US PRESIDENT'S ADVISER AT RHODES
President Clinton's adviser on AIDS met 100 Eastern Cape AIDS workers in Grahamstown yesterday. Ms Sandy Thurman, *centre*, director of White House policy on AIDS, is seen in Rhodes University's quadrangle with the vice-chancellor, Dr David Woods and the Eastern Cape's MEC for health, Dr Trudy Thomas before the meeting started. Picture by Stephen Penney.

US AIDS millions not for East Cape, says Clinton adviser

by Mike Earl-Taylor

GRAHAMSTOWN, Thursday. The Eastern Cape province will not benefit from the proposed US donation of $10 million to South Africa to combat AIDS and HIV.

This was learned today when the director of the White House national policy on AIDS, and adviser to President Bill Clinton, Ms Sandy Thurman, addressed nearly 100 high-level delegates at Rhodes University this morning.

Ms Thurman is here on a fact-finding mission and to seek co-operation between South Africa and the United States in creating programmes to combat the deadly disease.

Provincial MEC for health, Dr Trudy Thomas and senior members of her department were also in attendance and many officials, health workers and AIDS caregivers had travelled from all over the province to share information with Ms Thurman.

Dr Thomas said the rate of AIDS infection in the province was eight percent up from six percent last year. Other provinces had rates of between 15 to 26 percent of AIDS or HIV sufferers.

As director of national US AIDS policy, Ms Thurman is responsible for overseeing and co-ordinating federal and state policies with local government and community-based organizations.

Ms Thurman explained she was here on a fact-finding mission and would report on her findings and make recommendations to President Clinton.

ECN learned the $10 million would be earmarked for Mpumalanga, KwaZulu-Natal and the Northwest province and the decision was made before Ms Thurman's arrival in South

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When the United States president's adviser on AIDS, Ms Sandy Thurman, *second from right,* visited Grahamstown last week to meet AIDS workers and educators, she was the guest of Rhodes University's vice-chancellor Dr David Woods, *left,* and his wife, Mrs Charlotte Woods, right, at their home, The Lodge. Also seen at an informal braai last Wednesday is the vice-principal Dr Michael Smout, *second from left.*

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US AIDS millions not for East Cape, says Clinton adviser

* From page 1

Africa.

Ms Thurman was introduced by the university vice-chancellor Dr David Woods who said he hoped the Eastern Cape would make a significant contribution to the education and prevention of AIDS in the global sense.

A Xhosa praise singer welcomed Ms Thurman before she embarked on an informal and frank interchange with her audience in which the former director of AIDS Atlanta (a large community-based AIDS project in Georgia) was able to share her expertise.

She said her position at the White House was the only office that deals with the disease. There are between 600 000 and 900 000 people with AIDS or related diseases in the US.

She said she favoured the hands-on approach rather than the bureaucratic method and wanted to share the experience with South Africa.

"The AIDS problem here is very similar to ours and there is a need to be symbiotic between the academic and scientific approaches and the community.

"Sex education has to be age appropriate. We all know that children are engaging in sexual activity at a younger age and we need a reality check though it is a very sensitive issue.

"Our response should be reality-based and the strongest need is for education and prevention as there is no cure for the illness."

Ms Thurman explained the changing patterns of sexual behaviour in American society and the patterns of AIDS infection indicated more Afro-American women were becoming infected and the incidence of the sexually transmitted disease in young men in the "gay" population was increasing.

"This underscores the need for education and prevention. The AIDS infection rate now stands at between 40 000 to 60 000 a year but the death rate has declined due to the use of advanced but very expensive drugs, so more people are surviving the disease."

Another increasing source of AIDS infection was through drug users sharing needles.

Asked what she would do to help with the problem in the Eastern Cape which has the highest rate of Hepatitis B, often linked to the AIDS disease, Ms Thurman said she would advocate for programmes and for greater co-operation between the two countries.

In an interview with ECN Ms Thurman said the purpose of her visit was to collect the facts on the disease and form a data base and see what the people on the "front-line" were doing in South Africa.

"I shall report on my findings to President Clinton and make my recommendations as to how we can assist each other in combating the disease." - ECN.

E.P. HERALD. FRIDAY, JANUARY 23, 1998 Pg 11

E Cape to miss out on R49m in AIDS funding

By MIKE EARL-TAYLOR

THE Eastern Cape will not benefit from the proposed $10-million (R49-million) to South Africa to combat AIDS and HIV.

This was learned when the White House National Policy on AIDS director Sandy Thurman, who is also US President Bill Clinton's adviser, addressed nearly 100 delegates at Rhodes University yesterday.

Miss Thurman is here on a fact-finding mission and to seek co-operation between South Africa and the US in creating programmes to combat the deadly disease.

Provincial Health MEC Trudie Thomas and senior department members also attended. Many officials, health workers and AIDS caregivers travelled from across the province to speak to Miss Thurman.

Dr Thomas said the rate of AIDS infection in the province was eight per cent, up from six per cent last year. Other provinces had rates of between 15 per cent and 26 per cent.

As director of national US AIDS policy, Miss Thurman is responsible for overseeing and co-ordinating federal and state policies with local government and community-based organisations.

She will report back and make recommendations to Mr Clinton.

The $10-million is earmarked for Mpumalanga, KwaZulu Natal and the North West Province and the decision was made before Miss Thurman's arrival in South Africa.

"The AIDS problem here is very similar to ours and there is a need to be symbiotic between the academic and scientific approaches and the community," she said. — ECN

Daily Dispatch, Friday, January 23, 1998 Pg 3

No Aids research money from US for East Cape

By Adrienne Carlisle

GRAHAMSTOWN — The Eastern Cape will not benefit from a R48 million grant earmarked for combating Aids, it was learnt yesterday.

The disappointing news was confirmed by United States Director of Aids Policy, Ms Sandra Thurman, who is visiting the Eastern Cape and using Rhodes University as a base to gather a full picture of Aids patterns in the province.

Ms Thurman was billed as being "closely associated" with the grant, and expectations were that some of it would go to the Eastern Cape.

However the money has apparently already been allocated to Mpumalanga, North-West and KwaZulu-Natal where HIV figures are said to be particularly high.

She told a gathering of about 100 health workers, government representatives and Aids activists that it was important that all provinces get the financial support they needed for research and other work in the area of Aids but added that "a lot of other factors" such as prevalence of the disease had been taken into consideration.

Unfortunately there are resource shortages everywhere.

"Primarily, my job is to get information, do the fact finding and take the information back to my government and make recommendations about future actions. I don't really do the funding as such.

But Equity representative Dr Clarence Mini said he was "aggrieved" that no money was to come to the Eastern Cape, saying the decision was not an informed one.

"I suspect they based the distribution on statistics. If you have high HIV statistics you get the money."

He said the real rate of HIV in the Eastern Cape was higher than the reported rate and described the estimates in the Transkei as a "thumbsuck".

He said many migrant workers who contracted HIV were counted in the province where they work, but return home carrying the virus.

Health MEC Trudy Thomas confirmed at the meeting that the Eastern Cape — which has an eight-percent Aids prevalence — fell into a "lower level" Aids category when compared with many other provinces, but said this was not a reason to be complacent.

"We are in the lower level but we feel that we ought not to be complacent about it because eight out of every hundred is extremely high and very worrying. We are very concerned about the situation."

Dr Thomas said exacerbating factors contributing to the rising HIV rate in the province included the high level of hepatitis B, poor socio-economic conditions and a "migrant situation" where people returned home from high HIV-prevalent areas, possibly carrying the disease.

"In the Eastern Cape there are also sexual politics which are exploitative and controlling and prevent women from saying no. While our prevalence may not be the highest in the country we have a cultural culture, so to speak, which is conducive to the increase of Aids."

She said both Ms Thurman's expertise and money from the United States would be welcome in assisting in combating the virus.

Ms Thurman did not dismiss the possibility that other money would be coming the way of the Eastern Cape.

"I report back to my government on what I have seen and which projects are worth supporting. I just don't carry the cheque book."

USAID

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

Bureau for Africa
Office of Sustainable Development
Rosslyn, VA 22209

Date: 3/23/98

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Phone: _____

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Number of Pages Including Cover Sheet: _____

Message

Sandy,
Background for Q's + A's for POTUS re:
Research + AIDS.

Alie.

March 23, 1998

TO: Sandra Thurman

FROM: Alex Ross

SUBJECT: Research on HIV/AIDS

I have attached a copy of the executive summary of the 1996 National Research Council report "Preventing and Mitigating AIDS in Sub-Saharan Africa: Research ad Data Priorities for the Social and Behavioral Sciences" The report was funded by USAID's Bureau for Africa. It reviewed the state of the art in AIDS research and made a series of recommendations. As the NRC is indcpendent, USAID and others used the information to clarify research agendas. The report does not review what USAID is doing.

SUMMARY

Preventing and Mitigating AIDS in Sub-Saharan Africa

Research and Data Priorities for the Social and Behavioral Sciences

Barney Cohen and James Trussell, editors

Panel on Data and Research Priorities for Arresting AIDS in Sub-Saharan Africa

Committee on Population

Commission on Behavioral and Social Sciences and Education

National Research Council

NATIONAL ACADEMY PRESS
Washington, D.C. 1996

NATIONAL ACADEMY PRESS • 2101 Constitution Ave., N.W. • Washington, DC 20418

The National Academy of Sciences is a private, nonprofit, self-perpetuating society of distinguished scholars engaged in scientific and engineering research, dedicated to the furtherance of science and technology and to their use for the general welfare. Upon the authority of the charter granted to it by the Congress in 1863, the Academy has a mandate that requires it to advise the federal government on scientific and technical matters. Dr. Bruce M. Alberts is president of the National Academy of Sciences.

The National Academy of Engineering was established in 1964, under the charter of the National Academy of Sciences, as a parallel organization of outstanding engineers. It is autonomous in its administration and in the selection of its members, sharing with the National Academy of Sciences the responsibility for advising the federal government. The National Academy of Engineering also sponsors engineering programs aimed at meeting national needs, encourages education and research, and recognizes the superior achievements of engineers. Dr. Harold Liebowitz is president of the National Academy of Engineering.

The Institute of Medicine was established in 1970 by the National Academy of Sciences to secure the services of eminent members of appropriate professions in the examination of policy matters pertaining to the health of the public. The Institute acts under the responsibility given to the National Academy of Sciences by its congressional charter to be an adviser to the federal government and, upon its own initiative, to identify issues of medical care, research, and education. Dr. Kenneth I. Shine is president of the Institute of Medicine.

The National Research Council was organized by the National Academy of Sciences in 1916 to associate the broad community of science and technology with the Academy's purposes of furthering knowledge and advising the federal government. Functioning in accordance with general policies determined by the Academy, the Council has become the principal operating agency of both the National Academy of Sciences and the National Academy of Engineering in providing services to the government, the public, and the scientific and engineering communities. The Council is administered jointly by both Academies and the Institute of Medicine. Dr. Bruce M. Alberts and Dr. Harold Liebowitz are chairman and vice chairman, respectively, of the National Research Council.

The project that is the subject of this report was funded principally by the Bureau for Africa of the U.S. Agency for International Development (USAID) through a cooperative agreement administered by USAID's Office of Health and Nutrition. The Andrew W. Mellon Foundation also provided funding to the Committee on Population for this project.

The Summary is available in limited quantities from the Committee on Population, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.

The complete volume of *Preventing and Mitigating AIDS in Sub-Saharan Africa: Research and Data Priorities for the Social and Behavioral Sciences*, from which this Summary is extracted, is available for sale from the National Academy Press, 2101 Constitution Avenue, N.W., Box 285, Washington, D.C. 20055. Call 800-624-6242 or 202-334-3313 (in the Washington Metropolitan Area).

Printed in the United States of America

PANEL ON DATA AND RESEARCH PRIORITIES FOR ARRESTING AIDS IN SUB-SAHARAN AFRICA

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Acknowledgments

This report is the product of the efforts of many people. The panel was established under the auspices of the Committee on Population. The committee, chaired by Ronald Lee, was responsible for establishing the panel and for reviewing the final report.

We are most grateful to the organizations that provided financial support for the work of the panel: The Bureau for Africa of the U.S. Agency for International Development and the Andrew W. Mellon Foundation. Besides providing funding, the representatives of these organizations were a valuable source of information and advice in the development of the panel's overall work plan.

Special thanks are due to Claude Chela, Hortense Deffo, Jean-Pierre Edjca, Zakariaou Njoumeni, and others on the staff of the Institut de Recherche et des Etudes de Comportements (IRESCO) in Cameroon, who prepared two very useful background papers for the panel.

Thanks are also due to Lorna Edwards, Alexis Kuate, Annick Mady, Declare Mushi, and Richard Odindo for their help implementing a questionnaire to nongovernmental organizations in various sub-Saharan African countries; to Jeff O'Malley and Joanna Trilivas, who participated in the design of the survey and to Sahr Kpundeh, who managed its implementation.

We are very grateful to the numerous researchers and policy makers in Africa who made time in their busy work schedules to talk to members of the panel during their mission to Africa in January and February 1995.

We are especially indebted to Betsy Armstrong for her many hours of thoughtful editing, to John Belanger and Joanna Sadowska for checking and rechecking the references, and to Claire Del Medico and Amy Worlton for pre-

paring the manuscripts. We are also grateful for Elizabeth Pisani and Christine Solomon for their substantial contributions to Chapter 4 and Chapter 5, respectively. Special thanks are also due to Trish DeFrisco for providing superb administrative and logistical support to the panel, to Jennifer Johnson-Kuhn for her valuable research assistance on Chapter 6, and to Rona Briere for her skillful editing of the report.

We owe the greatest debt to Barney Cohen, who managed the entire process and ensured that we met our deadlines and whose intellectual contributions can be found in every chapter of the report, especially Chapters 1, 2, 6, and 7.

We close by expressing our heartfelt appreciation to the members of the panel who contributed long hours and their special expertise to the crafting of this report. Kofi Awusabo-Asare and Daniel Tarantola prepared the initial draft of sections of Chapter 2; Thomas Quinn, Maria Wawer, and Peter Way prepared the initial draft of Chapter 3; John Cleland prepared the initial draft of Chapter 4; Peter Lamptey, Deborah Rugg, and Carl Kendall prepared the initial draft of Chapter 5; and Mead Over prepared the initial draft of Chapter 6.

James Trussell and Jane Menken, *Cochairs*
Panel on Research and Data Priorities for
Arresting AIDS in sub-Saharan Africa

Contents

NOTE: This map, which has been prepared solely for the convenience of readers, does not purport to express political boundaries or relationships. The scale is a composite of several forms of projection.

Summary

The official number of acquired immune deficiency syndrome (AIDS) cases worldwide since the start of the epidemic passed the 1 million mark near the end of 1994—a fact that was covered in a six-sentence story on an inside page of *The New York Times* (January 4, 1995). Moreover, given the chronic underreporting and under-diagnosis in developing countries, the actual number of AIDS cases may be four times as high. The official statistics also do not reflect the millions of people who are infected with the human immunodeficiency virus (HIV) but have yet to develop symptoms of AIDS. The situation is critical in sub-Saharan Africa, where the World Health Organization (WHO) estimates that approximately 11 million adults and as many as 1 million children have been infected with HIV, and where basic infrastructure, financial, and managerial resources, as well as health-care personnel to deal with the catastrophe, are all extremely scarce.

Sub-Saharan Africa is geographically, demographically, socially, and culturally heterogeneous, and the extent and spread of HIV infection and AIDS have accordingly been heterogeneous as well. Thus, it is difficult to generalize about the AIDS epidemic in the region. There have been only a few nationally or regionally representative seroprevalence studies conducted to date in sub-Saharan Africa, and information is available predominantly on the groups with the highest risk of HIV infection. Yet some overall characteristics and trends can be seen. The most afflicted countries are geographically concentrated: other than Côte d'Ivoire in West Africa, they lie in a region of East and Southern Africa that

stretches from Uganda and Kenya southward to include Rwanda, Burundi, Tanzania, Malawi, Zambia, Zimbabwe, and Botswana.

