AIDS

COVER: Symbolizing the crushing of HIV infection and AIDS, this powerful fist is the distinguishing mark of a coordinated series of booklets and posters in Kenya.

FORFWORD

I am pleased to provide Congress with this report on the U.S. Agency for International Development's program for prevention and control of HIV infection and AIDS in developing countries. Although the worldwide toll from human immunodeficiency virus (HIV)

A Ugandan worker takes home a leaflet that describes how to prevent HIV infection and AIDS.

infection and acquired immune deficiency syndrome (AIDS) mounts, 1988 and 1989 have witnessed increasing numbers of prevention plans translated into vigorous efforts to help stem the pandemic and blunt its impact on development.

The virus has spread to virtually every corner of the globe. The World Health Organization estimates that five to ten million people are infected already, and most of them will eventually die of AIDS. Although the well-developed U.S. surveillance system was the first to identify large numbers of AIDS cases, currently available reporting indicates that the developing world has been hit even harder. In some developing countries, more women than men are becoming infected, and children are being stricken in growing numbers. There is no vaccine to prevent the disease and no cost-effective cure is expected in the near future.

This tragedy deserves our attention—and our helping hand—for humanitarian reasons alone. But the potential implications for the economic, social, and political stability of developing countries make the control of HIV infection and AIDS an important foreign policy issue for the United States. There are no quick or easy solutions to the AIDS pandemic. The Fifth International Conference on AIDS, held in Montreal, Canada, in June of this year, confirmed the prognosis that sustainable prevention programs are needed to control the virus.

This report describes the efforts USAID has made in helping developing countries build long-term programs. As the primary federal agency providing foreign assistance, USAID has become the lead U.S. organization in international efforts to combat the pandemic.

The cornerstone of our effort involves support for the World Health Organization's Global Programme on AIDS (WHO/GPA). This program has taken great strides in helping developing countries prepare national AIDS prevention plans. With mobilization well under way, attention is increasingly focusing on field implementation. USAID's experience in program implementation in the field is an example of the particular strengths and assets we have to contribute. We have developed a coordinated U.S. bilateral program to make our management and implementation resources available to the global effort.

The success of WHO/GPA will depend on vigorous bilateral support. In fact, WHO/GPA national AIDS prevention plans depend for more than 80 percent of their funding on bilateral donors. USAID must—and does—provide its share of both financial support and technical assistance. In addition to the WHO/GPA effort, U.S.-funded bilateral AIDS prevention activities are under way in 43 developing countries. We are providing technical assistance in public education, social mobilization, and prevention counseling. We also provide technical assistance in disease surveillance, blood transfusion screening, control of sexually transmitted diseases, and the distribution of badly needed supplies and equipment. We help health-service providers analyze costs so they can better allocate scarce resources to ensure the sustainability of their programs. And we support a variety of private voluntary organizations because they have a remarkable capacity to act rapidly and catalyze community response in times of crisis.

Although the fight has barely begun, we believe that we are on the right course. The challenge to the American people, as well as to the Congress, is to remain steadfast in helping developing nations cope with this plague. The reason is simple: HIV infection and AIDS know no boundaries.

Mark L. Edelman

Mark L. Edelman
Acting Administrator
U.S. Agency for International Development

A Global Portrait

Respecting no national borders or social classes, the human immunodeficiency virus (HIV) has spread to virtually every corner of the globe, inflicting growing numbers of men, women, and children with acquired immune deficiency syndrome (AIDS). There is no cure, and the limited methods of treatment available are only partially effective and very costly. No vaccine to prevent AIDS is expected in the near future.

As its name suggests, AIDS is actually a syndrome rather than a single disease. The virus gradually disables the body's immune system, rendering the individual increasingly vulnerable to a number of infectious diseases and cancers. The symptoms of these "opportunistic" infections, such as pneumonia or severe diarrhea, can sometimes be treated—but when treatment stops, the same or some other malady inevitably returns. Additionally, the virus can directly cause tissue damage, as is sometimes seen in HIV infection of the brain. Death usually occurs within two or three years of the clinical diagnosis of AIDS.

Through March 1989, 148 countries had reported 146,569 cases of AIDS to the World Health Organization's Global Programme on AIDS (WHO/GPA). But many more AIDS cases go undetected or unreported, especially in the developing world where large segments of the population lack access to health-care facilities and disease surveillance systems are often limited. In Latin America, half of all cases may go unreported, and in Africa, only one in five or ten cases is thought to be reported. Indeed, WHO/GPA estimates that there are actually more than 450,000 cases of AIDS worldwide.

Even this toll, however, barely begins to tell the story. WHO/GPA estimates that five to ten million people are now infected with HIV, which means that perhaps one million new AIDS cases can be expected within the next five years. Moreover, WHO/GPA predicts that the total number of people carrying the virus could well increase severalfold by the turn of the century. Absent development of effective and affordable therapies, the great majority of those infected will eventually progress to AIDS and die.

Modes of Transmission

The AIDS virus can be passed from person to person in only a few ways. Sexual intercourse is by far the most common mode of transmission, accounting for perhaps 90 percent of all HIV infections. Although early cases of AIDS in the United States were largely confined to adult males, in many developing countries men and women have been equally affected. Anyone who has multiple sexual partners, or whose partner has multiple partners, faces an increased risk. The presence of other sexually transmitted diseases (STDs)—especially those that produce genital sores, such as syphilis, herpes, and chancroid—also facilitates transmission. In developing countries where treatment is less accessible, STDs are far more common than in the industrial world. Consequently, STDs are becoming increasingly important cofactors in the spread of HIV.

Exposure to contaminated blood or blood products is the next most important mode of HIV transmission worldwide. While transmission via blood transfusions has been virtually eliminated in the United States by blood screening programs, the equipment and trained personnel required for screening are often unavailable in many developing countries, and screening is sometimes further constrained by lack

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NOTE: The design on the cover was produced by the Kenya Red Cross Society in conjunction with the Kenyan Ministry of Health.

of a reliable electric supply. In central Africa, transfusions have probably accounted for five to ten percent of HIV transmission among adults.

HIV can also be transmitted through blood-contaminated syringes and needles. The sharing of contaminated needles by intravenous drug users is a major problem in some developed countries, but this mode of transmission is still limited to only a few developing countries. The use of needles and syringes for therapeutic injections appears to carry a low risk of transmission, even if they are inadequately sterilized. Contrary to early fears, childhood immunization programs in the developing world have not been associated with HIV infection. In a 1984-85 study in Kinshasa, Zaire, for example, scientists from the Centers for Disease Control determined the HIV-prevalence rates among people of varying ages. Children aged one to 14 years were significantly less likely to be infected than any other age group. If childhood immunizations were indeed posing a major problem, more children would have been expected to carry the virus.

