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FIGHTING AIDS IN UGANDA: WHAT WENT RIGHT?

HEARING

BEFORE THE

SUBCOMMITTEE ON AFRICAN AFFAIRS

OF THE

COMMITTEE ON FOREIGN RELATIONS
UNITED STATES SENATE

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FIGHTING AIDS IN UGANDA: WHAT WENT RIGHT?

MONDAY, MAY 19, 2003

U.S. SENATE,
SUBCOMMITTEE ON AFRICAN AFFAIRS,
COMMITTEE ON FOREIGN RELATIONS,
Washington, DC.

The subcommittee met, pursuant to notice, at 2:31 p.m. in room SD–419, Dirksen Senate Office Building, Hon. Lamar Alexander (chairman of the subcommittee), presiding.

Present: Senators Alexander and Feingold.

Senator ALEXANDER. The hearing will come to order. I would like to welcome everyone here. Senator Feingold is here and we will begin.

Here is how we will proceed. I will make a very brief opening statement and I will invite Senator Feingold to do the same, and then we will begin with Dr. Peterson from USAID; and then we will go to our second panel, Dr. Green and Ms. Mukasa Monico, and we will have some questions for the two of you at that time.

After we have completed the hearing, we will immediately move to the nomination hearing of Steven Browning, nominated to be Ambassador to Malawi, and we will hear from him. At that time, since he is here, we will ask him to reflect on what he has heard.

In the midst of the AIDS pandemic, a beacon of hope shines out from Uganda. The rate of infection has declined from about 15 percent in 1991 to about 5 percent in 2001. Uganda did this largely through a nationwide campaign focused on the ABC model: Abstain, Be faithful, use a Condom.

Today we will look at how that model works in practice and what that implies for U.S. policy in combating AIDS. It is especially relevant because Senator Feingold and I and almost all Senators were up until about 2:30 in the morning on Thursday night expressing the agenda of both political parties as well as the President to do what this country can to help with this worldwide epidemic.

The crisis posed by the AIDS pandemic is growing worse every day and the statistics are becoming all too familiar. Over 40 million people are now infected by HIV-AIDS. Thirty million of those are in sub-Saharan Africa, nearly 5 percent of the overall population of sub-Saharan Africa. The scope of the problem in some countries is overwhelming. Eleven million African children have lost their parents to AIDS. In Zambia 30 percent of all children are AIDS orphans. In Botswana nearly 40 percent of the adult population is HIV-positive. When I visited Botswana a year-and-a-half ago, at one hospital the nurse there told me that 97 percent, virtually all,

of the women, the pregnant women she sees there are infected with HIV-AIDS.

The disease also affects other sectors of African society. Seven million agricultural workers have succumbed to AIDS. The agricultural work force has been depleted by more than 20 percent in several African countries, resulting in production declines that are a contributing factor to hunger and even famine. Young adults are the hardest hit by the virus, leaving not only millions of orphans but also ever-increasing numbers of households headed by grandparents.

But in the midst of this human tragedy there is hope. Something different has been happening in Uganda. Despite the lack of a cure or vaccine, HIV infection rates are declining. As I mentioned, in 1991, 21 percent of pregnant women in Uganda were HIV-positive. Ten years later that number declined to 6 percent. By comparison, 34 percent of pregnant women in Botswana were HIV-positive in the year 2000.

What is Uganda doing differently? Led by President Museveni, Ugandan society has mobilized to combat HIV-AIDS with vigor and over a long period of time. Uganda has taken a comprehensive approach to combating the challenge. Religious and military leaders, many of whom are HIV-positive themselves, have led the way in creating an open dialog that has to a large extent de-stigmatized the disease. With the help of groups like the AIDS Support Organization of Uganda, the country has sought to provide treatment and care to those infected.

But the heart of the story in Uganda is behavior change promoted by the ABC model. The campaign has had great success. In one area of the country, for example, 60 percent of youth age 13 to 16 reported being sexually active in 1994. By 2001 the number had fallen to 5 percent. Similarly, the number of Ugandan men with two or more sexual partners per year dropped from over 70 percent in 1989 to less than 20 percent in 1995.

So how does the Ugandan model work in practice? How can that model be replicated or adjusted to work in other countries and cultures, or can it be? What does that imply for United States policy and foreign assistance in combating this pandemic around the world? That is what we are here to find out and we have a distinguished panel to help us do that.

I also hope we will explore with the witnesses this afternoon the idea of having what I would call an AIDS Corps, where American health professionals can volunteer to go to Africa or other hard-hit countries and help train professionals in country how to provide care and treatment for those who are infected and affected by HIV-AIDS.

I introduced a bill for that purpose last week. There are provisions for that purpose in the legislation that passed on Thursday night. Many Senators of both parties, the President himself, have all talked about this idea and I thought this might be a good time to gain some additional advice about how we could help an AIDS Corps work if one were to be formed.

But before I introduce our first panelist, I would like to comment that the AIDS subject is not new to this committee or to this subcommittee. The former chairman of this subcommittee, Senator

Frist, now the majority leader, spoke about AIDS early on and vigorously and I believe helped to persuade this administration to take a more active role. He was joined in that by his partner on this committee Senator Feingold from Wisconsin, who has also been an early and active advocate for AIDS, has been to Africa many times. I welcome Senator Feingold for his opening statement.

[The prepared statement of Senator Alexander follows:]

OPENING STATEMENT OF SENATOR LAMAR ALEXANDER

In the midst of the AIDS pandemic, a beacon of hope shines out from Uganda. The rate of infection has declined from about 15 percent in 1991 to about 5 percent in 2001. Uganda did this largely through a nationwide campaign focused on the ABC model: Abstain, Be faithful, use a Condom. Today, we will look at how that model works in practice and what that implies for U.S. policy in combating AIDS.

The worldwide crisis posed by the AIDS pandemic is growing worse everyday. Over 40 million people are now infected by HIV/AIDS. Thirty million of those are in sub-Saharan Africa—nearly 5 percent of the overall population. The scope of the problem is overwhelming. Eleven million African children have lost their parents to AIDS. In Zambia, 30 percent of all children are AIDS orphans. In Botswana, nearly 40 percent of the adult population is HIV-positive.

The disease also affects other sectors of African society. Seven million agricultural workers have succumbed to AIDS. The agricultural workforce has been depleted by more than 20 percent in several African countries, resulting in production declines that are a contributing factor to hunger and even famine. Young adults are the hardest hit by the virus, leaving not only millions of orphans, but also ever-increasing numbers of households headed by grandparents.

But in the midst of this human tragedy, there is a glimmer of hope. Something different is happening in Uganda. Despite the lack of a cure or vaccine, HIV infection rates are declining. For example, in 1991 21 percent of pregnant women in Uganda were HIV-positive; ten years later that number had declined to 6 percent. (By comparison, 43 percent of pregnant women in Botswana were HIV-positive in 2000.)

What is Uganda doing differently? Led by President Museveni, Ugandan society has mobilized to combat HIV/AIDS with vigor. Uganda has taken a comprehensive approach to combating the challenge.

Religious and military leaders, some of whom are HIV-positive themselves, have led the way in creating an open dialogue that has to a large extent de-stigmatized the disease. With the help of groups like The AIDS Support Organization of Uganda, the country has sought to provide treatment and care to those infected.

But the heart of the Ugandan story is behavior change, promoted by the ABC model—Abstain, Be faithful, use a Condom. The campaign has had great success. In one area of the country, for example, 60 percent of youth aged 13-16 reported being sexually active in 1994; by 2001 the number had fallen to 5 percent. Similarly, the number of Ugandan men with two or more sexual partners per year dropped from over 70 percent in 1989 to less than 20 percent in 1995.

So how does the Uganda model work in practice? How can that model be replicated or adjusted to work in other countries and cultures? What does that imply for U.S. policy and foreign assistance in combating this pandemic around the world?

That's what we're here to find out, and we have a distinguished panel to help us do that this afternoon. I also hope to explore with the witnesses the idea of having an AIDS Corps—where American health professionals could volunteer to go to African or other hard-hit countries and help train professionals in-country how to provide care and treatment for those infected and affected by HIV/AIDS. I introduced a bill for that purpose last week.

Senator FEINGOLD. Thank you very much, Mr. Chairman, and I would like to thank you for convening this hearing, for your willingness to work in such a cooperative way in putting it together. I genuinely appreciate your approach and frankly, Mr. Chairman, think that this is the perfect medicine for a recent minor outbreak of what I might call politicization when it comes to this issue.

It is a little bit of a shame, really, that this hearing is coming after, rather than before, the floor action on the AIDS authoriza-

tion bill, which, as you mentioned, occurred late Thursday night when people were pretty tired, although there was one good thing about it. Everybody had to be there to listen, and that does not happen a lot in the Senate.

Let me compliment you on introducing and authoring, particularly so early in your tenure here in the Senate, Senate bill 1067, which is the AIDS Corps bill. It is interesting that in Botswana, a country that you and I have both visited and looked at the AIDS issue, that they had graduated, if you will, from the Peace Corps, did not have it any more, but because of the very severe problem with HIV-AIDS, the President, President Mogae of Botswana, asked if the Peace Corps would come back, and the Peace Corps there is exclusively working on the HIV-AIDS problem. So there is in a way a precedent, at least in one sense, for this very good idea that you have put forward, and I compliment you on it.

Lately we have heard many different perspectives on the ABC approach in Uganda, which of course refers to awareness raising and educational campaigns urging people to abstain, to be faithful to one partner, and to use condoms. I think common sense tells us that all of these elements are important parts of combating this horrifying pandemic.

Ugandan efforts have also been characterized by other things, by strong and visible political leadership, by grassroots involvement on a massive scale, and by concerted efforts to destigmatize the disease. The story is not a simple one.

The bottom line is that Uganda's multifaceted approach to combating AIDS was successful. Ugandan AIDS prevalence rates have declined markedly over the 1990s. Mr. Chairman, I had a chance to sort of see this in the middle when I visited the country in late 1999, met with President Museveni and others to see what they were trying to do. And today, several years later, as you have indicated, the country continues vigorously addressing the crisis.

This is a tremendously important example and Uganda deserves the acclaim that has come to the country in the wake of this achievement. But I must raise for a moment one other issue briefly because I think that it would be a mistake for this subcommittee to be convening today and discussing Uganda in any context without at least mentioning the ongoing crisis in Ituri province in the Democratic Republic of the Congo, a crisis that has involved Uganda and a crisis that will require international commitment to solve, including real commitment from Uganda and Rwanda to use their influence with Ituri's ethnic militia forces.

Obviously, this serious situation is not the focus of today's hearing, but I did want to use this opportunity to go on record about my deep concern and my hope that the United States will play a constructive role in defusing this crisis rather than being an obstacle to urgently needed action.

Turning back to the subject at hand, I think it is important that we recognize both the value in learning from the Ugandan experience and the fact that one country's model is not necessarily precisely the right model for every other AIDS-affected society. So this subcommittee is diving into this discussion with an understanding that Uganda is not Senegal, which is not South Africa.

That said, Uganda's success has played an important role in convincing people here in Washington and around the world that it is possible to fight AIDS and win. That is a tremendous contribution and it deserves to be celebrated and studied closely.

Mr. Chairman, I would ask that the statement of Senator Biden, the ranking member of the full committee, be added to the record.

[The prepared statement of Senator Biden follows:]

PREPARED STATEMENT OF SENATOR JOSEPH R. BIDEN, JR.

Mr. Chairman, I would like to submit a statement for the hearing record from Jeffrey Busch, Chief Executive Officer of SafeBlood for Africa. SafeBlood for Africa is a not for profit organization whose objective is to improve the national blood supply of African countries where few or no mechanisms exist to test blood for infectious diseases such as HIV before tranfusion.

Lately we have been hearing a lot about the importance of prevention in halting the transmission of HIV/AIDS. There has been a singular focus on what's know as the ABC model—Abstinence, Be faithful and use Condoms as the key to prevention. This model is very important, however as Mr. Busch's statement indicates, it is only one part of an overall prevention model which includes voluntary testing and counseling, prevention of mother-to-child transmission, and safety of the national blood supply.

I think it is important to understand the need to focus on a comprehensive strategy of prevention which includes more than just the ABC's.

[Attachment.]

BLOOD SAFETY: AN IMPORTANT TOOL IN AIDS PREVENTION

STATEMENT SUBMITTED BY JEFFREY BUSCH, CHAIRMAN AND CEO, SAFEBLOOD FOR AFRICA

PREVENTION IN UGANDA

Uganda is one of a few African countries to achieve a reduction in the prevalence of HIV in its population. While much has been made about the ABC approach in Uganda—Abstinence, Be faithful, use Condoms as a prevention strategy, I would like to point out that the "ABC's" are only a part of Uganda's overall prevention strategy. Other elements of the prevention strategy include prevention of mother-to-child transmissions, voluntary testing and counseling, and ensuring a safe national blood supply. According to a European Union report, the creation of a successful Uganda Blood Transfusion Service (UBTS) has been a major contributor to that success. (From 2nd Edition European Community Official Publication, *Safe Blood in Developing Countries,* www.tve.org/ho/doc.cfm?aid=413.)

The UBTS has saved countless lives through:

- Intensive HIV/AIDS education drives for blood donors. This has resulted in many Ugandans taking an HIV test. The knowledge of one's HIV status has encouraged those who are negative to stay negative, and those who are positive to avoid passing on the infection.
- Provision of infection free blood for those in need of blood transfusions through recruitment of volunteer, non-remunerated, repeat blood donors.
- Systematic training of staff. Central coordination and organization of all transfusion services including standard operating procedures and quality control.

The Ugandan experience stands in stark contrast to the rest of the African continent where unsafe blood is estimated to cause up to 10% of all new HIV infections. This is due to the fact that on much of the continent, blood transfusions occur with little or no pre-transfusion testing. Dr. Harvey Klein, Chief of Transfusion Medicine at the National Institute of Health, states, "In the last century, transfusions have saved more lives than any therapy except antibiotics." It is unfortunate that in sub-Saharan Africa transfusions meant to save lives carry a significant risk of having a negative effect on the health of African patients.

OTHER EXPERIENCES

At the XIV International Conference on AIDS held in Barcelona in 2002, the Global HIV Prevention Working Group, composed of nearly 40 of the world's leading HIV prevention experts, stated that that an effective global HIV prevention strategy

should consist of several different approaches. One of the experts, Dr. Helene Gayle of the Bill and Melinda Gates Foundation, emphasized this point by stating that "Just as combination therapy attacks HIV from different angles, prevention requires a combination of approaches. There is no single magic bullet. 'Combination prevention,' however, has proven very effective."

Supporting a multidimensional approach to HIV prevention, the United Nations Special Session on HIV/AIDS in June 2001 indicated that "Prevention programmes must concentrate on [all] the main routes along which HIV spreads [that is] by addressing blood safety, mother-to-child transmission, injecting drug use and sexual transmission."

SAFE BLOOD FOR AFRICA FOUNDATION

Our organization is a 501(c)(3) not-for-profit corporation whose purpose is to help prevent the spread of HIV/AIDS by blood transfusion in sub-Saharan Africa. We will achieve this goal by working with the 34 countries in sub-Saharan Africa where blood contaminated with infectious diseases—including HIV, Hepatitis B and Hepatitis C—is most prevalent to develop national blood screening and safety systems. When our programs are fully implemented, we estimate that we will save between 10 and 20 million lives over the next 10 years.

Senator ALEXANDER. It will be done.

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

[The prepared statement of Senator Feingold follows:]

PREPARED STATEMENT OF SENATOR RUSSELL D. FEINGOLD

Mr. Chairman, I want to thank you for convening this hearing and for your willingness to work in such a cooperative way in putting this together. I genuinely appreciate your approach and frankly think that it is the perfect medicine for a recent minor outbreak of politicization when it comes to this issue. It is a shame that this hearing is coming after, rather than before, floor action on the AIDS authorization bill.

Lately we have heard many different perspectives on the ABC approach in Uganda, which of course refers to awareness-raising and educational campaigns urging people to abstain, to be faithful to one partner, and to use condoms. And I think common sense tells us that of these elements are important parts of combating this horrifying pandemic. But Ugandan efforts have also been characterized by strong and visible political leadership, by grassroots involvement on a massive scale, and by concerted efforts to destigmatize the disease. The story is not a simple one.

The bottom line is that Uganda's multi-faceted approach to combating AIDS was successful. Ugandan AIDS prevalence rates have declined markedly over 1990s, and the country continues vigorously addressing the crisis today. This is a tremendously important example and Uganda deserves the acclaim that has come to the country in the wake of this achievement.

But I must raise one different issue, just briefly, Mr. Chairman, because I think that it would be a mistake for this subcommittee to be convening today and discussing Uganda in any context without mentioning the ongoing crisis in Ituri province in the Democratic Republic of the Congo—a crisis that has involved Uganda, and a crisis that will require international commitment to solve, including real commitment from Uganda and Rwanda to use their influence with Ituri's ethnic militia forces. Obviously this serious situation is not the focus of today's hearing, but I do want to use this opportunity to go on the record about my deep concern and my hope that the United State will play a constructive role in defusing this crisis rather than being an obstacle to urgently-needed action.

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Senator ALEXANDER. Thank you, Senator Feingold.

We are delighted to have Dr. Anne Peterson testifying on behalf of the administration. She is currently Assistant Administrator of

the Bureau for Global Health at USAID. Something like our majority leader, she is a medical doctor. She has done volunteer work in Africa, I guess may still do; formerly worked on the front lines in African countries as a volunteer doctor and in many nonprofit organizations.

Dr. Peterson, we are delighted to have you. We look forward to your comments. I would suggest to you and the other witnesses perhaps you could keep your comments to within 10 minutes or less and then that will leave more time for questions and discussion.

