fund was envisioned as a public/private partnership. Donations from governments to the Fund are only part of the effort. We must also take steps to encourage corporate, non-profit, and private donations to the Fund. For example, we could consider ways to mobilize resources for the Fund by creating tax incentives for private sector and individual contributions. We should consider the development of dynamic methods of support for the Fund, such as non-cash contributions of pharmaceutical and medical instrument donations to the provision of technical expertise and staffing to public health personnel.
- Our nation's public health community is doing great work in the fight against HIV/AIDS. But I believe we can do still more. We should consider ways to further leverage our nation's public health care resources and talent to address the global HIV/AIDS challenge.
- We must continue to encourage and empower coalitions of governments, multilateral institutions, corporations, foundations, scientific institutions, and NGOs to help fill the gap between the available resources and the unmet needs for prevention, care and treatment. Each has unique contributions to make to the battle. We in government should seek ways to expedite these connections through legislation if necessary.
- We should put non-governmental and community based organizations, both religious and secular, at the forefront of action on the ground, getting funds to them quickly so that they can most effectively do their jobs reaching out to those who need help most.
- We must ensure that international research efforts on disease affecting poor countries, such as AIDS, malaria and TB, are reinforced in a manner that assures that the best scientific work in the world can lead to real benefits for the developing world—at a cost they can afford. (CDC protocols and guidelines, research on alternative drug schedules.)
- We must find ways to balance prevention with support, care, and treatment options that combine low cost pharmaceuticals with enhanced health care delivery systems.
- We must take steps to provide comfort to the families and orphans affected—to give them hope.

Our challenge is great. But as Americans, it is not in our nature to turn away from great challenges. And I have no doubt that, as a nation, and as a people, we will rise to it.

The CHAIRMAN. Thank you.

Today we have with us a very distinguished and important panel, beginning with Secretary Tommy G. Thompson, the Secretary of Health and Human Services. Everyone knows of his bio.

The CHAIRMAN. He was one of the Nation's great Governors in my view and one heck of a Secretary of HHS. I quite frankly, for the record, although it is all past, I appreciated your optimism during 9/11. Without you, I think there would have been a little more panic out there. As you may recall, this is not hindsight. I said it at the time as well. I am glad we had somebody who had been a plain old politician in that position because of the significance of how things would be read based on your facial and your verbal gestures. It would have made a big difference. You communicated a

sense of some optimism to the American people at a very important time. So, I think your critics can go to the devil.

The CHAIRMAN. Mr. Natsios is a man well-known to us here. He is Administrator of the U.S. Agency for International Development. USAID is a Government agency that administers economic and humanitarian assistance worldwide and is always a whipping boy in the past 30 years I have been here. But I think the rest of our colleagues are beginning to realize what I think we all on this committee have realized, its incredible importance and significance. I suggest that, unless we make USAID even more robust over the next decade or so, we will be making a gigantic mistake.

Also we have the Ambassador with us who is in a position nominated by President Bush. She was unanimously confirmed by the Senate and sworn in as the Under Secretary of State for Global Affairs, a job that I doubt she even fully appreciated would take on the significance it has since she has been sworn in beyond what it already was.

So, I welcome you all. I will not take any more time.

It is very seldom that we ever do this, but I am going to recognize a man to your right, Chad Allen, because he used to be a staffer here. As long as you know you cannot speak, Chad, you are welcome. I am joking. That is a joke.

Claude. I said Chad. It is Claude. I have just been corrected, which means I will be corrected again before this is over.

So, Claude, it is good to see you back, although as I understand it, you are assisting the Secretary at this point, and at some point he may yield to you. I do not know.

With that, why do we not begin. We will start with you, Mr. Secretary, and welcome any opening statement you would like to make.

STATEMENT OF HON. TOMMY G. THOMPSON, SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES, WASHINGTON, DC; ACCOMPANIED BY CLAUDE ALLEN, DEPUTY SECRETARY

Secretary THOMPSON. Let me just start out by thanking you, Senator Biden, for your leadership in this area. I cannot think of a more important hearing to take place today, and I applaud you for your leadership in this effort and thank you so very much for having us.

The CHAIRMAN. The real leaders are the fellows on either side of me here. But thank you.

Secretary THOMPSON. Senator Frist is one of those wonderful outstanding leaders, and I appreciate what you do in Africa, Senator Frist. And, Senator Feingold, it is always a pleasure to be with you and thank you for your leadership in Africa as well. It is a great panel and I thank you so very much.

I am on the Global Fund Board and that is why I wanted to come and testify, Senator. I am going to have to leave, but Claude Allen is here as my Deputy, who is very interested and very much involved in this as well. He will be answering any questions that may come after my testimony.

Mr. Chairman, thank you for your leadership in responding to this devastating disease. And, Senator Frist and Senator Feingold,

thank you for all your efforts. And, Senator Frist, thank you for your leadership on the GLIDER legislation. We may not have succeeded yet, but your efforts certainly showed leadership and your commitment to this issue.

The administration and the Department of Health and Human Services are fighting the war against AIDS on two fronts: here in our own country and around the world. In all, HHS will devote $13 billion in fiscal year 2003 to fighting HIV/AIDS at all levels, an 8 percent increase over current spending.

In today's hearing, we are discussing the global efforts, but I can assure you and the members of the committee that our efforts within the United States are as aggressive and focused as well.

Mr. Chairman, as you know, Secretary of State Colin Powell and I serve as the co-chairs of the Task Force on HIV/AIDS, which was created by President Bush. We all know too well the dreadful, terrible statistics: 40 million individuals around the world living with HIV//AIDS and 3 million deaths from AIDS last year alone.

The scourge of AIDS threatens to destroy economies and social systems, to promote national instability and civil unrest, and to draw the United States and other developed nations into national and regional conflicts.

The administration is aggressively responding on numerous fronts, gathering resources from all across the Federal Government to battle HIV/AIDS and other infectious diseases.

Within my Department of Health and Human Services, the Centers for Disease Control and Prevention, the Health Resources and Services Administration (HRSA), and the NIH are world leaders in research and assistance. In addition, we are closely cooperating with private groups, the religious and non-sectarian charities that do so much good work internationally.

President Bush took the bold step last May 11th of announcing the first national contribution to the Global Fund to Fight HIV/AIDS, Tuberculosis, and Malaria. I am keenly aware of this committee's support for this effort and thank you and applaud you for it.

Organization of the fund has moved forward with remarkable speed since then. I am pleased to report to you, Mr. Chairman, that the fund now totals almost $2 billion in resources pledged by public and private sources.

The Global Fund held its first board meeting January 28 and 29 in Geneva. It was a great pleasure for me to be able to announce the President's pledge to the fund of an additional $200 million in fiscal year 2003. This latest contribution brings the total U.S. contribution to a half a billion dollars, by far the largest donation from any one country or entity, representing more then one-quarter of the overall commitments to the fund.

I can also report that a consensus has formed within the board that coincides with the President's priorities and the principles for the fund's operation. Let me, please, quickly highlight them.

First, the President spoke of the need for partnerships across borders and among both the public and private sectors. Accordingly, the fund is an independent, nonprofit foundation under Swiss law, located in Geneva in space separate from the United Nations.

Its board consists of seven donor governments, seven developing country governments, one representative from the philanthropic sector, one representative from the for-profit sector, and two representatives from nongovernmental organizations.

The second issue. The President called for an integrated approach to the three diseases, HIV/AIDS, malaria, and tuberculosis, emphasizing prevention and training of medical personnel, as well as treatment and care, including the use of new medicines. We are very pleased to be able to report to you today the rest of our colleagues on the fund's board are in agreement with these principles.

The third principle. The President called for financial accountability. To that end, the board has agreed to put in place strong financial and programmatic accountability mechanisms. The World Bank is going to serve as the fund's trustee and have the responsibility for the financial accountability.

All partnerships that receive grants will be subject to independent audits and provide assurances of adequate fiscal controls. Grantees must be able to demonstrate that their approaches are having a real impact in reducing mortality and illness.

Fourth principle. The President wanted scientific accountability. A plague of this magnitude demands results. So, medical and public health experts must review all proposals for their effectiveness.

A 17-member independent technical review panel, composed of six experts in HIV/AIDS, three in malaria, three in TB, and five from other disciplines, will evaluate all the proposals for soundness, feasibility, and financial management.

Finally, the President underlined the importance of innovation in creating lifesaving medicines that will combat this horrendous disease. We believe the fund must respect intellectual property rights as an incentive for vital research and development.

The fund, gentlemen and members of this committee, is on track and open for business. Contracts with the World Bank and the World Health Organization for financial and administrative services should be finalized within the next couple weeks. We are also currently looking for an executive director.

Applications are currently being taken for the first round of partnership grants. The board plans to make decisions on applications when it meets again in New York City the end of April.

In short, the President, Secretary Powell, and myself are delighted that the fund has surpassed even our most ambitious expectations, and we remain convinced that innovative approaches like the fund are truly our best hope for curbing this terrible disease in the developing world.

Of course, there is another important work that is being performed each and every day, contributing greatly to the plight against the scourge of HIV/AIDS. My Department is on the ground currently in 18 countries and will be in 25 by the end of the year, working intensely with governments, NGO's, and community groups to build infrastructure, assist in prevention, and provide direct care and treatment.

Certainly we concentrate on Africa where the disease is most widespread and at its deadliest. But I am also very concerned about the Caribbean Basin, which is the second real troubling spot. This April I will be meeting in Guyana with Caribbean health min-

isters to assess the regional status of the disease and develop new ideas for addressing HIV/AIDS.

The President's fiscal year 2003 budget calls for $144 million for the HHS global AIDS program, separate from the Global Fund, the same funding level as the current year.

In addition, the budget includes $11 million for international HIV prevention research at the Centers for Disease Control and Prevention in Atlanta.

At HHS, we do provide funding and technical assistance to ministries of health to bolster disease surveillance and essential laboratory services, including training for laboratory personnel and purchasing needed equipment. We also offer technical assistance and funding for a variety of prevention activities, including voluntary counseling and testing, preventing, which I think is so important, especially in Africa, mother-to-child transmission, blood safety, and sexually transmitted disease prevention. Even our treatment and care activities, like technical assistance on antiretroviral therapies, or ARV's, are proving to be vital pathways to prevention activities.

The team at HHS is assessing ways to be more effective, to safely and affordably bring these treatments to desperate countries and their people.

Finally, I would be remiss if I did not mention this country's commitment to research and practical assistance to battle HIV/AIDS. President Bush's budget and proposed funding for fiscal year 2003 for NIH includes $2.77 billion for AIDS-related research and an increase of $225 million specifically for vaccine, microbicide, and treatment research. Next year we will devote more than $420 million to the search for an HIV vaccine, a 24 percent increase over fiscal year 2002. Of course, the benefits of research into a cure for HIV know no boundaries.

Mr. Chairman, members of the committee, we have a compelling moral interest in helping poor nations fight a disease that is literally killing millions of their citizens. Through the Global Fund and our continued dedicated efforts at HHS and its agencies, we can offer real and effective help to those in need.

I thank you again, all of you, for your support, your passion on this very important endeavor. I am sorry I must depart, but Deputy Secretary Claude Allen will be here to answer any and all questions you may have.

[The prepared statement of Secretary Thompson follows:]

PREPARED STATEMENT OF HON. TOMMY G. THOMPSON, SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES

Mr. Chairman, members of the Foreign Relations Committee, I am pleased to be here today to provide an overview of the activities of the Department of Health and Human Services (HHS) to combat HIV/AIDS worldwide.

Thank you, Mr. Chairman, for you leadership in responding to this devastating disease. I want to acknowledge Senators Frist and Kerry for their work as co-chairs of an important task force organized by the Center for Strategic and International Studies (CSIS) on America's role in addressing the global HIV/AIDS pandemic. We at HHS, along with the U.S. Agency for International Development and the U.S. Department of State, are working with CSIS to ensure that this two-year project reaps benefits for both the U.S. and nations around the world hard-hit by HIV/AIDS.

We all know the dreadful statistics—40 million people worldwide now living with HIV/AIDS, 3 million deaths from AIDS last year—but they don't begin to represent the devastation this disease wreaks upon the developing world. The relentless on-

slaught of AIDS has the potential to devastate national economies and social systems, cause national instability and civil unrest, and thaw the United States and other developed nations into national and regional conflicts. This Country has a moral obligation to provide leadership in mobilizing resources for this international health crisis.

Secretary of State Colin Powell and I serve as co-chairs of the Task Force on HIV/AIDS created by President Bush, and, under his leadership, the United States has continued its commitment to battle HIV/AIDS and other infectious diseases and assist the world in disease control, surveillance and treatment activities. At HHS, the Centers for Disease Control and Prevention (CDC), the Health Resources and Services Administration (HRSA), and the National Institutes for Health (NIH) are world leaders in research and assistance in the worldwide battle against this scourge.

Last May 11, President Bush announced the creation of the Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria. I have the honor of serving as the U.S. representative to the Global Fund Board, a post I sought because I believe the Fund can make a real difference. Both Secretary Powell and I have championed the concept of a trust fund for these three diseases from our first days in office. And, I might add, so have many of you on this committee supported this effort. Thank you, Senator Frist, for your contributions in this area. Why is this idea so important? Because Africa and other parts of the world urgently need a public health delivery system that includes prevention of new infections; treatment for the sick, including the provision of drugs; and training of medical professionals.

The speed with which the Fund's architecture has been established is remarkable, and President Bush's founding pledge of $200 million has produced a 10-fold return on that investment in 9 months. I am pleased to report to you, Mr. Chairman, that the Fund is now up to just below $2 billion in promised resources.

The Global Fund held its first Board meeting on January 28 and 29, 2002, in Geneva. Because President Bush asked me to stay in Washington to meet with Ministers from the newly formed provisional government of Afghanistan, I was unable to attend. I did, however, address my fellow Board members by videoconference to announce the President's pledge to the Fund of an additional $200 million in FY 2003. This latest proposed contribution would bring the total U.S. contribution to half a billion dollars, by far the largest donation from any one country or entity, and over one-quarter of the overall commitments to the Fund.

The establishment of the Fund reflects the principles and priorities President Bush outlined last May. First, the President spoke of the need for partnerships across borders and among both the public and private sectors. The Fund embodies this principle; it is an independent non-profit foundation under Swiss law, located in Geneva in space separate from the United Nations and any of its agencies. The Board of the Fund consists of 7 donor governments, 7 developing country governments, 1 representative from the philanthropic sector, 1 representative from the for-profit sector, and 2 representatives from non-governmental organizations (NGOs).

Second, the President wanted the Fund to pursue an integrated approach to the three diseases that emphasizes prevention, training of medical personnel, as well as treatment and care. We are pleased that the rest of our colleagues on the Fund Board have agreed that proposals may cover prevention, treatment, and care and support in dealing with the three diseases in ways that local partnerships deem appropriate.

The Board has decided not to institute quotas or percentages for particular interventions. Prevention is indispensable to any strategy of controlling a pandemic such as we now face, but so are treatment activities, including carefully designed programs employing antiretroviral therapies.

Third, the Fund should concentrate on programs that work. We must know that the money is well spent, people living with HIV/AIDS are well cared for, and local populations are well served. To that end, the Fund Board has agreed that strong financial and programmatic accountability mechanisms must be put in place. The World Bank will serve as the trustee for the Fund, and have the responsibility for financial accountability, including collection, investment and management of funds, disbursement of funds to countries and programs, and financial reporting to stakeholders. All partnerships that receive grants will be subject to independent audits and provide assurances that adequate fiscal controls are in place. While the Board has not yet decided exactly how ongoing monitoring and post facto evaluation of grants will be done, the Board has embraced the principle that funding must be tied to measurable results. Grantees must be able to demonstrate that their approaches are having a real impact in reducing mortality and illness.

The President's fourth criterion asks for scientific accountability. All proposals must be reviewed for effectiveness by medical and public health experts, because a plague of this magnitude demands results. The Board will have ultimate decision-

making authority and be accountable for results, but no proposal will move forward without a rigorous review and endorsement by a group of technical experts. This 17-member, independent Technical Review Panel, composed of 6 experts in HIV/AIDS, 3 in malaria, 3 in TB, and 5 from other disciplines, will evaluate all proposals for programmatic and medical soundness, feasibility, and financial management, taking into account local realities and priorities. Indeed, my Department hosted a meeting of eminent experts from around the world last month, at the NIH's Fogarty International Center, to develop recommendations to the Fund Board on the operating procedures of the Technical Review Panel—advice the Board has accepted.

And, finally, the President underlined the importance of innovation in creating lifesaving medicines that combat diseases. Our position has been that the fund must respect intellectual property rights, as an incentive for vital research and development.

I will not hesitate to admit that much work remains to be done, but the Fund is on track and open for business. Contracts with the World Bank and the World Health Organization for financial and administrative services should be finalized in the near future. We are also looking for an Executive Director. Proposals for grants need to be written; in fact, applications are currently being taken for the first round of partnership grants. The Board plans to make decisions on applications during its next meeting in April.

So, as I have mentioned, the Fund is open for business and we at HHS intend to participate actively in helping partnerships to design their proposals and perhaps even join in monitoring and evaluation if asked. I see the Fund as a critical opportunity to force better coordination between bilateral and multilateral programs and to hone their focus on results and performance.

The President, Secretary Powell and I are all delighted that the Fund has surpassed even our most ambitious expectations, and we remain convinced that innovative approaches like the Fund are truly our best hope for curbing these diseases in the developing world.

HHS PROGRAMS IN THE GLOBAL HIV/AIDS ARENA

My Department's contributions in this arena also include the efforts of the CDC, HRSA, and NIH. Let me briefly share with you the very important work that these agencies are performing. The President's Fiscal Year 2003 budget calls for $144 million for the HHS Global AIDS Program within the Centers for Disease Control and Prevention, the same funding level as this year. In addition, the CDC budget includes $11 million for international HIV prevention research.

The Department is on the ground in 25 countries in sub-Saharan Africa, South and Southeast Asia, Latin America, and the Caribbean, working intensively with governments, NGOs and community groups to build infrastructure and capacity, assist in prevention activities, and provide direct care and treatment.

Most developing nations lack the necessary infrastructure to address their HIV/AIDS epidemics. Disease surveillance systems and epidemiology are often nonexistent or greatly compromised, making it difficult if not impossible to accurately determine at-risk and infected populations.

HHS provides funding and technical assistance to Ministries of Health to bolster disease surveillance and essential laboratory services, including training for laboratory personnel, information systems program monitoring and evaluation, and purchasing needed equipment.

We also offer technical assistance and funding for a variety of prevention activities, including voluntary counseling and testing, preventing mother-to-child transmission, blood safety, sexually transmitted disease prevention and care, behavior change communications, and prevention for populations at high risk for acquiring or transmitting HIV.

For example, preventing mother-to-child transmission is a priority for our programs—it is the only proven therapy to avert transmission from one person to another. HHS works with host countries and other partners to provide drug therapy to pregnant and post-partum women and their newborns and promotes replacement feeding strategies to avoid transmission via breast milk.

Our treatment and care activities focus on tuberculosis and other opportunistic infections, palliative care, and, more recently, technical assistance on antiretroviral therapies, or ARVs. Within HHS, the HRSA and CDC are training local health care providers in safe and effective patient care and monitoring. Working together, our agencies are fostering hospital- and clinic-based care programs, as well as community- and home-based care, for people living with HIV/AIDS.

Let me say a few words about ARV treatment, a subject that has drawn intense interest here and around the world. ARV treatment is now more affordable in sub-

Saharan Africa than ever, thanks to the assistance of drug manufacturers in this country and others. While most developing countries lack the sophisticated medical monitoring equipment and tests that are adjunct to ARV treatment, my team at HHS is assessing ways to effectively, safely and affordably bring these treatments to desperate countries and their people. CDC and HRSA are also examining the safety and effectiveness of what is known as "syndrome management," which means that diagnosis and continuing care are based on observable signs and symptoms, rather than sophisticated lab tests. These tests are not feasible in most countries in which the Fund will be working, so in such situations, clinicians there have to manage patient care by look and touch and feel—all skills that can be taught, and we hope that this effort will be another part of our contribution to the Fund.

Tuberculosis presents special dangers to those who are HIV-infected, and HHS currently is assessing a rapid TB diagnostic test that is effective among HIV-positive persons; the optimal duration of TB treatment among those who are HIV infected; and the acceptability of directly observed antiretroviral therapy for HIV. With the Botswana Ministry of Health, HHS research showed that TB is the leading cause of death for HIV-positive persons in Botswana and another showed that saliva tests for HIV can be used on TB sputum specimens, offering an effective tool for HIV surveillance.

Finally, the importance of research in attacking HIV/AIDS has long been recognized, and the United States has long been the world's leader in research and practical assistance to battle HIV/AIDS. President Bush's proposed FY 2003 funding for the National Institutes of Health includes $2.77 billion for AIDS-related research, an increase of $255 million that includes expansions for vaccine, microbicide, and treatment research. Next year, we will devote more than $422 million to the search for an HIV vaccine, a 24 percent increase over FY 2002.

Last year, the NIH Office of AIDS Research developed the Global AIDS Research Initiative and Strategic Plan which reaffirmed NIH's long-standing commitment to international HIV/AIDS research. NIH supports a growing portfolio of HIV/ATDS research conducted in collaboration with investigators in developing countries, and supports international training programs and initiatives to help build research. Altogether, NIH expects to spend $222 million in FY 2003, an increase of $34 million over FY 2002, specifically related to international HIV/AIDS research.

The NIH supports the HIV Vaccine Trials Network (HVTN), composed of 16 domestic and 13 international sites. Directly and through collaborations with mostly university-based investigators worldwide, the HVTN also supports laboratory research to ensure vaccines are efficacious against a variety of HIV strains found around the world.

HHS also supports university-based biomedical and behavioral research on interventions to prevent sexual transmission, and strategies to reduce perinatal transmission. The NIH-sponsored HIV Prevention Trials Network (HPTN) is a worldwide collaborative network designed to conduct research in 16 international and nine domestic sites on promising and innovative biomedical/behavioral strategies for the prevention or reduction of HIV transmission among at-risk adult and infant populations.

HHS works to strengthen—or create—the research and laboratory infrastructure of developing countries and train local investigators to conduct clinical trials of therapeutic and preventive therapies. These efforts include NIH's Fogarty International Center, which funds training in the U.S. for scientists from developing countries in Africa, Asia, Latin America and the Caribbean. Through grants to U.S.-based institutions, we have also conducted training courses in 60 countries. A new initiative, the Comprehensive International Program of Research on AIDS, also provides funding directly to foreign institutions for HIV research that is relevant to the host country. These grants focus on training of investigators and enhancement of laboratory and clinical capabilities, and to date, we have made five such awards.

None of the activities I've just outlined—infrastructure development and capacity building, prevention activities, care and treatment efforts, and research—could be accomplished or even attempted without the integral cooperation and collaboration between CDC, HRSA and NIH, as well as other parts of the U.S. government, most particularly USAID. At HHS, I am working to ensure that research and activities conducted throughout the Department, as well as within other entities, is complementary and not duplicative, and that it sees practical application in programs. HHS has a 20-year history of international intervention research, established CDC field stations, and many NIH projects worldwide. We strive to keep these efforts coordinated, and with the help of our other government partners, I believe we are succeeding.

CONCLUSION

Enormous challenges lie ahead. Just last month, the president of Family Health International, one of our NGOs, asserted that without treatment and prevention, AIDS will outstrip the bubonic plague as the world's worst pandemic. Bubonic plague killed 40 million people in the 14th century. Seven centuries later, we stand at the brink of an even worse catastrophe. But working together, we can change the course of the AIDS epidemic. Our research and its practical application have shown us that prevention, care, and treatment work. It is our responsibility to ensure that those at risk and those already infected have the benefits of that knowledge.

We are seldom presented with such clear and pressing need and such clear means to intervene. The Administration stands ready to contribute to a comprehensive plan for Africa and other parts of the world where HIV/AIDS is rapidly expanding.

I thank you again for your support of this important endeavor.

The CHAIRMAN. Mr. Secretary, before you depart, if we each can ask you one brief question. Then we will ask Claude a number of questions.

Congress appropriated $300 million in fiscal year 2002 for the Global Fund for AIDS, Tuberculosis and Malaria. The President's budget for 2003 requests only $200 million. Are you concerned that, by requesting less than what was appropriated last year, we are sending a negative signal to the international community?

Secretary THOMPSON. No, I am not because at the time that we said we were going to set up this fund and the President announced it, he indicated it was only going to be a 1-year contribution. The second year Colin Powell and myself requested of the President that there should be some additional money put into it. The President agreed. $200 million under the circumstances that we are facing right now I think is a tremendous, generous contribution.

The fund board, I want to be able to report to you, Senator, was ecstatic when I was able to announce that we were going to have an additional contribution this year of $200 million. It certainly would be nice if we had $300 million, but the $200 million was certainly well received by the board and by the countries represented at the meeting in Geneva.

The CHAIRMAN. The Congress may help you along again this year.

Secretary THOMPSON. Thank you, Senator. We certainly would not turn it down, Senator.

The CHAIRMAN. Do you have a question?

Senator FRIST. Thank you, Mr. Chairman.

Mr. Secretary, an issue that would probably be useful for you to comment on before you leave is this idea of coordination, and we will hear a little bit more about that later. But as you read through the materials both provided to us and where a lot of the discussion is, we have the funding issues, we have this whole linkage between prevention, care, and treatment, which is important to me, but then also internally how things are going to best be coordinated with this administration. We can compare it to the previous administration, which will be done. But I guess the real concern is how can we best coordinate who we are going to hear from today as well as tomorrow in a way that really does most effectively use the inputs. Everybody will be looking at the dollar figure as a measure of input, but it is much more complex than that.

We know we have the group at the cabinet level between you and the Secretary of State and others. Could you give us some sort of feel—again, we will explore it in more detail in later questioning—of both your commitment, but also to the potential for success of the current organization as both proposed and as carried out in the last several months?

Secretary THOMPSON. I think the coordination is exceptional. This is an issue that both Colin Powell and myself are passionate about. We have got other members of the cabinet very much involved in this. Our staffs meet regularly, almost weekly on the fund. In setting up the fund, they have been meeting more than weekly. The Secretary of State was represented at the fund, as I was, and we will continue to do that kind of cooperation and coordination.

We are also setting up this task force of 17 members which is going to review scientifically the grants, and we are going to have a lot of input from NIH and CDC to make sure that that is done correctly and properly. This is the ongoing thing. I can assure you that the cooperation and the coordination between State and the Department of Health and Human Services are at the utmost and we will continue to do so in the future.

Senator FRIST. Again, I know you need to leave.

The issues of the Department of Defense and Labor—clearly, we need to get all of these efforts together with a real focus. I guess what I am searching for is some reassurance that beneath the President of the United States at the highest level, we have people addressing it with the idea of coordinating all of it. Obviously, what State is doing and HHS is the prominent role, but is the structure there to take all the resources beyond the Global Fund itself?

Secretary THOMPSON. Absolutely, Senator. The Department of Defense is very much involved in it with their staff people with our staff people, and they meet with us. This cooperation continues and will continue. I can assure you.

Senator FEINGOLD. Thank you, Mr. Chairman. It is good to see my friend here. I know you have to get going. You and I have made an art in Wisconsin out of usually agreeing and then disagreeing agreeably when we need to.

Secretary THOMPSON. Minimally on the last one, Senator.

Senator FEINGOLD. Usually agreeable.

Of course, I admire all you have done here and in Wisconsin.

Let me just say, as I said to Secretary Powell last week. I am afraid I do not see the $200 million as an adequate contribution in light of what Kofi Annan has called for. I know you are very sincere in your desire to get after this problem. I know that having watched you go after health care issues in Wisconsin. But let me just say that for the record, that I just do not think it does the job and it does not reflect the leadership role that our country has to take.

But let me just ask you a different kind of question. What kinds of positive spill-over effects that are not directly related to HIV/AIDS but perhaps encouraging or encompassing other health and development issues are gained when in places around the world we have a robust U.S. effort to help fight AIDS?

Secretary THOMPSON. I think so much, and the Caribbean Basin is an absolute prime example of that. The Caribbean nations are coming together recognizing that they have a serious problem with HIV/AIDS, and the fact that the fund is set up, they are going to be very much involved in it. They have asked me to come down and meet with their health ministers to see how they could play a larger role in being able to stem the threat of AIDS and the growth of AIDS. That is just a prime example of what this Global Fund has been able to set up, is more people interested.

You are going to find the same in China, India, and Pakistan where the next, probably, threats are going to be for HIV/AIDS, and Russia. All of these countries now are taking a look at Africa and saying we have got to make sure that that does not occur in our country. I am much more cognizant of that, and the AIDS fund, the Global Fund, is going to allow for the dollars, hopefully not only to be in Africa, but these other countries to take a leadership role.

Senator FEINGOLD. Thank you, Mr. Secretary.

The CHAIRMAN. Thank you, Mr. Secretary, for being here.

Secretary THOMPSON. Thank you, Senator.

The CHAIRMAN. Mr. Natsios, thank you for your patience.

STATEMENT OF HON. ANDREW NATSIOS, ADMINISTRATOR, U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT, WASHINGTON, DC

Mr. NATSIOS. Thank you, Chairman Biden, members of the committee, Dr. Frist, and Senator Feingold. Thank you for leadership on this issue.

I will make some brief remarks and ask that the full version of my remarks be included in the record, if I could.

We are all familiar with the grim statistics that drive our policy and our programs in this terrible epidemic. An estimated 40 million are now living with HIV/AIDS. Another 40 million are expected to become infected in just the next 8 years unless we act. Economic and social and human costs of the pandemic are almost beyond reckoning.

One of the first actions I took as Administrator, when I was confirmed by the Senate in May of last year, was to send a cable out to our missions to tell them that they needed to integrate not just in the health sector our program in HIV/AIDS in our 75 field missions but across all sectors.

We know, for example, in Zambia that more teachers are dying of AIDS than are being graduated from the teachers colleges.

We are challenged in agriculture, for example. There are villages in Uganda where there are no adults alive who are capable of farming. So, there are only children and elderly people left. Everyone else has died. So, you are seeing malnutrition rates that are famine level in some areas not because there is a drought or a war or a pestilence attacking the crops or there is a problem of the farmers. The problem is the farmers have died and there is no one to grow the crops.

So, we have integrated into our programs in a number of countries that are particularly hard hit a food aid component to support the AIDS orphans and elderly people who do not have bread-

winners capable of supporting them anymore. We are doing this in conjunction with the ministries of health and the ministries of agriculture.

There is nothing more important to the U.S. Agency for International Development and to me personally than dealing with the HIV/AIDS pandemic. For the last 15 years, we have led the effort in AID to fight this dreaded disease. Based on our experience in more than 50 countries, we have devised a six-part strategy to combat the pandemic, and I would like to just go through those six points.

The first is prevention. This has been the cornerstone of our policy since 1986. The single most important element in preventing the spread of HIV/AIDS is changing people's behavior. This is whether you are in the north or the south, whether you are in the United States or whether you are in eastern Europe or Africa, especially among 15- to 24-year-olds. Young people are often difficult to reach and we have had success in crafting messages that they embrace and that will change their behavior.

In Zambia, for example, our work helped delay the age of sexual debut by 2 years, and as a result, the prevalence rates in this age group have now dropped by 50 percent in that country. The same thing has happened in Uganda.

Our programs stress abstinence and faithfulness, working through our faith-based and community-based partners. We have seen in Uganda how effective partnerships can be between political and religious leaders, and we have given them our strong support.

When I traveled with Colin Powell last May on his first trip to Africa, I asked in each country to meet with religious leaders from all denominations. I had an interesting conversation with the deputy head of the Islamic Doctors Association of Uganda, two Catholic bishops, an Anglican bishop, and a Pentecostal pastor who explained to us what they were doing in their parishes and in their mosques to combat the epidemic. It is very interesting. Since that lunch we had, they had not been actually talking to each other in an organized, aggressive way, and the fact that they had very similar problems and very similar approaches to this led to a successive set of meetings that now are integrating the religious community in Uganda.

The second strategy that we are focusing on beyond prevention is treatment, care, and support. While there is no cure yet, we can help people survive longer by treating opportunistic infections like tuberculosis and helping countries build up their health care systems. As the cost of antiretrovirals declines—and there has been a dramatic drop in the last year in these costs—our funding increases, we are now considering incorporating ARV's into our care and treatment program. Accordingly, we are now finalizing arrangements for four sites in sub-Saharan Africa where the health infrastructure permits their use, and we hope within the next few weeks we will be announcing agreements with the ministries of health in those four countries to begin the new antiretroviral therapies.

The third part of our strategy involves the millions of children who have lost parents to HIV/AIDS. I have been to Africa dozens and dozens of times over the last 13 years and I have seen the

faces of these children. When I was with an NGO, World Vision, we cared for 6,000 AIDS orphans in Uganda with a World Bank loan that was organized through the Ugandan Government. Of course, Uganda was one of the hardest hit earliest. The Ugandan Government has been very aggressive in combating the epidemic. But there are many things that need to be done in upbringing of children who are AIDS orphans.

We now have 60 projects in 22 countries that provide children with food, shelter, clothes, school fees, counseling, psychological support, and community care.

The fourth element of our strategy involves surveillance and monitoring. We are always learning new things about HIV/AIDS. There are now at least 15 different subtypes of the virus. One of our programs funds the Centers for Disease Control and Prevention research to understand better the dynamics of transmission.

Through the Census Bureau, we have been tracking HIV/AIDS data for years. Our figures are the standard now that are used in the international community. Nevertheless, we must keep monitoring the disease so we can track our programs and improve our strategies.

The fifth component is encouraging governments and multilateral institutions to increase their financial commitments to fight the pandemic. The United States now provides one-third of the total world's resources to fight the HIV/AIDS pandemic, four times what the next largest donor gives. We supply one-fourth of the UNAIDS fund and one-third of the Global Fund to Fight AIDS, Tuberculosis, and Malaria. I might add that USAID has staffed with our staff, that we secunded the initial executive secretariat of the trust fund to work out the technical details of managing this. In addition, we have contributed $1 million toward the management of the fund.

Finally, there is no substitute for leadership. Whether the issue is HIV/AIDS, democracy, or building free markets and institutions, the most important factor in development is the quality of national leaders and their commitment to their people's well-being. So, the sixth part of our strategy is to encourage and support national leaders to become strong advocates for programs that educate people about the disease and what they must do to prevent its spread. I have met with at least a dozen presidents and heads of states in Africa, in particular, but also now in other areas of the world, Central America for example, who are now leading the fight in their countries.

I would commend in particular the President of Tanzania. President Museveni was the first African leader in Uganda to lead the fight. The President of Senegal, the President of Mali has been a leader. The President of Mozambique, and Dr. Mocumbi, who is the Prime Minister of Mozambique, a friend of mine, is a medical doctor, and he has been leading the charge in Mozambique against the spread of the disease. I just met Friday with the President of Malawi who has also becoming very aggressive and very public in his champion of the effort to defeat the disease.

USAID was the first U.S. agency to fund international HIV/AIDS programs. Our program budget grew each year until the early 1990's and then leveled out for several years. It is now growing sig-

nificantly again and will reach $435 million this fiscal year for bilateral programs. This does not include the $100 million that we are giving next fiscal year for HIV/AIDS or the $50 million we gave in the current fiscal year.

By the end of this fiscal year, we will have spent in AID $2 billion on HIV/AIDS prevention and care.

For fiscal year 2003, I am proud that President Bush has requested $540 million for HIV/AIDS programs within the bilateral program of AID, a five-fold increase since 1999.

Secretary Powell has placed this crisis at the top of our foreign policy agenda in the developing world and has been one of the leaders worldwide in focusing the world's attention on this terrible disease.

Thanks to the White House and the leadership of the Congress, we have resources now to begin making a difference on a global scale. Much of the period during the 1990s, Mr. Chairman, we experimented with various programs. Some of the programs were successful in driving the infection rate, some were not. What we are now capable of doing, because of the level of resources we have been giving, is to scale up these pilot programs to a national level. We know that they work. After you try them in three countries and they have the same result in all three countries, you know that if you extend it worldwide in the developing world, it will be successful.

We have been working carefully with the ministries of health, and there is now a consensus in the developing world among the ministers of health that we work with on a daily/weekly basis with our health offices and our mission directors, what works, what does not work, where we need to focus our attention.

One of our most important management tools is to get more impact from every dollar we spend. This means spending more money in the field and cutting back here in Washington. Funding for country programs, therefore, will grow from $192 million to $398 million in our next budget, increasing the percentage we spend in the field from 61 percent to 78 percent. So, not only will we have more money for prevention, care, and treatment and children's programs, but more of it will be spent where it is needed the most.

We are increasing our HIV/AIDS priority countries from 17 to 23, adding substantially to what we spend in each of them. We have listened carefully to what Congress has told us. Sub-Saharan Africa continues to be our highest priority. Our new plan significantly increases funding for this region.

We are also focusing more strategically on hot spots where the epidemic is expanding and creating a central Condom Fund to consolidate our acquisitions, save money, and double what we purchase in terms of the volume of condoms in this next year.

Before closing, I would like to thank the committee for approving the nomination of our new Assistant Administrator for the Bureau of Global Health, a new bureau that I created to focus attention of our program on the health issue. The person that the President nominated who is now in place, Dr. Anne Peterson, is a medical doctor herself. She spent 6 years in Africa working on HIV/AIDS programs in Kenya and Zimbabwe and on other health problems. So, we now have a professional who has been confirmed by the

Senate who is in charge of our health programs worldwide. We are fortunate to have her.

We are in a race against time, Mr. Chairman, with a virus that shows no signs of letting up. The war on AIDS will be a long and arduous one, but it will be one that we ultimately will win. Thank you.

[The prepared statement of Mr. Natsios follows:]

PREPARED STATEMENT OF HON. ANDREW S. NATSIOS, ADMINISTRATOR, U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT [USAID]

Chairman Biden, members of the Committee, thank you for inviting me to speak today on this topic of singular importance.

I would like to begin by thanking this Committee for supporting our efforts to address HIV/AIDS. Your cooperation and your understanding of the magnitude and complexity of the pandemic has helped USAID maintain its leadership in the fight against this terrible disease. There are many aspects to the disease, the consequences of which are felt every day by millions of people throughout the world. We look forward to working with you closely as you draft a new authorization bill for HIV/AIDS this year.

The U.S. Agency for International Development has a budget of $8.7 billion this fiscal year and programs in more than a hundred countries, but there is nothing more important to our agency—and to me personally—than dealing with HIV/AIDS.

Time is not on our side. Since becoming USAID Administrator, I have made it a priority to streamline our procedures, so that more of our program money goes directly to the field and it gets there faster. We are also increasing the number of priority countries we focus our resources on, strengthening our regional programs and taking steps to improve our accountability.

You all know the grim statistics that drive our policy. Twenty-two million people have already died of HIV/AIDS. Ten percent of that number 2.3 million people—died last year in sub-Saharan Africa alone. Thirteen million African children have already lost a parent to the disease, and we expect that figure to triple by the end of this decade. The cost—to individual citizens, to families, communities, and countries—is almost beyond reckoning.

An estimated 40 million people are living with HIV/AIDS today. Far too many of them will die unless a cure is found—and none is yet in sight. Ninety-five percent of those who are infected live in the developing world. A third of them are between the ages of 15 and 24. Many do not even know they are infected or what to do if they are. Every six seconds another person gets the virus. By the end of this decade, another 40 million people may become infected.

Ten years ago no one anticipated the speed at which the pandemic would grow or the way it would spread through different sectors of society. HIV infection has reached alarming levels in southern Africa. One-third of the adults in Botswana, Lesotho, Swaziland and Zimbabwe are living with it now. In South Africa, one adult in five is infected. For many years, prevalence rates in West Africa were lower than elsewhere on the continent, but now we are seeing worrisome increases in infection rates in countries like Nigeria and Cameroon.

It is not just sub-Saharan Africa that is affected. Infection rates in some parts of the Caribbean are now the second-highest in the world. In Haiti and the Dominican Republic, for example, HIV testing suggests that more than one adult in 12 is living with the virus.

It is not just the millions who are infected today, but the speed at which the infection rate is growing that makes it so threatening. In Russia and the republics of the former Soviet Union, the rate of increase in HIV/AIDS cases is the highest in the world. In Russia alone, the number of officially recorded cases rose from just under eleven thousand in 1998 to 147,000 by late last year, and some suspect the numbers could be considerably higher.

In Asia, where prevalence has generally been low, there are signs of troubling change. India now has some four million people with the virus. In Indonesia, where HIV among prostitutes was once virtually non-existent, the infection rate among this group is now as high as 26%. Prevalence has risen very quickly among these same groups in Vietnam: in Ho Chi Minh City, over 30 percent of them are now HIV positive. Prevalence among injecting drug users is over 50 percent in some Vietnamese cities.

Apart from the individual human costs, the economic, political and social consequences of these facts are staggering. Clearly, HIV/AIDS is not just a health prob-

lem. In some parts of the world the pandemic is threatening the very fabric of society. There are places in Malawi, Uganda, Zambia, and Zimbabwe, for example, where HIV/AIDS has taken such a toll on farmers and farm workers that we are seeing alarming rates of malnutrition, even near famine-like conditions where food supply should be abundant and the people healthy.

It is no secret either, that population is declining in some countries, in part because women are dying before they live long enough to bear children. By the end of this decade, average life expectancy in the countries hardest hit by HIV/AIDS could be less than 40 years—comparable to what it was one hundred years ago.

Studies in Cameroon, Kenya, Swaziland, Tanzania, Zambia, and other sub-Saharan countries suggest that gross domestic product could be reduced by as much as 25 percent over a 20-year period. Some African companies have estimated the cost of HIV/AIDS in terms of health care, sick days and training new hires is reducing their productivity by 5 percent annually, and profits by 6 to 8 percent.

AIDS is like few other diseases, in that it strikes young adults most frequently. Young women are particularly vulnerable, for both biological and social reasons. Indeed, women below the age of 24 appear to be six times more likely to be infected than men their age. We are now seeing girls being infected at ever-younger ages.

HIV/AIDS hits people in their most productive years, leaving children and the elderly to do increasing amounts of the work upon which society depends. That means fewer children can attend school, less efficient farms and businesses, and more stress on local governments that must divert already inadequate resources away from development to health care and related services. A generation risks being lost. More and more children are acting—or trying to act—as caretakers for other children or for the elderly, and more and more families are forced to divert badly needed income for care and treatment of the sick.

As Secretary Powell said on World AIDS Day, "If humankind is to realize the great potential that the 21st century holds for prosperity and peace, the global response to this crisis must be no less comprehensive, no less relentless, and no less swift than the AIDS pandemic itself."

USAID'S HIV/AIDS STRATEGY

There are six parts to our HIV/AIDS strategy: prevention; care, treatment and support; working with children affected by AIDS; surveillance; encouraging other donors; and engaging national leaders.

First: prevention. This has been the cornerstone of our policy for the past 15 years. The single most important aspect of our prevention strategy is reaching young people and changing their behavior. Young people are often difficult to reach, but we have had some notable success working with local organizations to craft a message that they can embrace. In Zambia, for example, our work with 15- to 19-year-olds has helped delay the age of sexual debut by two years. As a result, HIV/AIDS prevalence rates have dropped by 50 percent in this group.

We also stress the importance of abstinence and faithfulness through our faith-based and community-based partners. We have seen in Uganda how effective a partnership of political and religious leaders can be and we have given them our strong support. And, of course, we distribute over 300 million condoms a year throughout the world.

We are also expanding our programs that prevent mother-to-child transmission of HIV/AIDS through the use of antiretroviral medication. Currently, we have them in Kenya, South Africa, Uganda, Ukraine, and Zambia.

Another important aspect of our prevention strategy is voluntary counseling and testing, for our experience has shown that those who know their HIV/AIDS status—and receive counseling if they are infected—are much more likely to behave responsibly than those who do not. They also make for very good counselors and care givers. So we work with them in programs all over the world. In the Dominican Republic, for example, we fund groups of HIV/AIDS-infected people who support 5,000 others who have the disease, as well as 19 self-help groups.

The second part of our strategy is the care, treatment, and support of those infected by the virus. While there obviously is no cure yet, we can help people survive longer by treating opportunistic infections such as tuberculosis and continuing to help countries build up their health care systems and infrastructure. Although prevention remains our primary focus, we have been providing funding for the care and treatment of people living with HIV/AIDS since 1987. Currently, we have 25 such projects in 14 countries. One example is Cambodia, where USAID funds an organization known as KHANA which organizes government nurses and staff from non-governmental organizations to provide home-based care.

As the cost of antiretrovirals (ARVs) has declined and the funding we have available has increased, it is now possible to consider incorporating ARVs gradually and selectively into our care and treatment programs. Accordingly, we have begun identifying potential sites in sub-Saharan Africa where the health care infrastructure is sufficiently advanced to permit their use. There continue to be a number of challenges we must address before we can make full use of ARV therapies, however. Among these are the adverse interactions between ARVs and TB medication and the need for basic laboratory services.

The third part of our strategy involves attending to the millions of children who have lost parents to HIV/AIDS or are at risk of doing so. I have been to Africa many times, and I have seen the faces of these children. The fact is we cannot give them what they need the most—their parents alive and well. But we can do our best to help them, and we are. We now have 60 projects in 22 countries that provide these children food, shelter, clothing, school fees, counseling, psychological support and community care.

In Romania, for example, USAID is sponsoring a modem pediatric AIDS Center that gives HIV-infected children and families care, support, and counseling. In South Africa, we are working with the Nelson Mandela Children's Fund to provide microfinance loans and community initiatives to support orphans and vulnerable children. This targets 250,000 affected children.

The fourth part of our strategy is surveillance. The nature of the HIV/AIDS pandemic is that we are always learning new things about it. Just as people's behavior differs from region to region, so, too, does the pathology of the infection. There are now at least 15 different sub-types of the virus that have been identified, and we fund research with the Centers for Disease Control and Prevention to understand better their dynamics of transmission.

Through our program with the Census Bureau, we have been tracking HIV/AIDS data for many years, and our figures have become the standard for the international community. But it is important that we keep monitoring the disease, tracking our programs, measuring their impact, developing new strategies with our partner organizations and coordinating our policies with other donor nations. This is the fourth part of our strategy and one that we must continue to expand.

The fifth component is our ongoing effort to encourage other governments and multilateral institutions to increase their financial commitments to the fight against the pandemic. The United States provides one-third of the world's resources to fight HIV/AIDS, four times what the next largest donor gives. We also supply one-fourth of the UNAIDS' funds and are the largest donor to the new Global Fund to Fight AIDS, Tuberculosis and Malaria. We have been able to leverage funding from other governments and foundations as well as coordinate strategies with other donors to get the maximum benefit from our programs and avoid duplication.

Finally, there is simply no substitute for leadership. Whether the issue is HIV/AIDS or democracy or building free markets and institutions, the single most important factor in a country's development is the quality of its leaders and their commitment to their people's well-being. As our experience in countries like Uganda clearly show, leadership can make an important difference. So the sixth part of our strategy is to encourage national leaders to become strong advocates for programs that educate people about the disease and what they must do to prevent its spread. In addition, we work with host governments to develop HIV/AIDS policies, to make the best use of their resources, and to utilize state media to broadcast prevention messages.

USAID'S COMMITMENT TO FIGHTING HIV/AIDS

USAID has been the U.S. Government's lead agency on fighting international HIV/AIDS for more than 15 years. For many years, we were this country's only federal agency that devoted resources to fighting the pandemic internationally.

In 1986, we provided funding for the global program on AIDS launched by Dr. Jonathan Mann at the World Health Organization. Our HIV/AIDS budget that year was just over $1 million; but our commitment has grown considerably since then, By FY '01 our budget had risen to $433 million and in FY '02 it reached $535 million. This means that by the end of this fiscal year, we will have spent more than $2 billion on HIV/AIDS prevention and care programs. This does not count additional funds that other branches of the U.S. Government are spending on programs and research.

For fiscal year 2003, I am proud to say that President Bush has requested $640 million for our HIV/AIDS programs. This represents a five-fold increase since 1999.

Over time, USAID has developed an expertise on international HIV/AIDS programs that is second to none. Ours is hands-on knowledge, derived from years of running programs in over 50 countries. One thing we know for certain: fighting

AIDS requires a wide range of technical experts. It calls for pharmacists, teachers, social scientists, specialists in behavior change, lawyers, as well as doctors, care givers, and epidemiologists. We have learned many lessons that have helped us make a difference in people's lives, and we have no intention of stopping now. We are continually looking for new ways to make a difference, to shape new programs, identify promising new techniques and innovative strategies. And as we learn, we are constantly evaluating ourselves and our programs so that we can fine-tune our approach.

It is important that we continue to provide a direct link between ongoing research and those who live in the developing world. An essential part of our strategy, therefore, is to fund the science. Our spending in fiscal years 2001 and 2002, for example, will total $16 million for vaccine research and another $27 million for the development of microbicides.

We fund applied research in 21 countries. Among the things we are working on are ways to reach youth—the most vulnerable group—with effective messages about HIV transmission and prevention; integrating HIV testing into existing health care procedures; improving programs to prevent mother-to-child transmission prevention; providing home and community-based care for those affected by the disease; and reducing the stigma of infection, so that those who have the virus can make use of the services that are available.

In addition, we monitor research that may have practical uses in the field. We test the findings in small pilot projects and adapt them for use in countries where they seem most promising. Then we develop the systems, protocols and training necessary to use these approaches on a larger scale so that we can help countries reach as many people as possible.

TECHNOLOGICAL INNOVATIONS

Over the years, USAID has introduced many techniques and strategies that would later become standard practices across the world. In the late 1980s, USAID supported the development of simple HIV tests to ensure the safety of blood transfusions. This prevented countless new infections and enabled hospitals to ensure the quality of their blood supplies.

In 1991, a study in Tanzania showed that treating other sexually-transmitted infections (STIs), such as syphilis and chancroid, reduced HIV transmission by almost a half. After that, treating STIs became a standard part of our HIV/AIDS prevention programs. Four years later we began a new approach known as periodic presumptive treatment. This entails foregoing lab tests, which are costly and time-consuming, and giving medication to high-risk populations, such as truck drivers, migrant workers and prostitutes on a regular basis, an approach which has been shown to reduce STIs significantly.

In 1995 USAID supported a three country study that demonstrated clearly what many had long suspected—that those who voluntarily undergo counseling and testing and know their HIV/AIDS status are much less prone to engage in unsafe behavior. In many cases, these individuals become powerful voices within their communities. In Uganda, for instance, where great strides have been made in lowering the prevalence of the disease, more than 500,000 people used these services. We now have voluntary counseling and testing programs in over 20 countries.

In 1996, USAID played a key role in the creation of UNAIDS. While UNAIDS has been a forceful advocate for HIV/AIDS funding, their function is not to fund services on the ground. That is done by individual donor nations such as the United States, Japan, Canada, Australia, and the Western Europeans.

In 1997 USAID was one of the first organizations to recognize the essential role that care, treatment and support plays in enhancing prevention efforts. Working with the World Health Organization (WHO) and UNAIDS, we developed the concept known as the "prevention to care continuum." This has now become universally accepted. Prevention, care and treatment are all critical components of an effective HIV/AIDS program. Care enhances our prevention efforts, reduces secondary epidemics like TB, and keeps people alive for their families and communities.

In 1998 USAID issued "Children on the Brink," a paper that focused attention on the plight of AIDS orphans. This was the first time that many statistics about these children were published, and it helped reveal another aspect of this terrible pandemic. Since then, we have launched support projects for HIV/AIDS orphans in 22 countries. An updated edition is expected this summer.

The first treatments that reduce mother-to-child HIV transmission were developed in this country in 1994, but at the time the process was very expensive and hard to duplicate in much of the developing world. By 1999, however, new studies revealed that Nevirapine could provide a much more cost-effective approach. The

drug, which requires a single dose each for the mother and the newborn child, costs only about a dollar. And better yet, the drug's manufacturer, Boerhinger Ingelheim, is making it available at no cost to developing countries.

PROGRAMS THAT MAKE A DIFFERENCE

Unlike diseases that can be treated by vaccines or antibiotics, the best strategy available to prevent the spread of HIV/AIDS is to change people's behavior. Doing this is never easy, especially when it comes to a subject as delicate and private as human sexuality. But we have learned techniques that work. Thirty million people over the last five years have received face-to-face counseling that has brought home their own risks and taught them how to protect themselves. We are confident that this has saved millions of lives.

Our mass media campaigns have reached hundreds of millions. And our annual condom distribution and social marketing activities probably avert a half a million infections every year.

In the early 1990's, we worked with the Government of Thailand to make it national policy that condoms be used in all the country's brothels. This helped decrease HIV and STI transmission rates substantially and has made Thailand one of the world's success stories. Lessons learned in Thailand are now being practiced within Cambodia and the Dominican Republic.

HIV prevalence among pregnant women in Cambodia declined by 28 percent from 1997 to 2000, and the infection rate among sex workers dropped by 57 percent between 1998 and 2000. In the Dominican Republic, too, condom use among the most vulnerable populations has increased, and men are reporting fewer sexual partners.

Another success story is Zambia, where as I noted above, HIV prevalence has fallen significantly among young people. A USAID-supported youth mass media campaign stressed abstinence for those who are not sexually active and condom use for those who are. The campaign also produced five television advertisements and an award-winning music video entitled "Abstinence is Cool." About 70 percent of the young people who live in the cities and 37 percent of those who live in rural areas reported seeing at least one of the ads.

Thanks to the support we have received from the White House and the Congress, we finally have the resources to begin making a difference on a global scale. As a consequence we are stepping up the war against the HIV/AIDS pandemic. I have already taken the first steps, upgrading our HIV/AIDS division to an office and putting it in the heart of our new Bureau for Global Health. Some of you may have already met the assistant administrator of that bureau, Dr. Anne Peterson. She is a medical doctor who has spent six years in Africa working on HIV/AIDS and other issues.

One of my most important management goals is to get more impact out of every dollar we spend. This means spending more of our resources in the field—where it is needed—and less of it here in Washington. Resources for field programs will increase from $192 million, or 61 percent, of our budget last year, to $389 million, or 78 percent, of our budget next year. So not only will we have more money to spend on prevention, care and treatment and children's programs, but more of the money will be spent directly on them.

We are also increasing our HIV/AIDS priority countries from 17 to 23 and adding substantially to what we spend on them. We have listened carefully to what Congress has been telling us. Sub-Saharan Africa continues to be our highest priority. Our new plan increases funding to it substantially.

We will also work to strengthen our regional programs so we can focus more strategically on regional "hot spots" where the epidemic is expanding rapidly, as well as migrant populations and cross-border interventions. We will be convening regional workshops to familiarize our staff with our new strategies. And we are working to establish a comprehensive monitoring and reporting system that will improve our ability to track the programs in our 23 priority countries.

We are also in the process of creating a central Condom Fund to consolidate our acquisition, save money, and get them to the field more quickly. This should allow us to double the number of condoms we purchase.

In addition, we are working with WHO, CDC, NIH and country partners to simplify and standardize treatment protocols. We are assessing the health care infrastructure in a number of countries to determine what needs to be done to introduce antiretroviral therapy. At the same time, we will continue to support and expand those low-tech but very effective services that improve the quality of life for people affected by this epidemic. These include home- and community-based care, treating tuberculosis, providing microfinance assistance, supporting families caring for addi-

tional children, and supporting organizations of people living with AIDS, giving them a voice and a seat at the table.

Last May, President Bush was the first to announce a contribution to the newly-formed Global Fund to Fight AIDS, TB and Malaria. To date, the U.S. has pledged $300 million, and President Bush requested an additional $200 million for the next fiscal year. Approximately half of that will come from USAID.

We have been actively involved in the formation of the Global Fund from the beginning, and participated in the first official meeting of the Fund at the end of January. USAID loaned staff to the Fund's Transitional Secretariat for six months, provided $1 million for Secretariat operations, and was key in providing technical guidance on AIDS issues during the formation of the Board.

We believe our experience and programs can serve as useful models for the Global Fund and can complement its aims.

In conclusion, I would like to emphasize once again how committed USAID is to stepping up the war against HIV/AIDS. We are in a race against time with a virus that shows no sign of letting up. As the rate of infection is still growing in many places, we have to redouble our efforts, speed up our processes, and constantly seek to refine our approach. While we have recorded some success stories, there are still many others that must be written. The war on AIDS will be a long and arduous one, but it is a war that we can, and ultimately, will win.

Thank you.

The CHAIRMAN. Thank you very much.

Madam Secretary.

STATEMENT OF HON. PAULA DOBRIANSKY, UNDER SECRETARY FOR GLOBAL AFFAIRS, DEPARTMENT OF STATE, WASHINGTON, DC

Ms. DOBRIANSKY. Thank you, Mr. Chairman, members of the committee. On behalf of Secretary of State Colin Powell, who is testifying elsewhere on the Hill on the State Department's budget today, I am pleased to appear before you to discuss one of the Bush administration's highest priorities, the global fight against HIV/AIDS, tuberculosis, and malaria.

As you very correctly pointed out in your opening remarks, the spread of HIV/AIDS continues unabated with some 8,000 deaths per day and 5 million new infections last year alone. There are 40 million people living with HIV/AIDS worldwide, nearly 3 million of whom are children under 15 years of age. We simply have no choice but to confront this pandemic.

Mr. Chairman, our battle against the HIV/AIDS, TB, and malaria pandemics is made easier by the steadfast support we have received from you and your colleagues on both sides of the aisle and in both houses of Congress. Simply holding this hearing today is critical in raising awareness and manifests how both branches of Government can and must work together if we hope to staunch the spread of these diseases, treat their victims, and find cures.

Two of your committee colleagues, Senators Frist and Kerry, deserve, I may say, special mention for their involvement with the work done by the Center for Strategic and International Studies on HIV/AIDS, work in which my colleagues and I have participated very directly and from which I know not only myself but others have benefited greatly. Many of your colleagues in Congress, including those on this committee, have played vital roles in backing the bilateral programs implemented by USAID and the vital work done by HHS and its agencies, as well as in facilitating the start-up of the Global Fund to Fight AIDS, Tuberculosis, and Malaria.

Mr. Chairman, I want to underscore this administration's commitment to this battle. Under the leadership of President Bush, the U.S. Government continues to be the global leader in the fight against HIV/AIDS. As Secretary Thompson referred to in his testimony, President Bush made the first pledge to the Global Fund by any government, and his request of an additional $200 million for the fund in fiscal year '03 sets an example for other governments and potential donors. The half billion dollars this administration has committed to the Global Fund constitute the world's single biggest source of support.

Last fall, the President came to the State Department for the Forum on Africa Growth and Opportunity Act and talked to the participants about AIDS in Africa. He included the fight against AIDS in his speech to the UN General Assembly. Also, he established a cabinet task force on HIV/AIDS, which is co-chaired by Secretaries Powell and Thompson, to coordinate his administration's efforts and to signify its high level of engagement. Like Secretary Thompson and Administrator Natsios, Secretary Powell has invested vast amounts of time and energy to this cause, for instance, having toured Africa last May where he saw firsthand the devastation these diseases have caused there.

In fact, last fall, to bolster and coordinate our fight against infectious diseases, Secretary Powell created a new Deputy Assistant Secretary position for International Health and Science in the Bureau of Oceans, Environment, and Science, a post filled by Dr. Jack Chow, who is here with me this morning. Dr. Chow was our chief representative at the negotiating sessions last fall of the transitional working group, the precursor to the Global Fund, with a delegation that included representatives from HHS, USAID, and the Department of the Treasury.

Dr. Chow spearheads an interagency working group that meets frequently to ensure that the U.S. approach is fully coordinated. This working group got started last fall in connection with the work on the Global Fund and will continue to meet on the fund as well as on bilateral programs. Indeed, the State Department works closely with other Government agencies and Departments, including USAID, HHS, CDC, and others, which contribute their own widely sought technical support, expertise, and experience.

Let me say a few words about the fund. The Bush administration views the creation of the Global Fund to Fight AIDS, Tuberculosis, and Malaria, which held its first board meeting last month, as one of the most promising steps in this 2-decade-old battle. The Global Fund, established as an independent foundation under Swiss law and based in Geneva, was created in record time by an unprecedented public/private partnership and thanks to the tireless efforts of a number of people here in this room today.

In approaching the establishment of the Global Fund, the President outlined a vision for what was needed for it to be most effective. All of the parameters we set forth during the negotiations on the fund were agreed to, and I would like to just share a few with you.

That the fund be based on a public/private partnership.

That the fund scale up the international response to these diseases with an approach that would complement, not compete with, existing international and bilateral programs.

That it promote an integrated approach, emphasizing prevention in a continuum of treatment, care, and response.