Finally, HIV can be transmitted from mother to child. This infection seems to occur during pregnancy, when the virus crosses the placenta into the amniotic fluid and then into fetal circulation, or during birth, when the baby is likely to come in contact with the mother's blood. The mechanisms are not clearly understood, but 20 to 50 percent of infants born to infected mothers have been found to acquire the virus. The very slight risk that babies can be infected via breast-feeding is far outweighed by the many health benefits of mother's milk; therefore, WHO and other international organizations recommend that even infected women breast-feed their infants.

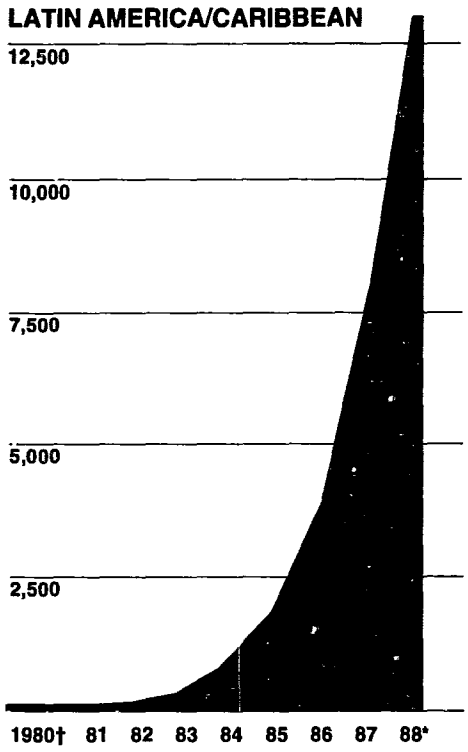
Just as we know how HIV can be transmitted, we know how it is not transmitted. The virus is not spread by food, water, or biting insects. Neither is it transmitted through sneezes or coughs, nor through casual contact such as handshakes and hugs.

Once a person is infected with HIV, it may be seven years or more before clinical manifestations of AIDS develop and are diagnosed. In fact, it is this "invisible" nature that contributes so significantly to the rapid and widespread transmission of HIV. During the asymptomatic period, the individual looks and feels healthy but is a carrier and can pass the virus to others.

Regional Differences

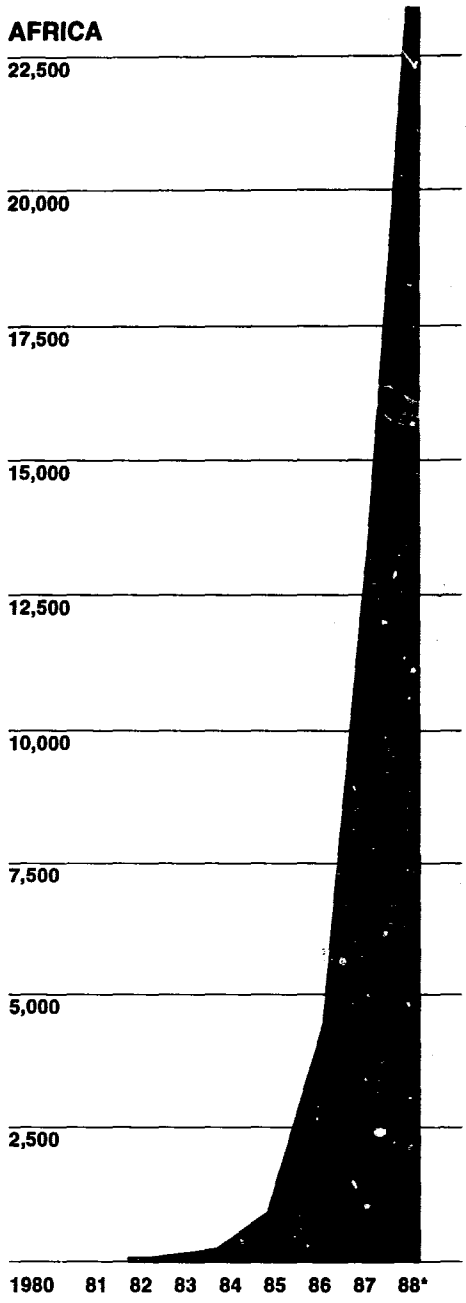
Africa has been hit the hardest by HIV infection. Although only about 20,000 AIDS cases have been reported, WHO/GPA estimates that the actual total is at least five times higher, more than the number

Cumulative AIDS cases reported by year



*Cases incomplete and widely underreported
†Includes cases prior to 1980
Source: World Health Organization