STATEMENT OF ANNE PETERSON, M.D., ASSISTANT ADMINISTRATOR, BUREAU FOR GLOBAL HEALTH, U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT, WASHINGTON, DC

Dr. PETERSON. Thank you, Mr. Chairman. It is an honor to be here today and thank you for holding this hearing on the grave public health crisis of HIV-AIDS. I would like to submit my written testimony for the record and then summarize it. I will try to be brief.

You have already spoken about the devastation that HIV-AIDS has wrought on the developing world. Every hour 350 people around the world die of AIDS and, as President Bush said last month at the White House, "time is not on our side." I am really thrilled with the urgency that is now really moving this epidemic and its response, our response to this epidemic.

President Bush called for a massive U.S. Government response to the crisis, the $15 billion over 5 years, and Thursday you voted to support that call to action. It has ambitious goals, to prevent 7 million infections, treat 2 million people with life-extending drugs, and provide care for millions.

Mr. Chairman, I am a public health physician and my career has been focused on both domestic public health and health development in Africa. My very first time in Africa was in the Bunia area of Congo that is now in such difficult circumstances, but most of my time was in Kenya and Zimbabwe, very close to the border of Uganda. I believe that the work that I have done in Africa and my American public health work has given me a good grasp of what is going on in Africa and the programmatic realities that we need to be dealing with now.

As you have recognized, Uganda is not only important because it is a success, but because there are many elements of that success that can be replicated. The Ugandan epidemic peaked in 1991 and has fallen to about 5 percent in 2001. I would like to quote again President Bush, who cited the example of Uganda in his call to action: "This is a terrible disease, but it is not a hopeless disease. We know that AIDS can be prevented. In Uganda President Museveni began a comprehensive program in 1986 with a prevention strategy emphasizing abstinence and marital fidelity, as well as condoms to prevent HIV transmission. The results are encouraging. Congress should make the Ugandan approach the model for our prevention efforts under the emergency plan."

The dramatic decline is unique to Uganda. What can we learn from it? I would like to enter for the record, Mr. Chairman, a study that was published last fall by USAID on Uganda's successful bat-

tle against HIV-AIDS. That report and my written testimony[1] contain a great deal of other information.

The Ugandan story is a story about prevention. As you said, before terrorism or vaccine was available, when President Museveni came to power in 1986, his country was already being decimated by AIDS. Under his leadership, every sector of society responded to the crisis by sending a unified and forceful message. Their message was as simple as ABC: "abstain, be faithful, and if necessary use a condom." This message was disseminated widely through all sectors of society during the 1980s.

The first is abstinence. By 1990 the percentage of youth age 15 to 19 in Uganda ever having had sex decreased noticeably. In 1989, 32 percent of males and 28 percent of females age 15 to 19 reported being virgins, while by 1995 these numbers had increased to 55 percent of males and 45 percent of females. As you can see in your handout, the decline is even more dramatic for 13- to 16-year-olds in an after-school educational program.

We can also measure abstinence in the trend toward delayed age of sexual debut among youth. In the 1990s, sexual debut among girls in Uganda increased from 16.5 to 17.3 years. This does not look like much, but it has profound impact on the prevalence of HIV-AIDS and it also demonstrates huge cultural changes that young girls were able to abstain. For boys it rose from 17.6 to 18.3 years in the second half of the decade. For youth the A of the ABC message, abstinence, is probably the most important single message.

The second message is B. The ABC message of Uganda is not just abstinence. Many people, including Uganda's first lady, acknowledged that the B, be faithful, which includes partner reduction, may be overall the most important factor. Also known as "zero grazing," being faithful is a strong cultural norm that resonated strongly in Uganda and, from my own experience, I know it resonates also in many other African countries.

In general, Ugandans of all ages now have considerably fewer non-regular sex partners. Surveys conducted in 1989 to 1995 show that men with one or more casual partners declined from almost 40 percent to 15 percent, and for women the decline was from 16 percent to 6 percent. The number of men reporting three or more non-regular partners in a year fell from 50 percent to 3 percent.

The 1995 survey also revealed an amazing statistic: 89 percent of men reported that they had changed some behavior relative to HIV-AIDS, with most of them adopting faithfulness as the behavior change. In the second data slide, you can see that for all ages Ugandans now reports significantly fewer non-regular partnerships than compared to other African countries.

The third message is C. While condom promotion was not a dominant element in Uganda's early response to AIDS, in more recent years, there has been increased condom use. The beneficial role of condoms is clear when one spouse is HIV-positive and the other is not, but it is also an important prevention tool for people who have sex with non-regular partners.

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[1] Dr. Peterson's written testimony and the report referred to can be found beginning on page 10.

Again, in the condom use slide, the third one, Uganda is a model. They are responding to the A and B message by having fewer partners, but when they do stray outside of marriage they are also leading the way on condom use.

We know that these ABCs have played key roles in the decline of HIV prevalence in Uganda, but there is more to learn about the relative contributions of each and the other factors that contribute to the decline of AIDS and the success of the ABC message. These include: the political commitment to fighting AIDS from President Museveni and his wife; the important role of faith-based organizations and churches in changing behavior; communicating a consistent message with credible messengers, such as Ugandan pop star Philly Lutaaya; fighting stigma that clouds the attitude toward HIV and AIDS and, as you are seeing in Botswana, this has been an incredible limiting factor. There were also important policy and law changes and the bringing in of voluntary counseling and testing.

I am pleased, Mr. Chairman, that USAID was able to play an important role in Uganda's success. Seventy percent of Uganda's prevention and care activities are funded by donor nations. USAID funded nearly half of that donor support. Last year we provided $20 million to Uganda for HIV-AIDS programs, and this year our budget will be over $27 million in Uganda.

The program includes a spectrum of activities from prevention to care, support, and treatment. I would like to mention just a couple examples. The AIDS Support Organization, or TASO, is world-renowned and has provided care and support to more than 60,000 individuals and their families, as well as supporting 200,000 children affected by AIDS. USAID has been a long-time supporter of TASO and today provides TASO with approximately $2 million a year. The former head of that organization, Sophia Mukasa Monico, will testify before you in a few minutes and is one of the many heros of Uganda's war on AIDS. Since 1995, we have also been supporting the First Lady Museveni's orphan and microcredit work and have been working with faith-based organizations since 1991.

USAID will continue strong support of the Uganda success and support of both the implementation and research into ABC programs. But the real question, days after the passage of the emergency AIDS bill—and again I thank you—is not only what happened in Uganda, but can we replicate Uganda's success? The short answer is emphatically yes. Uganda is unique, and it is hard to imagine the amazing leadership role of the President and his wife will be repeated, but many elements of Uganda's success can be recreated elsewhere.

In Uganda we have learned that a comprehensive behavior strategy, ideally involving high-level political commitment and a diverse spectrum of community and faith-based participation, building on cultural norms, can change the course of the epidemic.

The Uganda model is also a flexible model. It takes into account the epidemiological, the demographic, and the cultural norms, and can be balanced between the A, B, and C components as well as all of the other supporting elements.

Every country will be different, but we can learn from the successful elements of the action in Uganda. In some countries we are

beginning to hear the voices of Presidents and other political leaders take on new roles. In other countries we see strong leadership from the faith community and civil society. In South Africa the engagement of the business community is remarkable and likely to be a significant factor in future successes.

And we are seeing signs that other countries are beginning to turn epidemics around. Recent studies among youth in Zambia indicate that a similar success story there may be in the making. Clear and positive changes in all three of the ABC behaviors have been reported in surveys, and a significant decline in casual sex has occurred among both men and women between 1996 and 1999.

Mr. Chairman, as you noted, I spent 6 years in Africa as a missionary doctor. I worked with communities, children in school, street children, AIDS patients, and families in the most desperate of circumstances. I helped develop and teach abstinence programs to African youth. I have seen the light in young people's eyes when they realize they can take control of their own lives. The data shows this as well. It is as simple as ABC.

But we need that simple message, together with all the supporting elements involved that made the ABC success in Uganda, to save lives. We cannot ignore the moral issues involved in finding a solution to the HIV-AIDS crisis. To protect the next generation of African youth, we cannot step aside from difficult dilemmas of abstinence and faithfulness.

Uganda's First Lady Museveni last Tuesday in a speech said: "How are we going to teach children to be law-abiding citizens if we do not train them to exercise self-control and to learn to police themselves while they are still young and teachable? Not to guide our young in this way implies that we as adults and leaders have no faith in human nature and in our ability as beings to exercise self-control. If this is the case, then we are surely a doomed species."

My own experience tells me that Mrs. Museveni's words are directly on point. Our mission at USAID is to learn from the successes that we have before us and bring similar successes to other devastated countries around the world.

Thank you for letting me testify before you today.

[The prepared statement of Dr. Peterson follows:]

PREPARED STATEMENT OF DR. ANNE PETERSON, ASSISTANT ADMINISTRATOR FOR GLOBAL HEALTH, U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

Good afternoon. Thank you for inviting me to testify on the important topic of Uganda's successful battle against HIV/AIDS. This issue could not be timelier or more urgent. The HIV/AIDS pandemic is currently claiming 350 lives per hour worldwide. President Bush announced an unprecedented five-year, $15 billion program to fight the disease. It is crucial that we take the right lessons from Uganda's experience and apply them effectively elsewhere.

We are at a turning point in the battle against HIV. While HIV infection rates are still increasing and the disease is raging in many places, we now have success stories. We know what works and soon will have sufficient resources to implement those successful strategies much more broadly. It is important that we highlight the successful interventions in Uganda so we can better apply them to other countries. The new Emergency Plan for AIDS Relief that President Bush announced in January in the State of the Union Address is based on one of these successful models.

I have been serving as the Assistant Administrator of USAID for Global Health for 18 months. I came to the agency with a long history of service in medicine and public health. I spent six years in Africa, working with AIDS patients and their

families. My work in both Zimbabwe and in Kenya, near the Ugandan border, included similar interventions to ones we'll be examining today from Uganda.

I have seen first-hand the devastation that AIDS has wreaked on individuals, families and communities. While we often hear of the hopelessness of HIV/AIDS, today there are many signs that give us hope of winning the war against this deadly disease.

WHAT HAPPENED IN UGANDA?

Despite all my African experience, it is humbling to be here talking about what happened in Uganda. This is a Ugandan story and should be told by Ugandans. The saving grace is that I know many of you heard from Mrs. Janet Museveni, the First Lady of Uganda last week. Her passion and depth of insight are vital elements of the political leadership from her and her husband, President Yoweri Museveni, which has made, and continues to make, such a difference in Uganda.

Today, I would like to focus on four areas: first, the data on HIV/AIDS from Uganda; second, the data and cultural support for the ABC approach to AIDS prevention; third, USAID's past role in Uganda; and fourth, what the U.S. government can do to replicate Uganda's success elsewhere.

With your permission, Mr. Chairman, I would like to enter, for the record, a study published by USAID last fall on Uganda's successful battle against HIV/AIDS.

In Uganda, according to estimates by UNAIDS, HIV prevalence among adults peaked at around 15 percent in 1991, and fell to 5 percent as of 2001. While some quibble on the numbers, we know this dramatic decline is unique to Uganda, which is why it is important that we examine what led to the turnaround.

The Uganda success story is about prevention. When President Museveni came to power in January 1986, his country was already being decimated by AIDS. Under President Museveni's leadership, leaders at every level of society responded to this crisis by sending a unified and forceful message. They urged people to prevent the spread of HIV. Their message was as simple as ABC: Abstain, Be faithful, and, if necessary, use a Condom. This message was disseminated widely through all sectors of society during the late 1980s.

"*A*": By the 1990s, the percentage of youth aged 15-19 in Uganda reporting ever having had sex decreased noticeably. In 1989, 32 percent of males and 28 percent of females age 15-19 reported being virgins, while by 1995 these numbers had increased to 55 percent of males and 45 percent of females. In addition, there was a clear trend towards delayed age of sexual debut among youth. In the 1990s, sexual debut among girls in Uganda increased from 16.5 to 17.3 years. For boys, it rose from 17.6 to 18.3 years in the second half of the decade. For youth—I agree with Mrs. Museveni—the A of ABC, abstinence, is the most important single message. USAID will be funding additional studies to verify that our current body of evidence is in fact correct as to the contribution of abstinence to AIDS education.

"*B*": But the ABC message of Uganda is not just A. Many people, including Uganda's First Lady, acknowledged that "B", Be faithful, may be overall the most important factor. Also known as "Zero grazing"—being faithful is a strong cultural norm that resonated strongly in Uganda. The rise in couples that are mutually faithful is striking.

In general, Ugandans of all ages now have considerably fewer non-regular sex partners. In surveys conducted in 1989 and 1995, men with one or more casual partners declined from 35 percent to 15 percent, and for women the decline was from 16 percent to 6 percent. Also significant, the number of men reporting three or more non-regular partners fell from 15 percent to 3 percent. A 1995 survey found that 89 percent of men reported they had changed their behavior to avoid AIDS, with most of them adopting faithfulness to one partner, and other partner-related changes.

"*C*": While condom promotion was not a dominant element in Uganda's early response to AIDS, in more recent years, increased condom use has contributed to the continuing decline in prevalence. The beneficial role of condoms is clear when one spouse is HIV positive and the other is not. But it is also a particularly important prevention tool for people who have sex with a "non-regular" partner. In Uganda, condom use by women with non-regular partners rose from 20 to 38 percent, and for men rose from 36 to 59 percent, over the last five years of the 1990s.

We know that these "ABCs" have played key roles in the decline of HIV prevalence in Uganda, but there is much more to be learned about the relative contributions of each. There are still many unanswered questions about how Uganda has moved so many people to make such significant changes in behavior. Some of the critical elements we know contributed to the adoption of the ABC message were:

Political commitment: Uganda in 1986 was just emerging from 15 years of civil unrest. When he had just assumed office, President Museveni received evidence of an emerging epidemic and immediately began a proactive prevention campaign that continues to this day. In meetings and speeches, he emphasized that fighting AIDS was a patriotic duty requiring openness, communication and strong leadership at all levels. This early support from the President enlisted a wide variety of national participants in the war against the new disease.

Role of faith-based organizations: Religious leaders are uniquely positioned to influence the behavior of large numbers of people. Early and significant mobilization of Ugandan Christian and Muslim leaders and organizations resulted in their active participation in AIDS education and prevention activities. For example, the Catholic Church and mission hospitals provided leadership in designing AIDS home care projects and special programs for AIDS widows and orphans. The Church of Uganda and the Islamic Medical Association of Uganda used their extensive networks to train more than 1800 religious leaders and 5000 peer educators.

Communicating a consistent message: Along with elected and faith-leaders, other influential people who did not normally work on health issues, like First Lady Janet Museveni and pop music star Philly Lutaya, became involved in AIDS awareness and education. An aggressive media campaign, including print, radio and billboards, educated people to change their behavior. This was reinforced by old-fashioned, interpersonal communication, with Uganda training thousands of community-based AIDS counselors and educators, who in turn motivated people to change their behavior.

Fighting stigma: The stigma attached with HIV and AIDS often serves as a barrier to effective prevention measures. Openness on the part of President Museveni led to openness from every level of society down to local community leaders, producing an accepting and non-discriminatory response to AIDS. In addition, The AIDS Support Organization, known as TASO, advocated effectively against discrimination and stigma. TASO is recognized around the world as a leader and innovator in the field of HIV/AIDS care and support. The former head of that organization, Sophia Mukasa Monico, will join us in a later panel.

Policy and law change: "Gender vulnerability" refers to the problem of wives exposed to HIV through the indiscretions of their husbands or young girls put at risk through intergenerational sex. This is a deeply cultural and sensitive part of the problem in many African countries. When I asked Mrs. Museveni how Uganda overcame these problems, she talked about policy and law change. Women could prosecute for rape, wives would not lose their homes if they refused to have sex without protection with their HIV+ husband. And these weren't just verbal promises; free legal support, including from women lawyers, was made available so that this was a real hope. While not completely overcoming this problem and not reaching all parts of Uganda with legal support, these policy and legal changes make it possible for women to abstain when in other circumstances their exposure to AIDS would be out of their control.

Confidential voluntary counseling and testing: In 1990, the first confidential voluntary counseling and testing center opened in Kampala. The AIDS Information Center was the first to provide same-day results using rapid HIV tests. The Center also started "post-test clubs" to provide long-term support for those who have been tested, whether they are HIV-positive or negative. The availability of these services, and the lack of stigma associated with getting tested, were important assets in Uganda's prevention efforts.

USAID'S ROLE IN UGANDA

I am pleased to be able to report that USAID was a strong supporter of Uganda's approach and the largest financial supporter to its success story. Donor countries, particularly the United States, played important roles during those critical years by complementing Uganda's energy and initiative with financial and technical support.

Donor support covered 70 percent of Uganda's prevention and care activities, amounting to $180 million from 1989 to 1998. USAID has provided more than $83 million in AIDS funding since 1988. I will now describe the activities of USAID in Uganda, though I note that other federal agencies have also participated in the fight against AIDS in Uganda.

Last year, USAID provided $20 million to Uganda for HIV/AIDS programs, and this year's budget will be over $27 million. Our program includes prevention, care and support, voluntary counseling and testing, and programs for children affected by AIDS. Let me mention a few highlights of our past and present programs:

USAID has a long history of supporting Uganda's two largest local non-governmental organizations dedicated to the fight against AIDS. TASO, as I mentioned

earlier, is world-renowned, and has provided care and support services to more than 60,000 individuals and their families, as well as supporting 200,000 children affected by AIDS. Today, USAID provides TASO with approximately $2 million a year.

The AIDS Information Center, which provides HIV counseling and testing, has served over half a million Ugandans. USAID was the first donor to support the AIDS Information Center, and currently funds more than 80 percent of its annual budget.