Patients seeking treatment today probably contracted the virus years ago. Thus, no matter how serious the situation currently appears, there will be very large increases in the number of AIDS deaths in sub-Saharan Africa in the future. By the year 2010, demographers project that life expectancy will fall from 66 to 33 years in Zambia, from 70 to 40 years in Zimbabwe, from 68 to 40 years in Kenya, and from 59 to 31 years in Uganda.

NEED FOR IMMEDIATE ACTION

There is encouraging evidence that intervention programs to change behavior can be effective in preventing the spread of HIV. Public awareness of the AIDS epidemic is extremely high throughout Africa, and condom sales have risen dramatically across the continent in the past few years. Other promising findings include a recent reduction in the prevalence of HIV-1 infection among young males in rural Uganda and evidence that treating sexually transmitted diseases (STDs) in rural Tanzania may reduce the spread of HIV. But many interventions have been experimental and small scale and so are not sufficient to reverse the course of the epidemic. At the same time, discovery of an effective vaccine or treatment shows little promise. Furthermore, even if a vaccine or cure were developed, it would probably not be sufficient to bring a speedy end to the epidemic—because of imperfect effectiveness, cost, and less than universal distribution and acceptance. In addition, many of the millions of people already infected with HIV are unaware of their status and so represent a pool capable of passing the virus to new cohorts. Thus, changing human behavior to slow the speed or limit the extent of transmission will remain for the foreseeable future the first and probably the most important line of defense against HIV/AIDS in sub-Saharan Africa. More and better social and behavioral research is needed to develop more effective and acceptable preventive strategies and to find more effective ways of mitigating the negative effects of the epidemic.

Perhaps the most important argument for immediate action to slow the further spread of HIV is that, as suggested above, in many parts of the region the epidemic has not yet peaked. HIV tends to spread quickly among individuals whose behaviors place them at high risk of infection, such as commercial sex workers and their clients; it spreads thereafter—at first slowly and then at an accelerated pace—into the general population. In many sub-Saharan African countries the disease has already spread widely, but in others it has not. Because the cost-effectiveness of prevention efforts declines rapidly as the epidemic spreads, the timing of interventions is crucial. Failure to control the epidemic now will mean that far more costly and difficult interventions will be necessary in the future.

Another important reason for acting now to revitalize programs to combat

HIV and AIDS is that the region's governments are facing a critical turning point in prevention efforts. Since their inception in the late 1980s, national prevention programs often have operated on the assumption that traditional health education about HIV/AIDS would be sufficient to induce widespread behavior change. This has not proved to be the case. The most optimistic reading of the results of these prevention efforts is that they have been less successful than was at first hoped. At the same time, leadership of the global effort to fight AIDS is changing hands, creating an important opportunity to review what has been achieved to date and to develop a coherent global strategy for the foreseeable future. In response to a recommendation by the executive board of WHO, and with firm commitments to AIDS activities from other United Nations organizations, a joint United Nations Programme on AIDS (UNAIDS) is being created to improve coordination among the various organizations and to boost the global response.

Finally, for a number of reasons, current AIDS-prevention efforts may be reaching a plateau. Agencies and governments in developed countries are beginning to suffer from "donor fatigue," induced partly by the realization that the epidemic is unlikely to affect the developed world as badly as was first feared, and partly by an inability to see how the money and effort expended on prevention thus far have affected the course of the epidemic. Furthermore, international donors do not want to commit themselves to providing care for the growing number of AIDS patients in countries where expenditures on health averaged less than US $15 per capita in 1990. The most visible consequence of donor fatigue in Africa is the withdrawal of resident advisers of WHO's Global Programme on AIDS from national AIDS control programs. This reduction in assistance has had enormous costs, in both human and economic terms. It also increases the urgency for action by Africans and their governments.

We recommend research and data in the social and behavioral sciences to improve and extend existing successful programs and devise more effective strategies for preventing HIV transmission, as well as support efforts to mitigate the impact of the AIDS epidemic. Our recommendations cover five areas: the monitoring of the epidemic, information on sexual behavior and HIV/AIDS, primary HIV-prevention strategies, mitigation of the impacts of the epidemic, and the building of an indigenous capacity for AIDS-related research. Both our five key recommendations and our other recommendations are offered with full acknowledgment of the importance of the economic, political, and societal context of the HIV/AIDS epidemic in Africa. Our five key recommendations are numbered separately from our other recommendations, which are numbered by chapter in the order in which they appear.

SOCIETAL CONTEXT OF HIV/AIDS IN AFRICA

The societal context within which people are born and raised, are initiated to sexuality, and lead their lives strongly influences their perceptions of risk and their sexual behavior. Social, cultural, and economic factors can act either to

speed or to retard the spread of infection. Planners and policy makers must be cognizant of the societal context and attempt to modify it in ways that are conducive to and supportive of change. Effective interventions must target not only individual perceptions and behavior, but also their larger context.

Among the salient factors that affect the size and shape of the HIV/AIDS epidemic in sub-Saharan Africa are the age and gender composition of the population; the pattern of sex roles and expectations within society; inequities in gender roles and power; sexual access to young girls and the acceptance of widespread differentials in the ages of sexual partners; rapid urbanization under conditions of high unemployment; poverty; considerable transactional sex fostered by limited earning opportunities for women; and lack of access to health care, particularly treatment for various sexually transmitted diseases (STDs). These factors are often exacerbated by social upheavals related to economic distress, political conflicts, and wars. Of course, there is enormous variation in the situation from country to country; particularly noteworthy are the differences between West Africa and East and Southern Africa.

EPIDEMIOLOGY OF THE HIV/AIDS EPIDEMIC

The global HIV/AIDS epidemic consists of many separate, individual epidemics, each with its own distinct characteristics that depend on geography, the specific population affected, the frequencies of risk behaviors and practices, and the timing of the introduction of the virus. No single factor, biological or behavioral, determines the epidemiologic pattern of HIV infection. Instead, a complex interaction among several variables determines how and where HIV spreads in a population. The primary mode of HIV transmission is sexual, with heterosexual transmission accounting for at least 80 percent of adult HIV infections in sub-Saharan Africa.

Biological factors also influence the spread of the epidemic by increasing or decreasing susceptibility to the virus, altering the infectiousness of those with HIV, and hastening the progression of infection to disease and death. Such biological factors include the presence of classical STDs, male circumcision, and the viral characteristics of both HIV-1 and HIV-2 and their multiple genetic strains.

A growing body of data suggests that HIV cannot be considered in isolation from other STDs because it shares with them modes of transmission and behavioral risk factors. More important, there is evidence that other STDs may increase susceptibility to and transmission of HIV, so that treatment and prevention of STDs may serve as an important weapon in curbing the HIV/AIDS epidemic.

Although HIV infection rates are high among many populations and subgroups in sub-Saharan Africa, there is much variation in incidence and prevalence, both geographically and by population subgroups. The probable causes of this heterogeneity in seroprevalence include behavioral, biological, and societal factors. As suggested above, trying to explain the phenomenon by a single

factor—such as civil war, male circumcision, STDs, or rate of partner change—is simplistic. Instead, it appears that the simultaneous occurrence of several risk factors for HIV transmission determines how rapidly and to what level HIV spreads among a population and who becomes infected. This epidemiologic diversity not only reflects differences in sexual and other behaviors, but also suggests that the epidemic has not reached an equilibrium in most areas.

The HIV epidemic and the demographic structure of the population of sub-Saharan Africa will have complex interactions over time. The population is predominantly young, in sharp contrast with the age structure in developed countries, and many of the behavioral factors associated with HIV transmission are common among young people. Accordingly, the large number of people under age 15, who will soon enter their sexual and reproductive lives, represent a priority group for AIDS and STD prevention.

KEY RECOMMENDATION 1. Basic surveillance systems for monitoring the prevalence and incidence of STDs and HIV must be strengthened and expanded.

Good social science research is as dependent as public health and medical research on reliable and valid HIV/AIDS surveillance data. With the implementation of various interventions aimed at controlling HIV transmission, periodic monitoring of STD and HIV prevalence and incidence among selected populations is essential both for assessment of the impact of these programs and for decision making on program design and implementation.

Recommendation 3-1. More emphasis must be placed on HIV incidence studies for monitoring trends in HIV infection rates.

Although seroprevalence provides important information regarding currently infected individuals in an area, measuring incidence is also critically important for estimating the rate of change in the spread of HIV infection in a given population. In particular, data on current incidence provide the most direct and immediate information regarding the potential effects of a given intervention. Together, prevalence and incidence studies can provide information regarding the current status of the epidemic in terms of numbers of infected individuals and the rate of spread within a given population on an annual basis.

Recommendation 3-2. STD and HIV prevalence and incidence data should be combined with behavioral and demographic information.

Current surveillance systems are often limited, incomplete, and inconsistent, and they rarely measure behavioral or demographic variables. Given new, non-

invasive techniques for the collection and analysis of biological specimens (including blood, urine, vaginal secretions, and saliva), accurate assessment of STD and HIV prevalence and incidence can readily be combined with behavioral and demographic information.

In conjunction with periodic serosurveys, demographic information is needed to elucidate the differential spread of STD and HIV infection in rural and urban settings and variations in seroprevalence and incidence by gender, educational level, profession, income level, age, and other demographic factors. This type of information is critical for targeting prevention messages to selected groups at risk of acquiring and transmitting HIV and for projecting the effects of HIV and other STDs on a population over time.

SEXUAL BEHAVIOR AND HIV/AIDS

Patterns of sexual behavior—both partner selection and particular practices—are clearly the primary determinant of the spread of the HIV/AIDS epidemic in sub-Saharan Africa. Information on sexual behavior is needed to help project the future course of the epidemic, to develop more effective prevention strategies, and to provide baseline data for evaluating the effectiveness of alternative preventive strategies.

Several studies have begun to address how sexual networks channel and potentially amplify HIV transmission in sub-Saharan Africa. Such networking studies encompass the role of migration, transportation systems, and local markets. Asymmetric age matching, where young women have sexual contact with older men, results in a young cohort of women who have been exposed to older male partners with higher HIV prevalence; this pattern creates a chain of infection that passes from generation to generation.

Heterogeneity in the composition of sexual networks may have strong implications for the speed or direction of viral transmission. Patterns of mixing between people in high-risk core groups and others in the general population observed in sub-Saharan African settings (in contrast to pairings confined within well-defined core groups) can result in substantial spread of STDs and HIV among the general population. Although much emphasis has been placed on "high-risk" behaviors associated with multiple, sequential, short-term relationships, there is a growing body of research suggesting that concurrent multiple partnerships, including those that are stable and long term (common in many African settings), may contribute substantially to HIV transmission.

At the same time, however, networks also serve as bases of social support and the development of behavioral norms. Networks are a potential natural resource for behavioral interventions. Support for behavioral change, such as acceptance of condoms among peers, can enable individuals to negotiate these matters more effectively when confronted with a resistant partner. Conversely, the absence of support networks can make behavioral change more difficult to achieve.

Recommendation 4-1. Research on sexual networks is critical.

Population-based research is needed to collect and analyze data on both the variables that describe individual sexual behavior and the possible socioeconomic determinants of the decision to have sex with a new partner or forgo protection. Since the details of interconnected sexual networks are difficult to deduce from the answers to individual questionnaires, there is also an important role for social network research.

Recommendation 4-2. Researchers need to develop more reliable ways of collecting information on sexual behavior and to find ways of testing its validity.

There appears to be a much greater willingness to report sexual behavior than was believed until recently, but this field of research requires sensitivity. The challenge is to develop definitions and appropriate vocabulary, such as for categories of relationships, that are both specific enough to be clear to respondents and generalizable enough to be useful to analysts and program planners. The challenge is likely to grow as information about high-risk behavior spreads, increasing the likelihood that respondents will seek to give the "right" answers on questionnaires and in interviews. Hybrid research strategies involving both qualitative and quantitative approaches are essential. Where appropriate, and when both privacy and confidentiality can be ensured, biological markers of sexual activity (such as HIV or STD status) should periodically be incorporated into behavioral surveys to allow assessment of the validity of questionnaire responses and the extent to which the latter provide adequate information on risk.

Recommendation 4-3. Research is needed on patterns of sexual initiation and on the formation of sexual norms and attitudes.

The sexual habits of a lifetime may well be influenced by a socialization process that starts at or before puberty, often before sexual activity begins. A better understanding of the early influences on sexual norms and attitudes and of patterns of sexual initiation may prove essential to promoting safer behavior. For this recommended research to be successful, studies must include children and prepubescent youths, as well as sexually active adolescents and their partners. Recognition that sexuality is socially constructed and changing rapidly is essential to broadening the research agenda and improving interventions.

Recommendation 4-4. More work is needed to clarify the frequency of specific sexual practices.

Because the epidemic in sub-Saharan Africa is being sustained by heterosexual transmission, information on sexual behavior is needed to help develop

more effective prevention strategies, as well as to provide baseline data to evaluate their effectiveness. Specific sexual practices—dry sex, oral sex, and anal sex being but a few examples—may impede the success of particular interventions, yet information about such practices is necessary for encouraging behavioral change.

Recommendation 4-5. Research on coercive sex, especially among adolescents, is critical.

The magnitude of the problem of coercive sex is all but unknown, as are the circumstances under which forced sex or rape takes place. How frequently does it happen and why? Do the aggressors or the victims share characteristics that might suggest a path for preventive or protective interventions? Research on community attitudes, mores, and gender expectations that may serve to encourage or inhibit coercive sex is urgently needed in order to determine how to enlist community support for the curtailment of such practices.

Recommendation 4-6. Research aimed at achieving a better understanding of perceptions about the dual roles of condoms is required.

Condoms help prevent the spread of HIV/AIDS; they also prevent pregnancy. How aware are people of these dual roles, and what weight do they give each when deciding whether to use condoms? How often are these roles in concord and how often in conflict? Do partners discuss this issue, and if so, what are the negotiating mechanisms used?

Recommendation 4-7. Research on attitudes and beliefs about and behavioral responses to sexually transmitted diseases is required.

To develop effective strategies for the treatment of STDs, understanding is needed about social and cultural responses to STDs, including stigmatization. Much more knowledge about the health-seeking behaviors of people infected with STDs, and whether their sexual habits are altered by knowledge of infection, is also needed.

Recommendation 4-8. Research on acceptance of and behavioral responses to HIV vaccination is urgently needed.

Because vaccine trials are likely to begin with vaccines of limited efficacy, there is an urgent need to learn whether individuals who are vaccinated increase their exposure to HIV through riskier behavior, and if so, to determine how to mitigate this response.

PRIMARY HIV-PREVENTION STRATEGIES

As suggested earlier, despite the many limitations inherent in attempting to evaluate the effectiveness of interventions aimed at HIV prevention, clear evidence is emerging that such efforts can be successful, particularly among higher-risk groups. At the same time, however, data from various surveillance systems indicate that current interventions are probably not yet having a significant impact on the epidemic at the subcontinent or even the country level. Despite the fact that levels of AIDS awareness are extremely high in sub-Saharan Africa, getting people to change their behavior is difficult. Denial, fear, external pressures, social and sexual norms, other priorities, or simple economics can keep people from adopting healthier life-styles.

Yet getting people to change their behavior is not impossible. Indeed, health educators in sub-Saharan Africa have had a fair amount of success in recent years. For example, broad-based education campaigns have persuaded large numbers of people to have their children immunized against various childhood diseases and have educated mothers to give their children oral rehydration formula during episodes of diarrhea. Of course, attempting to modify more personal behavior, such as sexual practices, is more challenging. Yet family planning programs have been successful even in some of the most disadvantaged countries of the world. Even the most cautious reviews of behavioral interventions aimed at slowing the spread of HIV conclude that although most have not been rigorously evaluated, some approaches do seem to work. At the same time, it is important to have realistic expectations about what can be achieved. Behavior change will never be 100 percent: some individuals will never choose to protect themselves, while others will lapse into old patterns of behavior after a short period of time.