Cumulative AIDS cases reported by year



*Cases incomplete and widely underreported
Source: World Health Organization

AIDS cases reported by developing countries receiving USAID assistance

Country	Date of last report	Cumulative number of cases through December 1988*	Cases per 100,000 population in 1987
AFRICA			
Benin	06/88	15	0.1
Botswana	03/88	34	0.8
Burkina Faso	02/89	107	0.2
Burundi	06/88	1408	13.8
Cameroon	08/88	62	0.0
Central African Republic	06/88	432	6.9
Chad	10/88	11	0.0
Congo	12/87	1250	57.5
Cote d'Ivoire	11/87	250	1.3
Djibouti	12/88	1	0.0
Gabon	12/88	27	1.8
Gambia, The	12/88	62	3.0
Ghana	01/89	327	0.3
Guinea	11/88	33	0.1
Guinea-Bissau	01/89	48	3.3
Kenya	06/88	2732	9.8
Lesotho	08/88	2	0.1
Liberia	03/88	2	0.1
Malawi	06/88	2586	12.0
Mali	01/88	29	0.3
Mauritania	07/88	0	0.0
Mauritius	11/88	1	0.1
Mozambique	01/89	27	0.0
Niger	12/88	43	0.3
Nigeria	11/88	13	0.0
Rwanda	03/88	987	3.2
Senegal	11/88	149	0.9
Sierra Leone	08/88	5	0.0
Somalia	12/88	0	0.0
Sudan	12/88	98	0.1
Swaziland	06/88	14	0.9
Tanzania	12/88	4158	4.0
Togo	06/88	2	0.1
Uganda	10/88	5998	11.5
Zaire	06/87	335	1.1
Zambia	12/88	1296	4.1
Zimbabwe	04/88	119	1.4
Region Total:		**22653**	
ASIA/NEAR EAST			
Bangladesh	06/88	0	0.0
Cook Islands (N.Z.)	09/87	0	0.0
Egypt	12/88	6	0.0
Fiji	09/87	0	0.0
India	11/88	28	0.0
Indonesia	10/88	3	0.0
Jordan	12/88	3	0.1
Kiribati	01/88	0	0.0
Morocco	12/88	22	0.0
Niue (N.Z.)†	—	—	—
Oman	12/88	6	0.0
Pakistan	12/88	6	0.0
Papua New Guinea	03/89	8	0.0
Philippines	12/88	20	0.0
Solomon Islands	09/87	0	0.0
Sri Lanka	12/88	3	0.0
Thailand	12/88	10	0.0
Tonga	08/88	1	0.0
Tunisia	12/88	36	0.2
Tuvalu	09/87	0	0.0
Vanuatu	01/89	0	0.0
Western Samoa	10/88	0	0.0
Region Total:		**152**	
LATIN AMERICA/CARIBBEAN			
Antigua/Barbuda	12/88	3	1.2
Barbados	12/88	70	9.5
Belize	09/88	11	3.4
Bolivia	09/88	16	0.0
Brazil	12/88	4946	1.2
Chile	12/88	123	0.3
Colombia	09/88	308	0.4
Costa Rica	12/88	93	0.9
Dominica	09/88	6	6.8
Dominican Republic	12/88	701	4.6
Ecuador	06/88	45	0.2
El Salvador	12/88	71	0.3
Grenada	09/88	11	5.0
Guatemala	12/88	47	0.2
Haiti	12/88	1849	8.1
Honduras	12/88	211	1.5
Jamaica	12/88	79	1.4
Mexico	12/88	2158	0.8
Peru	12/88	137	0.3
St. Kitts/Nevis	12/88	18	0.0
St. Lucia	09/88	11	4.9
St. Vincent/Grenadines	09/88	14	4.5
Region Total:		**10928**	

*Cumulative cases incomplete and widely underreported
†Niue (N.Z.) does not report AIDS cases
Source: World Health Organization, March 1989

recorded in the United States. Approximately two to three million Africans are believed to carry the virus. The pandemic is concentrated mostly in urban areas in central and east Africa, with the highest reported HIV-prevalence rates occurring in the Central African Republic, the Congo, Cote d'Ivoire, Kenya, Malawi, Mozambique, Rwanda, Tanzania, Uganda, Zaire, Zambia, and Zimbabwe. Although infection rates are much lower in rural Africa, the virus is beginning to make inroads there as well.

HIV is transmitted in Africa primarily through heterosexual contact, with men and women afflicted in roughly equal numbers. In some urban centers, five to 32 percent of all people aged 20 to 49 carry the virus, and infection rates are often significantly higher among individuals practicing high-risk behavior. By early next decade, the total adult mortality rate in many cities is expected to have been doubled or tripled by AIDS. Because so many women carry the virus, transmission to infants is also disturbingly common. Up to one quarter of pregnant women in some cities have been found to be infected, and the number of infected babies being born is increasing steadily. A majority of these babies are likely to die of AIDS before their fifth birthday.

In the Caribbean, numerous countries have experienced some of the world's highest HIV-infection and AIDS rates. Hardest hit are the urban areas, with infection rates in some cities estimated to be as high as the rates in cities in central Africa. Approximately 4,000 cases of AIDS were reported from the Caribbean to WHO/GPA through March 1989, but the actual figure is estimated to be at least several times that number. The number of people infected with HIV could grow substantially, since the region faces a large increase during the next decade in the number of young people entering their most sexually active years.

Heterosexual transmission is now the most common mode of HIV spread in the Caribbean, accounting for roughly 60 percent of new cases. Infection occurs primarily among young to middle-aged adults and, although males are still more likely than females to have AIDS, the gap is narrowing. With this shift has come increasing numbers of infants infected with HIV, and pediatric AIDS is already a substantial problem in many countries.

In many Latin American countries, HIV-infection rates are still relatively low, with less than one percent of the adult population infected. Brazil and Mexico, however, have experienced serious outbreaks of infection, especially in urban areas among people practicing high-risk behavior. These two countries account for the great majority of AIDS cases in the region: Brazil reported 4,946 cases and Mexico reported 2,158 cases to WHO/GPA through March 1989. There is also potential for the virus to spread more widely. Heterosexual transmission is on the rise in some Latin American countries, and in time this may become the dominant mode of HIV transmission in the region.

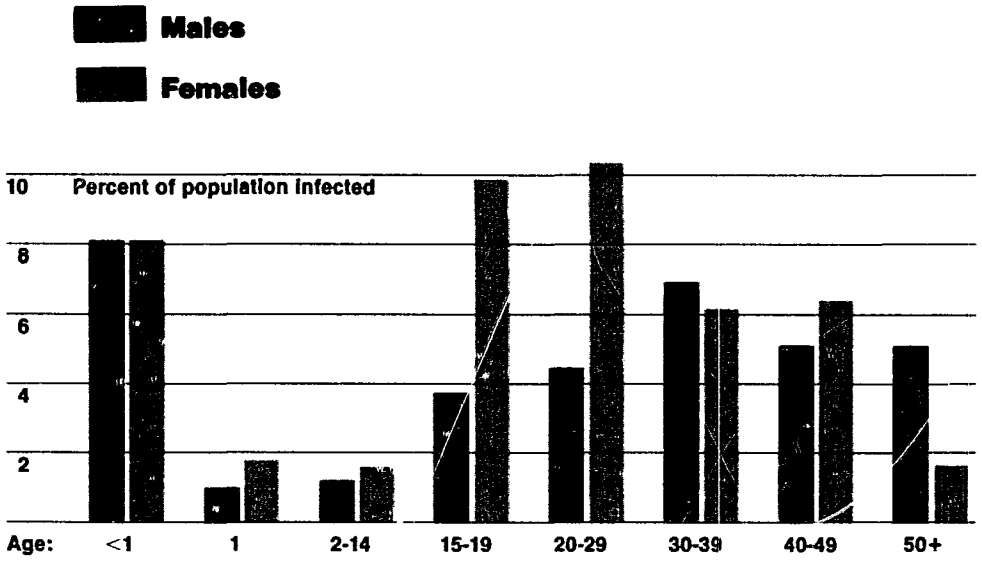
In Asia and the Near East, most

Sex ratio of AIDS cases in Latin America and the Caribbean

Country	Male-Female*
Antigua/Barbuda	All male
Barbados	3.9 : 1
Belize	3.3 : 1
Bolivia	All male
Brazil	11.1 : 1
Chile	13.6 : 1
Colombia	23.5 : 1
Costa Rica	21.8 : 1
Dominica	4.0 : 1
Dominican Republic	2.3 : 1
Ecuador	29.0 : 1
El Salvador	13.3 : 1
Grenada	1.8 : 1
Guatemala	All male
Haiti	2.3 : 1
Honduras	1.7 : 1
Jamaica	2.2 : 1
Mexico	9.4 : 1
Peru	14.1 : 1
St. Kitts/Nevis	1.3 : 1
St. Lucia	2.3 : 1
St. Vincent/Grenadines	3.5 : 1