USAID/Uganda's partnerships with faith-based organizations began early in 1991, with a project designed to mobilize civil-society organizations, including those that are faith-based. These institutions, especially the Church of Uganda and the Islamic Medical Association, were able to utilize their extensive networks to educate and influence people's behavior. Today, USAID funds World Vision to reinvigorate and strengthen the role of faith-based organizations in their response to HIV/AIDS. This initiative is strengthening the Interreligious Council of Uganda, as well as providing sub-grants.

USAID, working with Catholic Relief Services, World Vision and others, currently has a five-year, $30-million project in Uganda to provide food aid to over 60,000 individuals. Good nutrition plays an important role in the quality—and we believe also length—of life of people living with AIDS. In addition, since it is not uncommon for economically disadvantaged women to trade food for sex, food aid can play an important role in decreasing this risky behavior that can drive the epidemic.

The Uganda Women's Effort to Save Orphans, founded by First Lady Janet Museveni, has more than 7500 members, most of whom provide direct care for orphans. Since 1995, with support from USAID, this group's small-scale credit program has provided income generation activities for orphan households. Their programs have assisted over 25,000 orphans and 2,600 micro-entrepreneurs.

USAID provided the leadership and technical expertise for a planning meeting for representatives from the major religious communities in Uganda: Anglican, Roman Catholic, Orthodox Christian, and Muslim. Out of this meeting, the Interreligious Council of Uganda HIV/AIDS Task Force was established.

Currently, USAID and the Centers for Disease Control are funding a program to develop comprehensive, integrated HIV/AIDS prevention and care services in 16 of Uganda's 56 districts. These integrated programs will create a model for serving Uganda's rural poor.

Preventing mother-to-child transmission of HIV is one of the aspects of this program. USAID/Uganda is also supporting a private sector initiative designed to increase utilization of services to prevent mother-to-child transmission through a program for midwives. These programs will be scaled-up significantly thanks to President Bush's International Mother and Child HIV Prevention initiative and the President's Emergency Plan for AIDS Relief.

USAID'S BALANCED APPROACH TO AIDS PREVENTION TODAY

Although USAID has always acknowledged a balanced ABC approach to the HIV/AIDS pandemic is needed, it is true that in the past, the agency's programs tended to skew towards those that are easier to measure such as the social marketing of condoms. Uganda is leading the way in helping to provide data on the contribution of the abstinence and be faithful messages to successful AIDS prevention. There is supporting evidence from abstinence and teen pregnancy prevention programs in the United States and evidence is accumulating from a variety of international programs that these messages are successful.

Rarely do we have a controlled study environment in international programs that would allow interventions to definitely prove cause and effect. This is also true for the assessment of the ABC approach. But we do have a growing body of evidence of ecological, programmatic and time oriented associations that is very strong. Based on this body of evidence, USAID's policy since last fall has been modified to follow a more balanced approach to the ABC's of HIV prevention. The balance is set for an individual country based on culture, epidemiology, and the stage of the epidemic. The ABCs of HIV prevention reinforce one another, and the appropriate message must reach the appropriate audience. These messages and target audiences can be segmented without denigrating any one message.

In Zambia, we have seen evidence of a program that successfully applies a balanced approach. It is also a program that we think can be replicated in other similar situations. The HEART program—or Helping Each Other Act Responsibly Together—was designed by youth for youth and uses the mass media to promote AIDS prevention through abstinence, being faithful to one partner, and, when necessary, correct and consistent condom use.

According to a survey of Zambian youth, girls in particular said they want concrete messages with reasons to stay virgins or return to abstinence. The decision to abstain was frequently reported as a direct result of exposure to the HEART program. Respondents were also more likely to say they chose "to abstain" rather than to use condoms—a finding that counters the common argument that television and radio spots about safe sexual behavior encourage promiscuity. The study clearly shows we can promote abstinence as "cool" and reinstitute it as a social norm among Zambian youth, whether they are still virgins or for those wanting to return to abstinence.

In Jamaica, a USAID-funded program promotes abstinence with the slogans such as "go real slow, take the time to know." This message is promoted through popular rap songs, with lyrics like, "Now I don't want to complicate this life of mine, so right now sex is out, and that's just fine." An evaluation of this campaign found that more than half the youth who recalled the ads said they had influenced the way they handle relationships.

In Namibia, past surveys show that girls begin sex at a young age, and 12 percent of 15-19 year aids are HIV positive. USAID began a campaign last year that works with churches, including the Catholic Church and the Evangelical Lutheran Church, to encourage church leaders to use their pulpits to speak about the importance of educating children about HIV prevention, with an emphasis on delaying first sexual intercourse. Another component of the program will adapt the Christian Family Life Education to be implemented as part of Sunday School lessons. The program will also seek to form partnerships between churches and parenting organizations.

Similarly the B component of ABC is vitally important (Be faithful or Behavior change—partner reduction) to a comprehensive approach. B is a bridge between A and C and preliminary data suggests it may be the most important element of all. USAID will continue to support a strong B emphasis and continue to study to validate the data evidence for its contribution.

Condom promotion is also an important tool to stem the spread of the disease among high-risk populations. While messages of abstinence and faithfulness are key to young and married adults, it is important to provide information on condoms to those who have sex outside or before marriage. Prostitutes and their clients, long-distance truck drivers, and migrant populations, like miners and fishermen, are audiences that are appropriate for a condom promotion message. Social marketing is designed to tailor messages to a target audience. It is used successfully for hygiene initiatives, oral rehydration therapy, malaria control, and HIV prevention. Social marketing of condoms can provide appropriate and effective messages targeted to specific at-risk groups.

USAID uses indicators developed with UNAIDS to measure the success of A, B and C. We are analyzing the data we collect to make sure our programs are as effective as possible.

CAN UGANDA'S SUCCESS BE REPLICATED?

Uganda's experience was unique in many ways, particularly in the early and strong voice of the President and his wife. Many elements of Uganda's response, including the political and community action that supported the ABC approach and led to real changes in sexual behavior, worked together in order for HIV rates to fall so dramatically. However, many elements of Uganda's success can be and are being replicated elsewhere.

Every country will be different, but we learn successful elements of action from Uganda. For instance, in some countries, we are seeing political leaders, including and in addition to the head of state, take on a leadership role. In other countries, we see strong leadership from the faith community or civil society. In South Africa, the engagement of the business community is remarkable and likely to be a significant factor in future successes.

We are seeing strong signs that other countries are beginning to turn their epidemic around. Recent studies among youth in Zambia indicate that a similar success story there may be in the making. Clear and positive changes in all three of the "ABC" behaviors have been reported in surveys, and a significant decline in casual sex occurred among both men and women between 1996 and 1999.

Senegal, Thailand and Cambodia have also had successes, and their stories also suggest that a balanced ABC approach should be promoted.

In Uganda, we have learned that a comprehensive behavior change strategy—ideally involving high-level political commitment and a diverse spectrum of community and faithbased participation, building on cultural norms—can change the course of an epidemic.

Mr. Chairman, let me again thank you for holding this important hearing today.

[Attachment.]

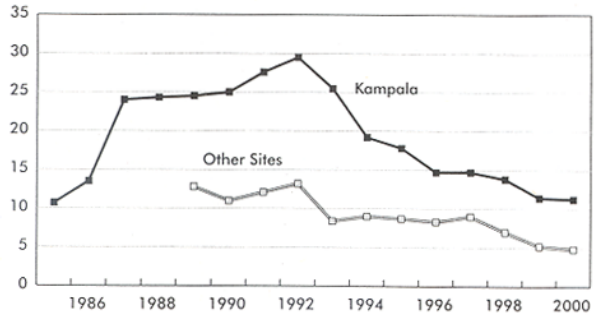
Project Lessons Learned Case Study—September 2002

WHAT HAPPENED IN UGANDA? [1]

DECLINING HIV PREVALENCE, BEHAVIOR CHANGE, AND THE NATIONAL RESPONSE

This document is not intended to provide a definitive explanation for Uganda's AIDS prevention successes during the 1980s and 1990s. Rather, it is a synthesis of presentations made in February 2002 at the U.S. Agency for International Development (USAID) by four individuals [2] with long-term experience in HIV prevention in Africa. USAID's Office of HIV/AIDS decided to commission a summary document synthesizing the ideas presented by these researchers. The following pages do not include all the various statistical and other details that were presented; however, it is hoped that the main points described here provide some insight into how Uganda has managed to control its HIV epidemic during the past 15 years.

MEDIAN HIV PREVALENCE AMONG PREGNANT WOMEN IN UGANDA
(Interpolated for one-year gaps in site data)



Source: HIV/AIDS Surveillance Report, STD/AIDS Control Programme, Ministry of Health, Uganda, June 2001.

HIV prevalence has declined significantly in Uganda: Now considered to be one of the world's earliest and best success stories in overcoming HIV, Uganda has experienced substantial declines in prevalence, and evidently incidence, during at least the past decade, especially among younger age cohorts. According to Ministry of Health (MOH) data, prevalence among pregnant women has declined consistently since the early 1990s at all of the country's sentinel sites (except Tororo, near the Kenyan border, where prevalence increased a little during the mid-to-late 1990s, but declined significantly again by 2000). While it is more difficult to find reliable data on trends in incidence (or the rate of new infections), seroincidence also appears to have fallen significantly. In one site, Masaka, incidence fell from 7.6 per thousand per year in 1990 to 3.2 per thousand per year by 1998. As with prevalence, the decline was more pronounced among younger women.

Seroprevalence among 15-19-year-old pregnant women, which is believed to he reflective of HIV incidence, fell sharply from the early 1990s, when this data was first collected, until 1995 or 1996, and since then has remained low. Based on this trend, as well as the fact that national seroprevalence peaked in 1991 and from some other indications (e.g., syphilis rates in Rakai plummeted in 1988), it is probable that incidence in Uganda would have peaked sometime in the late 1980s. Regarding prevalence, estimates by the U.S. Census Bureau/Joint United Nations Programme on

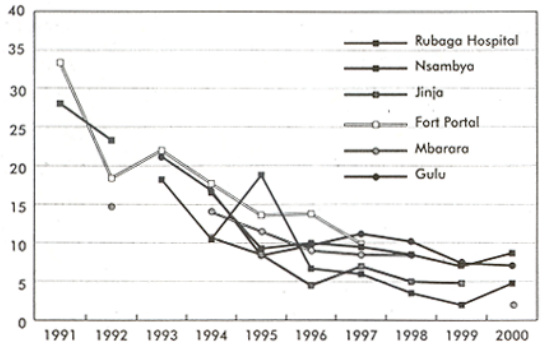
[1] This document was developed with support from the Office of HIV/AIDS, Bureau for Global Health, U.S. Agency for International Development under contract number HRN-C-00-99-00005-00. The opinions expressed herein are those of the contributors and do not necessarily reflect those of USAID.

[2] Editor: Janice A. Hogle, Ph.D. Contributors: Edward Green, Ph.D., Vinand Nantulya, M.D., Ph.D., Rand Stoneburner, M.D., M.P.H., John Stover, Ph.D.

HIV/AIDS UNAIDS) are that national HIV prevalence peaked at around 15 percent in 1991, and had fallen to 5 percent as of 2001. This dramatic decline in prevalence is unique worldwide, and has been the subject of curiosity since the mid-1990s, and recently of even more intense scientific scrutiny.

Observed consistently over time and across many different geographic and demographic populations, Uganda's falling HIV prevalence is likely not due merely to measurement bias or a "natural die-off syndrome," but rather mainly to a number of behavioral changes that have been identified in several surveys and qualitative studies. Some have postulated that the decline in seroprevalence was primarily a result of so many people succumbing to the disease that the rate of new infections was simply outweighed by the numbers of AIDS deaths. However, a number of other African regions (e.g., Zambia, Zimbabwe, western Kenya) have experienced nearly as old—and at least as severe—epidemics as Uganda's, yet prevalence has yet to decline at the population level. Furthermore, the large decline in prevalence among younger age cohorts in Uganda argues against this as a primary explanation.

HIV PREVALENCE AMONG 15-19-YEAR-OLD PREGNANT WOMEN



Source: HIV/AIDS Surveillance Report, STD/AIDS Control Programme, Ministry of Health, Uganda, June 2000.

The relationships between the large variety of interventions in Uganda and the decline in incidence and prevalence are complex and not yet completely understood. This is especially true regarding the earlier years (i.e., there is little HIV-related Demographic and Health Surveys (DHS) data prior to 1995). However, changes in age of sexual debut, casual and commercial sex trends, partner reduction, and condom use all appear to have played key roles in the continuing declines. Although we know that HIV knowledge, risk perception, and risk avoidance options can ultimately lead to reduced HIV incidence, there is a complex set of epidemiological, socio-cultural, political, and other elements that likely affected the course of the epidemic in Uganda. Many of these elements appear to be absent or less significant in other African countries that have not yet seen significant seroprevalence declines, such as Zimbabwe, South Africa, Botswana, Kenya, and Malawi. These key elements are summarized in roughly chronological order in the following pages.

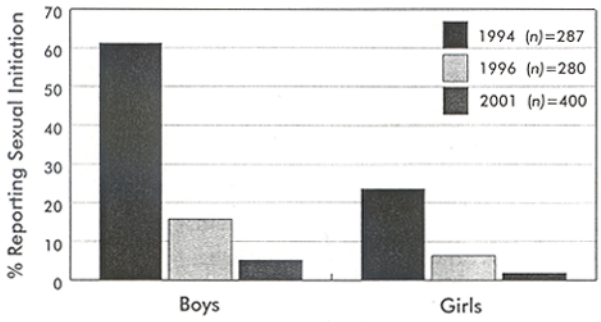
1. High-level political support with multi-sectoral response set the tone: In 1986, after 15 years of civil strife, Uganda's new head of state, President Yoweri Museveni, responded to evidence of a serious emerging epidemic with a proactive commitment to prevention that has continued to the present. In face-to-face interactions with Ugandans at all levels, he emphasized that fighting AIDS was a patriotic duty requiring openness, communication, and strong leadership from the village level to the State House. His charismatic directness in addressing the threat placed HIV/AIDS on the development agenda, and encouraged constant and candid national media coverage of all aspects of the epidemic. This early high-level support fostered a multi-sectoral response, prioritizing HIV/AIDS and enlisting a wide variety of national participants in the "war" against the decimating disease known as "Slim." In 1992, the multi-sectoral Uganda AIDS Commission (UAC) was created to coordinate and monitor the national AIDS strategy. The UAC prepared a National

Operational Plan to guide implementing agencies, sponsored Task Forces, and encouraged the establishment of AIDS Control Programmes in other ministries including Defense, Education, Gender and Social Affairs. As of 2001, there were also reportedly at least 700 agencies—governmental and nongovernmental—working on HIV/AIDS issues across all districts in Uganda.

2. Decentralized planning and implementation for behavior change communication (BCC) reached both general populations and key target groups: In 1986, Uganda established a National AIDS Control Program (ACP), which launched an aggressive public media campaign that included print materials, radio, billboards, and community mobilization for a grass-roots offensive against HIV. A national sentinel surveillance system, which has tracked the epidemic since 1987, began with four sites and by 2000 included 15; also of importance, there has been surveillance of AIDS cases since 1986. The ACP became the STD/AIDS Control Programme in 1994 and has since trained thousands of community-based AIDS counselors, health educators, peer educators, and other types of specialists. Led by their leaders' examples, the general population in both urban and rural areas eagerly joined the fight against AIDS, so that it became a "patriotic duty" to support the effort. Spreading the word involved not just "information and education" but rather a fundamental behavior change-based approach to communicating and motivating. Decentralization itself was actually a type of local empowerment that involved local allocation of resources—in itself a motivating force.

Notably, Uganda's approach to BCC has relied more on "non-electronic" mass communication—which was community-based, face-to-face, and culturally appropriate. Strong nongovernmental organizations (NGO) and community-based support led to flexible, creative, and culturally appropriate interventions that worked to change behavior despite extreme levels of post-civil war house-hold poverty. As Edward Green observed, "low-tech" approaches also led to the sensitization and subsequent involvement in AIDS awareness and education of not only health personnel, traditional healers, and traditional birth attendants (TBAs), but influential people normally not involved in health issues such as political, community, and religious leaders, teachers and administrators, traders, leaders of women's and youth associations, and other representatives of key stakeholder groups. BCC interventions reached not only the general population, but also key target groups including female sex workers and their clients, soldiers, fishermen, long-distance drivers, traders, bar girls, police, and students, without creating a highly stigmatizing climate.

DELAYED SEXUAL DEBUT AMONG PRIMARY SCHOOL PUPILS (13–16 YEARS) FOLLOWING INFORMATION EDUCATION AND COMMUNICATION (IEC) (Soroti District, Uganda)



Source: The Effects of the Katakwi/Soroti School Health and AIDS Prevention Project, African Medical and Research Foundation (AMREF) Report, Kampala, August 2001.

3. Interventions addressed women and youth, stigma and discrimination: Linked to high-level political support and grassroots-level communication for behavior change was a strong emphasis on empowerment of women and girls; targeting youth

in and also out of school; and aggressively fighting stigma and discrimination against people living with HIV/AIDS (PLWHAs). Since at least 1989, teachers have been trained to integrate HIV education and sexual behavior change messages into curricula. At the same time, the country's President and his political party have attempted to empower women and youth by giving them more political voice, including in Parliament where by law women make up a minimum one-third of the members. Four members elected by youth caucuses represent youth in Parliament. Youth-friendly approaches promoted partner reduction through talking about delaying sexual debut—remaining abstinent, remaining faithful to one uninfected person if "you've already started," "zero-grazing," and using condoms if "you're going to move around." Of particular note is the indicator for the proportion of youth that has not yet begun to have sex. In an African Medical and Research Foundation (AMREF) study in Soroti District cited by Vinand Nantulya, among youth age 13-16 nearly 60 percent of boys and girls reported having already "played sex" in 1994, but in 2001 that proportion was down to less than 5 percent.