That it operate according to principles of proven scientific and medical accountability.

That it focus on best practices proven to work in the field.

That it involve developing countries in the design and operation of the fund and in the projects to ensure ownership.

That it ensure respect for intellectual property rights as a spur to research and development.

We are pleased that the preparations leading to creation of the fund, as well as the operations of the fund itself, have been conducted in an open and transparent manner, with a strong emphasis on attaining financial and program accountability.

Along with governments, NGO's, foundations, and the private sector were represented in the transitional working group that met three times last fall to establish the principles and operating mechanisms for the fund. Some of those participants continue to serve on the fund's board. Secretary Thompson already outlined the 18 voting members, including seven donor countries, seven developing countries, two NGO representatives, one foundation representative, and one for-profit private sector representative. In addition, UNAIDS, the World Health Organization, and the World Bank, as the fund's fiduciary agent, as well as a third NGO serve as nonvoting members.

I am delighted that the fund's board issued a call for proposals just last week and hopes to announce the first grant awards at its next meeting in April, which will be held in New York City. The board will have the final decision making authority on proposals. It will benefit from a technical review panel composed of experts in a variety of disciplines and serving in their independent capacities to review all proposals to ensure that submissions are based on best practices and are technically sound.

Proposals will come from partnerships of Government, NGOs, and the private sector through what is called a country coordinating mechanism. Significantly, where such partnerships are not possible, NGOs will have the right to submit proposals directly to the fund. Proposals from those countries and regions with the highest burden of disease and the least ability to bring financial resources to bear will receive highest priority. Proposals from countries and regions with a high potential for risk will also receive strong consideration.

Because HIV/AIDS, TB, and malaria know no boundaries, the fight against them, to be successful, must be waged on a worldwide scale. Accordingly, recipients of fund grants will not be confined to one region of the world at the expense of other regions. Nor will the fund focus on just one disease. As the name of the fund itself reveals, it targets AIDS, tuberculosis, and malaria. There are no set limits on how much of the fund's resources will go toward either a particular region or toward one of the three diseases. The U.S. approach has been to afford the fund's board maximum flexi-

bility in responding to proposals that come in from around the world.

The Global Fund is to complement significant bilateral programs of the United States as well as the bilateral programs of other countries and the efforts of the UN agencies and the World Bank. It is not a substitute for these efforts that are already underway. It will dispense the money it provides as grants, not loans. While the fund will be fully independent of the UN, it will benefit from and work with the UN agencies charged with improving global health, such as the World Health Organization and UNAIDS.

Of the $1.9 billion that has been pledged to date, some over several years, we expect $700 million to be available this year for disbursal. As you know, our contribution totals $300 million so far and President Bush's budget proposes adding another $200 million for next year.

The President announced the initial U.S. pledge last May in a Rose Garden ceremony with Secretary-General Kofi Annan, to whom we do owe a debt of gratitude for his tireless work, as we do to Dr. Peter Piot, who will be testifying next. At that ceremony, the President stated: "The devastation across the globe left by AIDS, malaria, and tuberculosis, the sheer number of those infected and dying is almost beyond comprehension. Only through sustained and focused international cooperation can we address problems so grave and suffering so great." In sum, that is why the fund is so important.

In conclusion, Mr. Chairman, there is, of course, a great deal of work still to be done, and the best indicators of our success will be the decline in deaths from and spread of AIDS, TB, and malaria. We cannot afford to take a deliberate approach for one simple reason: the fight against these diseases cannot wait.

AIDS alone has left at least 11 million orphans in sub-Sarahan Africa, and in several African countries, as many as half of today's 15-year-olds could die of AIDS. By 2010, the Asia/Pacific region could surpass Africa in the number of HIV infections. The fastest rate of HIV infection in the world is in Central and Eastern Europe and Central Asia. The disease is also spreading in regions close to home, particularly Central America and the Caribbean. Tuberculosis claims almost half a million people a year in India alone. Malaria, long thought to kill a million people a year, mostly young children, may actually kill up to 2.7 million people each year.

Time is not on our side and we must resolve to move as expeditiously as possible. Human lives depend on our ability to get the funding underway in an effective and successful fashion. Congress's role in this endeavor is critical, and that is why this hearing is so timely and so important.

Thank you.

The CHAIRMAN. Thank you very much.

Obviously, we cannot fund a good audio system in this room.

Ms. DOBRIANSKY. I tried to speak loudly.

The CHAIRMAN. No. It is not you, it is us. We are the world's greatest economic engine, and we do not have microphones that function. I apologize.

Let me ask both of you, because there is a good deal of confusion that surrounds the Global Fund. When the Secretary-General of

the United Nations called for a fund of $7 billion to $10 billion, he was calling for the need for $7 billion to $10 billion a year being spent to combat this disease. I think the vast majority of people who are aware of that, even reporters and those reading the newspaper and watching television, assumed that that related to this Global Fund. Then when they see that there is $1.9 billion pledged or in that range, the conclusion reached is that the world is vastly underfunding the need on a yearly basis. Notwithstanding the fact that we are funding roughly 50 percent of all the money being spent on all efforts worldwide, including here, relating to AIDS, we quite frankly look like pikers when the number comes up of what we are committing relative to the need.

Would one of you try to rationalize for me those numbers and those percentages so we can, at the outset, get a clearer picture of, (A) what is needed, (B) what the world is spending relative to the need, and (C) what we are doing relative to our share and responsibility of leading the world on this issue?

Mr. NATSIOS. Let me first say that the total amount that the United States Government will be spending, both bilaterally through CDC, through State, and through AID—the Defense Department has a small program; there is a small amount from Labor as well—next year will be $1,117,000,000. That is what is in the budget. Of course, we do not know what Congress will give us, but usually they do not give us less.

The CHAIRMAN. We usually give you more than you ask for.

Mr. NATSIOS. Yes, you do. That is correct.

The CHAIRMAN. So, go ahead.

Mr. NATSIOS. That includes our contribution to the Global Trust Fund. So, internationally the amount that we will spend at a minimum next year—I expect it will probably be higher, but what we have proposed is $1,117,000,000.

The CHAIRMAN. Now, how firm do you think the number attributed to the Secretary-General is which, as I understand it, is between $7 billion and $10 billion? What do we assess, if we were making such a judgment, is needed worldwide? Is that a number that makes sense? If it is $10 billion, we are contributing over 10 percent a year of the need, not actually committed, and if it is $7 billion, we are committing over one-seventh of all that is needed.

The reason this is so important to get on the record at the front end here is to give the American people a sense of the degree to which we think it is a problem, the degree to which we are responding to the problem, and the degree to which the problem remains unresponded to in the rest of the world.

Mr. NATSIOS. Let me add a few other comments in terms of this issue.

The CHAIRMAN. Please.

Mr. NATSIOS. The first is that we should not see the trust fund as the only or even primary mechanism for responding to the pandemic. Is it one of many mechanisms. The front-line troops are the ministries of health in these countries. The medical doctors, the public health professionals in the ministries are the ones who have to lead the charge. The second group is the NGO's that do international health programs in these countries.

There are UN agencies that spend money directly from their own fund. UNAIDS, for example. You are going to hear from the Director of that program. We give money to that. Now, that is not included in the money we give to the trust fund because it is a separate account.

In fact, WHO also has programs in various areas.

There are specialties in different institutions. For example, CDC are the best in terms of surveillance from the biological side of surveillance. So, we rely on them in the field. They have set up laboratories. I have visited the laboratories and seen the work they do in actually testing blood and that sort of thing and watching the spread of the disease, examining the 15 different subvariants of the disease that have developed. We do the surveillance on the public health side, on the behavioral side of it.

A lot of the coordination that you asked about earlier in fact takes place not in Washington or in the UN agencies. It takes place in the capitals of the countries that are fighting the disease because there are different problems in each country.

The CHAIRMAN. I would like to get to that later.

Again, I want the record set straight so we are all singing from the same hymnal and the same page of that hymnal. When you hear criticism—each of your departments—when it occurs that we are not doing enough, that the degree to which we are funding is insufficient, et cetera, it is a useful thing for us to factually understand the context in which what we are doing contributes to the solution.

So, when I travel around the world, I will occasionally get lectures on why we are not doing more on this particular issue, and yet, when you look at the overall numbers and you look at the percentages of the total expenditure that impacts upon the problem worldwide, maybe we should do more, but we are doing the lion's share relative to any other single entity in the world.

It is important for you all to lay that out because, as the doctor and I were saying earlier, we focus on the Global Fund as if that is the totality. When the Secretary-General says the problem is a $7 billion to $10 billion problem a year and you look at the Global Fund and the total pledges do not come anywhere near that, then the conclusion that reasonable people could reach, if that is all the information they have, is wow, we obviously are not very serious.

Yet, you tell me, and you have said in your testimony, that $1.117 billion is requested for fiscal year 2003. I am telling you that I expect that will be higher. So, somewhat in excess of $1 billion to what is labeled a $7 billion to $10 billion problem a year is going to be committed by the United States of America. At least for reasonable people, it should change the attitudes a little bit about whether or not we are being responsible.

What I am trying to do is make your case for you. You are not making it very well. Let me help you a little more.

Mr. NATSIOS. Thank you, Senator.

Mr. ALLEN. Mr. Chairman, if I may try to address that for you.

The CHAIRMAN. As a former staffer, you probably know how to do it better.

Mr. ALLEN. Thank you.

One of the things we cannot fail to realize is in addition to the $1.1 billion that is being requested directly from the administration to fund, we have also left out those funds that are being put into this global issue through U.S.-based NGO's, through the private sector, and particularly in terms of the antiretroviral treatment. The pharmaceutical companies are putting billions of dollars either by, one, providing free the antiretroviral therapies or cutting their costs significantly, some even 90 percent of cost. So, I think that you are actually right.

Let us assume the worst case scenario of Secretary-General Annan's estimates of $10 billion a year. At a minimum, the United States is doing in excess of 10 percent of that, whereas we are providing that. I think that the estimates would be much higher than that when you take all in total what our nongovernmental organizations are putting in as well as what the private sector of the United States is putting in as well.

The CHAIRMAN. I am not suggesting we do not do more. I think we should do even more. What I am trying to get at here is a baseline so that we are all again speaking from the same baseline, so we know what is going on here. That is the reason I asked the question.

Mr. NATSIOS. Senator, let me add to the comments I made. You asked me whether we think this figure is right. We do not have a precise figure. We do not now for sure. There are some countries where the rates may be higher than we realize or lower than we realize. These are sort of global estimates.

We think in AID that the Secretary-General's estimate was a reasonable one. Let me say that first.

Secondly, I have always believed, doing this work over the last 13 years, that you do not put all your humanitarian or development eggs in one basket because if you put it into one institution, whether it is a bilateral institution, international institution, a national institution, and it fails, you have a lot of people who die. So, having multiple actors who coordinate with each other and work together is a much better approach because then whoever is most successful, whichever institution moves most rapidly is the one that should get more funding. If this trust fund works as well as we hope it will, we should put more money into it, but it has not proven itself yet.

Some international funds have been remarkably successful over the years, without mentioning names. Some have been remarkably unsuccessful. We think this one is going to be a successful one, but it has yet to prove itself.

The CHAIRMAN. I have a whole line of questioning. I would like to get into the coordination issue and how we measure success and how we measure failure.

But what I am trying to focus on now is the simple proposition that in terms of gross numbers of what is needed, I think most Americans would think that we have been behind the curve, as we are I might add in a lot of aid programs in other areas behind the curve relative to other countries in terms of their percent of GDP and the like. So, I just want to get a sense of where it is coming.

With the permission of my colleagues, I will follow up with one question, even though my time is up. Can you give me, any of you

or all of you, an assessment of why you think, if my perception is accurate, other G–7 nations and the EU generally have not, in relative terms—or have they in relative terms—made similar commitments to this worldwide fight on AIDS? Have they? And if they have not, do you have a sense of why? Is it just not viewed as urgent? Or can you give me some sense or feel? This is not to say who are the good guys and bad guys. We are trying to get a sense of what kind of urgency has to be created worldwide in order to be able to do what we are by any standard as a world not doing nearly enough to deal with it.

Ms. DOBRIANSKY. Senator, if I may comment.

The CHAIRMAN. You can call me Mr. Chairman. That is OK.

Ms. DOBRIANSKY. Mr. Chairman, thank you.

The CHAIRMAN. It may not last, but you can call me that.

I know it is hard for a Republican to say that, but give it a shot.

Ms. DOBRIANSKY. I think that one of the reasons that maybe we have not seen others being as forthcoming as we would like to see them is I think a point that Andrew referred to, which in a way has impacted our own contribution to the fund. That is, the point that the fund is but one instrument in this effort. There is the expectation that we look toward its success. There is the anticipation that it will be successful, but there may be other countries that may be hesitant, trying to anticipate what its success will be.

In terms of bilateral efforts, I personally believe that we need to be more vigilant. In fact, I know that the Secretary of State has used every means—bilateral meetings, multilateral fora—with which to get this point across and drive the point home, that this is an urgent issue. It is one that we all must have a stake in and which we all must address.

But I would say with respect to the fund, some of the lack of movement may be grounded in the Fund not yet having a proven, successful track record.

Mr. NATSIOS. Let me add. Most of my friends in Europe who are development ministers who have the same portfolio I do—we talk about these things. We have an annual meeting called the Tidewater meeting that has gone on for decades that is development ministers off the record speaking. The Europeans do take a different approach to health problems than we do. We take a disease-directed approach. In other words, we will target malaria or tuberculosis or HIV/AIDS. They take a health systems approach. We do that too, but if you looked relative to the amount of money we spend, Congress has preferred—and AID agrees with this approach—that a disease-focused approach is a better one.

It is legitimate disagreement. We do not have yelling matches over this. In fact, they complement each other. They put more money into systems. We put more money in fighting specific diseases, but we need the systems to do that. So, the two actually complement each other in many ways. So, the Europeans will say, if they were here, well, you are being a little unfair to us. We put the money into systems.

I might also add our other health programs are also integrated in our programming in the field. We do not have programs that are sort of isolated from the rest of the mission. We do a country strategy in each of the 75 countries we are in, and there is a health

strategy which includes HIV/AIDS. It also includes population, women's health, and child survival programming. Those get woven together and they all affect each other because we know that, for example, by the antiretroviral nevirapine being administered once prior to a woman delivering, we can reduce more than 50 percent the transfer of the infection to her newborn child. Well, that is also a child survival program. So, we are looking at this sort of in a tunnel way, when in fact the reality in the field with the ministries of health, with the NGO's, and with the AID agencies is a much more integrated approach.

The CHAIRMAN. That was the point I was trying to get at because I am not in any way criticizing or castigating Europeans or anyone else. I think it is important, this notion you have just put forward, this sort of holistic approach, that we are as a community and the industrialized world actually paying more attention to this collectively than is essentially given credit for.

We are not looking for credit. We are looking for a sense of cooperation. There is a whole range of issues that are north-south issues, that if we could communicate more accurately the degree of the concerns, we would also impact on the political side of this equation as it relates to things having nothing to do with AIDS or health issues. That is why I raise it.

But I will come back because I have gone over my time. I thank my colleague. I yield to the Senator from Tennessee.

Senator FRIST. Thank you, Mr. Chairman.

I want to continue a little bit on the question that I started with Secretary Thompson, or without him here or the Secretary of State here, instead of talking about cabinet level organization and focus at that level, I would like to explore what has been fascinating to me, and that is the relationship between the CDC and USAID on the ground.

Most of the people on this particular committee understand the importance of being on the ground, traveling to the various countries around the world, talking to real people, seeing what the policy or the money that we have been talking about actually translates into.

Mr. Natsios, in your written testimony, you stressed the importance of not just spending money and seeing money is allocated here, but to make sure it gets down to the local level where very successful programs, again that you outlined, like voluntary counseling and testing, we know works. We know it works. The problem is a lot of times our support, our intentions do not translate to on-the-ground. That is why I try to get to Africa every 6 months to a year and try to go and look at individual programs and talk to real people. The answers are there. Now we need to highlight them and make sure they are adequately supported.

I mention all of that because about 3 or 4 years ago, when I went to Kenya and I think it was Uganda the other day, comparing the relationship between the CDC and USAID, it seems to be different. I cannot figure it out yet. So, I would like for maybe Mr. Allen and then maybe Mr. Natsios, both of you, to explain to me your perception of the relationship between what the CDC is doing and what USAID is doing. Are they duplicative still at all, or through con-

tract relationships and working side by side, are those differing roles beginning to merge in a more coordinated way?

It is clearly different, for example, in Kenya now versus 3 years ago, and in Uganda the same. A tremendous success story. We spent about $120 million there over the last 10 years of taxpayer money, last year probably $25 million. Those are very rough figures. By CDC and USAID working together on the ground, supporting programs like VCT, voluntary counseling and testing, we have seen a 30 percent incidence of infection go to 6 percent or 7 percent. That is dramatic. A good investment for the American people and for the support of issues like the Global Fund.

My question after all of that is basically what is the role of CDC and USAID on the ground, and are they working hand in hand as effectively as they might?

Mr. ALLEN. From the HHS perspective—I think probably all three would share this view—on the ground we take direction from the ambassador. So, therefore, the State Department takes the lead in government relations there.

From HHS' perspective our relations differ in some sense—are not duplicative of what USAID does in that we work directly with the public health system, the public health service in country. Unlike USAID, CDC does not do direct contracting. We do not contract with providers. We have to work directly with the public health authorities. So, therefore, any country in which CDC is operating, we would have somebody on the ground working through the public health system in that country to develop capacity to provide infectious disease surveillance, response, training, but we do coordinate our activities very closely with what USAID is doing on the ground. So, I think just starting with that, it really is a different role because what we are required to do under statute, what we do not have authority to do on the ground.

Senator FRIST. How many countries, HIV/AIDS-related, is the CDC in right now?

Mr. ALLEN. We are, right now, in 18 countries, and by the end of the year, we will be in 25.

Senator FRIST. Mr. Natsios?

Mr. NATSIOS. Yes. Let me sort of go over the two respective specific focuses or ways we operate. We have a written memorandum of understanding. It is several years old. If you wish a copy of it. It goes into some detail as to what we do and what CDC does.

Senator FRIST. Can I ask you one question just so I can keep it in the record about the same?

Mr. NATSIOS. Sure.

Senator FRIST. They are in 18 countries now, HIV/AIDS-related. How many countries are you in?

Mr. NATSIOS. We are in 17 countries. We will be in 23 countries. This is in big programs, in major focuses. We have programs in a lot more countries that are more modestly sized.

Senator FRIST. That is helpful.

Mr. NATSIOS. CDC has expertise in disease surveillance. In fact, when we designed the disaster assistance response teams in OFDA, which you are familiar with, 10 years ago, there is a specific seat for CDC on that DART team. So, we take them to the field with us in most major emergencies, whether they be natural disasters

or famines because they set up the surveillance system for us. We have money, for example, the $600,000 in the Afghanistan budget for CDC to set up a surveillance system for disease in Afghanistan. We do not want to replicate that.

The second thing they do very well is on blood supply safety. You know that is one of the way in which the disease spread in the United States in the early years and continues in many countries because there are not adequate systems in place to test the blood. CDC has expertise in that that we do not have. We do not want to develop it. So, they do that.

They also have laboratories in which they conduct clinical studies in the field, once again, from sort of a biological standpoint.

Our expertise in AID is in public health. We have hundreds of people with master's degrees in public health or Ph.D.'s. We have a lot of medical doctors too. But the focus in AID is community health prevention in all our programming, not just in HIV/AIDS.

So, on the prevention side, we actually work through the ministries of health, NGO's, faith-based communities, and community groups and private contracting companies. We will hire private companies that will go in and do social marketing for us. If we want to do an advertising campaign, we do it with the ministry of health, but they actually come in and design the advertisements with the ministry of health's approval for billboards and radio ads and posters. If you go to many countries and you see them, if you look very carefully, at the bottom it will say it is an AID funded project. That is one of our great strengths. Those programs are successful.

We will give grants to NGO's to create a mechanism for community-based counseling for teenagers, for example. We do after school programs through the mosques and the churches and through the NGO's to counsel teenagers on postponing their sexual debuts. That is the term used by the clinical people. It is not my term. That has a profound effect on infection rates. We know that works. We are expanding that.

We just did an Africa-wide——

Senator FRIST. Let me just say that has been hugely successful, having been on the ground again, to see that that delay of 18 months or 2 years radically changes both behavior after that period of time but also during it.

Mr. NATSIOS. It does.

Senator FRIST. I just want to commend you because it is one of the great successes.

Mr. NATSIOS. Thank you.

We also do a lot in the treatment of STD's. We know that sexually transmitted disease, if you have it and then you are exposed to HIV/AIDS, there is a dramatic increase in the incidence of infection. So, if you treat the STD's, you reduce the spread of the infection of the HIV.

Senator FRIST. I am going to ask you to speed up. We are in the middle of a vote. So, I am going to go in a second. Go ahead and make your final point.

Mr. NATSIOS. In any case, so they are program design, program implementation. They tend to not be laboratory centered but on the prevention side and the public health side.

Senator FRIST. That is helpful.

Mr. NATSIOS. But we have a detailed MOU on that. We have had it for several years, and it goes into some detail as to what we do and do not do.

Senator FRIST. That is good. That is very helpful.

The Chairman I think in the point he made initially, in terms of the overall global spin, I think is important. It more addresses policy makers because we, like all of you, are traveling around the world answering questions. I think most of us think we need to put a lot more money in, but we need to really be able to document where we are putting money now, how much, as well as do what Jeffrey Sachs and others we will hear tomorrow about defining the big, big problem. I think that is a useful exercise for us.

Let me jump to something conceptually again. The Global Fund, as important as it is, does not reflect the overall efforts of the United States. It did not exist a year ago. There have been no programs approved. Yet, we have already committed or intend to commit $500 million, and that is a third of the fund. So, I think we ought to put more in it and I am going to argue for it. Yet, people do have to remember that fund did not exist a year ago. There have been no programs approved. The applications are just not out there. So, we need to do it in a step-wise, systematic way.

Right now we have got the CDC. We have got USAID that have been in the field. I have seen the programs work. Some do not work. We need to move beyond those. On the Global Fund, we do not know if it is going to work or not. We are trying to construct it in such a way with the right oversight. When people say why do you put money in the Global Fund, why not put it in the programs like CDC, USAID who are in the field already working—so my question is how you answer that, number one.

Number two, as we spend out of the Global Fund, will this money end up coming in part back to CDC, USAID type programs? Will some of that money that we are spending there, through the applications being made, feed back to the support of CDC, USAID on the ground?

Ms. DOBRIANSKY. If I may answer this. First, I think the fund has, even in its present state since coming into being January 1 of this year, significantly elevated global awareness and consciousness of HIV/AIDS, tuberculosis, and malaria.

Second, I think we have already referred to the importance of a diversified approach. In this case, I think the great value of the fund is that you have a global response. You have a diversified set of stakeholders coming together in support of an urgent issue, one that must be dealt with, one that deserves a remedy and a quick one.

Third, I would say that it is also very unique in terms of the public and private partnership. The fact that proposals are being solicited, are open to country coordinating mechanisms, which I referred to in my testimony, which basically pull together not only government entities but elements of civil society—the full scope of civil society. As you very well know, that is the most effective strategy to combine all efforts together, not just one. I think in that regard, our investment is a very worthwhile one for all of these reasons.

Mr. NATSIOS. Senator, if I could just expand on that just slightly. The fund will allow us in addition several benefits. It is the same rationale for GAVI, the Global Fund for Vaccinations and Immunizations, and that is economies of scale in terms of purchase. You know when you do volume purchases, you can get the price down per unit of what you are purchasing. The Global Fund will allow us to do that. While we do huge purchases—we will purchase 500 million condoms this year, for example—if you buy 3 billion, you obviously get a lower price and you can set up logistics systems for distribution that can be very useful. So, there are economies of scale that will allow us to reduce costs per unit.

The second is that we are providing and will continue to provide technical assistance to the applicants to the fund to make sure that their proposals are going to meet the standards that have been set up that everybody has agreed to. The southern countries have agreed and the northern countries have agreed what the standards are. We want to make sure that the institutions that we think have the execution capability, the implementation capability actually write the proposals so they get through this process properly. We are providing technical assistance to them to do that.

We are not going to apply. AID will not apply for any money in the fund. That would be self-defeating.

But it is also the case, I might add, that the way this will work is many ministries of health will work with local NGO's jointly to do proposals. The NGO community does not get one grant. Having been in the community for 5 years, I can tell you how it works. You do not get one grant from one donor and that is your program. You can get 10 donors to give money toward one huge program in one province, and you put them all together. You piece them together. There is one common program design, but you get multiple donors. That is what the UN agencies do too.

I expect some of the NGO's and ministries of health that are getting money from this fund are also getting resources from either CDC or from us at the country level. The benefit is, again, this economies of scale once again.

Senator FRIST. Let me move on. I think that has been very helpful to me, the whole discussion on the relationship between the two.

Madam Secretary, I appreciate you mentioning the CSIS project that many people in the room and many people on this committee are participating in, which is a longstanding project looking at a number of the issues that we can touch upon in these hearings but we do not have the time to really go into much more depth. So, I look forward to continue working with many people in the room on that.

We have three panels today and we are in the middle of a vote. I am going to leave in about 2 minutes, and the chairman is on his way back. So, we may suspend for bout 3 or 4 minutes.

But the issue of treatment is fascinating when you are on the ground. We have already talked a little bit about it, the antiretrovirals, which from sort of the north standpoint, western standpoint, are very effective. We do not have a cure for HIV/AIDS. We need to keep saying that. It is an incurable disease as we know it today.

Then you start thinking of linking prevention, care, and treatment. Again, as a physician, you have got to have care and treatment part of this equation. Prevention is where the answer is because we do not have a cure. Behavior is where the answer is for the time being, but the care and treatment opens up hope. It brings people in. The rapid testing, revolutionary because technology has made that possible over the last 6 months where you can come in and in an hour, a teachable moment because of this new test that costs about $1.20 instead of a $335 test which would take 2 weeks. To me it shows where this merger of technology, social policy, teachable moment all come together and has been very successful to date.

The antiretrovirals are a big part of potential treatment, but you have to look at some basic things like the treatment for opportunistic infections, other sexually transmitted disease, nutrition, all of which we know also does what antiretrovirals do, and that is prolong life and in many cases even in a more powerful way. So, we cannot just focus on the antiretrovirals.

With that, could any of the three of you—actually I am going to leave. So, I am going to throw that question out there. When the chairman comes back—I know we have got two more panels to go, but I would ask that you stay for a few minutes because I am sure he will have one more round of questions with you.

But this issue of treatment—and my question is going to be what is the CDC doing, what is State doing, what is USAID doing in terms of programs to look at this more complex, comprehensive, really more intricate way of treating which in truth is equally important, I would argue, to antiretrovirals today.

With that, I think we will suspend, though we will start back within about 5 minutes. Thank you.

[Short recess.]

The CHAIRMAN. We will come back in session, please.

Senator Frist has a few more questions, as I do. The reason I left early is to be able to go vote at the front end here and he is now voting. By the time I finish my questions, he will be back and will ask his questions. Then we can release this panel, which has been very, very helpful to us. I appreciate it.

Mr. Natsios, I would like to ask you, as well as anyone else who would like to respond. I have been told that less than 50 percent of the African countries have adopted a national blood transfusion policy, and less than one-third of the African countries have a system in place to limit HIV transmission through blood transfusions.

The first question I have is, is this accurate, to the best of your knowledge, or do any of you know?

Mr. NATSIOS. We believe it is pretty close to accurate, Senator.

The CHAIRMAN. What programs does the United States have to ensure, if there are any, that developing countries, particularly in Africa, are able to put in place systems for handling blood supply? Are we working with individual countries? What are the programs we have?

Mr. NATSIOS. CDC runs the programs that set up the laboratory systems to do the testing with the ministries of health. In the countries that they have been able to do this, I understand that they have been successful in treating and testing. I am less familiar

with the details of how the laboratories work. I visited a couple of them.

Mr. ALLEN. Through the Food and Drug Administration and the Department of Health and Human Services, it really has the focus on protecting the blood supply. We work in coordination with CDC and countries, but we also work with NGO's, such as the American Red Cross, to ensure safe blood supplies. So, working on the ground in those countries, we are being very effective in addressing and securing the blood supply, and that is a critical step in stemming the tide of the spread of HIV/AIDS, but also in bringing down the risk associated with others contracting the disease through tainted blood.

The CHAIRMAN. Do we have any sense of to what degree, if any, the transmission occurs through tainted blood in Africa or generically? In other words, if you have 50 percent of the countries, roughly, that do not have anything in place that would in any way be able to guarantee the blood supply, particularly as it relates to the transmission of AIDS, do we have any sense of how big a problem that is as a percent of the problem?

Mr. ALLEN. I do not have those numbers. We can certainly get that information for you.

Mr. NATSIOS. It is about 5 percent, Senator. Five percent of the incidence of HIV is attributable to blood transmission, that is, transmission through blood supply. As you can see by the 5 percent, it is not the predominant problem.

The CHAIRMAN. No, no.

Mr. NATSIOS. It is a problem but not the predominant problem.

The CHAIRMAN. But it seems to me that it may be one of those problems where you could—nothing is easy. You have at least the theoretical capacity to close that window of 5 percent, whereas you cannot quantify and/or be as certain that you can do that as easily with regard to teaching abstention or other things that are not as measurable, not as easily measured. That is why I raise the question.

Mr. NATSIOS. There are actually four or five countries now where we do have programs that CDC runs. We do not run them.

Mr. ALLEN. Right. We have programs currently in India, Kenya, Uganda, Tanzania. I do know that while in New York at the Global AIDS Summit, we had discussions with the Chinese who were very interested in looking at what the United States was doing in terms of our blood safety programs. Others are looking to the U.S. and our Government agencies to work in those areas of securing the blood supply.

The CHAIRMAN. Is there any institutional or infrastructure and/or cultural resistance? Is there anything preventing us from assisting in improving blood supply systems other than we just have not been able to get to it yet? I am not focusing on this as any failure. I am just trying to get a sense of whether or not there is any reason, other than just not being able to—because this is such a gigantic problem—get to it more effectively, more quickly? Or does it relate to dollars? Does it relate to infrastructure in the country?

Mr. ALLEN. I think it goes to all of that. I think part of it is infrastructure. If you cannot store blood, if you cannot test blood, if you do not have the laboratory facilities to assure that, that is all part

of the problem. Of course, money goes to the heart of that in many ways.

The CHAIRMAN. That is why I was asking.

Mr. ALLEN. I would think it is less of the former, the cultural differences that might exist. I think it is really technology.

Mr. NATSIOS. If I could add a couple of things. We are doing very extensive use of this rapid testing. It was AID field research that discovered that a rapid test will double the number of people who go into the clinics to get it done. If you use a rapid test as opposed to a test that takes days for the results to come back, if they get the results immediately, the number of people who are willing to go in and be tested doubles. This is true in the United States. It is true in the developing world. It is just a part of human nature. If you can do the tests rapidly and people know, their behavior does change fairly quickly for a large number of people. So, that can stem the spread of the disease.

In some countries, Senator, there is not a very large blood supply, I have to tell you, because there are not large hospitals. There health systems are more clinic-based and preventive-based as opposed to treatment in terms of surgery and that sort of thing. So, you will find a lot of countries without large blood supplies where this is an issue.

The CHAIRMAN. That was my next question.

One other thing I would like to ask you about is to the extent that you can characterize it with any degree of certainty or accuracy, how widespread—let us start with the continent of Africa, which is obviously a gigantic continent and is as diverse as any other continent in the world. But we have been focusing a little bit on it. How widespread do you believe among the populations at large is the knowledge of the extent of the virulence attached to and the method by which the disease is communicated in terms of just public education? How much awareness is there? I am not talking about the government level. We always talk about the government level and whether governments are willing to admit to or acknowledge or deal with it, et cetera. I am not talking about an official response. I am talking about if you were to walk into a low-income area populated with 750,000 people and you asked about HIV/AIDS, would you find an awareness as to the extent of the disease, as well as the means of transmitting the disease and the means of slowing the disease?

Mr. NATSIOS. The understanding of the disease, the existence of the disease, and the risk generally is very high in Africa. It is perhaps well over 90 percent. If you did a survey of the population, have you heard of this disease and do you know what it does to you in a generic sense, the answer is virtually the entire adult population in many countries do. The social marketing has been very effective. When the heads of state begin campaigns on this, they do not just make one speech. They make repeated speeches. They go to the countryside. They use radio. They use newspapers and posters and all this.

The problem is—and it is the same problem in the United States—whether you yourself are at risk. And this is the problem with teenagers here in the United States where the kids will say, yes, I know drunk driving is a problem, but it does not affect me

and I am not personally at risk. That is a problem with teenagers everywhere in the world in particular. So, the understanding of the risk that a person has of getting is not very high.

The CHAIRMAN. Let me ask you. My impression from dealing with this for some time is that the perception of risk is not as cavalierly viewed in the United States as you made it appear to be. The perception seems to be less pronounced in other countries. In other words, it has impacted on behavior here in terms of sexual behavior, not to the extent we want it to, but it has had impact. It is not like drunk driving, at least the statistics I have seen.

What I am trying to get at is what portion of your efforts to change behavior—again, please do not read into this that I am suggesting that is the answer, that all we have got to do is just say no. I am not suggesting that at all. I am trying to get a sense, though, of how real a risk it is viewed to be, and is it just like it is in any other—that is, there is no distinction.

Mr. NATSIOS. There is a distinction regionally and there is a distinction on different age groups. There is, for example, a very high understanding in East Africa. There is less understanding in West Africa.

The CHAIRMAN. To what do you attribute that?

Mr. NATSIOS. It is a matter of how advanced the disease is, the religious traditions of the country. Muslim countries have lower prevalence rates I have to tell you, substantially lower in many cases. It does not mean it is not present. It means the infection rates for a country that is 100 percent Muslim is substantially lower than it is in other parts of the developing world. So, those value systems, the religious traditions do affect this.

We are seeing success in behavior change in a number of countries where the disease is advanced. I have many Ugandan friends for many years, and some of them are fairly prominent people in their country. Several of them have decided not to marry because they can never be sure that their marital partner would not be infected because the infection rates are so high. It is a tragedy because they would like to marry, but these are some prominent people who have actually said we will be celibate our entire lives because of the extent of the disease. I am sure if the same level of disease spread took place in the United States, people would make the same judgment in the United States. It is a matter of survival.

It is changing people's behavior, I have to tell you, without even our program, because when you have a certain number of deaths in a village—in South Africa now in some areas, they are burying people in the same grave on top of each other. They are layering them because there is no room left in the graveyards. One NGO I was talking to in South Africa where I visited one of the clinics was telling me that they will have in some villages funerals from 6:00 in the morning till 6:00 at night on the weekends continuously all day long for what is happening. Now, that does have an effect on the population. People see what is happening. They understand it.

The problem is when it reaches that level, then it is too late, obviously, in many cases to stem the spread of the disease. So, our job is to prevent it from spreading so that eventuality does not take place.

The CHAIRMAN. Do you want to make a comment?

Mr. ALLEN. I was just going to comment that I think that the other component to that is political leadership. I think that you will see the level of awareness of the program closely attributed to political leadership. Countries like Uganda, Senegal, Malawi, countries that have taken a very aggressive stand from the very highest ranks of government, have been very successful in addressing the low-hanging fruit, those areas of mother-to-child transmission, securing the blood supply. I think that we have seen, through those leaders, the ability to get a message out. I think that is where we have to engage across the spectrum the political leadership as well in this debate and discussion to begin to educate the public about how the disease is contracted and how one can prevent from contracting it.

The CHAIRMAN. Senator Feingold.

Senator FEINGOLD. Thank you, Mr. Chairman.

I understand there was some very useful discussion of the Global Fund after I left, and I will certainly review the transcript with interest. I had indicated that I feel we do need to dedicate more resources to supporting the Global Fund, but I also do strongly agree with the statements that were made in my absence about the importance of a diversified approach, whether it be bilateral or multilateral mechanisms, and it is especially true if those efforts are well coordinated.

I think there is no doubt that the United States is a leader in the donor community when it comes to the fight against AIDS. You just mentioned Senegal. I saw that last February. In part, the efforts of USAID and others have led to a terrific program and success of bringing together seemingly all elements of society in a very positive effort in this regard.

But it is precisely for that reason that I am concerned about the fund. I think U.S. leadership is going to be required to actually make the fund the strong tool in our arsenal that it has to be.

Mr. Chairman, I am just going to leave it at that. I will have an opportunity tomorrow in the hearing that you have urged me to chair to explore this with some of your colleagues. I just want to thank the panel for all your effort and time.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Before the panel departs, I had contemplated today having in the panel of Government witnesses the CIA, as well as the Defense Department, which I may yet do. But I will not take the time now, but the national intelligence estimate produced by the Central Intelligence Agency entitled A Global Infectious Disease Threat and its Implications for the United States, the January 2000 report, has a pretty sobering estimate. Actually it is more pessimistic than what was communicated here today. But the point is that they reached several conclusions, one of which is that this epidemic will challenge democratic development and transitions and possibly contribute to humanitarian emergencies and civil conflicts in the world. The Defense Department rates this as a greater concern than an attack from an ICBM, for example, in terms of their interests.

So, this is not merely—it need only be the humanitarian catastrophe that it is producing, but our security agencies are saying

that the cost is not only in school teachers, for example, and doctors and people who run the country, but it is among officers of mobilized militaries in sub-Saharan Africa, and increasingly among those states, which I will not name, that have the possibility of being categorized as rogue states.

So, this is a multi-faceted dilemma that the world faces and the U.S. faces that goes beyond what we tend to only think—not you all, but when we talk about AIDS and we think of it, as we should, in terms of the humanitarian catastrophe, that it has so many implications, including national security implications, which I think warrants us paying even more attention. Through the leadership of all of you and the agencies you represent in the administration, I think we are on the right track here.

Yes.

Ms. DOBRIANSKY. Mr. Chairman, if I may just make a comment on that. Before taking this position, I had seen a product of the National Intelligence Council, which was a precursor to the one you are citing, which was on global trends 2015. It addresses a range of global issues, citing that if they are not dealt with, that they will cause conflict and instability in the future. And then the report that you mentioned was singled out on infectious diseases.

I have to say we have at the Department, through the Bureau of Intelligence and Research, held a number of conferences which have brought in both the public sector, different parts of the public sector including DOD and other agencies, and the private sector, to discuss not only the humanitarian ramifications but as you pointed out, the security considerations.

Also, the Council on Foreign Relations published a report which concluded that the spread of HIV/AIDS and infectious diseases is a security threat and one that the U.S. Government and the world at large must address because it affects us all.

The CHAIRMAN. The International Crisis Group issued a report on the 19th of June of 2001 which reached several conclusions. I will just read part of one and let you go.

On page 21 of the report, it says, "Anything that weakens a state, threatens its military, but also its institutions may create an environment in which states pose outside aggressors a more tempting target. When major powers are weakened, the effect is less likely to present itself as an invasion in war, but instead increase turbulence and minor violence in the international system. The larger the country, the larger the potential to stabilize an impact in the international arena. What happens in Russia, India, China, with huge populations, large militaries, historic rivalries matters a great deal elsewhere." And this goes on.

So, I just hope those who are listening to this hearing from the public at large who think maybe we are spending too much time and energy focusing on, as not many, but some say, the problems in other parts of the world understand that this is our problem. This is our problem.

I thank you all very, very much. I appreciate your consideration and your time and your patience in the way this has been running. So, thank you.

By the way, we will, with your permission, probably have some questions submitted to you, if we may, in writing.

[The questions referred to and the answers submitted thereto, follow:]

RESPONSES TO ADDITIONAL QUESTIONS SUBMITTED FOR THE RECORD BY THE COMMITTEE TO UNDER SECRETARY OF STATE PAULA DOBRIANSKY

A recent article appearing in *The Lancet* raised concerns over the capacity of potential African grant recipients to meet the standards the Global Fund has set for the preparation of applications and the implementation of Fund-supported activities, including project monitoring. The authors suggest that the Fund's standards and objectives could pose undue burden on ministries of health in Africa and lead to early disappointment with the Fund's performance.

Question. Would you share with us the requirements for fund applications and monitoring?

Answer. The Global Fund to Fight AIDS, Tuberculosis and Malaria has established the principle of public-private partnership as a critical aspect of its functioning. This principle is particularly important at the country level, where proposals are developed and implementation will occur. The work of preparing applications can and should be shared among all partners, not only ministries of health. The Fund requires that proposals be developed and implemented by Country Coordination Mechanisms (CCMs) that include all relevant partners at the country level, although there is a provision allowing NGOs to submit proposals directly to the Fund where such partnerships are not possible. These do not have to be new groups. The intent is to build on already existing coordination mechanisms to develop initial proposals, and over time to strengthen them. The Fund has been able to learn from the experiences of others, including the Global Alliance for Vaccines and Immunizations (GAVI), the subject of *The Lancet* article.

While one goal of the application process is to be as simple as possible, there must be sufficient information to ensure that only high-quality projects are funded. There is also a need to ensure that appropriate financial and program accountability structures are in place at the country level.

Each proposal will include a monitoring and evaluation plan. The Fund itself is establishing its own monitoring and evaluation framework at the global level. To the extent possible, the Fund will build upon monitoring and evaluation frameworks established by other donor organizations and multilateral agencies such as the World Health Organization. It is expected that Fund partners such as USAID and HHS at the country level will contribute to the process of establishing, strengthening, and supporting data collection systems at the country level.

The details for monitoring and evaluation are currently being discussed in an international working group that includes representation from HHS and USAID, both of which have extensive expertise in monitoring and evaluation. The goal is to have meaningful measures that not only enable countries to monitor their own progress, but also allow the donor organizations and countries to assess the impact of the Fund's grants portfolio.

Each proposal will also have to demonstrate strong and transparent arrangements for financial management and control.

Question. To what extent do you share the concerns raised in the article?

Answer. There is broad recognition among those involved in creating the Fund that many prospective recipients have capacity constraints. That is why USAID, HHS, other donor countries and multilateral organizations have committed to providing technical assistance, as appropriate and upon request, to help country partnerships prepare proposals, implement projects, and conduct monitoring and evaluation. These partners can help the country partnerships identify existing programs and resource availability, as well as programmatic and resource gaps that the Fund can fill.

The Fund has been established as a public-private partnership and proposals will come from partnerships, not from governments, although governments are expected to be important partners in most instances. The Fund was established based on the premise that no one sector or institution has the capability alone to deal with the problems posed by AIDS, tuberculosis and malaria, and that partnerships are, therefore, vital. However, the Fund also recognizes that building country capacity to implement and monitor programs is an appropriate area for Fund support. Fund donor partners, such as USAID and EMS, will continue to emphasize capacity building as part of their bilateral programs.

We consider financial accountability and monitoring and evaluation critical to establishing and maintaining credibility and transparency. Meeting these requirements will require some attention and effort on the part of country partnerships, and should be considered as worthwhile investments. The Fund can help countries build adequate systems for health data and fiscal accounting that will not only assist in monitoring the progress of the Fund, but also will aid the countries in improving their health care infrastructure.

Question. What role do you see the Agency for International Development, the Center for Disease Control and Prevention, or other U.S. agencies in helping African applicants meet the standards the Fund has set? What assistance, if any, has already been provided?

Answer. It is not only African applicants who will need assistance in meeting the reasonable and prudent standards set by the Fund. State and USAID have sent a series of cables to the field to brief our embassies and missions overseas on the Fund and to encourage them to work with Country Coordination Mechanisms (CCMs) to help in the proposal preparation process.

USAID is presently developing a strategy to utilize mechanisms and capacity at the global and regional levels to provide technical assistance to CCMs for proposal development, and to ensure that our bilateral support is coordinated with expected support from the Fund. USAID is also developing a process to mobilize technical assistance resources from a range of its contractors to provide assistance to CCMs at the country level, to help identify critical gaps and constraints to scaling up successful activities, so that Fund proposals submitted to the Fund can address those gaps and constraints.

Thus far, HHS, through field staff of the Centers for Disease Control and Prevention (CDC), has been invited to assist with the Global Fund proposal process in six countries: Botswana, Kenya, Mozambique, Tanzania, Uganda, and Zambia.

- In Botswana, HHS will serve on the MOM's technical advisory committee for review of incoming TB proposals and on the National AIDS Coordinating Agency's technical advisory committee for review of incoming HIV proposals.
- In Kenya, HHS, along with other donor groups, will be given the opportunity to review the submission.
- At the request of those involved in preparing a proposal, the HHS Global AIDS Program staff in Mozambique has provided input.
- HHS Global AIDS Program staff in Tanzania will provide technical input on that country's proposal.
- HHS staff in Uganda has been invited to meetings at the Uganda AIDS Commission.
- In Zambia, HHS Global AIDS Program staff has worked on the TB portion of the proposal.

Furthermore, staff at HHS and USAID has been involved in the various working groups established by the Fund to develop guidelines for monitoring and evaluation and other technical matters. Once these initial consultations are complete, we expect that staff will continue to be involved once grants have been made, in assisting the countries directly, when requested.

In providing support on proposals, we cannot, of course, guarantee that specific requests will receive funding. Our goal is to provide advice and expertise not only in the proposal writing stage but with the actual work that is being suggested to ensure that it fills gaps in current programs.

Question. What measures for evaluating the performance of grant recipients is the United States advocating?

Answer. Program and financial accountability have been identified by the Fund as critical components of proposals to be considered for funding. The Fund has created a working group to develop a monitoring and evaluation strategy and procedures that can be further developed and strengthened over time. This group will also look into the possibility of making funding available in tranches, with continued funding of projects based on achievement of agreed milestones and targets. The U.S. intention is to ensure that these milestones and targets are both measurable and meaningful. A panel of experts from HHS and USAID is helping to determine what such indicators might be and to develop appropriate mechanisms and procedures to insure that valid data on these indicators can be provided. While demonstrable reductions in some disease or infection rates may take time, we do expect certain operational milestones, such as increased coverage with proven effective interventions, to be met before continued funding is made available.

Establishing fair and realistic targets and indicators, neither too high nor too low, is extremely important as the Fund prepares to accept the first round of proposals. One of the early recommendations of the United States was to have each application reviewed from the perspective of monitoring and evaluation to ensure the soundness of applicants' plans and their ability to utilize existing or planned monitoring and evaluation systems and indicators.

The United States is also insisting that appropriate fiscal controls be in place, both at the country and global levels to ensure that funds are used for the purposes intended.

Question. To what extent are these measures likely to be effective?

Answer. The Global Fund is a new mechanism to provide additional funding for the scale-up of programs at the country level. It has been developed very rapidly, and is about to enter an operational phase in which it may take several years before we see meaningful changes at the global level. Nonetheless, the Fund must be sufficiently flexible to learn from lessons learned both by others and itself and to change procedures to help ensure better performance over time.

Experience gained through the review and initial implementation of the first grants that will be approved in April will be the basis of future modifications to improve capacity in this critical area. The United States Government (USG), especially USAID and HHS, have particularly good experience at the country level in the areas of monitoring and evaluation. The USG will play a leadership role on the monitoring and evaluation working group, and should be able to offer specific assistance in proposal development and strengthening local capacity to improve surveillance and monitoring systems.

Question. What burdens, if any, do they impose on health ministries, other government agencies, and non-governmental organizations in the recipient countries?

Answer. The Fund has tried to strike a reasonable balance between simplicity and accountability, but it will be dealing with large grants. It is not unreasonable to ensure that recipients are able to use such funds for the purposes for which they are intended and to reach the greatest number of people in a safe and efficient manner. The application process is the first demonstration of the capacity of recipients to fulfill their commitments. The intent, wherever possible, is to use existing plans and processes as the basis for proposals and for monitoring and evaluation. However, many country partnerships, with the aid of bilateral and multilateral partners, will have to engage in planning processes and write new proposals because they have not done the work previously. There is no other way to ensure that Fund proposals fit into national priorities, are feasible, and scientifically and technically appropriate. The Fund will work to keep the burden as low as reasonably feasible, within the limits of prudent grant-making.

It is especially important to use the additional resources and attention coming through the Global Fund to identify weaknesses and assist country personnel to improve surveillance capacity to monitor the progress of the epidemics and contribute to tracking impact of Global Fund-supported programs. The Fund will benefit from work already developed by its partners on monitoring and indicators. It expects to be able to use procedures and systems already in place, and in many cases supported by other Fund partners to meet the requirements of a rigorous monitoring and evaluation system.

Question. A couple of years ago, this Committee [the Senate Committee on Foreign Relations] and the Congress made a strong commitment to relieve the international debts of the poorest countries. And yet, it is my understanding that many of these countries still pay more in debt service to multilateral creditors than on health care.

Answer. The Administration greatly appreciates—and strongly endorses—the support the Congress has provided for debt relief under the Heavily Indebted Poor Countries (HIPC) Initiative. The HIPC Initiative greatly increases the prospects for economic and social development in beneficiary countries by allowing them to redirect into social sector spending funds that would have been due for debt service.

A recent IMF/IDA report, "The Impact of Debt Reduction under the HIPC Initiative on External Debt Service and Social Expenditures," provides information on initial results for the first 24 HIPC countries to reach their decision points. After HIPC implementation, debt service due has fallen sharply from 29 percent of government revenue in 1998 to an expected 11 percent in 2003. The report also notes that social sector spending rises from 33 percent of government revenue in 1999 to 39 percent in 2002, suggesting the desired redirection of spending is taking place. The above data would suggest that the HIPC Initiative has caused a broad and pronounced

shift from all categories of external debt service (not just multilateral) to social sector spending.

Typically, the health and education sectors receive special emphasis in social sector spending. Examples of programs in the health sector that HIPC savings will help fund include:

- Mozambique has committed to use debt service savings to expand the stock of basic medicines in government health clinics.
- Uganda will use enhanced HIPC relief to expand the country's successful HIV/AIDS awareness programs.
- Madagascar intends to use about 20% of its HIPC savings for programs in the health sector, to include immunization programs, an anti-HIV/AIDS campaign, the recruitment of medical personnel, and the supply of drugs and medicines.
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- In Cameroon, the U.S. Embassy reports that the 2001–02 budget breaks out $49.3 million of HIPC debt relief savings, of which $9.1 million will be spent on health programs, with an emphasis on HIV/AIDS and malaria. 1,000 public health workers will be recruited.

Yet, the success of the HIPC Initiative and broader development assistance ultimately depends not only on the assistance provided, but even more importantly on country efforts to undertake the necessary economic and social reforms that create the basis for sustained economic growth. In this regard, quality and effectiveness of spending in the health sector will be as important as amounts of spending.

Question. Is the level of debt relief currently provided sustainable over the long term, and sufficient to enable highly indebted countries to deal with the AIDS crisis and meet their critical development needs?

Answer. The HIPC Initiative will greatly enhance the prospects of debt sustainability through a substantial reduction in the HIPC countries' debt. The World Bank and IMF estimate that for the first 24 countries, HIPC debt relief will total more than $36 billion over time. However, given that these countries face steep development challenges and are highly vulnerable to external shocks, it will be important to focus on maintaining long-term debt sustainability. Most importantly, this will require sound economic policies in HIPC countries that create the basis for sustained economic growth. In addition, strong debt management, including prudent borrowing policies, will play an important role. Finally, creditors need to ensure that new financial assistance is provided on appropriate terms, including through increased use of grants.

With regard to the AIDS pandemic and the fight against other infectious diseases, the U.S. and other donors have recognized the need for additional resources above and beyond those freed up by the HIPC Initiative. The Administration's 2003 budget request proposes total bilateral and multilateral assistance for HIV/AIDS, TB and malaria programs in developing countries of nearly $1.2 billion, up from $1 billion in 2002. This $1.2 billion includes $200 million for the Global Fund to Fight AIDS, Tuberculosis and Malaria, raising the overall U.S. pledge to $500 million. The U.S. commitments in FY 2002 and FY 2003 will account for more than a third of estimated international donor funds. USAID is the single largest bilateral donor.

Question. Are countries that are benefiting from debt relief savings able to channel a substantial amount into the health sectors of their national budgets? If not, why not, and is there some assistance we could be providing to help them do so?

Answer. Although it is early in the HIPC process to provide an authoritative response based on how HIPC countries have actually spent their money, the IDA/IMF reports 2001 and 2002 budgets have a significantly higher level of social sector expenditure in the HIPC countries that have begun to benefit from debt reduction. In the 24 countries that have reached their Enhanced HIPC decision points, the report indicates that social sector spending rose from $5.1 billion in 2000 to $6.0 billion in 2001, and is projected to rise to $6.9 billion in 2002.

Question. You mentioned in your testimony that Secretary Powell created a new Deputy Assistant Secretary for International Health and Science, a role to be filled by Dr. Jack Chow. Dr. Chow is also to serve as the special representative of the Secretary of State for HIV/AIDS with the rank of Ambassador, subject to the Senate's confirmation.

What effect will the creation of this office have on HIV/AIDS policy?

Answer. By establishing the post of Deputy Assistant Secretary for International Health and Science, the State Department effectively raised the profile of health issues on the foreign policy agenda. Confirmation of Dr. Chow as the special rep-

resentative of the Secretary of State for HIV/AIDS with the rank of Ambassador will signal to our contacts around the world the importance the United States attaches to health issues.

As Deputy Assistant Secretary, Dr. Chow serves as the primary focal point in the USG on international issues related to HIV/AIDS and other infectious diseases, especially tuberculosis and malaria. He represents the United States in international negotiations.

If confirmed as special representative, Dr. Chow will work with presidential envoys and senior representatives from other nations to ensure an international response to HIV/AIDS. He will work to strengthen the Department's capabilities and to promote inter-agency coordination and cooperation on global HIV/AIDS.

Question. The President's budget request for FY 2003 includes $2 million in for [sic] the State Department's Foreign Military Financing program to "complement" a Department of Defense program that is aimed at educating African militaries about HIV/AIDS. $2 million is not a lot of money. Do you know how much funding did the President ask for in the FY 2003 Department of Defense budget for the program.

Answer. Resources for DoD's Africa Initiative in Military Medicine (AIMM), which seeks to provide training and education on HIV/AIDS for sub-Saharan militaries, total $10 million in FY2001 and $14 million in FY2002. It is my understanding that DoD's FY 2003 budget request does not include funding for AIMM.

Question. What activities will the State Department engage in that are complementary to the Department of Defense program?

Answer. The fight against HIV/AIDS and other maladies in Africa requires a multi-agency effort. HIV/AIDS and other diseases have weakened and reduced the security capacity of Africa's militaries. DoD's Africa Initiative in Military Medicine (AIMM) seeks to provide training and education on HIV/AIDS for sub-Saharan militaries. It is my understanding that in FY 2002 the Department of Defense was allocated $14 million for AIMM.

Subject to Congressional approval, the Department of State Foreign Military Financing program plans to allocate $2 million of FY 2003 FMF funds to purchase equipment such as computers and resource management software for creating and maintaining databases, laboratory and medical supplies, testing equipment, and rapid test field kits. This equipment will both complement and sustain the training initiative in African partner countries.

Question. According to a recent GAO report (December, 2001) the United Nations does not know how many peacekeepers have HIV/AIDS because it opposes mandatory HIV testing before, during or after deployment to a peacekeeping mission. With all that we now know, with all the evidence we have that peacekeepers, like other military personnel, are likely to engage in behaviors such as unsafe sexual practices that increase the risk of contracting and spreading HIV, what is the rationale for continuing the policy of NOT testing peacekeepers?

Answer. UN policy on HIV testing in the context of peacekeeping operations is under review. In November 2001, an expert panel on HIV Testing in UN Peacekeeping Operations met in Bangkok, Thailand. Participants included UNAIDS, the UN's Department of Peacekeeping Operations (DPKO), military officials from peacekeeping contributing nations, and legal experts. In addition, a pilot project funded by Norway and Denmark is being developed to begin a further assessment of UNAIDS's prevention strategies for peacekeepers

The DPKO has designed its current HIV/AIDS policy to comply with the wishes of its member states, which have divergent views on HIV testing. The UN in general and the DPKO specifically are also conscious to avoid policies that might increase discrimination against HIV-positive individuals.

The UN's policy on HIV testing of peacekeepers is largely determined by its contributing countries. For instance, some countries do not screen their military personnel for HIV. Others may test their forces but do not share this information publicly, considering such information sensitive. There is further concern among other countries that mandatory testing could be used for political decisions on the suitability of certain national forces to serve as peacekeepers.

This position is also based on human rights concerns. The UN has resisted screening for HIV on the grounds that it could increase discrimination against and stigmatization of those infected with the virus. In addition, the UN's personnel policy states that the only appropriate medical criterion is fitness to work. Accordingly, those not exhibiting clinical signs of AIDS are not precluded from peacekeeping service.

UN Security Council Resolution 1308 (July 2000) encourages UN agencies to take action with UN member states to develop strategies to mitigate the spread of HIV/AIDS in peacekeeping missions. These efforts have focused on three interventions: the development and use of an HIV/AIDS awareness card; training of troops in HIV/AIDS prevention; and the distribution of condoms to peacekeepers.

DPKO recommends that countries contributing to UN operations should not send HIV-positive individuals on peacekeeping missions. However, UN policy opposes mandatory testing and countries retain control over their forces, so DPKO cannot force countries to test or keep data on HIV prevalence.

Our next witness will be Dr. Peter Piot. He is the Executive Director of the joint United Nations Programme on HIV/AIDS and is Assistant Secretary-General of the United Nations as of December way back in 1994. He has done a great deal of work in this area. We are flattered he would take the time to be here, and we welcome his testimony. Doctor?

STATEMENT OF DR. PETER PIOT, EXECUTIVE DIRECTOR, UNAIDS, GENEVA, SWITZERLAND

Dr. PIOT. Thank you, Mr. Chairman, Senator Frist, Senator Feingold, ladies and gentlemen. It is up to me to thank you for the opportunity to testify this morning, and I would like to applaud you for your commitment and also for the focus on the global AIDS epidemic.

I am here today on behalf of the UN system organizations, in particular those AIDS agencies who make up UNAIDS, the Joint United Nations Programme on HIV/AIDS.

Twenty years since the world became first aware AIDS, three things have become clear. First, that we are facing the most devastating epidemic in human history. Second, that for all the devastation it has already caused, the AIDS epidemic is still in its early phases. A sobering thought. And third, that we are in a position to bring the epidemic under control. Today, I would like to focus on this third lesson, that we are prepared to succeed.

Mr. Chairman, I believe that for the first time in the short history of this epidemic, the world is in a position to translate the few local and national examples of success into a truly global movement and also a global success.

So, what is different now from 5 years ago?

One, manifestly greater political momentum to address the AIDS epidemic. It is really everywhere and not least in this country and right here on Capitol Hill. You will hear Secretary-General Kofi Annan this afternoon. He has made the fight against AIDS his personal priority. Five years ago, it was often difficult to persuade even health ministers that they ought to take AIDS seriously. Today when global leaders meet, AIDS is on their agenda from the G–7 to the World Economic Forum (at its meeting last week, for example), and especially among African heads of state.

Second, there is now a clear set of global priorities in the fight against AIDS. The series of benchmark targets adopted by all the world's countries at the Special Session on AIDS of the UN General Assembly last June in New York provide a common platform for accountability, and we have clear international consensus on a global strategy which stresses young people as a priority for action on AIDS and recognizes that prevention and treatment and care are integral parts of an effective response.

The third advance is that we have empirical evidence that action around such a strategy actually results in success. Very importantly, it results in fewer people becoming infected. No longer only Uganda and Thailand and Senegal, but also a country like Cambodia—after decades of genocide and civil war, it has less infections today than 5 years ago. Zambia, Tanzania, Brazil and others are also examples of success.

The fourth advance from 5 years ago is in the new realism about the resources required to effectively tackle AIDS in the developing world. As we heard this morning, roughly $10 billion annually is needed for a comprehensive AIDS response.

Mr. Chairman, I will now focus on two issues related to achieving success. The first one is on the question of the degree of program readiness in developing countries and second is on the resource gap. I will then conclude with discussing some opportunities and challenges for spending resources wisely and effectively.

First, we should remind ourselves that today we need to plan for success, and wherever effective AIDS responses are found, there are five key principles at work. There is leadership at all levels, mobilization of broad coalitions and good coordination. Overcoming stigma is one of the major obstacles to prevention and care. Fourth, responding at the scale commensurate with the epidemic. Finally, applying strategies based on good science, whether that is biomedical science or political science.

All this requires resources, not only dollars, but also capacity, people, systems, institutions. And that brings me then to the first broad issue.