*Ratios based on cumulative AIDS cases through December 1988
Source: Pan American Health Organization

HIV seroprevalence by age and sex in Kinshasa, Zaire: 1984-85



Source: Quinn, Mann, and Curran / *Science* 1986

countries have remained relatively free from HIV infection and AIDS, except for a few urban areas. WHO/GPA estimates that fewer than 100,000 Asians now carry the virus, but warns that this total could easily triple in the next several years. HIV infection is spreading among those practicing high-risk behavior within some Asian populations. In Thailand, for example, more than 40 percent of intravenous drug users in Bangkok test positive for HIV. These people provide a sizable pool for sexual transmission of HIV to people outside the drug community as well as within it.

Impact on Development

While the most obvious effect of the HIV pandemic is on infected individuals, its impact clearly spreads throughout all sectors of a nation's development. Also clear is the fact that developing countries have significantly fewer resources to fight AIDS than do developed countries. Many countries experiencing increasing numbers of AIDS cases are already hard-pressed by numerous problems, including drought, famine, illiteracy, and stagnant economies.

The pandemic threatens hard-won gains in the general health and well-being of people in many developing countries. AIDS competes with other diseases for limited health-care and preventive-health resources. For example, over half of the patients in some hospitals in central Africa have HIV infection. And health-care personnel are increasingly reporting general shortages of medicines because of demand for treatment of the opportunistic diseases that are characteristic of AIDS.

HIV infection also magnifies existing epidemics. For example, perhaps 30 percent or more of adults in many developing countries are carriers of dormant tuberculosis bacteria. By suppressing the immune system, HIV can enable the TB bacteria to become active, leading to damage of the lungs or other tissues that can eventually be fatal. Moreover, the tubercular patient becomes contagious, thereby increasing the incidence of TB in a previously healthy community.

Tuberculosis is on the rise among AIDS victims in the United States, where until the mid-1970s its incidence was declining. TB also seems to be occurring more frequently in Africa, where there is good reason

to suppose that HIV has been the trigger. Close to 40 percent of TB patients tested in a study in Kinshasa, Zaire, were HIV-positive, while fewer than eight percent of healthy adults tested during the same period carried the virus. An HIV-TB link is especially worrisome in the developing world, where poverty, overcrowding, and lack of health care make tuberculosis more lethal than in the West.

In the area of child health, HIV infection has considerable potential to erode the important progress that has been made. The last three decades have witnessed a revolution in child survival through immunization, oral rehydration therapy for diarrhea, breast-feeding, and family planning to space births. But left unchecked, HIV could undermine these gains as more maternal-child transmission occurs. Sadly, preliminary models of the most affected regions in Africa suggest that infant mortality could increase by more than 25 percent via perinatal transmission. In addition, when blood supplies are unscreened, children face increased risk of infection from blood transfusions frequently used to treat malaria in developing nations. Even if they escape the disease themselves, many children face another grim reality: a child with an infected parent is likely to lose that parent, and in time, both parents.

Beyond threats to health, the HIV pandemic also exacts a heavy economic toll. This includes the direct cost of hospital care and other medical services for people with AIDS, along with related costs such as counseling, blood screening, medical supplies, and the training of health-care workers. Currently, the amount spent caring for AIDS patients in many countries is directly related to the quantity of available resources, rather than real demand. That is, as with health care in general, poor countries are forced to spend less on each patient. Even so, the expenses are in many cases proving an enormous drain. And as more people fall ill, these costs will far exceed the capacity of health systems in most developing countries.

Significant, too, are the potential economic effects that may derive from the premature deaths of many people between the ages of 20 and 49. They are often the most productive members of society—the backbone of any economy. In some countries, key industries may eventually be affected. Many African countries, for example, depend upon mining to provide the bulk of their foreign exchange. But AIDS could potentially strike a severe blow to the labor forces. In Zambia's Copper Belt, half of the miners are aged 20 to 40, target years for HIV infection.

The AIDS pandemic threatens hard-won gains in the general health and well-being of people in many developing countries.

Because HIV infection is most common in urban areas, its victims often include people who are among a country's best educated, including business and government workers. Where the ranks of people with certain specialized skills and training may be small, the loss of even a handful of engineers, health planners, or agronomists can be debilitating. Such disruptions would come at a time when many developing nations are struggling to restore economic growth to economies burdened by heavy external debt.

HIV infection and AIDS can strike a major economic blow against a developing country's travel industry. Tourism figures prominently in the economic plans of many governments in the developing world. But reports of HIV infection have apparently discouraged travelers from visiting some countries. For example, when Haiti was first identified as an endemic area, tourism plummeted, causing immediate ripples throughout the hotel, transportation, and related industries.

Of course, the full economic and health effects of HIV infection and AIDS in developing countries will not be known for many years—the pandemic is still in its infancy. The number of deaths so far, though considerable, is still relatively small compared to some other causes of mortality. The world is rightly alarmed, however, at the potential. The control and ultimate prevention of HIV infection and AIDS will require a comprehensive and sustained national and international commitment.

The International Response

The international public-health community has mobilized to support individual countries' HIV infection and AIDS prevention and control efforts. This response is being led by the World Health Organization's Global Programme on AIDS (WHO/GPA), created in February 1987. Through its staff in Geneva and its network of resident technical advisors, WHO/GPA provides global leadership in policy, strategy, and guideline development for national and international programs; coordinates and supports biomedical, epidemiological, and social and behavioral research; and collects and disseminates information to monitor the pandemic and aid in its prevention and control.

All of these global efforts are designed to assist WHO/GPA as it works with individual governments to initiate a concerted response. WHO/GPA encourages and assists with national reporting of AIDS cases; formation of national AIDS committees, which are responsible for developing national AIDS control plans; and scheduling of donor coordination meetings in which bilateral donors meet with WHO/GPA representatives and national AIDS committee members to orchestrate funding for national AIDS control program implementation. In addition to mobilizing and coordinating the international response, WHO/GPA also evaluates the international response through a formal review of national AIDS control plans one year after the programs are initiated.