Respecting and protecting the rights of those infected by HIV has been inspired since 1988 by a number of prominent Ugandan citizens, and by public events such as candlelight memorials and World AIDS Day observances. In the late 1980s, a celebrated European-based Ugandan musician, who went public about his HIV status at the beginning of the epidemic, returned home and devoted his last days to giving testimonies in schools, colleges, churches and elsewhere. Of critical importance, The AIDS Support Organization (TASO) was organized back in 1987, and has advocated against discrimination and stigma while pioneering a community-based approach for care of PLWHAs. The work of TASO and other care organizations has also made important contributions to prevention efforts, exemplifying the concept of a prevention-to-care continuum. Other national spokesmen included a Major in the Ugandan army who talked openly about his infection and how he used condoms to avoid infecting his wife, and a Protestant minister who disclosed that he learned of his infection when his first wife died, and talked publicly about using condoms to avoid infecting his new wife and their children. Openness on the part of the President, other government and community leaders, and prominent activists has led in general to a remarkably accepting and non-discriminatory response to AIDS.

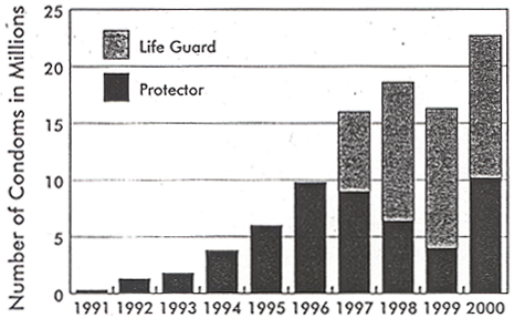
4. Religious leaders and faith-based organizations have been active on the front lines of the response to the epidemic: Mainstream faith-based organizations wield enormous influence in Africa. Early and significant mobilization of Ugandan religious leaders and organizations resulted in their active participation in AIDS education and prevention activities. Also, Mission hospitals were among the first to develop AIDS care and support programs in Uganda. In 1990, the Islamic Medical Association of Uganda (IMAU) piloted an AIDS education project in rural Muslim communities that evolved into a larger effort to train local religious leaders and lay community workers. Documenting increases in correct knowledge and decreases in risky behaviors, the IMAU project was selected as a "Best Practices Case Study" by UNAIDS. The Protestant Church of Uganda organized a workshop for bishops and other religious leaders in 1991, and implemented an extensive AIDS education project in many dioceses. The Catholic Church and mission hospitals provided leadership in designing AIDS mobile home care projects and special programs for AIDS widows and orphans. The three chairpersons of the Uganda AIDS Commission have included an Anglican and a Catholic Bishop. (The first leader was President Museveni.)

5. Africa's first confidential voluntary counseling and testing (VCT) services: In 1990, the first AIDS Information Center (AIC) for anonymous VCT opened in Kampala. By 1993, AIC was active in four major urban areas as more and more people became interested in knowing their sero-status. AIC pioneered providing "same day results" using rapid HIV tests, as well as the concept of "Post Test Clubs" to provide long-term support for behavior change to anyone who has been tested, regardless of sero-status. Uganda was fairly unique in Africa in the emphasis it placed on VCT, at a time when the Global Program on AIDS and other international organizations were not yet recommending it as a prevention strategy.

6. Condom social marketing has played a key but evidently not the major role: Condom promotion was not an especially dominant element in Uganda's earlier response to AIDS, certainly compared to several other countries in eastern and southern Africa. In Demographic Health Surveys, ever-use of condoms as reported by women increased from 1 percent in 1989, to 6 percent in 1995 and 16 percent in 2000. Male ever-use of condoms was 16 percent in 1995 and 40 percent in 2000. Nearly all of the decline in HIV incidence (and much of the decline in prevalence) had already occurred by 1995 and, furthermore, modeling suggests that very high levels of consistent condom use would be necessary to achieve significant reductions of prevalence in a generalized-level epidemic. Therefore, it seems unlikely that such

levels of condom ever-use in Uganda (let alone consistent use, which was presumably much lower) could have played a major role in HIV reduction at the national level, in the earlier years. However, in more recent years, increased condom use has arguably contributed to the continuing decline in prevalence.

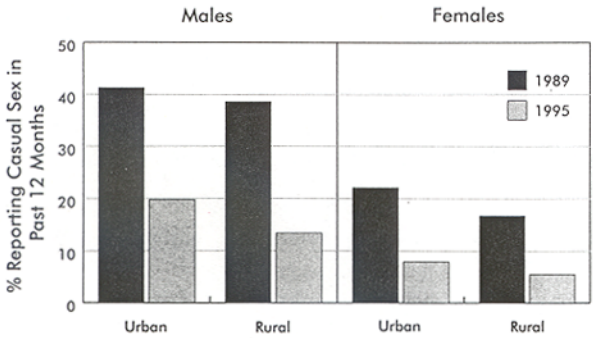
NUMBER OF SOCIALLY MARKETED CONDOMS SOLD IN UGANDA



Source: Deloitte Touche Tohmatsu, Commercial Market Strategies, Uganda Report, 2001.

In the early 1990s, there was resistance on the part of the President and some religious leaders to promoting condom use, but by the mid-1990s the controversy had generally faded. Purchased mainly with external donor funds, millions of condoms have since then been distributed by the MOH through health centers and NGO projects. Condom sales and reported use have increased significantly during the past half-decade (although still not to the same extent as in other countries like Zimbabwe, South Africa, Botswana, and Kenya). High levels of condom use have been reported for commercial sex work (i.e., reportedly at near-100 percent levels in Kampala), and according to Uganda's 2000 DHS, among people reporting a non-regular partner in the past 12 months, 59 percent of men and 38 percent of women reported using a condom with their last non-regular partner. Therefore, current condom use rates with non-regular partners are probably playing a role in the continued declining seroprevalence. Note that while condom use with non-regular partners has been increasing, Ugandans are also reporting significantly fewer non-regular partners. In contrast, according to John Stover, if condom use in Kenya had not been as plentiful, seroprevalence might have increased even more than it has. But without the other, Uganda-like behavior changes (i.e., delay of sexual debut and "zero grazing"/partner reduction), prevalence did not decline.

Sexually transmitted infections (STI) control and prevention programs have received increased emphasis: Since 1994, after declines in HIV prevalence began to be documented, two donor-funded projects addressed improving STI diagnosis and treatment of STIs. Adequate supplies of STI drugs in the country suffered from considerable delays in offshore procurement but by the end of the 1990s, drug supplies were adequate and distribution to rural health facilities was improving. Donor funding also financed a national reference laboratory at Mulago Hospital to study drug resistance. Two large randomized trials in Uganda (Rakai and Masaka) attempted to look at the impact of STI treatment on reducing HIV prevalence. Although both interventions reduced the rates of some STIs, there was no significant reduction in HIV incidence. According to an expert panel at the 2002 World AIDS Conference in Barcelona, the main reason for the lack of effect on HIV from STI treatment was the large decrease in risky sex/multiple partner trends that had occurred in Uganda by the time the STI trials began. (Most HIV transmission therefore now occurs within monogamous regular partnerships, where bacterial STIs tend to be rare.)

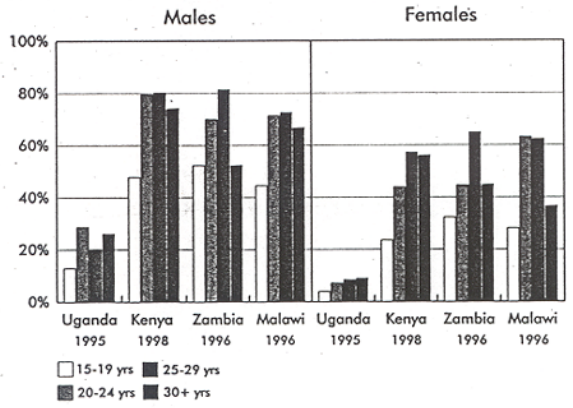


Source: Global Program on AIDS, Geneva.

8. The most important determinant of the reduction in HIV incidence in Uganda appears to be a decrease in multiple sexual partnerships and networks: In general, Ugandans now have considerably fewer non-regular sex partners across all ages. Population-level sexual behavior, including the proportion of people reporting more than one sexual partner, in Kenya (1998), Zambia (1996), and Malawi (1996), for example, appear comparable to those reported in Uganda in 1988-89. In comparison with men in these countries, Ugandan males in 1995 were less likely to have ever had sex (in the 15-19-year-old range), more likely to be married and keep sex within the marriage, and less likely to have multiple partners, particularly if never married.

According to Rand Stoneburner, such behavioral changes in Uganda appear related to more open personal communication networks for acquiring AIDS knowledge, which may more effectively personalize risk and result in greater actual behavior change. Comparing DHS survey data with Kenya, Zambia, and Malawi, Ugandans are relatively more likely to receive AIDS information through friendship and other personal networks than through mass media or other sources, and are significantly more likely to know of a friend or relative with AIDS. Social communication elements, as suggested by these kinds of indicators, may be necessary to bridge the motivational gap between AIDS prevention activities and behavior change sufficient to affect HIV incidence. If these elements are present, the success of prevention activities may be greatly enhanced. Model simulations suggest that knowledge can diffuse rapidly, even early in an epidemic, in an environment of "open" personal networks. Uganda's President set the example for the nation with his matter-of-fact approach to dealing with the HIV threat, and inspired thousands of community, religious, and government leaders to talk candidly to people about delaying sexual activity, abstaining, being faithful, "zero grazing," and using condoms (roughly in that order).

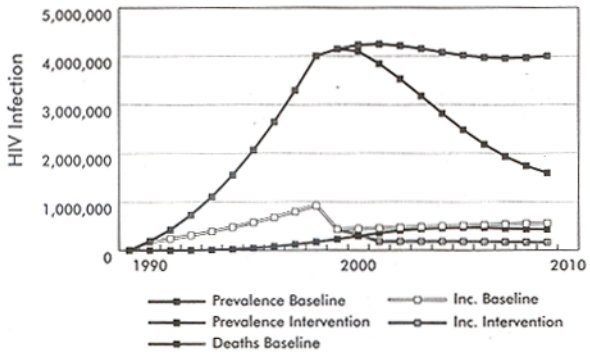
SEXUAL PARTNERSHIPS IN UNMARRIED BY AGE:
% reporting non-regular partners in last 12 months, (DHS)



Source: Demographic Health Surveys.

What did all this cost? According to an analysis by Elizabeth Marum, USAID/Centers for Disease Control and Prevention (CDC) HIV program director in Kampala throughout the 1990s, total donor support for all AIDS-related contributions during the period 1989-1998 was approximately $180 million, or about $1.80 per adult per year over the 10-year period. Donor contributions amount to an estimated 70 percent of total expenditures on AIDS prevention and care in Uganda. Although this proportion is clearly significant, Uganda itself (both public and private sectors) must be credited with developing much of the successful approach, specifically: involvement of religious organizations, bold IEC in schools, VCT, and community-based and culturally appropriate BCC strategies.

SIMULATION OF UGANDA HIV DYNAMICS:
Potential impact of similar behavior change in South Africa by 2000

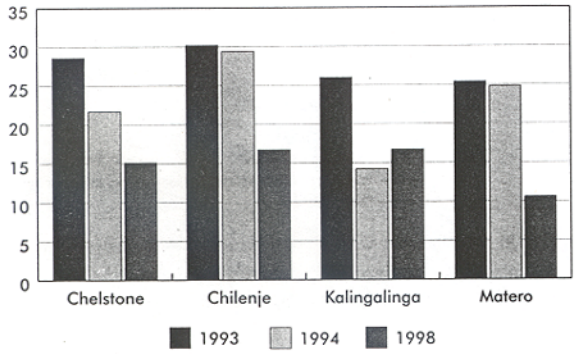


Source: Stoneburner, RL, Low-Beer D. Analyses of HIV trend and behavioral data in Uganda, Kenya, and Zambia: prevalence declines in Uganda relate more to reduction in sex partners than condom use. Abstract ThOrC734. XIII International AIDS Conference, Durban, South Africa, July 7-14, 2000.

A "social vaccine" in Africa? (Can this success be replicated?) It must be remembered that many of the elements of Uganda's response, such as high-level political support, decentralized planning, and multi-sectoral responses, do not affect HIV infection rates directly. Sexual behavior itself must change in order for seroincidence to change. According to Stoneburner, the effect of HIV prevention interventions in Uganda (particularly partner reduction) during the past decade appears to have had a similar impact as a potential medical vaccine of 80 percent efficacy. The historical and socio-cultural context, various interventions and other factors are complex and may be somewhat unique to Uganda, and it is not clear to what extent this success can exactly be replicated elsewhere, especially in more cosmopolitan, Westernized settings. However, recent seroprevalence and behavioral survey data among youth in Zambia indicate that a Uganda-like success story may be in the making there as well. According to a recent study by Population Services International, the main factor behind the large decline in prevalence among Zambian youth during the 1990s was a significant reduction in multiple partner trends.

In conclusion, although we may never fully know "what really happened in Uganda," the experience there and in other countries that have achieved some success suggests that a comprehensive behavior change-based strategy, ideally involving high level political commitment and a diverse spectrum of community-based participation, may be the most effective prevention approach.

HIV PREVALENCE AMONG 15-19-YEAR-OLD PREGNANT WOMEN IN LUSAKA, ZAMBIA



Source: U.S. Census Bureau, Population Division, International Program Center, HIV/AIDS Surveillance Data Base June 2001.

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Summary produced by Jan Hogle, Ph.D., Synergy Consultant.

Senator ALEXANDER. Thank you, Dr. Peterson, and thank you for your service. It is helpful to have someone with as much on the ground experience as you have had with this.

I have a few questions and I know Senator Feingold will have some and then I may have a couple more on a little different subject. I would like to talk with you for a moment about—and you referred to both of these—will the ABC approach work in other African countries? And then, then the more practical question of just how you go about implementing the model.

Let me begin with the "will it work" point. You referred to several factors, but Mrs. Museveni last week here referred often to self-control in the remarks I heard her make. You mentioned that.

And she said that, what you also said, which is the abstinence part, the A part, which she starts with and gives more emphasis to, although she does encourage strongly the B and the C, she says that fits the Ugandan culture. She basically said, in not so impolite words, that until the foreigners came in and began messing up behavioral patterns in Uganda, things were better in this respect.

No. 1, how true is that? In your own experience, how much does abstinence fit the Ugandan culture for children? And No. 2, is Uganda unique in that respect among African countries and does that mean that this model does not fit other countries quite so neatly?

Dr. PETERSON. Thank you. I think there has been a change in African cultures, and I am sure Sophia can say many more things about that. But most of the cultures do very highly regard abstinence in their cultural traditions. There are a few examples that are slightly different than that in sort of exceptional cases or with the Masai coming-of-age rites. But for the most part, abstinence and faithfulness is a cultural norm and, just as our own society went through a revolution and a sort of loosening of morals, African culture did as well.

So when the call came for abstinence and "zero grazing," it was very much based on coming back to your African roots. Zero grazing is where you put a stake in the ground and you tie your cow to it and he grazes just around that stake. That zero grazing in their agricultural society means to them the same thing: Put your stake in the ground for your marriage and you graze only within that household. So it resonated very much with the cultural norms and bringing them back to their cultural roots.

As far as whether it is appropriate for other countries, I would say, in all of the other countries that I have been in, yes, that they have that same cultural norm. It will be pulling them back to that cultural norm.

The other thing we need to remember is that most of the new infections, 50 to 69 percent of new infections, are with the young people, 15- to 24-year-olds, where abstinence is a very appropriate message to bring and the delay of onset of sexual activity. So if we are truly going to turn the epidemic around in a country, we do need to focus on what is best for the youth of that country. Uganda has really found a good balance and that is, as she said, abstinence was No. 1. Once you are married, be faithful, but they have also been very good at reducing the number of partners if they were outside of the A and B norms. But then using condoms also in the casual sex.

So they have heard all three parts and Uganda has done an amazing job of implementing all three parts.

Senator ALEXANDER. In a letter that Mrs. Museveni wrote to Senator Lugar, the chairman of our committee, April 2, which I will put in the record and share with Senator Feingold, although he may have seen it, she says: "My experience has led me to conclude that when dealing with young people especially, it is vitally important to emphasize abstinence as the first line of defense, so to speak." She also points out in her letter the importance of B and C in the ABC formula.

[The letter referred to follows:]

THE REPUBLIC OF UGANDA
STATE HOUSE, P.O. BOX 25497
KAMPALA, UGANDA, 2ND APRIL, 2003

The Honorable RICHARD G. LUGAR,
Chair
Senate Foreign Relations
United States Senate
Washington, DC 20510

DEAR HONORABLE LUGAR,

Re: GLOBAL AIDS SENATE BILL

We in Uganda are very pleased and grateful for the leadership that the United States of America has shown as far as the struggle against HIV/AIDS, Tuberculosis and Malaria is concerned. We believe that the commitment of the Bush Administration to this cause is genuine, as proven by the sizeable funding it has recently made available for the purpose of supporting developing nations hit by those killer diseases.

I have been made to understand that the Global AIDS Bill is soon coming before the Senate, and that the important issue of preferred methods of prevention of HIV is likely to be a point of contention. I note that one of the approaches to prevention is now being referred to as the "Uganda ABC model," namely "Abstain, Be Faithful, Use Condoms," in that order of preference.

I feel that I should shed some light on the issue of preventive measures against HIV/AIDS, since I have had first hand experience in activities of behaviour change in Uganda for over a decade. My experience has led me to conclude that, when dealing with young people especially, it is vitally important to emphasize Abstinence as the first line of defence, so to speak.