To increase the likelihood of success, interventions need to be culturally appropriate and locally relevant, reflecting the social context within which they are embedded. They should be designed with a clear idea of the target population and the types of behaviors to be changed. In turn, recognized impediments in the social environment to behavior change probably need to be specifically addressed. Behavior-change interventions should include promotion of lower-risk behavior, assistance in development of risk-reduction skills, and promotion of changes in societal norms. It must be noted that in sub-Saharan Africa, there is an urgent need to design ways of targeting women and adolescents for prevention messages.

Basic principles of successful intervention programs include the following:

- learning about and adapting to local conditions;
- ensuring community participation;
- carefully targeting the audience;
- identifying effective strategies and messages;

- building local capacity;
- evaluating results; and
- using the results from evaluation studies for improvement.

Successful intervention programs should also be multidisciplinary and multifaceted and involve multiple contacts with targeted populations. In sub-Saharan Africa, as elsewhere, HIV-prevention messages have included promotion of partner reduction, postponement of sexual debut, alternatives to risky sex, mutually faithful monogamy, consistent and proper use of condoms, better recognition of STD symptoms, and more effective health-seeking behavior.

Numerous interventions are being implemented throughout Africa, but most are still information-based health education campaigns. Many of the messages communicated are generic or vague and do not address specific risk behaviors. Innovative approaches are typically small scale and lack rigorous evaluation. Furthermore, it is not easy to demonstrate the success of a particular intervention because it is difficult to define and measure such outcome variables as "better health status" and to determine whether the intervention in question was the reason for a desired change. Consequently, the need for solid evaluation research is still urgent.

KEY RECOMMENDATION 2. An increase in research funding for the development of social and behavioral interventions aimed at protecting women and adolescents, especially girls, from infection deserves highest priority.

An important step in arresting the spread of AIDS in sub-Saharan Africa is to recognize that, although African women have relatively high autonomy by the standards of developing countries, their low and separate status remains a major obstacle to HIV prevention. In many societies, the presence of unmarried, postpubertal girls is a new phenomenon. Guidelines for their sexual behavior and that of others toward them are not well established; their low social status makes them particularly vulnerable. Moreover, in many areas of sub-Saharan Africa, high HIV incidence has been detected among adolescents and young adults, especially girls. Research on which to design culturally relevant programs targeted to adolescents and to adults who might be their sexual partners is an important priority.

KEY RECOMMENDATION 3. More evaluation research is needed to correlate process and outcome indicators—such as reported condom sales and behavior change—with reductions in HIV incidence or prevalence.

Rigorous designs, such as controlled intervention studies to assess the effectiveness of different prevention approaches, are needed. To date, few rigorous evaluations of intervention programs in sub-Saharan Africa have been conducted. Evaluations that have been reported often lack precision in their measurement of risk behaviors and are therefore not very informative. As a result, few strategies can demonstrate whether they are effective. Barriers to rigorous evaluation research include lack of human resources, expertise, financial resources, and equipment. Overcoming these barriers requires major changes in research infrastructure. Nevertheless, it is a priority to begin now a few large-scale behavioral interventions, including adequate baseline surveys, multiround surveys, and longitudinal studies with comparison cohorts, even if these interventions are relatively expensive. It is only with these types of studies that more definitive information on the effectiveness of various interventions, which is so desperately lacking for most studies in sub-Saharan Africa, can be obtained. The longer such studies are delayed, the longer will exist the uncertainty about which HIV-prevention strategies work best, for whom, and under what circumstances. In the interim, basic program evaluation and some formative and operational research can be completed, and such work should be required by donors as part of program implementation awards.

Recommendation 5-1. Interventions that promote gender equality deserve high priority as AIDS-prevention strategies in every country.

Women's primary source of risk is their society-wide subordination, not their lack of knowledge. Governments can effect change in many ways to empower women: reducing the financial necessity for multiple partnerships by changing laws to give women equal access to training and jobs, equal rights of inheritance and property ownership, equal access to education, and equal wage scales; enacting and enforcing laws against rape; building the capacity of women for collective action; and educating everyone about women's rights. Enhancing the status of women is a long-term strategy that would have many beneficial effects for development, in addition to the likely effect of reducing the transmission of HIV and other STDs.

Recommendation 5-2. In the short term, a female-controlled vaginal microbicide that would allow women to protect themselves without their partner's participation is an urgent research and development priority for international donors.

A microbicide is not a quick-fix substitute for the fundamental structural reforms necessary to achieve gender equality, but rather a temporary and partial response to this problem as it influences HIV transmission. Yet in the same way that the use of spermicides by women can reduce fertility, the use of a microbicide could, in and of itself, help arrest the spread of HIV.

Recommendation 5-3. Research is needed to address the HIV-prevention needs of several other populations with marked vulnerability, particularly the mobile and the disenfranchised.

There is a need to reach mobile individuals and groups with comprehensible and acceptable programs, particularly where linguistic and cultural barriers exist between migrants and the local population. Ways of effectively providing preventive services to the disenfranchised populations in the ever-growing urban slums and in refugee camps need to be developed; a major challenge to such programs is the lack of resources and social support for individuals in such settings.

Recommendation 5-4. Additional research should be conducted to determine the impact of specific STD interventions on the incidence of HIV infection within defined populations.

Research is needed to determine the extent to which STDs help cause HIV infection, to examine the importance of the behavioral synergy of STD and HIV transmission, and to design more effective intervention programs. There is a need for assessment of the relative efficacy and feasibility of various interventions for STD treatment and sexual behavior change in reducing HIV transmission. This research includes assessing the effects of programs that target individuals at high risk of acquiring and transmitting STDs, as well as the effects of community-based STD programs. The interventions themselves could comprise STD education, condom distribution, increased STD screening, and mass antibiotic therapy. Data on the effectiveness of these interventions, particularly those focused on decreasing STD prevalence, are essential for evaluating the impact of STD reduction on the spread of HIV. Behavioral research on ways of ensuring acceptance of various STD control strategies should be directly integrated into the epidemiological research.

Recommendation 5-5. Research is needed to assess the effectiveness and cost-effectiveness of the syndromic approach to STD diagnosis and treatment.

Clinical testing for STDs is expensive and not widely accessible. Therefore, research is needed on better ways to identify STDs more accurately through symptoms. In addition, new screening methods, including urine-based assays for chlamydia and gonorrhea and self-administered vaginal swabs for trichomonas culture and bacterial vaginosis gram stain, should be incorporated into research. Efforts are needed to make these techniques available and affordable in developing-country settings for surveillance, diagnosis, and validation.

Recommendation 5-6. For long-term program planning and resource allocation, cost-effectiveness studies should be incorporated in donor research work and the cost-effectiveness of HIV prevention compared with that of other health interventions.

Few intervention evaluations have adequately assessed effectiveness in terms of behavior change or seroincidence declines, much less cost-effectiveness. Results of evaluation studies currently in progress in several countries in sub-Saharan Africa are expected to provide data on the cost-effectiveness of various HIV-prevention strategies. However, determining the effectiveness of HIV-prevention strategies is methodologically complex and will take several more years to complete. In the meantime, since resources are insufficient and may well decline further, efficient resource utilization is paramount. Thus, basic analysis of overall program costs and specific intervention costs is critical. Simple cost analyses and cost-effectiveness estimates could provide data that would be helpful for public health decision making and program design.

Recommendation 5-7. Operations research should be a high priority.

The growth of the HIV/AIDS pandemic in the past 20 years in sub-Saharan Africa has led to the development of institutional and community-based responses and a corresponding need for operations research to improve the effectiveness, cost-effectiveness, and quality of these responses. Primary research needs include scaling up successful experimental interventions, improving the effectiveness and reducing the cost of existing programs, examining the cost-effectiveness of linking HIV prevention with HIV/AIDS care, and improving the sensitivity and specificity of criteria for targeting interventions.

Recommendation 5-8. Research should be undertaken to measure the impact of female-controlled barrier contraceptive use on HIV transmission.

Studies should be undertaken to determine the effectiveness against STDs and HIV of female-controlled barrier contraceptives such as female condoms and spermicides. This research should encompass field-based studies of the acceptability of these methods. Moreover, greater efforts need to be made to integrate appropriate HIV/AIDS-prevention messages and programs for STD diagnosis, referral, and treatment into family planning programs.

Recommendation 5-9. Behavioral research is needed to develop effective pregnancy-related HIV counseling programs.

Given the rapid spread of HIV among women in sub-Saharan Africa,

perinatal transmission continues to have a major impact on infant and child morbidity and mortality among populations with a high HIV seroprevalence. Studies using modified treatment regimens with Zidovudine (AZT), hyperimmune gammaglobulin, vitamin A, vaginal washes, and other means of intervention should be undertaken to determine their overall effectiveness and cost-effectiveness in decreasing HIV perinatal transmission.

MITIGATING THE IMPACT OF THE EPIDEMIC

AIDS will have a large social, psychological, demographic, and economic impact on both individuals and societies. In addition to the physical suffering and grief caused by the disease, AIDS can lead to social and economic hardship, isolation, stigmatization, and discrimination.

As noted above, even if transmission of HIV were halted today, millions of Africans who are currently infected would still develop AIDS and die over the next 10 to 20 years. But transmission has not ceased. To the contrary, evidence from a variety of populations in Africa suggests that seroprevalence either is continuing to climb or has leveled off at discouragingly high levels. For at least the next several decades, the HIV/AIDS epidemic will continue to ravage African prime-age adults and their children with death rates as much as 10 times higher than they would otherwise have been.

Although not immediately visible, the cumulative mortality effects of this "slow plague" will be substantial. Increases in infant and child mortality will be accompanied by increases in adult mortality and reductions in life expectancy. Population growth will decline more rapidly than expected, and the populations in sub-Saharan Africa in the year 2000, particularly among the countries in the main AIDS belt, will be somewhat smaller than those projected in the absence of AIDS. In many of the worst-afflicted countries, deaths will more than double during the 1990s as compared with the number estimated without AIDS. These additional deaths will put increasing strains on already overburdened health-care systems and on individual households trying to manage with limited economic resources. Care and support for orphans will be a growing concern, and traditional inheritance and other legal rights will be challenged.

Relatively little research has been conducted on the economic consequences of adult morbidity and mortality. AIDS is one of several diseases with potentially great economic significance for developing countries. Diseases such as malaria and measles are far more prevalent in Africa, yet there are reasons to believe that the economic impact of AIDS will be greater. The long incubation period of HIV implies that the economic impact of existing levels of infection would be felt for 10 years or more even if all infection were to cease today. The benefits of averting a case of HIV are very high relative to other diseases.

Whether directed at individuals with AIDS and their households or at other

levels of social organization, mitigation interventions divert scarce resources from other uses, including efforts to prevent transmission. Thus, the value to society of any mitigation intervention should be as least as great as the cost of the resources devoted to the effort. Research on this issue might improve the efficiency of current expenditures, as well as justify a case for or against additional spending.

KEY RECOMMENDATION 4. Research for mitigating the impact of the disease should focus on the needs of people with HIV/AIDS.

A great deal more is known about designing and implementing HIV-prevention programs than is known about providing care to the millions of people in sub-Saharan Africa already infected with the virus. Simple, cost-effective solutions to daily living problems faced by persons with AIDS, such as palliative care, part-time home care, and group counseling, may make larger, more expensive interventions unwarranted.

Recommendation 6-1. Research efforts to evaluate the impact of HIV/AIDS on individuals, households, firms, economic sectors, and nations are badly needed.

Research on impact should incorporate both qualitative and quantitative approaches to data collection and should evaluate both short- and long-term effects. Of particular interest is research that would permit an understanding of the impact of HIV/AIDS on poverty and on individual decision making. Research is needed to ascertain whether decreased life expectancy reduces willingness to save or invest in financial and real assets, in human capital, and in the relationships necessary to maintain social interactions. In the long term, the impact of HIV/AIDS on sub-Saharan Africa will depend on the strength and malleability of social and economic networks in accommodating the changes that are occurring.

Recommendation 6-2. Since the attempt to assist directly every affected household would be financially nonsustainable, research is needed on criteria for determining which households and communities should be targeted for assistance and which institutions should deliver that assistance.

The epidemic has already affected millions of households in sub-Saharan Africa and will continue to do so for at least the next 20 years. Efforts to mitigate the effects of the disease have been uncoordinated and poorly targeted, and their

ability to provide solutions for those infected and their families remains to be proven.

Recommendation 6-3. Discovering the optimal roles of government, nongovernmental organizations, and donors in HIV/AIDS prevention and mitigation is critical and requires further study.

Governments are now moving to decentralize and privatize AIDS programs by contracting, licensing, or franchising activities to various types of nongovernmental institutions. Research is needed on the determinants of the effectiveness of nongovernmental organizations, including those not devoted primarily to AIDS prevention and mitigation, in a variety of AIDS prevention and mitigation activities. Care is needed in defining the technical assistance needs and the absorptive capacities of nongovernmental organizations, to enhance their roles in research and prevention and to avoid overload and inefficient use of scarce resources.

BUILDING CAPACITY FOR AIDS-RELATED RESEARCH

If useful research on HIV/AIDS is to be undertaken and its results are to be applied appropriately and effectively, the necessary infrastructure must be in place, a prerequisite that is often lacking in sub-Saharan Africa. As a result, virtually all research undertaken to date has been possible only with technical cooperation and foreign assistance from the international community. Thus, beyond the immediate challenge of identifying the critical research questions, there remain enormous practical challenges of actually obtaining the answers.

Key aspects of a basic infrastructure for conducting effective research include access to adequate funding, skilled labor, and appropriate technology, as well as sufficient managerial and administrative capacity to plan, execute, monitor, and evaluate studies. Even in developed countries, amassing the resources required to undertake complex research endeavors is difficult, and these difficulties are multiplied many-fold in sub-Saharan Africa. Many of the region's universities have been badly neglected in recent years. The poor preparedness of matriculating students, entirely inadequate salaries for all levels of professional and support staff, neglect of buildings and libraries, and a lack of core funds necessary to move institutions into the technological age have contributed to the universities' slow demise and the widespread departure of their faculties to the private sector.

Many of the findings from the research that has been conducted have not been adequately disseminated, so that results are not widely known across the continent. As a consequence, the contributions of social and behavioral scientists have not been fully utilized. In addition, inadequate coordination of research efforts has resulted in duplication and the need to "reinvent the wheel."

These structural problems are compounded by donor policies and practices

that result in short-term studies that do not allow sufficient time for local capacity building, the predominance of expatriate personnel in most projects, and at least the perception among the recipients of donor assistance that projects address donor rather than local priorities. Yet the dominance of international donors in AIDS research in Africa is the result of a lack of domestic funding for such research in the region: many of the region's governments appear complacent about the magnitude of the epidemic and have so far contributed little to HIV/AIDS research.

In the long run, it is essential to help sub-Saharan African countries develop their own research capacity by strengthening their universities and augmenting the technical skills of their researchers. There is considerable debate and controversy, however, about how best to achieve this goal. Regardless of what the best mechanisms may be, no significant progress is likely to be made until the region's governments understand that they must put AIDS more squarely on their own research and policy agendas. Clearly, a major constraint on the amount of HIV/AIDS research that is undertaken is inadequate funding. Potential sources of funding include communities, private-sector firms, the public sector, and international donors. Because it is unlikely that donors are going to increase significantly their levels of funding in the near future, the governments will have to find additional resources. Given the weak economic position of most sub-Saharan African countries, however, it will be difficult to persuade their governments to pursue more vigorous research agendas in the near future.

KEY RECOMMENDATION 5. Linkages between sub-Saharan African institutions and international research centers must be established on a wide range of activities, including teaching, research, and faculty and student exchanges. International donors should seriously consider establishing a sub-Saharan African AIDS research institution with a strong behavioral and social science element.