WHO/GPA has been very effective in carrying out these roles. While the governments of some countries may once have been reluctant to acknowledge the spread of HIV infection among their populations, those days are for the most part over. Today's spirit of increasing governmental openness and cooperation is in large part due to WHO/GPA efforts. This was vividly demonstrated by the World Summit of Ministers of Health on Programs for AIDS Prevention, held in London in January 1988. The summit's official declaration, which was endorsed by all the delegations, states, in part: "We undertake to devise national programs to prevent and control the spread of HIV infection as part of our countries' health systems." Indeed, the vast majority of countries are gearing up to combat HIV infection and AIDS.

Although the threat from HIV infection and AIDS is global, in the final analysis individual countries are responsible for protecting the well-being of their citizens and for ensuring economic stability and growth. Moreover, while methods of combating the pandemic will often be similar from country to country, each nation must confront the problem in the context of its own history, culture, national resources, and particular needs. This effort requires active participation not only by national governments, but also by members of the community, including indigenous private voluntary organizations (PVOs). It is only with this local commitment to AIDS prevention and control that international efforts will be effective.

With WHO/GPA's support, more than 120 countries, including every country in sub-Saharan Africa, have developed short-term plans spanning six to 12 months. Approximately 35 countries have established medium-term plans covering three to five years. A major challenge now for WHO/GPA and bilateral donors is to help developing countries in their efforts to implement these national plans.

International Cooperation: The Role of USAID

The Global Programme on AIDS is an autonomous program of WHO. It receives no assessed contributions and is entirely dependent upon bilateral donors for the support it provides developing countries in implementing AIDS prevention and control programs. (A list of the 1988 bilateral donor contributions to WHO/GPA is provided in the chart on page 13.) The U.S. Agency for International Development is a vigorous, consistent supporter of WHO/GPA. USAID played an important catalytic role in the establishment of WHO/GPA and continues to be its largest financial supporter. The United States provides approximately 25 percent of the total WHO/GPA budget. We fully and actively support WHO/GPA activities. This support represents the cornerstone of the USAID assistance policy for the prevention and control of HIV

HIV INFECTION AND AIDS: A FACT SHEET

■ The human immunodeficiency virus (HIV) causes acquired immune deficiency syndrome (AIDS). HIV damages the individual's immune system and results in the body's inability to fight off infections and cancers.

■ Worldwide, five to ten million people may be infected with HIV. Left unchecked, the total will increase severalfold by the turn of the century.

■ Through March 1989, 146,569 cases of AIDS had been reported by 148 countries to the World Health Organization's Global Programme on AIDS (WHO/GPA). But there is widespread underreporting, especially in the developing world, and WHO/GPA estimates the actual number to be about 450,000.

■ Most, if not all, of those infected will develop AIDS, which often takes eight or more years to appear. When it does, few patients survive longer than three years.

■ HIV can be spread by individuals with no clinical signs of AIDS.

■ Approximately 90 percent of HIV infection is transmitted sexually. At high risk are persons who have multiple sexual partners or whose partners have multiple partners, as well as those with sexually transmitted diseases (STDs) that cause genital sores.

■ HIV is also spread by the transfusion of infected blood or blood products, by the use of contaminated needles, and from mothers to infants during pregnancy or birth. It is not spread through coughing or sneezing, or through casual contact such as hugs or handshakes.

■ In many developing countries, HIV strikes more women than men, and growing numbers of children are infected.

■ The pandemic's effects on child survival are already becoming apparent. Malnutrition is an increasingly common manifestation of HIV infection. In addition, in some countries, perhaps one in five children faces the prospect of being orphaned by AIDS.

■ The impact on health-care systems is also beginning to emerge. In some African hospitals, for example, 25 to 50 percent of patients have HIV infection.

■ Perhaps the greatest economic consequences of AIDS in developing countries will derive from the death of so many people aged 20 to 49, who are often the most productive members of society.

■ No vaccine or cure for HIV infection is expected in the near future.

■ Abstinence, mutual monogamy, reduction of the number of sex partners, treatment of STDs, and use of condoms can eliminate or significantly lower a person's risk of HIV infection.

infection and AIDS in developing nations.

In 1988, our $15 million budgetary contribution to WHO/GPA accounted for 25 percent of the WHO/GPA 1988 budget. However, our cooperation and coordination with WHO/GPA took a variety of additional forms, including collaboration in program planning and funding, participation in program reviews, and support of WHO/GPA-sponsored conferences and meetings.

USAID participation in donor coordination conferences marks our formal commitment to AIDS prevention activities within specific countries. Once donor support is established, program implementation can proceed. Bilateral assistance is crucial to the success of national program implementation. With its unique network of field missions and offices abroad, USAID has a wealth of experience and expertise from which to offer assistance in this area.

USAID involvement in program implementation requires that we take an active role in evaluation. In December 1988, WHO/GPA led the first AIDS program management review, and asked USAID to participate. Developed in early 1987 and approved by WHO/GPA, Uganda's National AIDS Control Programme was the first among developing countries to complete a full year of operation. By determining how well the program was meeting its objectives, the review was meant to help the Ugandan government develop a strategy for AIDS prevention efforts

International AIDS activities and USAID AIDS funding levels 1985-88

1985	1986	1987	1988
■ First international conference on AIDS, held at the U.S. Centers for Disease Control, in Atlanta, Georgia	■ Establishment of the WHO Control Programme on AIDS ■ First U.S. funding for AIDS: $2 million to WHO	■ **JANUARY** WHO's executive board formally endorses its global strategy for the prevention and control of AIDS ■ **FEBRUARY** WHO forms the Special Programme on AIDS, later renamed the Global Programme on AIDS ■ **APRIL** USAID Administrator formally approves the USAID AIDS policy ■ **SEPTEMBER** AIDSCOM and AIDSTECH contracts awarded	■ **JANUARY** Commencement of USAID AIDS Technical Support Project field activities ■ **DECEMBER** 43 countries with USAID AIDS activities
FUNDING:	**$2 MILLION**	**$16.9 MILLION**	**$40.7 MILLION**

in 1989. The conclusion of the review was that both the form of the national program and the range of activities carried out provide an effective base for future efforts. The review also stressed the need for continuing support from the Ugandan government as well as from international organizations and private donor agencies. The team noted that the speed with which Uganda implemented its national AIDS program, despite the many constraints it (like other developing countries) faced, indicates what can be achieved with a modest investment of external resources.