I believe that we humans have an innate mechanism called conscience, which convicts us concerning what is wrong and what is right, or what is good for our survival and what is harmful. It is this mechanism that society builds on to form certain norms and value systems to ensure the survival and continuity of it's people. When dealing with a disease such as HIV/AIDS which has no known cure, it is important to tap into this in-built sense of right and wrong and encourage it, particularly in young people who have not yet become set in their habits or behaviour patterns. I cannot help but recall the verse in the Bible which says, "Train a child in the way that he should go, and when he is old he will not turn away from it." (Proverbs 22:6)

And so, for the young, I believe it is our obligation to try to form their character by teaching them the benefits of abstaining from sex until they are ready to engage in it in the right context and with the right partner. Not to do this, to me, implies that we as adults and leaders have no faith in human nature and in our ability as human beings to control ourselves. How then are we going to prevent our young people from indulging in other practices such as excessive intake of alcohol, substance abuse, stealing, and killing other human beings? How are we going to teach them to be law-abiding citizens if we do not train them to exercise self-control while they are still young? Human beings must learn to police themselves internally; this is the first safeguard of civilization. This is the wisdom of the ages, and we ignore it at our own peril. Incidentally, I must mention that even before Christianity came to Uganda, promiscuity, specifically sex before marriage was severly punished; therefore in teaching abstinence to our children, we are also reinstating our cultural practices and traditions. A culture of promiscuity is, literally, a culture of death to the human race.

The practice of being faithful in marriage relationships then follows quite naturally when you have been practicing abstinence, and there is no need to elaborate on this.

We in Uganda have not advocated against the use of condoms as a method of prevention against HIV/AIDS. Condoms are freely available in all appropriate public places, freely and continuously advertised in our electronic and print media. Indeed they are even to be found in the remotest of our villages.

However, my husband and I belong to the school of thought that maintains that our preferred method of prevention for certain catagories of our population, particularly the young, is Abstinence and Faithfulness in sexual matters. We have seen it work in Uganda, and I would strongly advocate that it be considered as the method that, in the long run, is likely to be the most beneficial.

This is my humble opinion, based on 15 years of hands-on-experience in combating the killer disease, HIV/AIDS. I hope it can be transmitted to the august as-

sembly of the Senate of the United States of America as they deliberate these issues, which are critically important to our populations.

Sincerely,

JANET K. MUSEVENI (MRS)

Senator ALEXANDER. As I understand USAID policy, the emphasis has shifted somewhat from a focus, more of a focus on condoms, to more of a primary focus on abstinence, still recognizing the importance of the B and C part of the formula. Can you describe that shift of policy, if indeed there has been a shift?

Dr. PETERSON. I think this is part of the balanced approach and being able to shift the balance based on what you know, what you have learned, and on the specific country. For a long time we did not have data on abstinence, and within the public health community it was extraordinarily controversial. Senator Feingold pointed out that many of these issues have become very political at times. What I hope is to find the middle ground that everyone can agree to.

What has happened in the last few years is we are getting more and more data that supports abstinence as a public health intervention, not just as a philosophy or a moral mandate, but as a data-based public health intervention. The question initially, everyone said was: Yes, if you could get people to abstain, of course that would help reduce transmission of disease, but would youth ever do that? Would they ever wait?

What we are seeing, and I have seen it on the domestic front in teen pregnancy prevention programs as well as in Uganda and now in a number of other countries, is that with full education and really understanding the issues, you can wait, and they will wait. They will choose to wait, and therefore it is truly a public health intervention that can be used in HIV-AIDS programs successfully.

Senator ALEXANDER. My last question in this round is: After we get beyond the model and the talk and the legislation, somebody has to spend the money and make things work. How do you take a model like this into some country other than Uganda and make it work? What exactly do you do? What steps do you take? How do you go about that?

Dr. PETERSON. First certainly is to know the situation in that country, both the distribution of AIDS, the age groups at risk, whether it is what we call a concentrated epidemic, which would be more like the Cambodia/Thailand, or, as in the Presidential initiative countries, a more generalized epidemic. Look at the age spectrums and the routes of exposure.

Then you really need people and partners who are in the country who then can look at how much abstinence: Are we reaching a youth group or are we reaching married families with too many partners? Or is it really being primarily moved along by high-risk sexual activity of prostitutes and their clients?

Once you have done that, then you go to the partners who know how to work with those groups, with the in-country experts. We have examples of programs in many different countries, both on abstinence—our Zambia program is social marketing of abstinence. We have worked in policy change, quality assurance, voluntary counseling and testing.

The elements are all there. What you have to do is take all of those elements that have been supportive to the ABC message, find the political leaders, the faith-based leaders, and engage as many different sectors of society as possible to address the issues in their own cultural and epidemiological priorities.

Senator ALEXANDER. Thank you.

Senator Feingold.

Senator FEINGOLD. Thank you, Mr. Chairman. I found your line of questioning there to be very helpful and very much along the lines I want to pursue.

I would like to ask you a little bit more about this point that Senator Alexander was just asking you about, the differences from country to country. I noticed your answer essentially talked about looking at the same factors in each country and trying to adapt it to the country, but it is my sense, having visited 14 or 15 African countries and having tried to talk about AIDS or visiting an AIDS program in each of those countries, that each of those countries is not the same culturally. I am not suggesting you said that, but I think there are significant differences within the traditional cultures. There are also significant differences because of the different religious and colonial influences that occurred in the countries.

In fact, I have been struck by, for example, the difference in the willingness to talk about the disease in different places. So I guess I would like to pursue a little more specifically: How do you account for the differences between countries? Are there religious differences? For example, there was a very successful program in Senegal to prevent AIDS from ever getting out of control. That is a largely Islamic country and Uganda of course is a country that has a significant Christian population and traditional religions.

I am just wondering if you are able to take that into account and if it affects people's willingness to address A, B, and C.

Dr. PETERSON. Yes, I think there are significant differences. In Botswana it is utterly amazing that they have both some political leadership speaking about AIDS, they have a good health system for Africa, they have been making treatment available, and yet stigma has been an incredible stumbling block, and they are still not getting people to come in. In South Africa violence is an underlying factor that is dominating a lot of the response there.

What we have to do is talk to the people who have been working and how they have tried to overcome some of the problems. In Haiti, which traditionally is one of those countries that does not do very well and has never had the political voice, I went to an area, Jeremie on the South Peninsula. There was a physician who had mobilized the political leaders, the religious leaders, and the civil leaders. It is the only place that I have been to recently—and I have not been to Uganda in the last few years—where there was no stigma.

At least one of the unifying factors seems to be that political or social voice that allows the disease to be talked about that says: We will care for you. And Uganda was really remarkable about this. Mrs. Museveni talks a lot about responsibility and self-control, which sometimes is seen as negative, but immediately following that call to responsibility she says: But if you are HIV-positive, we

will take care of you and we will take care of your children. And they have overcome stigma there.

We have seen it in Haiti.

So I think we need to be very specific in our analysis of the problems. There are unifying factors. We know that we need to get all sectors involved. We know we need to deal with stigma. We know we need to deal with youth. And we put relatively different amounts of effort into the problems that are the biggest barriers in that particular country.

But all of the elements were there in Uganda, and they are there in other countries as well. We are going to learn new responses in some other countries. The business sector is new in South Africa. In some place or another, we are going to have to learn how do we overcome the violence that is a problem?

South Africa is beginning to overcome some stigma by providing grants that are disability grants, and suddenly people are willing to come in to be tested who were not before. That is a novel way of overcoming stigma. So we need to keep learning lessons, but we can also use what we have learned in Uganda and apply the pieces that fit for each country.

Senator FEINGOLD. I appreciate that answer, because on a recent trip to Botswana and South Africa there was so much conversation about situations involving older men and younger women. Essentially younger women were being put in a position where—I do not know if it was completely involuntary. Certainly in some cases it was. But you know, that is not an abstinence issue.

So I would suggest that as the policy tries to create the proper balance between A, B, and C—I think you are already aware of this—that the places in which the shift to focusing more on abstinence would be a certain number of places, but not necessarily every place, given the very points that you just made about, for example, violence in South Africa. I am not at all sure that abstinence is as relevant to that as it is to some of the issues that occur in other places.

Obviously, this is what you do, but that is just a point I would like to make.

What kind of information should be available at a voluntary counseling and testing center? For example, what if a man comes in and gets tested and tests positive? What would he learn? And if he returns bringing his spouse and she tests negative, what kind of counseling and information will the couple get?

Dr. PETERSON. Very good questions. Before he tests positive, he should have had pre-test counseling which should have covered the disease, the test itself, and the likelihood of testing positive, the windows where it might test negative, how it is transmitted, and what it might mean if he tests positive for himself.

After the test comes back, we actually do a lot of counseling for those who are HIV-negative, not just for those who are HIV-positive, and it has been shown that post-test counseling for HIV-negative has also been very helpful in behavior change. Presumably they are coming in because they have put themselves at risk. So we are seeing changes in behavior post-counseling even if they are negative.

If they are HIV-positive, then certainly they will learn about the disease, the progression of the disease, how they can keep themselves healthy as long as possible, and their responsibility to not pass the disease on.

If you have what we call a discordant couple—HIV-positive, usually husband, and then an HIV-negative spouse—then certainly they have two options. They either abstain, which some couples actually do, or use condoms. We have studies in an African setting that show correct, consistent, every single time use can protect the uninfected partner, and they would be recommended to do that very diligently.

I would like to go back to the gender issue, the young girls, and say that I agree completely. You have in your handout my favorite slide that I used for teaching in schools in Zimbabwe with the older man and the younger girl. I think this is an element we really need to again delve deep into the Uganda story. The fact that the young girls in Uganda did have a delay in onset of sexual activity, that they were able to stay virgins longer, means there has been a change in this situation. Either the girls have been given the power to say no or the men's activities have changed, probably both.

But we need to know how that very deep cultural change has happened. So those are the kinds of issues we will continue to look at very strongly. I see it as the backdrop to the ABC. It is one of those elements that supports the AB—you cannot just say abstain. What we have to do, especially for youth that are so critical, is say how can you abstain, how are you going to have the ability, the authority, to protect yourself?

That is true for wives as well. I used to have Kenyan wives come and say: My husband is coming home from Nairobi, I know he has that disease; what can I do to protect myself? And in 1986, 1987 in Kenya, I did not have anything that I could do for her.

Senator FEINGOLD. Well, I appreciate that as well, because in a sense, at least in some contexts, the abstinence is really a good consequence of empowering women or young girls to protect themselves. It is not actually the solution. It is the result of allowing women to make their own choices and to have the legal power and other powers to avoid something they may not want or may not be ready for.

So I think that needs to be a part of the analysis. I have found an awful lot of women talking about that element of it. That is really the driving force, giving women the power to protect themselves.

One of the concerns that has been voiced about abstinence-only programming is the concern that unless that programming is supplemented with other information when abstinence fails, individuals have no information about how to protect themselves. Other concerns center on the possibility that some may seek to discourage promiscuity by arguing that condoms do not work, thereby discouraging people from bothering to use them when they do actually begin a sexual relationship.

Will USAID work to ensure that to the extent possible communities have access to complete and accurate information about prevention strategies?

Dr. PETERSON. The short answer is yes, very strongly. I worked in an abstinence-only program in Zimbabwe in the schools, but we gave youth full information about their sexual development, about the disease, about how they could protect themselves. Many of the faith-based organizations have said, can we talk about condoms, and this is in an abstinence-only kind of setting, and give the data on how effective condoms are.

So there are some that are uncomfortable talking about it at all and there are others—and what I have said would be our policy—if they are to talk about condoms then they must be absolutely scientifically accurate. With a group that we are working with actually on either side of the debate, what we would want to have is accuracy in what they teach the children. And we have good data that condoms are protective. Is it perfect? No. But we have good data that condoms are protective and therefore that they play a role. We are very comfortable having all of our partners do that.

Senator FEINGOLD. Well, I appreciate your very reasonable answers and your willingness to get into some depth on them.

Thank you, Mr. Chairman.

Senator ALEXANDER. I have a couple of questions and then I will go back to Senator Feingold, and then we will go to our second panel.

My first question is to go back to this AIDS Corps idea. What I am really trying to do here is understand the idea well enough to move it on down the path, recognizing, as Senator Feingold pointed out, that a lot of people have this idea. The President in his speech in the East Room a couple of weeks ago turned around to the Peace Corps Director at the end of the speech and said: "Now, Mr. Peace Corps Director, I want you to go to work on this idea."

As I looked at the House bill that we passed last Thursday night, I saw three things about it that if I were in a magical world I would have changed with a sweep of the wand, and I wonder what you might think about this. One is I like the name "AIDS Corps" because I would like to focus. I think it gives a focus to the idea.

Two is I would like to put training for treatment ahead of treatment. In other words, my sense of things is that there is a real demand for volunteers or employees from this country who can go to African countries, as an example, and train people to treat people.

A third point is I would like to see the time limitation for that more flexible. I believe the legislation we enacted said 3 years. There are organizations in this country of health professionals and physicians who regularly go to other parts of the world for shorter periods of time and do a lot of good. They go all over the world. I am wondering whether if we could not make it easier for health professionals and doctors to go to Uganda, Botswana, wherever, for a month or 2 months or 3 months and fit into a program where they could train people to treat people and then come home, whether that is a practical idea.

Then the last change I would make would be to try to avoid the medical malpractice issues that might arise with any sort of treatment, to put these, these persons, these health professionals from the United States, say, who might go to an African country to train people, if they do incidental treatment and incur some sort of liabil-

ity that they would be under the same set of circumstances that a Federal employee would be under the Tort Claims Liability Act.

Now, anything you might say about this general idea would be useful to me and the committee, I think, as we look ahead to take an idea of many Senators and the President and push it forward.

Dr. PETERSON. Clearly, especially with the passage of the emergency AIDS bill and the Global Fund, we are getting to the point where we have got a fair amount of dollar resources. It is very soon that we are going to have what we call human capacity, the people as the limiting factor. We have an expanding epidemic, with more people at risk. We have a contracting number of health personnel because, frankly, they are as devastated by the disease as others.

When I was in Zimbabwe, my husband trained the higher level Ministry of Health people, and a third of the 20 or so people he trained are now dead. So human capacity is going to be one of the biggest limiting factors. Before you can just go and do, you truly should be training. So I agree with you completely that training needs to be first.

The Peace Corps is absolutely marvelous. They are more likely to be the ones to do this, and in fact are doing really wonderful, community-based training in many places, but that is going to be mostly on the prevention end. When you get to the clinical and treatment piece, then, as you said, there are many groups that are already experienced medical professionals. The only thing that I would have liked is experience, international experience, as one of the criteria, because that is what would lead us to being able to be more flexible about how long they went.

If they already had experience in similar countries, then they would be much more able to get up to speed quickly and make sure that they were training appropriate for that country, and not just trying to transfer our technology.

As we have been looking at this problem, both within the agency overall, but also together with HHS and other USG agencies on the mother-to-child transmission, we have been looking at this idea of a medical volunteer corps. At least initially, we were going to try and embed that volunteer medical corps within a twinning program where a U.S. institution is twinned with an African or Caribbean institution so they have an ongoing relationship and the volunteers are within those institutions and go back and forth.

So we are very supportive. We have been working very hard on this. I think this is one part of how we begin to deal with the human capacity issue. But we also need to do lots more training, as well as deal with systems issues like brain drain that are causing this to be such a difficult problem in many of the countries hardest hit by AIDS.

Senator ALEXANDER. Senator Feingold, do you have more questions?

Senator FEINGOLD. No, thank you.

Senator ALEXANDER. Dr. Peterson, thank you very much.

May I invite our next two witnesses to come forward while I introduce them.

I would like to welcome to the hearing Dr. Edward Green and Ms. Sophia Mukasa Monico. Dr. Green is the senior research scientist at the Harvard Center for Population and Development

Studies. He is a medical anthropologist with 30 years experience in developing countries, one of the leading authorities in academia on the Ugandan success story in the application of the ABC model.

Ms. Mukasa Monico is a Uganda. She is currently the senior AIDS program officer with the Global Health Council here in Washington, DC. She is a leading human rights and AIDS activist from Uganda. She has formerly led the AIDS Support Organization of Uganda, a leading civil society organization.

May I suggest Dr. Green first and Ms. Monico second, if you could keep your remarks to about 10 minutes or less, and then I and Senator Feingold will have questions for both of you. Thank you for coming.

STATEMENT OF EDWARD C. GREEN, PH.D., SENIOR RESEARCH SCIENTIST, HARVARD CENTER FOR POPULATION AND DEVELOPMENT STUDIES, CAMBRIDGE, MA

Dr. GREEN. Thank you, Senator Alexander, distinguished members of the Africa Subcommittee. I am an anthropologist working at the Harvard School of Public Health. For most of my professional career I have worked in less developed countries as a behavioral science researcher and as a designer and evaluator of public health programs. I have worked extensively in Africa and other resource-poor parts of the world. A good deal of my work has focused on reproductive health, some of this including the social marketing of contraceptives.

I applaud the President's initiative to commit major U.S. funding to address HIV-AIDS in the parts of the world with the highest infection rates. I am also glad that notice has been taken of Uganda's success in AIDS prevention since there is much to be learned from the country that has had the greatest amount of AIDS prevalence decline. Infection rates have declined from 21 percent to 6 percent. We have also heard the figure 15 to 5 percent. It depends on whether you do a weighting for rural-urban residents.

The Government of Uganda, led by President Museveni, developed a distinctive approach to AIDS prevention known as the ABC approach: abstain, be faithful, or use a condom. The abstinence message for the most part took the form of urging youth to delay having sex until they were older, preferably married. Many of us in the AIDS and public health communities did not believe that abstinence and faithfulness were realistic goals. It seems now that we were wrong.

Uganda's ABC AIDS program began in 1986, the year Museveni became head of state. Since the rate of new infections began to decline in the late 1980s, incidence rates, it becomes important to know what programs were in place at that time and what behaviors changed in order to account for the decline of infection rates.