Do developing countries, developing societies have the capacity to program greatly increased funds to combat AIDS in their communities? We have been looking into this crucial question. We have been looking into this crucial question as part of an ongoing UNAIDS assessment of the current status of AIDS programs in 114 low- and middle-income countries.

We used five core indicators of AIDS readiness: national AIDS plans, the capacity to operationalize the plan, costings of the plan, a monitoring and evaluation strategy, and mechanisms that can achieve coordination among governments, nongovernment actors, the UN system, and bilateral donors.

Across the globe, of 114 countries there are 24 countries assessed where all the elements of comprehensive AIDS programming are already in place. At the other extreme there are eight countries which are yet to develop any of the elements of readiness. Most are in the middle range.

These results are encouraging, but at the same time they also identified some generic weaknesses, such as insufficient monitoring and evaluation capacity. Above all, they tell us that unless we invest equally in people, systems, and institutions, as much as in activities and interventions, we have less chance of getting the dollars to do their work.

It also tells me, also as Mr. Natsios alluded to, that it is time for some out-of-the-box thinking, meaning for me outside of the public health system, outside the health services when it comes to tackling AIDS. Particularly in many African countries, the capacity of these health systems today is probably lower than it was at the

beginning of the AIDS epidemic for a variety of reasons, including because of AIDS itself which is killing the doctors and the nurses. So, let our AIDS programs go to where the capacity is, business and unions, churches and mosques, schools and sports.

Mr. Chairman, let me now turn to the issue that is on everybody's mind in this room apparently and that is the other side of the resources. That is the dollars. The needs are now well documented. They were mentioned many times this morning. But where are we today with the money available?

The total available this year, we estimate, is going to be roughly about $2 billion in terms of international resources, which by the way is less than the NIH budget for AIDS research, as I heard this morning.

The good news and real progress is that the Global Fund represents a 50 percent increase this year in currently available international funds for AIDS, and it has really generated additional money not only in this country but also from the European and Japanese side. That in itself I think is already a proven value-added of this Global Fund.

As Secretary Thompson mentioned, less than a year ago, UN Secretary-General Kofi Annan called for a war chest at an OAU Summit on AIDS in Abuja. And we had already the first meeting of the board of directors, and most probably in April, the first grants will be given, and that will be less than a year after the first pledge to the fund by President Bush.

But let me be clear, Mr. Chairman, since you raised it yourself as well. The Secretary-General, when he was mentioning $7 billion to $10 billion, said that this represents the current need of programmable AIDS funds in the world. He never meant to say that all this money should go through one single mechanism, the Global Fund.

Since Secretaries Thompson and Dobriansky gave a very accurate description of where we are with the Global Fund, I will not repeat it. But I would say that the comparative advantage of this newest actor must be in its ability to focus new resources, additional resources, rapidly and directly, on the programs with the best chance of success in the countries with the greatest needs. I think what has come out of the fund negotiations is very close to what was called for in the original legislation in this house.

I feel that this is a good and very promising start, but Mr. Chairman, allow me to focus now on the resources gap today and tomorrow.

Our estimates take into account what we believe the growing needs and growing program capacity will be in the near future. The Global Fund represents one-third of currently available international resources for AIDS; it accounts for about 16 percent of the total need.

The gap between current expenditure and total needs is so large, that moving immediately to the $10 billion of expenditure is impractical. Instead, we need to envisage a route to a comprehensive response where the available funds progressively increase over the next 4 years. If today's expenditure on AIDS were to be maintained only, next year's funding gap will be greater than $2 billion. By 2005, it will be about $7 billion.

But if we build on current activity and make a reasonable estimate of where it can be scaled up, then for each of the next 4 years, expenditures need to be increased by roughly 50 percent. This should not only happen in terms of the Global Fund to Fight AIDS, TB, and Malaria, but in terms of all resources that are there to fund AIDS programs, including resources of the governments of the countries that are affected. Some large, middle income countries have already started to spend significant amounts of money on AIDS. I am thinking of Brazil, India, South Africa, and incidentally, Brazil and South Africa at the board meeting indicated that they will not seek funding from the Global Fund on AIDS, TB, and malaria.

So, Mr. Chairman, the fight against AIDS is a race and so far it is the virus that has been winning. There is no doubt about that. But we are now in a position to make a leap forward, a leap that for the first time will put us ahead of HIV.

I would be kidding myself, of course, and all of you if I said that this task was going to be a very easy one. There are huge challenges, and collectively we have to turn thousands of really effective AIDS programs and activities around the world into hundreds of thousands, reaching all nations. We have got to coordinate all the players in the AIDS response—very important now with increasing resources. We have got to unblock the resource pipelines so resources get to communities effectively. We have got to meet the challenge to be led by science and evidence, and we have got to put in place strong mechanisms of programmatic and financial accountability.

You, the U.S., have already proved yourself willing to take a leadership role and make the required leap forward. We would strongly encourage you to continue in that leadership role, because I know that it is contagious—in the good sense of the word—to other countries. And I look forward to our continued partnership in meeting this great challenge. Thank you.

[The prepared statement of Dr. Piot follows:]

PREPARED STATEMENT OF DR. PETER PIOT, EXECUTIVE DIRECTOR, UNAIDS

Mr. Chairman, distinguished members of the committee, ladies and gentlemen.

I thank you for the opportunity to testify this morning, and I applaud you for your focus on the global AIDS epidemic.

I am here today on behalf of the UN System organisations responding to the global epidemic, and in particular the eight UN agencies whose collective efforts on AIDS make up UNAIDS, namely UNICEF, UNESCO, ILO, the United Nations Development Programme, UNFPA, UNDCP, the World Health Organization and the World Bank.

AIDS IS DIFFERENT

And Mr. Chairman, I am here today to tell you that the AIDS epidemic is different from any other epidemic the world has faced, and as such, requires a response from the global community that is broader and deeper than has ever before been mobilized against a disease.

Twenty years since the world first became aware of AIDS three things have become clear:

- that humanity is facing the most devastating epidemic in human history, the impact of which threatens development and prosperity in major regions of the world.
- that for all the devastation it has already caused, the AIDS epidemic is still in its early stages; and
- that we are in a position to bring the epidemic under control.

The first twenty years in the history of an epidemic is only the blink of an eye. The other communicable diseases that ravage many parts of the world have been known for many centuries. Their patterns of spread have become well-established and predictable.

Mr. Chairman, committee members, AIDS is unlike any other epidemic that we have faced:

- It affects every strata of society—wealth is no protection against the virus;
- Young adults are its biggest target—so it kills people just when they are in the most productive—and reproductive—phases of their lives;
- It has far-reaching ripple effects, on the economy, on the family and for the generation of children left without parents;
- It remains surrounded by taboo and stigma—still a huge barrier to effective responses.
- It spreads silently, so millions can be infected with HIV in a population before the impact in illness and death becomes apparent.

This silent spread and slow impact of AIDS have meant that the threat it poses has been consistently underestimated. For a moment, let us compare it to the much feared Ebola, a virus I have had first-hand experience of, dating back to when I was a member of the team that investigated the first known epidemic of Ebola virus infection in 1976 in then-Zaire.

Ebola spreads rapidly and causes illness instantly, so there is never any doubt about the need for a rapid and comprehensive response. Today, when Ebola breaks out anywhere, action teams are dispatched without delay. The immediate and present danger it represents is readily recognized and the international community immediately mounts an appropriate response to halt the new epidemic—and Ebola has caused probably no more than 1000 deaths in total.

Now, let us imagine a much smarter virus than Ebola. A virus just as deadly, but one capable of creeping silently through whole populations before it revealed itself. A virus whose casualties from its local epidemics are not measured in the hundreds, but in the hundreds of thousands. A virus that kills slowly, and painfully, and generally only after stigmatizing and pauperizing the entire family of an infected person.

It is difficult to imagine a smarter, more devastating virus than the subject of this hearing, the virus that causes AIDS. And it is equally difficult to imagine a world unwilling to mobilize to slow the spread and eventually contain this virus. All the more so, given what we know about it, how long we have seen it coming, and where we can now see it going.

THE STATE OF THE GLOBAL EPIDEMIC

More than 60 million people worldwide have been infected with the virus—nearly double the population of California. Since the epidemic's start, twenty million of the sixty million people infected with HIV have died—a number equivalent to the populations of Texas or New York State.

HIV/AIDS is now by a large margin the leading cause of death in sub-Saharan Africa and the fourth-biggest global killer. Life expectancy in sub-Saharan Africa is now 47 years, when it would have been 62 years without AIDS. In 2001 alone, an estimated 5 million people became infected with HIV, and half of them were young people between the ages of 15 and 24. There were an estimated 800,000 children under 15—mainly infants—infected with HIV in 2001, and 580,000 child deaths as a result of AIDS.

Sub-Saharan Africa is the region of the world where the epidemic has been worst and where its impact increasingly threatens the stability of whole societies.

Average prevalence in sub-Saharan Africa is 8.8 per cent in the adult population (15-49 years old). There are seven countries, all in the southern cone of Africa, where more than twenty per cent of adults are infected with HIV, and a further nine countries where infection rates exceed ten per cent.

We still do not know what is the upper limit for the extent of HIV spread in a population. Botswana is the country with the highest HIV rate to date with 36 per cent of adults infected. It is followed by Swaziland, Zimbabwe and Lesotho all between 24 and 25 per cent.

While the scale and impact of AIDS in sub-Saharan Africa is the worst in the world, HIV is a rapidly expanding problem in other regions.

HIV/AIDS is growing fastest in the countries of the former Soviet Union. There are a million cases in the region, and at least 250,000 new HIV infections in the past year—most of them in the Russian Federation. Ukraine has the highest prevalence with nearly 1% of the adult population living with HIV.

In Asia, China and India currently have relatively small overall prevalence, but given their huge populations, within each there are large numbers of people and locally high proportions that are infected with HIV. For example, the Indian states of Maharashtra, Andhra Pradesh and Tamil Nadu, each with over fifty million people, have HIV rates measured in pregnant women above three per cent, over four times the national average. In China, we have estimated that concerted action taken now will be able to avert ten million new HIV infections over the coming decade.

Adjacent to the U.S. mainland, the Caribbean is, next to Africa, the second-most affected region in the world. In a number of countries in the Caribbean and Central America more than two per cent of the population is HIV infected and adult HIV prevalence has risen to over 4% in Haiti and the Bahamas.

Nor can we declare HIV a problem that is over in the U.S., western European, and other wealthy countries—the rate of new infections in the U.S. and Western Europe has not been significantly reduced in the last decade. In the course of 2001, an estimated 30,000 adults and children became infected with HIV in Western Europe and 45,000 in North America, taking the total numbers living with HIV in these regions combined to 1.5 million. In these countries the face of the epidemic has changed, and it is among the poorer, ethnic minority and immigrant populations that the numbers infected with HIV are growing fastest. Ironically, access to more effective HIV treatment may also be associated with rises in unsafe sex among some of the populations that historically have shown the greatest level of behaviour change, such as gay men.

THE IMPACT OF AIDS: EVERY SECTOR IS AFFECTED

Mr. Chairman, distinguished committee members, AIDS is currently one of the greatest threats to global development and stability. It is a long-term humanitarian crisis of unprecedented proportions—the death and misery it has caused in the past twenty years dwarfs all of the natural disasters that have occurred in that time combined. The HIV epidemic has not only disrupted many millions of individual and family lives, it has threatened the stability of entire societies.

Economic Impact

In the worst affected countries, AIDS has a major impact on business productivity, on livelihoods and the supply of food, and on professionals: from doctors through to police forces. For example, in Kenya, AIDS accounts for 75 per cent of all deaths in the police force over the past two years. AIDS not only affects the poor, but also the educated and skilled. In South Africa, for example, ING Barings Bank projects that one-third of the semi-skilled and unskilled workforce will be HIV-positive by 2005, 23 per cent of the skilled workforce and 13 per cent of the highly skilled workforce. In the mining industry throughout Africa there is now an acute problem in replacing skilled mine workers lost to AIDS. And in Zambia, nearly two thirds of deaths among managers have been found to be attributable to AIDS, a higher proportion than among middle-ranking workers.

Consequently, AIDS has a direct impact on rates of economic growth in the most affected developing countries. There is a direct relationship between the extent of HIV prevalence and the severity of negative growth in GDP. When the rate of HIV in a population reaches 5 per cent, per capita GDP can be expected to decline by 0.4 per cent a year. And when HIV reaches 15 per cent, a country can expect a one percentage annual drop in GDP.

The cumulative impact of HIV on the total size of economies is even greater. By the beginning of the next decade, South Africa, which represents 40 per cent of the region's economic output, is facing a real gross domestic product 17 per cent lower than it would have been without AIDS. Similar studies in the Caribbean suggest Jamaica and Trinidad and Tobago face a five per cent loss in GDP by 2005 as a result of AIDS.

In settings where subsistence agriculture predominates, measured economic productivity only scratches the surface of the total impact of HIV on livelihoods. For example, AIDS hits the long term capacity for agricultural production, as livestock is often sold to pay funeral expenses, or orphaned children lack the skills to look after livestock in their care.

Armies are among those most affected by HIV. HIV rates in the armed services are in many cases two or three times higher than those in the respective civilian populations. When armies are deployed they spread HIV in the populations where they are stationed, and when they are demobilized they spread HIV in the towns and villages to which they return.

Human Impact

But measures of per capita GDP in fact underestimate the human impact of AIDS, as AIDS kills people, not just economic activity. We should reflect on what it means for a society when 10, 20 or 30 per cent of the population is HIV infected:

- with today's rates of infection, there is a more than 80 per cent chance that a fifteen year old boy today in Botswana will eventually die as a result of AIDS;
- nurses and teachers are dying faster than they can be replaced. Last year there were around a million African schoolchildren who lost their teachers to AIDS. In Malawi 6 to 8 per cent of the teaching workforce die each year.

The immediate impact of AIDS is felt most acutely in families where one or more members are HIV infected. In South Africa, households will on average have 13 per cent less to spend per person by 2010 than they would if there were no HIV epidemic. In Cote d'Ivoire in West Africa, the household impact of HIV/AIDS has been shown not only to reverse the capacity to accumulate savings, but also to reduce household consumption. AIDS not only affects income, with lower earning capacity and productivity, it also generates greater medical, funeral and legal costs, and has long term impact on the capacity of households to stay together.

This is most manifest in the number of children orphaned by AIDS, which now totals nearly 14 million. In developing countries, before AIDS around 2 per cent of children were orphaned, but now in many countries, 10 per cent or more of children are orphans. The war in Sierra Leone left 12,000 children without families. AIDS in Sierra Leone has already orphaned five times that number.

A fundamental part of our response to the epidemic must address how families and communities will cope.

- How many orphaned boys, and particularly girls, will not go to school because there is no one to pay their school fees, or no one to dress them and get them out of the house in the morning, or because they have to help grow the food to feed the remaining family?
- What does it mean for society to have a significant proportion of desocialized youth?
- How many will end up desperate and easy prey for militias and warlords?

Progress in the global response

Mr. Chairman, distinguished committee members, for too long we have been transfixed by the toll of the increasing HIV epidemic, unfolding before our eyes. Now we are shifting our gaze: success is squarely in our sights.

I believe that for the first time in the short history of this epidemic, the world is in a position to translate local and national examples of success into a truly global movement against the HIV epidemic. This is a great leap forward from where we were even a few years ago.

Five major elements define what today gives us the ability to seriously and successfully approach this epidemic on a global scale.

First: there is manifestly *greater political momentum* dedicated to addressing AIDS. We have learned that political leadership is required at all levels to marshal the necessary commitment and resources for the social mobilisation on which the response must be built.

- The level of political commitment to addressing AIDS has dramatically increased on every continent—and not least in this country, and very importantly, right here on Capitol Hill.
- Within the United Nations, increasing momentum is being led by the Secretary-General Kofi Annan. His public declaration that the fight against AIDS is his personal priority has helped to energize the whole of the UN system in its focus on AIDS, as well as opening doors to key political and business leaders around the world on this issue.
- In many cases, it has been when Presidents and Prime Ministers have taken control of the AIDS response that the most rapid advances have been made. Five years ago, we were challenged just to persuade Health Ministers that they ought to take AIDS seriously. Now, we find ourselves responding to Presidents and Prime Ministers throughout Africa, the Caribbean, the Americas, Asia and Eastern Europe who display deep personal commitment to the fight against AIDS.
- Some of the most prominent political leadership has been in Africa. For example, two years ago Botswana's President Mogae declared "as long as we still talk derisively about the HIV/AIDS virus and its victims . . . the pandemic will remain the invisible monster that stalks us in the darkness." With these words, he immediately opened up new opportunities across the nation for social dia-

logue and with his continuing strong leadership Botswana's AIDS response has since gone from strength to strength.

- Today, when political and other leaders come together, AIDS is on the agenda—from the G–8 to the World Economic Forum to the Organization of American States.

The second major element is that we can now point to increasing *success in countries.* In the developing world there are a number of familiar examples. In Uganda, surveys in urban areas in the early 1990s found 30 per cent of pregnant women were infected with HIV, but there have been sustained drops since then to less than 10 per cent. In Thailand comprehensive prevention efforts mean that the number of new HIV infections today is less than a quarter of the number a decade ago. And Senegal is a prime example of a country where the HIV epidemic has been kept small.

But today I would also like to draw attention to less familiar examples of success. For example:

- In Cambodia, despite the pressures on a society emerging from genocide and conflict, the threat of HIV in the mid-1990s was responded to, and as a result there are measurable declines in both risk behaviours and in the levels of HIV—the infection rate among pregnant women in Cambodia declined by almost a third between 1997 and 2000.
- Elsewhere in South-East Asia, the Philippines has kept HIV rates low with strong prevention efforts and mobilisation across society involving community and business organisations.
- Tamil Nadu state in India has recorded reductions in risk behaviour, reflecting the success of the state's comprehensive HIV prevention programme. Here, as everywhere, these efforts need continual renewal, with evidence that reductions in risky behaviour may have plateaued.
- In Africa, Zambia's focus on HIV prevention among youth and its efforts to involve business, farmers, schools and religion in the fight against AIDS have also shown success. In response to AIDS, young women in cities in Zambia have reported less sexual activity as well as increases in condom use, and the age at which they first become sexually active is increasing. As a result, the proportion of pregnant women under 20 who were HIV-positive had fallen from 27% in 1993 to 17% by 1998. In the Mbeya region in Tanzania, falls in HIV incidence have come through a decade of sustained action. Building local skills and infrastructure has been a core part this effort, along with generating political support and working through schools, health centres, churches, village committees and local businesses to deliver AIDS information and education, treat sexually transmitted diseases, deliver condoms, and provide community care for people with HIV.
- Brazil provides a leading example of integrating renewed commitment to prevention with comprehensive care. In 1994, the World Bank estimated that Brazil was heading towards 1.2 million HIV infections by 2000, but success in prevention in the second half of the 1990s kept the total down to 540,000. In 1996, Brazil established a legal right to free medication. The numbers of patients using antiretrovirals grew from 25,000 in 1997 to 100,000 today, and the number of AIDS deaths has fallen by 60 per cent.
- Similarly, in Barbados, planning for universal treatment access has been a core element of a major renewal in the national effort against HIV. With an expanding epidemic in a small population, Barbados is becoming a leading regional example with the strength of its government-wide AIDS response, led by the Prime Minister and supported by the World Bank.

The third major element is that there are now *widely accepted strategic approaches* which are derived from these successful country experiences. The Global Strategy Framework for AIDS which has been endorsed by all the members of the UNAIDS Programme Coordinating Board—including, of course, the U.S.—sets out a common understanding of the dynamics of the epidemic and the leadership commitments that are required to reverse it. As a consequence within the UN system, 29 different UN system bodies share a common strategic plan.

The global response to AIDS has moved beyond the stage of trying small scale experiments to see what might or might not have an effect. We are now at the stage of translating proven approaches to full scale national responses. These approaches include:

- Building broad *coalitions between governments and other partners* from outside government, including community organisations and business, that expand the response to AIDS to include all fields of economic and social life.

- Addressing changes in the *behaviour of individuals and equally of institutions.* The levers of change are to be found in pulpits and press rooms as much as they are in health centers. Changing the norms surrounding sex—which is at the heart of HIV prevention—has never been a task best left to men in white coats. We need doctors and nurses to provide treatments, but when it comes to HIV prevention, more lives will be saved by journalists, clergy, teachers and politicians.
- *Addressing the stigma surrounding HIV.* A major barrier to comprehensive AIDS prevention and care efforts remains stigma against people infected with HIV or against those groups where HIV is thought to be most common. We know we have a long way to go in fighting AIDS stigma when children from AIDS affected households are excluded from school, or AIDS patients are routinely turned away from medical services for even the most straight-forward of complaints. Responding to stigma requires involving people living with HIV centrally in the AIDS effort.
- Ensuring that *responses to HIV are on a scale commensurate with the scale of the epidemic itself.* We make a real difference to the epidemic when we ensure that local actors have the information they need to respond, and when the systems are in place that make sure they have the necessary resources available. By delivering responses that are rooted in communities, we build to the scale of response required.
- Responding to the epidemic with a *combination of efforts.* Just as combination therapy has proved the key to cracking the nut of HIV treatment, so too combination prevention is the key to stopping the spread of HIV. There will never be a single, one-size-fits-all solution to HIV.

The fourth major element, is that there is now a clear set of global priorities in the fight against AIDS.

- The series of benchmark targets adopted by all the world's countries in the UN General Assembly Special Session on AIDS last June in New York provide a common platform for accountability. Countries unanimously pledged themselves to a series of targets and goals, including a 25% reduction in the level of HIV among youth people in the hardest-hit countries by 2005, and a 50% reduction in the proportion of infants infected with HIV by 2010. Countries also pledged to promote access to vital drugs and ensure a supportive environment for children orphaned by HIV/AIDS. The most important legacy of that meeting has been the upsurge in country activity dedicated to meeting these targets.
- The clear international consensus that has formed around young people as a priority for action has been particularly important. Young women and young men need to take joint responsibility for reducing the impact of AIDS on their lives. They have proved themselves capable of changing the course of the epidemic if they have the right knowledge and support. In every country where HIV transmission has been reduced, it has been among young people that the most spectacular reductions have occurred. The UN General Assembly Special Session on children coming up in May will again be an opportunity for all the world's nations to set themselves on course to reducing the toll of AIDS on infants and young people. UNAIDS, and in particular our Cosponsor UNICEF, is ensuring that responding to AIDS is a core element of the global response to children's needs.

The fifth major advance is in the new realism about the resources required to tackle AIDS.

ADDITIONAL RESOURCES REQUIRED TO ADDRESS THE AIDS EPIDEMIC

Before I come to the total requirements, I will first try to put into perspective how additional resources could make a real difference to the epidemic. Let me take the example of a modest annual investment of $10,000.

If we spent that money on voluntary counseling and testing in India, there are non-government organisations that would provide good quality HIV counseling and testing services to 10,000 people. Or in Gujarat, a hundred buses that could carry AIDS messages for a year, reaching many thousand town and village dwellers.

$10,000 would allow the Brazilian Girl Guide and Scout movement to reach another ten thousand young Brazilians with an AIDS education kit. It would support 80 peer educators to reach hundreds of street children in every part of Brazil. It would allow the Living Positively project in the central Goiás state to reach more women with HIV, helping them to avoid transmission to their babies and training them as peer educators.

In Zambia, with $10,000 there are 1000 orphans who could receive bursaries so they can stay in school. $10,000 would let the Catholic church in Zambia train another 100 rural caregivers a year in providing community home-based care. There are six more health workers who could be trained and supported to provide antenatal care and antiretroviral drugs to help prevent mother to child transmission.

What does this add up to?

There is wide global recognition, including from the UN General Assembly, that AIDS spending in low and middle income countries needs to rise to $7 to $10 billion annually for a comprehensive AIDS response. The task we face today is to strategically multiply the number of these $10,000 investments until they reach the scale of the epidemic itself. It is no small undertaking—a million such investments make up the ten billion dollar target. But there are tens of thousands of communities that stand ready to take action and are desperate to do so, and there are hundreds of thousands more to which success could be spread.

A more detailed breakdown of the estimated total spending need has been made by an international group convened by UNAIDS and published last year in *Science* magazine. It shows there are major differences between regions in the balance of spending needed to respond to the HIV epidemic. In Africa, where 28 million people are already living with HIV, roughly two out of every three dollars would be needed for care and support. In Asia and other regions where the greatest opportunity still exists to prevent massive spread of HIV, the majority of funding would be directed toward prevention programs.

Almost one-quarter of the estimated need in prevention expenditure is for education, counseling and mass media communications aimed at youth to help them avoid becoming infected. We need to provide good information and support to youth before they become sexually active and provide better services and a safer environment once they do become sexually active.

Also included in the estimates are the costs to achieve the global goal to reduce mother to child transmission of HIV and thereby reduce the proportion of children infected with HIV by 20% by 2005 and by 50% by 2010. We can achieve this with known technologies that are appropriate in developing country settings. Our challenge is to build up the infrastructure and enhance human capacity to implement these programs for the largest possible number of women. Achieving this goal will save over 100,000 infant lives in 2005 and by 2010 the cumulative number of babies saved would be more than 1.3 million.

Assistance to communities and for school fees could require $700 million in 2005. By 2005 there may be as many as 19 million children orphaned by AIDS. This number is so large that even extended families will find it hard to cope. We must assist the communities where these children live to provide care and support and provide special assistance to ensure that these children have educational opportunities and do not end up in the street.

The business sector has an important role to play in funding the expanded response. Approximately 7% of the total resource need is for workplace prevention programs that can be funded by private enterprises. Many employers are also funding advanced treatment for their employees. Business involvement is crucial, not only because bottom lines are being hurt by AIDS, but also because business is often in the best position to reach its staff and the communities they live in. This is especially the case where there are mobile workforces, and men especially are removed from their families to find work—in this context, our definition of risk group need to expand beyond the obvious examples, like miners, to include others, for example trainee bank managers.

Roughly a quarter of the total resource need is for anti-retroviral drugs. Negotiations with the pharmaceutical industry have resulted in significant price reductions that are beginning to make it feasible to deliver these life saving drugs to those who need them. But progress in delivering treatment needs advances on three fronts simultaneously:

—finance;

—stronger health systems, so these drugs can be delivered and their health benefits maximized; and

—the expansion of voluntary counseling and testing services since the great majority of people around the world who are living with HIV do not know whether they are HIV infected, an obvious prior condition of treatment access.

CAN EXTRA RESOURCES BE SPENT WISELY AND EFFECTIVELY?

Countries do have the capacity to programme substantially increased levels of new AIDS funds. UNAIDS has just finished an assessment of the current state of programme readiness which has shown that the majority of countries assessed have already completed much of the planning and programme development work required to be confident of success in expanding their responses to AIDS. There are still some gaps in programme preparedness, especially in the monitoring and costing of plans. However, it is clear that developing countries are seriously engaged in detailed strategic planning on AIDS.

AIDS planning was well developed in 93 out of the 114 countries assessed—though there remain major challenges in roughly a third of the countries assessed—particularly in Africa. There are five core components to AIDS readiness: national AIDS plans, the capacity to operationalize the plan, costings, a monitoring and evaluation strategy and mechanisms that can achieve coordination among governments, non-government actors, the UN system and bilateral donors. Across the globe, there are 24 countries assessed where all the elements of comprehensive AIDS programming are already in place. At the other extreme, there are 8 countries which are yet to develop any of the elements of readiness.

One of the ironic benefits of a well-advanced epidemic in much of Africa is that there are good estimates both of the scale of the epidemic and of the resources needed to mount a response. The sea change among African leaders and communities to deal frankly and firmly with the challenge of AIDS is now apparent. Most governments have shown themselves willing to channel public resources to community and civil society organisations. But the systems to support the renewed commitment in most areas of prevention, treatment, care and impact mitigation remains weak. An important positive development has been the more effective and transparent use of resources. There are twelve African countries that have established a management capacity to deal with big increases in funding through the World Bank's Multi-country AIDS Programme for Africa and another 15 are establishing the fiduciary infrastructure required.

Our assessments of AIDS programming around the world also indicate that there is a compelling need for more intensive planning and programme development for effective responses in the education, social welfare, agriculture, and other sectors. Programme development in these sectors has lagged considerably behind the health sector.

The resources gap

Mr. Chairman, committee members, we are currently far from having secured the $10 billion required for a comprehensive AIDS response in the world's low and middle income countries.

In these countries in 2002, somewhat over $2 billion will be spent on AIDS, including the $1.7 billion made available by the international community. International spending is joined by significant national government expenditures on AIDS, which in middle income countries like South Africa, Brazil or India run to the hundreds of millions, but elsewhere are much smaller.

The gap between current expenditure and total needs is so large, that moving to $10 billion of expenditure immediately is impracticable. Instead, we need to envisage a route to a comprehensive response where the available funds progressively increase over the next four years.

If today's expenditure on AIDS were to be maintained only, next year's funding gap will be greater than $2 billion growing to at least $7 billion by 2005. The implications are quite clear and represent a major challenge for the development of vigorous resource mobilisation strategies.

To achieve our objective of scaling resource availability to keep pace with programming capacities, we need to see a *roughly 50 per cent increase in funding each year,* in each of the next four years.

The funding required neither could nor should come from a single source. Only when funds are maximized from all sources can we claim a comprehensive AIDS response.

There are five distinct groups of actors involved in responding to AIDS. Each of them has their own advantages in supporting a comprehensive AIDS response, both in relations to the resources the can mobilize but also in the tasks and responsibilities they perform best.

- First are developing countries themselves. National ownership and responsibility is a *sine qua non* of effective AIDS responses and it needs to be accompanied by budgetary allocations. A clear expression of commitment has come from the African continent with the Abuja Declaration adopted at the Organiza-

tion of African Unity's special summit on AIDS last year which included a pledge that 15 per cent of national budgets would be allocated to health to help fight AIDS and related diseases.

- Second are bilateral donors whose comparative advantage lies in being able to draw on domestic technical resources, for example within their universities and national programmes, and their capacity to build solidarity directly between their own communities at home and those in the recipient countries—for example through networks of non-profit organisations. Currently, the U.S. accounts for approximately one-third of the bilateral resources focussed on HIV/AIDS.
- Third are multilateral organisations which are particularly well placed to ensure that internationally accepted scientific and technical standards are applied, to help promote consensus on the effective approaches to complex and difficult social issues, and in the case of the World Bank credits, to facilitate the internalisation of new resources within the budget and finance mechanisms of countries, contributing to longer term financial sustainability of programmes.
- The fourth group, international NGOs and business, is becoming increasingly important. The size, range and sophistication of business involvement in the fight against AIDS has grown enormously over the past few years, although it is still only a faction of its potential. Business knows it needs to protect its investments in workforces and in markets against the impact of AIDS. Some of the most productive business initiatives in AIDS have capitalized on key business strengths. For example, UNAIDS has worked with MTV, which knows a lot more about holding the attention of a teenager than we do. UNAIDS is also working with Coca Cola in Africa—where in Kenya Coke's vast distribution network has been used to get out educational material on AIDS. There are also now a number of primarily U.S.-based foundations that have made significant commitment to global AIDS efforts, notably the Bill and Melinda Gates Foundation. But as well, there are many other U.S.-based foundations whose AIDS work joins their long history of concern about health and progress—the coalition of Foundations supporting the HIV prevention among women and prevention of mother-to-child transmission is just one of the many examples, and it includes the Rockefeller, Bill & Melinda Gates, William and Flora Hewlett, Robert Wood Johnson, Henry J. Kaiser Family, John D. and Catherine T. MacArthur, David and Lucile Packard, and UN foundations.
- The fifth and the newest actor is the Global Fund. Its comparative advantage must be in its ability to focus new resources, rapidly and directly, on the programmes with the best chance of success, in the countries with the greatest need.

THE GLOBAL FUND TO FIGHT AIDS, TUBERCULOSIS AND MALARIA

The establishment of the Global Fund to fight AIDS, Tuberculosis and Malaria has signaled the new decisiveness in global AIDS efforts. It was only April of last year that UN Secretary-General Kofi Annan declared at the Organization of African Unity's Special Summit in Abuja that the world needed a new "war chest" in the fight against AIDS. The Fund will approve its first proposals this April—less than a year after the Secretary-General's call to action.

In 2002 the Global Fund has around $800 million available to it to disburse, and the sources of these funds are largely G–7 pledges. Of course, the Fund will be considering TB and malaria as well as AIDS, although AIDS clearly has the greatest proportion of the needs. The presentation I and Dr. Brundtland, Director-General of the World Health Organization, made to the first meeting of the Board of the Global Fund estimated that AIDS accounts for 76 per cent of total global needs, tuberculosis 19 per cent and malaria per cent.

The Fund has been constituted as a financing instrument to complement the work and responsibilities of existing organisations. Its efforts will therefore be concentrated where they are most needed: on generating and making available additional resources. The Fund is there to support what is happening at community and country level—proposals have to be owned in the places where the money is going to.

The Fund is a public-private partnership—its Board includes business representation, as well as non-government organisations and representatives of the communities directly affected. The UNAIDS Secretariat, together with our Cosponsors the World Health Organization and the World Bank, sit on the Board. Part of our role will be to help countries in the development and preparation of proposals and to make available our expertise and networks available to the Fund to ensure it has the best possible advice about where its money will make a key difference.

Already, regional planning has taken place— earlier this month a meeting for the Asia-Pacific region demonstrated the enormous interest in the Fund from countries, and their preparedness to put forward the best possible proposals.

In calling for proposals, the Fund has declared its intention to promote partnerships among all relevant players within countries and across all sectors of society. It will build on existing coordination mechanisms, and promote new and innovative partnerships where none exist. Proposals will be considered through country coordination mechanisms, but eligibility for funding is not restricted to governments: public, private and nongovernmental programmes can be funded.

The Fund will support programmes both within and outside the health sector if they are technically sound, cost-effective and focus on performance by linking resources to the achievement of clear, measurable and sustainable results.

The support for the Fund in the U.S. Congress was a crucial factor in meeting the rapid timetable for its establishment. The two tranches of $200 million so far allocated to the Fund by the U.S. government have also set the pace for pledges from the rest of the world: total pledges to the Fund now stand at just under $2 billion.

A very wide international coalition has come together in the Fund, and in spite of the range of interests represented, it is notable that key considerations set by the U.S. Congress have been met including that:

—it will coordinate its activities with governments, civil society nongovernmental organisations, UNAIDS the private sector and donor agencies; and

—nongovernmental organisations, including faith-based organisations, will be eligible for assistance, and eligible areas include treatment and the provision of interventions to reduce mother-to-child transmission.

Mr. Chairman, committee members, pledges to the Global Fund already represent a 50 per cent increase on the international funds available to fight AIDS. This is progress!

The challenge now is to build on this progress: to make the Fund work well by demonstrating that it can spend wisely, spend rapidly, and show results. If it does this, it is our hope that it will be an increasingly attractive proposition for donors, and the Fund will grow.

MOVING FORWARD

Mr. Chairman, committee members, *AIDS is a massive global problem, but it is a problem with a solution.*

The tools for effective responses exist. In the vast majority of countries around the world, there are detailed plans for dealing with AIDS. There are countless communities ready to take action. And in order to build success, increased financial investment needs to be equally matched with investment in human resource and institutional capacities.

If we are to achieve success, we need to know how our progress is going. Critical U.S. support in monitoring the epidemic and in evaluating the success of AIDS programs has put us in a better position than a few years ago. The cooperative framework for monitoring and evaluation that the UNAIDS Secretariat has been able to deliver has resulted in a level of consensus and influence at country level which has far surpassed what any one agency alone could have achieved.

Of course, for AIDS spending to be worthwhile, it needs to be able to flow efficiently to the levels it is needed. Improving both governance and the efficiency of resource transfer mechanisms remains a core priority for UNAIDS, including our Cosponsors, particularly UNDP.

Mr. Chairman, committee members, the fight against AIDS is a race, and so far, it is the virus that has been winning. But we are now in a position to make a leap forward—a leap that will for the first time put us ahead of HIV. I would be kidding myself as well as all of you if I said the task was an easy one. There are huge challenges:

First, the challenge of scale. There are perhaps a few thousand really effective AIDS programmes and activities around the world today. Unless we can rapidly escalate this number to a few hundred thousand, we will fall behind in the race.

Second, the challenge of coordination. Funding for AIDS has increased. The number of players has increased. Different parts of government are now substantively involved. International and national non-governmental players are increasingly important. But while we must celebrate this renewed level of activity, unless there is a corresponding increase in coordination, we will still fall behind in the race.

Third, the challenge of resources flow. There are still far too many blockages between resource availability at global level and resource needs at the local, village

and neighborhood level. Unless we can unblock the resources pipeline, we will fall behind in the race.

Fourth, the challenge to be led by science. A pragmatic response to evidence must be our guide in the AIDS response, already too much effort has been diverted by those wishing to turn AIDS into their own private bandwagon. Responding to AIDS will always touch raw nerves around sexuality, drug use, relations between men and women, and the limits of personal confidentiality. But unless we can find the ways to agree to be guided by evidence and reason, then we will fall behind in the race.

Meeting these challenges requires us to marshal all we know about moving forward against the HIV epidemic. We know what to do. We know how to do it. We know it needs to be done at the right scale. We know what it costs. We are clearer than ever before about the ways in which increased spending would make a real difference to the course of the epidemic.

All these elements must now be put together. Success against the epidemic will be achieved when all the players involved play to their strengths.

Mr. Chairman, committee members, U.S. support for the global AIDS effort is directed in three areas:

- One, to the multilateral system, in particular the international organisations including UNAIDS and our Cosponsors;
- Two, to the new Global fund to Fight AIDS, Tuberculosis and Malaria; and
- Three, in bilateral efforts, including those of USAID, Health and Human Services, the CDC and research efforts through the NIH, as well as other programmes including that of the Department of Labor.

The United States government has long supported global AIDS programs and underwritten a research effort that remains a beacon of hope for people affected by the disease. It remains to the enormous credit of the U.S. Department of Health and Human Services through its Centers for Disease Control and Prevention that its expertise in identifying disease outbreaks was applied rapidly and effectively in the case of AIDS, and its continuing role both internationally and domestically has contributed enormously to the effectiveness of AIDS responses. More recently, initiatives have expanded—the U.S. Department of Defense, through the LIFE project, has been a key player in responding to AIDS awareness among the uniformed services, working with UNAIDS together with the contribution of one of our Cosponsors, UNFPA.

The U.S. is the first developed country to publish its 2003 budget. Most others will be following suit in the next few months—and I hope they will be able to take note that U.S. proposals for international HIV/AIDS assistance for 2003 are on an upward trend. The U.S., like every other donor, will need to do more if the world is to respond effectively to AIDS. American bilateral efforts on HIV/AIDS—at USAID, Health and Human Services including CDC, and the Departments of Labor, Agriculture and Defense—and critically now the Department of State—will also require further strengthening to keep up with country needs. Unparalleled American know-how in such vital fields as medical training, core public health functions, and service delivery are needed more than ever to assist developing countries.

The U.S. has already proved itself willing to take its leadership role in making the required leaps forward. We would strongly encourage you to continue in that leadership role, and look forward to our continued partnership with you in meeting this great challenge.

Thank you for your attention.

The CHAIRMAN. Thank you very much, Doctor.

Why don't begin with Senator Feingold?

Senator FEINGOLD. I thank you, Mr. Chairman. I thank you for your testimony.

Some in the advocacy community have called for the establishment of a global procurement fund that would try to secure economies of scale when it comes to pharmaceuticals to treat HIV/AIDS and opportunistic infections that are associated with the disease. What is your opinion of that idea and what role, if any, is to be played by the UN and UN agencies in terms of drug procurement today?

Dr. PIOT. Thank you, Senator.

There are certainly advantages of large procurement schemes. But as was said this morning also, the Global Fund is meant to benefit from existing mechanisms, and when it comes to global procurement, for example, UNICEF has a major supply division which is taking on procurement for medical supplies and others. I think it is probably the most cost effective way to make use of these existing procurement systems. That is one of the conclusions also of the board of the Fund a few weeks ago where a small working group is now looking into the most efficient and effective procurement mechanisms. But there is no doubt that that will drive the price down just because of economies of scale.

Senator FEINGOLD. So, that is not a role that is envisioned for the Global Fund.

Dr. PIOT. For the fund itself, no, but it should tap into existing procurement schemes.

Senator FEINGOLD. In your experience, do different members of the donor community have different priorities when it comes to addressing the AIDS crisis? What about the priorities of states that receive assistance from UNAIDS? Do you find that their priorities are different from those of the donors?

Dr. PIOT. Well, I could safely say that today the situation has changed dramatically from where we were, as I mentioned, 5 years ago, and that in my mind in all African countries, for example, and in all Caribbean nations, AIDS is one of the top priorities for the leadership. That is less so, I would say, in Eastern Europe with the exception of Ukraine where the President himself is chairing the National AIDS Council and has declared 2002 the Year of AIDS. And it is also highly variable in Central Asia. Let us not forget that in Eastern Europe and Central Asia, we have got the fastest growing AIDS epidemic in the world. So, it is a very variable picture but there is good progress.

The key challenge now is not to convince any of these leaders, certainly not in Africa, that AIDS is a threat to their security, to the survival of the nation, but is to assist with the how. How are we going to put in place effective mechanisms that are going to make a difference at the community level?

Senator FEINGOLD. Let me try another angle on this. How does UNAIDS work to avoid sort of a one-size-fits-all formula in the approach to prevention, care, and treatment around the world? If you could actually give an example of two very different approaches that UNAIDS is taking in different places just to illustrate it, I would appreciate it.

Dr. PIOT. Yes. When I got into this job, this was one of the questions I was struggling with because before UNAIDS existed in the UN system, there was indeed the blueprint approach to AIDS. Whether you were in China or in Uganda, it was all the same. First of all, culturally that will never work, and second, the needs are different.

When I look at the resource needs, for example, the estimates that we made to come to the $7 billion to $10 billion figure, are based on the fact that in Africa the needs, in terms of treatment and care, are far greater than, for example, in Asia where a much, much lower percentage of the population is infected.

The principle should be really that each country has to define its own road map, but the principles and the goals are the same everywhere.

So, concretely in China, our approach has been one of working with the government more at the political level to lead to a recognition that AIDS is a problem and working with the various provinces, because it is a highly decentralized country.

When it comes to a country like Uganda, there we have been working trying to set in place two things. One is, mainly through UNICEF, youth programs, prevention of HIV among young people, saving the current generation, which should be a top priority, and then second, expanding access to treatment and care by decreasing the price of antiretroviral drugs, by putting in place care centers and training of health care workers.

So, these are two examples, but there are so many.

Senator FEINGOLD. Thank you very much, Doctor. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Frist.

Senator FRIST. Thank you, Mr. Chairman.

Dr. Piot, thank you for your leadership. I was just talking to the chairman impolitely as you were talking, basically saying that of all the witnesses that we will see today, the person who has seen the most on the ground, has had the most sort of global exposure but really on-the-ground exposure as to what works and what does not work in a range of countries, like in your first slide presented, is you. Therefore, I would like to have you comment further or elaborate a little bit more on what you just closed with.

You heard me ask the first panel, and I will get their answers in writing. But to link care and treatment to prevention, which as a physician and as a real believer in public health and the impact you can make, but the demand must be that you link all three.

In this country today, if you look at the President's budget, there is an emphasis on really all three, with a heavy emphasis on research, but also the treatment end as well as the prevention end. Here in this country when people look globally, they think of treatment being antiretrovirals. Period. The concentration has been on intellectual property rights, which I think is a very appropriate discussion. It has been on diminishing or lessening the cost.

In Africa, it was amazing, Mr. Chairman. Now antiretrovirals are down probably a tenth of what they were 18 months ago. Still not low enough. We still have got to go a long way, and we have got to keep pushing in appropriate ways there.

But what has been remarkable to me that I think we need to understand better is this linkage of care and treatment, opening up hope, the power of nutrition, the power of even herbal treatments that in this country many times are diminished, that care and treatment is not just antiretrovirals. If you focus just on antiretrovirals, they will not be delivered because of really what you said initially in terms of capacity and capacity building as we go forward.

Could you just paint that picture based on your experience? Not in my words but your experience.

Dr. PIOT. Thank you, Dr. Frist.

I think it is really at the heart of, let us say, the substantive strategic debate at the moment.

When I look at Uganda, for example, the success has been mostly in declining infection rates.

Now, I mentioned the elements of success, but one very important element for me was that people with HIV who were affected or whose partners have it or died from AIDS organized themselves and started to organize also some care, some treatment. This was even before antiretrovirals existed and were introduced here.

There is one element that never figures into economists' cost effectiveness calculations and so on, and you mentioned it, Dr. Frist, and that is hope. It is hope that drives communities that drives social reform. So, this is where I believe now, as recognized by the declaration of commitment that came out of the UN General Assembly, that care and treatment are an integral part of the response, just as prevention. But sometimes I feel that the debate is only on treatment or sometimes it is only on prevention, and we have got the supporters of both. We really need both together.

What is the link between these two? That is the voluntary counseling and testing. Ninety-five percent of people with HIV in the developing world have no clue that they are infected, that they are HIV-positive. Just imagine what that is. Of the 40 million people who are infected, they do not know. Not that they do not want to know, but first, there are no testing centers or they do not have the money to pay for a test. Or if they go for a test, all that is at the end of the test is discrimination. They lose their job. Their husband may kick them out and there is no treatment. So, this is a crucial issue to put in place in terms of programs.

When we talk about treatment, I think we have learned a lot. Four years ago, we started with UNAIDS in Kampala and in Abidjan, in Ivory Coast with some pilot projects to learn what are the best ways to improving access to treatment and care for people with HIV in really poor resource environments. What we have learned is that you can do a lot. You can do a lot on the one hand, with no antiretrovirals, treating the symptoms, keeping people alive with treating and preventing opportunistic infections, but also that antiretroviral therapy in Africa in capitals is possible. It is not possible, I think, to offer it overnight for everybody, both for economic reasons and because of the infrastructure that is not there, but it can be introduced. Patient compliance is as good as anywhere else in the world. Why would it be different?

So, what I feel is that in each country we need to define exactly what we are meaning. There needs to be a societal debate and if that debate is not there, if it is not planned in a way that access to treatment will be widened, what happens is that only those who have the means to pay privately will have access to treatment. We need to make sure that systems are being put in place, that money is going to come—and I think it is starting to come.

The CHAIRMAN. How do you do that, Doctor? How do you do the first piece?

Dr. PIOT. We are not living in a desert in the capitals. When Dr. Frist is doing surgery in Africa, it is in existing hospitals and health care facilities. That is where we can start, and that will be the easier part, the first part.

To go beyond that is going to be the more difficult one, and that is where we will have to invest in training, in, let us say, community-to-community programs, medical assistance, and all the things that we have said this morning. But I think for today to expand that, that is feasible.

In terms of the financing of all that, who is going to pay for it? That is also another part. Here we have got to see that the pots of money that pay for prevention and that pay for treatment and care in about every country in the world are different pots of money. So, I think we need also to look at that in a more refined way. Financing for health care, including in developing countries, is not going to come only from the outside. People are already paying. The problem is that to pay for antiretroviral therapy, it is just not going to be possible without massive external funding, at least in Africa.

Senator FRIST. Again, even in listening to your comments, when you are really on the ground, Dr. Piot, the antiretrovirals are there. I do not know what the number one killer really is with HIV/AIDS, but say it is tuberculosis.

Dr. PIOT. TB.

Senator FRIST. TB and that is what we say because so many people have TB. I do not think it really is. Anyway, it is an opportunistic infection of some sort.

Dr. PIOT. Right.

Senator FRIST. It is hard for me to explain to people, when you have that little virus which is winning the war—and I love your analogy. It is winning the war. Even with the number of people that die, it is winning the war as we go forward in terms of the new infections.

If we cannot even treat the opportunistic infections or we do not have the capacity, it is going to be asking a lot to pull down an antiretroviral. I agree compliance will be there if the system is there, but globally I do not think we are adequately addressing the treatment for other sexually transmitted diseases, the opportunistic infections which we know with a certain input, will prolong life significantly if we can adequately treat tuberculosis or any of the other infections. I do not see, even in your comments, why we do not put more emphasis on treatment of those opportunistic infections and nutrition, which when you go into these communities, you see it has such a huge, huge impact.

Dr. PIOT. No. I do not think we disagree at all because the way I see it is prevention has to be scaled up, treatment for opportunistic infections, care for orphans and support, but then at the same time, I think we should not wait until everything is in place to start with the antiretroviral therapy there where it is possible. Because I also think that we can never have a real impact on this epidemic if we go with, let us say, a 10 percent approach—we have tried that for 20 years—and do a little bit of this and a little bit of that. I think that is where we are now getting into at least gearing up to a full response. But I am the last one to underestimate all the problems.

My biggest question is how to do this outside the big cities. In the cities I think it is possible, but outside is where we have got to build the systems. That is why I put so much emphasis on the

capacity building, and the illusion that we sometimes have in the development assistance community is we give a bit of money to do certain things, but then we tell that NGO or that church or government you are not allowed to use that money to train your people. We are pushing education but we do not invest in the teachers who need to be trained because there are so many who die from AIDS. That is a real problem.

Senator FRIST. To even take that one step further, it is easier from our perspective, as we try to build support to increase the funding, for people to focus on one element of like antiretroviral therapy and just say, oh, it is too expensive, we cannot do anything, and hide behind that and not address the capacity building. I link it very much to treatment of opportunistic infections because you get your nurses out there and you get the communication, you get those teachable moments there. I think that is the challenge we have.

Mr. Chairman, I know we have got another whole panel, but can I just bring up one thing?

The CHAIRMAN. No, no, keep going.

Senator FRIST. It is totally different. And that is the orphans. Again, the last panel will bring it up. But having the opportunity to have somebody such as yourself here. Ten million, thirteen million. And orphans—the definition just so people understand—does not necessarily mean both parents are dead. You might give me the real definition, but what it means is one of the two parents have died of HIV/AIDS.

But, in essence, we have got 10 million to 13 million out there. We will go to 40 million within 10 years. We have got to address it. As I said, when you are going through the areas and you do not see any people middle aged because the parents are dead and you have a grandmother taking care of one generation and the next generation, and then the generation of all the children of 28 children, you know we have got to address that issue.

Now I am at a loss of what we do. You can talk about it and you can link the care and you can link the hope. But what can we, sitting up here, really be doing to address that issue?

Dr. PIOT. Well, that is probably one of the most complicated issues, in addition to being the most tragic one.

First of all, on the definition, what we use is that children who lost their mother because that is the key in terms of survival. By June we will have also statistics on orphans who lost both of their parents and so on. So, we are refining the definition.

I think that one of the main consequences will be more street kids, more teenagers on the street. Some of these orphans are infected with HIV as well. Others will grow up and will become teenagers. We have a whole generation of what is called desocialized youth that is growing up.

Senator FRIST. Can I just add to that? When we think of terrorism, when we think of lack of civil society, when you see kids—they are good kids, but they just have nobody to look to—and you think of terrorism and you think of the lack of order and the risks of terrorism in the past, all of a sudden, all these images start linking together because it gives them nobody to turn to.

Dr. PIOT. Exactly. I think these are an ideal reserve of kids, adolescents who, you know, you put a collection cup in their hands and here we go. Anybody who is looking for cheap soldiers.

The CHAIRMAN. On this orphan question, which sounds so antiseptic the way I just said it—I do not mean it that way—based on the definition being used for an orphan, are any of these orphans in collective care anywhere? Most Americans think of orphans as being in an orphanage. They think of it as being in some sort of state-provided care. Paint a picture for us of what we are talking about when we are talking about the millions orphans we are referring to. Are these kids like the orphans that existed in Brazil earlier on, literally wandering gangs of 12- and 13-year-olds led by 14-year-olds? I do not mean gangs in the sense they are murderers. I mean just in terms of their family. What are we talking about when we talk about these orphans in terms of where they are located?

Dr. PIOT. Sorry. Wherever——

The CHAIRMAN. No. I do not mean what country. Let me just give you my conclusion and maybe you can respond. My impression is that when we talk about orphans in Africa, orphans as a consequence of the loss of a mother to AIDS, we are talking about that child being in the extended care of a grandmother or of the family next door or just literally subsisting on his or her own on the street as opposed to orphans being collected into a social agency where they are given three square meals a day, able to be tested as to whether or not they are HIV-positive, *et cetera*. That is what I am trying to get at.

Dr. PIOT. Right. First, a kid who lost her mother, in general, also will have no father or have lost the father to AIDS because of the sexual transmission issue.

But second, indeed, very few of these children will be in institutions. We also do not think it is the first option, the first solution. Fortunately, particularly in Africa, there are extended families where there is a tradition that not only orphans but children in difficulty will be taken up. But these families are stretched to the limit, and that is not working.

There are three priorities for dealing with orphans. We have done some work—this was in Zambia with UNICEF and with USAID—mapping out the orphans, where are they, what are their needs. It is quite predictable. It is food, it is a roof, and it is school. The most important investment I believe is in keeping these kids in school. For example, I know in Zambia, because I just talked about it at the World Economic Forum, for $10,000 you can keep 1,000 orphans in school for 1 year. We are not talking about billions here. That is very concrete. And emphasizing vocational training so that they learn a job and that they do not end up in the street in gangs and so on.

The CHAIRMAN. The reason I ask such basic questions here is that to a lesser extent than Dr. Frist, but nonetheless to a significant degree, most of us who serve on this committee and serve in the Congress or the Senate or in various positions of authority are aware of the nature, scope, and the demographics of the problem we are talking about. Most Americans and I suspect most Euro-

peans do not have it down to intellectual bite-sized chunks that they can understand.

For example, when I go home, Doctor, my constituency is a fairly well educated constituency. Where I come from, in relative terms, is one of the most affluent States in the Nation. I will get off the train tonight and someone will have watched this on C-SPAN or watched some news coverage of it, and they will ask questions that in a sense, to use the vernacular, bring me up straight, make me realize that I speak too much like a foreign relations expert or I speak too much of the international lingo about what the problem is.

When I go home someone will ask me about orphans. The conductor will ask me on the train, he will say, if you have all these orphans, why do we not just test them all in the orphanage and find out who has AIDS and cannot we help deal with the problem that way? And I say, no, no, no, that is not how it works.

When you talk about education—how can I say this politely? One of the problems the Senator and I have had—and it is presumptuous of me to speak for him. Our interest in this subject is something that 10 years ago, for example, was not immediately embraced by our constituencies. Among some Members of this Congress, the notion that we would spend time, energy, resources on this issue were almost viewed in moral terms.

But once you begin to break this problem out and the reason why I think Senator Frist is so effective, if you notice, he is always talking about on the ground. He has changed the mind of some of our colleagues to vote for more money or vote for the money requested by the administration by saying "are you aware." I notice he has a picture in his lap right here. Are you aware that this is what we are talking about? And he shows a picture of a village or shows a picture of 10 or 12 children surrounding him in an area, or he tells a story about how in an extended community where, to use the phrase which got battered around for political reasons up here, it takes a village to raise a child, that African proverb is one that actually functions, that people actually reach out. When you put it in those terms, we find that people come along and say, oh, I got that. I will vote for that.

I am going to get in trouble here, but for example, we have a great fight here in the United States about the availability of condoms for youth. Yet, we fund a significant amount of money for condoms for the rest of the world. People do not make that connection here. They do not think about it.

So, the reason why I am trying to get you to even paint a more vivid picture about orphans or prevention, it is because the more it can be broken down into terms that our collective constituencies, whether it is in France or in the United States, whether it is in Germany or it is in Brazil, the more I believe generic and broad support we get across the board for doing more and more.

I am going to ask you this one question and perhaps you could give me some concrete notions about prevention. When you say prevention here in the United States, a whole bunch of different images pop up in people's minds. Not negative, but what do you mean by prevention? What are the prevention programs or initiatives that are the most successful in your experience? And it may vary

from country to country to country. But give us some examples of prevention programs, if we were able to fund more of them, encourage more of them, that would have a greater impact on the spread of this disease.

Dr. PIOT. Well, thank you, Senator. That is a long story, but I will try to be as concrete as possible.

I think that all evidence today shows that it is in young people, youngsters, that we have the greatest chance to succeed with prevention programs, with education, contrary to what many older people think. When you look at the curves of declining infections in the countries that I mentioned, it is always in young people 15- to 24-year-olds that you see the first decline, the most rapid one, and we heard some examples also of postponement of first sexual intercourse, higher condom use, less partners, and all that.

And what works there? It is not someone like me telling them this is good for you or this is not good for you. That does not work. Certainly when I was 15, I would not have listened. It is using the youth culture. What we have been most successful with is working with singers like Youssom N'Douf in Senegal who gives concerts, working with MTV. I think our most successful partnership with a private company in UNAIDS is that with MTV, a very unlikely partnership between a UN organization and MTV for the last 4 years.

The CHAIRMAN. I do not think it is unlikely at all.

Dr. PIOT. Last year on World AIDS Day, we reached 1 billion young people—1 billion—at a cost to us of half a staff member, helping to formulate the message and then MTV does the packaging in India, in the Caribbean, in Brazil and so on.

So, that is one principle, trying to work with sports heroes and singers. Sports and music. That is the youth culture. There were the soccer games in Africa 2 weeks ago in Mali. For those of you who have seen it and watched it on TV, it is mostly young boys watching it in Africa. Every match, there were eight messages, and we know that that has more impact again than 1,000 billboards.

The second way is so-called peer education, young people talking to young people in the language that they understand. So investing into that, but making sure that there is quality control in the sense that it is not just anything that they say, but things that make sense.

We have also been working with church groups because there are different types of young people. So, you are reaching another one. And in Kampala, for example, there is facilitation, as we say in the UN, to an open environment. Create a space for young kids that they can talk about that. Radio programs. In Zambia, there is a whole club which is called Post-test Clubs and clubs of students against AIDS. It is relatively different from one place to another, but the principles are exactly the same.

The CHAIRMAN. Now, one last question on that point because at least I think this is helpful in being able to carry the case beyond where we have already carried it here and what we need to do in terms of resources because you talk about the gap between projected resource availability and program capacity, that you are building program capacity, but in resource availability there may be a very wide gap.

What kind of resistance institutionally from the governments do you get, and does it vary, for these kinds of initiatives, the kinds you have just acknowledged and you have just stated? Because we find even in this country initially there was real reluctance to talk about it, talk about safe sex. There are cultural impediments. Without getting into which countries, but how much of an impediment toward this notion of prevention are due to cultural impediments that exist? Or is it not that much of a problem?

Dr. PIOT. Well, first I would say, Senator, that every society, every country I have been in is going through the same problems in recognizing that there is an AIDS problem and then has the same difficulties in talking about sex, the openness about it. Everybody does it or most people, but to talk about it in a way that will protect people and save lives is one thing.

Then the other thing that I see in common everywhere is the stigma associated with AIDS that makes it difficult. That is why this leadership thing is so important. I was with President Mandela on World AIDS Day in '99. He addressed the nation on AIDS for the first time, and he extensively used the word "condom," talked about it and was very explicit. That makes a real difference because there is resistance in South Africa or in my own country.

There is usually also resistance particularly when it comes to HIV prevention among young people. My kids do not do this. Or sex education in schools. We know from surveys that sexual activity may start at a very early date. So, it is really critical that problems are being addressed before they become sexually active. These are problems we see in every society.

We have really taken an approach that is extremely inclusive, working from above and from below, above with the leadership. I am not only thinking of the president, although a president talking about it makes a difference, or the first lady in many countries. In Ivory Coast, for example, or in Rwanda, the first lady is really spearheading the AIDS campaign and it is easier, when she talks about it, for others who are teachers to talk about it because our big chief has talked about it, our first lady.

Also, this is why it is so important to have the traditional chiefs and the religious leaders, wherever they come from, to have them on board. That is changing. I can see there also a sea change over 5 years ago.

Perhaps the most important factor has been that certainly in Africa there is not a single family who has not lost a relative from HIV. So, it has come much closer to wherever we are. [start]

The CHAIRMAN. My last question is this: one of the most troubling aspects of the spread of HIV/AIDS in some countries is that teenage girls are becoming infected at rates that are significantly higher than their male counterparts. The number of HIV positive women seems to be on the rise. There are a variety of reasons for this, but one of them seems to be the fact that women do not have as great a say in when and with whom they wish to have sex.

What programs, if any, specifically address the special needs of women and children in terms of their vulnerability to the exposure to AIDS? Is there any particular focus on that?

Dr. PIOT. Yes. Certainly it is one of the most shocking aspects of the AIDS epidemic. We have done some work, for example, in Kenya, in Zambia, in Cameroon, and in each place, when you look at 15- to 18-year-old girls, their infection rate is two to five times as high as in boys of the same age. How are these girls becoming infected? Not from the boys of their age group, but from older men. So, the problem is not so much with the girls, but with the sexual behavior of the older men. That is what our programs have to address.