Collaboration with WHO/GPA goes beyond formal coordination activities, however. In Latin America and the Caribbean, USAID maintains a close and coordinated working relationship with the Pan American Health Organization (PAHO), an arm of WHO. PAHO has a key role in AIDS control in this region, which it fulfills by coordinating prevention programs in education, communications, counseling, research, HIV screening, and training.

PAHO works primarily with national governments, and USAID has assumed a leadership role in working through the private sector, which constitutes much of the health-care delivery system in many Latin American and Caribbean countries. To avoid duplication of efforts, USAID works with PAHO to develop complementary programs: PAHO, USAID and its contracted technical experts, and other bilateral donors meet quarterly to review projects and develop plans for collaborative activities.

In the field, USAID staff and technical experts regularly collaborate with local PAHO representatives, providing technical assistance and planning program development, interventions, and training. In 1988 the USAID mission in Santo Domingo worked with USAID contractors, the Dominican Republic National AIDS Committee, and PAHO to develop an in-country communications strategy. This collaboration is typical of USAID AIDS program development in host countries.

USAID has an important role to play in providing developing countries with appropriate technical assistance to implement effective HIV infection and AIDS prevention programs.

USAID also provides funds to PAHO's Caribbean Epidemiology Centre (CAREC), located in Trinidad, for a variety of activities in the Caribbean region. For example, USAID helped CAREC organize and conduct two regional model workshops on AIDS prevention and counseling. Sixty participants from CAREC's 19 member nations attended the workshops. Back in their home countries, the participants trained others in what they had learned—in this way, the information ultimately reached an estimated 5,000 additional people working in HIV infection and AIDS prevention.

Even more people received AIDS-related information during the Second Pan American Teleconference on AIDS, held in Rio de Janeiro, Brazil, in December 1988. Sponsored by PAHO, the conference was televised live by satellite in four languages to more than 650 sites in Latin America and the Caribbean and some 350 sites in the United States. An estimated 50,000 health professionals, educators, government policymakers, and members of the media were thus able to watch presentations by some of the world's leading authorities, including representatives from the USAID AIDS program, making this the largest medical conference ever. USAID supported the teleconference in several ways: AIDS program staff participated in the teleconference as presenters, USAID sponsored several participants from developing countries, and we provided support for a telephone link-up via satellite, which allowed professionals from all over the world to participate in the conference. USAID supported other WHO/GPA-sponsored conferences as part of specific interventions to generate AIDS awareness in developing countries.

Capitalizing on USAID Strengths

The leadership of WHO/GPA is very important in the establishment, coordination, and evaluation of the international effort to control HIV infection and AIDS. However, WHO/GPA relies upon bilateral donors for in-country assistance with program development and implementation of the AIDS control plans it has helped the national governments develop. USAID has an important role to play in providing developing countries with appropriate technical assistance to implement effective HIV infection and AIDS prevention programs.

One of USAID's chief assets is its decentralized field presence. Its 67 field missions and offices implement a wide range of development assistance programs, often including a network of well-established health, population, and education programs. The missions provide a versatile capacity to respond quickly and effectively to the particular needs of the host countries. This capacity is virtually unparalleled in the developing world.

The missions are in direct and

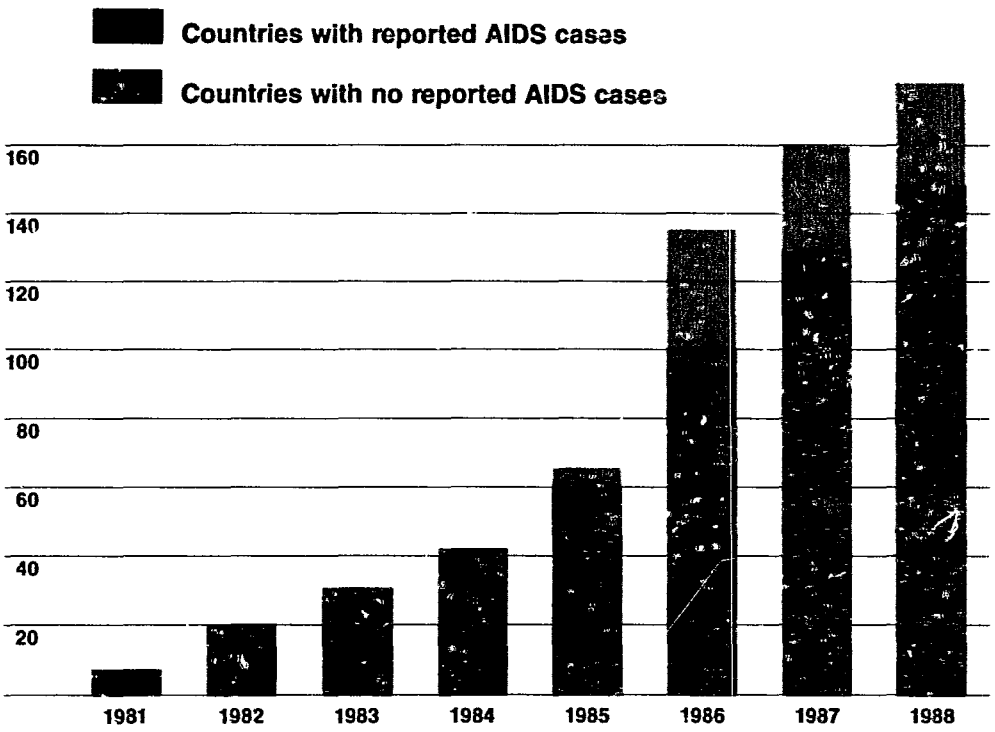
frequent contact with host-country government officials as well as local private and community organizations. Mission staff members have firsthand knowledge about local problems and resources. They are aware of social, cultural, economic, and political conditions. This can be of special importance in AIDS control since controlling the spread of HIV infection will in large measure involve changes in behaviors that have exceptional public and private sensitivity in all societies. Additionally, the missions constitute a management, information, and resource base. Thus they are in a position to assist the host countries in implementing HIV prevention and control programs tailored to special circumstances by directing appropriate technical expertise to where it is needed.

USAID missions are supported by USAID's Bureau for Science and Technology and the geographic regional bureaus in Washington, D.C. They provide technical support and up-to-date information, enabling missions to respond with maximum efficiency.