There is a critical need to strengthen research institutions in sub-Saharan Africa. Linkages with international organizations, especially if built on an evolving and well-defined research agenda, can help local institutions develop and assist local researchers by providing relatively secure long-term funding, offering support for the preparation of data and manuscripts for publication and dissemination, and providing in-country technical assistance and research training. Experience in a number of settings has demonstrated that such long-term collaboration, in addition to contributing significantly to understanding of the HIV/AIDS epidemic, is mutually beneficial to all institutions involved; it could be very

successful in providing highly skilled African researchers with support and the possibility of remaining in their country of origin.

Recommendation 7-1. The number of African scientists well trained to conduct research on HIV and AIDS must be increased.

Research capacity in sub-Saharan Africa cannot be improved without an increase in the number of well-trained local researchers. Four possible ways to introduce and keep more researchers in the field are to (1) integrate more graduate students and young professionals into all new AIDS-related research initiatives; (2) establish small grants programs to fund the projects of young researchers; (3) adjust pay scales to attract and retain talented professionals; and (4) provide other incentives for researchers to remain in their home institutions, including small-scale research grants, fewer teaching or administrative responsibilities, and more opportunities for international travel. Providing technical assistance to local researchers is an important priority. Local researchers could benefit from workshops that would help them design research projects, prepare research proposals, identify potential sources of funding, write reports describing interim results, and prepare final manuscripts for submission to peer-reviewed journals.

Recommendation 7-2. Each national AIDS control program should establish a local AIDS-information center that would develop and maintain a database of all AIDS-related research conducted in the country.

These centers should be linked via available technology, such as the Internet. They should also have AIDS databases on CD-ROM (CD-ROM-equipped computers are available in most national AIDS control program offices.) In addition, national and regional conferences should be held to provide forums at which researchers can discuss their research plans and present their results to a larger group of local researchers than those that attend international conferences.

Recommendation 7-3. There is an urgent need for sub-Saharan African countries to establish and periodically update research priorities at the regional and national levels, providing a basis for discussions with donors on AIDS-related research.

It is important to reduce the proportion of donor-driven research taking place in the region.

Recommendation 7-4. International organizations and donors should utilize existing local resources to the fullest extent possible.

It is paradoxical that donors underutilize existing talent in the region. Utilizing local expertise can strengthen local institutions, generate employment, and create opportunities for talented researchers in sub-Saharan Africa.

Recommendation 7-5. Greater dialogue between researchers and policy makers is necessary.

Not only is there an urgent need to increase indigenous capacity to conduct research, but there is also a need to better synthesize and translate research findings into effective prevention and control programs and policies. Otherwise, prevention programs will be only marginally based on local needs or tailored to local conditions, and research will be even more undervalued and underfunded. Researchers need to do a better job of drawing out the policy implications of their work, and planners and policy makers need to articulate more clearly to researchers what information they need for effective planning and programs.

Recommendation 7-6. If more effective strategies for AIDS prevention and mitigation are to be developed in the future, better coordination among donors is needed, particularly sharing of information about which prevention and control efforts work and which do not.

The role of the new cosponsored United Nations Programme on AIDS (UNAIDS) will be critical to future work. Success will also require greater political will and commitment on the part of the governments of sub-Saharan Africa and other countries.

CONCLUSION: THE NEED FOR BETTER BEHAVIORAL AND SOCIAL SCIENCE RESEARCH

Because AIDS is an epidemic firmly rooted in human behavior, driven by economic, cultural, and social conditions, the behavioral and social sciences are essential to identifying solutions for its control. Yet to date, most funding for HIV/AIDS research has been devoted to biomedical studies of the nature of the virus as a logical starting point for identifying a vaccine or a cure. All too often it has been implicitly assumed that behavioral and social science research should take place only because there are currently no effective vaccines or treatments for the disease, as if the discovery of a vaccine or a cure would eliminate any further need for such research. This assumption that the availability of treatment solves all problems is simply not true. For example, the resurgence of tuberculosis has become one of the world's most serious health problems, even though a cure that is 95 percent effective has been available for almost 50 years.

Effective prevention of HIV/AIDS will require enormous and continued commitment in order to achieve lasting changes in human behavior. No one set

of interventions—behavioral or medical—will be sufficient by itself to combat the epidemic. More behavioral and social research is needed to develop effective and acceptable preventive strategies to refine successful programs and to help find more effective ways of mitigating the negative impacts of the epidemic.

The interpretation and utility of much epidemiological, behavioral, and social research have been limited by the lack of a multidisciplinary approach. Data on reported behavior change may be difficult to assess in the absence of biological validation that such change is reducing STD/HIV infection. Efforts to model the demographic effects of the HIV/AIDS epidemic are hindered by a paucity of data sets that combine fertility, mortality, migration, and other sociodemographic information with HIV serology. Conversely, serological studies that fail to collect adequate behavioral data miss an important opportunity to assess the effects of key factors in the spread of HIV, such as sexual practices and sexual networks within given populations. The design, execution, and analysis of clinical trials for STD control, HIV vaccines, antiretroviral drugs, and genital barrier methods and virucides all depend on appropriate behavioral research to guide enrollment; ensure adherence to trial protocols; and permit adequate interpretation of epidemiological results, including the very basic need to control for differential behavioral change between study groups.

Until new research is available, it is critical to keep trying the existing strategies that are believed to be most effective, as well as designing new and innovative ones. The epidemic is forcing people to rethink their values and behavior, and is changing the social context. Strategies and policies must be responsive to the ever-changing situation, as well as receptive to the findings of research being carried out throughout the region. An effective partnership between research and program interventions will be key to lessening the spread and impact of the HIV/AIDS epidemic in sub-Saharan Africa.

CHAPTER 2

The USAID Response: Prevention and Care Initiatives

For more than a decade, the U.S. Agency for International Development (USAID) has made a major commitment of resources, staff, and funding—nearly U.S.$1 billion—to counter the spread of HIV/AIDS in the developing world. This crucial investment in HIV/AIDS prevention as a key to sustainable development has put the Agency in the forefront of the global response to the epidemic.

Preventing sexual transmission—which is responsible for about 80 percent of HIV infections—is central to USAID's widespread efforts in service delivery, capacity building, biomedical and behavioral research, and policy formulation. Until a vaccine or affordable treatment becomes available, developing and expanding successful HIV/AIDS prevention strategies remain a priority mission for USAID, its counterparts in the international health community, and its local partners who work together in more than 75 countries around the world to create effective responses to one of the world's most complex and devastating health crises.

A snake charmer in New Delhi, India, uses cobras to talk about AIDS.

U.S. AND JAPAN LAUNCH A "COMMON AGENDA" AGAINST HIV/AIDS

In 1993, an international bilateral partnership for global problem solving was created between the United States and Japan. One of the major initiatives of the U.S.-Japan Common Agenda involves cooperative efforts in population and HIV/AIDS in the developing world. Each country devotes considerable funding and technical assistance to selected countries, with the goal of improving HIV/AIDS prevention and family planning programs, training and capacity building, child survival, policy dialogue, and other important health activities. USAID coordinates the U.S. response and funding function for the Agenda through its Global Bureau's Center for Population, Health and Nutrition.

The Common Agenda's HIV/AIDS prevention activities for 1996 included support for condom social marketing and special funding provided by the Japanese for UNAIDS programs in Bangladesh; behavior change communication (BBC) efforts in Ghana; policy dialogue, capacity building, and condom social marketing in Guatemala; policy development, improved STD management, condom social marketing, and BCC in Indonesia; and similar projects in Kenya, Madagascar, Mexico, Malawi, Peru, the Philippines, Senegal, Tanzania, and Zambia.

Recently, a Common Agenda team made up of USAID staff and their Japanese counterparts traveled to Vietnam to develop plans to help the government implement improved blood testing and blood safety procedures, design behavior change communication campaigns, and support various community-based organizations involved in HIV/AIDS prevention. Because Vietnam appears to be at a relatively early stage of the epidemic, team members are optimistic that interventions of this kind, particularly those targeted at high-risk groups, will help slow the spread of HIV.

PARTNERSHIPS FOR PREVENTION

Collaboration is, in fact, the hallmark of all USAID activity in HIV/AIDS prevention, from the global to the village level. As the epidemic evolves and demand for new approaches in research and programming grows, USAID seeks out collaborators who possess the experience and expertise to design, develop, and manage both comprehensive and specialized projects. In each of the developing countries that requests USAID assistance in HIV/AIDS prevention, the Agency creates partnerships with government agencies, indigenous nongovernmental organizations (NGOs), local technical experts, policymakers, and key community leaders. For global initiatives, the Agency works in cooperation with other donors to coordinate international responses and refine new technical strategies with worldwide applications.

This extensive network of partnerships includes such internationally prominent organizations as the Pan American Health Organization, the World Bank, and the Joint United Nations Programme on HIV/AIDS (UNAIDS), founded in January 1996 by the World Bank and five United Nations agencies: the World Health Organization, UNICEF, the United Nations Development Programme, UNESCO, and the United Nations Population Fund. USAID continues to be the major donor supporting the work of UNAIDS and serves on its Programme Coordinating Board.

USAID's own regional and bilateral programs in developing countries require close working relationships with subcontractors funded to carry out design and management of country-based programs and research activities. Since 1991, the AIDS Control and Prevention (AIDSCAP) Project, administered by Family Health International (FHI), has been USAID's single largest comprehensive prevention program, with projects in 45 countries. Another important partner in prevention programming is the Academy for Educational Development (AED), which, in collaboration with the International Planned Parenthood Federation and the Futures Group, manages the Central American HIV/AIDS Prevention Project, a regional effort covering five nations. Technical expertise important to USAID's mission is provided by specialists from the Program for Appropriate Technology in Health (PATH), the University of Alabama, the University of Washington, Harvard University, Tulane University, Johns Hopkins University, and the University of North Carolina. In biomedical research, USAID works with some of the most prominent institutions in the United States, including the U.S. Centers for Disease Control and Prevention, the National Institute of Allergy and Infectious Diseases of the National Institutes of Health, the Population Council, and numerous universities. Under an

interagency agreement, the U.S. Bureau of the Census gathers, analyzes, and publishes valuable data on HIV seroprevalence and other health indicators in developing countries.

But many of USAID's most fruitful partnerships grow at the community level, among leading national and local organizations in developing countries. Committed to building the capacity of each country to sustain and expand prevention programming, USAID involves indigenous institutions and gatekeepers from the planning stages on, and continues to help build their skills through training and involvement in decision-making. From a tiny village-based NGO on the Maasai Plain of northern Tanzania to the powerful institutions of the Brazilian business community, these links to local leadership ensure the cultural and social appropriateness of programs, create broad-based community support, and build lasting institutions and structures so that nations that benefit from USAID programs today will be able to sustain them on their own tomorrow.

PREVENTION STRATEGIES THAT WORK

Ten years of global experience in HIV/AIDS prevention have provided the Agency with many lessons learned, but perhaps one is most fundamental: there is no single, standardized set of interventions in HIV/AIDS prevention programming. The combination of approaches that works well in one region or country may not be the best in another. The goal for program designers is to develop and fine-tune the right mix of strategies appropriate for vulnerable populations, while considering available resources, local patterns of risk behaviors, cultural attitudes and belief systems, and other unique characteristics of each setting.

Achieving an effective balance of approaches can be quite challenging. For example, on a major trucking route crossing the border between India and Nepal, drivers of both nationalities receive coordinated behavior change communication materials and education as well as similarly packaged condoms to reinforce safe-sex messages and remind them that the danger of HIV infection does not disappear at the frontier. This campaign required the cooperation of two sets of government health agencies, bilingual materials, and a coordinated logo design that took into account the cultural sensitivities and preferences of both nationalities.

IMPORTANT NEW DATA CONFIRM THE EFFECTIVENESS OF USAID'S THREE KEY PREVENTION STRATEGIES

In the past two years, results from research projects and sentinel surveillance appear to confirm the value of three key prevention strategies promoted by USAID: behavior change communication, condom social marketing, and control of sexually transmitted infections.

In Uganda, sentinel surveillance indicates a 35 percent decrease in HIV prevalence among young women in the 15 to 19 and 20 to 24 age groups. Population surveys reveal that these declines could be largely due to increased monogamy, fewer sexual partners, increased condom use, delayed onset of sexual activity, and other reductions in high-risk behavior—precisely the messages promoted by behavior change communication campaigns conducted in the country over the last several years.

In Thailand, the government's 100 Percent Condom Policy, which strictly enforces consistent condom use in all commercial brothels, is credited in part for significant decreases in HIV prevalence among populations such as military conscripts, whose HIV prevalence dropped from 12.3 percent in 1993 to 6.7 percent in northern Thailand in 1995. This decrease appears to confirm that condom use lowers HIV transmission, and validates investment in condom social marketing as a prevention strategy.

In Tanzania, the groundbreaking "Mwanza study," funded by the European Union, showed that using simple, realistic syndromic management to treat sexually transmitted infections within a study population reduced the number of new HIV infections by an impressive 42 percent. In Malawi, another important study funded by USAID yielded strong biological evidence that treatment of gonorrhea can make HIV-infected men less infectious. Results such as these are strong arguments for making affordable STI treatment widely available throughout the developing world.

USAID and its partners have identified three prevention strategies that, in synergy with supporting strategies, are key to success in HIV/AIDS prevention: behavior change communication, condom social marketing, and control of sexually transmitted infections.

YOUTH RESPOND TO PREVENTION PROGRAMMING THAT REFLECTS THEIR LIVES AND CONCERNS

Around the world, adolescence is a time of transformation. In some cultures the passage to maturity may be rockier than in others, but all young people face the uncertainty and confusion of leaving childhood to face the new responsibilities and concerns of adulthood. Understanding and learning how to handle one's growing sexuality is one of the most important aspects of this universal human process.

Unfortunately, the spread of HIV/AIDS around the world has made growing up a far more dangerous experience than it's ever been before. As young people approach an age when many want—or feel pressured—to experiment with sex, too few understand HIV's threat to their health and futures. Sex education for young people, where it exists at all around the world, is often inadequate to meet their needs. In many societies in both the industrialized and developing world, young people find it difficult to approach their parents, teachers, or even health care providers with questions about sex. And too few young people know how to use or have money for and access to condoms.

The vulnerability of young people is evident in the HIV sero prevalence data from many developing nations, where some of the highest rates of infection occur in girls between the ages of 15 and 24. In many countries, seroprevalence data point to the likelihood that up to 60 percent of all new HIV infections will occur in this age group, with females outnumbering males by a ratio of two to one. Girls and young women are at especially high risk for both biological and social reasons. The immature female reproductive tract is biologically far more vulnerable to infection, and women's social subordination makes it difficult for girls to negotiate with prospective male partners. In many settings where the epidemic is severe, girls may also become the sexual prey of older men, who hope to avoid infection themselves by sleeping with younger, "unblemished" women.

Protecting the next generation has become a high priority for HIV/AIDS prevention program managers, and most USAID-funded programs have developed special interventions for youth. At this stage of the epidemic, many also recognize the importance of creating targeted interventions designed not only for young people but by young people. By participating in project design and even managing their own prevention activities, youth ensure that their concerns are addressed and that other youth will take notice.

Some of the many examples of youth-participatory prevention programming around the world stand out for their ability to reach young people with their frankness and youthful perspective. One such effort is the youth newspaper *Straight Talk*, created in 1993 as part of the media campaign Safeguard Youth From AIDS (SYFA), a collaboration between UNICEF and the Government of Uganda. *Straight Talk*, which includes very frank features about sex, emotional difficulties and relationships, HIV, STIs, and other areas of concern to adolescents, now publishes editions in Kenya and in Tanzania, which is supported by the USAID-funded Tanzania AIDS Project of AIDSCAP. The Tanzanian edition's young editors—the editor-in-chief is 22 years old—cover a wide range of vital issues, including the advantages of postponing sex, the importance of avoiding gender stereotypes, and the value of treating the opposite sex with respect. Explicit advice on STI symptoms, how to avoid HIV infection, and how to use condoms is provided for young people who are already sexually active. The paper is interactive and includes articles and letters from young readers, who often respond to each other's concerns.