And it is both for behavioral reasons—the older men having sex with younger girls, which is the case in most societies. When you look at relationships between men and women, the males are usually a bit older than the women, but the distance can be enormous in some societies.

And second, there is a biological reason also, and that is that young girls, young women are biologically far more vulnerable to infection with HIV than boys of the same age or than older women for anatomical reasons, *et cetera.* We are not going to go into that now. So, there is clearly a vulnerability, a social one and a biological one.

Ultimately there are two things that have to change. That is male sexual behavior, particularly men over 30, the most difficult thing to change. That is why over the last 3 years we have been promoting that as a theme, which created a lot of resistance in many societies, not only in developing countries but also in the West. I can tell you.

The CHAIRMAN. I agree.

Dr. PIOT. Second is education for girls. We know also from several surveys, from Kenya to Zambia to Tanzania, that women with a higher level of education are in a much better position to protect themselves, to say no to unwanted sex if it is not associated with violence. So, that would mean that if we would take away funds from education programs to put them into AIDS programs, the net result may be ultimately zero. That is, I think, also something we have to bear in mind.

The CHAIRMAN. Let me ask one other question on that score. If 95 percent—I think that is the number somebody used; maybe you, Doctor—of the people infected in—just focus on Africa, as we have, for a moment—are unaware that they are infected, but if 95 percent of the population is aware of the extent of the disease, not that they have it, but that it is a widespread disease, would not that, particularly in male-dominated societies, increase further pressure on young women because the percentage play that most older men would conclude would diminish their prospects of being infected would be to have sex with a younger woman? Is there any evidence? Is that beyond just sort of a common sense assessment or is that real?

Dr. PIOT. Well, Senator, there is anecdotal evidence for that but not systematic evidence. It makes good sense, if you want.

But I think in all these areas, the real crime is that we have lots of successful examples of what works and an order of magnitude less resource than is required when we talk about all these things. So, I hope that the U.S. will continue to lead there.

The CHAIRMAN. Well, I can assure you that with the leadership of Senator Frist and others, the U.S. will try to not only maintain, but maybe even increase the U.S. participation.

Senator FRIST. Can I make one more comment?

The CHAIRMAN. Oh, please. I am sorry.

Senator FRIST. No, I am done. I know we have got to get to the next panel, but just following up a couple of points.

The women's issue is huge. I will tell you, again going to Tanzania, Kenya, Uganda, and just asking the question, the same question you asked, the answer is focusing on education for young women. It is not just that you educate to make more prudent decisions, but during this vulnerable period where, for biological reasons, which most people do not know unless you are told—in part. That is part of the reason. But just by having the opportunity to go to school over that year or 2 years changes behavior for the rest of life. It is just critically important. So, something that can be done that will get these curves moving in the other direction as simple as keeping young girls in school for an additional 2 years. What happens when there is a family tragedy or times are tough, the girls are pulled out of school first and the boys are left in school. So, I think the question is a perfect question, and I think we need to understand that.

Second, we have not talked about the United Nations. We talked about leadership. Mr. Natsios implied that the leadership has come a long way and you have done the same. I am still sorely disappointed in the leaders of the African countries, as well as people in the United Nations, of where we are today because the leaders have to come out and take a strong stand as we go forward. I just would encourage you. I know you are in the middle of that. In the United Nations, Richard Holbrooke I think did a superb job elevating this issue, a little bit uncomfortably at first, but to the leaders of the United Nations. But I think we have got a lot more to do there. Again, I know that you are right there.

The First Lady of Uganda is going to be here next week to speak to essentially a church-sponsored conference on HIV/AIDS. And I agree with you. You have got to have sort of the top person, whoever it is, but having their spouses out there makes a huge difference.

Thanks for really helping us understand the issue.

The CHAIRMAN. Doctor, thank you very, very much, and thank you for your work for so many years. I appreciate it. Thank you for being here.

With that, we will move to our third and final panel. Princeton Lyman, the Executive Director of the Global Interdependence Initiative at the Aspen Institute. He is also a member of the Center for Strategic and International Studies Task Force on HIV/AIDS.

I tell you what. We will take a 5-minute break here.

[Short recess.]

The CHAIRMAN. If we can come back to order here.

As I started to say before, our panel now is Ambassador Princeton Lyman. I spoke briefly about his career in Government includes service as Assistant Secretary of State for International Organization Affairs, Ambassador to Nigeria, Ambassador to South Africa. He received his Ph.D. in political science from Harvard and has

written extensively on development, foreign policy, and conflict resolution. His book on the U.S. role in South Africa's transition to democracy will be published this June by the U.S. Institute of Peace. Hopefully, he will not have an extensive chapter on my shouting match with the former Secretary of State during that period.

Dr. Ray is a public health specialist, working as Director of the Southern Africa AIDS Information Dissemination Service, a regional information service serving the South African region. She has worked since 1983 in Zimbabwe on both rural and urban strategies mainly in public health specializing in gender issues and communicable diseases, including HIV and tuberculosis.

And Dr. Peter Okaalet. I am pronouncing it correctly, am I not, Doctor?

Dr. OKAALET. Yes.

The CHAIRMAN. Is that close enough for government work? If I mispronounced it, you can call me "Bidden" if you like.

Dr. Okaalet is the Director for Africa Division of Medical Assistance Program International. He is a medical doctor, licensed to practice in both Kenya and Uganda, and he holds two master's degrees in theology, in addition to his medical training. He is not 112 years old. It is amazing you got all that in a short amount of time.

With that, let me move right to the witnesses and invite them in the order they have been introduced to make their statements. Again, we appreciate your patience and being here and waiting this long. Mr. Ambassador.

STATEMENT OF HON. PRINCETON LYMAN, WORKING GROUP CO-CHAIR, CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES TASK FORCE ON HIV/AIDS; EXECUTIVE DIRECTOR, GLOBAL INTERDEPENDENCE INITIATIVE, ASPEN INSTITUTE, WASHINGTON, DC

Ambassador LYMAN. Thank you, Mr. Chairman. Thank you very much. It has not been a problem to sit here because this has been an extraordinarily good hearing, and certainly I want to join others in commending you and Senator Frist for this hearing, which I think has contributed a great deal.

The CHAIRMAN. Doctor, as my friend, our friend, the Senator from South Carolina, Senator Thurmond, would say, would you pull that machine close to your face there? Because I do not think they can hear you in the back.

Ambassador LYMAN. Okay. I hope they can now. Thanks.

I have submitted a statement which I would appreciate being put in the record.

The CHAIRMAN. Your entire statement will be placed in the record.

Ambassador LYMAN. Thank you, and I will just summarize it here.

I have just also returned from South Africa. You can see firsthand in South Africa not only the magnitude of this problem, but the painful and often divisive debate that this issue creates within societies, and I will come back to that a little bit.

Here today I want to speak to the work of the CSIS Task Force, which you have mentioned. Senator Frist and Senator Kerry have been, kindly, co-chairs of this effort. Steve Morrison and I are

working on a 5-year approach to this problem, and I want to concentrate on that today because the need now, as awareness is growing and has been created with hearings like this and a lot of other things, is now to have for the United States and then internationally a strategic, multi-sectoral, 5-year approach that has very specific objectives and is assured of adequate support and resources each year along the way.

I think first we need to understand where this pandemic is moving in the next 5 years, and much of that has been discussed here. But then we must move to such a plan.

We talked a little bit about greater awareness. Mr. Chairman, you have talked about the American public. We have a survey that will be just issued in the next day that was done for the CSIS Task Force that shows a very great awareness among the American public about this problem, a receptiveness to the type of information that has been discussed here today, a serious concern about it, and a great interest in those programs which work, knowledge about programs that work, and those programs will get, if this survey is at all accurate, the strong support of the American public. And I think that is an important element.

But there is also increased international awareness of the need for a broad strategy. The UN General Assembly Special Session outlined such a thing. There is a WHO commission on the relationship of macroeconomics and health, and there is, of course, the Global Fund which deals with several different diseases.

When we look at the structure and operation of our own Government in this regard—and Senator Frist has talked about this earlier in the hearing—obviously a number of very important things have been done, and the Bush administration has taken a number of very important steps, the joint task force that is chaired by Secretaries Thompson and Powell, the contributions to the Global Fund, the increase in bilateral funding. But I think, if we could suggest, that there needs to be more understanding and perhaps joint planning between the administration and Congress on the roles of the various Government agencies and to assure that they have the mandates as well as the funding to do this international work.

If we look at the role, for example, of HHS, if it is going to assume a greater role in helping build the infrastructure, train the people, create the capabilities abroad—and that is true of NIH and HRSA—we have to make sure that the funding is there, that the mandates are there, that the committees that control their funding are seized with the importance of this. And that goes for other agencies as well.

Now, I would like to say a word about American leadership in this area because it is so critical. But let me put my other hat on for a moment, work we have done at the Aspen Institute about what the American public thinks about leadership. It is interesting that the focus groups that we have done show that the public thinks of a leader as someone who steps forward from the community and helps the community solve a problem, not one that dominates that issue.

In this case, the United States has the skills, the resources and the world responsibility to step forward, not to take over this issue,

but to help the world community come together to solve it. Mr. Chairman, you have talked recently about the importance of engagement, and I think this is a classic example of where this is an issue that can only be solved by global cooperation and engagement, but it is one that we, by stepping forward, can help shape tremendously. And we have a lot of the resources and skills to be able to do that.

Now, let me just say a word about where this pandemic is going. We heard a lot about that earlier in the hearing. Let me just say that one thing we see over the next 5 years is that this issue is clearly going global. It is concentrated now heavily in Africa. Secretary Thompson talked about the Caribbean. We know it is spreading rapidly, as Dr. Piot said, in Eastern Europe. It is in China. It is in India, *et cetera*. And while these situations are different and have to be addressed differently, as this issue becomes more global, the issues become more global. I think we will see over the next 5 years an even deeper and perhaps more contentious debate over questions of access, questions of resources, poor versus rich, prevention versus treatment, and this could become one of the most divisive and contentious debates of the 21st century. We must anticipate that debate and begin now to try to resolve those issues.

There is, it seems to me, in this area a danger of being overwhelmed by the problem. That is, we hear how incurable it is, how many deaths have taken place, *et cetera.* I think it is also very important, as Dr. Piot said, that we realize that we have an opportunity to address this problem, contain it, and bring it under control.

When I was in South Africa last summer, one of the members of the Anglo-American Corporation that leads an AIDS program said he always starts his presentations in South Africa by saying that 75 to 80 percent of South Africans are HIV-free and that this is a problem that they can contain and address. I think we have to look at it that way as well, that if we take the steps needed, we can in the next 5 years make a tremendous impact on this problem.

If we have a 5-year strategic plan, we should be able by 2007 to get to a situation where the pandemic has reached a turning point in its history, where the spread of infection has greatly diminished, where it has dropped significantly in a number of countries, and where we have far more agreement on the kinds of interventions and steps that need to be taken.

Now, to get there in 5 years, we need to do a number of things, and they have to be started now in order to get there in 5 years.

Prevention, of course, is as people have talked about, absolutely critical if the rate of infection is going to be stabilized and reduced. And this means putting in place national interventions that overcome ignorance and myth and alter the behavior of high-risk populations.

Second, the U.S. will have had to contribute to the building of health infrastructures throughout the developing countries, and I want to come back to that in terms of resources.

Third, as has been mentioned already, it is going to be extremely important to support the education and other programs to enhance the ability of women to play an important role in containing this disease.

Fourth, we need to address the questions of orphans and have in place programs that enable communities to take care of this very large problem on the horizon.

Now, coming to resources, which you, Mr. Chairman, talked about greatly—and you notice that Dr. Piot indicated a rising requirement, and I think this is very clearly going to be needed. We know that right now this year, according to the testimony, there will be somewhere around $2 billion available this year for addressing this problem. By the end of the 5 years, we should be at the $7 billion to $8 billion a year level, and we need to start planning for that and how to get there.

But let me emphasize that none of the additional resources for HIV and AIDS should come from current and future programs aimed at poverty alleviation. That would be self-defeating. If these countries remain poor, they will be unable to deal with or sustain any of the programs we put into place over the next 5 years. Moreover, poverty not only aggravates the problem, it poses terrible choices for these countries. A South African official said to me, yes, we can go forward and offer antiretrovirals to all the people affected by HIV and AIDS, but what about the people dying today of cholera because they do not have access to clean water? That kind of issue has to be addressed concurrently with our efforts on HIV/AIDS. So, the poverty alleviation programs cannot suffer as we increase the resources for HIV/AIDS.

Now, the question of access, the question of access to drugs and care is, as already has been indicated, one of the most difficult issues. There has been a lot of progress on this. There have been steps by the pharmaceutical companies themselves to provide drugs at greater prices. There are organizational programs that Dr. Piot mentioned. But we still have a long way to go, and one of the issues that concerns countries who are faced with this problem is how sustainable are these programs that are now being put into place.

In South Africa, one of the things that concerns the government most is, if they start down this path of promising treatment to everyone living with HIV/AIDS, will the price reductions, will the support be there 5 years from now, 10 years from now to enable them to continue those programs? Of course, it would be a political disaster if, having started down that path, they suddenly found that the programs could not be sustained. In the next 5 years, we need to have the answers to that and we need to have the institutions and the arrangements in place. I might add those arrangements must be such that they keep the pharmaceutical companies in the game in the investment in research and the development of new drugs and treatments, et cetera.

The CHAIRMAN. If you get that right, you will win the Nobel Peace Prize.

Ambassador LYMAN. Well, I tend to be optimistic because there has been a lot of progress. I think there is an interest in the industry on this front, and I think that it is possible to do those things.

Now, one other aspect that has only been touched on here which has to be part of the 5-year effort, and that is to address the problem of HIV in the military establishments in developing countries. It is having a major impact on peacekeeping, on the options for

peacekeeping, and we certainly do not want peacekeeping contributing to the problem. So, that has to be built into it as well.

There are a number of other steps that we can build into this 5-year plan, but the point that we would like to make is that the time is ripe for having a clear-cut, multi-sector 5-year strategy, that we can start not just dealing with it annually, but know that these are steps toward a 5-year program that we are confident at the end of the 5 years we can say we have got a real handle on this problem. I think now we have enough knowledge, we have growing awareness, we have the skills to be able to achieve that.

Thank you very much.

[The prepared statement of Ambassador Lyman follows:]

PREPARED STATEMENT OF AMB. PRINCETON LYMAN, EXECUTIVE DIRECTOR, GLOBAL INTERDEPENDENCE INITIATIVE, THE ASPEN INSTITUTE, ON BEHALF OF THE CSIS HIV/AIDS TASK FORCE

INTRODUCTION

Mr. Chairman, I am grateful for the opportunity to appear here today, and commend you and other members of the Senate Committee on Foreign Relations for focusing on the global HIV/AIDS pandemic, a subject of profound urgency to U.S. foreign policy stakes.

I have the fortune of having just returned from a two-week visit to South Africa, where I witnessed firsthand the intense, combative debate there over national priorities, in the face of a pandemic that directly touches every family in that society and that threatens an entire generation. South Africa, like other acutely affected countries in Africa and elsewhere, is truly in the midst of a complex and painful national emergency that will be with it—and with us, by extension—for the next few decades. From where we sit, it is difficult to grasp the urgency, magnitude and innate controversy of what South Africans and others confront on a daily basis.

Also, I am a member of the international supervisory panel overseeing the evaluation of the first five years of the UNAIDS program.

I am here today however on behalf of the Center for Strategic and International Studies' Task Force on HIV/AIDS. The CSIS Task Force is a two-year effort, funded by the Gates and Catherine Marron Foundations, intended to strengthen U.S. international leadership on HIV/AIDS. I am grateful to Senators William Frist and John Kerry for agreeing to co-chair the Task Force.

Today, I will concentrate my testimony on how we might best design a five-year approach to battling HIV/AIDS. I and J. Stephen Morrison, Director of the overall CSIS Task Force, co-chair a working committee charged with looking into this question.

Such an approach will require a strategic vision that looks far beyond immediate responses. It will demand sustained U.S. global leadership, a reliable grasp of how the pandemic will likely evolve in coming years, and feasible, prioritized medium-range goals. To build support at the popular level and among foreign policy experts, this vision should also draw systematically upon the American people's growing awareness of the pandemic and their deepening well of support for a substantial U.S. commitment.

In this context, and because it is such an important element in any such strategy, I wish to discuss how the international debate over intellectual property rights and affordable access to essential medicines has changed in the past year. Several recent developments now focus our attention particularly upon sustainment of access: through more reliable financing, greater transparency in global pricing, and strengthened infrastructure.

LOOKING FIVE YEARS OUT

In the 1990s, ad hoc, stove-piped responses could not keep pace with the powerful, swift momentum of HIV/AIDS. We now recognize that combating HIV/AIDS requires attention not only to health, but also economic, social and cultural factors. Recent increases in U.S. high-level attention and resource commitments have achieved significant gains and brought greater coherence to U.S. efforts, and encouraged others to do more. In its first year, the Bush administration showed sustained leadership, even in the aftermath of September 11. It established the joint task force on HIV/AIDS, co-chaired by Secretaries Powell and Thompson, assembled a strong

interagency team of experts, raised aggregate international spending levels on HIV/AIDS to over $800 million in this fiscal year, and contributed substantially, both politically and financially, to the establishment of the Global Fund to Fight AIDS, TB and Malaria.

These commendable steps reflect the deepening awareness, among our leaders and the American public, that the AIDS pandemic threatens an unprecedented moral, human, societal and economic catastrophe, and that it demands an unprecedented mobilisation that will stretch beyond this generation. Secretary of State Powell captured this reality very succinctly when he stated earlier this year: "I know of no enemy in war more . . . vicious than AIDS, an enemy that poses a clear and present danger to the world."

The risk remains, however, that fatigue or complacency with existing efforts may set in.

If the international community is to assert effective authority over the pandemic in coming years, the United States, in concert with partner governments, international organisations and others, will need a long-term, strategic, multi-sectoral, and highly collaborative approach that steadily enlarges the pool of resources, with a focus on clear, achievable priorities. To strengthen consensus and clarity of purpose, the Bush administration needs to join with Congress, on an urgent basis, in forging an ambitious multi-year plan of action. That plan should spell out clearly how U.S. leadership will be deployed strategically over the next several years to build on recent momentum.

The realisation of the need for a long-term strategic international mobilisation motivated broad endorsement of the detailed Declaration of Commitment on HIV/AIDS issued at the UN General Assembly Special Session on AIDS (UNGASS) in June 2001. It prompted the World Health Organization to launch the WHO Commission on Macroeconomics and Health, charged with analyzing the linkage between infectious diseases and economic productivity and proposing a multi-year plan of action to redress weak health infrastructures in developing countries. UNDP has subsequently committed itself to a broad based approach in all its country programs that links health, development and political action to stem the pandemic. UNGASS finally inspired the intensive international efforts that launched in early 2002 the Global Fund to Fight AIDS, TB and Malaria, first endorsed at the UNGASS in June. (The CSIS Task Force has also today released a briefing paper on the Global Fund that is available at this hearing in hard copies and accessible in electronic form through the CSIS web site.)

No less important, in the aftermath of September 11, an additional, powerful factor entered the debate over the HIV/AIDS pandemic: the awareness that runaway infectious diseases, accompanied by and contributing to broken states and damaged economies, are generating desperation and rising criminality. If we are to sustain an anti-terrorist coalition, we cannot afford a lackluster response to the threat that HIV/AIDS and related problems pose to developing societies.

THE CRITICAL IMPORTANCE OF U.S. LEADERSHIP

Over the next five years and beyond, global outcomes in battling the HIV/AIDS pandemic will hinge, to an overwhelming degree, on U.S. leadership. Leadership means using our strengths, our economic resources, and our skills to enable and empower the world community working together to combat this disease. The U.S. role is critical for several reasons:

The U.S. plays a leading role in the international policy dialogue on HIV/AIDS and related infectious diseases—in the G–8, the UN Security Council, deliberations on the newly formed Global Fund to fight against AIDS, TB and Malaria, and elsewhere.

The U.S. is the preeminent force in global scientific research and the development of new medical technologies.

The U.S. funds half of the worldwide programmatic response to HIV/AIDS and related diseases, in the areas of prevention, care and treatment.

Washington is the best positioned of any power to move international trade policy to promote enhanced access to affordable medications.

So too, Washington is the best positioned power to link international debt relief and other poverty-alleviation programs to heightened local investment in public health interventions.

In exercising its leadership over the next five years, the United States should concentrate its efforts in three priority areas:

1. Expand existing U.S. strengths

The United States should consciously build upon its core strengths. These include its leading role on global health issues; its record of appropriating an ample con-

tribution to global funding; its vast institutional expertise in public health policy; its long developmental experience in strengthening local infrastructure in resource poor setting; and its predominant scientific research and development capacities across public, educational, philanthropic and corporate sectors.

A key challenge is ensuring that there is coherence and effective coordination of U.S. efforts, given the range and rising number of agencies operating overseas. Increasingly, there is overlap and duplication of effort, and it is frequently difficult to identify who at a senior level position is actually in charge of the overall U.S. campaign.

A related, pressing issue is which agency will carry lead responsibility in training skilled medical personnel to address the critical personnel shortfalls in acutely affected countries. If that role is to be filled by the agency within HHS responsible for such training, the Health Resources and Services Administration (HRSA), Congress will need to act quickly to provide it the legal mandate and funding to meet this requirement.

The Joint Task Force can, and should, pursue these issues on an urgent basis.

2. Build key bilateral relationships

Modeled upon creative new public/private partnerships in Botswana, Uganda and elsewhere, the United States should give priority to forging new programmatic partnerships with institutions, public and private, in acutely affected countries. These partnerships should focus not only on HIV/AIDS assistance, but also trade and investment initiatives that will address poverty and weak infrastructure.

Integral to the success of those partnerships will be a new emphasis in U.S. diplomacy, at the country level, on battling global infectious diseases. That calls for mainstreaming, and elevating within the foreign policy establishment, public health professionals. The State Department has taken an important step in this direction by creating the Office of International Health and Science, headed by Deputy Assistant Secretary Dr. Jack Chow. Equally important will be systematically integrating America's non-governmental organisations into U.S. programs and policy consultations.

3. Consolidate global coordination

The United States will need to act in close concert with—and leverage ample, focused contributions from—UN agencies, the World Bank, major foundations, corporations, and other bilateral donors. It should work to develop an international steering committee on HIV/AIDS to ensure proper coordination and division of responsibilities between international donors, the Global Fund, UNAIDS, and bilateral programs—limiting duplication and achieving an appropriate balance between research, prevention, treatment, and care.

The U.S. role will neither be to dominate, nor carry a disproportionate share of responsibility. The essence of its leadership will be to rise to the task of mobilizing the world community to better address this highly fluid, dynamic and complex pandemic. In practice, that means the U.S. will need to assign a far higher priority to forging greater conceptual integration and coordination among the far-flung agencies committed to battling the pandemic, both within the United States and internationally.

STRONG SUPPORT FROM THE AMERICAN PEOPLE

This is a program that will receive strong support from the American people. Indeed the public will expect strong leadership by the Government in this area. The American public and American foreign policy elites now exhibit a surprisingly high knowledge of the HIV/AIDS pandemic, high levels of concern, and considerable support for substantial engagement overseas to combat the pandemic. Americans not only strongly support U.S. leadership but also are open to new, more robust initiatives from American leaders.

This dramatic shift from the opinion environment of the late 1990s is the core finding of a recently completed survey of popular and foreign policy expert opinion, that was conducted to inform the work of the CSIS Task Force. The survey was carried out by Public Opinion Strategies and Greenberg Quinlan Rosner Research, generously funded through the UN Foundation/Better World Foundation. Those surveyed were particularly responsive to information on the scope and gravity of the pandemic, its impact upon children, exhortations from Secretary Powell, and evidence that prevention and education programs are achieving concrete results.

TRACKING THE PANDEMIC

A U.S. multi-year plan should be informed by how the pandemic will evolve in the next five years.

First, in the next five years the pandemic will have become *globalized and will be seen by world leaders as such.*

The pandemic's epicenter will remain in Africa, where heightened attention will be paid to its course in Ethiopia, other areas of the Horn, and Nigeria. At the same time, the pandemic will have extended its reach more deeply into China, Russia, other states of the former Soviet Union, India, and the Caribbean states of Haiti, Dominican Republic and Jamaica.

Second, we will see *regionally differentiated approaches.*

Africa will struggle overwhelmingly with acute constraints on access to health services, borne of insufficient financing, weak infrastructure, and insufficient trained health personnel. Young women and infants will bear the highest vulnerability, while millions of newly orphaned children will also attract significant attention. A handful of African states will likely dominate, intellectually, programmatically, and scientifically:Uganda, Botswana, Senegal, and Ivory Coast. Nigeria, South Africa and Kenya, if they can overcome respective formidable internal barriers to effective action, could each quickly advance ambitious national programs and establish prominent continental positions for themselves.

In Asia, the central preoccupation will be stemming at an early point the pandemic's spread. Strategies will vary widely.

In China, the focus will be upon mobilizing the inherited central command state and newly emergent, scattered private medical enterprises to combat China's deep social stigma and contain four sub-epidemics: rural blood markets; medical re-use of syringes; injecting drug use; and prostitution. Already, as new infections spread into the general population, the Chinese government is coming under intensive pressure to institute new, nationwide public health campaign. By 2007, that campaign will be fully operational.

In Thailand and Cambodia, the focus will be upon consolidating solid, state-led gains in reversing infection rates.

In India, the central challenge will be circumventing its dense federal and state-level bureaucracies, along with social and cultural barriers, in time to implement meaningful programs before infection rates mushroom. By 2007, the pandemic will have moved beyond the current six focal states to affect significantly virtually every state.

In Russia and former Soviet states, the priority challenge will be overcoming the collapse of the Soviet-era health infrastructure, in the midst of weak economies, and altering high-risk behaviour among pariah sub-populations: of prisoners, prostitutes and injecting drug users. HIV is poised to break out of these sub-populations; hence the urgent need for a public education/prevention campaign in Russia and Ukraine.

Third, the struggle between the pandemic and efforts to control it will have generated *mixed results at the country level.* In many places, the disease will continue to out distance local and international responses. In many other places, however, determined, smart interventions will have begun to tame the pandemic.

In this context, *individual country responses* will inexorably have become increasingly *differentiated.*

Several countries will have steadily distinguished themselves and thereby attracted a major share of new resource flows: those which demonstrate strong leadership and probity of national institutions; which make substantial budgetary commitments to health; and which aggressively build affordable access to medical products, indigenous skilled medical talent and scientific research capacity.

Occupying a middle tier will be states that struggle to overcome confusion, financial weakness and internal resistance. They will benefit from expanded international assistance, but on a comparatively more cautionary, and conditioned basis.

A third tier of distressed, internally conflicted or otherwise broken states will likely find themselves further on the margins.

Fourth, despite these differentiations, as the pandemic spreads and deepens, *global norms* will have evolved towards universal demand for expanded access to treatment.

This will intensify a debate: over prevention versus treatment; equity in the allocation of treatment (rich versus poor; urban versus rural); and the sustainability of antiretroviral regimes and palliative care in resource poor countries. This debate could become one of the most contentious and divisive of the 21st century unless we act now to address it and plan for its resolution.

THE EMERGENT AGENDA ON AFFORDABLE ACCESS

Because this debate will become so important, it is relevant to examine in more detail the direction of the debate on this issue so far, because it points to promising ways by which it can be resolved.

In the past two years, there have been several major developments that have broadened the landscape of debate over how best to promote affordable access to essential medicines by poor countries acutely affected by HIV/AIDS and related infectious disease.

First, the *prices of many essential drugs have fallen* radically.

The WHO Accelerated Access Initiative, begun in mid-2000, has brought now 70 countries into discussions with five pharmaceutical companies and provided enhanced technical expertise in determining which drugs are most appropriate. Negotiated and unilateral prices reductions, along with increased availability of some new generic drugs, have reduced prices by as much as 90%, more in some instances.

Developing countries remain concerned that these price outs may last only for a fixed period. Moreover, even at reduced prices, many of these drugs are still not affordable among the poorest countries: some expanded financing mechanism will be required, along with concerted investment in basic infrastructure, if essential medicines are to be deliverable in the poorest settings.Second, the *intellectual property rights debate has shifted* significantly.

At the Doha world trade talks in November 2001, trade ministers agreed that intellectual property protection is not and should not be a barrier to access. They also agreed that the poorest developing countries will have no patent obligations until 2016; that means, in effect, that there are no legal arguments in those countries over patents or compulsory licenses.

Related to these developments, one recent study has shown that most essential drugs are not patented in the poorest countries (*See* Amir Attaran, "Do Patents for Antiretroviral Drugs Constrain Access to AIDS Treatment in Africa?" JAMA, 286, pp. 1886–1892, October 17, 2001). Also during 2001, litigation actions by pharmaceutical companies to enforce patent protection in South Africa and Brazil were dropped in the face of intense public and media criticism, and in both countries cooperative arrangements between the companies and the governments are being developed to provide adequate access.

Third, the *Global Fund to Fight Against AIDS,TB and Malaria,* will soon launch its efforts in April when it will respond to the first set of country funding proposals.

In 2001, the Fund will have up to $700 million to disburse, some of it on a multiyear basis. An estimated 80% will go to countries in Africa. At least an equal amount will be available in 2002, perhaps more.

The Fund is uniquely well positioned to leverage the resources at its disposal to improve country-level coordination, and to assist developing countries to develop the technical capacity to refine their programs and negotiate most effectively with large international and corporate entities to strengthen their affordable access. Most obviously, the Fund is will positioned to press for far greater transparency and consistency in global pricing of essential medicines.

Fourth, the *WHO Commission on Macroeconomic and Health* completed its major work at the end of 2001. The committee headed by Dr. Richard Feachem developed a pragmatic framework for action, by "the pharmaceutical industry (both patent holders and generic producers) to agree jointly to guidelines for pricing and licensing of production for low income markets. The guidelines would provide for transparent mechanisms of differential pricing that would target low-income countries." (page 89) This proposal, which envisions a set of reciprocal obligations between industry and poor countries, is now in need of a plan to operationalize it. The Bush administration's Joint Task Force should make that a priority for 2002 and beyond.

Fifth are the emergent public-private partnerships now a conspicuous part of national efforts in Botswana and Uganda.

Nevertheless, important issues remain. In the next few years there will be continued debate over aspects of TRIPS, most notably rules governing parallel imports. But at the same time far greater attention will be paid to the *sustairiability* of initiatives intended to deliver essential medicines at affordable costs. This is one of the principal issues that has troubled the South African Government and has inhibited that Government's willingness to make clear-out policy decisions that are desperately needed.

So too, much urgent work will proceed on how best to balance complex, competing demands (how to block transmission from mother to child, while also oaring for an infected mother), how to meet human skill and training requirements, how to measure the cost effectiveness of interventions, and how best to monitor and evaluate delivery systems. All of these issues must be addressed in a comprehensive response to the HIV/AIDS crisis.

FEASIBLE, PRIORITIZED OBJECTIVES FOR 2002-2007

If the international community, with strong U.S. leadership acts forcefully now and throughout the next five years, we can stem this pandemic and avoid a major world catastrophe. By 2007, we should be able and should commit ourselves to a situation where the pandemic *should have reached a turning point* in its history. The pandemic's speed should be far better contained than it is today, prevalence rates will have dropped significantly in several acutely affected areas, and efforts to mitigate the pandemic's impact on societies and economies will have begun to achieve concrete results.

To achieve this set of goals, we envision U.S. programs and policies put in place over the next five years organized around four priority areas:

1) Programmatic interventions

- Prevention is the mainstay, if in the next five years we are to see the rate of new infections stabilized and reduced. Most importantly, that means putting in place national interventions that overcome mass sero-ignorance and myths, and alter the behaviour of high-risk populations. Cooperative efforts among governments, international organisations, NGOs, local communities, and religious organisations, will have been fostered in every affected country.
- The U.S. will have contributed significantly to strengthening healthcare infrastructures in the most heavily impacted countries, increasing the availability of treatment for opportunistic infections as well as direct HIV/AIDS treatment.
- The U.S. will also have given special attention to strengthening women's organisations to provide women greater protection and a greater voice in prevention, treatment, and care of family members.
- To more adequately address the challenge of AIDS orphans, communities will have also been strengthened with widespread assistance programs, scholarships, and other support services.
- For virtually every programmatic intervention, urgent training of skilled personnel will have been a top priority.

2) Bilateral and global resource mobilisation

- The U.S. will have helped leverage significant increases in funding, from multiple sources, that narrow the gap between supply and demand.
- In 2001, approximately $1.8 billion in external assistance worldwide went towards prevention, care and treatment in developing countries acutely affected by HIV/AIDS, of which slightly less than half came from public and private sources in the U.S.
- By 2007, that figure should have risen to the $7-8 billion range annually, with aggregate U.S. contributions amounting to at least $3 billion per year. That translates into a tripling of resources over the next five years, roughly the same level of growth between 1997-2002.
- None of the resources for HIV/AIDS must come from current and future programs for development and poverty alleviation. Rather, these latter programs should themselves be strengthened and increased because poverty alleviation will have a major impact on the capacity of affected countries to address in a sustained manner the many issues associated with this pandemic.

3) U.S. investment in research and technology

- The current potential of U.S. research efforts will have been realized and significant progress made on vaccine development and trials.
- The U.S. will have collaborated on and contributed to significant research on social and cultural factors in every acutely affected country, enabling messages on prevention, especially among youth, to have greater impact.
- U.S. health institutions will also be mobilized and effectively engaged in strengthening the research and treatment capacities of the comparatively advanced healthcare infrastructures in Asia and CIS.

4) Concerted multilateral action

- The U.S. will have helped elaborate and strengthen a new global health architecture—centered on WHO, UNAIDS, and the Global Fund—that increases the capacity and reliability of surveillance systems, creates greater coherence and integration of responses, that mobilizes new financial flows, and that promotes exchange of data and debate of emergent issues.
- To increase financial transparency and affordable access to treatment, appropriate pricing and distribution policies and programs will have been established in all acutely affected countries, with a combination of private, host govern-

ment, and international financing as appropriate. These policies will have been structured and financed in ways that assure universal access as well as continued private sector investment in new treatments and drugs.

- Major progress will have been made to control HIV/AIDS infections in international military establishments, preventing peacekeeping operations and other international deployments from further contributing to the pandemic.

Only with this degree of commitment and action, beginning now, can the world stem this crisis. But the good news is that if we so act now, we can do it and leave the next generation safe from this plague and its dire consequences.

The CHAIRMAN. Thank you.

Let me say to the other two witnesses, who I would like to go to right away, I am going to be necessarily absent for a few minutes here, and I am not sure, since we are to host the Secretary-General at 3 o'clock—this all got backed up because of the late start with the five votes. But I will try to come back between now and 3:00 to ask questions, but Senator Frist has kindly suggested he would be able to—I am sure he is able. He is willing to continue and bring this hearing to a close in the event I cannot get back. I would like to suggest that I have a number of questions that I would like to submit to you in the event I cannot get back. My leaving is not a lack of interest or disrespect. It is a scheduling dilemma that I do not know quite how to resolve at the moment except with the help of Dr. Frist.

I would like to proceed with you, Doctor, now with your testimony. Again, I apologize for not being here. I will read your testimony, but I apologize for not being here while you testify. Please proceed.

STATEMENT OF DR. SUNANDA RAY, DIRECTOR, SOUTHERN AFRICA AIDS INFORMATION DISSEMINATION SERVICE, HARARE, ZIMBABWE

Dr. RAY. Thank you very much to the Senator, as he leaves, but to the committee as well for inviting me to come and make a testimony today.

I should just say again my name is Sunanda Ray. I am the Director of SAfAIDS which is a southern Africa information dissemination service for HIV and AIDS. It covers the SADC region essentially which includes Tanzania, but we have lots of links with East Africa. So, sometimes we do things together, but in the main we are trying to target the countries that actually are hardest hit by HIV which have been less referred to here today. Botswana, Zimbabwe, Swaziland, all have very high HIV rates. South Africa has the largest number of people with HIV and the most rapid incidence and Zambia, Malawi, Mozambique also have major problems, though Zambia has successes also that we can learn from.

I am going to speak today really from the basis of being a nongovernmental organization, and it was referred to earlier that the NGO's actually pick up a lot of the work that the government is not able to do. And to some extent, NGO's and civil society organizations are more flexible in what they can do. But in many ways, they are also the least resourced depending on who their donors and funders are.

One of the resources that is probably less used because of funding problems is a mushrooming number of civil society organizations, community-based organizations. And our plea to the com-

mittee would be that you, along with other donors, look at how the funding arrangements can be made more flexible so that a lot of the innovative work that is coming from small organizations can be considered, but recognizing that these organizations do not have the infrastructure or the skills to actually fulfill the kinds of reporting requirements that are laid out by the donors.

Now, the way the donors usually respond to this is by asking a bigger umbrella organization to, in a way, mentor the smaller organizations. We get asked to do this a lot, and what happens as a result is it is like saying if something is good, let us throw more work at it until people who are already overcommitted completely drown in the work. And that creates a lot of problems because we do not have the capacity to absorb the work of lots of small organizations.

Our answer to that would be that we would like much more investment in the kinds of skills and capacity building that has been referred to, but specifically within small organizations to help these organizations to do the work that they are good at but also to fulfill fairly basic reporting requirements, that they should not be asked to fill in these huge forms that they are asked to do, but also that larger organizations can also have investment as trainers of those organizations.

This tends to be a whole area that is neglected. It is either there that people have the management capacity or it is not. As much as we need to train doctors in how to treat people with ARV's, we need to train managers within organizations in how to properly manage them and how to account for the money that they are given, but also as part of the monitoring and evaluation, how they should be looking at evaluating how well they are doing because that is a resource that many developing countries do not have. That is the first thing.

Then the second thing is that we are asking for more consideration on time frames. There is a contradiction here. On one hand, we want HIV to be treated as the emergency that it is. If we had the same numbers of people dying in a terrorist attack or in a cholera epidemic or a flood, there would be an immediate emergency response, a multi-sectoral response from the donors getting together and planning how they were going to respond to this. I would argue that we really need that level intervention right now. There are areas of southern Africa where one in three women coming into an antenatal clinic is HIV-positive. That is an emergency. This is usually a young woman, maybe in her first or second pregnancy. That is an emergency.

At the same time, we have to recognize that this is also a long-term development problem. So, we need plans that go beyond the 2- to 3-year funding plans that are made out. People need to be able to plan for the next 10 years how they are going to manage their programs and they need support in doing that from the donors. It is very difficult to hire staff, who are of the caliber that are required to manage these programs, and make a commitment to them on a 2- or 3-year basis. Usually as soon at the UN needs to fill a position, that person will leave to get a higher paid job, even if they are personally committed to the work that they are doing in an NGO. We need to be able to give people commitments

that they will be employed for much longer, and we need to develop plans which involve the work that they are doing in communities.

So, the length of time and the basis on which things get treated as an emergency and development need to be reviewed by all the donors, not just by USAID.

And the third issue is this issue of grants. We have heard about huge amounts of money being discussed here. And the people living with HIV that we are in contact with on a daily basis often say to us, where is all this money? Because we do not see it. I might say to them, well, we see a little bit of it. And they will say, well, we do not see any of it. Often the issue is that they believe that they are the ones who are living with the problem, but there has been a huge industry that has been developed out of AIDS and they have very little part of that cake.

So, we would like to see more of the money that is allocated to HIV and AIDS actually spent in the countries which have the problem and, in particular, that are hardest hit.

A typical case is where you will get a donor coming into a country and they want to do some work. They will set up a tendering process whereby organizations have to tender for money. If you take southern Africa, it will be the same organizations that are asked to bid on these huge amounts of money, and usually we do not have the capacity to do it. So, then outside organizations win the contract, which means that essentially we are paying for salaries in Europe or in the U.S.

The same thing happens when consultants come out. Their salaries and all the other structures that support them are earning the money usually in their host countries.

And we want more of that money to be spent in our countries. But we acknowledge that we do not yet have the level of skills to perform the same kinds of duties. So, what we are asking for is that each of those consultants, when they come, they come as trainers. So, for instance, when CDC sends people out to do surveillance or epidemiological reviews or any of the programs they do, part of their commitment has to be to train local people. Now, if they cannot train local people because of government issues, then they should look for alternative structures that they can train people.

And we have got good partnerships. In Zimbabwe, we have a good relationship with the CDC group there and with the USAID group. And there are ways whereby their skills can be transferred to local people, even if it is just straightforward analytical skills. It needs a mind set which says that we are here to support local people, rather than saying we are coming in to do the job, which is a little bit what I have been hearing at the presentations today. People are saying we are doing this, we are doing that. Actually what we are saying is we want to do it and we want you to do skills transfer. We want to learn from you how to do it, but we want you to leave knowing that there are people here who can take over and do the same work. It is solidarity rather than patronage I think is perhaps the way of looking at it.

My last point is that all of these structures that we have been talking about and all of the programs that we know are effective should all be linking together and they all require much, much more investment in public health infrastructure. So, for instance,

to spell it out, we are talking about the Global Health Fund looking at TB, HIV, and malaria, and these are three programs that traditionally have been done in a vertical way—TB and malaria anyway—and that they do not link up together enough. That means that there is an awful lot of opportunity that is lost in trying to get the best benefit for each of those programs.

If you take voluntary counseling and testing, linking that with TB programs means that every person who goes through a VCT center who is told that they are positive should be screened by the person giving them the results symptomatically to see whether they also have TB, not saying to them, okay, for the screening, you have to go to another center, because the chances are they do not have transport money to go to both places.

If they get through the TB screening, they should come out knowing that they are at risk of TB and how they can protect themselves or how they can know whether they need further referral.

Similarly, people who go through a TB screening service or a TB case finding service should also know about the link with HIV and should be referred to VCT, not just them but their families as well. So that then those linkages are made and the messages are repeated often about the risks of HIV and the risks of TB.

The issue about parent-to-child transmission is a very hot one. We insist on calling it parent-to-child not mother-to-child because it is the only way of drawing in men to the problem. When people talk about mother-to-child transmission, often the responsibility of men, both in preventing infection but also in helping cope with it, is ignored. You find that when you are talking to groups of people, they actually assume that this is a woman's problem and that they do not have anything to do with it. But if you can get men to attend one antenatal care clinic, one clinic session with their partners, there is a whole range of activities that should open up to both the man and woman, and testing is just part of that, bearing in mind what the earlier speaker said, that 70 percent of the women coming through antenatal care will be negative, and they need to know how to protect themselves. But they do not have power to protect themselves. They rely on their partner's cooperation. So, the partners need to know how to protect their families.

And men do not like getting information from their wives or their girlfriends or their partners. They like getting it firsthand usually from professionals.

So, having a whole system that encourages men to come in means that you have to have the resources to be able to provide all those services. You cannot expect overworked health staff to provide all of these functions without any additional investment, and this is where we are proposing that we have to get back to that concept of good quality comprehensive health services where all the health staff are trained in how to deal with all these issues, not necessarily to become full-fledged counselors, but to know when the opportunities arise to be able to provide that advice.

I think I better stop because I know we are short of time. But my last point is that we have to remember that poverty underlies all of this. The reason why young girls are so at risk of infection, even when they know how they get infected, even when they know

how to protect themselves, is because they are usually using sex as a way of getting out of poverty. Until that changes, they will continue to be at risk.

Thank you.

[The prepared statement of Dr. Ray follows:]

PREPARED STATEMENT OF DR. SUNANDA RAY, DIRECTOR OF SOUTHERN AFRICA HIV/AIDS INFORMATION DISSEMINATION SERVICE [SAfAIDS]

HIV/AIDS: PREVENTION, CARE, TREATMENT AND IMPACT MITIGATION NEEDS IN SOUTHERN AFRICA

Summary

The southern Africa region is confronted by a major catastrophe in the form of an HIV epidemic that has not yet spent its force. We are facing 50% of our current 15 year old cohort being dead before age 50 mainly through AIDS related mortality. The burden of HIV is greatest for the poorest people, felt hardest at household level, with families staggering to cope with loss of their main income earners and food producers dying of AIDS while elders are looking after increasing numbers of orphans and vulnerable children. Children themselves are now becoming the carers, giving up aspirations of education and employment to do so. This is happening at a time when many of our countries are in economic difficulties and we do not have the resources to adequately respond to this epidemic.

Many interventions are known to be effective in prevention of HIV transmission, treatment and care of those affected in developing countries. Some are:

- provision of voluntary confidential counselling and testing facilities, particularly targeting young people;
- prevention of parent-to-child transmission through antenatal clinic advice, testing and provision of ARVs to mothers and infants, as well as infant feeding guidance;
- a management and control of sexually transmitted infections;
- male and female condom promotion;
- peer facilitation with young people, sex workers, mobile populations such as truck drivers;
- youth friendly sexual health services;
- community based care for people living with AIDS;
- integrated comprehensive tuberculosis and HIV care.

All these programmes require good quality public health infrastructure extending from hospitals, health centres and clinic to community based workers and the communities themselves, the so-called continuum of care approach. This is a major area for investment from donors: in training and staff development; maintaining standards of care; reliability of commodities and supplies of drugs, male and female condoms; home care materials; destigmatisation of HIV; workplace policies against discrimination; information exchange especially in good practices and lessons learnt. Integration and interlinkages between programmes such as family planning, antenatal care, STI control, infant feeding, TB management, home based care and VCT provide the best opportunity for maximum gain in breaking down the paralyzing stigma and denial that haunt our programmes. Each sector reinforces the messages promoted in support and care, maximizes the efforts of staff, community workers and volunteers, with structured referral between services to avoid duplication and repetition. All this activity will need a good overall national strategic framework to pull it together, the development of which is a major priority for each government and will require donor input and expertise to facilitate the process.

Donors need to become more flexible and responsive to the needs of non-governmental organisations, community groups and support groups in providing funding in small chunks to enable them to do what they are good at without getting overwhelmed with administration and accounting. Larger organisations would also benefit from training and organisation development in managerial skills so that they can oversee and support these smaller community groups in their activities. Regional investment in drugs and condom manufacture would provide employment and avoid transfer of valuable scarce resources to industrialized countries. Similarly, investment in local expertise would circumvent paying salaries in rich countries for work done in the region. These solutions require a longer time-frame than most donors plan for, probably 10-20 years to properly achieve the goals and benefits set out in strategic planning.

INTRODUCTION

Globally, by the end of 2001, 40 million people were living with HIV, with 28.1 million, or 70%, from sub-Saharan Africa. In addition 21.8 million people had died of AIDS, with 19 million, or 87%, coming from sub-Saharan Africa. The highest number of new infections is still in Southern Africa, which has 50% of Africa's cases and the world's nine most affected countries. Illnesses and deaths from AIDS will continue to rise for many more years, even when HIV incidence has stabilized or begun to drop. Consequently life expectancy has been drastically lowered, with Swaziland and Zimbabwe reduced to 30–40 years by 2010 if current trends continue.

South Africa has an estimated 20% of adults infected with HIV, an increase from 13% two years ago. This translates into 4.2 million people living with HIV/AIDS, the highest individual country total in the world. The two countries in the region with the highest population percentages are Botswana and Zimbabwe, with estimates of 36% and 35% of adults infected respectively. In Botswana the prevalence rate has increased to 46% among women aged 25-29. Health services are obviously overwhelmed—an estimated 70% of Zimbabwean hospital bed occupancy is HIV related. In Malawi only 400 out of 900,000 persons with HIV receive antiretroviral therapy: in the region ARV treatment is generally inaccessible due to extremely high costs and spiralling poverty. The effect of HIV/AIDS on other sectors such as education is enormous: in 1998 Zambia lost 1500 teachers, 70% of the new teachers trained annually. In much of southern Africa half our 15-year old boys will be dead before they reach age 50 years, with mortality mainly due to HIV-related causes [UNAIDS].

Although these figures are very dramatic, there are some positive trends. For example UNAIDS reports that for the first time there are signs that the annual number of new infections may have stabilized in some parts of sub-Saharan Africa. In Zambia, recent surveillance data suggest a drop in HIV incidence among young people aged 15-19 years in the two main towns of Ndola and Lusaka. Uganda has also been notable in reducing HIV prevalence in young people as evidenced by antenatal trends.

In order to encourage and build on these developments, HIV-related activities have to concentrate more on targeting young men and women for prevention. Early sexual debut and early marriage are risk factors for HIV for women, because of biological susceptibility during adolescence and because of the age gap between women and men, whereby men would be in older age groups with higher HIV prevalence. The best opportunity for significant prevention of infection is targeting young people before the age of sexual debut, since it is easier to influence safer sex patterns from the outset than change established patterns of behaviour in adults. Supporting women in self-efficacy skills that enable them to refuse early sex provide better chances that they will be able to negotiate for condom use later. Social and community norms that hinder prevention efforts, that encourage stigma and discrimination, have to be challenged. In addition, families living with AIDS need practical and emotional support including caring for the carers. The HIV epidemic has exposed areas of gender inequity in all our countries that were already the basis for poor health and inadequate social development in the past, which need addressing even more urgently now. HIV, maternal mortality and sexually transmitted infections [STIs] are the greatest causes of women's ill health, accounting for over 50% of disease burden among women in southern Africa. By promoting understanding of the long-term development impacts of the epidemic, we can stimulate more effective responses including tackling the poverty/HIV cycles whereby each makes the other worse.

WHAT DO WE KNOW ABOUT WHAT IS EFFECTIVE IN PREVENTION AND TREATMENT PROGRAMMES IN DEVELOPING COUNTRIES?

The response to HIV/AIDS includes three essential components;

- Prevention of new infection.
- Treatment and care of people living with HTV and AIDS.
- Mitigation of current and future social and economic impacts of the epidemic.

Key elements of prevention include what is known as the "abc" in southern Africa: abstinence, be faithful and condom use. All of these depend on the ability of individuals to negotiate for these behaviours. The literature on gender dynamics permitting or otherwise women and men to carry out these behaviours is extensive. A major failing of previous HIV prevention programmes in the region is that there was undue reliance on individual behaviour change without concurrent supportive changes in societal norms and values, the so-called enabling environment. Now it

is clearer that community education and community behaviour change are essential to support people to undertake all these protective behaviours.

In addition, condoms have to be accessible for those who want to use them. The Thailand experience of the 100% condom campaign targeting sex workers and clients led to a reduction in new infections from 143,000 in 1991 to 20,000 in 2000. In Cambodia new infections in sex workers dropped from 40% to 23% in 2000, with sales of condoms climbing from 100,000 in 1994 to 11.5 million in 1998. If condoms are available in sufficient quantities for those who want to use them, there can be significant impact on STI/HIV transmission. Provision of male condoms per year by donors in six countries of sub-Saharan Africa with the highest provision averaged 17 condoms per man aged 15-59. These countries were Botswana, South Africa, Zimbabwe, Togo, Congo and Kenya. In South Africa, it is estimated that 84 condoms per man aged 14-63 years would be required per year based on an average of 7 episodes of sex per month. Obviously, some would be more and some less, and some men would not need to use condoms at all if they were with a steady partner. However, based on these statistics one billion condoms would be required for South Africa alone for men aged 15-59 years. The number of condoms distributed free by the government rose from 6 million in 1994 to 198 million in 1999, still indicating a considerable condom gap in a country with rapidly growing HIV incidence. Locating condom manufacture within the region [as is the case with East Asia] with suitable quality control would make a substantial difference.

Other essential components of prevention are STI control and prevention of parent-to-child transmission [PTCT]. STI control requires reliable supplies of condoms for prevention, drugs for syndromic management with laboratory back up for resistant cases. Prevention of PTCT requires access to good quality antenatal care, health workers trained to provide advice, testing facilities. For women identified as HIV positive, the options available for prevention of transmission to their infants are Nevirapine or AZT given to mother and infant, caesarean section as method of delivery and advice on exclusive breastfeeding or exclusive artificial feeding [mixed feeding presenting the highest risk]. Most countries cannot afford to offer free formula feeding and there is enormous stigma attached to being seen to bottle feed since this labels the women as HIV positive. Nevirapine has been provided free to countries with high prevalence but the above account shows that drug costs are a small part of the overall infrastructure required to prevent PTCT. The benefits of PTCT programmes extend beyond prevention of infection to infants. Voluntary counselling and testing [VCT] has been shown to provide motivation to individuals to stay negative or to seek support if they are positive. If antenatal care includes this process of VCT in addition to public education about HIV, there is potential benefit at each stage, particularly in informing women about the risks of HIV, how to protect themselves. With more discussion about HIV, there could be more openness leading to potential benefits of destigmatisation in communities. Even where 30% of women attending antenatal clinics are HIV positive, the majority will be negative, and need the opportunity to protect themselves. At present, there is so much fear surrounding the presence of HIV, that many women assume they are HIV positive and lose opportunities to prevent infection. Where men are encouraged and motivated to attend antenatal clinics with their partners, they may access advice and testing also, with potential benefit to themselves and their families. One generalized intervention that is being proposed is motivating men, without testing, to use condoms for a defined period of time during their partner's pregnancy and breastfeeding to avoid the higher risk of passing on infection during seroconversion. It is estimated that 5% of women become positive during the year of their pregnancy and breastfeeding, probably because their husbands have had casual sex during that time.

For all these behaviours in prevention to be successful, they have to be promoted within an environment that is supportive of protection, and with good quality health service infrastructures in place. Apart from Botswana most PTCT programmes are in the pilot stage, but are ready to be scaled up nationally. The main obstacle will be the lack of trained staff to properly support women and their partners in making decisions about their HIV status and their pregnancies.

As far as treatment and care are concerned, the problems in providing services are even greater. The HIV epidemic has increased the burden of disease up to sevenfold increasing demand for public health care at the same time as spending on health care has decreased in many countries in southern Africa. Most people with AIDS are cared for at home by relatives who have very little formal support with protective materials or emotional support. Many of these relatives will be themselves living with HIV, or caring for other children from parents who have died of AIDS. Many of the carers are themselves children looking after dying parents. Most support comes from NGOs or faith based organisations, rather than public health services. These either do not have transport to do home visits, or are struggling to

cope with their inpatient load. They also do not have spare materials to provide in home care. People dying of AIDS do not have basic analgesia to ease their pain, suffer from malnutrition because they have terrible mouth sores from fungal infections and cannot swallow, do not have access to anti-diarrhoea drugs or drugs to stop their vomiting. For many, therapy to ease opportunistic infections and pain are higher priority than antiretroviral drugs. Although ARVs have made a major impact on survival of people with HIV in industrialized countries, differences in life expectancy were already stark because of the difference in access to basic health services and early treatment of opportunistic infections.

If cheaper sources of ARVs are made available, the infrastructure costs of provision must be factored into the costs, including costs of VCT and provision for spouses and other HIV positive children. Activists and the medical profession alike often overlook equity of provision when campaigning for ARVs. If public money is spent on acquisition of ARVs with the support of donors, the best way of ensuring equity is to channel the drugs through programmes such as prevention of PTCT so that women attending antenatal care and found to be HIV positive, are prioritized for treatment if appropriate. Their partners can also be drawn in through the provision of treatment which if accompanied by good quality VCT, would work towards caring for affected families, linking them with support networks and advising them on positive living and early treatment of infections. Tuberculosis programmes that have good mechanisms already for registration of patients, with good follow up and care, would be another appropriate means of identifying families for VCT and ARV therapy while keeping equity of access foremost in priority. If these strategies are not in place, ARV therapy will mainly be used to benefit the rich and influential without safeguards for poorer people, especially those in rural areas.

WHERE SHOULD DONORS CHANNEL RESOURCES?

For the HIV epidemic to be adequately addressed, major investments are needed on a crisis scale in public health sectors of countries in the southern Africa region. This need is underscored in every aspect of prevention, treatment and care. In addition, recognizing that the impact of HIV is wider than the health field, and is greatly felt in all aspects of social and economic development, investment is also needed in other sectors such as in education of young women and men, provision of further education and employment possibilities, restructuring of social welfare to serve the needs of families decimated by AIDS, in particular orphans and vulnerable children, training of all levels of public sector workers in all these fields, to account for attrition due to ill health as well to cope with the increasing demands.

Interventions that are known to be effective have to move urgently from pilot projects to national scaling up. The public and private sectors have to be prepared for this, and linkages between the programmes maximized for greatest benefit. So for instance, all VCT services should also provide basic symptomatic screening for STIs and tuberculosis, with onward referral to services as appropriate. They should also provide family planning advice to prevent unwanted pregnancies. Public health services similarly should refer persons screened for TB to VCT in view of the linkage between TB and HTV. Family members should also be referred. For these referrals to be effective, STI, TB, family planning and VCT services need to drastically intensify their advisory services, bringing up HIV with clients as much as possible, especially to break down the denial and stigma patterns that have fostered the epidemic. In this prevention, treatment and care are closely intertwined, with intensive promotion that the majority of people are negative and need to stay that way. Primary health care gains in many countries in southern Africa have been reversed by the HIV epidemic. However, the developments that led to those gains have to be urgently revitalized to link quality antenatal care, family planning, infant feeding, child health, syndromic STI management, TB control, support for home based care and management of opportunistic infections in people living with AIDS under the banner of comprehensive health care. Added to this will need reliable provision of sufficient quantities of commodities such as male and female condoms, antibiotics, pain relief, symptomatic treatment for HIV related illness including opportunistic infections, and protective materials for home based care. This will be even more effective if coupled with public education so that health services are actively supported by their communities, with linkages with volunteers, faith institutions and NGOs. All this activity will need a good overall national strategic framework to pull it together, the development of which is a major priority for each government and will require donor input and expertise to facilitate the process.

All these programmes need to give special attention to targeting young people. Linkages with school health programmes, peer facilitation projects, media work with young people, youth friendly clinics and advice centres, sports and educational en-

tertainment programmes are various ways in which this can be achieved. More action research is needed on where young people get their information from, who they respect as peer facilitators, what influences are successful in persuading them to protect themselves, how they arrive at realistic decision making, and how to increase self efficacy for young women and men. The behaviour changes desired are delay in sexual debut, consistent condom use, early attendance for STI treatment and understanding the link between infertility and STIs at young ages, prevention of young women treating sex as a commodity thereafter ending up as sex workers.

Donors have an additional role to play in providing flexible systems and mechanisms to support small-scale community development, local structures and organisations. This is partly through funding but also through capacity building, supporting information exchange and dissemination in accessible formats, supporting innovative methods of interactive information exchange such as through media, email discussion fora, theater and performing arts. At SAfAIDS we do all these things entirely through donor funding. In addition we link researchers with organisations involved in implementation, so that research findings can inform the design of programmes, provide feedback on research and implementation across groups, and translate information found on the internet or e-mail discussions into print formats such as newsletters and bulletins so that those without computer access can still be updated.

CRITICAL APPRAISAL OF U.S. BILATERAL ASSISTANCE EFFORTS

My main experience with U.S. assistance for HIV programmes is in Zimbabwe. USAID has focused on several areas of proven effectiveness combined with operational research components to establish what works where the evidence is not so clear. These programmes are:

- Social marketing programmes for high quality voluntary confidential counselling and testing [VCT] services through the private sector; this is mainly in urban areas but provision of mobile outreach clinics for more rural areas is being explored. These programmes particularly target young people.
- Social marketing of male and female condoms and oral contraceptives through pharmacies and supermarkets. Procurement of condoms is done in conjunction with the British Department of International Development [DFID].
- Support for the Zimbabwe National Family Planning Council [ZNFPC], in particular to train and upgrade community based distributors of oral contraceptives so that they can provide other forms of sexual health advice.
- In conjunction with the U.S. Centres for Disease Control [CDC] programme in Zimbabwe, there is support for monitoring the spread of HIV in Zimbabwe through serological surveillance and a youth sexual health survey. They are also embarking on a media programme targeting young people.
- Impact mitigation through orphan care, educational support for girls, microfinance projects targeting women, vulnerable groups such as street children and farm workers.
- A policy and advocacy programme has just started which plans to provide support and grants for private sector and NGO initiatives to destigmatise HIV and reduce discrimination such as through workplace policies, capacity building, lobbying parliamentarians, and use of media.

The main constraint we face in the NGO sector in the region related to U.S. funding for our projects is that the process of procuring funds is very bureaucratic and cumbersome. In the words of one friend, big money is not always the answer if it cannot be delivered in small enough chunks. There is little flexibility in the system to make small grants to NGOs with good ideas but little absorptive capacity for large amounts of money. A grant of 50,000 U.S.$ to support VCT activities in an NGO involves the same arduous process as a grant of 20 times that amount. The justification for this is in need for organisational accountability and financial accounting mechanisms. However, it means the funding cannot be used in ways that are dynamic, responsive or empowering to community groups where the impact of the HIV epidemic is felt the hardest and who have the least means to protect themselves.