Two components of the USAID technical support project, AIDSCOM and AIDSTECH, are examples of how USAID provides technical assistance. AIDSCOM, an AIDS technical support contract with the Academy for Educational Development and its subcontractors, the Annenberg School of Communications, Johns Hopkins University, Porter/Novelli, and the PRISM Corporation, develops and demonstrates effective public-health communication strategies, prevention counseling approaches, and methods for marketing condoms. AIDSTECH, an AIDS technical support cooperative agreement with Family Health International, provides technical assistance and training in high-risk behavior change, identifying effective and affordable methods for keeping blood supplies free of HIV, monitoring the pandemic, and improving the logistics of condom distribution. AIDSCOM and AIDSTECH staff provide developing countries with appropriate technical assistance for establishing programs to inform people about HIV infection and how it is spread, to help people understand and practice risk reduction, and to ensure safe blood supplies. USAID's Bureau for Africa organized the HIV/AIDS Prevention in Africa Project (HAPA) to provide rapid and flexible assistance to African field missions for needs that could not be otherwise met.

USAID, through cooperation with other U.S. government agencies, can call upon the knowledge and experience of those involved in U.S. AIDS programs. USAID is working with the U.S. Bureau of the Census to develop a model for assessing the spread and impact of HIV infection. In 1988, USAID expanded its program through other inter-government agency agree-

Countries participating in the AIDS surveillance network of the World Health Organization's Global Programme on AIDS



ments with the Centers for Disease Control (CDC), the National Institute of Allergy and Infectious Diseases (NIAID), and the Uniformed Services University of the Health Sciences (USUHS). USAID support enables CDC to respond to requests for short-term technical assistance and to place long-term resident AIDS advisors in developing countries. NIAID will provide short-term technical assistance and research training to scientists from developing countries through an information exchange program. USUHS is participating in the implementation of the National Sexually Transmitted Diseases Control Program in Zambia, and has established a regional AIDS training program.

In addition to USAID's institutional strengths and its capacity to provide educational technical assistance, it has an established worldwide system for the procurement and distribution of condoms in developing countries as part of our family planning program. Rather than duplicate this system for AIDS, we have employed additional funds for its expansion. In 1988, USAID procured $3 million worth of additional condoms for AIDS prevention through the Office of Population; these 60 million condoms were shipped to 45 countries. These additional condom shipments, which were made at the request of host-country institutions (many in coordination with WHO/GPA), suggest an increased awareness of modes of HIV infection and prevention within developing countries.

USAID also has considerable experience in conducting operations research. This includes assessing the impact of technology development and intervention programs to determine what works and what doesn't, how success in one country can be duplicated in many others, and finding ways to lower program costs. While numerous other national and international organizations are supporting new programs and technologies, few devote as many resources to examining the actual effectiveness of their efforts in everyday practice. In the development and field testing of all prevention technologies, special care is taken to ensure that USAID's efforts serve a catalytic role and do not supplant or slow down efforts by private industry or other government agencies.

USAID has also helped foster the involvement of the private sector, particularly private voluntary organizations. They are critical to the ultimate success of a developing country's AIDS-prevention program. The private sector can operate at the grass-roots level, providing an accessible source of information and assistance. Thus they are well positioned to help bring home the message that HIV prevention is ultimately the responsibility of individuals. Private health and family planning clinics, Red Cross societies, men's and women's organizations, churches, national and international voluntary organizations, peer groups formed by people practicing high-risk behaviors—all have joined the fight to control HIV infection in country after country.

USAID's budget reflects the growing roster of HIV infection and AIDS prevention and control activities. In FY 1986, USAID contributed $2 million to WHO/GPA but had no bilateral technical support program. In FY 1987, the USAID AIDS budget grew to $16.9 million, of which $5.5 million was directed to WHO/GPA. The remainder was allocated for bilateral programs, including $3 million specifically designated for the provision of condoms. In FY 1988, of the $30 million appropriated for the AIDS account, Congress earmarked $15 million for WHO/GPA. USAID missions added to the $15 million bilateral funds for AIDS-related activities from other accounts (including the Development Fund for Africa, the Economic Support Fund, and the Health and Population Accounts), bringing the 1988 total for bilateral programs to $25.7 million. (A breakdown by country of FY 1988 obligations for HIV infection and AIDS activities is provided in Appendix B.)

1988 bilateral donor contributions to WHO/GPA for unspecified global activities

Contributions	In US $
Australia	380,400
Canada	4,076,885
Denmark	2,933,175
Finland	987,256
France	328,579
Germany, F.R.	290,698
Japan	1,450,000
Netherlands	3,309,186
New Zealand	335,971
Norway	2,380,839
Sweden	14,268,602
Switzerland	3,875,969
USSR	821,557
United Kingdom	8,187,300
United States*	10,000,000
UNDP	2,909,750
Miscellaneous	15,421
Total	**56,551,588**

*The United States provided an additional $5 million to WHO/GPA that was allocated for specific country activities
Source: World Health Organization

In 1988, the international community effectively geared up to take on the challenge of the AIDS pandemic. USAID's annual funding for bilateral HIV-related activities has increased from nothing to more than $25 million during a period when the total available for foreign assistance has remained relatively constant. The impact of our support is significant in that we have been responsive to many developing country appeals for assistance. The urgency of the AIDS problem will place growing demands on developing countries and the donor community.

Major USAID Programs For Prevention and Control

The USAID policy for addressing the AIDS pandemic in the developing world is to focus programs on prevention of the spread of HIV. Implementation of this prevention policy involves the development of educational and technical interventions to reduce the risk of transmission through high-risk sexual behavior and through the exchange of infected blood via transfusion or other skin-piercing activities. The specific elements that constitute the prevention program are: to monitor the AIDS problem within the context of individual countries; to help increase government and public awareness of the problem; to assist developing countries with the development and implementation of AIDS prevention programs; and to conduct applied research aimed at improving available means of prevention that are appropriate for use in developing countries.

In recognition of the fact that assistance resources are limited, USAID has set priorities for the AIDS prevention program. Focusing first on those countries with high rates of HIV infection, highest priority is given to prevention of the sexual transmission of HIV, which is by far the most common mode of spread.

Within this broad strategic framework, USAID moved forward in 1988 with a focused program of prevention activities. Woven throughout the program are efforts to determine how well our various activities are working, whether they can be made more cost-effective, how successes can be sustained, and how they can be replicated in other locations. The remainder of this chapter describes a representative sample of USAID's activities.

Monitoring the Problem

Controlling the spread of HIV and AIDS will depend, in part, on gaining a more accurate description of the virus's current distribution—internationally, nationally, and among various population subgroups. This knowledge can reveal trends that can help assess the pandemic's course and its potential impact on development. Projections will help in planning where and which type of intervention and control measures to put in place and, later, in evaluating their success. Such analysis is essential to health planners and policymakers in developing countries in their efforts to plan optimum prevention strategies.