Another example of a successful youth-participatory project is the Save Your Generation Association (SYGA) in Ethiopia, founded by five young university students who witnessed too many of their friends succumbing to AIDS. SYGA, now a registered NGO with a paid staff of 14 and more than 6,000 dues-paying members, receives support from AIDSCAP for its efforts to bring HIV/AIDS prevention education to out-of-school youth in urban areas, many of whom are un- or underemployed and thus difficult to reach. SYGA works with local governments and community organizations to identify these young people and to organize street drama, puppet shows, video showings, sports events, and other entertainment to attract young people to their meetings. Peer educators give one-on-one counseling and provide condoms for free or at specially subsidized low prices.

To support and improve the work of youth-oriented NGOs like SYGA, research into the health and prevention needs of young people has been critically important. The Women and AIDS Research Program of the International Center for Research on Women has been a leader in revealing the dynamics of the epidemic's threat to young people, particularly girls and young women. Its recent research paper, "Vulnerability and Opportunity: Adolescents and HIV/AIDS in the Developing World," summarizes insights gleaned from qualitative, participatory research in Africa, Southeast Asia, and Latin America to analyze the vulnerabilities of young people, illuminate the coercive economic and social pressures that plague girls in particular, examine why many efforts to get young people to adopt safer sexual behaviors have failed, and propose new models for youth prevention approaches that "address the root causes of young women's vulnerability."

The mandate of a special USAID project, FOCUS on Young Adults, is to expand the awareness and application of these lessons by gathering and distributing up-to-date information about the reproductive health of young people. FOCUS approaches HIV/AIDS and STI prevention in a broader reproductive health context, offering technical advice, resources, and skills to Agency bureaus, USAID's partners, and youth prevention programmers.

Behavior Change Communication

Educating people about HIV/AIDS and the deadly threat it poses to them, their partners, and their children is a fundamental component of prevention programming. Years of experience have shown, though, that merely imparting facts to a passive audience is seldom enough to change people's risky behaviors, especially sexual behaviors. Even in places where HIV/AIDS information is so widespread that more than 90 percent of the adult population understand how to avoid infection, too few take the important next step of acting on their knowledge by adopting safer sexual behavior.

But the art and science of prevention education have evolved significantly in recent years, hastened by a fast-moving, deadly epidemic that can only be curbed by convincing millions of individuals—one by one—that how they behave sexually can make the difference between life and death. USAID-supported programs have been pioneers in behavior change communication (BCC), which uses interactive, community-based educational and skill-building approaches that personalize risk by incorporating the daily realities of targeted populations into HIV/AIDS prevention messages and activities. Using a wide variety of media and formats—from radio soap operas to workplace discussion groups to newspaper columns to street theater—comprehensive BCC projects link these techniques together to create multilayered, mutually reinforcing messages that build a supportive environment for widespread, sustained adoption of safer sex behaviors.

In the Dominican Republic, an award-winning TV ad campaign targeting youth has had a powerful impact. The four-part ad series, created by the Dominican advertising agency Cumbre as part of AIDSCAP's comprehensive youth-focused BCC program, features attractive young actors dealing with issues of sexuality and faithfulness. As each ad draws young viewers into story lines that resemble their own lives, the scripts educate their audience about personal risk behavior, reminding hundreds of thousands of young people that they cannot know beforehand which of their partners might carry the virus. The campaign began in September 1995 with a march of young NGO volunteers through the streets of Santo Domingo, ending at a launch ceremony that included influential government, church, and cultural leaders as speakers. Contrary to standard practice in the Dominican Republic, media executives aired the ads thousands of times for free, making it possible for the campaign to expand its efforts to include workshops and a telephone referral network for youth with questions about HIV/AIDS. In Brazil, similar leveraging of private sector resources resulted in the provision of valuable space in *Claudia,* one of the nation's most popular women's magazines, for monthly articles about women and AIDS.

Peer educators trained in the fine art of building rapport can be powerful mentors for behavior change. In southern India, peer educators trained by the regional NGO MYRADA, in collaboration with the U.S.-based organization, PLAN International, used a wide variety of approaches—including a village-to-village bike marathon—to approach their neighbors with life-saving information about prevention. This two-year partnership, funded by USAID through AIDSCAP's

NGO/PVO Initiative, accomplished an extraordinary amount of community sensitization in a very short time. While adapting messages to local audiences continues to be a core principle of BCC, AIDSCAP discovered that some materials have very wide appeal. A comic book series created by AIDSCAP featuring a sympathetic community

Dhaaley Dai, the condom cartoon that serves as the logo for AIDSCAP's program in Nepal, is displayed prominently on a bus stop stall on the highway between the Indian border and Kathmandu.

HIV/AIDS activist named Emma offers prevention and care education in French, English, Swahili, Haitian Creole, and other languages to diverse audiences in the Caribbean and throughout Africa, saving many thousands of dollars in materials development costs for each site.

Condom Social Marketing

Throughout the world, condoms remain the only commonly available device that prevents sexual transmission of HIV. Yet even in regions where the epidemic is severe and risk is high, cultural prejudices and sensitive interpersonal issues often make it difficult for couples to use them. Availability and affordability may also limit their use in developing countries, especially outside major urban areas.

To increase the acceptability of condoms and make these life-saving devices accessible to many more people, USAID partners apply the techniques of condom social marketing (CSM) throughout the developing world. CSM uses commercial marketing and advertising techniques and the distribution infrastructure of the private sector to make condoms attractive to the public, to train people to use them correctly, and to ensure their wide availability. CSM programs have created viable distribution networks in areas—such as the countryside—where they were previously unreliable or nonexistent and during times of social stress. Prices are set at levels that even low-income people can afford, often at only pennies apiece. USAID-supported CSM efforts are responsible for significant increases in condom sales around the world; more than 275 million condoms were distributed globally in 1996 through USAID projects.

As an AIDSCAP partner, Population Services International (PSI) created an extraordinarily successful CSM program in Haiti that increased condom sales a hundredfold in less than two years, even though political and economic chaos overcame the country soon after the campaign began. Despite an international fuel embargo and ongoing street violence, the program conducted a popular advertising campaign and extended wholesale and retail networks for condom sales deep into rural areas where they had never been available before. One particularly innovative component of the program was the training of community-based salespeople who, motivated by their ability to earn extra income during a period of extremely low employment, helped open hundreds of new points of sale around Haiti.

Community-based CSM strategies have been similarly successful in other parts of the world. In Tanzania, PSI trained more than 1,000 independent itinerant condom sales agents throughout the country to promote and sell condoms, ensuring 24-hour-a-day condom availability to friends and neighbors. In Brazil, DKT International increased condom sales by 44 percent in 1996 through its very visible campaign in the streets during Carnaval season, on the beaches of Rio, in bars and social clubs, and in other locales where HIV transmission is a real threat and the need for condoms can be immediate. And in Rwanda, PSI produced a powerful film that is extremely popular with a population still recovering from a devastating period of civil strife. It depicts a war widow

oping to rebuild her emotional life with a neighbor who also lost his spouse to violence and addresses such issues as negotiating safer sexual practices and condom use.

Sexually Transmitted Infection Control

Sexually transmitted infections (STIs) are widespread throughout the developing world, and women and men who suffer from them are as much as ten times more vulnerable to HIV infection and are also more likely to spread HIV to others. A recent study showed that having a sexually transmitted infection, such as gonorrhea, significantly increases the amount of infectious virus transmitted in body fluids. Controlling the spread of STIs through health education, prevention, and treatment is thus a priority in preventing HIV transmission. Unfortunately, STI services in many developing countries have long been inadequate, and many STI cases are never diagnosed and treated, or are self-treated with ineffective and sometimes even dangerous drugs. Even where STI treatment facilities exist, many people in need do not use them. Women may remain untreated because they are often asymptomatic and not aware that they need treatment. Others who suspect they might have an STI may delay or avoid care at a specialized facility because of stigma associated with STIs, a concern that is especially acute for women and girls.

Recognizing that full-service STI treatment programs based on access to costly laboratory services are simply too expensive for many developing country settings, USAID-funded HIV/AIDS prevention programs support an alternative treatment system developed in collaboration with the World Health Organization's Global Programme on AIDS (WHO/GPA). Syndromic management of STIs is a public health approach that makes it possible for primary health care facilities to diagnose and treat most symptomatic STIs effectively without costly lab tests or staff with advanced medical training. Using easy-to-understand diagnostic guidelines tailored to the STI prevalence and antibiotic resistance patterns of each region, health practitioners analyze their patients' symptoms and dispense medication for all possible STIs that could cause those symptoms. Patients receive full treatment and prevention counseling at the point of first encounter with the health care system, and rarely need to return for follow-up. One of the key components of the syndromic approach, partner referral, can help identify women whose asymptomatic STIs would not otherwise prompt them to seek treatment.

USAID-funded programs are implementing syndromic management training in 22 countries. In Tanzania, AIDSCAP's Tanzania AIDS Program (TAP) has incorporated such training as a primary component of its HIV/AIDS prevention mission, conducting workshops for public and private sector medical practitioners at all skill levels. Jamaica's Ministry of Health is an enthusiastic proponent of STI syndromic management, which it has successfully integrated into its network of public clinics with new diagnostic guidelines specific to STI prevalence in Jamaica. In 1996, regional management training courses to improve syndromic management were conducted in South Africa, the Dominican Republic, and Kenya, organized through the collaboration of international and national health organizations. To ensure an effective treatment protocol, USAID supports research on antibiotic resistance and STI prevalence that are the first baseline prevalence and resistance studies ever conducted in some countries.

Integrating STI treatment into primary health care, family planning, and maternal-child health services is seen by many in prevention programming as an important and cost-effective step to curbing the spread of STIs. Unfortunately, tight budgets and reluctance on the part of some health care and family planning practitioners to associate their clinics with STIs have slowed integration and expansion of STI services. The International Planned Parenthood Federation/Western Hemisphere has launched successful pilot programs in Honduras, Jamaica, and Brazil to demonstrate how affordable, sustainable programs that integrate STI treatment can help stem the spread of HIV/AIDS. By the middle of 1995, the Jamaica program had reached nearly 20,000 people and increased condom distribution by more than 350 percent.

Other STI treatment methodologies developed and promoted by USAID-funded programs include pilot training projects in syndromic management for pharmacists—often the first people to whom those suffering from STIs turn for advice—in Nepal and Thailand. Pharmacists in Cameroon were also recruited to participate in pilot sales of prepackaged STI treatments. And in 1996, WHO and AIDSCAP produced several important publications designed to build capacity for syndromic management, including case management workbooks for the training of health providers and a state-of-the-art manual, *Control of Sexually Transmitted Diseases: A*

Handbook for the Design and Management of Programs, targeted to STI program managers.

STRATEGIES THAT SUPPORT PREVENTION

Behavioral and Social Research

Understanding why individuals practice risky behaviors, despite their knowledge of the possible consequences, is critical to formulating effective solutions in HIV/AIDS prevention. USAID supports well-designed behavioral research that helps explain the determinants of sexual behavior that may endanger people and increase transmission of HIV/AIDS.

Since 1990 USAID's Office of Health and Nutrition and Office of Women in Development have funded the Women and AIDS Research Program of the International Center for Research on Women (ICRW) to investigate these determinants and their program and policy implications. ICRW launched a small grants competition, funding 17 descriptive and operations research projects in 13 countries in Africa, Latin America, and Asia to focus on the needs of vulnerable women, and to identify needs and strategies for making HIV/STI interventions more responsive to the economic, sociocultural, and political realities of women's sexual lives. Policy and program recommendations were developed from these global findings, and were rapidly and widely disseminated through a variety of channels. In a second phase of the program, eight of the projects were selected for implementation based on their Phase I findings, and an additional two projects were funded to evaluate the benefits of participatory, gender-responsive sexual health interventions. The program has contributed to validating qualitative studies as a crucial component in behavioral research, and to awareness of the importance of gender issues in HIV/STI policy and program circles.

One important behavioral study nearing completion is the HIV Counseling and Testing Efficacy Study (C&T) conducted by AIDSCAP and UNAIDS and coordinated by the Center for AIDS Prevention Studies (CAPS) at the University of California, San Francisco. At study sites in Tanzania, Kenya, and Trinidad, researchers hope to determine whether personalized risk assessment and behavior change counseling combined with HIV testing is a cost-effective way to influence individuals to adopt safer sex practices.

Policy

Legal, social, economic, and regulatory barriers often inhibit the effectiveness of HIV/AIDS prevention efforts. To engage policymakers and enlist the participation of community leaders in prevention, USAID supports policy dialogue and reform at the international, national, regional, and local levels. USAID partners also seek to involve the private sector in designing prevention programs for the workplace.

With USAID funding, the Policy Project of the Futures Group has developed the AIDS Impact Model (AIM), which has successfully helped policymakers and other leaders assess the future impact of the epidemic on their nations, develop policies to enhance the effectiveness of prevention programs, and understand the importance of eliminating discriminatory laws and practices. Policy Project staff have trained small groups of local experts —epidemiologists, demographers, economists, and policymakers—to identify the best available data on HIV and AIDS prevalence and impact, to enter those data into the model, and to tailor their presentations and policy recommendations to the concerns and interests of specific policy-making audiences. In 1995 and 1996, the Policy Project presented AIM to leaders in Kenya, Ethiopia, Ghana, and Madagascar; in some countries—notably Kenya—the presentation has been offered multiple times to local and provincial leaders. The Policy Project also serves developing country governments in a consultative capacity, working with counterparts to develop projections on the future socioeconomic and health impacts of the epidemic.

AIDSCAP also incorporates policy activities into its comprehensive prevention projects, offering technical assistance to government agencies and NGOs in developing countries in their efforts to influence national and local HIV/AIDS-related policies. Other technical assistance takes the form of socioeconomic impact analysis of HIV/AIDS on families, communities, and national economies. In 1996, AIDSCAP collaborated with the Policy Project to train leaders from three Central American nations in developing impact analyses. AIDSCAP's Policy Unit collaborated with Thai prevention programmers in a cost analysis of BCC and STI interventions in Bangkok that helped decision makers decide how best to allocate HIV/AIDS program resources. AIDSCAP also focuses on HIV prevention opportunities in the private sector, and in 1996 used its Private Sector AIDS Policy (PSAP) Kit to engage business, government, and labor leaders in more than ten countries to consider the value of HIV prevention at their work sites.

The Support for Analysis and Research in Africa (SARA) Project, funded by USAID's Africa Bureau and managed by AED, conducts workshops and other training and information-sharing activities to inform African governments about research results in seroprevalence, behavior change, economic impact, and other issues that could influence policy directions. In 1997, the SARA Project supported collaboration between the Morehouse School of Medicine and the International Foundation for Education and Self Help to ensure that HIV and TB were on the agenda at the African-African American Summit in Harare, Zimbabwe. This biannual meeting attracts government, business, and other civic leaders from all over sub-Saharan Africa and the U.S. to foster mutual understanding and expand opportunities for collaboration in development.

In addition to its research on gender issues, the ICRW's Women and AIDS Research Program also conducts public forums, assists in-country researchers to engage in policy dialogue, and publishes a policy series that recommends policy reform strategies to enhance the ability of women and girls to protect themselves from HIV/AIDS and end discriminatory practices and laws that endanger women.

Evaluation

To judge the effectiveness of different HIV/AIDS prevention approaches, ongoing monitoring and evaluation are integrated into the design of every USAID-funded project. The ability to determine which aspects of which interventions make a difference drives much of the evolution in HIV/AIDS programming and helps create new building blocks for future projects.

The AIDSCAP Project has been a global leader in the development of effective evaluation approaches and the application of evaluation results to improve HIV/AIDS interventions. The project emphasized the use of multiple data collection methods, both quantitative and qualitative, to monitor and evaluate HIV/AIDS programs and to identify ways to refine prevention strategies and methods.

One of AIDSCAP's most important contributions to HIV/AIDS evaluation is the behavioral surveillance survey (BSS) methodology, which enables evaluators to track trends in HIV risk behavior among target groups through a series of cross-sectional surveys. In Bangkok, AIDSCAP and the Bangkok Metropolitan Administration (BMA) established a

In Gokak, India, midwives gather to hear a MYRADA/PLAN presentation on AIDS funded by the AIDSCAP Project so they can disseminate the information as respected elders in the village.