Another problem is that the time scales for programme planning and funding are short, sometimes 2 to 3 years. A much longer-term perspective is essential for strategic planning to achieve its goals, probably 10-20 years. The effects of HIV in communities will continue to be experienced for that long even if new infections are entirely prevented. At the same the urgency of the current HIV epidemic in southern Africa has to be regarded and dealt with as a crisis rather than a chronic development issue, so that disbursement of funds are more quickly facilitated to multiple

sectors and groups working to ameliorate the impact. Some have called for mobilisation of "war budgets" with all resources reoriented towards this effort.

TRAINING AND INFRASTRUCTURE NEEDS IN DEVELOPING COUNTRIES

Many training and infrastructure needs have been referred to in earlier sections but it is worth emphasizing some needs in particular. At SAfAIDS we are often asked to act as an umbrella body to smaller organisations to enable them to get grants through us because we have the skills and accounting mechanisms to fulfill donors reporting requirements. If we agreed with this, our attention would be divided between doing what our mission is, which is using information as a change agent, and mentoring smaller organisations with varying capacity and ability to carry out what their purpose is. There are not sufficient indigenous organisations with the necessary skills and infrastructure to carry out this kind of mentoring because it is difficult to retain skilled staff within the NGO sector. For this reason donors often commission international agencies to develop networks of partners to carry out their work but the sad consequence is that valuable funds then go to pay salaries in Britain, U.S. and Europe rather than investing in capacity building within the region. South Africa is one country that has private companies competing for many of these contracts and we could make more of developing regional partnerships with them. One essential training need here is to build up managerial and financial accounting capacity within small organisations so that they are better able to report on the funds they receive, and among larger organisations so that they can capacity build smaller organisations. Developing centres within universities to carry out these functions would be another way to support training as well as skills expansion, staff development and consultancy.

A major gap that has developed between rich and poor countries is access to computer skills and information technology, with the access this provides to updated information. Most secondary schools in the region do not have computers even when they have access to electricity and phone lines, so students do not even have keyboard skills. Access to IT has been liberating in many circumstances. Many academics are now able to access medical and other health journals free on the internet whereas they previously received print journals very late, if at all. Discussion fora prior to conferences are often more interesting than the conference proceedings themselves, and usually more democratic. The youth e-mail discussion forum for the African Development Forum 2000 in Addis Ababa was a case in point. We provide cyber training for small groups of NGOs that have access to email and internet but do not know how to use them. This is an area that could develop rapidly with investment beyond what we can offer, taken up by major training in each country. Email discussion groups in each country could enable the National AIDS Councils to keep their partners and member organisations informed of grants, funding, activities as well as stimulate debate on various aspects of the crisis, such as how the money is being spent! Other use of technology is that the rapid acquisition of cell phones in the region has meant that setting up telephone helplines for the public are now a possibility whereas in the past this only served urban elites.

Finally, there are major training needs for all levels of public sector workers related to HIV/AIDS, in health, education, social welfare, industry, agriculture and so on. For health sector workers, training in provision of sensitive non-judgemental sexual health services for all who walk in the door is crucial so that they do not create barriers to uptake of services as often happens at present. In particular they need training in how to provide youth friendly services in imaginative ways [such as having peer facilitators working alongside them in clinics], how to encourage sex workers to use public facilities without fear of discrimination, and other marginalized groups such as street children. Training is needed in how to provide advice for prevention in PTCT, such as management of mastitis and breast problems [that may facilitate HIV transmission], support for exclusive breast-feeding or exclusive artificial feeding. Many of these activities we assume health workers must know, but in fact they do not. Doctors are the least equipped to support infant feeding or to give advice on testing. In addition doctors and other health workers need more intensive training in how to support relatives in home based care and symptomatic management of HIV related pain and illness. If ARVs become available this will be a further area for training, not only in treatment and monitoring of treatment, but also in how to ensure equity in provision of treatment. There are training courses usually associated with universities in the region that can cater for many of these training needs but they are often inaccessible because of costs of travel, accommodation, course fees. Again, facilitating attendance and follow up at these courses would be an important use of donor money but is often not provided because of the administration involved in small grants.

In conclusion, the literature around what is effective in prevention, treatment and care in HIV/AIDS is vast and could not be covered adequately in this paper. What is crucial now is learning how to put what we know into practice, with feedback and follow up built in to research and programme work. It is difficult to implement any of these programmes beyond pilot projects when health staff are deskilled and in poor morale, when health services are run down and unable to provide comprehensive care, with poor linkages with communities. To respond to the HIV epidemic in appropriate and timely ways requires massive investment and support to public health service provision, training and skills development in all public sectors on HIV, and flexible, streamlined and coordinated donor responses to the most major and catastrophic social disaster of our time in the southern Africa region.

Senator FRIST [presiding]. Thank you, Dr. Ray.

Dr. Okaalet.

STATEMENT OF PETER OKAALET, M.D., AFRICA DIRECTOR, MEDICAL ASSISTANCE PROGRAM INTERNATIONAL, NAIROBI, KENYA

Dr. OKAALET. Chairman Biden, in absentia, distinguished Senator Frist, fellow partners in the struggle against HIV and AIDS, thank you for inviting me to bring before you today both a challenge and an opportunity.

My name is Peter Okaalet. I am a Ugandan-born physician who leads MAP International's HIV and AIDS work in Africa. The credentials I offer on this subject are three-fold. As an African physician, I have treated dying patients of HIV and AIDS. As an African theologian, I have counseled them and comforted their grieving relatives. And as a family member, I have been, and still am, brother, uncle, and cousin to those dying of HIV and AIDS.

I do not wish to discuss the program today, but instead to speak of a unique resource to combat the disease. In every community, from the smallest, most remote village to the largest urban centers, there is an institution that is always present. It can muster tremendous human resources. It has infrastructure in place. It is truly grassroots, and it can influence behavior, politics, and social justice. In fact, in many instances, it has changed the course of human events. From my Christian background, I will refer to this simply as the church, but please hear the term and recognize that for the purpose of this testimony, I will use that to encompass all organized religion and all faith-based institutions.

To quote from a 1995 UNICEF report: "Religion plays a central, integrating role in social and cultural life in most developing countries. There are many more religious leaders than health workers. They are in closer and regular contact with all the groups in society and their voice is highly respected. In traditional communities, religious leaders are often more influential than local government officials or secular community leaders."

I offer you today the church as a powerful tool with which to address both HIV and AIDS prevention and care. In truth and humility, we in the church recognize that our tool has been badly flawed. As the AIDS pandemic spread, it exposed fault lines that ran in the heart of our theology, ethics, and actions. The church was too often an obstacle in the fight. We looked the other way when customs and traditions flew in the face of religious teachings, and we created unnecessary factions over the condom issue. We called people living with HIV and AIDS sinners, and we too often ostracized

them rather than embraced. We as religious leaders were loathe to discuss the issue of sex and death with our families, communities, and never from the pulpit. In many cases, we increased rather than ameliorated the suffering and separation of the ill and the dying.

But I am here to tell you that in Africa, I am hearing recognition that we have been part of the problem. I am also seeing that we are an integral part of the solution. Religious-based institutions, when properly supported and coordinated, can be some of the most strategic vehicles through which to slow the spread of HIV and AIDS.

This past November, for example, at the Global Consultation of the Ecumenical Response Against HIV and AIDS was held in Nairobi. Also in November of last year, 580 representatives from 31 nations, representing 70 million members of the Association of the Evangelicals in Africa met in Burkina Faso and together declared that the church must address poverty and HIV and AIDS. The participants left energized and committed for the raging battle. The call to action does not demand uniformity in response, but it does demand a resolve to speak openly and honestly about the disease.

The church also recognizes that the AIDS pandemic has systemic issues that are rightly the domains of the church: namely, violence, gender inequality, poverty, human rights, and social justice. The future holds great promise, building upon what the church has already done to address HIV and AIDS. I would like to cite a few success stories.

Uganda, my home country, is often cited for the most dramatic reduction in HIV infection rates. It is not mere coincidence that the period when the rates plummeted, especially between 1991 and 1998, was a period of marked involvement by the Anglican, Catholic, and Muslim religious organisations. Their messages of fidelity and abstinence echoed the approach strongly favored by President Museveni. Senator Frist, you have already refereed to his wife coming to address a conference that will be taking next week.

Several studies have documented behavior change, including reduction in sexual partners, delay of sexual debut, and abstinence. A UNAIDS best practices study of the Islamic Medical Association in Uganda shows that AIDS prevention activities carried out through religious leaders did have a significant impact in reducing the spread of AIDS. As behavior continued to change and HIV infection rates declined, several other religious groups became involved under the coordination of the ministry of health. Dr. Edward Green, a consultant of the Synergy Project and Harvard School of Public Health, studied the Ugandan model and estimated that in 1995 over 2,700 trainers and peer educators, as well as about 5,600 community volunteers in the Muslim IMAU project alone, had reached nearly 200,000 households and had counseled or sensitized over 1 million sexually active people.

In Zambia, the Salvation Army has been on the forefront of HIV and AIDS prevention and control strategies. They have supported institutional care of people living with HIV and AIDS in Chikankata Hospital, for example. Their program reflects the continuum of care model that is essential in the face of this pandemic.

The organization that I represent, a Georgia-based PVO, Medical Assistance Program International, has its own success stories in

Kenya. With funds received from USAID through Family Health International, MAP launched its project which was dubbed Integrated Action Against AIDS with Kenyan Churches in 1994. MAP has worked since, across the denominational spectrum, from Pentecostal to Roman Catholic congregations, conducting training in HIV and AIDS prevention and compassionate care ministries. The project incorporated baseline research, material development and dissemination, networking, and policy formation with top-level leaders and grassroots practitioners. It developed a peer education program, youth-to-youth, training adolescents in various parts of Kenya, especially in the schools and churches.

MAP, in partnership with a select number of theological institutions in Kenya, began to develop a curriculum on HIV and AIDS targeting seminaries and bible schools in sub-Saharan Africa. The rationale for this project was the simple fact that clergy and church leaders were sadly unprepared to deal with the HIV and AIDS impact, especially in the churches and in the communities. As most of us have found out working with religious leaders, the official duty that a young African clergy fresh from seminary or bible school would be called upon to perform would most likely be a graveside service for someone who had died of HIV and AIDS, not a biblical exegesis from the pulpit on a Sunday morning. Seminarians usually graduate with a knowledge of Hebrew, but have little knowledge on the subject of the prevention of sexually transmitted diseases, including HIV and AIDS.

In 1996, MAP developed a series of curriculum modules that address HIV and AIDS, targeting especially again the theological schools. Some of the modules included such modules as facts about transmission, advice on mobilizing church resources, information about home-based care, and other AIDS-related issues imperative for a church leader to grapple with when they graduate from theological school.

In June of 2000, the ministry of health in Kenya opened another workshop that brought together theologians from east and southern Africa to discuss the subject of HIV and AIDS and try to create a curriculum targeting theological schools again in that region. We are pleased to report that through a grant from the Episcopal Relief and Development Fund in New York this fall, four Anglican seminaries in Kenya, Uganda, Zambia, and South Africa have accepted the challenge and will integrate HIV and AIDS courses in their curriculum.

MAP has worked closely with people of other faiths, especially the Muslims in Kenya. Last October, for example, at the request of the National AIDS Control Council, MAP organized an inter-religious conference on the role of faith-based organizations in combating HIV and AIDS that included Christians, Muslims, Sikhs, and Hindus.

The examples I cite above have a number of common threads: a proactive program reaching across denominations, strong coordination and effective follow-up, and a partnership among government, secular, and religious sectors. Partnership is essential to any effective broad-based program such as the one that I am talking about.

The Uganda model used World Bank funding, government backing, and faith-based organizations' networks and training ability.

MAP's experience in Kenya would never have been possible without the initial funding from USAID's AIDS Control and Prevention Project, AIDSCAP. MAP was supported by the World Health Organization to carry out also some other home-based care in western Kenya. UNAIDS has funded most of the work that we have done, and I am sorry that Dr. Peter Piot is not here to hear some of the vote of thanks that I wanted to give to him at this time.

AIDS is not just a medical problem and not just a public health issue. It is also a behavioral issue. MAP International promotes the ABC approach: abstinence until marriage, being faithful in marriage, and condom usage where warranted.

While MAP does not make a judgment for other groups about the use of condoms, it does advocate for a participatory approach in discussion of the issue. I wish to stress that behavior change is not synonymous with condom usage. Like a pebble tossed into a lake, behavior is but a ripple effect of deeper issues, values and choices. This would suggest that one cannot speak of behavior change necessary to combat HIV and AIDS without addressing the core issues of poverty, injustice, and the exploitation of women, what my other colleagues have already referred to, basic human rights, enough food to eat, enough clean water to drink, a roof over one's head, and a way to make a living.

A mother of four in my country who can make the equivalent of $3 for having unprotected sex with a client or $1 if she demands he wear a condom can hear the message of safe sex all day, but it will not drown out the hungry cries of her children.

A 10-year-old in South Africa who is forced to have sex with an HIV-infected person, especially a man much older than her, who believes that sex with a virgin will cure him, is an inappropriate target for the "wait until you are married" kind of talk.

Neither faith-based organizations nor governments nor world assemblies can separate the AIDS pandemic from the larger social and political issues. One of the most effective strategies in the Uganda AIDS success story was the use of debt relief to expand the AIDS control effort. Recognition of the root causes, resource pooling, and coordination are key, with each player bringing to the table the very finest resource in their arsenal.

Last May, Christian Connections for International Health brought together about 166 participants representing 25 countries to an AIDS, TB, and malaria conference which was held at the First Presbyterian Church of Arlington, Virginia. The venue was a house of worship, but the participants represented WHO, UNAIDS, USAID, CDC, pharmaceutical representatives, academicians, congressional staff, and secular NGO's, in addition to the faith-based organizations represented.

As already alluded to, next week another assembly convened by the Samaritan's Purse, whose team is here present under the leadership of Ken Isaacs, will draw representatives, over 900 of them at least, from the same diverse sectors, all focused on AIDS and the broader issues of poverty and human rights, all committed to the fact that the time has come to present a united front in face of this pandemic.

I would now like to pose three key questions and suggest a few answers as I close.

Senator FRIST. Dr. Okaalet, just because the Secretary-General is going to start here in a few minutes, summarize in a couple of minutes. Your testimony will be read by everybody. The questions are great and the answers are great because I had an opportunity to look at those earlier. But summarize those and we will go through one round of questions. Then we will have to close.

Dr. OKAALET. Thank you.

The first question, what do we, the faith community, offer the world in the fact of this pandemic? A track record of 2,000 years of history of care and support to those who are in situations like those HIV and AIDS people find themselves in. Responsiveness and commitment, integrity, access, moral authority, advocacy, and a holistic approach.

Second, how do we, the faith community, construct a new plan of action to address HIV and AIDS? We will condemn discrimination and stigmatization. We will seek out partners. We will advocate broadening the discussion on HIV and AIDS to include other issues that are no-touch subjects like sex and sexuality, even preaching about them from the pulpit. We will educate. We will promote effective means of prevention. We will commit resources to care and counseling. We will challenge culture and traditions.

Lastly, what do we, the people of faith, ask of you in the committee? Number one, that you continue to create space in which to engage us, be it through formal offices for faith-based initiatives, conferences, or informal discussions. Second, that you help leverage the tremendous financial resources of the United States and the western world to engage the pandemic even more aggressively. And lastly, that you continue to shift resources like those through the USAID CORE initiative to grassroots faith-based organizations and institutions in the front lines of the battle who have proven that they can indeed be committed allies to defeating this pandemic.

Thank you, Mr. Chairman.

[The prepared statement of Dr. Okaalet follows:]

PREPARED STATEMENT OF PETER OKAALET, MD, M.TH, M.DIV., AFRICAN DIRECTOR, MAP INTERNATIONAL

THE ROLE OF FAITH BASED ORGANISATIONS IN THE FIGHT AGAINST HIV AND AIDS

Chairman Biden, distinguished Senators, fellow partners in the struggle against HIV and AIDS, thank you for inviting me to bring before you today both a challenge and an opportunity.

My name is Peter Okaalet. I am a Ugandan-born physician who leads MAP International's HIV and AIDS work in Africa. The credentials I offer on this subject are three-fold: as an African physician, I have treated dying AIDS patients; as an African theologian, I have counseled them and comforted their grieving relatives; as an African family member, I have been—and still am—brother, uncle, and cousin to those dying of AIDS.

I do not wish to discuss the problem today, but instead to speak of a unique resource to combat the disease. In every community—from the smallest, most remote village, to the largest urban centers, there is an institution that is always present. It can muster tremendous human resources; it has an infrastructure in place; it is truly "grass-roots;" and it can influence behaviour, politics, and social justice. In fact, in many instances it has changed the course of human events. From my Christian background, I will refer to it as the Church. But please hear that term and recognize, that for the purpose of this testimony, I will use that to encompass all organized religion and all faith-based institutions.

To quote a 1995 UNICEF report:

> "Religion plays a central, integrating role in social and cultural life in most developing countries . . . there are many more religious leaders than

health workers. They are in closer and regular contact with all age groups in society and their voice is highly respected. In traditional communities, religious leaders are often more influential than local government officials or secular community leaders." (Religious Leaders as Health Communicators. New York, NY:UNICEF, 1995)

I offer you today the Church as a powerful tool with which to address both HIV and AIDS prevention and care. In truth and humility, we in the Church recognize that our tool has been badly flawed. As the AIDS pandemic spread, it exposed fault lines that ran to the heart of our theology, ethics, and actions. The Church was too often an obstacle in the fight: we looked the other way when customs and traditions flew in the face of religious teachings; we created unnecessary factions over the condom issue; we called people living with AIDS sinners; and we too often ostracized rather than embraced. We as religious leaders were loathe to discuss issues of sex and death within our families, communities, and never from the pulpit. In many cases, we increased, rather than ameliorated, the suffering and separation of the ill and the dying.

But I am here to tell you that, in Africa, I am hearing recognition that we have been part of the problem. I am also seeing that we are an integral part of the solution. Religious-based initiatives, when properly supported and coordinated, can be some of the most strategic vehicles through which to slow the spread of HIV and AIDS. This past November, at a Global Consultation on the Ecumenical Response to the Challenge of HIV and AIDS in Africa held in Nairobi, this was confirmed. Also in November, 580 representatives from 31 African nations representing 70 million members of the Association of Evangelicals in Africa met in Burkina Faso and together declared that the church must address poverty and HIV and AIDS. The participants left energized and committed for the raging battle. The call to action does not demand uniformity of response—but it does demand a resolve to speak openly and honestly about the disease, about sexuality and about behaviour, and to act practically, compassionately, and nonjudgmentally in response to it. To quote one of the plans of action from the conference: "It is time to speak the truth. It is time to act only out of love. It is time to overcome fatigue and denial And it is time to live in hope."

The Church also recognizes that the AIDS pandemic has exposed systemic issues that are, rightly, the domains of the Church: namely, violence, gender inequality, poverty, human rights, and social justice. The future holds great promise, building upon what the Church has already done in addressing AIDS. I would like to cite a few success stories:

Uganda, my home country, is often cited for the most dramatic reduction in HIV infection rates. It is not mere coincidence that the period when the rates plummeted, 1991-1998, was a period of marked involvement by Anglican, Catholic, and Muslim religious organisations. Their messages of fidelity and abstinence echoed the approach strongly favored by President Museveni. Several studies have documented behaviour change—including reduction of sexual partners, delay of sexual debut, and abstinence. A UNAIDS "Best Practices' study of the Islamic Medical Association of Uganda (IMAU) shows that AIDS prevention activities carried out through religious leaders had significant direct impact. As behaviour continued to change and HIV infection rates declined, several other religious groups became involved under the coordination of the Ministry of Health AIDS prevention activities, funded by the World Bank. Dr. Edward C. Green, consultant to the Synergy Project and Harvard School of Public Health, studied the Uganda model and estimated that in 1995 over 2,745 trainers and peer educators as well as 5,629 community volunteers in the Muslim IMAU project alone had reached nearly 200,000 households and had counseled or sensitized over 1 million sexually active people. The Anglican project had reached nearly 3/4 million Ugandans.

In Zambia, the Salvation Army has been on the forefront of HIV and AIDS prevention and control strategies. They have supported institutional care of people living with HIV and AIDS in Chikankata Hospital. Their program reflects the continuum of a care model that is essential in the face of this pandemic.

The organisation I represent, a Georgia-based PVO, MAP (Medical Assistance Programs) International, has its own success story in Kenya. With funding from USAID, through Family Health International, MAP launched its project, "Integrated Action Against AIDS with Kenyan Churches" in 1994. MAP has worked since, across the denominational spectrum, from Pentecostal to Roman Catholic congregations, conducting training in HIV and AIDS prevention and compassionate care ministries. The project incorporated baseline research, material development and dissemination, networking, and policy formation with top-level leaders and grass roots

practitioners. It developed a peer education program, youth-to-youth, training adolescents to counsel their peers in Kenyan churches and schools.

MAP, in partnership with a select number of theological institutions in Kenya, began to develop a curriculum on HIV and AIDS targeting seminaries and bible schools in sub-Saharan Africa. The rationale for this project was the simple fact that clergy and church leaders were sadly unprepared to deal with AIDS and its impact on their churches and communities. The first official duty that a young African clergyman, fresh from seminary or bible school, would be called upon to perform would most likely be a graveside service for someone who had died of AIDS, not a biblical exegesis from the pulpit! Seminarians usually graduate with knowledge of Hebrew, but have limited knowledge on the subject of the prevention of sexually transmitted diseases.

In 1996 MAP developed a series of curriculum modules addressing the biblical foundations for an HIV and AIDS church initiative, facts about transmission, advice on mobilizing church resources, information about home-based care, and other AIDS-related issues imperative for a church leader to grapple with. In June 2000, MAP, in partnership with the World Council of Churches and UNAIDS, hosted a forum that attracted academic deans, principals, and representatives from 20 theological institutions from 14 countries in East and Southern Africa. The outcome was a draft curriculum with a challenge to take it, adapt it to the particular denomination or country, and require its use in the seminaries and bible schools.

We are pleased to report that, through a grant from the Episcopal Relief and Development Fund in New York this fall, four Anglican seminaries in Kenya, Uganda, Zambia and South Africa have accepted the challenge and will be integrating the HIV and AIDS courses into their curriculum.

MAP works closely with the Ministry of Health and has held a seat on the board of the Kenya AIDS NGO Consortium (KANCO) since its inception. This consortium includes government, faith-based organisations, international organisations, and secular NGOs.

Working with the Muslim community in Kenya, MAP has made great strides in interfaith alliances. HIV and AIDS prevention radio spots, created by MAP for the Kenya Broadcasting Corporation, patterned themselves after Islamic calls to prayer. Discussions have been held with the Imam of the largest mosque in Nairobi. Last October, at the request of the Kenyan National AIDS Control Council, MAP organized an inter-religious conference on the role of faith-based organisations in combating HIV and AIDS, that included Christians, Muslims, Sikhs, and Hindus.

The examples I cite above have a number of common threads: a proactive program reaching across denominations; strong coordination, and effective follow-up; and a partnership among government, secular, and religious sectors. Partnership is essential to any effective, broad program.

The Uganda model used World Bank funding, government backing, and the faith-based organisations' networks and training ability. MAP's experience in Kenya would never have been possible without the initial funding from USAID's AIDS Control and Prevention (AIDSCAP) Project. MAP was supported by the World Health Organization (WHO) to carry out a home care study. UNAIDS funds much of our conference and networking work. The faith-based initiative offices of USAID and the World Bank offer consulting and networking opportunities. Clearly, bilateral and multilateral agencies are recognizing and responding to the potential offered by partnering with faith-based organisations to combat HIV and AIDS. Archbishop Desmond Tutu, among others, has forcefully called for a concerted effort by all to rise up to the challenge posed by HIV and AIDS. He challenged global leaders to look beyond their differences and to join hands in solidarity against this pandemic.

AIDS is not just a medical problem . . . and not just a public health issue—it is also a behavioural issue. MAP International promotes the ABC approach: Abstinence until marriage, Being faithful in marriage, and Condom usage when warranted. To complement this prevention strategy, MAP also emphasizes care and support of people infected and affected by HIV and AIDS, thus addressing the entire continuum of care—prevention, care, and support.

While MAP does not make a judgment for other groups about use of condoms, it does advocate for a participatory approach in discussion of the issue. I wish to stress that "behaviour change" is not synonymous with condom usage. Like a pebble tossed into a lake, behaviour is but the ripple effect of deeper issues, values and choices. This would suggest that one cannot speak of the behaviour change necessary to combat HIV and AIDS without addressing the core issues of poverty, injustice, exploitation of women, and basic human rights to enough food to eat, enough clean water to drink, a roof over one's head, and a way to make a living.

A mother of four in my country who can make the equivalent of $3 for having unprotected sex with a client—or $1 if she demands he wear a condom—can hear the message of safe sex all day, but it will not drown out the hungry cries of her children. A ten year old in South Africa who is forced to have sex with an HIV-infected man who believes that sex with a virgin will cure him, is an inappropriate target for the "wait until you are married" talk.

Neither faith-based organisations, nor governments, nor world assemblies can separate the AIDS pandemic from these larger social and political issues. One of the most effective strategies in the Uganda AIDS success story was the use of debt relief to expand AIDS control efforts. Recognition of the root causes, resource pooling, and coordination are key, with each player bringing to the table the very finest resources in its arsenal. Last May, Christian Connections for International Health brought together 166 participants from 25 countries to an AIDS, Malaria, TB conference held at the First Presbyterian Church of Arlington, Virginia. The venue was a house of worship, but the participants represented WHO, UNAIDS, USAID, CDC, pharmaceutical representatives, academicians, congressional staff, and secular NGOs, in addition to the faith-based organisations represented. Next week, another assembly convened by Samaritan's Purse will draw representatives from the same diverse sectors—all focused on AIDS and the broader issues of poverty and human rights. All committed to the fact that the time has come to present a united front in the face of this pandemic.

I would now like to pose three key questions, and suggest a few answers:

What do we, the faith community, offer the world in the face of this pandemic? (Quoted in part from a Christian Connections in International Health document):

- A track record—A 2,000 year history of quality care for the sick and the dying. In many African countries, religious organisations provide 30-50% of the hospital beds in the country.
- Responsiveness and long-term commitment—Faith based organisations respond quickly to difficult situations, accepting challenges other institutions ignore or quickly abandon when they linger or become unfashionable.
- Integrity—Individuals in America and around the world give more of their philanthropic dollars to religious institutions than to any other group. On the whole, religious groups have a record of fiscal responsibility and a divine mandate to be good stewards of the resources allotted them.1
- Access to a wide audience and community involvement.
- Moral authority—religious leaders can influence communities, societies, nations, and the course of human events.
- Advocacy—Religious institutions champion the poor, the marginalized, the disenfranchised.
- A holistic approach—melding the spiritual, physical, mental and social aspects of health and balance.

How do we, the faith community, construct a new plan of action to address HIV and AIDS? (Quoted in part from the Plan of Action: The Ecumenical Response to HIV and AIDS in Africa, Kenya, November 2001)

- We will condemn discrimination and stigmatisation and will embrace people living with AIDS.
- We will seek out partners in government, business, and the international community, pooling resources to form the most efficient, effective response to the pandemic.
- We will advocate broadening the discussion of HIV and AIDS to include issues of gender, violence, political inequity, and poverty.
- We will educate ourselves and those under our care—with special emphasis on our new generation of leadership and our youth.
- We will promote effective means of prevention. In doing so, we will support the churches' historic commitment to faithfulness and abstinence, while allowing latitude for means beyond these that have proven effective in reducing risky behaviour.
- We will commit resources to care and counseling in addition to prevention and education.
- We will challenge culture and traditions, identifying those practices that are antithetical to our teachings and harmful to health, and proposing alternative rites and rituals in place of these harmful practices.

What do we, the faith community, ask of you?

- That you continue to create spaces in which to engage us—be it through formal offices for faith-based initiatives, conferences, or informal discussion.

- That you help leverage the tremendous financial resources of the United States and the Western World to engage the pandemic even more aggressively.
- That you continue to shift resources, like those through the USAID CORE initiative, to grass-roots faith-based organisations and institutions in the front lines of the battle and have proven their effectiveness, often with few resources.

In closing, my distinguished colleague, Dr. Peter Piot of UNAIDS, has said that although AIDS has been an issue for twenty years now, "it is a tale that is still in its opening chapters." While it is true that because of the long lead-time between infection and manifestation of the symptoms, what we are seeing, especially in Asia and Latin America, may only be the first few chapters of this macabre tale. It is also true, however, that faith-based organisations that heretofore have been introduced in a supporting role in these first few chapters, in fact will become integral to the story and may well determine the story's outcome.

Senator FRIST. Thank you very much.

Dr. Okaalet, where do you live? Are you in Uganda or Kenya?

Dr. OKAALET. I live in Nairobi.

Senator FRIST. And where did you go to medical school?

Dr. OKAALET. I went to Maketeda Medical School in Uganda.

Senator FRIST. And you are licensed to practice in Uganda then still?

Dr. OKAALET. Both in Uganda and in Kenya.

Senator FRIST. Well, you and I—and I say this quite proudly—are probably the only two people in the room who are licensed to practice medicine in Uganda. As you may know, I had the opportunity to operate alongside the Vice President of Uganda who is a surgeon in the medical center there, which has a tremendous tradition in terms of producing I guess the first three physicians in sub-Saharan Africa long ago. It was a real pleasure for me to operate alongside her.

But in my office, I have a 3-month temporary license to practice in Uganda. So, I have got another 2 and a half months.

I wish we had more time because each of these three dimensions are fantastic and they really integrate one with another. Mr. Lyman mentioned the role of the church and the role of faith-based organizations. Clearly as we tie in with the NGO's, the faith-based component, given what the predominance in Africa is, for the reasons that you closed with, Dr. Okaalet, in terms of the foundation, the long-term care, the long-term involvement plays a huge role, and I am impressed by it every time I go to Africa.

Several questions real quick and then we will wrap up for the Secretary-General.

Dr. Ray, we have talked a lot about the Global Fund, and I think over the course of the last 4 hours, it has been an appropriate perspective where people look to it, know it is not the answer. It is important that we continue to invest, I would argue, very heavily in that fund. But whatever we do here in Washington, DC in making decisions, it is important that that money gets down to your groups, to your constituents.

In addition to being in Uganda, I was in Tanzania and met there with Sister Denise, again with the Catholic diocese there. She told me exactly the same thing. We see this money coming down. It gets all the way down to the country level. It gets down to the local level. It gets down to even the community level, and it is a chunk of money. But it rarely gets down to right where you need it. We

just got to continue to address that by hearing from people such as you in a direct way.

My question is for the Global Fund. And you are stressing you need managers and administrators as well as physicians, nurses, people on the ground. When we have this new Global Fund that is being set up, will your NGO's have the expertise to put together an application that does have enough finances, accountability there, or not? You made the case of the need of those sorts of people, but if you do not have those people now and you have got to fill out an application, that I have not seen, but I assume asks for a lot of data and all, does that put you at a disadvantage?

Dr. RAY. The issue with the Global Health Fund is interesting because we had understood that there had to be one country response, which means that relies very much on having a good working partnership usually between government and big NGO's, so that they put together some kind of proposal and submit it.

Then my experience with how people get grants is it is based very much on reputation. So, for instance, in my organization I can certainly pull together a funding proposal, and I have a good enough relationship with donors that if I am convincing, they will consider it. If an organization says we want to develop a leaflet in local languages on the five symptoms of TB that every HIV-positive person needs to know and we want to a print run of 10,000, that activity would probably have major impact in those 10,000 people, but they will not get funding for it. So, it depends on whether my organization can then say, okay, we will administer the grant for you, which means that then I have to hire three more people just to administer and to do the reporting for all the little organizations that need that kind of support.

Some of those organizations will be corrupt. Some of them will not be able to do what they set out to do just because they are not skilled or trained. I am not in a position where I can micromanage them, and that is where the whole thing falls apart.

I think what we are asking for is just some latitude, some flexibility so that donors actually have a part of that money which is available for small grants, and where they are not asking for great reporting requirements. The kind of stuff that we get from the donors is like that.

Senator FRIST. You understand that a lot of the NGO's throw money away. It is wasted. And that is the real challenge. Obviously, having people such as you who can interact with a lot, but by having too much flexibility and not enough reporting and not enough accounting, it is hard for me to make the case with the American people because, as you know, some of the NGO's do not do a good job or you give it to the NGO and it still does not make it down to the level. That is the real challenge that we have as we go forward.

Dr. RAY. But I think the World Bank itself has begun to face that. The last time they talked with us, they were actually saying, okay, the majority of our funding has to have that kind of funding requirement where people fill in these forms and have audited reports and that kind of thing. But we can now make small amounts. It is almost like saying it is worth the risk to have a small amount

of money that could be thrown away, but maybe if a quarter of it works, that it is worth it.

In a sense organizations like mine can support the product. What is difficult for us to support is the proposal writing, the report writing, all the admin that goes in organizing things. So, in a sense if USAID or DANIDA or the British DFID said to us, can you help develop this leaflet, we could say, yes, of course, we can help them develop the leaflet. But what we cannot do is do their audited accounts for them.

Senator FRIST. Very well said.

Mr. Lyman, I feel like I should come back to you, but I am going to be seeing you so much over the next few months and I am not going to see the other two. So, selfishly let me again turn back to Okaalet.

Where have the churches been? I think your written presentation is really perfect. As a matter of fact, I turned to my staff and said this really paints the picture where you have been. The potential is there. United States churches have locked up too, and they have locked up, have not addressed it, and we have clearly got to mobilize here. We have the stigmatization in this country. We have the same problems that you have had to face in Africa.

You mentioned the Samaritan's Purse conference next week, the conferences in Africa. Do you think you will be able to mobilize the churches?

I know in Uganda I guess the person who runs the overall AIDS program is——

Dr. OKAALET. A bishop.

Senator FRIST [continuing]. A Catholic bishop, which is just again gratifying to me to see because a lot of the work I have done has been through mission fields and all.

Do you think we could bring them to the table? Not bring them. Obviously, they are coming to the table, but help paint the picture for me and for my colleagues. They have not been there in the past nor have they been in the United States. Is the opportunity there for us to realize now?

Dr. OKAALET. I believe, Senator Frist, the opportunity is here and the opportunity is with us now.

When you say where has the church been, I think that there are many reasons to explain why the church has not been actively involved. One of them is stigma that several other speakers already referred to.

The other one is HIV and AIDS causes death, and in Africa it is not a subject that many people want to talk about freely.

Ninety percent of the people who contract HIV/AIDS is through heterosexual contact, one infected person and the other. Sex and sexuality is no-touch subject. In some of the meetings that we have conducted in western Kenya, a pastor has come forward to say, doctor, if you are to help us survive this disease, then you need to be coming more from Nairobi to Kisumu because I cannot preach about it. I cannot talk about sex and remain accepted in my community. Because HIV and AIDS touches on sex and sexuality, Africans have found it very difficult to talk about it openly. Because it causes death, again it is a bit difficult.

But there is a Chinese proverb that says a journey of a thousand miles begins with one step. I think several steps have already been taken. Our own experience working with the churches in Kenya are that the church has gone through four phases. The first phase, those who did not work with us directly, those who have not helped to train their pastors and so on, always were resistant. HIV and AIDS is caused through sin, so let sinners get out of the church. Isolate them. That is what I characterize as judgmental attitude holding your fist against the face of another person.

Second, there has been a lame kind of response. I am talking as a medical doctor. If somebody has a lame hand, it becomes difficult to greet another person the African way, the way we greet. Because they will not respond. They are not trained. There is no capacity as some of my fellow speakers have already said. The response has been very lame.

Thirdly, there is what I characterize as a gloved response. People want to respond but they want to be protected. For example, a pastor would go into a ward and rather than touch and lay hands on a patient who is sick, he will stand at the door and say, God bless you, and then walk away before he touches them. But now we are challenging them if Jesus were alive today, would he touch an HIV and AIDS person like he touched leprosy people? Yes, he would.

But we are moving them from the judgmental attitude, from the lame response, from a protected, over-cautious response to recognize that we need to embrace those who are sick with HIV and AIDS. If the church is absent today, it will be irrelevant tomorrow when so many of the Africans will be dying and everybody will be asking, as you are correctly asking, Senator, where were you when we needed you. So, the time to respond for the church is now.

And I believe as MAP International, working together with many other partners, we have trained several people in Kenya. I was in Namibia with another colleague from MAP International training all the Anglican pastors and two of their bishops in Namibia about a month ago.

Senator FRIST. I think we have a lot to learn from Africa in so many ways, but I think this is a good example. I think what is bringing people to the table a lot is that the continent is being destroyed and so people recognize they have to face it. When you look in the Caribbean, which has the second fastest growing, or you look at Russia, which has the fastest growing incidence of AIDS, or India where we have more people with AIDS than any other country in the world, I think all, including the United States, can learn from the faith-based organizations in Africa who are coming to the table facing it head on.

I am going to have to close because I have got 3 minutes to get over to our meeting with the Secretary-General.

For the record, Mr. Lyman, if you could summarize the survey briefly in, say, two or three pages in terms of some of the data that I would like to make available to my colleagues and the record as well in terms of the current attitudes in the United States.

Ambassador LYMAN. We will do that.

Senator FRIST. Let me thank all of you. Again, we are going to be spending the next hour with the Secretary-General. Tomorrow we have a hearing that will continue the discussions and the proc-

ess that we have begun today. The three of you have been very, very patient, and for everyone who has participated today, I want to say thank you.

Dr. Ray, in 30 seconds or less.

Dr. RAY. Just a promotion. I did not manage to bring our materials because they were lost at the airport somewhere. But they will be available through Heather. If anybody here wants to see some of the materials we produce, particularly on boys and men and HIV, they can get copies from her.

Senator FRIST. And we will make sure that gets distributed to the group.

With that, we stand adjourned.

[Whereupon, at 3:15 p.m., the committee was adjourned.]

ADDITIONAL STATEMENT SUBMITTED FOR THE RECORD

PREPARED STATEMENT OF SENATOR GORDON H. SMITH

I want to thank Chairman Biden for the opportunity to talk about the plight AIDS has caused on not just the world economy but on the infrastructure of every country and every family it touches.

And I want to thank our panels—especially Secretary Thompson, for taking the time to talk about the spread of AIDS worldwide.

We come here to talk about the spread of AIDS worldwide—but I want to take a moment and note since we do have the Secretary of Health and Human Services present, that this is a disease that touches every state in the Union—including my home state of Oregon.

Last year marked the 20th anniversary of AIDS in the United States and sadly, the death of a constituent of mine.

I am speaking of the 1981 CDC report that noted the appearance of a rare type of pneumonia that had struck five gay men. One of those five men was an Oregonian—a man named "Chuck" whose place in history is a CDC report that this country took too long to respond to—Chuck has been dead for almost 20 years now.

But I am pleased with Secretary Thompson's interest in these issues—we have spoken in the past about Oregon's AIDS crisis—the numbers—we have had 5,000 cases of AIDS in Oregon alone since 1985. And I have asked him to expand Medicaid access for those with HIV/AIDS.

Just a few years ago this very committee took the lead in finding necessary funds for fighting AIDS in sub-Saharan Africa and found the bipartisan spirit to pass authorizing legislation to fight AIDS world wide.

But now the world is facing a global health problem of disastrous proportions in the global HIV/AIDS pandemic.

In the past few years, this issue has received much needed attention from the international community and the U.S. government.

But, unfortunately, our efforts and the efforts of other governments, the private sector, and foundations have not been enough and the pandemic continues to wreak havoc on the lives of millions of people around the world.

We now face AIDS not just in Africa—but the onslaught in Central and Eastern Europe, in Russia, in China and in South East Asia . . . while we may hear many statistics today . . . it is important to remember that this disease is threatening the whole world—it knows no boundaries and no politics.

I look forward to our testimony from the Administration, academia and the private sector.

RESPONSE TO AN ADDITIONAL QUESTION SUBMITTED FOR THE RECORD BY SENATOR HELMS TO DR. PETER PIOT

Question. According to a recent GAO report (December 2001) the United Nations does not know how many peacekeepers have HIV/AIDS because it opposes mandatory HIV testing before, during or after deployment to a peacekeeping mission. With all that we now know, with all the evidence we have that peacekeepers—like other military personnel—are likely to engage in behaviours such as unsafe sexual prac-

tices that increase the risk of contracting and spreading HIV, what is the rationale for continuing this policy of not testing peacekeepers?

Answer. UNAIDS commends the GAO report on HIV/AIDS and peacekeeping (December 2001) for its comprehensive assessment of this important area, which has also been given high priority by UNAIDS during the last year.

In view of the number and complexity of issues relating to HIV testing in UN peacekeeping operations, and in response to concerns expressed by members of the UN Security Council, the UNAIDS Secretariat, in close consultation with the UN Department of Peacekeeping Operations (UNDPKO), initiated a comprehensive review of United Nations policy in this area. An Expert Panel on HIV Testing in UN Peacekeeping Operations was established to assist in this effort. The panel was chaired by a Justice of the High Court of Australia and included representation from the USA Centers for Disease Control and Prevention, several military officials from peacekeeper contributor nations, and other military, medical, social science and legal experts in this area.

After careful review of the extensive empirical and qualitative data provided in background documentation commissioned for the meeting and in other relevant sources and international standards, the members of the panel unanimously recommended voluntary HIV counseling and testing as the most effective means of preventing the transmission of HIV, including among peacekeepers, host populations, and spouses and partners of peacekeepers. No member of the panel endorsed mandatory HIV testing by or for the United Nations as a means to prevent the transmission of HIV to or by peacekeepers. The panel considered voluntary counseling and testing to be an essential part of the response to HIV/AIDS among peacekeepers and stressed that voluntary counseling and testing should be provided to peacekeeping personnel within a comprehensive package of integrated HIV prevention and care programs.

In detailed substantiation of its recommendations, the expert panel also noted that voluntary counseling and testing has been shown to be more effective than mandatory HIV testing in promoting safe sexual behaviour and reducing other risks involved in transmitting HIV or becoming infected. Further, the panel concluded that mandatory HIV testing has not been shown to have demonstrable individual or public health benefits and may result in significant negative outcomes. In sum, while it concluded that mandatory HIV testing was neither necessary nor advisable in the context of UN peacekeeping operations, the panel empahsized that voluntary counseling and testing for HIV must be made available as an essential component of HIV prevention in the context of peacekeeping and that peacekeepers should be encouraged to avail themselves of these services.

During the past year, UNAIDS and the UN Department of Peacekeeping Operations (UNDPKO) have collaborated closely, and the United Nations has undertaken a number of important measures and initiatives to address HIV/AIDS in peacekeeping operations. As requested by the UN Security Council, UNAIDS in collaboration with UNDPKO has produced a redesigned awareness and prevention strategy for peacekeepers. Important initiatives also include the recruitment of HIV/AIDS officers attached to individual peacekeeping operations, and organization of workshops with relevant medical and training staff of DPKO on putting in place measures to prevent transmission of HIV/AIDS. At country level, UNAIDS and UNDPKO have focused their collaborative efforts on the five main UN peacekeeping missions currently in operation, specifically those for Ethiopia and Eritrea (UNMEE); Sierra Leone (UNAMSIL); the Democratic Republic of Congo (MONUC); Kosovo (UNMIK), and East Timor (UNTAET).

RESPONDING TO AFRICA'S HIV/AIDS CRISIS: THE ROLES OF PREVENTION AND TREATMENT

THURSDAY, FEBRUARY 14, 2002

U.S. SENATE,
COMMITTEE ON FOREIGN RELATIONS,
Washington, DC.

The committee met, pursuant to notice, at 2:30 p.m. in room SD–419, Dirksen Senate Office Building, Hon. Russell D. Feingold (chairman, Subcommittee on African Affairs), presiding.

Present: Senators Feingold and Frist.

Senator FEINGOLD. I call the hearing to order. I want to start off by thanking all the witnesses for being here today. Yesterday, Senator Biden, the chairman of the full committee, held a hearing on the future of the United States bilateral and also multilateral response to the HIV/AIDS crisis, and I certainly commend him for elevating this issue to the appropriate level and for making plain that this crisis is truly one of the most urgent foreign policy priorities we confront today. We are very fortunate that the chairman has used his leadership position in this way to face this tremendous crisis.

Today, the committee will focus on Africa, where the crisis is most severe, to take stock of what we have learned and what we still do not know about how to most effectively pursue prevention, care, and treatment in the region. According to UNAIDS December 2001 AIDS epidemic update, 2.3 million African people died in 2001 because of AIDS. The estimated 3.4 million HIV infections in sub-Saharan Africa in the past year mean that 28.1 million Africans now live with the virus.

The report states that recent antinatal clinic data show that several parts of southern Africa have now joined with Botswana with prevalence rates among pregnant women exceeding 30 percent. In West Africa, at least five countries are experiencing serious epidemics, with adult HIV prevalence exceeding 5 percent. In South Africa alone, an estimated 6 million people are infected. Approximately 2,300 more are infected every day. Over 260,000 will die this year because of AIDS.

Anyone in the hearing room or watching that hearing yesterday could not help but be impressed with the knowledge and commitment of my partner on the African Affairs Subcommittee, Senator Frist. Senator Frist cares deeply about this issue and so do I. Both of us have seen the individual tragedies that make up these horrifying statistics. We have spoken to the orphans and the widows

and the widowers. We have seen the terrible evidence of pervasive death in too many African communities, but we have also seen ample evidence that the situation is not a hopeless one.

In Uganda, an aggressive campaign with support from the highest levels of government is bringing infection rates down. In Senegal last year, I had the pleasure of meeting with that country's visionary public health community, which includes tireless volunteers and dedicated scientists, doctors and nurses, and clerics who are raising awareness in mosques throughout the country.

Let me be clear, Africans themselves provide the help and inspiration that one needs to confront a crisis of this magnitude head-on. I often recall the very end of my inspirational meeting in Senegal. A gentleman who had been waiting very patiently among those briefing me stood up and, speaking softly, he told me that he is HIV positive. He wanted to know if there would be any help for him, any assistance with the kind of treatment that is out of reach for so many in Africa.

There must be an answer to his question. Increasingly, the world is recognizing that treatment is a critical component of the fight against AIDS. Statistics from Botswana suggest that when treatment comes available, voluntary testing and counseling rates surge upward.

One of the witnesses yesterday stressed the importance of integrating tuberculosis screening with HIV/AIDS testing so that people who come in for the HIV test can also learn their TB status and at the same time be referred to a treatment center. In these scenarios, prevention and treatment complement and reinforce each other, increasing the impact of the overall effort. But pursuing both treatment and prevention means making choices, choices about resource allocation, about public health strategies and, indeed, about treatment options themselves.

As Senator Frist reminded the committee yesterday, there are a range of options covered by the broad category of treatment, including options specifically targeted to opportunistic infections. It seems clear to me that some of these choices will vary from one community to another, depending upon the context on the ground.

How we assess that context, how we make those choices together with our African partners, these are the topics that I hope we will explore today. They are difficult and complicated questions, but one thing is perfectly clear and simple, and that is that there is a moral imperative to act. There are unquestionably other reasons to act, most notably to protect our security interest, because devastated societies are unstable societies. The U.S. Institute of Peace recently issued a report highlighting the connection between HIV/AIDS and conflict in Africa, and the economic drain of a disease that affects the most productive segment of society is setting back hard-won gains in poverty reduction.

But to explain the sense of urgency surrounding this issue I think it is enough to return to the basic human decency that tell us that we cannot stand by as tens of millions die and societies collapse. That clarity guides all of us as we wrestle with issues that are anything but clear, and so I look forward to the testimony today.

[The prepared statement of Senator Feingold follows:]

PREPARED STATEMENT OF SENATOR RUSSELL D. FEINGOLD

I want to start out by thanking all of the witnesses for being here today. Yesterday Senator Biden, the Chairman of the full committee, held a hearing on the future of the U.S. bilateral and multilateral response to the HIV/AIDS crisis. I certainly commend him for elevating the issue to the appropriate level and for making plain that this crisis is truly one of the most urgent foreign policy priorities that we confront today.

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Anyone in the hearing room or watching that hearing yesterday could not help but be impressed with the knowledge and commitment of my partner on the African Affairs Subcommittee, Senator Frist. Senator Frist cares deeply about this issue, and so do I. Both of us have seen the individual tragedies that make up the horrifying statistics, we have spoken to the orphans and the widows and the widowers, we have seen the terrible evidence of pervasive death in too many African communities.

But we have also seen ample evidence that the situation is not a hopeless one. In Uganda; an aggressive campaign with support from the highest levels of government is bringing infection rates down. In Senegal last year, I had the pleasure of meeting with that country's visionary public health community, which includes tireless volunteers, dedicated scientists, doctors and nurses, and clerics who are raising awareness in mosques throughout the country. Let me be clear—Africans themselves provide the hope and inspiration that one needs to confront a crisis of this magnitude head-on.

I often recall the very end of my inspirational meeting in Senegal. A gentleman who had been among those briefing me stood up, and speaking softly, he told me that he is HIV positive. He wanted to know if there would be any help for him, any assistance with the kind of treatment that is out of reach for so many in Africa.

There must be an answer to his question. Increasingly, the world is recognizing that treatment is a critical component of the fight against AIDS. Statistics from Botswana suggest that when treatment becomes available, voluntary testing and counseling rates surge upward. One of the witnesses yesterday stressed the importance of integrating tuberculosis screening with HIV testing, so that people who come in for the HIV test can also learn their TB status and at the same time be referred to a treatment center. In these scenarios, prevention and treatment complement and reinforce each other, increasing the impact of the overall effort.

But pursuing both treatment and prevention means making choices—choices about resource allocation, about public health strategies, and indeed about treatment options themselves. As Senator Frist reminded the committee yesterday, there are a range of options covered by the broad category of treatment, including options specifically targeted to opportunistic infections. It seems clear to me that some of these choices will vary from one community to another, depending upon the context on the ground. How we assess that context, how we make those choices together with our African partners—these are the topics that I hope we will explore today.

These are difficult and complicated questions. But one thing is perfectly clear and simple, and that is the moral imperative to act. There are, unquestionably, other reasons to act—most notably to protect our security interests, because devastated societies are unstable societies. The U.S. Institute of Peace recently issued a report highlighting the connection between HIV/AIDS and conflict in Africa. And the economic drain of a disease that affects the most productive segment of society is setting back hard-won gains in poverty reduction. But to explain the sense of urgency surrounding this issue, I think it is enough to return to the basic human decency that tells us that we cannot stand by as tens of millions die and societies collapse. That clarity guides all of us as we wrestle with issues that are anything but clear.

I look forward to the testimony today.

Senator FEINGOLD. Now, I would like to turn to our ranking member of the subcommittee, Senator Frist.

Senator FRIST. Thank you, Mr. Chairman, and welcome to all of the witnesses in all three panels today. Especially, I thank all of you for the work you are going to be talking about, and that is represented by your presentations and discussions today.

As the chairman said, if you look over the last 24 hours, most of the hours, or working hours, have been spent addressing HIV/AIDS, which I think hopefully makes a statement to others and to the outside world how important this issue is to this subcommittee, to this Foreign Relations Committee, and to this Government in the United States today.

The statistics, we all start and go through the statistics, and it is tempting to move on beyond them, but when you realize that every 10 seconds one person dies from AIDS, and another two are infected, and we have no cure for that infection, you realize that we are on a curve that can result in devastation and destruction of a generation, or if we do it right, if we provide the right leadership, if we have the appropriate strategy and planning, we can reverse what we all project out to be a continuation of the most devastating, most destructive health, yes, public health, but health crisis that mankind has ever seen.

In January I went to Africa, and there are several people actually in the room today, Scott and Tricia Hughes, who was with me, as we look predominantly at HIV/AIDS programs just now. Three weeks ago we had the opportunity to travel to Nairobi, where we visited the Kaberra slum, 750,000 people with one out of five of the individuals in that community HIV positive. As we walked through the crowds, as we walked down the streets, they are—most of you have seen pictures of the narrow passageways there, with the shanties and the aluminum roofs. You just did not see that many people of middle age. You saw very young people and you saw older people, but you see first-hand the devastation, with a whole middle sector of the generation of people now gone, a sector of people that are among the most productive in terms of their working lives, being teachers, participating in the military.

We had the opportunity to go to Tanzania, to Arusha, where we met Nema, who—I mentioned this in the hearing yesterday—means "Grace," and is HIV/AIDS positive. She sells bananas on the side to survive, and to provide for her little year-and-a-half old son. When that son, as we visited, cried from hunger, she really had nothing else, nothing else to offer except a kiss on that little hand.

Marguerite, in Arusha, whose symptoms first came on in 1990, her husband died, and despite her illness she found the strength to fight his family in order to keep the family property, and thanks to her brother she has a house for her six children.

Tabu, a 28-year-old prostitute who was leaving Arusha to return to her village to die. She stayed an extra day so she could meet with us, so we could visit with her, and I will never forget her cheerful demeanor, her smile as we met her in a small hut 12 x 12 feet in size. Her two sisters, also infected, another sister has already died, and Tabu, who by now has probably died, will have left behind an 11-year-old daughter, and the stories go on and on.

We must fight this battle on two fronts, prevention and expanding access to treatment. Science will provide a vaccine, I think, at some point in the future, and it is a goal that we must all strive to. In the meantime, prevention, care, other types of treatment should be underway. Behavioral change is key. Even in HIV-ravaged Africa, most of those who come in today will be negative. As we all know, however, that 8 out of 10, or 9 out of 10 in Africa today do not know whether they are negative or positive.

Rapid HIV testing in many ways has revolutionized, I believe, the opportunity we have to reverse the trends from the last several years in Africa. A test that is specific, maybe not so sensitive, combined with a test that is sensitive and perhaps not so specific, but together for less than $1—or about $1 a test—someone can come in, be counseled, 50 minutes later have the results of that test, complete counseling, and we know that this voluntary counseling and testing works.

A huge challenge, a challenge that seems insurmountable, but being on the ground, looking at the programs that work, sharing those stories as to what works, increasing investment where we know that things work, I am convinced can make a difference.

In yesterday's testimony we heard a lot of encouraging news about prevention and treatment, news that we will share with our colleagues. We were able to visit 2 weeks ago centers of success like the AID Information Center in Uganda, which is a USAID-funded project, the Kikoshep project in Nairobi, a Centers for Disease Control and Prevention [CDC] CDC-funded project, and you can see the differences that they make. I am encouraged by the good work of USAID, encouraged by the good work of the CDC in Africa. We can do a lot more.

Dr. Peter Piot was with us yesterday, as you have heard. As stated, the scourge of AIDS has been with us for 20 years, but it is a tale that is still in its opening chapters. It will take all of our efforts, public and private, pulling together partnerships, individuals, churches, denominations of all faiths, to tackle this problem.

I look forward to hearing our witnesses today, and appreciate all of them taking time to share their experiences with us.

[The prepared statement of Senator Frist follows:]

PREPARED STATEMENT OF SENATOR BILL FRIST

I would like to thank our witnesses here today and especially thank them for all the work they do every day to fight this terrible disease.

We are all aware of the alarming statistics:

- 22 million persons have already died of HIV/AIDS.
- 2.3 million died in Africa last year of HIV/AIDS.
- 13 million African children have already lost a parent to HIV/AIDS and this number could be as high as 40 million by the end of the decade.
- 40 million persons are living with HIV/AIDS today, one third of the adults in Botswana, Lesotho, and Swaziland are infected.
- 95 percent of those infected live in the developing world, and 90 percent of those do not know they are infected.
- Every 10 seconds, one person dies from AIDS and nearly two more are infected.

In January, I went to Africa and witnessed the human face of these statistics. In Nairobi, Kenya, I visited the Kibera slum. With a population of over 750,000, one out of five of those who live in Kibera are HIV/AIDS positive. As I walked the crowded, dirty pathways sandwiched between hundreds of thousands of aluminum shanties, I was amazed that everyone was a child, or very old. The disease had

wiped out the parents—the most productive segment of the population—teachers, military, workers, the providers.

In Arusha, Tanzania, I met Nema whose name means "Grace." She sells bananas to survive and provide for her year-and-a-half-old son, Daniel. When Daniel cried from hunger, Nema kissed his hand because she had nothing to give him but her love.

Margaret, also in Arusha, had symptoms that first appeared in 1990. When her husband died, despite her illness, she found the strength to fight his family to keep the family property. Thanks to her brothers, she has a house for her six children.

And Tabu, a 28-year-old prostitute, who was leaving Arusha to return to her village to die. She stayed an extra day to meet with us, and I will never forget her cheerful demeanor and mischievous smile as we met in her small stick-framed mud hut, no more than 12 by 12. Her two sisters are also infected, another sister has already died. Tabu will leave behind an eleven-year-old daughter, Adija.nnnn

These stories of a lost generation—of young mothers and their children are—sadly—not unique to Africa.

We must fight this battle on two fronts: by improving primary prevention and expanding access to treatment.

Until science produces a vaccine, prevention through behavioral change is the key. Even in HIV ravaged Africa, most of those who come in to be tested will test negative. This presents a real opportunity to save countless lives. I believe we should increase investments in rapid HIV testing kits and counseling for developing countries. Access to inexpensive and rapid HIV testing can help reinforce prevention messages and guide treatment options. And as I saw in Africa, testing centers become centers of hope for the community, a place where those struggling with HIV/AIDS can share ideas, support each other, learn important coping strategies, and receive medical treatment and nutritional support.

Treatment is an important part of the mix. Treatment includes a mix of options that not only suppress the virus but also stave off opportunistic infections and relieves suffering. For example, treatment can include not only antiretrovirals but also nutritional support, antibitoics, and low-cost herbal and other medications to improve quality of life. When persons with AIDS receive medical and nutritional support, they live longer and healthier, avoiding opportunistic infections such as tuberculosis; providing income for themselves and their families; and ensuring a better future for their dependents.

Prevention and treatment compliment each other. Without prevention, the disease will continue to spread. The hope of treatment will bring people to get tested, reinforcing prevention efforts.

In yesterday's testimony, we heard encouraging news that our efforts at prevention and treatment are making a difference to millions of Africans. I have been to such centers of success as the AIDS information center in Uganda (a USAID funded project) and the KICOSHEP project in Nairobi (a CDC funded project) and I have seen the difference they can make. I am encouraged by the good work of USAID in Africa and the CDC's efforts in developing guidelines that will lower the cost of medicines and testing so that they will be available to all who have this disease.

But we can do much more. As Dr. Peter Piot, who testified before this committee yesterday has stated that the scourge of AIDS has been with us for twenty years but it is a tale that is still in its opening chapters. It will take all our efforts—the public and the private sectors, individuals, churches and denominations of all faiths to tackle this problem.

I look forward to hearing from our witnesses on how we can further these efforts and bring hope and relief to millions of Africans.

Senator FEINGOLD. Thank you, Senator Frist, for your eloquent comments and for your obvious devotion to this issue. We appreciate it.

We have two outstanding panels of witnesses here today, so let me make the introductions brief to give us time to discuss the incredibly important issues before us. Let me say that there could be a vote in a few minutes, in which case we will just take a 10-minute break and come right back and continue the proceedings.

Let me begin by introducing both witnesses on the first panel, then I would ask each witness to testify in the order of introduction. First, Dr. Eugene McCray. Dr. McCray is the director of the Global AIDS Program at the National Center for HIV, STD, and

TB Prevention, Centers for Disease Control and Prevention, Atlanta, Georgia. The Global AIDS Program coordinates the CDC response to the global HIV/AIDS pandemic worldwide. This involves a collaboration with the United States Agency for International Development in 24 countries in Africa, Asia, the Caribbean, and Latin America.

Since 1988, Dr. McCray's work at the CDC has focused on HIV and tuberculosis surveillance both in the United States and internationally. He serves as a consultant to such agencies as the World Health Organization and the International Union Against Tuberculosis, and he has worked on tuberculosis and HIV/AIDS projects in a number of countries in southern Africa.

He has published a number of articles on tuberculosis and HIV/AIDS, and he has received numerous awards for his scientific and public health contributions. He is also a practicing infectious diseases physician, providing volunteer services in a primary care clinic for HIV-infected persons.

Dr. Anne Peterson. Dr. Peterson is the Assistant Administrator in USAID's Bureau of Global Health. Dr. Peterson provides health leadership at USAID, including technical and program support to field interventions in the area of HIV/AIDS infectious disease, reproductive health, child and maternal health, environmental health, and nutrition.