None of the standard programs we associate with AIDS prevention—condoms, social marketing, voluntary counseling and testing, treatment of sexually transmitted diseases, and most recently prevention of mother to child transmission based on the drug nevirapine—were in place in the 1980s. I am certainly not saying that these standard biomedical interventions are not useful, only that we need to look at what interventions were actually in place when infection rates began to decline.

It is also important to work backward from the epidemiological and behavioral data. We know that prevalence decline and changes in sexual behavior were most pronounced in youth age 15 to 19. These findings took many of us by surprise since we believed that teenagers are driven by raging hormones, therefore abstinence is an unrealistic or impossible objective. In fact, many of us also believed that women had no power to negotiate sex or to refuse unwanted sex or to insist upon condom use because African societies are male-dominated.

In spite of these legitimate concerns, based on real cultural patterns, Uganda designed interventions aimed at fundamentally changing sexual behavior, something the standard interventions just listed do not attempt. The primary target audience was youth. Let me provide two examples of interventions that were among the first developed by Uganda. One is the youth program which was and is national in scope. The second example involves faith-based organizations.

The program to introduce AIDS education in Ugandan primary schools began in 1987, starting with the School Health Education Program, or SHEP, of the Ministry of Education. The aim of this program was to teach youth with AIDS prevention information, reach youth with this information, before they became sexually active. It was also known that the dropout rates after primary school were high.

AIDS was not the only component of SHEP, but it was an important one. The behavior change emphasis was on delay of age of first sex, but education about condoms was also part of the program.

To implement the new program there was a training of trainers approach that went from the district level down to sub-districts, then to teachers, who were the ones who taught students. Students themselves were trained as peer educators and they were expected to teach their parents and friends about AIDS. This was all done in a relatively short time. The basic facts about AIDS and how to prevent it were taught.

So-called life skills education also has been taught in Ugandan schools for a number of years beginning in about 1987. Life skills might be regarded as AIDS Education 102, which comes after the basic course in what AIDS is and how it is transmitted and prevented. Life skills refers to training youth in skills such as interpersonal relationships, self-awareness and self-esteem, problem-solving, effective communications, decisionmaking, negotiating sex or not having sex, resisting peer pressure, critically thinking, formation of friendships, and empathy. These are referred to as cognitive skills and they seem to help youth make healthy and indeed life-saving decisions.

Did this and similar programs have impact? According to studies by the World Health Organization, the proportions of young males age 15 to 24 reporting premarital sex decreased from 60 percent in 1989 to 23 percent in 1995. For females the decline was from 53 percent to 16 percent.

The take-home message for the U.S. Senate is that, while condoms were part of the education for youth, the emphasis was

on persuading children to postpone sexual activity until they were older, until they were married.

In addition to the national statistics already cited, we have some findings concerning the impact of a school-based AIDS education program in Soroti District, a program that benefited from additional inputs from an East African nongovernmental organization called AMREF. Baseline and followup studies of primary 7 students, which is age 13 through 16, but mostly around age 14, showed that as an apparent result of the school AIDS prevention program self-reported sexual activity among boys dropped from 61 percent for the class of 1994 to 5 percent for the class of 2001, while in girls the change was of similar magnitude, from 24 percent in 1994 to 2 percent in 2001. Some evidence other than self-reported findings corroborate these remarkable data, and I have some figures in the paper that has been handed out.

Now to the faith-based example. Some other early efforts involve faith-based organizations or FBOs. In 1992 USAID allocated funds for three major religious groups in Uganda—Catholic, Anglican, and Muslim. Each developed an AIDS prevention project and each received roughly a third of a million dollars from USAID. The FBOs said at first that they wished to promote fidelity and abstinence rather than condoms. At the time many working in AIDS prevention thought that fidelity and abstinence promotion would lead to few, if any, measurable results. Nevertheless, USAID made the grants and only asked that the FBOs not criticize condom promotion by other groups. This was agreed to and adhered to.

In the months to follow there were few, if any, problems over condoms. In fact, before long there was some condom promotion by two of the projects.

All three projects were found to be successful. The experience of the Muslim project, IMAL, has been published as a U.N. AIDS so-called best practices paper. So I will say a little bit more about the Anglican church project because it is less well known. This program was implemented in 10 out of 40 districts in Uganda at the time, meaning that the project had relatively large coverage. Clergy and laity were trained in AIDS prevention using the peer education approach. AIDS education messages were delivered from the pulpit in sermons as well as at funerals, weddings, and other occasions.

A USAID-funded evaluation of sexual behavior change among those reached by this project was conducted in 1995. It found that those reporting two or more sexual partners declined from 86 percent to 29 percent for men and from 75 percent to 7 percent for women. Ever-use of condoms rose from 9 percent to 12 percent in the same period.

These findings underscore that in Uganda reduction in the number of sexual partners was probably the single most important behavior change that resulted in prevalence decline. Abstinence was probably the second most important change. Why do I say this? We measured both behavior and HIV prevalence through surveys of people age 15 through 49. Most people in these age groups are married, especially in Africa, where the age of marriage is relatively young, and therefore sexually active. This is why Uganda's main message directed at the majority population was "zero grazing," meaning being faithful to one partner. Fidelity to one partner

also seems to have been the main response to the epidemic, if not to Uganda's prevention program.

When Ugandans were and are asked in surveys what is the main thing they have done to avoid AIDS, faithfulness to one partner is the first and overwhelming response in all age groups except 15 to 19, among whom the first answer is abstaining or delaying, closely followed by fidelity to one partner.

Unfortunately, the American political debate over abstinence versus condoms has contributed to monogamy or partner reduction being somewhat overlooked. It is very good that the United States through USAID has adopted the new ABC policy for those countries with generalized epidemics, that is epidemics where most HIV is found in the general population rather than in distinct high-risk groups. This policy should guide the development of programs in Africa and the Caribbean funded under the President's initiative.

Indeed, there are other countries in these regions that have implemented ABC approaches and they have achieved measures of success—Senegal, Zambia, Jamaica, and the Dominican Republic.

My concern is that the ABC from Uganda be recognized for what it actually is, a comprehensive approach to AIDS prevention that recognizes that people are different and therefore a range of behavioral options for AIDS prevention needs to be presented, not just one or two. It should be remembered that "zero grazing" or remaining faithful to one partner was the main message for the majority of Uganda's population.

The reason I must say "was" is that Uganda's AIDS prevention program has gradually changed, perhaps due to the funding priorities of foreign donor organizations. Since the mid-1990s there has been less emphasis on sexual behavior and more on medical solutions. In recent years there has been a small but disturbing trend toward riskier sexual behavior and for the first time in a decade there has been a slight up tick in national infection rates. The distinctive Ugandan ABC model of the earlier period, the one developed primarily by Ugandans for Ugandans, is the one that seems to have worked the best and the one that probably has the most to teach the rest of the world. Thank you, Senators.

[The prepared statement of Dr. Green follows:]

PREPARED STATEMENT OF EDWARD C. GREEN, PH.D., SENIOR RESEARCH SCIENTIST, HARVARD CENTER FOR POPULATION AND DEVELOPMENT STUDIES, CAMBRIDGE, MA

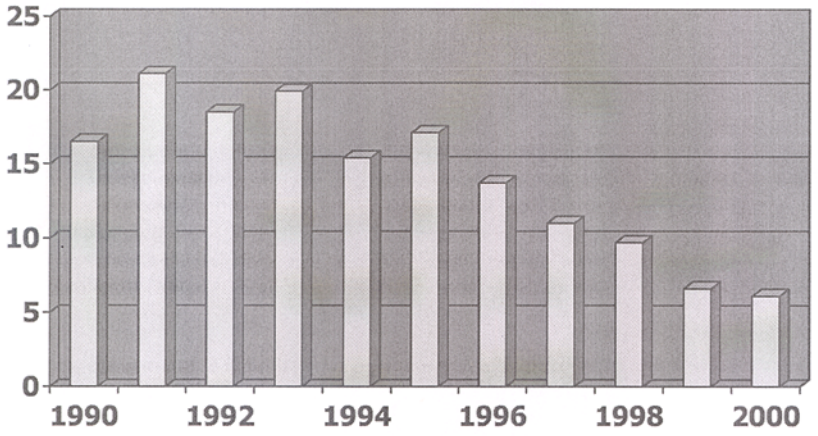
Thank you, Senator Alexander and distinguished members of the Africa subcommittee. I am an anthropologist working at the Harvard School of Public Health. For most of my professional career, I have worked in less developed countries as a behavioral science researcher and as a designer and evaluator of public health programs. I have worked extensively in Africa and other resource-poor parts of the world. A good deal of my work has focused on reproductive health, some of this including the social marketing of contraceptives.

I applaud the President's Initiative to commit major U.S. funding to address HIV/AIDS in the parts of the world with the highest infection rates. I am also glad that notice has been taken of Uganda's success in AIDS prevention, since there is much to be learned from the country that has had the greatest amount of HIV prevalence decline.

Infection rates have declined from 21% to 6% since 1991 [Fig. 1]. The Government of Uganda, led by President Museveni, developed a distinctive approach to AIDS prevention known as the ABC approach: Abstain, Be faithful, or use Condoms if A and B are not practiced. The abstinence message for the most part took the form of urging youth to delay having sex until they were older, and preferably married.

Many of us in the AIDS and public health communities didn't believe that abstinence and faithfulness were realistic goals. It now seems we were wrong.

FIG. 1.



Decline in National HIV Seroprevalence in Uganda, based on 15 sentinel surveillance sites

Uganda's ABC AIDS program began in 1986, the year Museveni became head of state. Since the rate of new infections began to decline in the late 1980s, it becomes important to know what programs were in place at that time and what behaviors changed in order to account for the decline of infection rates. None of the standard programs we associate with AIDS prevention:

Condom social marketing;

Voluntary counseling and testing (VCT)

Treatment of STDs

And most recently, prevention of mother-to-child transmission (PMTCT, based on the drug nevirapine)

were in place in the 1980s.

I am certainly not saying that these standard, biomedical interventions are not useful, only that we need to look at what interventions were actually in place when infection rates began to decline. It is also important to work backwards from the epidemiological and behavioral data. We know that prevalence decline and changes in sexual behavior were most pronounced in youth age 15-19. These findings took many of us by surprise, since we believed that teenagers are driven by "raging hormones," therefore abstinence is an unrealistic or impossible objective. In fact, many of us also believed that women had no power to negotiate sex, or to refuse unwanted sex, or to insist upon condom use, because African societies are male-dominated. In spite of these legitimate concerns based on real cultural patterns, Uganda designed interventions aimed at fundamentally changing sexual behavior, something the standard interventions just listed do not attempt. The primary target audience was youth.

Let me provide two examples of interventions that were among the first developed by Uganda. One is a youth program which was and is national in scope. The second example involves faith-based organizations.

THE SHEP PROGRAM

A program to introduce AIDS education in Ugandan primary schools began in 1987, starting with the School Health Education Program (SHEP) of the Ministry of Education. The aim of this program was to reach youth with AIDS prevention

information before they become sexually active. It was also known that dropout rates after primary school were high. AIDS was not the only component of SHEP, but it was an important one. The behavior change emphasis was on delay of age of first sex, but education about condoms was also part of the program.

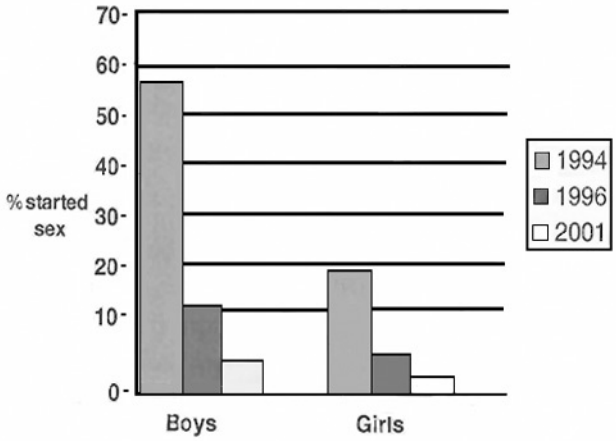
To implement the new program, there was a "training of trainers" approach that went from the district level, down to sub-districts, and then to teachers, who were the ones to taught students. Students themselves were trained as peer educators, and they were expected to teach their parents and friends about AIDS. This was all done in a relatively short time. The basic facts about AIDS and how to prevent it were taught.

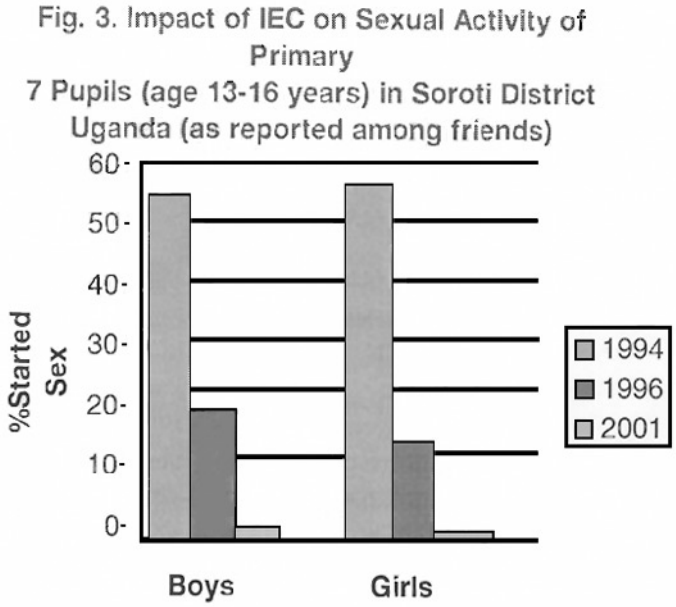
So-called Life Skills education has also been taught in Ugandan schools for a number of years, beginning in about 1987. Life Skills might be regarded as AIDS Education 102, which comes after the basic course in what AIDS is and how it is transmitted and prevented.

Life Skills refers to training youth in such skills as interpersonal relationships, self awareness and self esteem, problem solving, effective communication, decision-making, negotiating sex or NOT having sex, resisting peer pressure, critical thinking, formation of friendships, and empathy. These are referred to as cognitive skills and they seem to help youth make healthy and indeed life-saving decisions.

Did this and similar programs have impact? According to studies by the World Health Organization, the proportion of young males age 15-24 reporting premarital sex decreased from 60% in 1989 to 23% in 1995. For females, the decline was from 53% to 16%.

The take-home message for the U.S. Senate is that while condoms were part of AIDS education for youth, the emphasis was on persuading children to postpone sexual activity until they were older, until they were married. In addition to the national statistics already cited, we have some findings concerning the impact of a school-based AIDS education program in Soroti District, a program that benefited from additional inputs from an East African NGO called AMREF. Baseline and follow-up studies of Primary 7 pupils (age 13-16) showed that as an apparent result of the school AIDS prevention program, self-reported sexual activity among boys dropped from 61% for the class of 1994 to 5% for the class of 2001, while in girls the change was of similar magnitude, from 24% in 1994 to 2% in 2001 [Fig. 2]. Some evidence other than self-reported findings corroborate these remarkable data. [Fig. 3] (AMREF/Uganda. (2001; Nantulya 2002).





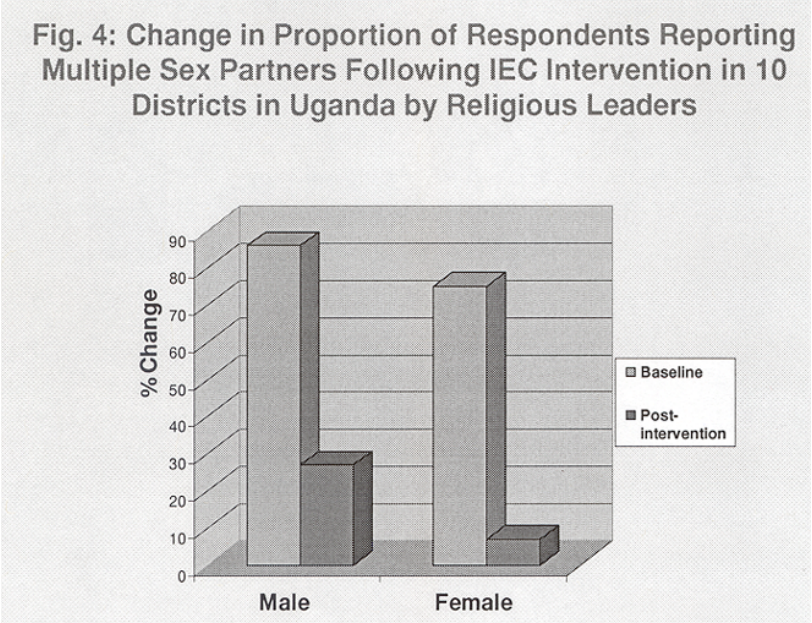
THE ANGLICAN CHURCH PROJECT

Some other early efforts involved faith-based organizations (FBOs). In 1992, USAID allocated funds for three major religious groups in Uganda: Catholic, Anglican and Muslim. Each developed an AIDS prevention project and each received

roughly $350,000 from USAID. The FBOs said at first that they wished to promote "fidelity" and "abstinence" rather than condoms. At the time, many working in AIDS prevention thought that fidelity and abstinence promotion would lead to few if any measurable results. Nevertheless, USAID made the grants and only asked the FBOs to not criticize condom promotion by other groups. This was agreed to and adhered to. In the months to follow there were few if any problems over condoms, in fact before long, there was some condom promotion by two of the projects.

All three projects were found to be successful. The experience of the Muslim project has been published as a UNAIDS so-called Best Practices paper. I will say a bit more about the Anglican project since it is less well known. This program was implemented in 10 out of 40 districts of Uganda, meaning the project had relatively large coverage. Clergy and laity were trained in AIDS prevention, using the peer education approach. AIDS education messages were delivered from the pulpit in sermons, as well as at funerals, weddings, and other occasions.