BSS system that interviewed more than 3,000 people from six different socioeconomic and occupational groups every six months. When compared over time, the BSS results identify which target groups are responding to prevention interventions and which are not, and can help redirect prevention efforts to those that lag behind in behavior change.

In the Philippines, Joy, 16, left home when she was 14 to work on the streets of Manila as a sex worker and has used "Shabu," known as the poor man's cocaine.

Although AIDSCAP ended its Bangkok activities in September 1996, the BMA, recognizing the value of BSS data, continued it using local resources. The success of the BSS in Bangkok has generated interest throughout the rest of Thailand, where behavioral surveillance modeled after the BSS is now administered in most of the country's provinces. AIDSCAP has also begun behavioral surveillance surveys in Cambodia, Indonesia, India, Nepal, and Senegal.

Another new evaluation tool designed by AIDSCAP is the AVERT computer spreadsheet model. AVERT uses available data on HIV and STI prevalence and on levels of risk behaviors to estimate the number of HIV infections that could be averted through prevention outcomes, such as increased use of condoms, improved STI treatment, and sexual behavior change. Created for users in developing countries with limited modeling experience and no access to extensive databases, the software is user-friendly and requires only behavioral variables commonly found in program data. In late 1996, AIDSCAP used the AVERT model to study the effectiveness of peer education and periodic presumptive treatment for STIs for women at high risk in a South African mining community. The AVERT data estimated that 235 new HIV infections—40 among the 400 women who used the service and 195 among their estimated 4,000 male miner clients and partners—had been averted over the course of the year. These results were used to calculate that for every dollar spent on prevention, eight dollars could be saved in HIV-related health care costs, which convinced the local mining company to sponsor and expand the intervention.

Biomedical Research and Diagnostics Development

USAID, often in partnership with the National Institute of Allergy and Infectious Diseases (NIAID), funds biomedical research through its cooperating agencies, such as the Contraceptive Research and Development (CONRAD) group and Family Health International, to develop low-tech, affordable HIV/AIDS prevention devices, pharmaceuticals, and diagnostics. One landmark study in this series, carried out in Cameroon by FHI, found that use of a contraceptive film containing nonoxynol-9 conferred no additional protection against HIV and other STIs beyond the protection provided by male condoms. These agencies, along with the Population Council, continue the search for a low-cost, safe, vaginal microbicide that women can use to protect themselves from HIV and other sexually transmitted infections. A female-controlled microbicide, complementing growing use of the male condom, would clearly have an enormous impact on international efforts to contain the epidemic.

USAID maintains an interagency agreement with NIAID for access to valuable microbiological information resources, and also provides seed money to NIAID scientists to undertake research in HIV-related research questions that are of particular importance in the developing world. Several of these important research efforts supported by USAID focused on tuberculosis and HIV infection. One study examined the causes of multiple drug-resistant TB in areas with high HIV prevalence. USAID is also supporting collaboration between WHO, the Centers for Disease Control and Prevention, and the ministries of health in six sub-Saharan African countries to develop models for improved home-based TB care.

USAID supported a study in Malawi into the effectiveness of washing the vagina with an anti-

FEMALE CONDOM RESEARCH GROWS AS A FOCUS OF GENDER-BASED PREVENTION EFFORTS

Because traditional gender roles deprive many women of control over their sexual and economic lives, seroprevalence among women has skyrocketed as the epidemic develops. Despite much lower HIV seroprevalence for women than for men at the beginning of the epidemic, female infection rates are now equal to or higher than those of men in many regions. In both industrialized nations such as the United States, where AIDS is the single greatest killer of African American women in their most productive years, and developing regions such as sub-Saharan Africa, where more than 7 million women are now HIV-infected, the world is finally becoming aware that HIV/AIDS is very much a women's issue.

In response to this frightening trend, empowering women to protect themselves from HIV has been the goal of intensive gender based research, analysis, and prevention programming in recent years. Thanks to the efforts of such organizations as USAID's Office of Women in Development, the International Center for Research on Women, UNAIDS, and the AIDSCAP Women's Initiative (AWI), an agenda for women and HIV/AIDS has become an integral component of the larger campaign to prevent the spread of the epidemic.

One important effort has been the search for prevention methods that, unlike the male condom, women themselves can control. As research to develop a vaginal microbicide continues, another woman-controlled device—the female condom—has been the object of much attention in the past two years. Initial studies have found the device to be as safe and effective as male condoms if used correctly, offering an alternative method of preventing heterosexually acquired infections.

Because the female condom—a loose-fitting polyurethane sheath with two flexible rings—is so different from other prophylactic devices, its acceptability to both women and men has been the subject of several studies. In 1995, USAID distributed female condoms to 19 countries for use in Agency-sponsored acceptability trials and operations research on introducing the device into reproductive health services and social marketing programs.

Several important issues - chief among them affordability—remain to be resolved. The lowest price thus far negotiated by the public sector is U.S.$0.63, compared to a public sector sale price of $0.05 for the male condom. Will the female condom meet critical cost-benefit standards? Is the device appropriate for social marketing? Will developing countries with limited health budget be able to sustain female condom programs if major donors start them? Ongoing research and analysis in the next few years should answer many of these questions.

At a recent AWI conference in suburban Washington, "The Female Condom: From Research to Marketplace," participants discussed the cost barrier and other important issues. One subject of considerable interest was whether a reusable female condom can be developed, thus lowering the cost per use considerably. Another important topic was the question of targeting: should these products be targeted only to high-risk groups or to the general public? Should targeting be to couples rather than just to women, to raise acceptance by men? The final recommendations from conference participants encourage ongoing study of the cost, targeting, policy, and interpersonal issues involved in making the female condom as powerful a prevention tool as possible.

One developing nation has decided to invest in the female condom to increase access. Zimbabwe, prompted by a petition campaign that included 30,000 women's signatures, launched the first large-scale effort in the developing world to make female condoms available to the general population throughout the country. In some poor rural regions where people cannot afford the female condom even at subsidized prices, it's likely that many of the several hundred thousand condoms purchased by the Zimbabwean government will be given away free.

septic agent to prevent maternal transmission of HIV to newborns. Conducted by the National Cancer Institute and Johns Hopkins University, the study showed that while vaginal washing offers no protection from HIV except in special cases, it does reduce infant deaths from neonatal sepsis and from meningitis by two-thirds. These

where medical practitioners might reuse needles and thus spread HIV and other infectious diseases. PATH is now focusing on the development of rapid, simple, and inexpensive diagnostic tests for sexually transmitted infections that would improve the treatment of both symptomatic and asymptomatic women.

In Gokak, India, a MYRADA/PLAN International van funded by the AIDSCAP Project operates as a condom distribution outlet in the village.

unexpected but encouraging findings can now be applied throughout the world at very low cost to reduce the risk of infant death.

The Program for Appropriate Technology in Health (PATH) has used USAID funds to develop a low-tech, low-cost diagnostic dipstick that tests for HIV infection. Although it is as accurate as the standard tests used in industrialized nations, each dipstick test costs less than a dollar and delivers results in only 20 minutes. PATH has also designed effective single-use syringes to use in resource-poor regions

Community Mobilization and Capacity Building

Mobilizing and building the capacity of communities to respond to the epidemic is perhaps the single most important way to sustain prevention efforts over time. Building on lessons learned from research and from the experiences of activist communities, USAID partners have developed expertise in motivating and training communities to build a social environment for safer sex behavior and risk reduction, raising the odds for success in curbing HIV transmission. USAID supports projects that encompass the three major approaches to capacity building:

technical and management skills building, management systems development, and networking.

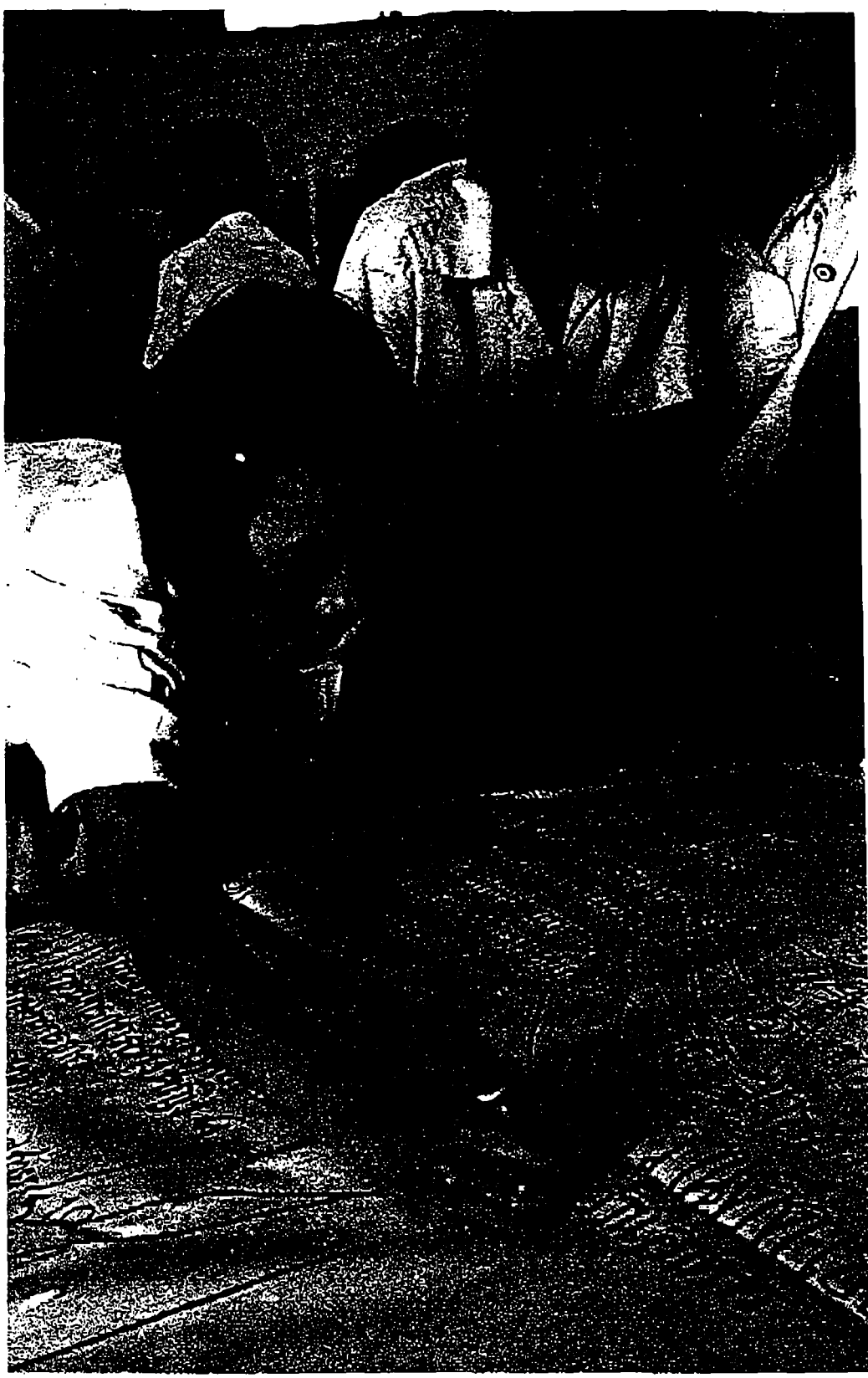
USAID has long supported the involvement of community-level NGOs and private voluntary organizations (PVOs) in all stages of planning, design, and implementation of HIV and STI prevention programs. USAID is one of the founders of the International HIV/AIDS Alliance (IHAA), an international NGO whose mission is to mobilize nongovernmental and community groups, increase their access to resources at the local level, and enhance their technical and organizational skills to enable communities in developing countries to play full and effective roles in the global response to HIV/AIDS. Since 1993, the IHAA has assisted more than 450 local, community-based organizations and NGOs in developing, implementing, evaluating, and sustaining advanced HIV prevention programs at the grassroots level.

In all of the AIDSCAP Project's country programs, capacity building is an integral part of the design of each subproject. Worldwide, more than 500 nongovernmental organizations—from small village-based groups to influential organizations with international profiles—plan and administer AIDSCAP-supported prevention activities while they receive ongoing training in technical, organizational, and financial skills. Two AIDSCAP programs provide special funding opportunities to strengthen community-based NGO activities. The first has linked nine NGOs in developing countries with U.S.-based private voluntary organizations and supports their innovative prevention projects with three-

year, U.S.$400,000 grants. And the Rapid-Response Fund has awarded more than 220 small grants to community-based organizations involved in client-centered HIV/AIDS prevention services.

Another innovation in capacity building with particularly broad impact is AIDSCAP's Regional AIDS Training and Education (RATE) Program, which offers skills training in BCC, STI management, policy development, and training of trainers to professionals in health, policy, communications, and journalism from all over Asia. Based in Bangkok, RATE created centers of excellence at three Thai universities that will continue to provide regional leadership and sustain this valuable training function after AIDSCAP ends in 1997. For Cambodia, Laos, Mongolia, Sri Lanka, Indonesia, and other Asian nations that are just beginning to confront the epidemic, RATE training offers an enormous head start in prevention planning.

Since 1991, USAID has built a valuable partnership with the Peace Corps, working with volunteers to build capacity for ongoing prevention activities in 26 developing countries. Peace Corps volunteers use the training they receive in HIV/AIDS prevention, behavior change communication, and community mobilization to assist indigenous NGOs and other community members, providing low-cost technical assistance to build sustainable prevention programs. One particularly creative and successful enterprise was the "Teach English/ Prevent AIDS" program, which brought together Peace Corps volunteers, educators, and public health specialists to draft lesson plans that meld English instruction with



JEREMY HOFER/FRANCOIS PAET/PSI

12-year-old girls at Pang Lao School in Chiang Rai Province, Thailand, play a game to illustrate how sexual networking can increase the risk of HIV transmission.

HIV/AIDS prevention messages. Begun in Cameroon, the program has been adapted for use in Chad, the Central African Republic, Gabon, and Ethiopia. The Peace Corps also provides NGOs and other community organizations in Thailand with training in home-based care.

The National Council for International Health (NCIH), under an agreement with USAID, provides valuable support to NGO networks through its prevention training workshops, a bimonthly newsletter, and international conferences that address NGO concerns.

Care and Support

As the epidemic matures and the number of people stricken with AIDS grows, developing nations find themselves overwhelmed by the demand for care and support services. Where HIV/AIDS care consumes much of the health budget, leaving little for other pressing medical concerns, both public health and economic development are endangered. Understanding the relationship between the need for care and a sustainable future has helped breach the conceptual barrier between prevention and care, highlight the importance of cost-effectiveness, and put care and support squarely on the programming agenda.

With so much at stake, USAID and many of its partners have become more involved in HIV/AIDS care and support. All USAID programs in high-prevalence countries are seeking appropriate and sustainable approaches to meet this increasing need. Both USAID and UNAIDS have identified HIV/AIDS care as one of the key areas for research and testing to develop and disseminate best practices.

AIDSCAP's Care and Management Small Grants Program seeks to develop affordable and sustainable care models through seed grants to NGOs in developing countries. The program supports approaches that create innovative community-based care activities and that leverage resources from communities, the public or private sectors, and donors. In Haiti, for example, three hospitals received funds to extend HIV/AIDS care—medical services, counseling, and prevention education—into outpatient clinics and patients' homes.

Some AIDSCAP country programs have long incorporated care into their activities, notably Tanzania, where even small village NGOs associated with AIDSCAP's Tanzania AIDS Program take on significant care and support responsibilities. Tanzania is also the site of an important AIDSCAP research effort to determine whether intensive, personalized counseling and care of HIV-positive people can influence them to change their sexual behaviors and lower their risk of infecting others. The study reflects a new global interest in uncovering linkages between HIV/AIDS prevention and care by examining the hypothesis that caregiving can prompt both the caregiver and care receiver to take prevention seriously.