Before joining USAID, Dr. Peterson served for 3 years as Commissioner of Health for the State of Virginia. Dr. Peterson also has an extensive background in both the U.S. and international public health practice. She has served as a consultant for the Centers for Disease Control and Prevention and the World Health Organization, and she has spent almost 6 years in Kenya and Zimbabwe supporting community development, public health training and AIDS prevention programs.

She is also the author of numerous scientific publications, and speaks extensively on a wide range of health issues.

So with that, Dr. McCray, we would love to hear from you.

STATEMENT OF DR. EUGENE McCRAY, DIRECTOR, GLOBAL AIDS PROGRAM, NATIONAL CENTER FOR HIV, STD, AND TB PREVENTION, CENTERS FOR DISEASE CONTROL AND PREVENTION, ATLANTA, GA

Dr. McCRAY. Thank you, Chairman Feingold and Dr. Frist, members of the Subcommittee on African Affairs. I am pleased to be here today to discuss the efforts of the Centers for Disease Control and Prevention to address HIV/AIDS worldwide and in particular in Africa, with a special focus on the necessary balance on prevention and treatment. My remarks will be mainly about the Global AIDS Program, or GAP, at CDC, but also touch in other areas of CDC that are involved in HIV/AIDS internationally.

At the outset, I would like to acknowledge that we at CDC are grateful, Mr. Chairman, to you and your colleagues on the subcommittee and the full Foreign Relations Committee for your support of these efforts, and I want to thank you for that.

I will not bore you with statistics that I think you are all familiar with, but today I would like to outline for you what CDC, in conjunction with other U.S. Government entities, as well as numerous

other partners, is doing to intervene in this epidemic worldwide. The hardest-hit region by far is sub-Saharan Africa, which accounts for 70 percent of all the HIV/AIDS cases, followed by southeast Asia, Latin America, and the Caribbean. CDC has concentrated its efforts in the 24 countries in those regions. A 25th country, China, will be added probably by the end of this fiscal year. We are working intensely with the governments of these nations to bring the epidemic under control.

In fiscal year 2003, our budget for GAP was $143.7 million. Guided by its 5-year HIV prevention strategic plan, CDC works to mount space for primary prevention programs, as well as treatment programs, initiatives, in collaboration with USAID, with Health Resources and Services Administration [HRSA], NIH, and the Department of Defense and the Department of Labor, and a number of other countries. In addition, we are working with a number of multilateral agencies such as the World Bank, WHO, UNAIDS and so on, and soon the Global Fund for AIDS, TB and Malaria. We are also working with private foundations such as the Bill and Melinda Gates Foundation, and with a variety of international and nongovernmental organizations.

With the advice and assistance of our many partners, CDC has developed a set of 17 technical strategies for implementing programs focusing on three key areas. These areas include infrastructure and capacity development, primary prevention, and care and treatment, and I would like to talk a little about each of these areas before turning to the question of balancing prevention and treatment.

First, let me talk a little about infrastructure and capacity development. Most developing nations lack the necessary infrastructure to adequately address their HIV/AIDS epidemic. Disease surveillance systems and epidemiology are often not comprehensive, making it difficult, if not impossible many times to accurately determine how many people are at risk for infection, what their risks are, and the level of need for prevention services, as well as how many people are already infected, which populations are involved, and the need for care and treatment.

CDC provides funding and technical assistance to ministries of health and other organizations to bolster essential laboratory services as well as improve quality assurance and quality control for HIV testing. We provide training of laboratory personnel, as well as purchase the needed equipment to ensure the labs are functioning at a minimal level.

The importance of a functioning public health and health care delivery infrastructure to comprehensive HIV prevention care and treatment programs cannot be overstated. Sound infrastructures are essential to delivering needed services over time. For example, voluntary counseling and testing or VCT is the cornerstone for prevention, and the gateway to care and treatment, but if the procurement systems fail to provide the needed test kits in insufficient quantities an on-time VCT cannot be done.

If the laboratory system fails for lack of proper equipment, supplies, or trained personnel, tests cannot be performed and interpreted. If information infrastructure fails, individuals anxiously awaiting test results cannot get them. Prevention opportunities,

both for those who are seronegative but at high risk, and for those who are already infected, are lost as a result.

Likewise, the health care infrastructure can impede or support care and treatment efforts. Training for health care providers, equipment, drugs, and other essential components must be in place and remain there over time for care and treatment programs to succeed.

We in the developed world take these things for granted. In the countries where we work, these are not a given. Capacity infrastructure development are critical first component of every GAP program we are implementing.

Prevention, let me talk a little about prevention. Currently, a safe and effective vaccine is not available, but when available will contribute significantly, I think, to controlling the AIDS pandemic, but while we have made tremendous progress in vaccine development, the development of a vaccine is likely years away. Other biomedical intervention such as vaginal microbicides are likewise as yet not yet proven and ready for widespread use, so in the interim the world's best and only hope for controlling this epidemic is through sound prevention and care programs.

CDC offers technical assistance and funding for a variety of prevention activities, including averting mother-to-child transmission and intervention for special populations at high risk for acquiring HIV, including in and out of school youth, teacher and other school staff, injecting drug users, sex workers and their clients, and displaced populations.

Preventing mother-to-child transmission is a high priority for most developing nations, and is the only proven opportunity to use drug therapy to avert transmission from one person to another. CDC works in concert with host countries, the National Institutes of Health, and other partners to mount effective programs to provide necessary drug therapy to pregnant and post partum women and their newborn, and to promote replacement feeding strategies to avoid transmission via breast milk.

Another innovative program sponsored by CDC looks at ways to effectively integrate prevention of HIV, other sexually transmitted infections, and unintended pregnancies, and reproductive health care. We know prevention works. We also know that to be effective a prevention program must be mounted on a large scale. They cannot be scatter-shot, and they must be sustained over time. With those conditions met, prevention programs can help countries contain and even reverse the growing epidemic.

For example, the Uganda national response to HIV has been recognized as a model program and the effort there has clearly curbed the epidemic. Uganda's sustained efforts have reaped enormous benefits, and over the last decades we have seen consistent declines in HIV prevalence reported through most of the surveillance systems in that country.

Next, let me turn to care and treatment. CDC's treatment and care activities focus on tuberculosis and other opportunistic infections, and more recently technical assistance on antiretroviral therapies. For the past two fiscal years, CDC has provided a minimum of $3 million annually to HRSA for training and in-country health care providers and safe and effective patient care and moni-

toring. Working together, the two agencies are fostering hospital and clinic-based programs as well as community and home-based care for people living with HIV and AIDS.

Given that most developing countries lack the sophisticated medical monitoring equipment and tests available in the United States and other developed nations, CDC and HRSA are also examining the safety and effectiveness of what is known as syndromic management of HIV disease, which means that diagnosis and continuing care are based upon observable signs and reported symptoms, rather than sophisticated lab tests. Here in the U.S., patients' viral load is monitored along with their T-cell count, both indications of the effect HIV is having on the body and therefore on the patient's health, but these tests are not feasible in most countries where CDC and HRSA work.

In such situations, clinicians have to manage patient care mostly by look, touch, and feel, and these skills can be taught. Tuberculosis presents special dangers to those who are HIV-infected, and CDC focuses particular attention on TB research, prevention, and control. Research conducted by CDC and the Botswana ministry of health shows that TB is a leading cause of death for HIV-positive persons in Botswana, and another study showed that saliva tests for HIV can be used in TB sputum specimens, offering an effective tool for HIV surveillance in that population.

Let me state that none of the preceding activities that I mention could be accomplished or even attempted without the integral cooperation and collaboration of other parts of the U.S. Government, most particularly USAID, HRSA, NIH, as well as other partners. Most importantly, the ministries of health play a major role in this. Working together, our efforts are enhanced and multiplied so that the whole is more than the sum of the parts.

Now I would like to focus on balancing prevention and treatment. With global infections at 40 million adult rates in some countries, close to 40 percent, there is no doubt that targeted, sustained prevention efforts are critical. Lifelong prevention services are critical for those who are already infected with or without treatment. Those that are not infected need support, information, and education to assist them to remain that way, and GAP country programs focus on prevention for individuals who are HIV-infected and for those who are at high risk for becoming infected.

HIV is a top priority for most GAP countries. Faced with millions of people in need of treatment, however, most of these countries cannot afford these life-sustaining medications and the infrastructure required to deliver them safely and effectively, so in fiscal year 2001 the Congress, through the appropriations language, specifically directed CDC to support targeted antiretroviral treatment demonstration projects in countries where sufficient care and treatment infrastructure exists.

Working in conjunction with USAID and academic institutions, CDC is assessing ways to effectively, safely, and affordably bring antiretroviral [ARV] treatment to countries and their people. The global fund to fight TB and malaria, which has a tripartite focus on prevention, care, and treatment, offers great promise, and CDC looks forward to helping to implement these countries' proposals that are funded.

We know with absolute certainty the hope of treatment is a great inducement to taking HIV tests and learning your serostatus, and the test is the gateway to prevention, so for those who are uninfected, post test counseling and entry into prevention service can help them remain HIV-free. We also believe treatment can help to destigmatize HIV and can further the aim of prevention. Stigma associated with HIV/AIDS continues to profoundly affect prevention efforts, leading patients to deny their risk, avoid testing, delay treatment if it is available, and suffer needlessly.

Senator FEINGOLD. We are going to have to go cast our votes. We will just simply come back as soon as we can and continue with your testimony. Thank you.

[Short recess.]

Senator FEINGOLD. The committee will come back to order. My apologies for the delay. Dr. McCray, if you would like to finish your remarks.

Dr. MCCRAY. Yes. I should be brief. I was just going to basically state that recent successes in Ivory Coast and Uganda have demonstrated that antiretrovirals can be provided safely, effectively, and appropriately in development countries, and we think that the United States can help capitalize on these successes and at the same time assist developing countries where appropriate to build the infrastructure to safely and effectively provide these drugs and help also create a lasting health infrastructure.

Let me just basically conclude by saying we clearly recognize the enormous challenges that lie ahead, but we have hope and are supported by encouraging gains from programs that are already underway that our efforts will avert potential disaster. I think that we are seldom presented with such clear and pressing need, and such unambiguous means to intervene. I would like to thank you again for your support of this important endeavor, and I would be happy to take questions at the end.

[The prepared statement of Dr. McCray follows:]

PREPARED STATEMENT OF EUGENE MCCRAY, M.D., DIRECTOR, GLOBAL AIDS PROGRAM, CENTERS FOR DISEASE CONTROL AND PREVENTION, DEPARTMENT OF HEALTH AND HUMAN SERVICES

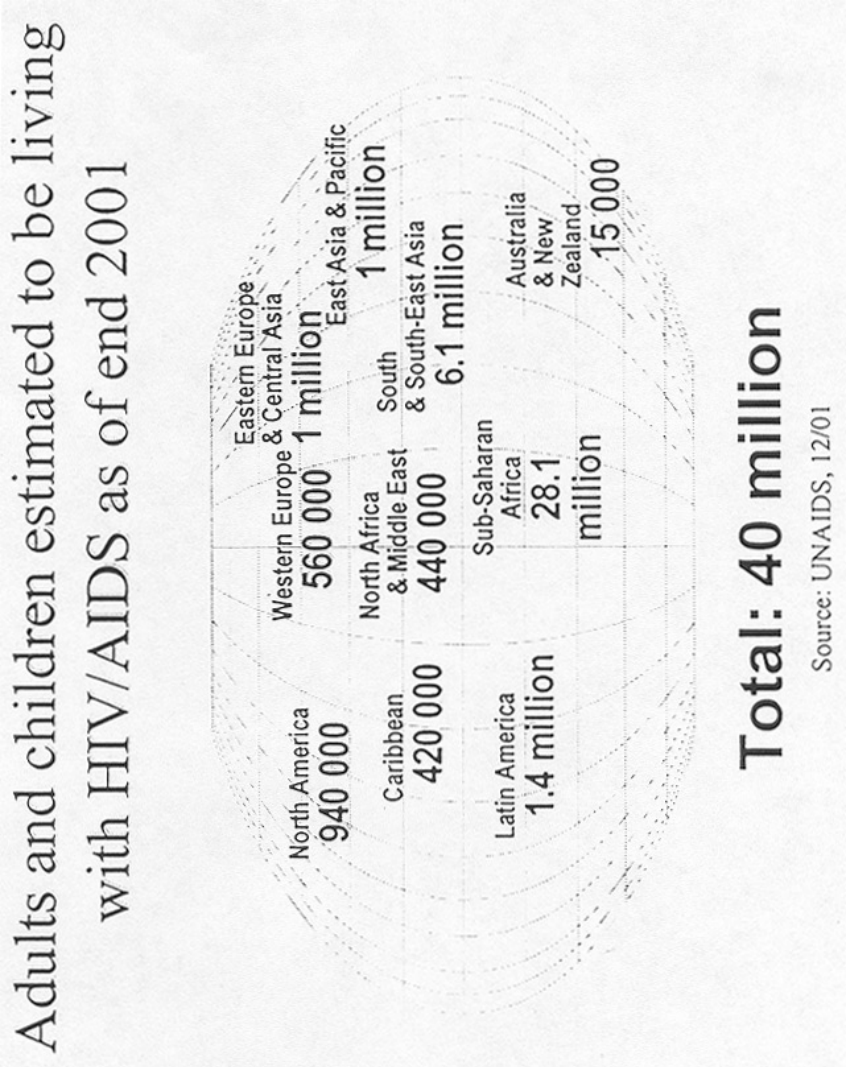
Mr. Chairman, members of the Subcommittee on African Affairs, I am pleased to be here today to discuss the efforts of the Centers for Disease Control and Prevention (CDC) to address HIV/AIDS worldwide and, in particular, in Africa, with a special focus on the necessary balance between prevention and treatment. My name is Eugene McCray; I'm a physician and I direct the Global AIDS Program (GAP) at CDC. My remarks will be mainly about the GAP program, but also touch on other areas of CDC that are involved in HIV/AIDS internationally.

At the outset, I would like to acknowledge that we at CDC are grateful, Mr. Chairman, to you and your colleagues on this subcommittee, and larger Foreign Relations Committee, for your support of these efforts. Thank you.

CURRENT SITUATION

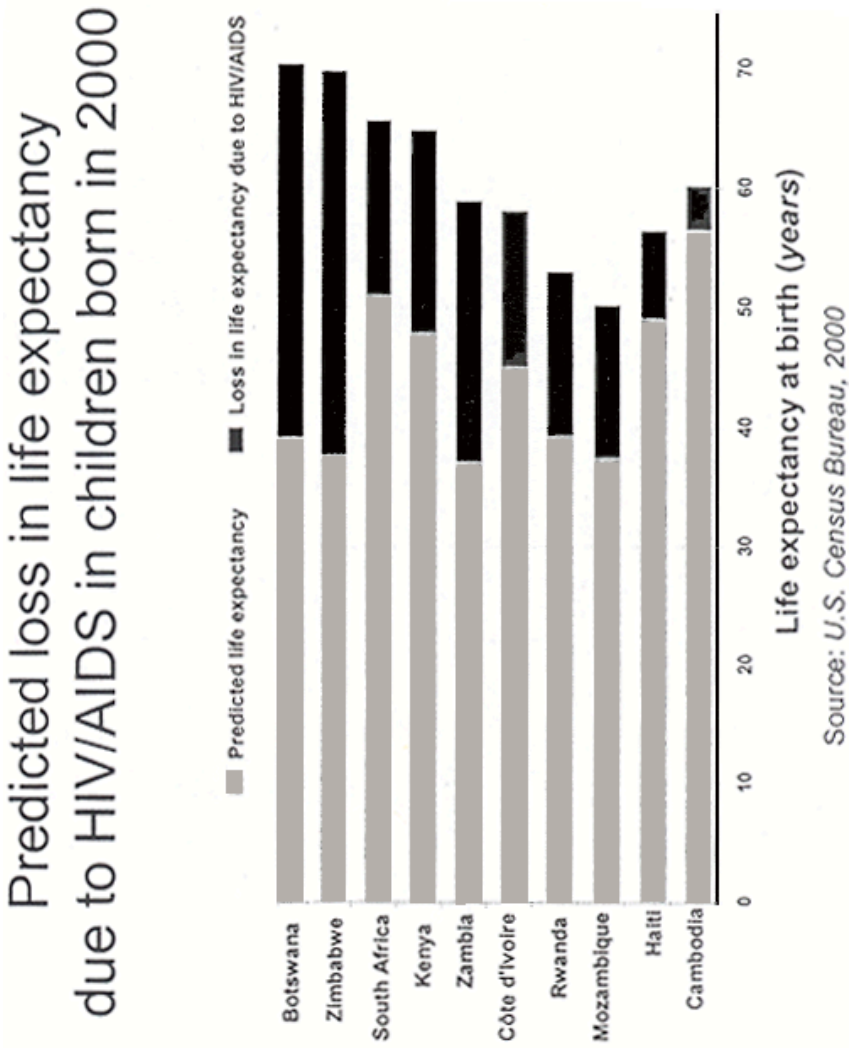
The World Health Organization and the Joint United Nations Programme on HIV/AIDS report that 40 million people worldwide are now living with HIV/AIDS. About 3 million people died of AIDS in 2001 and slightly more than 5 million became infected—or almost 14,000 a day, every day, for the entire year. More than 95% of the new infections are in developing countries. Of the 14,000 infected daily, about 12,000 are people aged 15 to 49 years—and about half are young adults ages 15 to 24. Almost 6,000 are women (Figure 1).

FIGURE 1



In areas of some countries, as many as 40% or more of the adult population is infected with HIV. Health care services, including treatment for HIV/AIDS and its associated illnesses, such as tuberculosis, are extremely limited. Look around this room. Imagine if half the people here today were infected with a deadly disease, doomed to die slowly and painfully and, in many instances, without care and support (Figure 2). In fact, WHO and UNAIDS estimate that nearly 22 million people have died since the beginning of the pandemic, most of them in the developing world.

FIGURE 2



These statistics don't begin to represent the devastation AIDS wreaks upon the developing world. Just this week, at the African Population Commission meeting in Addis Ababa, it was reported that life expectancy of Africans is set to reach one of its lowest levels ever. By 2005, most Africans will die before they reach their 48th birthday. The spread of HIV/AIDS in particular, along with wars and poverty, have driven down life expectancy by 15 years in the last two decades. Unchecked, AIDS has the potential to destabilize national economies and social systems, to throw nations into a spiral of instability and civil unrest, and, possibly, to draw the United States and other developed countries into national and regional conflicts. But we have the opportunity and, I would argue, the responsibility to intervene. Today I'd like to outline for you what CDC, in conjunction with other U.S. Government entities as well as numerous other partners, is doing to intervene.

RESEARCH

In the research arena, capitalizing on its 20-year history of international prevention research, CDC's established field stations in countries such as Uganda, Kenya, Cote d'Ivoire, Botswana, South Africa, and Thailand are working with the National Institutes of Health and local researchers in three key areas: preventing mother-to-child transmission, field testing a vaginal microbicide, and collaborating on trials of candidate HIV vaccines, including the development of relevant cohorts of trial participants. For example, CDC will soon have a senior researcher stationed in Botswana to head up an investigation of the effectiveness of an innovative microbicide made from a seaweed component. CDC's long history of work with the Ministry of Health in Botswana means that, if this product is shown to be effective, it can be swiftly deployed in the field, to help women protect themselves against sexual transmission of HIV. CDC would also utilize the GAP infrastructure to extend this product to women in other countries, as it becomes commercially available.

A safe and effective HIV preventive vaccine is essential to controlling the AIDS pandemic. But, while we have made tremendous progress in vaccine development, the deployment of a vaccine is likely years away. Other biomedical interventions, such as microbicides, are likewise as yet not proven and ready for widespread use. In the interim, the world's best—and only—hope for controlling the epidemic is through sound prevention programs.

PREVENTION PROGRAMS

Approximately 40 million individuals are now living with HIV worldwide. The hardest-hit region, by far, is sub-Saharan Africa, which accounts for 70% of all HIV/AIDS cases, followed by South and Southeast Asia, Latin America and the Caribbean. In total, those areas account for 90% of the world's HIV/AIDS burden. CDC has concentrated its efforts in 24 countries in those regions (China will be added in Fiscal Year 2002), working intensively with the governments of these nations to bring the epidemic under control (Table 1).

TABLE 1

COUNTRIES SERVED BY CDC'S GLOBAL AIDS PROGRAM FY2002

Angola	Mozambique
Botswana	Namibia
Brazil	Nigeria
Cambodia	Rwanda
China (new for FY 2002)	Senegal
Cote d'Ivoire	South Africa
Democratic Republic of Congo	Tanzania
Ethiopia	Thailand
Guyana	Uganda
Haiti	Vietnam
India	Zambia
Kenya	Zimbabwe
Malawi	Regional: CAREC (*Caribbean Epidemiology Centre*)

CDC's GAP, currently has 38 staff stationed in 17 of those countries, we hope to add staff to the remaining 8 by mid-year. The fiscal year 2003 budget for GAP is $143,763,000.

Guided by its five-year *HIV Prevention Strategic Plan,* and through GAP, CDC works to mount science-based primary prevention programs as well as care and treatment initiatives in collaboration with U.S. agencies such as USAID, NIH, the Health Resources and Services Administration, the Department of Defense and the Department of Labor here in the U.S.; with multinational agencies such as the World Bank, WHO, UNAIDS, and, soon, the Global Fund to Fight AIDS, TB, and Malaria; private foundations such as the Bill and Melinda Gates Foundation, and a variety of international non-governmental organizations. With the advice and assistance of its many partners, CDC has developed a set of 17 technical strategies for implementing programs, focusing on three key areas:

- *infrastructure and capacity development,* including disease surveillance, laboratory technical support, information systems, training, and program monitoring and evaluation;
- *primary prevention,* including voluntary counseling and testing, preventing mother-to-child transmission, blood safety, sexually transmitted disease prevention and care, behavior change communications, and prevention for drug users; and
- *care and treatment,* including treatment of tuberculosis and other opportunistic infections, palliative care, and appropriate use of antiretroviral medications.

INFRASTRUCTURE AND CAPACITY DEVELOPMENT

Most developing nations lack the necessary infrastructure to adequately address their HIV/AIDS epidemics. Disease surveillance systems and epidemiology are often not comprehensive, making it difficult if not impossible to accurately determine how many people are at risk for infection, what their risks are, and the level of need for prevention services, as well as how many are already infected, which populations, and the level of need for care and treatment. CDC provides funding and technical assistance to Ministries of Health and other organizations working in GAP countries (e.g., local nongovernmental organizations and international entities) to bolster essential laboratory services, including quality assurance and quality control for HIV testing, training for laboratory personnel, and purchasing needed equipment.

The importance of functioning public health and health care delivery infrastructures to comprehensive HIV prevention, care, and treatment programs cannot be overstated. Sound infrastructures are essential to delivering needed services over time. For example, voluntary counseling and testing (VCT) is the cornerstone of prevention and the gateway to care and treatment. But if the procurement system fails to provide needed test kits in sufficient quantity and on time, VCT can't be done. If laboratory systems fail for lack of proper equipment, supplies, or trained personnel, tests can't be performed and interpreted. If information infrastructure fails, individuals anxiously awaiting test results can't get them. Vital surveillance information is lost. Prevention opportunities—both for those who are seronegative but at high risk and for those who are already infected—are lost. Likewise, the health care delivery infrastructure can thwart or support care and treatment efforts. Training for health care providers, equipment, drugs, and other essential components must be in place and remain there over time for care and treatment programs to succeed. We take these things for granted in the developed world. In the countries where GAP works, they are not givens. Capacity and infrastructure development are critical first components of every GAP program in every country.

PREVENTION

CDC also offers technical assistance and funding for a variety of prevention activities, including averting mother-to-child transmission and prevention for special populations at high risk for acquiring or transmitting HIV, including in- and out-of-school youth, teachers and other school staff, injecting drug users, sex workers and their clients, and displaced populations.

For example, working with WHO, CDC has successfully brought together Ministries of Health and Education to work together to strengthen school-based HIV prevention and to help prevent HIV/AIDS from decimating the ranks of teachers. According to UNICEF, the United Nations Children's Fund, HIV/AIDS incidence is disproportionately high among teachers in sub-Saharan Africa. In Kenya alone, nearly 1,500 teachers died from AIDS-related disease last year, up from just 10 deaths in 1993. The loss of large numbers of teachers in a poor nation is a serious blow to future development. Unless the trend is reversed, a generation of young Africans faces the prospect of fewer education opportunities and reduced job prospects, with corresponding negative effects on fragile country economies and social systems.

CDC also supports innovative projects aimed at helping women. Preventing mother-to-child transmission is a high priority for most developing nations—and is the only proven opportunity to use drug therapy to avert transmission from one person to another. CDC works in concert with host countries, NIH, and other partners to mount effective programs to provide necessary drug therapy to pregnant and postpartum women and their newborns and to promote replacement feeding strategies to avoid transmission via breastmilk. Another innovative program sponsored by CDC looks at ways to effectively integrate prevention of HIV, other sexually transmitted infections (or STIs), and unintended pregnancy in reproductive health care.

Data from a large number of biologic and epidemiologic studies show that STIs are a co-factor for HIV transmission. An untreated STI can increase both the acqui-

sition and transmission of HIV up to fivefold. Thus, STI prevention and treatment have the potential to play an important role in the reduction of sexually acquired HIV transmission in addition to preventing the other consequences of STIs, such as infertility and congenital infections. Based on country needs, available epidemiologic and behavioral data, and ongoing activities by other partners, CDC focuses on developing and implementing programs that promote risk reduction behaviors; improve STI health-seeking behaviors; strengthen availability and quality of and access to STI treatment services; and increase services for vulnerable populations, particularly youth.

We know prevention works. Substantial evidence from carefully controlled scientific studies and from analyses of various developing countries' experiences shows that prevention is effective, and cost effective. We also know that to be effective, prevention programs must be mounted on a large scale. They can't be scattcrshot and they must be sustained over time. With those conditions met, prevention programs can help countries contain and even reverse growing epidemics.

For example, in sub-Saharan Africa, Uganda's national response to HIV/AIDS has been recognized as a model program. The bedrock of this successful program is strong commitment from national leaders, starting with the president. In 1986, President Yoweri Museveni first highlighted the nation's growing HIV epidemic; a national AIDS control program was established the following year. In 1990, the Uganda AIDS Commission was created under the president's leadership and supports comprehensive prevention programming. This includes widespread voluntary counseling and testing (VCT). Behavior change communications are implemented through mass media, community-based organizations (CBOs), and schools. Faith groups, including Roman Catholic, Protestant, and Islamic organizations, have played an important role in providing educational materials and encouraging behavior change.

Uganda's sustained effort has reaped enormous benefits. Over the last decade, consistent declines in HIV prevalence were reported by most surveillance systems. For example, in Kampala, the major urban center, data from prenatal clinics has been available since the mid-1980s. Surveillance showed that HIV prevalence among women attending prenatal clinics increased from 11% in 1985 to 31% in 1990. Beginning in 1993, however, HIV prevalence among this population began to decline, reaching 14% in 1998. Outside Kampala, median HIV prevalence among prenatal clinic patients has declined from 13% of those tested in 1992 to 8% in 1998.

Similar declines have been observed among patients at STD clinics. For example, in 1989, 42% of male STD clinic patients in Kampala were HIV-positive; by 1992, that had increased to 46%. In 1998, only 30% of male STD clinic patients were HIV-positive. In 1989, 62% of female STD clinic patients were HIV-positive; by 1997, that had declined to 37%.

In addition to tracking HIV prevalence, behavioral surveillance also monitors people's sexual behaviors, tracking changes in risky—and healthy—behaviors and in people's knowledge levels and attitudes. For example, Uganda tracks people's knowledge of protective practices, numbers of and behaviors with non-regular sexual partners, condom use, age at first sexual experience, and adolescent pregnancy. All these indicators help hone prevention messages and target populations most in need. Uganda is a GAP country, and CDC staff are working with the government and other partners to ensure that Uganda's success continues and multiplies.

CARE AND TREATMENT

CDC's treatment and care activities also include a focus on tuberculosis and other opportunistic infections and, more recently, technical assistance on antiretroviral therapies (ARVs). For the past two fiscal years, CDC has provided $3 million annually to the Health Resources and Services Administration for training in-country health care providers in safe and effective patient care and monitoring. Working together, the two agencies are fostering hospital- and clinic-based care programs, as well as community- and home-based care, for people living with HIV/AIDS.

Given that most developing countries lack the sophisticated medical monitoring equipment and tests available in the U.S. and other developed nations, CDC and HRSA are also examining the safety and effectiveness of what is known as "syndromic management" of HIV disease, which means that diagnosis and continuing care are based on observable signs and symptoms, rather than sophisticated lab tests. Here in the U.S., patients' viral load is monitored, along with their T-cell counts, both indications of the effects HIV is having on the body, and therefore the patient's health. But these tests are not feasible in most countries where CDC and HRSA work. In such situations, clinicians there have to manage patient care by look and touch and feel—all skills that can be taught.

Tuberculosis presents special dangers to those who are HIV-infected, and CDC focuses particular attention on TB research, prevention, and control. For example, with the Ministry of Health in Botswana, CDC has sponsored the BOTUSA project since 1995. Research conducted by BOTUSA showed that TB is the leading cause of death for HIV-positive persons in Botswana and another study showed that saliva tests for HIV can be used on TB sputum specimens, offering an effective tool for HIV surveillance. Additional studies are underway to assess a rapid TB diagnostic test that is effective among HIV-positive persons; the optimal duration of TB treatment among those who are HIV infected; and the acceptability of directly observed antiretroviral therapy for HIV.

None of the preceding activities could be accomplished or even attempted without the integral cooperation and collaboration of other parts of the U.S. government, most particularly USAID, as well as other partners. Working together our efforts are enhanced and multiplied, so that the whole is more than the sum of its parts.

BALANCING PREVENTION AND TREATMENT

With global infections at 40 million and adult seroprevalencc rates in developing countries of, in some instances, of higher than 40%, there is no doubt that targeted, sustained prevention efforts are critical. It is self-evident: Estimates are that 14,000 people are infected daily. Lifelong prevention services are critical for those who are already infected, with or without treatment. Those who are not infected need support, information and education, and assistance to remain that way. GAP country programs focus on prevention for individuals who are HIV-infected and for those at high risk of becoming infected.

HIV treatment is a top priority for most GAP countries. Faced with millions of people in need of treatment, however, most countries cannot afford the cost of these life-sustaining medications and the infrastructure required to deliver them safely and effectively. In fiscal year 2001, Congress, through appropriations language, specifically directed CDC to "support targeted antiretroviral treatment demonstration projects in countries where sufficient care and treatment infrastructure exist." Working in conjunction with USAID, WHO, academic institutions like the Harvard AIDS Institute, voluntary organizations, and the private sector, CDC is assessing ways to effectively, safely, and affordably bring ARV treatment to desperate countries and their people. The Global Fund to Fight AIDS, TB, and Malaria (GFATM), which has a tripartite focus on prevention, care and treatment, offers great promise in this arena, and CDC looks forward to helping to implement those country proposals that are funded.

We know with absolute certainty that the hope of treatment is a great inducement to taking HIV test and learning your serostatus. And a test is the gateway to prevention. For those who are uninfected, post-test counseling and entry into prevention services can help them remain HIV free. For those who are infected, prevention services and support can help them avoid transmitting the virus to others. Without the possibility of treatment or even palliative care, many people living in the dire circumstances of the developing world simply have no reason to learn whether they are infected or not. Treatment can help destigmatize HIV/AIDS and can further the aims of prevention. Stigma associated with HIV/AIDS continues to profoundly affect prevention efforts, leading people to deny their risk, avoid testing, delay treatment if it is available, and suffer needlessly. AIDS stigma reflects societal biases about race/ethnicity, socioeconomic status, sexual orientation, age, gender, and drug usc. HIV infection evokes and magnifies these biases. But if HIV is no longer a death sentence because of treatment, then the stigma associated with infection is likely to diminish, supporting prevention efforts.

Various factors that must be considered in assessing how best to control the HIV/AIDS epidemic are:

- *Level of political will*—What is the level of commitment from the country's public and private-sector leadership to address prevention and treatment? What are the host country's priorities for epidemic control?
- *Surveillance and epidemiologic information*—What do we know about the populations who are infected, how and when they were infected, and the populations at risk and why they are?
- *Scalability of pilot or demonstration programs*—What is the likelihood that small-scale demonstration projects can be scaled up to a national level and sustained?
- *Age of the epidemic*—A country with a young epidemic, with low seroprevalence rates and few cases of AIDS, may benefit more from prevention programming than from treatment. As epidemics mature, with increases in seroprevalence

and AIDS cases, the mix of appropriate services will change, and treatment may become a greater priority.

- *Strengths and weaknesses of both the public health and health care delivery infrastructures*—Can treatment efforts be safely mounted, without running the risk of drug shortages? If procurement systems are inadequate, this may lead to drug shortages, resulting in the inability of patients to maintain therapy regimens, possibly leading to the development of drug-resistant strains of HIV, as people cycle on and off medications or substitute less-effective drugs.

Recent successes in Cote d'Ivoire and Uganda demonstrate that ARVs can be provided safely, effectively, and appropriately in certain developing countries. Pilot programs in Uganda and Cote d'Ivoire addressed common concerns about providing ARVs to people in developing countries, such as patients' clinical response to treatment, ability to adhere to drug regimens, ability to stay in treatment, survival, the emergence of drug resistance, and cost. In Uganda, patients were responsible for payment for all their medical care, drugs and laboratory tests. There was no direct financial support from the government or other donor agency. The outcomes were better than expected and proved that sophisticated treatment programs can work in developing countries. The United States can help capitalize on these successes and, at the same time, assist developing nations, where appropriate, to build capacity to safely and effectively provide ARV treatment and create a lasting health infrastructure.

GAP's guiding ethos on this topic is to view prevention and treatment as complementary and, where possible, integrated. Experience with preventing mother-to-child transmission demonstrates the value of integrating prevention services with treatment. Thailand was the first developing country to implement a national program to prevent mother-child HIV transmission. As part of technical assistance through the Global AIDS Program, CDC helped the Thai government develop a national hospital-based monitoring system, now implemented in >95% of Ministry of Public Health hospitals. Data from >500,000 women giving birth in the first year show that 93% had an HIV test, 70% of HIV-positive women received short-course zidovudine (ZDV), and 82% of HIV-exposed children received infant formula. An estimated 1,000 infant infections were prevented. CDC is now assisting with other projects to evaluate program outcomes, enhance HIV care for mothers and children by including ongoing prevention, train health care workers, and research new interventions.

We recognize the enormous challenges that lie ahead. But we have abiding hope, supported by encouraging gains from programs already underway, that our efforts will avert potential disaster. We are seldom presented with such clear and pressing need and such unambiguous means to intervene.

I thank you again for your support of this important endeavor, and I would be happy now to take your questions.

Senator FEINGOLD. Thank you, Doctor, for your excellent testimony.

Dr. Peterson.

STATEMENT OF DR. E. ANNE PETERSON, ASSISTANT ADMINISTRATOR, BUREAU OF GLOBAL HEALTH, U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT [USAID], WASHINGTON, DC

Dr. PETERSON. I would like to thank you, Chairman Feingold and Dr. Frist, for convening this important hearing and for inviting me to testify. This is an area of long interest to me, after having lived in Africa for almost 6 years and worked much of that time in the area of HIV/AIDS. I have seen first-hand the devastation both in individual and in collective lives due to AIDS. I will give some brief remarks, and then I believe you have my longer written testimony.

Every country in the world has reported cases of HIV/AIDS. I saw my first case of AIDS in Zaire in 1982, and then worked in the mid-eighties in Kenya, when the adult prevalence of HIV was well below 1 percent in the area we were living. Now, devastatingly, HIV/AIDS prevalence among adults exceeds 20 percent in seven countries in the developing world, all in Africa, and was

above 10 percent in 9 additional countries and in another 41 countries prevalence equals or exceeds 1 percent. Twenty-two of these are in Africa, 11 in Latin America, 4 in Asia, and 1 in Eurasia. As you said, the burden of this disease is in Africa.

It is also not just different across the world, but it is also the epidemiology within the countries. Half of the new infections in Africa are in the 15-to-24-year-old age group, and with young girls and women, accounting for 75 percent of these. Over 80 percent of the transmission is heterosexual, and over 55 percent of infections in sub-Saharan Africa are occurring in women. This is due to both biological and socioeconomic vulnerability.

In parts of Kenya, 15 percent of 15-to-19-year-old girls are now infected, compared to 6 percent of boys in the same age group. The increasing number of infected women has led to nearly 600,000 infants becoming infected with HIV annually. Looking at this epidemiology, we need to recognize both the gender and geographic differences in the epidemiology of the disease. We do have simple interventions to reduce mother-to-child transmissions that are available, though currently less than 5 percent of women in sub-Saharan Africa have access to these services. These tragic statistics are well-known to you all.

Since 1986, USAID has been addressing HIV/AIDS in developing countries, and has provided nearly $2 billion in support. I want to also thank you for the increased funding that has come to USAID in recent years. Our 2002 budget in the bilateral programs is $435 million for this year, with another $50 million for the Global AIDS Fund, and we are expecting to be somewhere in the realm of $540 million for our bilateral programs for 2003 and another $100 million, as you have heard, was committed from our budget for the global fund again.

We have HIV/AIDS programs in over 50 countries, of which 23 are receiving priority attention and a larger bulk of funding, 13 of these priority countries are in sub-Saharan Africa, and as we are looking at the resource allocation for the future, while not all of the money is going to Africa, an increasing proportion of the money is going to dealing with HIV/AIDS in Africa.

Responding to the scope and devastation of HIV/AIDS calls for an extensive approach, from primary prevention to care and treatment, and finally, support for those infected and for the survivors, especially for children orphaned by AIDS, and these include multisector initiatives. This is one of the comparative advantages for USAID, that our prevention and treatment programs can be linked with our other ongoing development efforts, both our school programs, agriculture, food, as well as the traditional maternal, child, and other health programs.

Preventing new infections really continues to be the most urgent priority in the fight against HIV/AIDS. Prevention programs are designed to slow and ultimately reverse the rising HIV infection rates, and we know they work, yet there is no single intervention or magic bullet that can effectively deal with this pandemic. Changing behavior is complex and difficult, and what works for one person may not work for others.

All of the prevention initiatives we are talking about require behavior change by individuals, communities, and societies. We have

long experience that knowledge alone is not enough. It requires acknowledging personal risk, knowing how to avoid and reduce it. That means close links to those individuals and those communities to make the need for behavior change real and acted upon in their lives.

We work with mobilizing society, providing skills to opinion and religious leaders. We support intensive personal counseling and HIV testing. That testing provides a teachable moment, an opportunity for intervention, social support, and increased knowledge about the disease itself.

Many of you have heard about Uganda's success story, and it was mentioned yesterday, but we have success stories that are now going beyond Uganda, and in Zambia there has been significant delay in sexual debut, the age at which sexual intercourse begins, by a full 1 to 2 years, a decreased number of sexual partners, and increased condom use. We are seeing the success of those behavior changes in reduced numbers of new infections.

Recent surveys show nearly a 50-percent reduction in prevalence rates for the 15-to-19-year-olds in Lusaka and other urban areas from 28 percent to 15 percent between 1994 and 1998. Prevention is not easy, but it is working in many of the African countries. Prevention also links to medical interventions in the critical area of reducing mother-to-child transmission.

USAID now has programs in four countries, which include the use of ARV to prevent transmission to the child. In Zambia we focus on infant-feeding issues, in South Africa we fund 10 outreach centers affiliated with Africa's largest hospital, in Uganda we fund testing and counseling, in Kenya we work with the Ministry of Health. An important part of this effort is operations research, so we can learn from the experience and share knowledge.

Finally, a review of USAID support of AIDS prevention would not be complete without mention of our input into vaccine and microbicide development. We recently finalized a 2-year, $16 million grant agreement with the international AIDS vaccine initiative, and for almost a decade we supported the development and evaluation of microbicides to prevent sexual transmission of HIV/AIDS. We plan to spend about $15 million in this area this year. One promising microbicide is in the final stages of field testing, but there is much more to the story than prevention alone.

More than 13 million children under age 15 have lost their mother or both parents due to AIDS. By 2010, some 44 million children in 34 countries will have lost one or both parents primarily due to AIDS. In sub-Saharan Africa, where the majority of AIDS orphans resides, gains in health achieved over recent decades are unraveling. In Zimbabwe, I worked with street children orphaned by AIDS, gave them medical care, and talked with them about the risk for HIV/AIDS. I also taught AIDS prevention in schools, where the children's greatest fear was that they, too, would lose their parents.

Orphaned children lose their families, their hope for education, basic necessities of food and shelter, they become easy prey for violence, sexual exploitation and crime. In some settings they are fodder for child militias. Again, in Zimbabwe, I worked with a local NGO now funded, I found out later, by USAID that has an amazing program of community support to households that are headed

by teenagers. Facilitating such community support is the foundation of USAID's support for children and families affected by AIDS. Since 1999, USAID's help for children has increased to more than 60 different projects in 22 countries.

These programs can have impressive impact. Care and treatment is important for humanitarian reasons. It also enhances prevention by increasing the utilization of voluntary counseling and testing, as Dr. McCray said. It also prolongs parenthood and economic productivity.

By treating the most important opportunistic infections like tuberculosis, we extend the lives of persons infected with HIV. We also help control the expanding TB epidemic which threatens all countries, including our own.

People with HIV/AIDS have many needs in addition to health care. These include psychological support, legal assistance, as Dr. Frist mentioned, microenterprise opportunities, economic support, and accurate information about HIV/AIDS. A USAID study found that a person with HIV requires 10 to 15 percent more energy a day and 50 to 100 percent more protein a day than an average adult. We are now incorporating food security activities into our care and support efforts. We currently have 25 care and treatment projects overall in 14 countries.

Antiretroviral therapy is one of the more recent and controversial areas, but it has had a dramatic impact in reducing AIDS mortality in the developed world. There are challenges that limit the ability to offer treatment and support to a large number of people, as Dr. McCray again spoke to, that include the cost of the drug, which is rapidly decreasing, but also treatment protocol and clinical capacity.

As our Administrator, Mr. Natsios, said yesterday, we are looking at having an introductory demonstration site for ARV usage. We hope to be able to announce all of our sites during the course of the next few months, but today the first site was finalized and announced. This is since yesterday's hearing. Ghana has launched the START program. This program is in close partnership with the Government of Ghana. It will introduce antiretroviral therapy as part of a comprehensive HIV prevention and care program, and we are one of the supporters of that through Family Health International.

This experience is not just a first-time for ARV use. It is also a demonstration project that we can use the information for Ghana and for other African Governments and donors, planning on how best to provide care and treatment for people living with AIDS. We will be launching three additional antiretroviral treatment demonstration sites in sub-Saharan Africa this year.

We need still to remember, as we enter into this new area, that relying totally on treatment interventions will not stop the advance of the pandemic. Lessons from the U.S., France, and Brazil and other countries that offer ARV therapy clearly demonstrate that introduction of combination therapy does not retard the epidemic. We must closely link our treatment with prevention.

The scope of the AIDS problem is immense. No one agency can do all that needs to be done. We have many new partners who are wanting now to participate in the AIDS problem, and we really

welcome that interest and concerted work, but with this many partners, coordination of efforts becomes even more critical. It is true among government agencies, and we have been working long and well with CDC. It is also true in our international partners and partnerships, including the new Global Fund.

The coordination efforts must occur at two levels, actually probably three, within Washington, at headquarters, in the international setting, and on the ground in each of the countries is probably the most vital. This kind of collaborative work is one of USAID's strengths.

In the past 2 years much progress has been made. We have learned important lessons on what works and what does not. We have successful models that are being replicated, and in six countries we are now seeing reductions in new HIV infections at the national, not just a program level. Drug costs have come down dramatically, and treatment protocols have been simplified. We have tools, and we know they work, and with your continued support and the new resources you have given us, we can move ahead to save the lives of millions.

Thank you.

[The prepared statement of Dr. Peterson follows:]

PREPARED STATEMENT OF DR. ANNE PETERSON, ASSISTANT ADMINISTRATOR FOR GLOBAL HEALTH, U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

I would like to thank Chairman Feingold and Dr. Frist for convening this important hearing and for inviting me to testify.

Over the past twenty years the AIDS pandemic has continued to surprise, shock and devastate us. Every country of the world has reported cases of HIV/AIDS. At the dawn of this 21st century, HIV/AIDS prevalence among adults exceeded 20% in 7 countries in the developing world (all in Africa) and was above 10% in 9 additional countries. In another 41 countries, prevalence equals or exceeds 1%. Twenty-two of these are in Africa, eleven are in Latin America, four in Asia and one in Eurasia. In contrast, HIV/AIDS prevalence in the United States was 0.6% at the end of 2000.

THE EPIDEMICS OF SUB-SAHARAN AFRICA

As we learn more about these epidemics, we discover that there is no single pattern.

- *In the countries of East Africa,* the oldest HIV epidemics in the world have occurred with slow, steady progression over the past 30 years. These are seen in the Great Lakes regions of East Africa—in the countries of Uganda, Tanzania, Malawi, Kenya, Zambia, and the Democratic Republic of the Congo (formerly Zaire).
- *In the countries of West Africa* where the epidemic seems to have started about 10 years later, progression of the epidemic has been more indolent and is further complicated by the presence of both HIV 1 and 2. The national prevalence rates are generally lower between 1 and 8%, except for Cote d'Ivoire, where the prevalence is estimated to be over 10%.
- *In Southern Africa* where the epidemic started in the mid-to-late 80's there have been a series of explosive epidemics over the past 8 years, reaching the highest prevalence levels on earth, 20-40%. These countries include South Africa, Namibia, Zimbabwe, Botswana, Swaziland, and Lesotho.

Specific aspects of the epidemics in this region include:

- Currently in Africa, half of new infections are in the 15-24 age group, with young girls and women accounting for 75% of these. Over 80% of HIV transmission is heterosexual, with over 55% of infections in sub-Saharan Africa occurring in women. This is due to both increased biological and socio-economic vulnerability.
- In parts of Kenya, fifteen percent of 15-19 year old girls are now infected compared with 6% of boys in the same age frame. Young girls are frequently infected by older men; these girls then infect their same age partners and hus-

bands as they get older; then the men as they get older in turn infect young girls.

- The increasing number of infected women has led to nearly 600,000 infants becoming infected with HIV annually. While simple interventions to reduce mother-to-child transmission are available, currently less than 5% of women in sub-Saharan Africa have access to these services. This is primarily due to the shortage of systems capable of delivering this care. The challenge of preventing mother-to-child transmission in Africa illustrates how difficult it can be to deliver even the simplest interventions in low resource settings.

These tragic statistics are well known to members of this Committee. Yesterday, the Administrator for USAID shared USAID's leadership role in fighting the pandemic. This has included developing the tools needed and providing direct assistance to countries for prevention and care services. Since 1986, USAID has been addressing HIV/AIDS in developing countries and has provided nearly $2 billion is support. In the late 80's USAID's programs were focused on prevention; in the mid-1990's USAID expanded its emphasis on sustainable prevention activities and launched new programs in care, treatment and support for people and communities coping with HIV/AIDS.

The HIV/AIDS pandemic presents some very special challenges. If one looks at health interventions from a development perspective, there is an ongoing predisposition toward "public health" strategies. These often rely on relatively simple interventions. For example, in the areas of child survival to reduce infant and child mortality most international assistance revolves around immunizations, use of oral rehydration salts packets to treat diarrhea, and more recently, the use of vitamin A to reduce infant mortality and impregnated bednets to reduce malaria transmission. Interventions have generally cost between a few cents for an ORS packet and vitamin A, to $20 per person for immunizations to approximately $300 to cure a case of TB.

HIV/AIDS IS DIFFERENT

Responding to HIV/AIDS calls for a radically different approach. We must address multiple dimensions of the pandemic and recognize the essential synergies that enhance effectiveness of our investments. In developing country settings, we have never attempted such a complex and comprehensive approach to a single disease—from primary prevention to care and treatment and finally support for those infected and for survivors, especially children orphaned by AIDS. The necessary response is not limited to a single sector. We are drawing upon USAIDs broad development experience to design and implement multisectoral approaches. One of USAID's comparative advantages is that HIV/AIDS prevention and treatment can be incorporated into other ongoing development assistance efforts, such as school education programs and training of agricultural workers. Also very important is our strong partnership with indigenous community organizations throughout Africa.

Prevention continues to be critical. However care and treatment are also critical. Neither can be neglected.

We have HIV/AIDS programs in over 50 countries of which 23 receive priority attention. Thirteen of these priority countries are in sub-Saharan Africa.

A LOOK AT ACTUAL PROGRAMS

I would like to get down to specifics. What do our programs do in countries? How do they actually work? I will give you some real examples from USAIDs country programs. Our programs fall into three broad areas: prevention; treatment/care/support; and children affected by AIDS. While all of these have substantial research elements, which ensure that what we learn is quickly shared and applied, today I will be focusing on the human impact of these programs.

PREVENTION EFFORTS

Preventing new infections continues to be the most urgent priority in the fight against HIV/AIDS—currently about 70 percent of USAID's HIV/AIDS budget is committed to prevention. Prevention programs are designed to slow—and ultimately reverse—rising HIV infection rates. We have now seen that these programs work in countries where ARVs and other treatments are not available.

Yet, there is no single intervention or magic bullet that can effectively deal with this pandemic. Changing behavior is complex and difficult and what works for one person may not work for others.

There are two basic principles of prevention. The first is to reduce the frequency of risky acts—by delaying the beginning of sexual activity and decreasing the num-

ber of sexual partners. The second is to decrease the efficiency of HIV transmission—by treating sexually transmitted infections, and using condoms. We hope that soon a microbicide will be developed that will help decrease the efficiency of transmission. Ultimately, a vaccine will serve this purpose.

All of these interventions require behavior change by individuals, communities and societies. Knowledge alone is not enough. Behavior change means far more than having basic knowledge about the disease AIDS, or even being disturbed or concerned about it. It requires knowing one's personal risk and how to lessen it. Promoting monogamy and condom use, and encouraging young people to wait, requires mobilizing women, men, and communities to rethink policies and social norms. It also involves creating environments where individuals who understand these messages are supported, not derided, shunned, or beaten. We have learned that HIV/AIDS risk reduction needs positive social change that eliminates stigma and links health, gender and human rights in new productive ways.

There are very important cultural factors which affect AIDS prevention programs. We should not be so surprised then, that in the absence of such social change, even in countries like Zimbabwe, Botswana, and South Africa, that have raging, visible epidemics, people have continued in a state of denial about their own personal danger of becoming infected. The stigma that is associated with AIDS means that AIDS is always someone else's problem. We have seen this phenomenon in virtually every country in the world—including our own.

To counter this lack of perceived personal risk, we are now mobilizing societies, providing skills to opinion and religious leaders and supporting intensive interpersonal counseling and HIV testing. Giving the results of an HIV test provides an opportunity for intervention, social support and increased knowledge about the disease itself.

Uganda shows how behavior can reverse a severe epidemic. There has been a delay in sexual debut by one to two years, decreased numbers of casual partners and increases in condom use. The proportion of Ugandan girls who have ever had sex declined by almost half between 1989 and 1995. Over half of young sexually active Ugandans report using condoms in their last sexual contact—this rate was close to zero at the outset of the epidemic. As a result of these two major changes in behavior, HIV infection rates among 15 to 19 year old girls have declined from 22 percent in the early 1990's to 8 percent by 1998. In the same period, national HIV adult prevalence has decreased from 14 percent to 8.3 percent.

In Zambia, we are also seeing the impact of behavior change on the number of new infections. Recent surveys are showing nearly a 50 percent reduction in prevalence rates for the 15 to 19 year olds in Lusaka and other urban areas from 28 percent to 15 percent between 1994 and 1998.

Until the mid-1990s, women's role in the AIDS crisis was little recognized. But women now comprise nearly half of all infections—and in Africa, more than half. In addition, women bear much of the burden of caring for HIV-infected family members and risk passing HIV on to their infants. They often also have the least control over their risk of contracting AIDS, for both cultural and economic reasons. Because USAID's HIV/AIDS programs recognize the difficulties women and girls face, they:

- Work through maternal, child, and other health services that women use;
- Help women develop action plans to reduce their risk of HIV infection and to increase their access to services;
- Address economic and social issues that put women at a disadvantage;
- Involve men as well as women in supporting the health and welfare of women and girls;
- Involve women's organizations in the fight against AIDS. For example, in Senegal, traditional women's associations played a key role in increasing condom use.

In addition to behavior change, we heed to apply what we have learned about medical interventions to reduce transmission. One critical area involves reducing mother to child HIV transmission. USAID now has programs in 4 countries.

- In Zambia, USAID supports an innovative community based program in Ndola District that provides education on HIV and infant feeding choices and offers referral to the district health center for testing and counseling. This program is adding antiretroviral prophylaxis. This innovative model will be expanded to Malawi this year.
- In South Africa, USAID is providing management support to the MTCT program at Chris Hani Baragwanath Hospital in Soweto. This hospital which performs 16,000 deliveries per year provides MTCT services to women delivering

in the hospital and has established MTCT services in more than 10 outreach centers.

- In Uganda, USAID is supporting MTCT services in Mulago Hospital (in Kampala) along with the Elizabeth Glaser Pediatric AIDS Foundation. USAID funds the testing and counseling components, while the hospital is providing the antiretroviral drugs and antenatal care.
- In Kenya, USAID currently supports MTCT prevention projects in three sites. This is a collaborative effort with the government of Kenya, UNICEF, UNAIDS, WHO, and African researchers. An important part of this effort is a comprehensive operations research study, so that we can learn from the experience and share the knowledge gained.

Another important way that we can reduce transmission is through treating other sexually transmitted diseases (STIs). A study in Tanzania showed that treating these infections, such as syphilis and chancroid, reduced HIV transmission by almost half. Treating STIs is a standard part of our HIV/AIDS prevention programs. Recently we have begun applying an innovative approach, periodic presumptive treatment, to those at very high risk, such as truck drivers, migrant workers and prostitutes. This ensures that these populations get regular treatment even where there is not sophisticated laboratory support.

Finally a review of USAID's support to AIDS prevention would not be complete without mention of our substantial investments in vaccine and microbicide development.

The pursuit of a vaccine that will prevent transmission of all strains of HIV remains one of the most challenging scientific and technological problems facing the world today. USAID has finalized a two-year $16 million grant agreement with the International AIDS Vaccine Initiative (IAVI). IAVI provides scientific leadership by financing and managing promising international vaccine research and development projects in developing countries. USAID's funding will provide support for vaccine research and development and strengthening clinical and laboratory infrastructure in developing countries. Also because USAID has extensive developing country experience and on the ground infrastructure, we stand ready to partner with vaccine developers to facilitate the contacts with governments NGOs and academia that will be needed for successful vaccine trials. We will provide assistance with community preparation and mobilization and the necessary prevention interventions needed to support AIDS vaccine trials.

USAID has been supporting the development and evaluation of microbicides to prevent sexual transmission of HIV for almost a decade. In FY01 USAID invested $12 million for the development and testing of microbicides and plans to raise this to $15 million in 2002. One promising product to come from this process is the seaweed derived compound, Carraguard, that is currently receiving wide attention. USAID is supporting field trials of this product in Africa.

TREATMENT, CARE AND SUPPORT ACTIVITIES

Care and treatment is important for humanitarian reasons. It also enhances prevention by increasing utilization of voluntary counseling and testing, and helping to decrease stigmatization. It prolongs parenthood and economic productivity. By treating the most important opportunistic infection, tuberculosis, we have prolonged the lives of persons infected with HIV. We also help control the expanding TB epidemic, which threatens all countries.

People with HIV/AIDS have many needs in addition to health care. These include psychological support, legal assistance, economic support, and accurate information about HIV/AIDS. These are often as important as health care, since HIV infection remains symptom free for many years. USAID has supported and will expand our programs that provide non-medical services to people living with AIDS.

USAID produced "HIV/AIDS: A Guide for Nutrition, Care and Support" which shows that, compared with the average adult, a person with HIV requires 10 to 15 percent more energy a day, and 50 to 100 percent more protein a day. We are now incorporating food security activities into our care and support efforts.

Currently, we have 25 care and treatment projects in 14 countries. In Uganda, USAID has begun a five-year, $31 million program to provide food to HIV/AIDS-affected families, to help reduce the impact of AIDS on households. We can help people survive longer by treating opportunistic infections such as tuberculosis and continuing to help countries build up their health care systems and infrastructure.

Antiretroviral therapy has had a dramatic impact in reducing AIDS mortality in the developed world. However, there are a number of challenges that limit the ability to offer treatment and support to a large number of people. USAID is actively trying to assess and solve these problems.

- The U.S. currently spends close to $4,000 per person per year on health care. In many countries in sub-Saharan Africa, annual spending is about $40 per person—a 100 fold difference. Providing antiretroviral therapy to one person for a year costs at least $600. Early on, approximately a quarter of those infected will need treatment. This may seem a manageable number. However, since therapy is lifelong, the numbers of people needing it will escalate, causing an ever increasing expenditure for treatment.
- Persons with HIV infection generally lack access to health care. There are few health care workers trained to administer therapy, not enough laboratories capable of providing even the most basic tests to monitor patients for side effects, and drug management systems that are too weak to prevent leakage of extremely valuable drugs into the black market.
- Without simple standard protocols for therapy and patient monitoring, it will not be possible to provide therapy to large numbers of people in Africa. With standard protocols, healthcare workers, under the supervision of a few physicians, can be trained to deliver therapy, adherence can be enhanced, and drug management can be streamlined,
- Even with the most ambitious treatment plan, the demand for therapy will likely exceed the supply. National governments must address this issue. People living with HIV/AIDS must be actively engaged in this discussion.

USAID will be launching four antiretroviral (ARV) treatment sites in sub-Saharan Africa this year. These sites will not only save lives but will also provide critically needed answers to the challenges noted above and begin to build much needed local capacity.

All of these efforts must build on a solid prevention strategy. We must closely link treatment with prevention. Relying totally on treatment interventions will not stop the advance of the pandemic. Lessons from the U.S., France, Brazil and other countries that offer ARV therapy clearly demonstrate that the introduction of combination therapy does not retard the epidemic. In fact, the belief that HIV is no longer dangerous may result in increased transmission.

CHILDREN AFFECTED BY AIDS

More than 13 million children under age 15 have lost their mother or both parents due to AIDS. By 2010 some 44 million children in 34 countries will have lost one or both parents, primarily due to AIDS. The impact of such large numbers of orphans and other vulnerable children is substantial for the children themselves, their families and the communities in which they live.

In sub-Saharan Africa, where the majority of AIDS orphans reside, gains in child health achieved over recent decades are unraveling. In Zimbabwe, I worked with street children orphaned by AIDS. I also taught AIDS prevention in schools where the children's greatest fear was that they too would lose their parents. Orphaned children lose their families, their hope for education and the basic necessities of food and shelter. They become easy prey for violence, sexual exploitation and crime. In some settings, they are fodder for child militias.

While some communities have organized support for especially vulnerable children and households, many are weakened by the burden of illness and death as well as the economic deterioration caused by AIDS. Helping communities care for their own is a critical area where USAID can make a difference. We have models that work and that can bring hope to families and communities.

This is the foundation of USAID's support for children and families affected by AIDS. Since 1999, USAID's help for children affected by HIV/AIDS has increased to more than 60 different projects in 22 countries. Supporting communities and families is the most efficient and effective way to address this tragic problem and reach the millions who are and will be affected.

- In Namibia, community groups work together to keep orphaned and vulnerable children in school.
- In South Africa, the Nelson Mandela Children's Fund aims to reach an estimated 250,000 orphans and other vulnerable children through multisectoral initiatives in HIV/AIDS-affected communities.
- In Zambia, an interactive radio and local volunteer program helps out-of-school and other vulnerable children continue to learn.
- In Uganda, research is underway to identify effective ways to support families in planning for the care of children upon their parents' death.
- In Rwanda, several programs work together toward the goal of providing food to 22,000 AIDS-affected children.

I have seen that these programs can have impressive impact. In Zimbabwe, I met with a local NGO that facilitated amazing community support to households headed by teenage siblings.

WORKING TOGETHER MATTERS

No one agency can do it all. With so many new partners, the coordination of our efforts becomes even more critical. This is as true among the U.S. government agencies as it is among our international partners, including the new Global Fund. Coordination efforts must occur at two levels: at headquarters and in the countries we are assisting.