A USAID-funded evaluation of sexual behavior change among those reached by this project was conducted in 1995. It found that those reporting two or more sexual partners declined from 86% to 29% for men, and from 75% to 7% for women (Lyons 1996:8-9). Ever-use of condoms rose from 9% to 12% in the same period [Fig. 4].



These findings underscore that fact that in Uganda, reduction in the number of sexual partners (mutual monogamy, also reduction in partners among the minority of core transmitters reporting 3 or more partners) was probably the single most important behavioral change that resulted in prevalence decline. Abstinence was probably the second most important change (see Green 2003 and Hogle et al 2002 for more supporting data).

Why do I say this? We measure both behavior and HIV prevalence through surveys of people age 15-49. Most people in these age groups are married (especially in Africa, where age of marriage is relatively young) and sexually active. This is why Uganda's main message, directed at the majority population, was "zero grazing," meaning being faithful to one partner. Fidelity to one partner also seems to have been the main response to the epidemic, if not to Uganda's prevention program. When Ugandans were (and are) asked in surveys what is the main thing they have done to avoid AIDS, faithfulness to one partner is the first and overwhelming response in all age groups except 15-19, among whom the first answer is abstaining or delaying, closely followed by fidelity to one partner.

Unfortunately, the American political debate over abstinence versus condoms has contributed to monogamy or partner reduction being overlooked. It is very good that

the United States through USAID has adopted a new ABC policy for those countries with generalized epidemics, that is, epidemics where most HIV is found in the general population rather than in distinct, high-risk groups. This policy should guide the development of programs in Africa and the Caribbean funded under the President's Initiative. Indeed, there are other countries in these regions that have implemented ABC approaches, and they have also achieved measures of success: Senegal, Zambia, Jamaica, and the Dominican Republic.

My concern is that the ABC model from Uganda be recognized for what it actually is: a comprehensive approach to AIDS prevention that recognizes that people are different and therefore a range of behavioral options for AIDS prevention needs to be presented, not just one or two. And it should be remembered that "zero grazing," or remaining faithful to one partner, was the main message for the majority of Uganda's population.

The reason I must say "was" is that Uganda's AIDS prevention program has gradually changed, perhaps due to the funding priorities of foreign donor organizations. Since the mid-1990's, there has been less emphasis on sexual behavior and more on medical solutions. In recent years, there has been a small but disturbing trend toward riskier sexual behavior, and for the first time in a decade there has been a slight uptick in national infection rates. The distinctive Uganda ABC model of the earlier period, the one developed primarily by Ugandans for Ugandans, is the one that seems to have worked best, and is the one that has most to teach the rest of the world.

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Senator ALEXANDER. Thank you, Dr. Green.

Ms. Sophia Mukasa Monico, welcome.

STATEMENT OF SOPHIA MUKASA MONICO, SENIOR AIDS PROGRAM OFFICER, GLOBAL HEALTH COUNCIL, WASHINGTON, DC

Ms. MUKASA MONICO. Thank you, Mr. Chairman. My name is Mukasa Monico.

Senator ALEXANDER. Mukasa, I am sorry. Mukasa.

Ms. MUKASA MONICO. Mr. Chairman, subcommittee members, ladies and gentlemen: Thank you for giving me this opportunity to be here with you this afternoon. I think you all agree with me that this is a historic moment. On behalf of the thousands of health practitioners what are members of the Global Health Council and the communities they care for around the world, I want to thank you and your colleagues in the Senate for the speed with which you passed the President's emergency plan for AIDS relief.

From 1995 to 2001, Mr. Chairman, I was the chief executive officer of The AIDS Support Organization, TASO. TASO is an indigenous nongovernment organization in Uganda which was founded in 1987 to contribute to the process of restoring hope and improving the quality of life for people and communities infected and affected

by HIV and AIDS. TASO is now recognized around the world as a leader and innovator in the field of AIDS care, prevention, and support and, like what Anne said, the real heroes of TASO are the people living with HIV and AIDS and the founders who have passed away in the past years.

Mr. Chairman, ladies and gentlemen, my task this afternoon is to share with you some key elements that constitute Uganda's relatively small but significant success story, and I refer you to my testimony for more detailed information and statistics around this success story.

As we have all heard, as early as 1986 the then new Ugandan President Yoweri Museveni learned through his army that his nation was confronting an epidemic threatening to decimate his nation. The President has made it his personal and governmental priority to speak out about HIV and AIDS and is an advocate for reducing HIV-AIDS-related stigma and denial.

Mr. Chairman, reduction in stigma and denial is an indispensable element in the positive response to HIV and AIDS. It enables individuals to proactively take steps to avoid infecting others or being infected, as well as promote access to services that add to the overall success of prevention efforts. Additionally, it improves people's attitudes, making them more accepting of the infected and willing to provide compassionate care and support.

Ladies and gentlemen, reduction in stigma and denial is not enough to halt HIV transmission. Individuals must take action to change their own behavior and take precautions to avoid getting infected. Accordingly, President Museveni's personal commitment was quickly followed by a national policy and strategy, a strategy which is embedded in the conviction that HIV and AIDS affects every level of the population and poses a serious threat to the socioeconomic strata and development of our country.

The national policy charges all Ugandans individually and collectively with the responsibility of being actively involved in AIDS control activities within their mandates and capacities in a coordinated way at the various administrative and political levels down to the grassroots level. Ownership of the response is critical to an effective response to HIV and AIDS, Mr. Chairman.

Working with a nongovernmental faith-based, tradition, and community-based organizations, President Museveni has promoted prevention and care interventions that are relevant and culturally appropriate and sensitive. For some he promotes a message of delaying sexual relations, for others he urges them to be faithful to each other and promotes the use of condoms as an effective barrier. It is this three-part message that has made it possible for Ugandans to respond effectively to the devastating epidemic. I cannot stress strongly enough that all these program elements need to be in place for prevention to work.

Mr. Chairman, this is the foundation of the massive social mobilization effort that has given birth to the result that constitutes the success of Uganda. The interventions that contributed to this success go beyond ABC. They include the implementation of a comprehensive package of services for prevention, care, support, and treatment which serve overlapping but not identical goals. Prevention, support, and care efforts are not additive, but rather each

strategy increases the impact of the other through synergistic effects. Further, prevention and treatment involve different sectors and constituencies. It is therefore necessary to invest in all three simultaneously to achieve more than would be accomplished by investing in any one alone.

As a Ugandan, Mr. Chairman, I am deeply concerned when I hear people taking a single element of our successful national program, like abstinence, out of context and ascribe all our achievements to that one element. All three elements must be implemented together in order for prevention to work.

Ladies and gentlemen, Ugandans were very much cognizant of their society and as early as 1986 we acknowledged that providing comprehensive and candid information about HIV and AIDS was not enough. We had to reinforce those messages by formulating other policies and creating an environment that enables us to turn our knowledge into meaningful action. Hence other sectoral changes were also necessary in order to assure that prevention of HIV infection is attained in Uganda.

For example, Mr. Chairman, we worked with the existing decentralized political system to ensure that the voices of the most vulnerable populations, especially the girls, women, and the youth, are heard and acted upon. Through the education for all policy, as we have heard, and other programs, Ugandans ensure that social alternatives to sex are created for the youth and the children by keeping them productively busy through formal and informal education.

This policy change is important because schools provide a natural protective environment for the children, putting girls out of reach of older men and transactional sex. According to Ugandan data, girls are four to six times more vulnerable to HIV infection than boys of the same age group. Schools also provide an opportunity to inform, educate, and communicate about HIV and AIDS to the youth in an appropriately mixed and balanced way that is not interpreted as inciting the youth into early sex or promiscuity.

From a legal protection point of view, Mr. Chairman, significant changes have been made to the laws relating to sexual abuse, especially for the youth. For example, the age for consensual sex was increased from 14 to 18 years. In addition, Uganda has made economic empowerment of women a priority in order to improve their status in society, turning the rhetoric "no to risky sexual contacts" to meaningful protective actions.

It is worth reiterating, Mr. Chairman, that it was important for Uganda to have all of these and more programmatic elements in place for our balanced and comprehensive program to work.

The next step in addressing the epidemic in Uganda and throughout the developing world is extending anti-retroviral treatment. In his State of the Union Address, President Bush outlined his vision and commitment for the United States to expand access to anti-retroviral drugs. These medicines will provide hope to millions of Africans who do not see a future for themselves or their community today.

In a nutshell, Mr. Chairman, a motivating rather than a judgmental environment in Uganda made it possible for the community at large to forge ways and means that are both culturally

sensitive and relevant to meaningful behavior change, protecting people from HIV infection, and encouraging compassionate care.

Mr. Chairman, Uganda, just like most countries in the world, is implementing the universal approaches that are recommended by public health practitioners. As Ugandans, as Africans, we know what works. The real issue following the passage of the emergency plan for AIDS relief is to identify, expand, and replicate those elements that make the HIV-AIDS universal interventions work for Ugandans.

Mr. Chairman, to answer your question about the AIDS Corps, but also to move the agenda forward, the Global Health Council will be sponsoring a summit meeting for those charged with delivering these programs during the International Conference on AIDS and STDs [sexually transmitted diseases] in Africa this September in Nairobi, Kenya. At this summit, Mr. Chairman, representatives from the public, private, and governmental sectors will come together to share lessons learned and strategies that work.

The meeting will also discuss the practicalities needed to effectively and efficiently implement President Bush's challenge. We must be ready to put this legislation together—to work, and immediately.

Thank you for the opportunity to share my views with you today and I am happy to answer any questions you might have.

[The prepared statement of Ms. Mukasa Monico follows:]

PREPARED STATEMENT OF SOPHIA MUKASA MONICO, SENIOR AIDS OFFICER, GLOBAL HEALTH COUNCIL, WASHINGTON, DC

Mr. Chairman, subcommittee members, ladies and gentlemen, thank you for giving me the opportunity to be with you today. This is a historic moment. On behalf of the thousands of health practitioners who are members of the Global Health Council, and the communities they care for around the world, I want to thank you and your colleagues in the Senate for the speed with which you passed the President's Emergency Plan for AIDS Relief. As a native Ugandan, I believe that the onus is now on African and Caribbean people to make it work. I join my colleagues at the Global Health Council, which is the world's largest membership alliance dedicated to saving lives by improving health around the world, in looking forward to working with the Administration and Congress to put this plan into action.

From 1995 to 2001, I was the Chief Executive Officer of The AIDS Support Organization (TASO). TASO, an indigenous Ugandan NGO, was founded in 1987 to contribute to the process of restoring hope and improving the quality of life for persons and communities infected and affected by HIV/AIDS. TASO is now recognized around the world as a leader and innovator in the field of AIDS care, prevention and support.

AIDS IN UGANDA

Uganda is a large country about the size of Oregon, with an estimated population of 22 million people. AIDS was identified in 1982 in Uganda and early surveillance data showed that in 1988, the prevalence rate was 9 percent. This quickly escalated and, by 1992, urban areas were registering a prevalence rate of 30 percent, while the nationwide average rate was 18.5 percent. With the benefit of a concerted national effort, by the end of 1999 infection rates dropped 50 percent to the current prevalence rate of 5.7 percent in urban areas.

Children have been hit particularly hard by the epidemic, with two million children under age 18 having lost either one or both parents to the disease. This is detrimental to the development of an entire generation, which have lost their parents at the moment when parental care, guidance, and socialization are pivotal as a child develops his or her identity.

The effects are varied. A study carried out in southwest Uganda reported that school absenteeism in AIDS-affected household is significantly higher among girls than boys. This is largely due to the fact that girls are often the main care givers at home when their parents are ill. Not attending school has also had a significant

impact on the overall success of Uganda's prevention strategy. In Uganda, HIV/AIDS prevention messages have been incorporated into primary school curricula, with Ugandan boys and girls reporting behavior change as a direct result.

The epidemic has also had a significant impact on the overall health status of children, wiping out the significant gains we had achieved in child survival over the past decade. Uganda's child mortality rates remain high, with 134 out of every 1,000 live births not surviving until their fifth birthday because of AIDS.

WHY WAS UGANDA SUCCESSFUL?

Mr. Chairman, my task this afternoon is to share with you some of the reasons why Uganda has become a relatively small, but significant, success story. The epidemic is still raging in Uganda, and we have much to do before we can claim victory over our HIV/AIDS epidemic.

As early as 1986, the new Ugandan president, Yoweri Museveni, learned from his Army that his nation was confronting an epidemic threatening to decimate his nation. Early on in his presidency, President Museveni both spoke out about HIV/AIDS and became an advocate for reducing HIV/AIDS-related stigma. Strong political leadership is key to Uganda's success, and stigma reduction has been critical on many levels. When stigma is reduced, individuals are more willing to seek counseling and voluntarily seek HIV testing. This enables individuals to proactively take steps in order to avoid contracting and transmitting the virus to others, and adds to the overall success of prevention efforts. Additionally, if the stigma of HIV/AIDS is reduced in communities, people become more accepting of the infected and willing to provide compassionate care for them. Reducing stigma has benefits for both the community and the individual.

But, a reduction in stigma alone is not enough to halt HIV transmission individuals must take action to change their own behavior and take precautions. Accordingly, an environment that supports this individual choice must be created and sustained. President Museveni spoke out loudly and often about the need for individual Ugandans to protect themselves from the virus. Working with non-governmental, faith-based, traditional and community-based organizations, President Museveni promoted prevention interventions that were creative, culturally appropriate and compassionate, for people who were infected and affected by HIV/AIDS.

For some, he promoted a message of delaying sexual relations; for others, he urged them to be faithful to one partner and to use a condom. It was this three-part message that was effective in Uganda. In my personal experience, I believe that this comprehensive approach is critical. Different populations require different messages, and it is essential that people of all ages are educated about how to protect themselves.

I cannot stress strongly enough that all these program elements need to be in place for prevention to work. As a Ugandan, I am deeply concerned when I hear people taking a single element of our successful national program like abstinence out of context, and ascribe all of our achievements to that one element. All three elements must be implemented together, in order for prevention to work.

Museveni's personal commitment was quickly echoed by a National Policy and Strategy, which was embedded with the conviction that HIV/AIDS affects all every level of the population, and posed a serious threat to the socio-economic development of our country. The National Policy charges all Ugandans, individually and/or collectively, with the responsibility of being actively involved in AIDS control activities within their mandates and capacities in a coordinated way, at the various administrative and political levels down to the grassroots level.

This is the foundation of the massive social mobilization that has given birth to the results that constitute the success of Uganda. The interventions that contributed to this success include the implementation of a comprehensive package of services for prevention, care, support and treatment, which serve overlapping but not identical goals. Prevention and care efforts are not afterthoughts but, rather, each strategy increases the impact of the other through synergistic effects. Further, prevention and care involve different sectors and constituencies. It is therefore necessary to invest in all three simultaneously, to achieve more than would be accomplished by investing in any one alone.

We know what works and these interventions are not unique to Uganda. They are the universally recommended approaches advocated by all public health institutions and practitioners. Therefore, the issue is not what to do. Rather, we must identify, expand and replicate what the Ugandans did and are doing, to make the universal interventions work for everyone.

I will take this opportunity, to discuss further an issue that has been pulled out of context and risks to reverse the prevention gains we have achieved so far: bringing abstinence-only programs into the discussion.

We all know how critically important it is for prevention programs to target youth before they become sexually active. Uganda has achieved this on a personal and a societal level. Cognizant of our society, early in the process we acknowledged it was insufficient to only provide comprehensive and candid information about HIV/AIDS. We had to reinforce those messages by formulating other policies and creating an environment that would enable youth to turn their knowledge into meaningful action, which encouraged them to choose to protect themselves. In order to achieve this objective, the environment and messages had to be motivational rather than judgmental.

Political Change: We worked with the existing decentralized political system to ensure that the voices of the most vulnerable populations—especially girls, women and youth were heard, by:

- Setting a policy that ⅓ of members of Parliament had to be women;
- Establishing a seat in Parliament for youth; and
- Ensuring that women and youth were represented at all levels of the political decision-making apparatus.

Social Change: Ugandans ensured that youth and children were kept busy through both formal and informal education, which created social alternatives to sex. Under a policy change that calls for education for all, communities have promoted sending more girls to schools. However, it is not enough to promote only primary education. As education is still not free-of-charge in Uganda, communities are advocating for a policy that would make high school education free for all as well.

This policy change is important because schools provide a natural protective environment for children, putting girls out of reach of older men and transactional sex. Schools provide an opportunity to provide information about HIV/AIDS that is appropriately mixed and balanced, so that it is not interpreted as inciting the youth into early sex or promiscuity. These classes, which have demystified sex, impart sensitive and relevant life skills to youth so that they can make responsible choices.

Legal Change: Significant changes were made to laws in Uganda relating to the treatment of rape and statutory rape. Female lawyers in Uganda came together to seek these changes, and continue to work to stiffen the punishments for these offences. Other laws need to be established that will both serve as a disincentive to adults who might consider having sex with youth, and will enable enforcement against those who violate the law.

Economic Change: Uganda has made improving the status of women through economic empowerment a priority. Credit facilities targeted towards women were established, enabling many women to establish small businesses and attain economic self-sufficiency.

I cannot stress strongly enough how important it was for Uganda to have all of these programmatic elements in place, for our balanced and comprehensive program to work. Mr. Chairman, meaningful implementation of abstinence cannot be left open for interpretation by individuals with differing moral values. Uganda was very much aware of this, and complemented its ideology and sexual morals with an environment that encourages abstinence and change.

The next step in addressing the epidemic in Uganda and throughout the developing world is extending anti-retroviral treatment. In his State of the Union Address, President Bush outlined his vision and commitment for the United States to expand access to anti-retroviral drugs. These medicines will provide hope to the millions of Africans who do not see a future for themselves or their communities today. Pilot projects in Africa offering these life-extending medications have begun to reap their just results, with people returning to their normal lives as working, self-sufficient members of society, rather than as people waiting for death. Treatment is not only a humanitarian imperative—treatment supports prevention efforts, because it provides the requisite hope that will encourage individuals to learn their HIV status and it will reduce associated stigma.