TANZANIAN NGO "CLUSTERS" OFFER MODEL COMMUNITY-BASED RESPONSE TO HIV/AIDS

The East African nation of Tanzania, with an average per capita income of U.S.$90, is one of the most impoverished in the world. With its western provinces situated in the African epicenter of the AIDS epidemic, it has also been one of the hardest hit by HIV. Seroprevalence among low-risk urban populations reached 13.7 percent in 1995; in studies of people at high risk, the rate was nearly 50 percent. The epidemic continues to have an enormous impact on the country's health, economy, and social fabric, overtaxing the health care and welfare systems and other sectors' budgets, depriving Tanzanian farms and factories of skilled workers in their most productive years, and leaving thousands of children orphaned and in need of care.

Yet despite its poverty, Tanzania has long had formidable weapons with which to fight back: talented and committed women and men, and a political culture that has for decades encouraged citizen participation and community cooperation in solving the nation's problems. The country's wealth of human resources and its spirit of engagement, combined with financial and technical assistance from international donors, have turned Tanzania's efforts against the epidemic into a global model of decentralized participation.

AIDSCAP's Tanzania AIDS Project (TAP), a five-year USAID-funded program that began in 1993, has built success through its involvement with hundreds of community-based NGOs, from the national to the village level. To support these groups and make best use of limited resources, TAP created

NGO "clusters" in nine different high-transmission regions of the country, a unique approach to capacity building. These networks bring together carefully selected NGOs of different sizes, mandates, and levels of expertise, many of whom hadn't worked together before, to benefit from each other's resources and skills and to avoid duplication of regional prevention efforts. Each cluster also includes the regional and district AIDS coordinators working for the Ministry of Health, a beneficial linkage between NGOs and the government.

The cluster formation concentrates formerly isolated NGO talent and energies, strengthens the NGOs' political influence, and provides upport and feedback for their often overextended members. Clusters plan activities and educational campaigns together, refer clients to each other, and receive technical assistance from TAP as a group. All nine clusters have opened offices that also serve as drop-in community education centers, where counseling is available and prevention activities such as video showings and drama performances take place on a regular—and often daily—basis.

In addition to regional activities, clusters are also involved in many of TAP's national prevention activities, including behavior change communi cation, condom social marketing, and policy dialogue. After group training in behavior change communication development, each cluster takes charge of creating its own prevention messages, designing its own materials, and organizing its own public pre- ention activities, using approaches nd materials most appropriate for its region. Many clusters also participate in the condom social marketing campaign of TAP's Social Marketing Unit (SMU), integrating condom instruction into their prevention education and, in many cases, serving as sales outlets for the subsidized Salaama brand condom at their community centers. At the TAP office in Dar es Salaam, the SMU directs its national advertising and promotion efforts for Salaama and manages a complex national distribution system that reaches deep into rural areas of the country where condoms have traditionally been hard to find. Sales of Salaama have skyrocketed since they began in 1993; in 1996, sales figures of 8 million were double those of the year before.

Another important national strategy that benefits enormously from cluster participation is policy dialogue. Just as TAP serves as an advocate for policy changes at the national level, the clusters advocate to strengthen HIV/AIDS prevention and care programming and promote legal reform to end discrimination against those who are infected at the regional and local levels. Nationally and regionally, a great deal of effort goes into educating policymakers, elected officials, government ministers, business managers, trade union directors, and community and religious leaders about the dangers of the epidemic and their responsibility to support policies that promote prevention and care.

Control and treatment of STI—a severe problem throughout the country—is another priority for TAP, which sponsors training in syndromic management and other cost-effective strategies. Managed by such outstanding national institutions as Muhimbili University, extensive courses are scheduled throughout the country for clinic and hospital personnel at all levels, from physicians to nurses to health educators to support staff. Syndromic management is now the official practice in public hospitals and health clinics in Tanzania.

Given their commitment to the communities in which they're based, it's hardly surprising that TAP's clusters are deeply involved in providing care and support for families and individuals affected by HIV/AIDS. Counseling, home-based care, orphan support, and income generation opportunities are among the many services that most clusters offer. In the Dar es Salaam cluster, one NGO provides legal advice to HIV-infected people and their families on how to protect their rights and secure their property for their survivors by writing simple wills and avoiding probate. These care and support efforts benefit more than just individual families, for by their example they sensitize the larger community to the threat that HIV/AIDS poses to all and help end stigmatization of those who are infected.

TAP's unique cluster structure has proven to be a powerful means of involving an entire nation—from the grassroots to the nation's top decision makers—to work together to end the suffering and economic hardship the epidemic has caused. Many also believe that this model of community-level mobilization could also evolve into a model of sustainability for the rest of the world, a potential lesson learned in the value of cooperative action and community involvement.

CHAPTER 3

Focusing on the Future

Since USAID initiated its first HIV/AIDS prevention efforts more than ten years ago, the pandemic has, with sobering speed, become a global phenomenon that continues to expand and intensify. Its metamorphosis into a persistent, many-faceted, and often unpredictable threat to human health and security calls for a response on the part of the international community that is similarly flexible and comprehensive.

To maintain its international leadership role in the response to HIV/AIDS, the Agency recently undertook a comprehensive review of its strategy, leading to a thorough redesign that will guide its worldwide programs well into the next century. Consistent with the Agency's guiding principles, this three-part, collaborative process relied upon the active participation of all potential "stakeholders": host country health ministries and AIDS control agencies, policymakers, PVOs, NGOs, organizations representing people living with HIV and AIDS, the international donor community, and U.S. government agencies.

In the Philippines, exhausted children who work at night as sex workers on the streets of Manila sleep during the day at the Children's Laboratory for Drama in Education.

A NEW STRATEGY

Developing a Common Vision

During the first stage of the redesign process, beginning in August 1995, USAID organized public meetings to encourage stakeholder groups to develop a shared vision of the ideal worldwide response to HIV/AIDS. These meetings included the Third USAID HIV/AIDS Prevention Conference in Washington, D.C.; satellite meetings at the 1995 regional meetings on HIV/AIDS in Thailand, Israel, Chile, and Uganda; a satellite meeting at the U.N.'s Fourth World Conference on Women in Beijing; and a "Town Meeting" in Washington, D.C. In addition, questionnaires were distributed to international and indigenous NGOs, Ministry of Health officials, national AIDS control program managers, and USAID missions worldwide.

Participants firmly placed HIV/AIDS in its development context and reconciled biomedical and behavioral perspectives. They also emphasized the importance of HIV/AIDS care and support, multisectoral coordination, the need for sustainability, and reducing stigmatization of and discrimination against people vulnerable to, and living with, HIV/AIDS. Stakeholders constructed a universal framework of objectives that recognizes that prevention, care, local ownership of HIV/AIDS program objectives, human rights protection, and maintaining the productivity of the infected are mutually reinforcing objectives.

Identifying Priorities

The second stage of the participatory redesign process sought to involve stakeholders in building a

consensus for USAID's future priorities in HIV/AIDS. Participants at USAID-sponsored workshops in Washington confirmed the value and validity of the framework developed in stage one and established criteria for selecting USAID's priority objectives from that framework. Among the criteria are magnitude of impact on the epidemic, feasibility of attaining the objective, potential for capacity building and sustainability, and the degree to which the welfare and empowerment of women and other vulnerable groups are promoted.

Using these criteria, USAID identified the six areas of programmatic focus for its HIV/AIDS strategy for 1998-2005. Expressed as results to be achieved by USAID programs, these six foci are designed to help the Agency reach the overall objective of "increased use of improved, effective and sustainable responses to reduce HIV transmission and to mitigate the impact of the HIV/AIDS pandemic."

- Increased quality, availability, and demand for information and services to change sexual risk behaviors and cultural norms in order to reduce transmission of HIV.
- Enhanced quality, availability, and demand for STI prevention and management services.
- Improved knowledge about, and capacity to address, the key policy, cultural, financial, and other contextual constraints to preventing and mitigating the impacts of HIV/AIDS.
- Strengthened and expanded private sector organization responses in delivering HIV/AIDS information and services.
- Improved availability of, and capacity to generate and use, data to monitor and evaluate HIV/AIDS and STI prevalence, trends, and program impacts.
- High-quality, timely assistance provided to USAID's regional bureaus and missions, international organizations, and other partners to ensure effective and coordinated implementation of HIV/AIDS programs.

Designing Strategies

In stage three of the redesign process, USAID staff worked to translate the stakeholder-identified priorities into a series of specific strategies. For each programmatic focus selected in stage two, the design team outlined the activities that would make it possible to achieve the desired result and identified performance indicators to measure the Agency's progress toward achieving that result. It also worked to highlight and reaffirm the Agency's commitment to addressing essential cross-cutting issues, such as HIV/AIDS care and support, NGO capacity building, policy reform, and a focus on youth.

STRATEGIC APPROACHES

The strategic objective and long-range strategy that emerged from the review process were built on two overarching themes: (1) the need for continued and expanded emphasis on sustainable responses to prevent HIV transmission, and (2) a new emphasis on mitigating the epidemic's impact on people and communities while more closely studying its social, economic, and policy impacts.

Prevention and mitigation efforts will be undertaken in a selected set of emphasis countries, enabling the Agency to focus more effectively on achieving results and building capacity in the countries it does target so that they can sustain implementation once foreign assistance has ended. A more focused response will also heighten opportunities for impact and increase opportunities for demonstrating successful program models.

Prevention

Since 1987, USAID's strategy has centered around three approaches to HIV/AIDS prevention: increasing distribution of condoms, changing high-risk behaviors through behavior change communication, and improving the diagnosis, treatment, and control of sexually transmitted infections. Each approach, over time, has had demonstrable impact in the field.

Roughly 70 percent of USAID's overall budget for HIV/AIDS programs will be spent to continue prevention activities. These prevention efforts will build on successes achieved to date and will concentrate on strengthening the long-term sustainability of HIV/AIDS programs.

Mitigating Impact

To enhance its prevention agenda, USAID's expanded portfolio will embrace new efforts to mitigate the effect of the epidemic on individual lives and communities. Activities will include:

- Improving basic care and psychosocial support for people living with HIV/AIDS and their survivors.
- Improving and expanding HIV/STI surveillance systems.
- Promoting operations research to identify "best practices."
- Assisting PVOs and NGOs, including community-based organizations, involved in HIV/AIDS activities.

THE PREVENTION-TO-CARE CONTINUUM

For more than a decade, HIV/AIDS programs in developing countries have focused on prevention. With no effective, affordable treatment available, many donors and nongovernmental organizations invest their resources in protecting people from HIV infection rather than caring for those already infected.

But health care providers, outreach workers, and community volunteers are finding it increasingly difficult to maintain this artificial separation between prevention and care, particularly in countries with mature epidemics. And many believe that an exclusive focus on preventing further transmission actually weakens prevention efforts.

Those who support the emphasis on prevention fear that any attempt to meet the burgeoning need for HIV/AIDS care and support would drain precious dollars from effective prevention efforts, making it impossible to slow the spread of the epidemic. Even in sub-Saharan African countries where few have access to antiviral treatments such as AZT or the new drug "cocktails," the cost of basic hospital inpatient care for one AIDS patient ranges from U.S.$210 to $936. In contrast, a comprehensive HIV/AIDS prevention and STI management program in a workplace in one of these countries would cost U.S.$15 to $25 per person reached. In the case of HIV/AIDS, an ounce of prevention may truly be worth a pound of "cure."

However, many now believe that integration of HIV/AIDS care and prevention is essential on both humanitarian and practical grounds. They argue that a single-minded focus on prevention undermines the credibility of an HIV/AIDS program among the very people it is intended to help, especially in countries with high HIV prevalence. At the same time, tending to people living with HIV/AIDS and their families and communities without using their experience to reinforce prevention messages is to miss the most obvious of motivational opportunities.

Experience suggests that providing HIV/AIDS care and support enables prevention programs to reach those most likely to transmit the virus. And one recent study provided powerful evidence of the importance of providing STI treatment for those living with HIV/AIDS. In Malawi researchers from the University of North Carolina at Chapel Hill, with support from AIDSCAP, found that treating gonorrhea in HIV-positive men reduced the amount of virus in their semen eight- to tenfold, making them far less likely to infect others.

Few studies, however, have examined the relationship between HIV prevention and provision of care and support. A USAID-AIDSCAP-UNAIDS study underway in Tanzania, Kenya, and Trinidad—the first randomized controlled trial of the impact of voluntary HIV counseling and testing on sexual risk behavior in the developing world—is expected to yield widely applicable answers

THE HIV PREVENTION-TO-CARE CONTINUUM

NASCENT	CONCENTRATED	GENERALIZED	MATURE
Fewer AIDS cases, low HIV prevalence in "high-risk groups"	High prevalence in "high-risk groups"	Increasing prevalence in general population	Increasing mortality
Targeted behavior change interventions (BCI), including condom social marketing	Increase targeted BCI (include HIV+ and HIV- messages)	Consider opportunistic infections interventions	Home-based care models
STI management	Increase use of peer education	Improve TB management	Orphan interventions
Baseline behavior studies	Consider counseling and testing	Interventions to reduce vertical transmission	Health systems strengthening
	Policies to reduce stigma		Explore models to increase use of antiviral therapies
	Establish referral systems		

about the cost-effectiveness of such services as a prevention intervention. And a small USAID-sponsored study by AIDSCAP in Tanzania will shed light on how psychosocial support affects the behavior of individuals during the first few months after they learn that they are HIV-positive.

Although questions remain about the most cost-effective ways to link prevention and care, a consensus is slowly emerging that AIDS care and support do have a role to play in prevention efforts. The figure on page 32 illustrates how mitigation of some of the epidemic's impacts can complement prevention efforts at different points along the continuum representing the increasing prevalence of HIV/AIDS in many countries.

This continuum is all too familiar to USAID staff working in high-prevalence countries where the pressure on government services, community resources, and family survival threatens the very social fabric. While the majority of USAID's HIV/AIDS programming will continue to focus on prevention, the Agency has broadened its strategy to incorporate new initiatives promoting a more holistic approach to the pandemic. USAID's contribution will be to identify ways to improve care for those living with HIV/AIDS and psychological, social, and legal support for all those affected by the epidemic.

FROM STRATEGY TO ACTION

USAID's approach to achieving its strategic objectives is built around five core activity areas: operations research, regional and country interventions, social marketing, evaluation and dissemination, and multilateral assistance.

The Agency's *global leadership, research and development* activity will place renewed emphasis on advancing the state of the art in responding to HIV/AIDS through operations research, field tests of interventions, and promotion of best practices. Topics of research will include STI management and prevention, integration of HIV prevention into public and private sector health services, and analysis of policies governing delivery of care and support services to people living with HIV/AIDS and their families and communities.

Operations research in behavior change communication is particularly critical in order to improve strategies for influencing individual sexual risk behaviors and social norms in specific countries. A substantial need remains for leadership in developing expertise and networks on which national programs can draw in tailoring prevention messages for different segments of their populations.

Lessons learned through global leadership initiatives will be quickly put into practice through dissemination of best practices and in USAID's *regional and country interventions*. Through this activity, the Agency will continue to provide the technical assistance, training, logistical and other support required by field programs and USAID missions to implement HIV/AIDS and STI prevention programs.

Country and regional support will include assistance in developing strategies and structures for integrating HIV/AIDS interventions into other primary care and reproductive health initiatives. Methods of providing such assistance are contingent upon what is most appropriate for a country or region, but could include long-term technical advisors, short-term consultants, and cooperating agencies.

The third core activity, *social marketing*, has proved effectiveness in making STI/HIV prevention information and condoms widely accessible at nominal cost to the consumer. Under USAID's new strategy, the role of social marketing as a mainstay of prevention programming will expand to include additional public health products such as the female condom, prepackaged therapy for STIs, and a vaginal microbicide when it becomes available. The Agency will also focus on expanding social marketing interventions to national or regional scale and evaluating their impact.