A good example is our work with CDC over the past two years. We have decided upon a mutual list of priority countries, we have agreed upon strategic approaches and we are finalizing new areas of specific expertise. We have signed a Memorandum of Understanding, which defines our collaborative efforts and establishes on-going communication systems. Even more important is the coordination that must take place within the country between CDC and ourselves and with the host country government and community groups. It is there on the ground where we will realize the impact of our combined resources.

An example of how we work together is seen in the area of surveillance. CDC has taken the lead for the biologic surveillance of HIV prevalence while USAID is supporting behavior surveys. Together we use this information to track the epidemic, target our resources and measure impact.

In the past two years, we have learned important lessons on what works and what does not. We have successful models that are being replicated, and in six countries we are now seeing a reduction in new HIV infections at a national level. Drug costs have come down dramatically and treatment protocols have been simplified. We have the tools, we know they work. With your continued support and the new resources you have given, we can now move ahead to save lives of millions.

Senator FEINGOLD. Thank you, Dr. Peterson, for your fine testimony, and I will begin with some questions for the panel and then turn to Dr. Frist, and go back and forth.

Dr. McCray, you talked about the importance of adequate health infrastructure for both prevention and treatment. Give me an idea of what specific interventions the CDC is involved in laying the groundwork for those components, and if you can tell the committee about a case in which all three components of the CDC effort are up and running, infrastructure, prevention, and treatment, if you could give us an example of that.

Dr. MCCRAY. Yes. In a number of countries CDC has played a major role in helping improve the public health laboratory infrastructure that is sorely needed to help support voluntary counseling and testing, which is a part of prevention, and help to support care and treatment, which requires some laboratory monitoring as well as help to support clinical followup with patients.

The example I would like to give is Botswana, where we have been working with the Government of Botswana in implementing the voluntary counseling and testing program. Those programs, we have implemented programs in seven districts with an intent to go to about 15 districts by the end of 2003. Those programs are directly linked to prevention of mother-to-child transmission, and are being directly linked to care, and CDC is playing a major role in implementing those programs in collaboration with the government, and have been very successful in doing that, so that is one example of how we do it.

Senator FEINGOLD. Let me ask both of you, what kinds of innovative ideas have we developed to help address the challenges surrounding the cost and treatment protocols in resource-limited settings? In other words, what are some of the most promising treatments being considered today? Dr. Peterson.

Dr. PETERSON. There are a number of different elements. Certainly we have been working in our mother-to-child transmission programs with the pharmaceutical companies, and they have been providing the drugs for the programs as we work on the protocols, and I guess again in South America one of the big things that Brazil and the Ministry of Health partners told us is laying out negotiations with the pharmaceutical companies to decrease the prices has been very instrumental in them coming down.

Overall, the partnerships, and I believe the corporate partners, including the pharmaceutical industry, wants to be part of this. They want to make a difference worldwide. They are actually contributing large amounts of drugs to the programs, and that is one of the ways that we will make the most progress.

I do not know if it is innovative, but as you get all of the partners involved, the ministry of health, the communities that care, the AIDS patients and victims themselves, working together with our dollars, with the pharmaceutical companies, then you have a nexus of people and dollar resources to really address this cost and begin to make it possible.

The hardest is the public health infrastructure, to have the services far enough out, in all of the places to address the scope of need that exists currently, let alone how big it could be if we do not get a handle on slowing it down or stopping it.

Dr. MCCRAY. Actually, I was just going to give a concrete example of what is happening, what is beginning to happen in Uganda, which is somewhat innovative in Uganda. USAID, CDC is beginning to work on two fronts, one in an urban setting and another one in a rural setting, to implement ARV therapy in the urban setting of Kampala. The Academic Alliance, which is a private entity that is primarily funded, I think, by Pfizer, we are going to be working with them to help implement ARV comprehensive treatment programs in an urban setting, and the pharmaceutical, of course, is providing a lot of the funds to support the facility that will be used to evaluate and treat patients, was well as for providing free drugs.

We are working with other partners to secure antiretroviral—CDC and USAID with other partners are also working in a rural setting to implement a pilot ARV program that will actually use minimal technology. In the urban setting we will have state-of-the-art technology, viral load testing, CD–4 testing, et cetera, but in the rural setting there will be limited resources, and we will use minimal techniques that are being evaluated to monitor and follow patients, and so those are all sort of innovative ways we are trying to use to implement these programs.

Senator FEINGOLD. Thank you. In my opening statement and in some of your comments we talked about cases where treatment and prevention appear to complement and reinforce each other. I am wondering if there are situations where this is not the case, and if so, what factors cause the difference, for either of you.

Dr. PETERSON. I cannot give a specific case where having them together would not have some synergy and complement. The biggest difficulty is, as Dr. Frist pointed out, the resources, and competing for resources, and balancing how much you put into the treatment versus the prevention. It does make a difference.

The other place that we see that sort of synergy is when you make the rapid testing available, and someone knows that when they come in they are going to find out that day what their results are, you get many more people coming in. We found the same thing. If you know, when you come in and get your test, you are actually going to be able to do something about it, it does encourage people to come in more, and it is just, how are we going to balance the resources, because we both want to treat and give compassionate care, we also want to stop the epidemic from spreading and the next generation of youth within Africa not to become infected.

Dr. MCCRAY. I agree, and I really do not have a lot to add, except to say I think one of the biggest challenges we are facing in the countries is the fear by many of the national programs that once they get engaged in care, moneys are going to be sucked away from prevention, and they, in turn, see us as being competitive, and I think part of our job is to help them understand that the two should not be competitive in any way, and we need to develop models that clearly demonstrate that the two activities are complementary, so I think to the bottom line our biggest challenge is convincing national governments in many of these countries that it is OK to get involved in care.

Senator FEINGOLD. Let me ask one more question before I turn to Dr. Frist. Say a little more about the public health benefits that can come from a solid voluntary counseling and testing program, including spillover benefits that might not be AIDS-specific. For example, what effect do such programs have on other sexually transmitted diseases?

Dr. PETERSON. For a long time we would use rates of STD's as markers for our HIV prevention programs, because as you did your counseling, your testing, your behavior change communication and reaching out there, we did not early on have a way to know, we did not have an HIV test that was reliable, and so we used rates of STD's, and so that is obviously the classic place that we see a difference. Sometimes they follow teenage pregnancy rates. That is not nearly as reliable, obviously, a way of following it.

The other is a much larger sort of social piece, and that is, as you do the counseling and people can take ownership for their own behaviors and risks, you take back some of the fear, pull them back from the fear that I saw in the kids that I worked with, what is happening to my family, what will happen to me and saying, you do not need to just be afraid, some of this is under your control, and give them back their future and a chance to plan where they are going to go and what they want to do, that they can continue in their education, and so all of those are opportunities that you have as you do your counseling and testing to transform a culture.

Dr. MCCRAY. Just to add on the biomedical side, voluntary counseling and testing sites provide opportunities for you to get people into specific care. In many of the centers we screen for syphilis as part of voluntary counseling and testing when the blood is collected. In addition, in some of the centers we screen for active tuberculosis in patients who fit a certain syndrome that are referred for screening and further followup to treat their tuberculosis. Those who are found not to have tuberculosis in some countries they are now beginning to use what we call INH preventive therapy to pre-

vent new cases of TB, so voluntary counseling and testing really is an entry point to many prevention activities, as well as care and many of the psychosocial support activities that are mentioned.

Senator FEINGOLD. Thank you very much. Senator Frist.

Senator FRIST. Thank you, Mr. Chairman, and I appreciate the testimony of both of you, and your excellent written testimony as well, and I really just have one question, and it has to do with, I think, Dr. Peterson, I know in your written testimony you mention, and that is the role of women and young women in what we can do. I would like both of you to comment, because before going to Africa this most recent time I did not have a full appreciation—I probably just was not looking for it, but both the data that was presented in terms of the initiation of sexual activity, the importance of education. Again, we talked a little bit about it at our hearing yesterday, but I am increasingly fascinated by the education component, by the empowerment component.

I mentioned in my opening statement here that one of the more impressive people, when with the Hewitts and others, I was with in Africa, that we interviewed, the story of a woman who really became empowered culturally is a change in behavior, a change in culture, but where she stood up really for her rights, when her husband died and everything normally would have gone to his family, but just the more I look at this, as we are looking at places to incrementally have an impact both short-term and long-term.

It comes down to—an issue in this country we have, it is not addressed until, well, fairly recently, but the empowerment of women, but these younger girls as we go forward. I am struggling with what we do both from the CDC and USAID component, and what we can do as a Foreign Relations Committee to both further emphasize that, institutionalize that, support that as we go forward. I would be interested in both of your comments.

Dr. PETERSON. I think the situation really is remarkable. When I was there I had similar kinds of stories, only we worked in rural areas in Kenya. We would have women come to us and say, I know my husband is coming back from the city and he has that disease, and I do not have any way of saying no. How do I protect myself? How do I not—I want to live to take care of my children, a heart-rending kind of question, and early on, really what we could say is, we will treat you for your STD's, we will encourage you, but in the last 10 years many huge things are happening.

There are starting to be policy guidance at national levels. There are legal groups starting to give some legal rights to women to protect themselves in specific circumstances, and we do some of that legal and policy support type of work. Education is key, working with kids in schools. One of my favorite posters, that is actually the only AIDS posters I have in my office, shows a typical sugar daddy situation with a young schoolgirl, and when you show it in an African school setting they know exactly what this means, and the question is, well, what can she do, and we would talk through, OK, how could she not be in this situation, what could she do differently, and at first they think there are no solutions, but when you work with them there are solutions.

But the biggest breakthrough for me was when we talked to the boys and said, what would you think if this was your sister, your

cousin, how do you want to be part of the solution to some of these situations that put the young girls, your girlfriend, your sisters, at risk, and see the light go on in their eyes, that they have a role and a responsibility within women's issues and risks for HIV/AIDS and other diseases as well, and so education is key.

On the biomedical side, one of the things that we have been researching and starting to do, obviously, is the female condom, something that would put into women's hands a way, a choice on how to protect themselves. It has not taken off wildly, but we are continuing to support research in those areas to give women a little more choice about their own risks in places and situations where they may not have other choices.

Dr. MCCRAY. I basically agree with most everything Dr. Peterson just said. The only thing I would add is that one of the things we are attempting to do is to support studies, especially behavioral studies, to try to understand better some of the cultural and social dynamics that affect women's inability to prepare themselves and then try to learn from the communities innovative ways that we can then overcome some of these barriers, and USAID is also funding some of that kind of work, but I think we have to do a better job working with local behavioral scientists, et cetera, trying to understand what many of the cultural and social factors are and doing something to change those, because it has to be changed not only at an individual level, but I think at a societal level as well.

Senator FRIST. Thank you, Mr. Chairman. Thank you both very much.

Senator FEINGOLD. I will have a number of additional questions, but so we can move on to the next panel let me ask just one more, unless Dr. Frist decides he wants to ask more questions.

Dr. Peterson, you indicated USAID is implementing pilot treatment programs in a few of the African countries. Can you tell me a little more about how the countries were selected? Are there characteristics of each that will provide especially valuable information to the agency about how to pursue treatment in different contexts? That is for either one of you.

Dr. PETERSON. We have the one in Ghana that we announced today. The other three are still in negotiations, and it really depends on whether the Ministry of Health, as Dr. McCray pointed out, are not all ready to move into this arena, that they are ready and willing to work with us, that the infrastructure is there to actually do the first pilots, to have the people there to work with, and that we can get the other logistical issues put together, so we have actually talked to a number of different countries, and we have three we are still negotiating with, and the other that is firmed up, in addition to the ones that were ongoing with CDC, and they are all places where there is significant threat and higher prevalence, so they are areas of concern, but they need to have the infrastructure for us at least to begin to do the pilots.

Dr. MCCRAY. The three countries that we are beginning to have these pilot projects in are Uganda, Kenya, and Botswana, where we are working very closely with Harvard AIDS Institute, but the criteria differs a little bit for each country. In Uganda, it was clearly a request that was made through the Ministry of Health. They wanted us to help them look at ARV, or treatment, demonstrate

treatment projects in various areas. In Kenya, the initial request for our involvement came through the Kenya Medical Research Association. It is the Kemri Medical Research Institute, which includes a group of leading infectious disease divisions.

They in turn met with the Ministry of Health staff and then basically got their buy-in, and then we are working with them to help implement the ARV projects in Kenya, but the bottom line is that they are usually the Ministry of Health—we feel it is important that the Ministry of Health be on board and supportive of whatever projects we plan to do in these countries, because our goal is to demonstrate that it can be done, and the assumption is that there will be a will by the government to then expand the programs to make them available to others.

Senator FEINGOLD. Just a quick followup. For these pilot programs to be successful, what kind of resources are we talking about that will be required to implement these on a larger scale, if you could give me some sense?

Dr. PETERSON. To scale them up once we finished, or to do a demonstration site?

Senator FEINGOLD. To do them on a larger scale.

Dr. PETERSON. I do not know if anyone has estimated how large the cost would be. If you multiplied the number of people in Africa who have HIV/AIDS and then look at how many of them, how many are HIV positive, and then how many are AIDS and therefore susceptible to treatment, times the cost, and we did a rough estimate yesterday, it ranges between $600 to $1,300 for drugs, and so if the dollars keep going down, and it may be another $200 for health clinical costs, you multiply it out, and it is in a few billion dollars range. We are starting small to make sure we have got the logistics right, and obviously the drug costs are continuing to come down.

Dr. MCCRAY. I was just going to say, in Uganda they have been really successful in getting the prices down to about $90 a month just for the drugs, and with the additional cost for monitoring and evaluation I would agree with the estimates that she has come up with, but again, as part of these demonstration projects we are collecting information on cost so that at the end we will be able to say, for the expected number of people living with HIV/AIDS who will need to be on drugs, this is probably what it is going to cost for you to try to implement this country-wide. That is one of our goals.

Senator FEINGOLD. Thank you for your answers.

Senator FRIST. Can I just ask a followup, because I think that question there is very helpful for me. Are the pharmaceutical companies participating, and on board, and specifically I am thinking of the trials themselves in terms of these partnerships that I know, Dr. McCray you were talking about earlier, and Dr. Peterson, because it is critical, and clearly they are down there. There is good reason for them to be there, and some people are skeptical in terms of why they are doing it, but just for us, for the trials—and again, as I have been on the ground, you hear about these trials that are coming. Is the partnership working with the pharmaceutical companies?

Dr. PETERSON. We have a long history of working with the pharmaceutical companies and getting free drugs in other disease areas. They have been working very well with us and quietly been very willing to provide selected drugs for us free or at lowest cost for these projects, mother-to-child, and these new ARV's, so I think there is an ongoing relationship.

I think there is a hesitation about taking on the millions of people, and having to do it at less than their cost, and whether they could actually sustain it, but they have been making an extra effort.

Dr. MCCRAY. CDC does not work directly with the pharmaceuticals, but we are working with the foundations that receive support from the pharmaceuticals, and that is usually our entryway. An example is the PMTCT Plus program that is being supported by the Pediatrics AIDS Foundation as well as a number of other foundations, and they are providing—we are collaborating with them on a number of projects, and they will be providing the drugs, but the pharmaceuticals are making those drugs available almost free, or at very low cost.

Senator FEINGOLD. Thanks so much to both of you on this panel. We appreciate it, and we will now move on to the second panel.

We also have an excellent second panel of witnesses with us today. I would like to thank them for joining us. Let me introduce each of them, and then I would ask each witness to testify in the order of introduction. We will start with Dr. Jeffrey Sachs. Dr. Sachs is the Galen L. Stone Professor of International Trade at Harvard University, and the director of Harvard's Center for International Development. His broad research interests have focused on the links between health and development, along with economic geography, globalization, and macroeconomic policies in developing and developed countries.

He serves as economic advisor to the governments in Latin America, Eastern Europe, the former Soviet Union, Asia, and Africa, and I am pleased to note that he was just appointed by U.N. Secretary Kofi Annan to serve as Special Advisor on the U.N.'s Millennium Development Goals, and that position, Dr. Sachs will organize the United Nations' research aimed at significantly decreasing world poverty, disease, and death by 2015. Dr. Sachs has won many awards and honors, and he is well-known to this committee, and I am pleased to have him with us here today.

Dr. Jim Yong Kim. Dr. Kim is a trustee of Partners in Health, the Harvard affiliated nonprofit organization that supports health projects in poor communities of Latin America, Eastern Europe, Asia, and the United States.

One of the leading world authorities on multidrug resistant tuberculosis, Dr. Kim serves as the director of the Program on Infectious Disease and Social Change at Harvard Medical School and is an attending physician at the Brigham and Women's Hospital in Boston. Working closely with the World Health Organization, the U.S. Centers for Disease Control and Prevention, and other stakeholders in the public nonprofit and commercial sectors, Dr. Kim has played a central role in developing more effective global policies to control TB. In 1999, he coauthored the global impact of

drug-resistant tuberculosis, a groundbreaking report documenting the epidemic rise of multidrug resistant TB worldwide.

Dr. Kim's most recent book is, "Global Inequality and the Health of the Poor," an edited volume focusing on socioeconomic forces that can undermine the ability to provide basic social and medical services to people in poor countries.

Mr. Martin Vorster is a very interesting witness from South Africa with us today. Mr. Vorster is a South African missionary who has worked on AIDS prevention in a township outside of Pretoria, South Africa, for the past 5 years. His religious ministry provides in-home care for those suffering from AIDS, along with care for AIDS orphans. They also provide assistance and care for those who have been rejected or isolated by their families as a result of the stigma that is so often attached to those who suffer from HIV/AIDS.

We obviously welcome all of you. We are pleased to have all of you here today. Dr. Sachs, if you would proceed with your testimony.

STATEMENT OF DR. JEFFREY SACHS, DIRECTOR, CENTER FOR INTERNATIONAL DEVELOPMENT, HARVARD UNIVERSITY, CAMBRIDGE, MA

Dr. SACHS. Thank you very much, Mr. Chairman. It is really a pleasure and honor to be back with you and with this committee. The two of you have led the way in the Senate and helping the American people and your colleagues in Congress to understand this issue, and I think we are seeing the fruits of your very hard labors over the last few years.

This supertanker of ours is very gradually starting to turn in the right direction, and I think you should take great pride in what you are accomplishing in these years and in making better understood this calamitous situation.

But I am here to say also that all is not right by any means, and I think we still have not really turned the supertanker in the direction it needs to go, and I do not think it is a matter of just waiting a bit longer and things will come out right. Millions of people are dying as a result of the inaction of the United States and other countries. Time is not on our side, both in epidemiological terms and in terms of the real struggles of human beings that are dying for neglect of modest resources.

I was mildly pleased by what I heard in the first panel, but I have to say also I continue to be alarmed that we are now 65 million infections into this pandemic, and we have not put one person on antiretroviral therapy yet, but we are starting, but we are 65 million people into this. USAID has not had one single person on a donor-supported program on antiretroviral therapy, other than the very beginning of the mother-to-child one or two dose, but in terms of helping to keep the mothers and fathers, the doctors and nurses, farmers, workers of Africa alive, the donor world has not figured out yet to put one human being on treatment.

This is going to be one of the most puzzling and shocking features of our generation, when we look back, how we let it happen again. The never again is happening again before our eyes, and I do not really understand it, actually. Although I know all of the

real political explanations, I do not understand it or accept it. I would hope that your leadership could help the U.S. Government get better organized, because my basic message is, it is not organized yet.

I would ask four questions, first, who is in charge, second, where is the strategy, third, where is the matching of resources and need, and fourth, where are your colleagues in the Congress? I think we need to figure out very fast answers to those questions. I think there are good answers, but I do not think we have them yet. It is just not good enough to have all the high rhetoric that we have and end up with an fiscal year 2003 request of $200 million for the Global Fund.

The only word that comes to mind is bizarre, and such a lack of seriousness that one does not even know where to begin to understand what is happening at OMB or in the White House or in the State Department or at HHS, or in the Treasury, or other places where things might get done. There is no conception of linking needs and actions. The rhetoric gets better and better, but at the bottom line the one thing I know how to talk about in this, which is the macroeconomics, we are just nowhere right now, and it is just impossible to understand, frankly.

In a budget proposal where $62 billion of tax decreases are budgeted and apparently are not going to be done because we are not going to have a stimulus package we hear the political leadership of the United States say there is no more money than $200 million. It is just not so. We are a $10 trillion economy. We are a $2.1 trillion budget. We have billions and billions of dollars built in, $224 billion built in for the military increases. We have more than $200 billion built in for a stimulus. We have $141 billion built in for a stimulus package which is not even going to take place, and then we are told $200 million is what we can come up with.

We hear our Secretary of Health and Human Services say that we just do not have more money. I do not know what that means. What I think it means is we have not done the serious work of saying what can be accomplished with the money, what happens with scaling up, how much would it cost, what is a timetable, what is a multiyear strategy, how do the pieces fit together?

We heard an extraordinary answer just now to your question both to CDC and to USAID. It is not acceptable, in my opinion, in the 21st year of this pandemic, that they could not give an answer of the cost of scaling up. That makes no sense for us, as the greatest country in the world, that we have not been able to get organized to give an answer to that question. It is not so hard to do. The right answer, by the way, is that roughly, it is $1,000 per person per year for treatment, all costs included, drugs and all of the ancillary testing, counseling, medical care.

Probably that is in my view the outer limit. I saw cases a couple of weeks ago when we had the great pleasure to meet Senator Frist in Kampala. Just before that I was in Malawi, where the drugs were $1 a day, $350 a year from Cipla, and the extra costs were probably about $200 per patient, I would say under $600 per year to get the job done with a regimen which we were told was working extremely well.

But let me paint a picture for you, if I could, just very briefly. In one ward of a hospital I saw a sight which I hope never to see again, of course, but at the same time I wish every one of your colleagues could see. The ward had hundreds of people in it, three to a bed. It is something unbelievable. There were no drugs in the ward. Everyone was dying. So you look into a room where there is just death going on, two in a bed, one under the bed.

Across the hall was the outpatient clinic where, if people could afford $1 a day, they were getting treated. They were walking out of the clinic because these drugs are incredibly effective, and they are not so impossible to deliver as one of the great practitioners of this is about to tell you, because this man is an inspiration, and his partner. They prove the concept just by doing it, but now I have seen all over Africa it is just being done if you can afford the $1 a day.

So in one room thousands are dying each month, the other room a few hundred are surviving because they can afford it. There is nothing lacking but the resources. In that case, Senators, there is nothing lacking but the few bucks that it would cost, and we have so far made a calculation that Africans are not worth $1 a day to keep alive. That is the calculation the rich world has made, and they agonize over this.

Are Africans really worth $1 a day to keep alive? Are Africans cost-effective at $1 a day? Is it cost-effective to have 40 million orphans? Is it cost-effective to have a continent fulminant in disease? Is it cost-effective to have millions going hungry because the farmers are dead? Is that what we mean by cost-effective? Is it cost-effective for us to be allowing a generation to die for lack of a few dollars per American?

Well, our government has not even done the calculations, Senators. I know that. I spent 2 years as chairman of the Commission on Macroeconomics and Health for the World Health Organization. We did the calculations, and I hope that everyone on the committee has gotten the text. I think it is pretty authoritative. I can say that because I did not make the calculations, but the London School of Hygiene did, and experts from all over the world, and we found that for a penny out of every $10 in the rich world, one penny out of every $10 of income in the rich world we could save 8 million lives per year. That is the kind of calculation that the world that we are really living in.

If the rich countries each raised $1 per person, Senators, that would be $1 billion per year. That would save a million lives at least each year, $1. That is the kind of calculation we need to be making. Our government is absolutely winging it. That I believe is unacceptable in the greatest pandemic in history, that they cannot give you a 5-year strategy, a scaling up cost estimates, and I know they cannot because they do not do them. No one is in charge. No one is making a strategy. They are winging it.

They tested the air. They said, we will give $200 million. Then—it is bizarre. They said, $500 million, but you know, that is a weird way to say it. I am sorry. People need the drugs each year. You do not keep adding the pile. It is $300 million this year, then $200 million next year. What kind of strategy is that?

My God, thank goodness we do not fight wars that way. You know, we do not just wing it, and that is what we are doing, and so our basic message—and I have given you detailed testimony, but my basic message is, we have got to stop winging it. It is a game right now. It is a game of the minimum amount that can be gotten away with. To say we are doing it, we have got a site here, we have got a site there, there is no strategy right now. There is no scaling up strategy where 40 million people are affected now, 20 million have died, and they cannot give you a straight answer of what the cost of scaling up would be because they have not thought about it even.

[The prepared statement of Dr. Sachs follows:]

PREPARED STATEMENT OF PROF. JEFFREY D. SACHS, CHAIRMAN, WHO COMMISSION ON MACROECONOMICS AND HEALTH, DIRECTOR, CENTER FOR INTERNATIONAL DEVELOPMENT, HARVARD UNIVERSITY

Senators, thank you for the opportunity to testify today regarding one of the most urgent problems facing humanity—the global AIDS pandemic. The decisions that the Congress and Administration make regarding the pandemic will determine the life or death of millions of people in the next few years, and will affect America's security and standing in the world for decades to come. To date, the United States and other donor countries have under-financed AIDS control in poor countries. This has allowed the pandemic to run rampant. Millions of poor people are needlessly dying every year when their lives could be extended by appropriate medical care at modest cost and enormous benefit to the

Last month, I visited some of the dying fields of Africa. I stood in Queen Elizabeth Hospital in Blantyre, Malawi where 70 percent of the medical admissions are AIDS-related. Hundreds of patients are crowded into the wards to die, two or three to a bed, with patients also lying on the floor under the beds. Hospital services are collapsing under the weight of the epidemic. There are no life-saving drugs given to these people because neither the dying patients nor the Government of Malawi can afford the medications.

Yet across the hall, an outpatient service successfully treats the small fraction of HIV-infected people who can afford one dollar per day. Hundreds of people are successfully on antiretroviral therapy. The problem in this hospital is not infrastructure, doctors, testing equipment, adherence by patients, the ability to tell time—it is simply the shortage of $1 per day per patient that would supply life-saving drugs. Even when one adds in the testing and counseling costs in addition to the direct costs of drugs, it is very likely that total spending would remain well under $3 per person per day.

While the stain of U.S. neglect during the first 20 years of the pandemic can never be washed away, it is not too late to act, for our direct security needs as well as our moral purpose as a great nation. The United States should increase its spending on AIDS control by contributing at least $2.5 billion in FY03 to control of AIDS in poor countries, of which at least $2 billion should go the Global Fund to Fight AIDS, tuberculosis, and Malaria, for the reasons described below. Our contribution of $2.5 billion to AIDS control should be matched by at least $5 billion from Europe and Japan, for a total outlay of $7.5 billion for HIV/AIDS control. The Global Fund should disburse at least $6 billion for AIDS, tuberculosis, and malaria in FY03.

The Global Fund has $700 million for disbursements in 2002, of which the U.S. share is $250 million. The Congress and the Administration should agree to a supplemental appropriation of at least $750 million for FY02, to raise the U.S. contribution this year to $1 billion. This in turn should be matched by at least $2 billion from Europe and Japan, for a total of $3 billion. Without this supplemental appropriation, the Fund will either run out of money during the year, or will drastically ration the size of programs that it approves, to the serious detriment of disease control efforts.

SCALE OF FINANCIAL ASSISTANCE FOR HIV/AIDS CONTROL IN POOR COUNTRIES

Table 1[1] breaks down the financing of AIDS control in recent years, and estimates the needs for U.S. contributions for AIDS and for total disease control efforts in poor countries in the coming years.

In the second half of the 1990s, America spent around $10 billion dollars per year battling the AIDS epidemic at home, but only around $55 million per year in helping Sub-Saharan Africa. It is worth recalling that the U.S. has about 1 million HIV-infected individuals, while the developing world has 38 million infected individuals. Treatment costs, I will note below, are of course much lower in the poor countries, but the combination of prevention and treatment costs will still require vastly higher donor assistance to meet the needs of the tens of millions of individuals already infected and the hundreds of millions that are at risk of infection.

U.S. international assistance to fight AIDS has recently begun to increase, to around $680 million in FY02, with perhaps two-thirds of that aimed at Africa (depending, for example, on allocations from the new Global Fund to Fight AIDS, TB, and Malaria). The FY03 budget request again increases the total international spending on HIV/AIDS to around $844 million, with $200 million requested for the Global Fund. While these recent spending increases are certainly in the right direction, U.S. assistance is still woefully short of any realistic sum needed to help the poorest countries, especially in Sub-Saharan Africa, fight the AIDS pandemic.

Secretary General Kofi Annan has called for $7 to $10 billion per year for the control of AIDS in low-income countries, an estimate that has been supported by several expert studies, published in the world's leading journals, such as *Science Magazine* (Schwartlander, et. al., 2000) and elsewhere. Looking out a few years, the worldwide need for donor assistance to control AIDS will probably be at the high end, perhaps reaching $10-15 billion depending on the course of the epidemic, the evolution of treatment costs, and ability of the low-income countries to scale up AIDS control efforts.

In the past two years, I chaired the WHO Commission on Macroeconomics and Health, which was charged in part with determining donor financing needs to address the interlocking pandemics of AIDS, malaria, tuberculosis, and other killer diseases. Our study, released in December 2001, determined that Sub-Saharan Africa would need total donor assistance for health of around $18 billion per year as of 2007, of which more than half would be devoted to the control of AIDS, with the rest directed at other killer diseases such as tuberculosis, malaria, vaccine-preventable diseases, respiratory infections, and diarrheal diseases. Since other regions would also need donor assistance to fight AIDS, the worldwide need for donor assistance to fight AIDS could reach $10-15 billion per year by 2007.

Since the U.S. represents around 40 percent of the GNP of the donor world ($10 billion out of $25 billion in total donor GNP), the U.S. share of the total health assistance will need to be at least one quarter of the total, if not more. This means that U.S. spending on AIDS in Africa will require at least $2 billion per year, and *total U.S. foreign assistance for AIDS should reach at least $2.5 to $3 billion per year worldwide in FY03.* According to the Report of the Commission, total worldwide donor spending on all types of health programs should be approximately $27 billion per year by 2007, so that total U.S. health assistance would be in the range of $7-$8 billion per year, roughly five to six times the current level.

These numbers may seem large, Senators, but the amount of suffering and global risk posed by the pandemic diseases is far greater. The Commission findings suggest that if the U.S. invests on the order of $7-$8 billion per year as part of a global program of around $27 billion per year as of FY07, around 8 million deaths will be averted each year by the end of the decade. We can save 25,000 people every day from deaths due to AIDS, malaria, tuberculosis, and other killers if we put our minds, and a modest part of our incomes, to it. Note that $7 to $8 billion per year for global health needs would represent far less than one half of one percent of our national budget, and less than one penny out of every 10 dollars of our income.

The United States, while the second largest donor in absolute terms (after Japan), has become *the smallest donor in the world when aid is measured as a share of income!* (Chart 1)[2]. We are now spending only 0.1 percent of GNP on all forms of official development assistance, compared with an average of more than 0.3 percent of GNP in Europe. The oft-repeated excuse that "aid does not work" is a cruel abnegation of U.S. responsibility. We must stop talking about "aid" in generic terms, and start discussing targeted financial support for specific health interventions—such as prevention and treatment of AIDS, increased coverage of immunizations, wider dis-

[1] Table 1 appears at end of statement.
[2] Chart 1 appears at end of statement.

semination of antimalaria bednets, and the like. History demonstrates that such targeted interventions have a high success rate. From the expanded program on immunization (EPI); to the campaigns against smallpox, polio, African river blindness, and trauchoma; to the spread of oral rehydration therapy; directly observed therapy short-course (DOTS) for tuberculosis, and insecticide-impregnated bednets, foreign assistance for health has worked well. Unfortunately, the level of aid has always been tragically meager compared with the level of need.

DONOR SUPPORT FOR ANTI-RETROVIRAL THERAPY IN POOR COUNTRIES

Life-saving antiretroviral combination therapies have been available since the mid-1990s. Yet given the low levels of donor assistance, the stunning fact is that *not one person* in the developing world—out of the more than 60 million who have been infected by the HIV virus since 1981—has received such drugs through official donor support from the U.S. or any other country or multilateral institution. Let me repeat that, Senators. Not one person in the developing world has yet received donor-supported antiretroviral therapy! The U.S. and other leading donors have so far turned their backs on millions of dying people. This dreadful fact is supposed to change, finally this year, when the Global Fund and USAID both begin to support the introduction of antiretroviral therapy. Yet the donor sums so far committed in 2002 will permit only a very small scaling up of treatment relative to the enormous needs.

For many years it was casually supposed that antiretroviral treatment was too expensive for low-income countries. Drug regimens cost $10,000 or more per year in the United States. But it has come to be understood that the prices of antiretrovirals in the $300-$750 dollars per regimen per year, depending on the precise combination of medicines. The high margin of the price over marginal production cost reflects the returns on research and development, a margin that is properly protected by patent rights. Yet, the lower production costs make it possible to provide the low-income world with the drugs at the actual marginal cost of production, close to $1 per day for the least expensive combinations. The leading pharmaceutical companies, and high-quality generic producers that have access to the African market (which has little patent coverage for most of the relevant drugs) have shown their readiness to provide drugs at the much reduced prices. Still, the impoverished countries in Africa require donor assistance even to cover the costs of $1 per day for the drugs (and perhaps another $1 per day on average for the accompanying testing and medical care).

A high-end estimate is that anti-retroviral treatment will require around $1,000 per patient per year in low-income settings, including the costs of drugs, testing, and medical care. This can probably be reduced to around $500 per patient per year with further reductions in drug prices, and optimized regimens regarding testing and medical care. Of the 25 million Africans currently infected with HIV, perhaps 4 to 5 million would qualify for highly active antiretroviral therapy on clinical grounds. Of these, it is estimated that perhaps 25,000-50,000 are currently receiving the medicines, while the rest are dying. Even those receiving the medicines are often on sub-optimal regimens, with interruptions of drug availability, inadequate drug combinations, and poor monitoring.

UNAIDS, WHO, and other expert groups that have looked closely at this believe that 5 million people in low-income settings, mainly in Africa, could be on successful antiretroviral therapy within 5 years. Indeed, the numbers could be even higher is scaling up is given adequate support. That would suggest a total cost of around $5 billion per year for antiretroviral treatment by FY07, plus the costs of prevention programs and treatment for opportunistic infections, thereby arriving at the cost estimate of $9-$12 billion of donor support by FY07.

THE GLOBAL AIDS PANDEMIC AND U.S. SECURITY

Let me briefly address the highly adverse foreign policy implications of the AIDS epidemic for the United States, and then discuss the importance of scaling up treatment, including anti-retroviral therapy, to control the epidemic.

AIDS is destroying the prospects for African economic development and democracy

The greatest hope for democracy and economic progress in Africa remain our friends such as South Africa, Nigeria, Botswana, Ghana, Mozambique, Malawi, and Tanzania. These nations, among many others in the region, are being ravaged by AIDS. Foreign investment has been seriously impeded as investors avoid countries where a significant proportion of the labor force is likely to be HIV-infected. The labor force, including the most highly productive age groups, is being wiped out. Sub-Saharan Africa now has 25 million HIV-infected individuals, roughly 9 percent

of the adult population between the ages 15 and 44. More than two million Africans are dying of AIDS each year. In Southern and Eastern Africa, the prevalence is well above 10 percent, and in hard hit countries, 25 percent or more. AIDS has become a dire and fundamental impediment to economic progress in Africa and leaves an even more troubling legacy: tens of millions of orphaned children.

AIDS is creating a demographic catastrophe, with profound security risks

AIDS has already left behind more than 12 million orphans, and epidemiological estimates suggest that the number could rise to 40 million by the end of the decade unless the pandemic is staunched. As America lets millions of Africans die for want of $1 per day in medicines, millions more children are left orphaned. Common sense and repeated studies have shown that these children are at great risk of hunger, neglect, withdrawal from schooling, crime and violence.

AIDS is creating a breeding ground for terrorism

Disease is repeatedly found to be one of the most powerful predictors of state collapse and internal violence. The CIA Task Force on State Failure identifies high infant mortality rates as one of the three most powerful predictors of subsequent state failure (in addition to lack of democracy and lack of open economy). Furthermore, AIDS is decimating adult populations and increasing the percentage of populations which are aged between 15 and 24. Research has determined that such demographic shifts are a major predictor for the outbreak of conflict.

AIDS is fomenting a social and political backlash against the United States

Throughout Africa and the developing world, people believe that they have been left to die by America. They are aware that life-saving drugs exist to save them, but that those drugs are not being made available. Conspiracy theories abound in Africa that AIDS is a deliberate policy of genocide by the United States, or an accident of the CIA gone awry. These desperate flights of fancy aside, our *actions* to date point to one conclusion: America judges African lives to be worth less than $1 or $2 per day.

AIDS is threatening China and India and other parts of the world

What has come to Africa will soon be true in the populous centers of Asia, including India and China, where the epidemic is still in its early stages. The destabilization that could arise from full-fledged epidemics in those countries is harrowing. We must not ignore the central truth about epidemics: they are far less costly to control at an early stage.

AIDS originated in Africa, probably West Africa, sometime around 1930 according to the best current estimates. It went undetected for decades, in part because of the remarkably poor state of public health surveillance in Africa, and was only identified as a new disease in 1981 after it had spread to the United States. In this sense, AIDS is precisely the kind of threat of cross-border transmission of infectious diseases that public health officials have warned us about for decades. Our neglect of burgeoning infections abroad—whether from AIDS, or tuberculosis, or other new and rapidly evolving viral and bacterial conditions—poses stark risks to American public health. The day has already arrived when any one of us could, during a flight or in a theater, be infected with multi-drug resistant tuberculosis, the treatment of which involves two years of chemotherapy. AIDS is also evolving rapidly, and there are reasons to suspect that some viral subtypes may be more transmissible and virulent than others. New forms of the disease in Africa or elsewhere, especially if uncontrolled, will readily jump to the United States with dire consequences. Thus, we must act decisively not only because it will save lives abroad; it will save lives here at home as well.

DESIGNING A CONTROL STRATEGY THAT CAN MEET THE CHALLENGE OF A GLOBAL PANDEMIC

AIDS requires a comprehensive strategy, including both prevention and treatment

The most pernicious myth of donor policy has been that prevention alone, without treatment, will control the epidemic. This view is brutally shortsighted and fundamentally flawed. Both prevention and treatment are necessary. In the Report of the Commission on Macroeconomics and Health, we concluded that total spending on AIDS should fall into three roughly equal categories: prevention programs; treatment of opportunistic infections; and antiretroviral therapy.

Anti-retroviral therapy is necessary for two basic reasons. First, we cannot afford to allow millions of working-age Africans—mothers and fathers and core members of the labor force—to die for lack of $1-$2 per day in medicines and treatment costs, given the enormous resulting losses in economic development, the millions of or-

phans that would be left behind, and the resulting threats of violence, political destabilization, and social upheaval. It is just dreadful economic miscalculation to believe that it is "cost effective" to stand by and allow a generation to die for lack of $500-$1000 per patient per year for medicines and ancillary care.

Second, treatment is vital for successful prevention. In the United States, the Centers for Disease Control terms antiretroviral treatment a form of "secondary prevention." The availability of treatment encourages people to get tested for HIV infection, and then to receive counseling if they are infected. Yet in Africa, where testing is not now followed by treatment, individuals rarely seek testing and counseling.

The benefits of treatment for prevention go well beyond encouraging counseling and testing. Stigma is reduced when the disease is known to be treatable, and the disease can be addressed in much more direct and sensible manner. Irrational and often highly destructive social interpretations of the disease (e.g. that it is a form of witchcraft, or a CIA form of bioterrorism, or that it can be cured by having sex with a virgin) are diminished as soon as successful medical interventions are demonstrated. Politicians stop hiding from the epidemic when they can offer hope to their populations. Medical staffs, currently unable to save their dying patients for want of medicines, are re-energized to fight the epidemic.

Treatment is feasible at a greatly enlarged scale

Physicians experienced in Africa know that treatment can be successfully scaled up dramatically. Many doctors in Africa and other resource-poor settings are already successfully treating patients, but only the small proportion who are able to purchase the drugs out of pocket. With concerted financial support, training to African medical personnel could be expanded dramatically; testing facilities could be expanded or created; and new protocols could be elaborated to ensure a reliable flow of drugs and high patient adherence to drug regimens. WHO and UNAIDS estimate that at least 5 million patients in low-income settings could be on anti-retroviral therapy by the end of 2006.

The Global Fund is the best single investment for the United States in AIDS control

The Global Fund to Fight AIDS, Tuberculosis, and Malaria is an important new weapon in the fight against AIDS. The Fund was formally launched in January 2002, and will receive the first round of proposals by March 10, 2002. Initial funding is likely to begin by late April.

The Global Fund has several key strengths.

(1) The Fund will be the key source of multilateral grant financing for AIDS control in low-income countries, especially since the World Bank is still hamstrung in making loans rather than grants for AIDS control efforts in low-income countries;

(2) The Fund effectively pools donor resources, so that countries can create a comprehensive strategy and apply to one single source of financing, rather than to twenty or more distinctive and often contradictory assistance programs supported by individual bilateral donors;

(3) The Fund leverages U.S. funding by encouraging donor support from Europe, Japan, and other high-income countries. The initial U.S. contribution of $250 million for FY02 has now been matched by at least $1.5 billion from other donors.

(4) The Fund offers Congress and the international community a transparent mechanism for monitoring the flow of funding proposals and funding decisions, thereby helping to ensure that donor funds are disbursed in a sensible and evidence-based manner. One of the strongest features of the Global Fund is that proposals will be vetted by an independent expert review committee;

(5) The Fund is already spurring initiative at the grass roots (including local nongovernmental organizations), as well as increased collaboration between governments and civil society;

(6) The Fund will enable selectivity in the choice of programs and countries that will be funded, so that funds can be held back from corrupt governments and inappropriate programs;

(7) The Fund will enable improved monitoring and auditing of the actual use of donor funds.

The Research Effort to Find a Vaccine and Improved Medicines Should be Intensified

The U.S., through the National Institutes of Health, is already the world's leader in basic research in AIDS. This leadership should be maintained and enhanced, with increased research contributions from other donors as well. Recent advances in vaccine research suggest that an effective vaccine may be available within a dec-

ade, if not sooner. There will need to be considerable coordination across countries in the basic research, product development, and clinical testing, to speed the process. The International AIDS Vaccine Initiative, among others, has already made important strides in this area, and work by IAVI and others should be supported by the U.S. Government.

IMMEDIATE STEPS

Budgetaty outlays of $2.5 billion FY03

The Congress and Administration should support a U.S. contribution to AIDS control of at least $2.5 billion in FY03, of which the Global Fund should receive at least $2 billion, compared with the Administration's request of $200 million.

Supplemental budget in FY02

Congress and the Administration should be prepared to make a supplemental appropriation for the Fund during FY02 of $750 million, raising the FY02 U.S. contribution to $1 billion.

Bi-partisan Congressional Mission to Africa during this Spring

Given the urgency of the global AIDS pandemic, and the role that the U.S. must play to overcome it, it is critical for Congressional leaders and staff to understand the crisis on a first-hand basis. Much of what is reported, especially the alleged obstacles of effective treatment in the African context, does not reflect on-the-ground reality. Moreover, the sheer scale of the crisis is difficult to fathom without a first-hand view.

For this reason, I strongly urge that the Congressional leadership appoint a bipartisan mission to travel to Africa and to report back to the Congress this Spring. The claims and counter-claims can then be evaluated directly, and the shocking enormity of the crisis will better be brought to the American people through their Representatives in Congress.

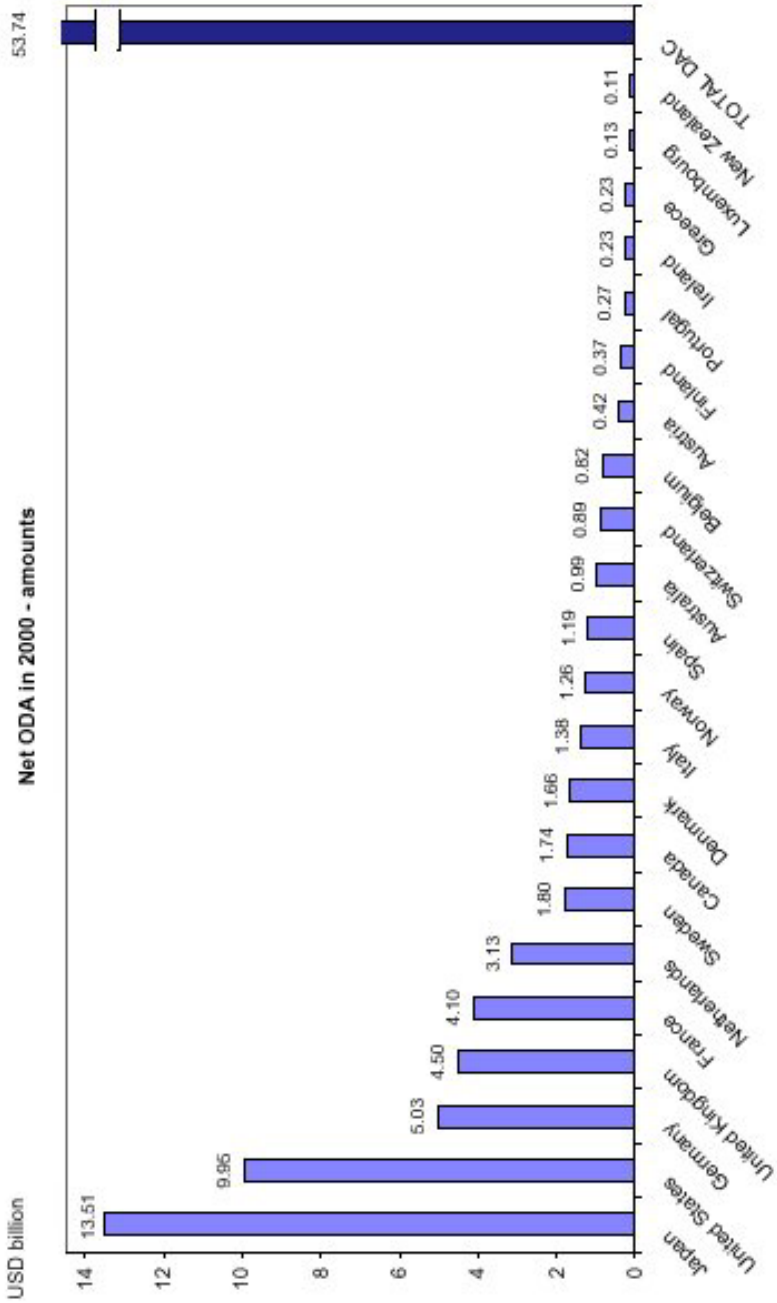
The Opportunity

The United States has missed an enormous opportunity during the past two decades to establish global leadership in quelling the AIDS epidemic. It's been an opportunity to not only save lives and make a contribution to the global economy; it's been an opportunity to promote enormous good will towards our nation, to shore up democracy and economic growth, and to lessen the threats posed by destabilized states.

I come today bearing one message: today is not too late to act. While millions have died and instability has grown, we can still avert the worst. Senators, in our lifetimes our children and grandchildren will ask us what our country did during the worst epidemic to strike humankind. With your leadership, I hope that we shall be able to offer a response that makes us all proud to be Americans.

TABLE 1.—Estimated Budgetary Outlays and Needs for AIDS and All Disease Control

	FY1995-1999	FY2000	FY2001	FY2002	FY2003	Estimated Need by FY2007
U.S. AIDS Spending Domestically	$10 billion	$10 billion	$10 billion	$11 billion	$12 billion	.....
U.S. AIDS Spending in Poor Countries	$120 million	$235 million	$449 million	$680 million	$844 million	.....
U.S. AIDS Spending in Africa	$55 million	$109 million (USAID) +$25 m (est. CDC)	$145 million (USAID) +$75 m (est. CDC)	$450 million (est.)	$525 million (est.)	.....
Estimated AIDS Needs from all Donors	.....	.....	.....	.....	$7-10 billion	$9-12 billion
Estimated AIDS Needs from U.S.	.....	.....	.....	.....	$2.5 billion	$3.5 billion
U.S. Funding for all disease Control	.....	.....	.....	.....	$1 billion (USAID) +$350 m (est. other)	.....
Estimated Needs for U.S. funding for all Disease Control	.....	.....	.....	.....	$3-4 billion	$7-8 billion
U.S. Contribution to Global Fund	.....	.....	.....	$250 million	$200 million	.....
Estimated Need for U.S. Global Fund Contribution	.....	.....	.....	$1 billion	$2 billion	$3 billion


Net ODA in 2000 - amounts
USD billion
0
2
4
6
8
10
12
14
13.51
9.95
5.03
4.50
4.10
3.13
1.80
1.74
1.66
1.38
1.26
1.19
0.99
0.89
0.82
0.42
0.37
0.27
0.23
0.23
0.13
0.11
53.74
Japan
United States
Germany
United Kingdom
France
Netherlands
Sweden
Canada
Denmark
Italy
Norway
Spain
Australia
Switzerland
Belgium
Austria
Finland
Portugal
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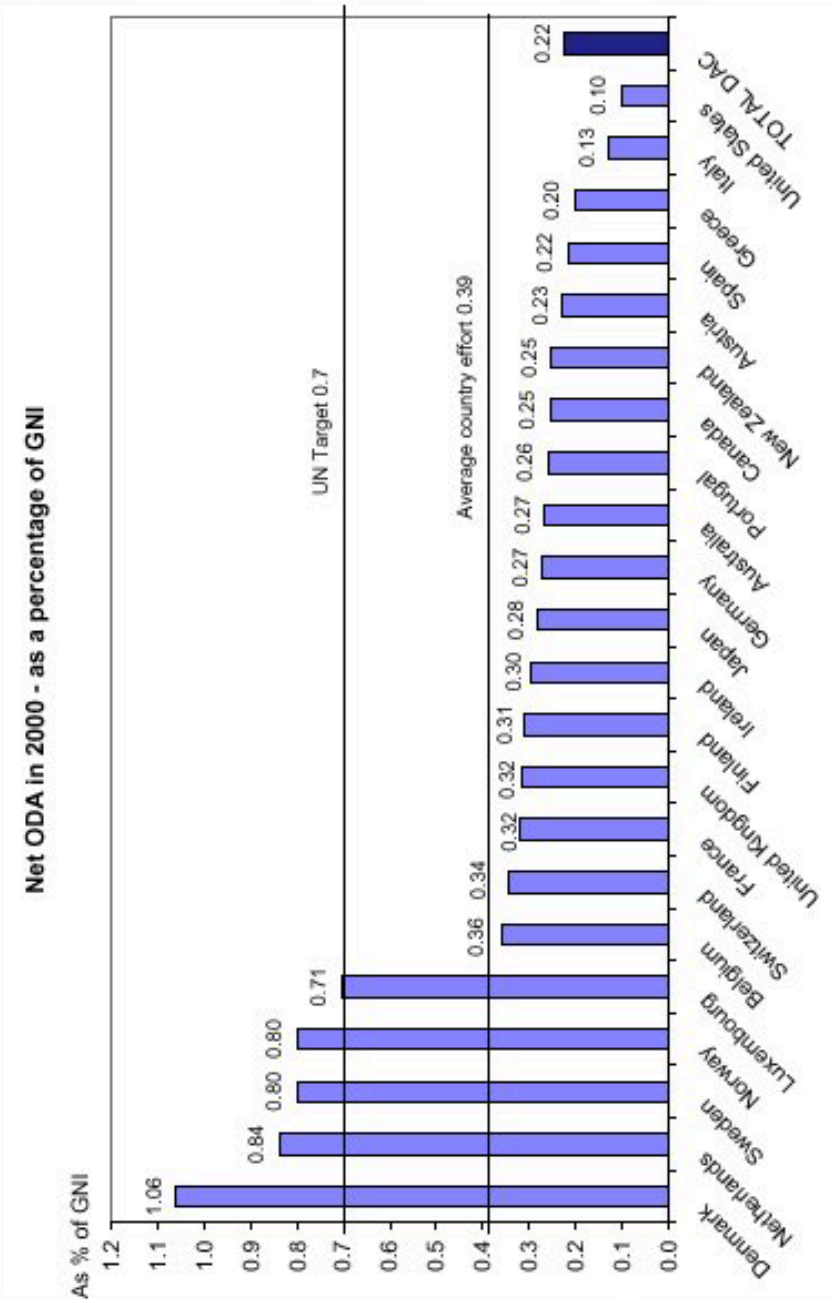
Greece
Luxembourg
New Zealand
TOTAL DAC



Senator FEINGOLD. Doctor, let me just say that that is some of the most powerful and passionate and important testimony I have ever heard on this subject. I will not soon forget it. I would agree

with you that this amount that the United States is putting forward is not adequate, and that when the Secretary-General talks about $7 billion to $10 billion, yes, that figure is an annual figure, and this idea of counting up everything, as you just pointed out, and saying we have done $500 million really is a confusing way, and a rather handy way to point out an amount of contribution that does not do the job, so thank you for that.

We are coming to another bind with votes and so on, so I am going to move on to Dr. Kim. The vote may start shortly, and I may have to recess us again for a while, but we will return to hear the other testimony and to have some questions.

STATEMENT OF DR. JIM YONG KIM, DIRECTOR, PROGRAM IN INFECTIOUS DISEASE AND SOCIAL CHANGE, HARVARD MEDICAL SCHOOL, BOSTON, MA

Dr. KIM. Thank you for inviting me. The introduction painted me as a multidrug-resistant TB person, but we also run a project in Haiti in which we are providing antiretroviral therapies in Central Haiti, one of if not the poorest region in the entire Western Hemisphere, and what I want to talk to you about is several things, but much of it has been covered. I was asked to talk about the synergy of prevention treatment the notion of antiviral drug-resistance and what we mean by infrastructure.

I will reflect on those issues, but in terms of my own personal experience over the last 15 years trying to deal with not only AIDS and tuberculosis, but many of the other afflictions that devastate the poor. I am a physician, but I am also an anthropologist. I did the two degrees together, and I am also an infectious disease and internal medicine physician working in a hospital. We do all these things at Harvard University, but our real work is in developing countries.

We work in the Central Plateau of Haiti, and we work in the slums of Lima, primarily Lima, Peru, but also more recently been working in the prisons of Siberia and also in the inner city of Boston, and I think one message that I will start with is that we are really in a different time now.

This is the time of AIDS. How we respond to this epidemic will define certainly my generation of physicians, but it will define us all as human beings. The traditional approach to public health has been extraordinarily effective for what it was designed to do. We felt that the most we could do in developing countries was take a small amount of money and divide it up as efficiently and as effectively as possible. We are no longer living in that age. We need new paradigms in public health.

Dr. David Heyman, who is the head of the communicable diseases cluster at the WHO, recently said just that, a population-based approach which tries to, quote-unquote, "Keep It Simple stupid (KISS)," the classic KISS approach to public health, is no longer adequate. We, in working in the slums of Lima, stumbled upon an epidemic of multidrug resistant tuberculosis [MDR–TB]. This is a form of tuberculosis that is resistant to the two most powerful antituberculosis drugs. Once you reach the stage of MDR-TB, the traditional approach does not work any more. You have to use old, second-line drugs, that are second-line drugs because no one

uses them any more. There have been no new drugs for tuberculosis in the last 30 years. Despite the fact that it used to be the No. 1 killer among infectious disease of adults. We use these drugs over a period of 2 years. They have very toxic side-effects. We have to manage the side-effects very aggressively. We did it using community health workers, student nurses, and we trained some of the local doctors. Right now, the entire program is being run by local physicians, and we received a grant from the Bill and Melinda Gates Foundation of $45 million to do precisely what you asked about today, which is scale up a very complicated invention to an entire nation.

We have had to quintuple the number of patients on treatment, and we have had to train health workers, nurses and physicians to manage very complicated treatment regimens and to deal with the side effects. We do directly observed therapy every day for 2 years. This is clearly the most complicated intervention that has been undertaken on a national scale anywhere in the world that we know of. Compared to MDR-TB therapy antihigh retroviral therapy is easy. It is harder to sustain, because we have to do it over a much longer period of time.

In Haiti in 1998 through drug donations we started treating our most ill patients with the triple combination antiretroviral drugs. The way we did it was, we did directly observed therapy for one of the two doses every day. In the morning, the community health worker goes and gives the patient their morning dose. Right now, the combination we are using is one pill in the morning, and four pills in the evening. It is a twice-a-day regimen, and then the family members supervise the evening doses.

Every single patient has had a positive outcome. We did not have access to CD4 testing when we started, so we did it based on syndromic management, something Drs. Peterson and McCray talked about a little bit earlier. The results so far, and we have not even published it yet, but Dr. Bruce Walker of the Harvard AIDS Institute graciously has been doing some testing for us for free, of the first 50 patients we have tested we have 84 percent full file suppression. There is some resistance, but it is trivial. The resistance that has developed will not limit our ability to treat any of the remaining patients. All have had weight gain. We have only had to change regimens on a few of the patients.

My colleague, Paul Farmer, who is our primary person in Haiti, tells me that we cannot—we cannot extrapolate our experiences in the United States to places like Haiti. He says, the great irony of my life is that in the United States I beg my patients to take their pills, but in Haiti, the patients beg me to give them pills. It is a different phenomenon, doing this in the developing world, where people at every socioeconomic level are infected and affected.

Let me go on to the question of infrastructure. Often we hear talk about infrastructure as if it were love or goodwill, something to decry the lack of, but because we do not really know exactly what it means, we do not have to define it. Well, we have looked and we have built our programs on the back of very minimal infrastructure.

In Peru, the DOT's, the local DOT's basic TB control program, we had to train some new people. We had to train specific physicians

in the management of MDR-TB, but this was quite frankly not rocket science in Haiti. The expansion of our TB program to what we call our DOT, our directly observed antiretroviral program, was a matter of taking our TB workers and giving them 2 full days of training on the management of antiretrovirals. We are still able to do that now. We have not yet received money to scale up in Haiti, but we are very hopeful that we will receive funding for that soon.

Infrastructure exists in so many different forms. Often also we hear Africa spoken about as if it were a country. There are enormous differences across Africa, and our organization did a little study where we sent an e-mail out to organizations that are concerning themselves with HIV. We found 38 that are effectively involved in treating patients. We also have had requests through Professor Sachs from corporations, from churches, from community-based groups for help in translating some of our tools and our methods to other places in Africa.

Infrastructure exists in so many different forms, for example, companies are ready to treat the pharmaceutical industry as setup programs you have already heard about that provide a very nice infrastructure, community based organizations, there are public-private partnerships, tuberculosis and immunizations programs, all of these are ready to scale up. We simply need the resources to do so.

As I said, this epidemic will define our generation. To reflect a little bit on the notion of the Black Plague, what is happening right now is that we have therapy that we can provide, and we are not providing it. This is not like the Black Plague. We do not have answers. This is not going to be easy. We need to start immediately, though, to figure out in each place, in each local area how to implement these programs, and the only way to do that is with massive new funding.

I would like to talk to you briefly about one idea that we have been tossing around. There are many examples of how access to treatment have been leveraged to achieve other public health goals. The global drug facility for tuberculosis drugs, the Green Light Committee for second-line TB drugs, which I was involved in. Each of these programs have utilized access to treatment as a way of pushing forward other public health goals. In other words, what I would argue is that massive infusions for treatment can accelerate prevention very rapidly.

We heard this story. Ninety percent of the people in Africa know how the virus is transmitted. Less than 10 percent use condoms on a regular basis, so it is not a matter of education and condoms. The one thing that can change behavior more than anything else is knowing your serostatus, and that we can do with VCT.

What brings people to VCT? It is treatment. Back in 1990, when I was caring for my patients with HIV in a hospital, it was very difficult to get them to get tested. Of course, there was really very little we had to offer them. In Haiti, in Brazil, in Botswana, in every situation where you look in which treatment is offered, the voluntary counseling and testing centers are swamped. This is the way, if you do not want to think about it as a treatment program, think about it as a prevention acceleration program. We need to do both of those things absolutely immediately.

Thank you very much.

[The prepared statement of Dr. Kim follows:]

PREPARED STATEMENT OF JIM YONG KIM, M.D., PH.D, DIRECTOR, PROGRAM IN INFECTIOUS DISEASE AND SOCIAL CHANGE, HARVARD MEDICAL SCHOOL

INTRODUCTION

I would like to begin by thanking Senator Feingold for inviting me to testify for such an important hearing. I applaud you for taking so seriously the problem of AIDS in Africa.