CONCLUSION

Uganda's current successes were realized through an effective social mobilization effort that fostered an environment that was motivational, rather than judgmental. Uganda's efforts against HIV/AIDS continue to be substantially, financially and technically supported both by the government, as well as multilateral organizations including UNAIDS, the United Nations Development Program, the World Bank, the European Union and the World Health Organization. In addition, efforts are funded

through bilateral mechanisms supported by the U.S., Danish, British, Swedish, Italian, German, French and Japanese governments. Various international and local NGOs also fund and implement a variety of programs and activities.

This positive environment makes it possible for the community at large to forge ways and means that are both culturally sensitive and relevant to meaningful behavior change, protecting people from HIV infection and encourages compassionate care. In addition, you will note that these interventions represent a multi-sector response. AIDS is not just a medical condition in Africa HIV prevention work is not carried out by people wearing white coats but it is the responsibility of individuals, families, schools, media and religious institutions, political leaders and traditional leaders to ensure that further spread of HIV infection is halted.

NEXT STEPS

The real question following passage of the Emergency Plan for AIDS Relief is how to replicate the success in Uganda in other countries. It is critical for the U.S. government to remember the importance of working with local partners, which will guarantee cultural sensitivity and effectiveness.

Toward that end, the Global Health Council will be sponsoring a summit meeting of those charged with delivering these programs this September in Nairobi, Kenya, discussing the practicalities needed for effectively and efficiently implementing President Bush's challenge. At this summit, representatives from the public, private, and governmental sectors will come together to share lessons learned and strategies that work. We must be ready to put this legislation to work immediately.

Thank you for the opportunity to present my views here today and I am happy to answer any questions you might have.

UGANDA AIDS COMMISSION STATUS REPORT

WWW.AIDSUGANDA.ORG

HIGHLIGHTS OF KEY EVENTS AND ACTIVITIES

1982—Uganda medical doctors identify first AIDS cases on the shores of Lake Victoria in Rakai district, Southern Uganda.

1982-86—The epidemic largely handled by the health sector with spontaneous community initiatives to care for the infected and affected.

1986—Uganda's Health Minister of the new government announces the existence of HIV/AIDS in the country during the World Health Assembly in Geneva. This marked the beginning of political openness about the epidemic, creating a conducive environment for mass campaigns spearheaded by President Y K Museveni.

1986—The first AIDS Control Program was established in the Ministry of Health. Its priorities were safe blood, prevention of HIV infection in health care settings, information, education and communication about how to avoid HIV transmission (beginning of the ABC policy). This marked the first government-structured effort to address the epidemic.

1987—An AIDS Control Program was established in the Ministry of Defense to respond the special needs of the armed forces.

1987-91—Consultations began on a multi-sector approach to controlling AIDS. The government recognized that the epidemic's impact went beyond the health sector, and required planning and implementing relevant activities in other sectors.

1987—Establishment of The AIDS Support Organization (TASO) to provide much needed psychosocial support for the infected and affected. Quickly complemented by other initiatives, especially from the missionary hospitals (Kitovu, Nsambya, Rubaga and Mengo).

1990—Establishment of the AIDS Information Center (AIC) for voluntary Counseling and testing services (VCT).

1992—The Government adopts the multi-sectoral Approach to the Control of AIDS (MACA) as a policy and strategy for responding to the epidemic. This approach was aimed at building broad coalitions between the government and other partners, including community-based organizations and business.

1992—The Uganda AIDS Commission (UAC) is established by Act of Parliament to coordinate and harmonize the multi-sectoral efforts of the response.

1993—UAC leads and coordinates the development of the first multi-sectoral National Operational Plan (NOP) for HIV/AIDS/STD Activities 1994-1998, re-

flecting the priority need for different sectors to take the lead in addressing the epidemic.

1994-95—More AIDS Control Program Units are established in the Ministries of Gender, Education, Agriculture, Internal Affairs (Police and Prisons), Justice, Finance, Public Service and Local Government.

1994-Government secures a $75m soft loan from the World Bank to fight the epidemic, executed by the Ministry of Health through the Sexually Transmitted Infections Project (STIP) 1995-2000.

1995—Uganda successfully hosts and organizes the International Conference on AIDS and STDs in Africa (ICASA). Uganda announces the observed declining trends in HIV prevalence.

1996—Uganda receives the first UNAIDS Country Program Adviser (CPA).

1996—The country begins preparing for HIV vaccine trials after thorough consultations with all key stakeholders. Actual trial begins 1998.

1997-99—Participation in the study for the prevention of mother-to-child transmission of HIV using anti-retroviral drugs.

1997—With the support of UNAIDS, a comprehensive review of HIV/AIDS activities in Uganda is conducted by partners to assess coordination and implementation of HIV/AIDS activities.

1997—Uganda shifts from its traditional observance of World AIDS Day (WAD) to an annual World AIDS Campaign (WAC), culminating in WAD every year. WAC has since become a major advocacy activity in the country.

1997—Development of the 1998-2002 National Strategic Framework (NSF) for HIV/AIDS Activities with consensus from partners from various sectors at national and district levels.

1998—Establishment of the Drug Access Initiative, advocating for reduced prices for Anti Retroviral (ARV) drugs and supporting the establishment of the proper infrastructure for administering these drugs.

2000—Revision of the 1998-2002 NSF and development of the 2000/1-2005/6 NSF, which puts the HIV/AIDS problems into the broader context of national development goals.

2000—Recognizing the impact of HIV/AIDS on development, the Government embarked on the process of mainstreaming HIV/AIDS issues in the country's Poverty Eradication Action Plan while targeting integration in the government sector budgeting exercise.

2001—Accomplishment of the preparation of the Uganda AIDS Control Project prepared under the aegis of Multi-country AIDS Project (MAP) of the World Bank. A $50 million loan has been secured to support HIV/AIDS activities in all sectors at national, district and community levels.

Senator ALEXANDER. Thank you, Ms. Mukasa Monico. I appreciate your coming.

I have a question and it is one I asked Dr. Peterson earlier. Mrs. Museveni suggested that the African culture is congenial to the idea of self-control, of young people delaying sex, of married people being faithful. One, do you believe that is true? And two, do you believe that is unique in Uganda? I would be interested. Let me start with you, Ms. Mukasa Monico.

Ms. MUKASA MONICO. I will start with the last one. I do not think it is unique to Uganda. I think every human being, especially every parent, if I can start from that as a parent, will agree with me that abstaining would be the best solution for every youth in the world to avoid getting infected. But again, we know that the youth—or that children become youth and they become adults who make their own decisions.

So the best alternative to avoid getting infected would be, when you start getting—when you become sexually active, at least stick to one partner so that you do not get STDs or even HIV infection from outside your partnership or your union.

But as we know as human beings, if that were just the answer to it, Mr. Chairman, we would not be having infections right now. So we have to get together all the other approaches that will actu-

ally ensure that if A does not work and B does not work, then there is another way, another practical way to avoid getting infected and dying of HIV.

So if you find yourself in a situation where you actually cannot abstain, you are not sticking to your partner, or actually your first partner, who you do not know what his status is, but you have to get sexually involved, then you must do everything possible to protect yourself.

Senator ALEXANDER. It seems to me that all the witnesses and most people agree that part of the genius of the Ugandan proposal seems to be the combination of things, starting with exceptional leadership over a long period of time, that includes not just the government but many other, many other parts of the community, and that is comprehensive in that it is A, B, and C.

Yet it seems to me the news about it is not just that it worked, but that A and B worked better than most health care professionals expected. Most of the talk was that condoms were the answer and the news I am hearing is that condoms are a part of the answer, but that abstinence and faithfulness are more of the answer than many people were willing to admit 5 and 3 years ago. Would you agree with that or not?

Ms. MUKASA MONICO. My simple answer to that is I do not think it is A, B, or C. I think it is A, B, and C together that have made it happen.

Senator ALEXANDER. No, I am not disagreeing with that. But I am saying I believe—and Dr. Green, let me just go to you. Do I not hear you saying that, that among health care professionals over the last several years that most were skeptical of abstinence or faithfulness as contributing much toward prevention of AIDS?

Dr. GREEN. That is right, Senator.

Senator ALEXANDER. And what the data suggests is that they are important parts of the comprehensive approach?

Dr. GREEN. Part of the genius of Uganda's response to AIDS, and it occurred early, is that it treated AIDS as a behavioral issue, not simply as a medical issue for which there were medical solutions, such as condoms, male or female condoms, such as drugs for treating standard sexually transmitted diseases, which if you treat them the idea is that you will have less opportunity for infection.

But I think that you have put your finger on it, Mr. Chairman, that the real difference between ABC as practiced in Uganda and elsewhere is there was genuine balance. There was some real emphasis on A and B, not just the occasional nod in the direction of A and B and the funding goes into condoms and drugs and the program impact indicators are attached to condoms and drugs. It was truly a balanced program. I think we do not find so much balance elsewhere.

Senator ALEXANDER. Senator Feingold.

Senator FEINGOLD. Thank you, Mr. Chairman. This is an excellent panel and an extremely important discussion.

I want to say particularly to Ms. Mukasa Monico how important her message is. I heard your message loud and clear, and that is that we dare not oversimplify what happened in Uganda. You know, Uganda was a country that arguably had one of the worst reputations of any country in the world in the 1970s and 1980s,

and somehow miraculously, through incredible effort of the Ugandan people, this country has made great progress. In the whole world now, if you know anything about HIV-AIDS, if you want to talk about somewhere where people were able to help bring this under control, the first place that is discussed is Uganda, which is a tremendous credit to your country, to your leadership, and to all the people of your country.

I guess I feel so strongly that we should not mischaracterize or accidentally portray in a way that is not accurate what was really done there, and I believe that somebody like you who has devoted your life to this has a very important message when you tell us to be sure that we understand the complexity of it, that abstinence itself certainly is not the only answer and is not sufficient. And I believe the chairman is saying that and I believe other witnesses are saying that as well, in fairness.

But your phrase that this needs to be motivational but not judgmental is very, very important, because there are people who will take this data and these concepts and this straightforward talk about what is going on and use it in a way to suggest something that, frankly, is way too simplistic to be effective and in my view is extremely unfair to the people of Uganda who have achieved this success.

So I appreciate your message and believe that we have to continue to tell the story as it has actually occurred in Uganda and I will strive to be as accurate as I can about it and to avoid the judgmental aspect that potentially could accompany it.

My questions sort of relate to that aspect for both of you. First, Dr. Green, do the data show that people who have previously been sexually active respond meaningfully to the abstinence message or are the B and C messages typically more effective for this segment of the population?

Dr. GREEN. The short answer is yes, typically for people who have experienced sexual debut, as they call it, that the B and C messages are more appropriate. We have data from, for example, the demographic and health survey funded by the United States that shows that a not insignificant proportion of Ugandans who are widowed or single, but are, say, over 21 and who have had sexual intercourse are abstaining because they are not currently married.

But most of those who report zero partners in the last year are those who have not started to have sex yet, yet. But yes, the B and C messages are probably the most important messages for the sexually active, and it was so recognized by Uganda.

Senator FEINGOLD. With regard to certain specific groups of people within the country, let me ask first Ms. Mukasa Monico: What kind of steps have been taken in Uganda to work with high-risk groups like long-haul truck drivers?

Ms. MUKASA MONICO. A comprehensive program, especially a prevention program and information, education, and communication, but candid communication about HIV and AIDS. But let me just take you another step up from just truck drivers, because what we realized in Uganda is the fact that sex workers are very young girls and mainly girls who have parents or are orphans. And unfortunately the clients of the sex workers are none other than our husbands, our brothers, and our children. So to ignore them as a

population which is at high risk and actually risk to transmit HIV into our families—we had to target them.

The only way to make sense while working with them was to promote the use of condoms. Actually, there was a great increase in the use of condoms among sex workers, from 20 percent in 1991 to 80 percent in 2001, which is a very big contribution to HIV prevention, especially from a high-risk group to a normal group.

But going to the truck drivers, if you go to Uganda you find that along the highway from Kenya to Rwanda that is where you find all the TASO programs. You find a program in Jinja, Mulago, Tororo, and up to Rwanda practically. The one reason why we put those programs there was to target the truck drivers by, first of all, demystifying HIV and AIDS; and after demystifying it making sure that they actually have the right information and devices to protect themselves from HIV infection. So that was another targeted high group, high-risk group, in our interventions.

Senator FEINGOLD. Dr. Green, you want to comment on that?

Dr. GREEN. There was an attempt not to stigmatize groups like commercial sex workers and bar girls and truck drivers and soldiers. So the information, education, and communication was mostly done sort of low-key, through peer educators. And there was a lot of condom promotion to groups that were known to be at special risk.

Senator FEINGOLD. What about the military? You point out the history of this and how President Museveni found out about the problem through the military. We have heard very similar concerns in South Africa. What strategies have been targeted to the military, Ms. Mukasa Monico?

Dr. GREEN. I think that that is——

Senator FEINGOLD. Dr. Green?

Dr. GREEN [continuing]. Another high-risk—Sophia was looking at me, so maybe she wanted me to answer it first.

Senator FEINGOLD. Go ahead.

Dr. GREEN. I think that that was another high-risk group. There was a lot of peer education in the military. Infection rates fell in the military in the late eighties, early nineties, quite dramatically. But this was also true for military recruits. So you just had a lot of HIV prevalence decline among all groups, but including the military, and there were special programs.

I think maybe the first program in Africa that was directed at the military was there. I was part of the design of such a program in Swaziland a year ago, funded by the USAIDs of Defense, and the question arose what are the—out of A, B, C, what do you promote to soldiers? The answer was B and C.

When you mentioned truck drivers, about 10 years ago I was working in Tanzania in a project for commercial sex workers and I was driving to Mulago and our car broke down and we had to hitchhike, and we hitchhiked with a couple of truck drivers on the famous highway that you have all heard about, along which HIV infection spread. We asked the truck drivers what they were doing about AIDS and one driver said that he was faithful to his girlfriend that he is living with and the other one said he is getting married and no longer stopping and having sex along the way the way they used to.

So this was 1993, and it gave me my first clue that something other than the model that we had in mind as international AIDS experts might be going on. Then soon after that, I went to Uganda for the first time and saw that indeed something different was being promoted and something different seemed to be happening.

Ms. MUKASA MONICO. Maybe just to answer you about the military. One important element that has been incorporated in the military is voluntary counseling and testing as an entry point to behavior change and also seeking prompt medical care, which you find everywhere—not everywhere, like 60 percent in Uganda. But this is a specific service for the military men.

Senator FEINGOLD. I appreciate both of your answers because obviously I focus on the truck drivers and the military because of the stories I have heard all over Africa about the way in which HIV-AIDS can be spread. I remember hearing on a trip where we went first to Tanzania, then Mozambique, the concerns about the highways and the travel and the way in which it may have spread through Tanzania to Mozambique.

I appreciate the candor that realistically the most likely thing to work here is B and C, although you do express some hope that, it sounds like, that A has some role in this regard. But I think you are looking at the type of lifestyle and situation realistically. It is so important to remember what the role of B and C are in preventing the spread among very mobile people, which by definition the military and the truck drivers are.

We have even heard this with regard to sometimes troops that we have helped assist us in various difficult situations in Africa being sent from one country to another to keep the peace. This is a potential negative side effect for a country that may not have a particular high HIV-AIDS rate, when individuals may come and be involved in those areas. Even though they may be trying to keep the peace, other things obviously happen. This is a very critical part of understanding how the problem has spread throughout the continent.

Where do efforts to increase access to treatment stand in Uganda? Have efforts to increase access to treatment in Uganda encouraged people to participate in voluntary counseling and testing? Ms. Mukasa Monico?

Ms. MUKASA MONICO. The first targeted initiative to increase access to treatment in Uganda started around 1998 with the drug access initiative from UNAIDS. That is when we negotiated with big pharma to import drugs with reduced prices. It was not so reduced, because a person was paying around $1,500 per month just for triple therapy.

But around 2001, through again an increased effort to decrease prices and through contacting CIPLA India we managed to negotiate for generics and now drugs are costing $300 per year in Uganda, which is a substantial decrease from $1,500 per month. So that is one step forward.

So what we did was to import generics of anti-retrovirals, but by importing generics of anti-retrovirals we also managed to bring down the prices, some of the prices of the brand names for anti-retrovirals.

I think, just like any other incentive, knowing that you have a support system to fall back on, people are encouraged to go and test and find out where they are with HIV and AIDS because they know at the end of the day I can improve my quality of life because I can get access to anti-retrovirals. So undoubtedly, with more access to anti-retrovirals more people find out about their HIV status, and by finding out their HIV status they either know that they have to change their behavior if they are not infected, and if they are infected at least they know that they can get support.

But it also decreases the stigma around HIV and AIDS, and again improving access to services.

Senator FEINGOLD. Mr. Chairman, I thank both the witnesses. Thank you, Mr. Chairman.

Senator ALEXANDER. Thank you very much. I think the Ugandan experience has done something in the United States that we ourselves could not do. You have those who strongly believe in abstinence talking about condoms, and those who strongly believe in condoms acknowledging the importance of abstinence. That is a lot of progress in this country.

So we are grateful to you for the work you have done in Uganda and in helping us understand the role of that model as we go about an effort, particularly on this subcommittee, to help make sure the United States marshals the resources that we are beginning to approve and that we spend them as wisely and effectively as possible and with as much respect for the countries and the people that we hope to serve.

Thank you very much for being here.

Dr. GREEN. Thank you.

[Whereupon, at 4:02 p.m., the subcommittee adjourned, to reconvene subject to the call of the Chair.]