Through its *design, monitoring, evaluation, and dissemination* activity, USAID will provide its missions and other partners in HIV/AIDS prevention with access to technical assistance in program design and evaluation and to the lessons learned from all the activities under its portfolio. Effective dissemination of such lessons builds informed interest, encourages partnerships, and helps programs and their implementers avoid the pitfalls that other programs have already encountered. USAID will place renewed emphasis on developing systems that provide missions, cooperating agencies, international donors, and governments regular access to current technical, descriptive, and evaluative information on active and completed HIV/AIDS programs.

Finally, USAID will continue providing *multilateral assistance* to United Nations partners and others engaged in international HIV/AIDS programming. Through this activity, the Agency will support UNAIDS, the successor to the WHO Global Programme on AIDS. The international leadership of such an organization is increasingly important at a time when, notwithstanding the inexorable growth of the HIV/AIDS pandemic, a degree of "donor fatigue" is weakening the resolve of many multilateral and bilateral funders. USAID will look to UNAIDS to play an increasingly prominent role in coordinating the HIV/STI/AIDS activities of international donors at the country level.

CROSS-CUTTING ISSUES

In addition to its core activities, USAID will undertake a series of new, exploratory initiatives intended to provide cutting-edge support to the priority elements of its portfolio. Such cross-cutting issues as the linkages between care and prevention, NGO capacity building, young people's access to information and services, and integration of programs will influence all aspects of HIV/AIDS prevention and mitigation, thus making them particularly important to the improved effectiveness of all programs.

With the new priority given to efforts to mitigate the impact of HIV/AIDS, *research on the prevention-to-care continuum* assumes critical importance. Operations research in this area will investigate how best to create reinforcing linkages between prevention and care. Research that leads to appropriate, workable definitions of care, followed by guidelines for providers engaged in home and community support, will make a major contribution to the mitigation effort in USAID-assisted countries. Other areas for country-specific study include guidance on psychosocial and legal support for infected individuals and their families, laws and policies that may restrict care givers, and innovative approaches to meeting the needs of AIDS orphans.

THE COMMUNITY AS A LOCUS FOR ACTION

Community action has been an essential part of the response to HIV/AIDS since the early days of the epidemic, when community-based organizations (CBOs) were created to fill the gaps in often inadequate public and private services for people with HIV/AIDS. Many of the most respected and effective HIV/AIDS organizations, such as The AIDS Service Organization (TASO) in Uganda and Jamaica AIDS Support (JAS), began as support groups for the family and friends of those who had died of AIDS. Responding to the evolving needs of their communities, these CBOs gradually expanded their efforts to HIV/AIDS care, prevention, and advocacy.

USAID has recognized the importance of community action in HIV/AIDS prevention and care and has channeled much of its funding for HIV/AIDS to CBOs and other local nongovernmental organizations. About 70 percent of the activities of the AIDSCAP Project, for example, were carried out by more than 500 NGOs and CBOs. Since some of these groups were fledgling organizations and many others were already experienced in health or development but were new to the HIV/AIDS field, AIDSCAP's technical assistance, training, and institution-building support were critical to the success of these partnerships.

The Agency has also helped fund the NGO capacity building and network strengthening efforts of the International HIV/AIDS Alliance, the National Council for International Health, and the International Council of AIDS Service Organizations. In addition, USAID's support for groups involved in advocacy, such as the Kenya AIDS NGOs Consortium, fostered the creation of successful grass-roots movements to influence national HIV/AIDS policies in a number of countries.

This reliance on organizations with deep roots in their communities has enabled USAID to reach millions of people with prevention messages and services that are truly responsive to their needs. It also offers the potential to leave behind a sustainable indigenous response to the epidemic in countries that eventually "graduate" from U.S. support.

USAID's new strategy calls for an even greater emphasis on community action for HIV/AIDS prevention and care. In addition to strengthening NGO capacity building efforts, the Agency will create links with other USAID programs, such as democracy and governance initiatives, that promote community empowerment. The ultimate goal will be sustainability: enhancing technical and management skills and building strong networks among community organizations to ensure that they can continue HIV/AIDS prevention, care, and advocacy efforts in the future.

Mitigation efforts must be complemented by *biomedical research* to develop methods for preventing further HIV transmission. Using its own resources and leveraging those of others, USAID will continue to play a leading role in sponsoring research into key new technologies, such as vaginal microbicides, inexpensive STI diagnostics, methods to reduce mother-to-child transmission, and vaccines for use in resource-limited settings.

The Agency will also collaborate with other development partners to help governments build and strengthen *HIV/AIDS surveillance systems*. USAID has supported the U.S. Bureau of the Census (BUCEN) HIV/AIDS Surveillance Database since 1987 and recently began working with UNAIDS to develop guidelines for biological and behavioral surveillance in developing countries. Recognizing the growing need to understand the dynamics of HIV transmission and the results of STI/HIV/AIDS prevention interventions, USAID will continue working with UNAIDS, BUCEN, and the Centers for Disease Control and Prevention to develop state-of-the art systems for STI/HIV surveillance.

Another activity that cuts across all aspects of HIV/AIDS programs is *NGO capacity building*. Nongovernmental organizations are becoming increasingly important in developing countries for mobilizing resources at the community level and developing programs that are both appropriate and cost-effective. Yet many of these NGOs are relatively new and inexperienced, and most need technical assistance and training to meet the technical, programmatic, and managerial challenges of the epidemic.

USAID will place major emphasis on building the capacity of indigenous NGOs to play permanent roles in the design, implementation, and evaluation of HIV/AIDS prevention and care programs. These roles could range from serving as focal points for community-based social marketing activities, to organizing model private sector care and service organizations, to recruiting and training volunteers to assist families affected by the epidemic, to exploring the potential for mutually supportive activities between themselves and U.S. HIV/AIDS NGOs.

Providing *access to information and services for youth* will remain an important element of USAID-supported HIV/AIDS programs. Youth volunteers, young peoples' associations, and school groups have been some of the most enthusiastic promoters of responsible sexual behavior in the age of AIDS. Models of successful in-school and out-of-school programs are available to be adapted and replicated.

USAID will support the adaptation and replication of these successful programs through operations research to determine which approaches are most effective for different ages in different settings. Educating youth on how to prevent HIV infection must start at an early age, and experiences to date with programs for youth audiences will be instructive.

As the epidemic has matured, *policy reform* has moved beyond dialogue to generate government commitment to HIV/AIDS prevention and care. A more advanced set of policy issues now includes seeking direct governmental contributions to the effort, decision making on resource allocation, addressing discrimination and stigma, and identifying the appropriate care and support interventions for people living with HIV/AIDS, survivors, and affected communities. To address these issues in the policy arena, USAID will support behavioral research and the generation of more sophisticated policy tools, such as simulation models to assist policymakers in making resource allocation decisions.

A final cross-cutting issue and a continuing USAID priority is the *integration* of various reproductive health and primary care services, including HIV/AIDS prevention, STI diagnosis, treatment and prevention, family planning and primary health care. Family planning, and maternal-child health clinics, for example, offer promising opportunities for reaching millions of sexually active adults with comprehensive and complementary reproductive health services. Integrating health services can also improve both cost-effectiveness and the quality of the services themselves.

Effective integration of reproductive health services is only one of the many health and development challenges posed by the HIV/AIDS epidemic. Although these challenges may seem daunting in the face of a relentlessly expanding epidemic, USAID's thorough review of prevention experience to date offers reason for cautious optimism.

Many operational questions remain, but we now have evidence that the prevention approaches we have developed and refined over the years work, and we have the experience to apply them ever more effectively. USAID's strategy, which represents the collective wisdom and vision of those on the front lines of the pandemic, offers a blueprint for using the lessons of the past decade to meet the challenges of the future.

USAID FY 1995
HIV/AIDS OBLIGATIONS BY COUNTRY

	DEVELOPMENT ASSISTANCE		DEVELOPMENT FUND FOR AFRICA		ECONOMIC SUPPORT FUNDS	SPECIAL ASSISTANCE INITIATIVE	NEW INDEP STATES	POP ACCOUNT	FY 95 COUNTRY TOTAL
Country	Mission Core Funds	FS Funds	Mission Core Funds	FS Funds	Mission Core Funds	Mission Core Funds	Mission Core Funds		TOTAL FUNDS
Guatemala	–	–	–	–	–	–	–	335,731	335,731
Guyana	–	–	–	–	–	–	–	39,373	39,373
Haiti	2,515,000	1,000,000	–	–	384,000	–	–	150,086	4,049,086
Honduras	150,000	600,000	–	–	–	–	–	417,147	1,167,147
Jamaica	965,000	875,000	–	–	–	–	–	86,885	1,926,885
Mexico	–	100,000	–	–	–	–	–	565,961	665,961
Montserrat	–	–	–	–	–	–	–	348	348
Nicaragua	113,000	25,600	–	–	–	–	–	418,815	557,415
Panama	–	–	–	–	–	–	–	28,385	28,385
Peru	–	–	–	–	–	–	–	638,426	638,426
ROCAP	2,000,000	–	–	–	–	–	–		2,000,000
Suriname	–	–	–	–	–	–	–	74,593	74,593
Trinidad & Tobago	–	–	–	–	–	–	–	46,633	46,633
LAC Regional Total	7,647,000	4,350,600		–	384,000	–	–	4,706,363	17,087,963
WORLDWIDE									
Interregional	–		–	–	–	–	–	329,705	329,705
PHNC	51,841,000	–	8,247,000	–	–	154,000	364,000	99,400	60,705,400
PPC	287,000	–	–	–	–	–	–	–	287,000
BHR	897,000	–	–		–	–	–	–	897,000
WIDC	1,261,000	–	13,000	–		39,000	39,000	–	1,352,000
AA/STC	73,000	–	1,000	–	70,000	–	–	–	144,000
Worldwide Total	54,359,000	–	8,261,000		70,000	193,000	403,000	429,105	63,715,105
GRAND TOTAL	68,383,000	8,356,600	38,748,000	2,000,000	2,472,000	193,000	403,000	31,297,279	151,852,879

Note: The grand total includes 1995 Population Account funding for contraceptive procurement of $31,197,882.

Source: USAID Activity Code/Special Interest System 10/16/96 and USAID Worldwide Database.

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USAID FY 1996
HIV/AIDS OBLIGATIONS BY COUNTRY

Country	DEVELOPMENT ASSISTANCE: Mission Core Funds	DEVELOPMENT ASSISTANCE: FS Funds	DEVELOPMENT FUND FOR AFRICA: Mission Core Funds	DEVELOPMENT FUND FOR AFRICA: FS Funds	ECONOMIC SUPPORT FUNDS: Mission Core Funds	SPECIAL ASSISTANCE INITIATIVE: Mission Core Funds	NEW INDEP STATES: Mission Core Funds	POP ACCOUNT	FY 96 COUNTRY TOTAL: TOTAL FUNDS
AFRICA REGION									
Africa Regional	1,995,000	550,000	–	–	–		–	–	2,545,000
Benin	772,000	–	–	–	–	–	–	231,014	1,003,014
Cameroon	–	–	–	–	–	–		764,771	764,771
Central African Rep.	–	–	120,000	–	–	–	–	102,565	222,565
Chad	–	–	–	–	–	–	–	3,193	3,193
Côte d'Ivoire	–	–	–	–	–	–	–	744,686	744,686
Eritrea	288,000	–	–	–	–	–	–	140,062	428,062
Ethiopia	2,813,000	–	–	–	–	–	–	1,100,793	3,913,793
Ghana	1,645,000	–	–	–	–	–	–	623,667	2,268,667
Guinea	1,504,000	–	–	–	–	–	–	179,060	1,683,060
Guinea-Bissau	–	–	–	–	–	–	–	10,117	10,117
Kenya	1,206,000	1,501,000	–	–	–	–	–	–	2,707,000
Lesotho	–	–	–	–	–	–	–	19,164	19,164
Madagascar		–	–	–	–	–	–	220,534	220,534
Malawi	5,687,000	–	–	–	–	–	–	412,852	6,099,852
Mali	–	–	2,028,000	–	–	–	–	333,317	2,361,317
Mauritania	–	–	–	–	–	–	–	17,288	17,288
Mozambique	2,251,000	500,000	–	–	–	–	–	259,549	3,010,549
Niger	136,000	100,000	–	–	–	–	–	123,799	359,799
Nigeria	90,000	910,000		–	–	–	–	1,187,014	2,187,014
Rwanda	–	–	1,994,000	–	–	–	–	259,455	2,253,455
REDSO/EA	138,000	–		–	–	–	–	138,000	–
REDSO/WA	2,030,000	670,000	–	–	–	–	–	–	2,700,000
Sahel Regional	–	–	61,000		–	–	–	61,000	–
Senegal	–	725,000	–		–	–	–	456,871	1,181,871
Sierre Leone	–	–	–	–		–	–	5,794	5,794
South Africa	4,028,000	–	–	–		–	–	–	4,028,000
Southern Africa Region	–	–	250,000	–	–	–		–	250,000
Tanzania	441,000	3,820,618	–	–	–	–		613,838	4,875,456
Togo	–	–	–	–	–	–		186,362	186,362
Uganda	4,943,000	–	–	–	–	–	–	701,069	5,644,069
Zambia	1,988,000	–	–	–	–	–	–	280,645	2,268,645
Zimbabwe	2,990,000	440,000	–	–	–	–	–	–	3,430,000
Africa Regional Total	34,945,000	9,216,618	4,453,000	–	–		–	8,977,479	57,592,097
ANE REGION									
ANE Regional	4,500,000	–		–	–		–	–	4,500,000
Algeria	–	–		–	–	–	–	104,592	104,592
Bangladesh	–	–		–	–		–	1,327,361	1,327,361
Cambodia		–	–	–	1,025,000		–	44,878	1,069,878

Note: The grand total includes 1996 Population Account funding for contraceptive procurement of $19,701,021.

Source: USAID Activity Code/Special Interest System 10/16/96 and USAID Worldwide Database and G/PHN/HN

USAID FY 1996
HIV/AIDS OBLIGATIONS BY COUNTRY

	DEVELOPMENT ASSISTANCE		DEVELOPMENT FUND FOR AFRICA		ECONOMIC SUPPORT FUNDS	SPECIAL ASSISTANCE INITIATIVE	NEW INDEP STATES	POP ACCOUNT	FY 96 COUNTRY TOTAL
Country	Mission Core Funds	FS Funds	Mission Core Funds	FS Funds	Mission Core Funds	Mission Core Funds	Mission Core Funds		TOTAL FUNDS
Haiti	90,000	–	–	–	191,000	–	–		281,000
Honduras	108,000	905,000	–	–	–	–	–	448,976	1,461,976
Jamaica	791,000	500,000	–	–	–	–	–	3,438	1,294,438
Mexico	4,000	–	–	–	–	–	–	384,154	388,154
Montserrat	–	–	–	–	–	–	–	385	385
Nicaragua	–	148,000	–	–	–	–	–	284,687	432,687
Panama	–	–	–	–	–	–	–	5,887	5,887
Paraguay	–	–	–	–	–	–	–	1,454	1,454
Peru	100,000	–	–	–	–	–	–	1,072,295	1,172,295
ROCAP	4,514,000	60,000	–	–	–	–	–	–	4,574,000
St. Kitts	–	–	–	–	–	–	–	971	971
LAC Regional Total	9,875,000	4,543,946	–	–	191,000	–	–	4,969,309	19,579,255
WORLDWIDE									
PHNC	44,090,446	–	–	–	–	–	–	–	44,090,446
PPC	251,000	–	–	–	–	–	–		251,000
BHR	862,000	–	–	–	–	–	–	–	862,000
WORLDWIDE Total	45,203,446	–	–	–	–	–	–	–	45,203,446
GRAND TOTAL	96,825,446	15,210,554	4,453,000	–	1,216,000	–		19,801,021	137,506,021

Note: The grand total includes 1996 Population Account funding for contraceptive procurement of $19,701,021.

Source: USAID Activity Code/Special Interest System 10/16/96 and USAID Worldwide Database and G/PHN/HN.

HEALTH ISSUES IN SOUTH AFRICA