In 1348 Europe was devastated by the first attack of *Yersinia pestis* or Black Death. For almost 300 years plague terrorized communities with profound consequences for the social and economic organization of Europe. Doctors could offer nothing for those infected, and perhaps as many as 40 million perished. At the time, city officials would resort to burning masses of people alive, a method considered a rational public health strategy, to protect their cities from the epidemic. Other defensive measures taken in the fourteenth and fifteenth centuries to prevent the rapid spread of bubonic plague included banishing those in society who followed irregular life-styles seen as offensive to God, partaking in public processions to appease angry deities, and awaiting a realignment of the planets. Wealthy people of the time sought to avoid the plague by running away from it "by fleeing early, fleeing far, and returning late."[1] Despite all these efforts, recurrent waves of bubonic plague ravaged Europe and the Middle East for centuries.[2]

AIDS has already claimed the lives of 26 million people and 40 million others are infected. Unless drastic measures are taken, AIDS will become a catastrophic epidemic on the scale of the Black Death. Yet comparisons to historical epidemics like the plague do not capture the true tragedy of AIDS. Health officials 600 years ago did not know how plague was transmitted, much less have a access to a series of interventions to mitigate its effects. In the 14th century, health officials were unable to implement successful measures to end the plague because they lacked knowledge. Today, we have the knowledge, the medical tools, and the means to change the course of the AIDS pandemic. What we lack is the conviction and determination to adopt courageous new measures and rally the resources to implement them. However, unless we adopt these new measures without delay, AIDS will soon become the worst public health catastrophe of all time. If we fail to act, the next decades of the AIDS pandemic will not be examined by future historians as a tragedy of ignorance so much as one of cold indifference to its victims, over 90 percent of whom live in resource poor settings, most notably in sub-Saharan Africa. While we are not burning people alive as our predecessors did during the Black Death, we are standing by as over 17,000 people become infected and 8,000 people die every day of a miserable disease we have the tools to prevent and treat.

Even as recently as two years ago, we did not possess the means to control the pandemic—the medications were too costly and there was no way to responsibly administer therapy and coordinate prevention. Now, we have the knowledge to proceed. We understand, for example, the promises and limitations of prevention programs based on behavioral change and risk reduction. And we have learned that prevention efforts alone have not altered the course of the epidemic, especially in many high HIV-prevalence areas. But, as of 1996, we have new triple combination therapies that when integrated into comprehensive AIDS control programs have the potential to reduce dramatically AIDS morbidity and mortality—as these medicines have done in the United States and Europe. Prior to May 2000, one of the chief obstacles to the widespread distribution and use of these treatments was their exorbitant price. But in the last two years, the cost of the antiretroviral drugs has fallen over 95 percent. Regimens that once cost in excess of $10,000 are now available for less than $400 annually. Moreover, new drug regimens to fight AIDS are far simpler to take—requiring only two or three pills two or three times daily—and come with fewer side effects than previous combination therapies. Other obstacles preventing resource poor areas from adopting comprehensive AIDS control programs are rapidly being overcome. This testimony provides a scientific review of the evidence supporting the case for intensified efforts and greater funding for AIDS prevention, care, and, importantly, treatment in sub-Saharan Africa.

INSTITUTIONAL PROFILE 15 YEARS OF PROVIDING HEALTHCARE FOR THE POOR

Partners In Health is a non-profit charity dedicated to providing high quality medical care for people living in poverty. Since its foundation in 1987, PIH has worked with resource poor communities ranging from inner city Boston to rural Haiti, tackling diseases such as multidrug-resistant tuberculosis (MDR-TB) and

HIV/AIDS. Each intervention is based on an assessment of the disease burden of the community, a process that focuses on creating partnerships and fostering the full participation of the local community. In our 15 years of experience working in conditions of severe deprivation PIH has developed practical experience in implementing complex health interventions in poor settings. We have learned that the diseases that are devastating many populations, often in the most poverty stricken areas of the world, are no longer treatable by simple methods and quick solutions. Treatments involve more than the provision of drugs; they necessitate the creation of infrastructure and human capacity.

Since 1996 PIH has been working with community based organizations in Lima, Peru to provide treatment for multidrug-resistant tuberculosis. The program serves patients living in squatter settlements built into barren rocky hills surrounding the City of Lima. Treatment requires the use of weaker medications with serious side effects for up to two years. A single course of therapy cost over $15,000 when the program began. When we announced our intention to treat MDR-TB, the global TB community said it could not be done. Critics maintained that the infrastructure didn't exist, the drugs were too expensive, the clinical work too complex and the medicines too toxic. Nonetheless, PIH began treatment using nurses, students, and community health workers to provide directly observed therapy. International collaborations provided laboratory support, and dedicated staff developed algorithms that since then have been expanded to a national level. The treatment results from the first cohort of patients were very good; 85% successfully cured—a rate rarely achieved in the developed world. We paid for the medications through the generosity of individual donors at first, but once the program proved that MDR-TB could be treated in poor settings the WHO established a mechanism for pooled drug procurement that slashed prices by as much as 97%. Today, 11 national TB programs have accessed these drugs and more applications are pending.

MDR-TB treatment is a very difficult and complicated intervention. In our experience, antiretroviral therapy, by comparison, is significantly less challenging to implement, but potentially more difficult to sustain. HIV treatment must continue indefinitely, while MDR-TB typically involves 18-24 months of therapy for each patient In 1998 we translated our experience with MDR-TB to a rural community in Haiti and began one of the first ARV therapy programs in developing countries. Unable to offer the technologically advanced viral load assays and CD4 cell counts that are the hallmark of ARV programs in developed nations, physicians relied on clinical presentation to treat patients. To create an atmosphere of support and care, PIH used directly observed therapy to administer medications. Our regimens involve taking pills twice a day and the community health worker directly observes the morning dose while providing social support and monitoring adherence and side effects.

Haiti has a per capita gross domestic product below that of many sub-Saharan African nations. Access to our clinic, only 60 miles from an international airport, involves a four-hour car trip over roads four-wheel drive vehicles can barely navigate. The public health infrastructure is deplorable, with the nearest hospital almost one and half hours away; there is no sanitation and only partial access to safe water. Therapy for a single patient cost $10,000 per year when we began, but PIH firmly believed that drug costs would fall and support would blossom if proof emerged that ARV therapy is possible in settings of poverty. After three years of treatment PIH was able to transport biological samples to the Harvard AIDS Institute to analyze viral loads, CD4 cell counts, and check for resistance. The results were spectacular, with 84% of the first cohort achieving viral suppression. Resistance was found in only three patients, and none of the mutations were a threat to the efficacy of treatment. But the effects of our program extended much beyond the patients treated. Rates of voluntary testing and counseling sky rocketed, and prevention efforts expanded significantly. People began to search out information about the disease because they wanted to protect themselves and their families. Treatment, even for such a small cohort, brought hope and inspiration to the region and people saw the disease in a new light. Throughout the world communities like ours are desperately seeking medications that we know the international community can safely deliver. All that remains is marshaling the political will and funding to expand pilot efforts like our own.

1. THE SYNERGY OF PREVENTION AND TREATMENT

Most AIDS specialists now dismiss old debates suggesting that resources should be devoted to prevention efforts rather than to the provision of treatment. Public health and medical professionals now appreciate that AIDS prevention measures are enhanced and rendered far more effective when AIDS treatment is made avail-

able—even in poor regions of the world. Lamenting the old polemics of the debate between prevention and treatment, Peter Piot, the Director of UNAIDS reported recently:

> In the South, the slogan "prevention is the only cure" began to sound like the hypocritical justification of a morally bankrupt global divide. Inadequate access to the treatments that have transformed AIDS in rich countries is tantamount to robbing poor ones both of a powerful weapon against the epidemic, and of hope in collective action.[3]

Scientific analyses support the growing consensus that AIDS prevention and treatment strategies work best when linked and integrated into a comprehensive AIDS program. Such analyses are typically organized under four distinct themes (see table 1), which we will address in turn.

TABLE 1.—Treatment and Prevention are both essential to an AIDS control Program

- Prevention alone is insufficient to control HIV in highly impacted areas.
- Treatment enhances the effectiveness of voluntary counseling and testing (VCT).
- Treatment reduces viral load, which reduces transmissibility.
- Treatment prevents maternal to child transmission of HIV.

1.1 Prevention Alone is Insufficient to Control HIV in High Prevalence Areas

Epidemiological modeling confirms that once an epidemic becomes generalized, effective prevention becomes more difficult. In other words, prevention campaigns in regions with late stage HIV epidemics, in which large numbers of the population are infected, may have a minimal impact on lowering HIV incidence.[4] Even dramatic increases in condom usage may have little mitigating effect in high-risk areas because those infected are now a reservoir of potential infections.

Of the 11 major randomized controlled trials examining the effectiveness of HIV prevention interventions completed by 2001, none had successfully demonstrated an impact on HIV incidence.[5] This is not to say that prevention is ineffective, but rather to emphasize that the most dramatic benefits occur in populations with low disease prevalence. Moreover, prevention efforts are most successful when they are tailored to the specific needs of a population; when they account for the population's baseline HIV and STI prevalence, interactions between high-risk groups and the general population, urban/rural population patterns, socioeconomic variables, and sociocultural dynamics between genders and generations. Implementing ongoing and effective prevention programs that account for these variables is challenging and absolutely necessary but, unfortunately, they are not likely to turn the tide of the epidemic without other interventions like treatment.

Even the most successful prevention campaigns to date in high prevalence countries have had mixed results. The Ugandan national AIDS program, initiated in 1986, successfully decreased prevalence from 18% in 1995 to 8% in 2000.[6] Uganda achieved success through broad, multi-sectoral approaches and political commitment. Local districts had autonomy in implementation and used coalitions among non-traditional social structures to help mobilize mass awareness.[7] The treatment of sexually transmitted infections and targeted interventions in high-risk populations, were combined with ongoing AIDS education and support. Yet, even the dramatic gains of the Ugandan program cannot erase the fact that 8% of the population is still fatally infected with HIV—a rate that has remained constant for two years, suggesting that the limits of prevention may have been reached. Uganda continues to be a pioneer in AIDS control. In response to the reality of sustained HIV infections in the country, the government has instituted one of the first antiretroviral (ARV) treatment programs in sub-Saharan Africa. Even so, less than 10,000 patients are enrolled, a mere fraction of those in need.

1.2 Treatment Enhances Prevention

In June 2001, government envoys of 189 States and Governments, dignitaries from around the world, and representatives from a legion of non-governmental organizations and special interest groups met in a United Nations General Assembly Special Session devoted to developing new strategies to control the global AIDS pandemic. In their resolution, adopted by the General Assembly, representatives recognized that:

> Care, support, and treatment can contribute to effective prevention through an increased acceptance of voluntary and confidential counseling and testing, and by keeping people living with HIV/AIDS and vulnerable

groups in dose contact with health-care systems and facilitating their access to information, counseling and preventive supplies.

Current studies from several African countries report very high knowledge about AIDS and basic understanding of how the disease is transmitted. Some researchers estimate that 90% of African people today know how AIDS is spread and that condoms can prevent transmission. And yet barely 10% of the populations of most countries regularly uses condoms. Moreover, approximately 95% of people in Africa are unaware of their HIV status.[8] Data from voluntary counseling and testing programs throughout the continent suggest that knowledge of serostatus is the most effective way to catalyze behavioral changes But what incentive does one have to be tested, to learn of one's HIV status, if those with the disease remain highly stigmatized and marginalized from society? If one is tested and learns that they are indeed infected, without treatment what hope do they have for their future? Based on our experience treating AIDS in rural Haiti and those of similar programs around the world, patients are much more likely to change their behavior if they have hope. The availability of AIDS treatment encourages individuals to step forward for voluntary AIDS counseling and testing, because even if they test positive they have hope for a long and productive life.

Scientists credit the availability of voluntary counseling and testing to the overall success of the Ugandan AIDS program.[10] The efficacy of VCT in promoting risk reduction has been established through randomized clinical trials,[11] allowing those who know their infection status to avoid infecting others, while individuals testing negative can protect themselves.[12] Testing allows pregnant women to access antiretroviral prophylaxis to prevent maternal-to-child transmission[13] and counseling mitigates fears of dying and abandonment through active support. It encourages high-risk populations to learn risk reduction strategies and promotes decreased numbers of sexual partners and increased condom usage in the general population. In Zimbabwe, one study showed that work place prevention strategies based on such counseling paradigms reduced HIV incidence by 30%.[14]

Without the promise of medical care and the possibility of receiving life prolonging and improving drugs, individuals have little incentive to be tested for HIV when the consequences of a positive test are rejection and isolation. Evidence from Haiti reflects this. When our clinic began to offer ARV treatment, the percentage of our patients choosing to be tested and counseled increased dramatically. Similar results are being reported from ARV programs in countries in Africa.[15]

1.3 Treatment Reduces Viral Load, Which Lowers Transmission

Antiretroviral therapy reduces the viral load by preventing the virus from reproducing in the body. Reduced viral loads have been linked to decreased likelihood of transmission. This means that patients on ARV therapy may be less likely to transmit the virus to uninfected partners. An important study from Uganda followed over 400 couples, in which one partner was HIV positive and one partner was HIV negative. The rate of transmission among this cohort was correlated with viral load levels; the more virus a person has in their body the more likely they are to transmit the disease.[16] Commentators on this study noted that the potential impact of this information on those already infected could be significant The majority of disease transmission occurs from a relatively small sub-set of the population, and reducing their infectiousness could have dramatic results on overall incidence in a population.[17] We now know that reduced viral load decreases transmission of the disease. ARV therapy reduces viral load, therefore, treatment may reduce the spread of disease. It is important to note that data from San Francisco suggests that once perceived risk of transmission is reduced through providing treatment, the level of high-risk activity in specific populations increased.[18] This emphasizes the need to link treatment and prevention in a single, comprehensive AIDS program.

1.4 Mother To Child Transmission (MTCT)

> In sub-Saharan Africa, among the 26 million women who were pregnant in 2001, more than 2.5 million carried HIV. Assuming a rate of 20 percent for mother-to-child transmission of HIV, we can foresee that more than 500,000 babies born to these mothers will be infected. Many of these infants, as well as the luckier 80 percent who are not themselves infected at birth, are likely to be motherless by the time they can walk.
>
> —MTCT-Plus Program Brochure[19]

In 1994 zidovudine, or AZT, was reported to reduce the transmission of HIV-1 from mother to child.[20] Since that study, the average rate of MTCT in the United States has fallen to just 3%. Since then new drugs have resulted in efficacious therapies that require as little as a single dose delivered to a mother during labor.[21]

These life saving advances can prevent the spread of disease to a generation of unborn children. Pilot projects for the delivery of MTCT exist throughout sub-Saharan Africa, but to integrate prevention and treatment these sites must be expanded.

It is important to remember that while short-term prophylactic measures to prevent transmission are important, it is also essential to promote the health and survival of the family unit through increased access to effective HIV treatment. Few programs provide ARV therapy to recent mothers, and without new drugs these women have little hope to provide a stable future for their children. As a comprehensive global AIDS strategy is developed, focus on the reduction of maternal viral load will also decrease the high rate of adult transmission in the community and prolong the disease-free survival and ongoing social contributions of women of childbearing age.

1.5 The Peril of Prevention Alone

An AIDS control program that excludes treatment fails to account for the perilous ramifications of a rapidly spreading fatal disease. Without treatment, health professionals, educators, agriculturists, political and business leaders living with AIDS will continue to perish en masse. When infection rates reach levels in excess of 20-30%—as they already have in many African countries—the future socioeconomic viability and political stability of entire African nations are threatened. Agricultural productivity in the hardest hit areas of Africa, a major source of food and economic stability, is seriously compromised due to sickness and death from the AIDS pandemic. The Food and Agriculture Organization of the United Nations released a 1999 report emphasizing the dramatic consequences of the disease on rural production.[22] Due to deprivation and poverty associated with the loss of parents, orphans are at higher risk for malnutrition, illness, and illiteracy. Rather than becoming productive members of society they often become a drain on already strained resources. Worse, desperation can force children into prostitution and drug use, driving the epidemic forward. The social consequences of 13 million orphans are already profound. What will the continent look like when 40 million children are orphaned, as UNAIDS predicts for Africa in the year 2010? The manifestations of an AIDS control policy that ignores treatment are difficult to quantify but horrific to imagine. Public policy that refuses to recognize the necessity of providing ARV therapy not only ignores scientific evidence linking prevention and treatment, but it fails to grasp the long-term socioeconomic and geopolitical consequences of 65 million people dying in a single generation.

2. ANTIRETROVIRAL DRUG RESISTANCE

2.1 Therapeutic Advances and Drug Resistance

The introduction of antiretroviral therapy can directly inhibit HIV replication. However, the effectiveness of a single drug on the clinical outcome of AIDS is limited. HIV can quickly generate resistance to drug therapy because it is a virus that replicates very quickly with lots of random mutations. A small number of these mutations may result in new strains of the virus that are resistant to one or more antiretroviral drugs. When a patient is prescribed ARV therapy using only one or two drugs (mono- and dual-therapy), the virus is capable of randomly developing resistance thus rendering that specific treatment ineffective. However, if a patient is taking multiple medications aimed to attack the virus at different stages of its lifecycle (the so called AIDS "cocktail"), then a virus resistant to one type of antiretroviral is destroyed by another. This has led to new therapeutic strategies in which at least three drugs are prescribed simultaneously. The presence of a third antiretroviral drug dramatically reduces the likelihood of resistance. Although ARV therapy today is very successful at lowering AIDS related morbidity and mortality in developed countries, it is by no means a simple solution to the AIDS pandemic. Fortunately, there are ways of preventing antiretroviral drug resistance.

TABLE 2.—Preventing Antiretroviral Drug Resistance

- Simplified pill counts facilitate adherence.
- New drugs have better side effect profiles.
- Improved drug regimens helps to prevent resistance.
- Clinical management strategies such as Directly Observed Therapy and peer support groups create supportive environments that encourage patient drug adherence.
- Stable drug supply and procurement reduce supply interruptions.

The successful administration of ARV therapy requires that patients have uninterrupted access to medications and ongoing social support to ensure that doses are

not missed. Patients' nonadherence, or failure to take drugs precisely as prescribed, must be avoided to limit the development of resistance. The negative consequences of drug resistance include medication failure, spread of resistant disease to others, disease progression and death. A decrease in adherence by as little as 10 percent has been associated with a doubling of viral load, the most important indicator of treatment effectiveness.[23] Further, even with strong adherence to medications, a significant long-term risk of developing resistance remains. Slight variations in dosing provide the virus with a window of opportunity to mutate into a resistant strain. Moreover, successful long-term viral suppression requires that patients adhere extremely closely to their drug therapies.[24]

2.2 Strategies to Control Resistance

The lessons learned from the first stages of drug development and treatment hold the key to preventing new forms of resistance in future populations. Early clinical trials using mono- and dual-therapy led to the development of resistance in the United States and Europe when no alternative therapies existed. Consequently, many American and European populations now have high levels of drug resistance, which complicates therapy and threatens the viability of clinical care. Emphasizing the rational use of drugs can reduce prescriptions of inadequate regimens and encourage powerful drug combinations capable of suppressing antiretroviral drug resistance.

New generations of less toxic medications help patients adhere to their drug regimens by reducing side effects and pill count. Just a few years ago many people living with AIDS in the United States were prescribed as many as 33 pills, to be taken in several intervals, throughout the day. Other regimens required 14 pills, three times a day. Today, one of the most common drug regimens is quite simple. Patients take a total of one tablet in the morning and four tablets at night.[25] An important AIDS drug, efavirenz, was approved last summer in a once daily formulation.[26] New combination tablets combining more than one agent in a single pill, such as Combivir (two drugs) and Trizivir (three drugs), along with blister packs that contain each of the pills required in a day, greatly simplify and facilitate therapy adherence. Such strategies have also proven successful in malaria and TB treatment programs.[27] In Africa, where exposure to one and two drug combinations is historically extremely low, initiating treatment programs with triple therapy could improve long-term prospects of minimizing drug resistance.

To take their medications properly over long periods, most patients need supportive environments and individualized attention from caregivers. The success of ARV therapy in controlled environments such as the penal system,[28] where patient adherence is easy to monitor and enforce, has lead to innovative strategies such as directly observed therapy (DOT). This allows for precise monitoring of adherence and side effects, but more importantly creates an environment of support and trust to accompany therapy. An inner-city clinic in the United States recently used DOT to successfully administer ARVs to patients in a community with routinely poor adherence patterns.[29] Other adherence interventions and strategies that have proven successful indude interpersonal support such as peer counseling, medication adherence counselors, support groups, and home visits.

In resource poor settings, DOT offers clinicians a cost effective mechanism to begin therapy—even when patients reside far from health centers. Our experience using this strategy to deliver ARVs to persons living with AIDS in rural Haiti has been encouraging. Based on DOT by community health workers, our program trains local residents to personally administer the daily medications. These community health workers serve to ensure compliance with prescribed medications and provide social support for persons living with AIDS. The creation of a stable environment not only allows for proper medical care, but also creates community involvement and integration around HIV prevention and care. DOT facilitates the provision of ARV therapy in settings of extreme poverty while also preventing the emergence of drug resistance.

2.3 Antiretroviral Anarchy: An Impetus to Action

The unfettered distribution of commercially available ARVs has lead to an explosion of diffuse and unmonitored treatment programs throughout the developing world. Preliminary results from a study conducted by Partners In Health in July 2001 found privately funded ARV programs in operation in 38 low- to middle-income countries, most located in sub-Saharan Africa. Without government assistance or adequate medical oversight, these programs, often relying on inconsistent drug supplies from donations of unused drugs by patients in developed countries, will continue to use pharmaceuticals in an environment void of control. An unregulated environment in which prescribing practices, drug quality, and adherence rates are un-

known and unmonitored can potentially lead to the widespread development of resistance.

Despite imaginary scenarios of massive drug resistance, we already know that when programs are well administered and controlled treatment can be delivered safely and responsibly. The preliminary assessment of an ARV program affiliated with the University of Capetown, South Africa, reveals that of 104 patients who completed 48 weeks of therapy the mean adherence was 88.6%. Data such as these, combined with the experience of PIH, suggest that the non-governmental sector can be a valuable resource in HIV prevention and control. The challenge is to ensure that they do so effectively, not haphazardly.

National AIDS treatment programs in sub-Saharan Africa have begun the process of determining what is needed to provide quality care. Uganda and Senegal have both initiated successful small-scale ARV programs with encouraging results; in Senegal 87% of patients achieved the target of 80% adherence.[30] Even so, isolated programs without global support face overwhelming obstacles. In Uganda only 58% of patients enrolling in therapy were alive after 30 months.[31] Cote D'Ivoire, another nation providing ARV therapy, has also reported difficulties. Less than 40% of those treated had viral suppression after 1 year, according to UNAIDS,[32] and 57% of patients tested in Cote D'Ivoire had resistance to at least one anti-AIDS drug.[33]

These programs should be viewed as bold first steps in the public provision of ARV therapy in Africa. Much can be learned from their implementation. While some of these data suggest that poor compliance and drug resistance complicate the introduction of therapy in resource poor settings, they also indicate substantial success. Stable distribution and financing can reduce drug supply interruptions and the need to pay for medications that may have sewed as barriers to adherence in countries like Senegal and Uganda. Clinical strategies including directly observed therapy and heightened coordination with extant disease control services, such as for tuberculosis, offer the hope of integrated care capable of safely providing ARV medications. As one CDC expert recently said: "There is no moral victory when patients die of drug sensitive disease."[34] We have the knowledge and the tools to vastly scale up treatment efforts in Africa.

3. INFRASTRUCTURE CONSTRAINTS

3.1 What Is Needed?

Putting into operation comprehensive AIDS control programs that effectively link prevention and treatment poses challenges. Physicians need special training to administer ARVs and manage side effects; health sectors require modem and well-stocked laboratories to monitor patients' viral loads and immune status; drug distribution systems need to be upgraded and safeguarded to ensure the prompt and consistent delivery of supplies; and new mechanisms for drug adherence and clinical effectiveness must be designed. It is not just a matter of providing antiretroviral drugs, but also that they must be provided within a structured framework. While daunting, these challenges are by no means insurmountable. Effective collaboration between African national governments, international organizations, businesses, universities and NGOs can pave the way by expanding and improving existing health infrastructures—leading not only to more effective AIDS control, but also to a legacy of improved health for all Africans.

Our success in administering ARV therapy in the poorest region of the most impoverished country in the Western Hemisphere, Haiti, suggests that substantially less infrastructure may be needed than is currently believed necessary.

Certainly large sections of the infrastructure necessary are inadequate or lacking in sub-Saharan Africa. But infrastructure does exist. A brief review of the state of infrastructure in sub-Saharan Africa reveals many deficiencies, but also many public health promises. To preclude treatment for 28.1 million Africans because they do not have medical facilities as advanced as our own is unjust and unfair.

3.2 What Currently Exists?

> I can be "realistic" and "cynical" with the best of them—giving all the reasons why things are too hard to change. We must dream a bit, not beyond the feasible but to the limits of the feasible, so that we inspire.
>
> —Jeffrey Sachs, *Macroeconomics and Health: Inverting in Health for Economic Development*

In sub-Saharan Africa, a region with an average annual per capita health expenditure of $8, health systems are not yet able to provide widespread comprehensive AIDS care. When compared to the health infrastructures found in North America and Europe, the health sectors of most African countries are severely deficient. African health care systems do not compare favorably with those found in the world's

wealthiest countries but this does not mean that the entire continent lacks the capacity to deliver high quality healthcare. Four times the size of the United States, the continent is diverse in every conceivable way, including its health systems. Many countries boast modern, even state-of-the-art healthcare facilities, while others lack the most rudimentary healthcare hardware.

In the intervening years since most African countries gained independence in the early 1960s, dramatic gains were made across the continent. Large modern hospitals were built, research institutes established, community dispensary programs initiated, and vertical disease control programs implemented and expanded. Access to sanitation and clean water dramatically improved.[35] An analysis of the 14 sub-Saharan African nations most heavily impacted by HIV/AIDS reveals that 72% of children in these countries are vaccinated against measles every year and over 80% of women receive some form of antenatal care. Immunization coverage is often used as a proxy for the strength of health delivery systems; high rates reflect a network of health clinics, a complex management system capable of delivering vaccines safely and effectively, trained staff, and reporting and accountability measures.[36] Even the poorest nations have well-established networks of primary and secondary care facilities and virtually every country in the world has an extant branch in place to expand childhood vaccination coverage and to fight tuberculosis, leprosy and other communicable diseases.[37]

Most public sector investments in Africa are concentrated on large urban hospitals. These tertiary care facilities provide a substantial array of services and are often affiliated with local medical schools and international institutions. Even so, case studies of health systems in many of the poorest nations suggest that while the components of fully functioning health system are not in place, many resources do exist. Traditional indicators of health infrastructure do not catalog the extent of potential treatment resources. In addition to public sector health services are systems of private providers, religious hospitals, non-governmental organization programs, industrial clinics, and international civil society volunteer groups, such as Rotary, Lions, and Zonta. Each of these health service providers serves communities connected through kinship and social networks that allow for rapid mobilization of human resources (see table 3).

TABLE 3.—Non-traditional Infrastructure: Opportunities for scaling up.

- Industrial and commercial clinics.
- Pharmaceutical industry donation programs.
- Community-based organizations.
- Public-private partnerships, international collaborations.
- Existing disease infrastructure.

The World Health Organization recently released "Scaling Up,"[38] a report that describes a multitude of diverse, untapped sources of infrastructure that provide clinicians potential platforms to launch comprehensive AIDS control programs that include treatment. For example, Zimbabwe has 1,080 health facilities providing outpatient care, of which 72% are government sponsored. In regions where services are not available, the Ministry of Health contracts with private hospitals to provide health care. Such models enable rural inhabitants and industrial workers access to care that was reserved previously only for those who could afford private healthcare. They also demonstrate the potential for public-private partnerships in the coordination of healthcare services.

Industrial Infrastructure

Corporations throughout the continent are facing labor crises due to the devastation caused by HIV/AIDS. As a result, several large companies have begun providing AIDS prevention and treatment to their workers. For example, Debswana, an African mining consortium and the largest employer in Botswana, declared in May 2001 that it would pay 90% of the cost of AIDS care and treatment, including ARVs, for workers and their families. A few car manufacturers and other mining companies in southern Africa are beginning to follow suit. Coca Cola has committed to using its vast distribution networks and social marketing to increase AIDS awareness through prevention campaigns. Several public utilities have also successfully launched AIDS prevention programs for their workers.

Pharmaceutical Programs

Some research-based pharmaceutical companies have indicated a willingness to donate drugs for treatment programs in poor communities. Historical commitments such as Merck's Mectizan Program to fight river blindness, and other recent initiatives in sub-Saharan Africa to treat HIV, indicate promising corporate investments

in global public health. Secure the Future is a $100 million donation program initiated by Bristol Myers and Squibb. Moreover, GlaxoSmithKline has now licensed generic manufactures to produce their key ARVs in South Africa, and Boehringer-Ingleheim has offered free ARVs to prevent mother-to-child transmission.

Community Based Organizations

Community-based organizations, women's organizations, village councils, youth groups, and professional trade unions are all important components of sub-Saharan Africa's social structure. Kinship ties and regional networks offer vast opportunities for the organizing community outreach and training of local health workers and volunteers. In Uganda, TASO is an organization of persons living with AIDS that has been instrumental in coordinating the sustained government commitment to fighting HIV in the country. DOTS programs in South Africa have capitalized on the social organization of women to incorporate civic groups in the administration and monitoring of tuberculosis medications. Recent interventions initiated through trade unions have brought condom promotion to mining camps.

Public-Private Partnerships, International Collaborations

Public private partnerships and institutional collaborations offer new hope for future AIDS control efforts. The Netherlands, Australia, and Thailand initiated a program entitled HIV-NAT to address the burgeoning epidemic through operational research and antiretroviral therapy in Southeast Asia. As a result of new capacity and expertise, Thailand recently agreed to help Zimbabwe produce generic ARVs for domestic use, and if successful intends to offer the service to other African nations such as Ghana. Similary, directors of the Brazilian National AIDS Program have hosted groups from southern African countries to inspect aspects of their comprehensive, universally available AIDS program. Latin American nations such as Guatemala, which seeks to capitalize on the Brazilian experience, are being offered technical assistance from the Brazilian Ministry of Health on drug production and distribution. In addition, a coalition between an African government, a pharmaceutical multinational corporation and a private foundation—the government of Botswana, Merck, and the Bill & Melinda Gates Foundation—is currently in the final stages of introducing what will likely become Africa's first, universal HIV/AIDS treatment program.

Existing Disease Infrastructure

Precedents exist throughout Africa for the successful introduction of resource intensive health interventions. The STOP TB Initiative and the Expanded Program for Immunizations (EPI) are two examples. Each of these interventions, undertaken in almost every African nation, worked with and built upon the limited local infrastructure, ultimately creating new public health networks and resources. The STOP TB initiative relied upon community health workers to implement DOTS, covering over 50% of the African people.[39] In the 1980s and 90s, the EPI established networks of cold chains capable of delivering environmentally sensitive vaccines, even to remote areas throughout Africa. It also created immunization management and monitoring systems to record use and coverage. Although immunization rates have fallen in many parts of the developing world in recent years, a new, bolder initiative to improve childhood immunization coverage, the Global Alliance for Vaccines and Immunizations (GAVI) is providing new mechanisms for rapid infusions of infrastructure and material support.

One of the cornerstones of effective prevention is the administration of ARVs to pregnant mothers. Just a single dose of Nevaripine, a potent new drug, can substantially reduce the likelihood of mother-to-child transmission (MTCT) of HIV. Across the continent, systems of clinics capable of providing counseling, testing, and interventions are being put into place. This network has organized an initiative called the MTCT Plus program. This will provide an estimated $100 million to link prevention of MTCT to the treatment of the mother with ARV therapy. Funding proposals for treatment at clinics already providing services have already been received, and treatment should be initiated by summer 2002.

3.3 What Can Be Done?

Innovative programs to address structural deficiencies in health care are being implemented in several African countries. While current health infrastructure remains inadequate in most regions, a substantial foundation for future investments has been laid. A comprehensive review of strategies addressing structural deficiencies by the Commission for Macroeconomics and Health (CMH) identified proven interventions to overcome infrastructure constraints.[40] Limitations on program capacity based on weak health systems can be addressed through modem management techniques. The implementation of tuberculosis control programs in Malawi and the

revitalization of primary health care in Tanzania are excellent examples of dramatic infrastructure improvement in two of the poorest nations in sub-Saharan Africa. Many of the interventions necessary for AIDS control do not require the extensive facilities of modem hospitals, but can be effectively administered through small clinics and dispensaries. The CMH study refers to these as dose-to-client (CTC) systems and suggests that increasing the capacity of these local clinics and dispensaries through stable financing is well within the ability of an international effort. Crucial to the success of such a program is the integration and mobilization of broad public and private partnerships. Scaling up CTC will require investments in health personnel, and improvements in physical structures, transportation, and telecommunications. It will also involve integration with national drug distribution and warehousing. Although it may not be possible to rapidly create a system that functions flawlessly, it is well within the "absorption capacity" of developing nations to steadily increase their levels of health investment.

Since gaining its independence in 1961, the country of Tanzania began to aggressively improve health systems and services. Today, the legacy of these investments is a pyramidical structure of healthcare integrating village level dispensaries to district hospitals and national tertiary care facilities. The government operates 86 hospitals, and non-governmental organizations, religious charities, and the private sector contribute an additional 93 health facilities. Throughout the country there are almost 5,000 health clinics and 90% of the population lives within 10 km of a health facility.[41] Through this extensive healthcare network, 90% of pregnant women receive antenatal care and 74% have a trained medical person with her at delivery. These resources exist in a nation with a per capita grossdomestic product of under $240.

The success of Tanzania's health reform was based on new development strategies such as the Sector Wide Approach (SWAP) and strong donor support. SWAP pools donor funding for development projects into a centralized resource under the jurisdiction of the Ministry of Health. The Ministry then has discretion to invest the funds in a coordinated manor as they see fit The donor community remains involved as consultants, however the principle responsibility for management and accountability is transferred to the government. The aim of SWAP programs is to eliminate fragmentation, duplication, and inefficiencies in healthcare delivery. The Swiss government became actively involved in supporting this initiative through a funding agreement secured in bilateral negotiations.

Malawi is one of Africa's poorest countries, with a gross domestic product of just $190 and an HIV seroprevalence rate of 16%. The dramatic increase in HIV in the last decade triggered a corresponding rise in TB rates throughout the country. The basic control mechanism for tuberculosis is a protocol called directly observed therapy, short-course (DOTS). This strategy is a clinical algorithm, endorsed by the WHO, in which a trained health worker administers a standardized regimen of drugs over a period of 6 months. Laboratory capacity, patient drug adherence, resistance prevention, and infrastructure are all necessary for a successful TB control program. In 1985 Malawi began a partnership with the International Union against Tuberculosis and Lung Disease (IUATLD) in order to effectively care for those infected. Malawi has 43 hospitals and 45 laboratories. The TB program required each of these facilities to increase human resource capacity and to train staff in multidisciplinary fields. Approximately 35% of the medical care provided in Malawi is run by non-governmental agencies and partnerships between health facilities were needed to increase coverage rates. Members of local family networks and businesses were enlisted to serve as volunteer health workers. Operational research identified innovative mechanisms to use social and civic resources for health delivery, including a network of 50,000 traditional healers.[42]

Malawi and Tanzania are two of the most impoverished countries in sub-Saharan Africa, and yet despite high prevalence of HIV each has successfully addressed deficiencies in their healthcare systems and found solutions to expand the scope and quality of care. Critical shortages in resources may exist, but contrary to some critics, health infrastructure exists and can be built upon in the coordination AIDS programs.

The pandemic in Africa cannot be controlled without investments in health and social services. Expert modeling of the epidemic suggests that the disease is still in the middle stages of development.[43] Without action, the continued spread of AIDS will further jeopardize the health systems of sub-Saharan Africa. The strain of AIDS on local services is already dramatic; AIDS not only increases morbidity in the region and stresses already weak systems, it also takes a severe toll among health workers themselves. New strategies of operational research, global lending paradigms, collaborations and partnerships, and coordination of diverse resources offer a basis from which treatment can be introduced. Interventions would begin on a

small scale in communities with infrastructure in place. A strategy carefully planned growth would allow these sites to expand coverage quickly, leveraging their success to train new health workers and and increase access to care and treatment.

4. AIDS PROGRAM FOR PREVENTION AND ACCESS TO CARE AND TREATMENT AIDS PACT

The struggle to improve access to care in sub-Saharan Africa has lead to the identification of infrastructure constraints, the threat of resistance, and concerns over the long-term sustainability of both treatment and prevention. Each of these barriers to care is real and presents the international community with a serious challenge. Significant logistical complexities are involved in connecting multiple sources of pharmaceutical and other products with multiple needs and varying capabilities of poor communities and individual patients on the ground.

Yet, several programs in the past decade have shown that drugs and vaccines can be successfully delivered to people in resource-poor countries through innovative partnerships.[44] The programs include: i) the Mectizan Donation Program, which prevents blindness by providing the drug, ivermectin, to 22 million people annually in Africa and Latin America to treat river blindness (onchocerciasis); ii) the International Trachoma Initiative, which provides the drug, azithromycin, to treat trachoma and thereby prevent another major cause of blindness; iii) the Global Alliance for Vaccines and Immunization (GAVI), which currently provides vaccines and support for vaccine programs to 36 countries; iv) the Green Light Committee (GLC) for Tuberculosis, which provides specialized drugs for the treatment of multidrug-resistant tuberculosis to many countries; and v) the Global TB Drug Facility (GDF), which provides TB drugs to programs employing Directly Observed Therapy, Short-course (DOTS) in 5 countries. Partners in Health has recently been working with a small group of physicians, health policy experts, social scientists and management consultants to study these existing programs and develop a similar mechanism that will link HIV treatment with prevention and assure a long-term sustainable supply of low-cost, high-quality ARV's for resource-poor settings. We have called this mechanism the AIDS PACT (Prevention and Access to Care and Treatment).

I have had the privilege of being involved in the genesis of the WHO's Green Light Committee, which was an initiative linking treatment and prevention to control MDR-TB. In 1999, recognizing the potential gravity of a drug-resistant airborne infectious disease such as MDR-TB, the World Health Organization resolved to address the principle obstacles to developing effective treatment programs in highly affected areas. The WHO program faced constraints similar to those we are currently encountering with HIV: inadequate infrastructure to implement complex clinical regimens; the potential threat of developing further drug resistance; and the cost and supply of medications.

To overcome these obstacles an organization now known as the Green Light Committee (GLC) was formed. This body fulfills two key functions: 1) by pooling demand and creating a competitive market environment it leveraged massive reductions in drug prices while assuring quality; and 2) by making access to preferentially priced drugs conditional upon program requirements it ensured rational use and minimized drug resistance. A scientific committee encourages and provides support for the development of adequate program infrastructure and clinical supervision throughout the application process. Government funding proposals are reviewed in light of criteria associated with international guidelines for MDR-TB management. All projects that are approved are quality-assured through their duration, and monitored for continued compliance.

The results have lead to minimum price reductions of 40% on single drugs and discounts up to as much as 99% for others. Net drug costs for some participating Ministries of Health have diminished over 96%. The funds saved on procurement are then available for investment in other aspects of tuberculosis control. The GLC faced a paradoxical challenge: increase access to medicines by decreasing prices, and increase regulatory control over these same drugs. Market consolidation achieved the first goal, and program requirements enforced by a regulatory body with technical assistance met the second.

The strength of this model derives from the ability of an international oversight committee to apply rigorous conditions to access for medications. Such controls minimize the opportunity for resistance to develop by ensuring that the tuberculosis program involved has appropriate algorithms for treatment. *To impose controls without technical assistance would ultimately restrict access, rather than promote rational use of pharmaceuticals. Accordingly, any project initially unable to qualify can ask for technical assistance to meet eligibility requirements.*

TABLE 4.—AIDS PACT

- Pooled procurment of both branded and generic drugs combined with strong quality control assures low prices, high quality and a long-term sutainable supply.
- Technical assistance through grant and loan mechanisms ensure rational use of drugs and capacity building.
- Linking treatment to prevention provides the best possible chance for controlling the epidemic.

The management of MDR-TB treatment programs through the GLC offers lessons for the challenge of delivering HIV/AIDS treatment to poor communities worldwide. The current barriers to effective AIDS treatment programs are analogous in many ways to the conditions of the MDR-TB epidemic. Beyond parallel concerns of cost, objections center on the problem of inadequate local infrastructure and management capacities. Given infrastructure weakness, institutional inefficiency, and corruption, it is argued that even if drugs for HIV were available at no cost the "systems to deliver them are not there."[45] This claim reflects the real gaps in poor countries' health care delivery apparatus. Yet, their existence is not an excuse for inertia and resignation. Non-traditional infrastructure and institutional capacity are present, and proven mechanisms for scaling up delivery exist.

An international pooled procurement program and scientific regulatory body could prove helpful in providing a framework for the rational introduction of therapy. Using economies of scale and quality control mechanisms procurement agents can purchase AIDS drugs at preferential prices. Drugs from this effort could be procured from both the research based pharmaceutical industry and the generic drug industry. Six major research based pharmaceutical organizations have already engaged in reduced price access to ARVs for developing countries through the Accelerating Access Initiative. Additionally, there are at least 25 generic manufacturers engaged in some level of ARV production. Finally, procurement must include testing kits and laboratory reagents. Ten companies are involved in rapid HIV testing systems, 3 companies in viral load systems, and at least 8 companies providing CD4-cell count systems. Efforts to procure these resources in a manner that will lead to a long-term supply of high-quality, low-cost drugs have been discussed in various fora but to date no unified and coordinated system has been built.

Applicant programs would need to demonstrate the ability to meet requirements based on international guidelines established through a panel that included medical and public health specialists but also people living with HIV and representative of treatment advocacy groups. Programs that express need but do not have the infrastructure can be supported through technical assistance, grants, and loans. Most importantly, access to antiretroviral therapy will be tied to high-level national commitment to prevention, care and impact-mitigation efforts. Through a mutually supportive process national AIDS plans can be designed and implemented that reflect the need to care for those infected and prevent future spread. Treatment can act as a catalyst for prevention programs, as well as a complement to them.

An AIDS PACT program would provide developing countries with resources to overcome infrastructure constraints, access affordable antiretroviral therapy, and receive technical assistance to maximize the effectiveness of both treatment and prevention. Using access to medicines to influence policy can also provide the best protection against irresponsible prescribing practices, poor quality drugs, and strengthen adherence monitoring programs. This could minimize the development of drug resistance and provide a future mechanism for the distribution of AIDS vaccines and new pharmaceutical products as they become available. Finally, the AIDS PACT could become a clearinghouse for operational research into best practices for linking treatment to prevention in resource poor settings. Data from participating sites can be aggregated and analyzed, operational research can be implemented across regions and new regimens can be tested through institutional partnerships.

Any program such as the AIDS PACT would have to do at least two things extremely well. It would have to dramatically and quickly increase access to treatment and at the same time link treatment to prevention. Examples of programs that do just that exist and must be studied closely as we move forward in our efforts to respond to the AIDS catastrophe.

CONCLUSION

I am very grateful to Senator Feingold for inviting me to provide testimony to the Senate Foreign Relations Committee. As a physician, an anthropologist and a human being, I am convinced that what we do in response to this epidemic will define our generation. I urge you to increase dramatically our country's financial com-

mitment to fighting this epidemic. In addition to the funding provided through bilateral funding channels, I strongly support a much larger contribution to the Global Fund to Fight AIDS, TB and Malaria (GFATM). Funds provided to the GFATM can leverage other funding and build an appropriate level of resources so that we can do the right thing in Africa and other parts of the world.

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Senator FEINGOLD. That is wonderful testimony. I am going to turn now to Mr. Vorster. This is the greatest job in the world I have here, but it can be frustrating, and they are about to start a series of votes that is going to make it very difficult to ask questions. What I would like to ask is, if we could submit, first of all, questions in writing to you if we cannot ask them, and second I am wondering if you would be willing to meet with us in a more informal setting if we cannot reconvene the hearing so that we can pursue this discussion, because it has already been such a fine panel.

Mr. Vorster, please proceed.

STATEMENT OF MR. MARTIN J. VORSTER, MAHYENO TRIBUTARY MAMELODI, PRETORIA, SOUTH AFRICA

Mr. VORSTER. Thank you, Mr. Chairman and committee members. I am not an expert. I am a worker, working in the grassroots among the poor and caring for AIDS patients and children orphaned through AIDS. I do not take this privilege lightly of being able to speak here this afternoon, particularly in view of our recent past in South Africa.

As you will see, I am a middle-aged white South African with a surname of Vorster, and according to my CV you will notice that I spent many years in the military, but through faith in God I have been turned around, and the people that I once subdued their aspirations, in believing that it was service to God, I now serve with my family in empowering the poorest of the poor.

I also speak on behalf of our poor particularly in South Africa. I speak on behalf of the Caring for the Poor and Needy Resource Network, which currently has 473 individuals and organizations from amongst the poor, representing 78 countries. And 106 of these organizations are networkers from Africa.

For the past 9 years, I have worked in black townships in South Africa, and for the past 5 my family and I have lived and worked amongst the poor in Mamelodi. We empower the poor in marker

enterprises. We care for AIDS sufferers in their homes, and we parent the children orphaned through AIDS.

One of our AIDS sufferers, a single mother, had only one child, a 7-year-old daughter, Nongani, and we prepared her as best we could for the death of her mother, as much as one can for a child of that age, yet when the mother died, the trauma that this little girl experienced in being wrenched from her mother caused her to have a stroke. It disfigured and twisted her face.

Now, there are many such heartbreaking experiences happening throughout Africa today, but what I was asked to speak on this afternoon was the role of faith-based organizations as well as political leadership in combating AIDS, particularly in South Africa. Up until recently, our government has focused extensively on the prevention of AIDS, rather than on the treatment of AIDS. This prevention campaign was largely education through the media, coupled with the provision of millions of condoms. The campaign was very controversial, yet we at the grassroots level found that it had a positive effect in lifting the taboo around AIDS, the stigma.

Four to 5 years ago, the patients were being dismissed from hospitals in their final stages of AIDS, and often with acute diarrhea. The families, having no knowledge of the virus, were understandably afraid, and these patients were then placed in their rooms and all of the keyholes were sealed with tape to prevent the spread of the disease. In many cases they were not given food or water, and within days they would die from dehydration.

Caregivers like my wife, Terry and I were literally running from home to home to try and save these patients from a horrible death. On the other hand, nearly the role of the faith-based organizations in AIDS has been largely on the treatment phase and not prevention, although this is done on an individual basis, one to one. It has taken years, but now there is a growing recognition of government and others that faith based organizations (FBO's) are contributing significantly toward the fight against HIV and AIDS.

FBO's often reach into the most sections of society and those most vulnerable to the epidemic. For years, this fact has been hidden, and possibly for the following reasons. No. 1, in South Africa it is not the national religious organizations that are spearheading this involvement, but rather individuals or small groups of people, mostly women, who are working in obscurity in our black townships, communities, and rural areas.

No. 2, the involvement of faith-based organizations at grassroots level was initially responsive and not proactive. As the crisis grew, they would quietly care for those suffering and those dying, making use of their own meager resources.

In contrast to this, we have nongovernmental organizations and community-based organizations [CBO's] who would first constitute themselves, set up committees, and then seek the donations and contributions toward their plans before any action took place. Unfortunately, it is generally the case that NGO's and CBO's are founded as a means of employment, and they depend heavily on government funding to sustain them.

The FBO's generally continue to remain active and involved, giving sacrificially of their own capabilities and resources. FBO's be-

lieve that they are motivated by a call from God, and they and their workers are prepared to depend and trust in God.

No. 3, initially there was a very slow response from the government to the AIDS crisis which left a vacuum in the townships. Four to five years ago, the catch-phrase and the focus by the government was poverty alleviation and job creation. Funding was made available to CBO's involved in community development and empowerment, and specific strategies and theories were presented by the departments of government to implement these actions.

However, at this stage, the rate of AIDS-related deaths began to increase, and orphans were being left to fend for themselves. The government's social workers were unable to meet the needs of this new crisis simply because the format of the poverty alleviation plan did not meet the criteria presented by the AIDS crisis. Therefore, all funding was denied to those involved.

It was in this vacuum that many FBO's took the initiative by using their own resources, limited as they were. For various reasons, many FBO's today still remain outside that circle of funding. The government now acknowledges that although religious organizations and structures have played and continue to play a significant role in alleviating the AIDS crisis, that these FBO's have been very limited, due to the fact that the resources of most of these organizations are inadequate.

In spite of this, the following decisions have been made and passed on to FBO's. First, the government has stated that it cannot fund religious institutions. Second, religious institutions, churches or organizations will have to reconstitute themselves as nonprofit organizations falling under the Department of Welfare in order to apply for government funding. This decision can affect FBO's negatively in cases where government policies and strategies clash with religious beliefs or morals.

Third, it has been stated that nonprofit organizations receiving government funding will not be able to receive funding from alternative sources.

The government has left it too late in addressing the real root problem of AIDS, and that is that it is essentially a moral behavioral problem, and that people's life patterns need to change. It is reported that this is to be addressed by the government in 2002.

Although poverty is not the cause, it also plays a major role in the spreading of the AIDS virus. As is the case with substance abuse, one finds that those who are lower down on the poverty scale are generally those who suffer from greater substance abuse. In the informal settlements or slums there is primarily a lack of adequate housing. Families often share a room. Three or four family members will share a bed, and often fornication and general immorality or abuse does take place.

The percentage per middle income household of those with HIV/AIDS is not as high as that amongst the poor in the squatter settlements, where it is now beginning to wipe out entire families.

We have identified three categories of groups in our townships, first the youth who are infected and are angry, some even wanting to wilfully affect others. Second, there is the group who have been tested positive and are remorseful, living changed, quieter lives, and then last, the vast majority, who out of fear have not been test-

ed and yet perhaps through knowledge of their own behavioral patterns realize that they could be infected. This is the majority, and they live in constant fear.

The reality and the causes. The reality is that extreme poverty does exist in Africa. In many ways, it can be attributed to colonialism and inequalities and injustices of the past and the present. The reality also is that Africa does not just want a hand-out, but a hand up, not just helping people, but also helping people to help themselves. They want to be empowered. There is a strong drive to make Africans Africans again. Under the leadership of President Mbeki, there is a will to make Africa succeed and overcome the manyfold problems that led to the perception of Africa being known as the Dark Continent.

Senator FEINGOLD. Mr. Vorster, I am sorry, if you would summarize quickly, I have to leave for the floor in about a minute. I regret this. I find your testimony very moving. So please conclude if you could.

Mr. VORSTER. If Africa wants to emerge as a role-player in world affairs, coupled with the African renaissance, this does have effects onto the ground level, and perhaps to use the example of the advice given by the traditional spiritual healers, that infected people should have sexual intercourse with children under the age of 2 years, which was then changed to all virgins, and had astronomical effects in our townships and is still going on today, where there is much rape and abuse of particularly young children and newborn babies, the dilemma is that people need to be empowered, but last the solution is back to realism. We are all aware that within faith-based organizations and NGO's you will still find corruption. However, because of the structure and accountability of the FBO's as well as the fact that in many instances the grassroots work is actually happening, that there should be a lower level of corruption in FBO's than in NGO's.

The other positive point is that the chances of holistic help reaching the poorest of the poor is more likely to happen, and also where they are at.

[The prepared statement of Mr. Vorster follows:]

PREPARED STATEMENT OF MARTIN J. VORSTER, MAHYENO COMMUNITY CARING FOR THE POOR AND NEEDY, MAHYENO TRIBUTARY MAMELODI, SOUTH AFRICA

I speak on behalf of Africa. I do not take this privilege lightly, especially in view of our recent South African past. As you can see, I am a white middle aged South African. I have an Afrikaans surname, Vorster. You will notice from my CV I spent a number of years in the military. I believed that I was doing my country—and God—a service in subduing the aspirations of the African people. God has turned all this around for me. Together with my family, I now live and work in a black township empowering the "poorest of the poor."

I also speak on behalf of our poor; I speak on behalf of the Caring for the Poor and Needy Resource Network (CPNRN) as a member of Mahyeno Community. The CPNRN is a resource network for those who work with the poor.

There are currently 473 individuals and organizations amongst the poor representing 78 countries, 103 of these CPNRN Networkers are from Africa. They are World Vision, World Relief, UNICEF, Salvation Army, and Samaritan's Purse and others.

For the past nine years I have worked in black townships in South Africa, for the past five years, my family and I have lived and worked amongst the poor in Mamelodi, near Pretoria. We empower the poor in micro enterprises; we care for AIDS sufferers in their homes; and we parent children orphaned through AIDS. One of our AIDS sufferers, a single mother, had only one child, a seven-year-old daugh-

ter, Nongani. We prepared her as best we could for the death of her mother—as much as one can for a child of that age. Yet, when the mother died, the trauma that this little girl experienced in being wrenched from her mother caused her to have a stroke. It disfigured and twisted her face. There are many such heartbreaking experiences happening throughout Africa today.

THE ROLE OF FAITH BASED ORGANISATIONS AND POLITICAL LEADERSHIP IN COMBATTING AIDS

Up until recently, our government has focused extensively on the prevention of AIDS rather than on the treatment of AIDS. This prevention campaign was largely education through the Media, coupled with the provision of millions of condoms. The campaign was very controversial, yet we at grassroots level found that it had a positive effect in lifting the "taboo" around AIDS. Four to five years ago patients were being dismissed from hospitals in their final stages of AIDS, and often with acute diarrohea. Their families, having no knowledge of the virus, were understandably afraid and these patients were then placed in their rooms with all air holes and keyholes being sealed with tape to prevent the spread of the disease. In many cases they were not given food or water and within days they would die from dehydration. Caregivers like my wife Terry, and I were running from one home to the next trying to save these patients from a horrible death.

On the other hand, the role of faith-based organisations (FBO's) in AIDS has been largely on the treatment phase and not prevention, although this is done on an individual basis—one to one. It has taken years but now there is growing recognition from government and others that FBO's are contributing significantly toward the fight against HIV and AIDS. FBO's often reach into most sections of society and those most vulnerable to the epidemic. For years this fact has been hidden, and possibly for the following reasons:

1. It is not the national religious organisations that are spearheading this involvement, but rather individuals or small groups of people, mostly women who are working in obscurity in our black townships, communities and rural areas.

2. The involvement of FBO's at grassroots level was initially responsive and not pro-active. As the crisis grew, they would quietly care for those suffering and those dying, making use of their own meagre resources. In contrast to this we have nongovernmental organisations (NGO's) and community based organisations (CBO's) who would first constitute themselves, set up committees, and then seek donations and contributions toward their plans, before any action took place. Unfortunately, it is generally the case that NGO's and CBO's are founded as a means of employment and they depend heavily on governmental funding to sustain them. The FBO's generally continue to remain active and involved, giving sacrificially of their own capabilities and resources. FBO's believe that they are motivated by a call from God and they, and their workers, are prepared to depend and trust in God.

3. Initially there was a very slow response from the government to the AIDS crisis, which left a vacuum in the townships. Four to five years ago, the catch phrase and the focus by the government was poverty alleviation and job creation. Funding was made available to CBO's involved in community development and empowerment, and specific strategies and theories were presented by the departments of government to implement these actions. However, at this stage the rate of AIDS-related deaths began to increase and orphans were being left to fend for themselves. The government social workers were unable to meet the needs of this new crisis simply because the format of the poverty alleviation plan, did not meet the criteria presented by the AIDS crisis. Therefore all funding was denied to those involved. It was in this vacuum that many FBO's took the initiative by using their own resources, limited as they were. For various reasons, many FBO's today still remain outside that circle of funding.

The government now acknowledges that although religious organisations and structures have played, and continue to play, a major role in alleviating the AIDS crisis; that these FBO's have been very limited due to the fact that the resources of most of these organizations are inadequate. In spite of this, the following decisions have been made and passed on to FBO's:

1. The government has stated that it cannot fund religious institutions.

2. Religious institutions, churches or organizations will have to reconstitute themselves as non-profit organizations, failing under the Department of Welfare, in order to apply for government funding. (This decision can affect FBO's negatively in cases where government policies and strategies clash with religious beliefs or morals).

3. It has been stated that Non-profit Organisations (NPO's) receiving government funding will not be able to receive funding from alternative sources.

The government has left it too late in addressing the real root problem of AIDS, and that is, that it is essentially a moral behavioral problem, and that people's life patterns need to change. It is reported that this is to be addressed by the government in 2002.

Although poverty is not the cause, it also plays a major role in the spreading of the AIDS virus. As is the case with substance abuse, one finds that those who are lower down on the poverty scale are generally those who suffer from greater substance abuse. In the informal settlements or slums, there is primarily a lack of adequate housing. Families often share a room. Three or four family members will be in a bed and fornication and general immorality/abuse does take place. Idleness through unemployment, lack of running water, sanitation, electricity, etc. sometimes leads to all forms of abuse, which in turn leads to increasing immorality. The percentage per middle-income household of those with HIV/AIDS is not as high as that amongst the poor in the squatter settlements, where it is now beginning to wipe out entire families.

We have identified three categories or groups in the township: firstly, the youth who are infected, are angry, some even wanting to willfully infect others. Secondly, there is the group who have been tested positive and are remorseful, living changed, quieter lives. And then lastly, the vast majority, who out of fear have not been tested, and yet perhaps through knowledge of their own behavioral patterns realize that they, could be infected. This is the majority and they live in constant fear.

Do not the struggles of these last two groups show that the motivation of the faith-based organisations is where the answer lies?

REALITY AND CAUSES

The reality is that extreme poverty does exist in Africa. In many ways it can be attributed to colonialism and the inequalities and injustices of the past and present. The reality also is that Africa does not just want a handout, but a hand-up, not just helping people but also helping the people to help themselves. They want to be empowered. There is a strong drive to make Africans, Africans again.

Under the leadership of President Mbeki there is a will to make Africa succeed and overcome the manifold problems that led to the perception of Africa being known as the "Dark Continent." Africa wants to emerge as a significant role-player in world affairs and to be stable, sustainable and competitive in the world markets.

In this process there is a strong reaction against being dictated to, manipulated and coerced by particularly the Western countries.

Policies in pursuit of the African Renaissance have direct bearings on behavior right down to grassroots level. An example of this is the acceptance and even promotion of sangomas—traditional spiritual healers—as medical alternatives in the African culture. Despite the lack of science of these people, our leaders promote them as being legitimate, and thousands flock to them for a cure for AIDS. Up until recently one of the prescriptions given to AIDS sufferers in the black townships was to have sexual intercourse with children under the age of two years. This was then altered later to include all virgins. We have seen a sharp increase of rape and sexual abuse amongst young girls and even newborn babies.

THE DILEMMA

People need to be empowered through a participatory developmental approach. There is place for relief aid. Donations are sometimes given in a vacuum, devoid of structure and accountability, although possessing many good ideas and visions. When an organisation is not able to handle the donation, this leads to temptation to misappropriate resources.

THE SOLUTION

Back to realism! We are all aware that within faith based organisations (FBO's) and nongovernmental organisations (NGO's) you will still find corruption. However, because of the structure and accountability of FBO's, as well as the fact that in many instances, the actual grassroots work is already happening, (albeit in many instances with volunteers), the level of corruption should be much lower. The other positive point is that the chances of holistic help reaching the poorest of the poor, is more likely to happen in a shorter space of time, as well as to reach them where they are at.

Why am I, a white middle-aged South African, with the Afrikaans surname of Vorster, prepared to now love and serve the very people I once loathed? It is because

my life was turned around by faith and repentance. Because I have seen how others in the CPNRN, who are similarly moved by faith, have made a significant difference in their world.

Aids is a reality! My beloved country, South Africa, cries as it buries its unnecessary dead. But with the enlightened help of our international friends, organisations such as ours can continue to provide the added dimension in the treatment and prevention of Africa's HIV/AIDS crisis.

I thank you.

Senator FEINGOLD. Thank you, Mr. Vorster. Let me quickly say I am very moved by your testimony. I indicated how I felt about Dr. Sachs' testimony, but I also want to say Dr. Kim's testimony, although sometimes technical, is so important, because he is answering the question that is too often left out, and that is, how can it be done? This committee really needs to hear that and to have it inform our legislation.

Let me say I know that Senator Frist regrets we have to somewhat prematurely stop the hearing, and he thanks you profusely for this very good panel and we look forward to the followup when we ask the questions in writing, and also we want to get together with you to talk some more, but you have been very helpful, and I really appreciate this panel. Thank you so much.

That concludes the hearing.

[Whereupon, at 4:45 p.m., the committee adjourned.]

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