At the Center for International Research (CIR) of the Bureau of the Census, researchers supported by USAID have developed a computerized database on the distribution of AIDS and HIV in developing countries. Because there have been few reliable national or regional HIV seroprevalence surveys conducted in developing countries, information on the prevalence of HIV infection among various populations has generally been derived from a large number of small-scale surveys. These studies, individually, are of limited utility for purposes of nationwide assessment, but together they can form a composite picture of infection in a particular area.

The CIR researchers concentrated first on African countries. That database is now up-to-date. These materials are available without charge to the scientific community and by subscription to the general public. Requests from users are increasing steadily, and the collection has proven to be a major resource for numerous scientific papers presented at AIDS conferences around the world. The CIR will continue to update the African data, and work is now focusing on countries in Latin America, the Caribbean, Asia, and the Near East.

An interagency working group chaired by the Department of State has been formed to develop a flexible, user-friendly computer model that can assess the spread of HIV in a population and the potential demographic impact of AIDS. The group is building on an HIV-infection model developed by The Population Council, with support from USAID. The interagency working group constitutes a modeling team made up of members from CIR, Los Alamos National Laboratory, the

University of Illinois, The Futures Group, and AIDSTECH.

■ Computer models attempt to simulate reality and are important planning and management tools. However, developing countries also need to conduct continuous HIV surveillance programs to establish the actual dynamics of infection among their populations. With this understanding, policymakers can direct resources toward areas where they can be most effective. USAID has also provided technical assistance in a number of countries to help monitor HIV infection among select "sentinel" groups – that is, groups that can be tested for HIV infection and that can serve to provide an accurate indication of the rate of infection among the population as a whole. Surveillance projects are under way in Burundi, Ghana, Cameroon, the Dominican Republic, and in several Caribbean countries through the Caribbean Epidemiology Centre.

Even with concentration on sentinel groups, however, tracking HIV infection is no easy task. USAID-supported researchers are therefore exploring alternative, more cost-effective methods of surveillance. One avenue being pursued is the design of improved surveillance methods for STDs, which are significant cofactors in the spread of HIV. STDs usually occur at far higher rates than HIV infection and are easier to detect. Thus, the effects produced by AIDS prevention programs will be more readily seen as a reduction in the incidence of STDs than of HIV infection. Work has begun in Burkina Faso to develop an STD surveillance system as an HIV monitoring and program evaluation tool.

Controlling the spread of HIV and AIDS will depend, in part, on gaining a more accurate description of the virus's current distribution – internationally, nationally, and among various population subgroups.

■ Direct surveys, while expensive and difficult to conduct, provide invaluable information for monitoring the level of public awareness of HIV and AIDS. In Kinshasa, Zaire, USAID has supported a city-wide survey concerning HIV infection and AIDS, conducted by the Family Planning Service Project and Tulane University. The results will help health officials guide the country's prevention program. Nearly all of the 6,600 men and women of reproductive age surveyed had heard of AIDS, and nine in ten of those who had heard of the disease knew the major modes of transmission. More

THE PRIVATE SECTOR IN ACTION

HIV prevention and control programs work best when responsibility is shared between people and organizations. It is particularly important for governments to build active partnerships with private voluntary organizations (PVOs).

Working together brings a number of benefits. Scarce financial and human resources can be pooled. Programs can be implemented faster when managed by local experts who are members of established networks. The impact of prevention messages is multiplied when they are communicated from many perspectives by many voices. Duplication of effort is avoided through coordinated support of existing programs that are already doing good work.

USAID supports productive partnerships with PVOs in more than 20 countries throughout the developing world. As but one example, Project HOPE is working in Barbados to expand the country's ability to control HIV infection and AIDS. The larger goal is to help countries across the Caribbean develop the resources needed to plan, implement, and evaluate prevention and education programs on their own.

Project HOPE is working closely with the National AIDS Committee and the Ministry of Health in Barbados, and is coordinating its efforts with the Pan American Health Organization and its Caribbean Epidemiology Centre. As a first step, the PVO has established a committee of government officials, health professionals, university researchers, and educators to help provide support and program direction.

The project has targeted three groups, representing the front line of defense against HIV infection, to receive specially prepared educational materials. The first group includes all types of health professionals—physicians, nurses, emergency medical personnel, laboratory technicians, community health workers, and dentists. Second, the PVO is joining forces with the University of the West Indies and the Barbados Community College to reach students in medicine, nursing, midwifery, and allied health. The third group includes social workers, teachers, school counselors, members of the clergy, and other individuals who might help in prevention counseling.

To ensure that the educational programs are tailored to the specific needs and cultural practices in Barbados, Project HOPE has developed a survey to assess the knowledge, attitudes, and practices of the target groups as well as the general public. Based on the results of the surveys, the PVO will design cost-effective workshops, teleconferences, and printed support materials covering a variety of topics. Six teleconferences, originating in the University of the West Indies' telecommunications centers in Barbados and Grenada, will be broadcast to Antigua, Dominica, Jamaica, Saint Lucia, and Trinidad and Tobago.

Project HOPE helped to develop this teleconference system. By establishing regional lines of communication about HIV infection and AIDS, the PVO wants to provide a way for government health officials, health professionals, educators, and others to consult with each other about the disease, share ideas, and make the most of the region's limited resources. Through this program, Project HOPE expects to reach more than 900 people in key sectors throughout the Caribbean.

than one third of all respondents believed there is an AIDS vaccine, however, and 40 percent of men and 21 percent of women believed that AIDS is curable. And while over 90 percent of married men and 77 percent of married women had heard of condoms, only 12 percent of them had used condoms with their spouses. These results provide policymakers and other professionals with information on how to approach an AIDS prevention campaign.

■ Measuring public awareness of HIV and AIDS is essential to prevention efforts, but does not provide policymakers with all of the information needed to address the problem. A major challenge facing the governments of all developing countries is assessing and projecting the economic impact of HIV infection and AIDS in order to allocate scarce health resources most effectively.

In Mexico, USAID-funded economists are assisting the Ministry of Health in a study to measure all of the costs associated with infection. The study includes a retrospective and prospective analysis of both hospital and personal expenses. Researchers have analyzed the medical records of more than 500 AIDS patients in four Mexican hospitals, and 100 patients are being followed from the time of their hospital release to their death, with Mexican physicians visiting the patients in their homes each month to interview them about any out-of-pocket expenses incurred because of their disease. In addition, the researchers are calculating the indirect costs of HIV infection and AIDS, measured in terms of the cost of productive years of life lost due to illness or death, as well as the costs to the government of conducting prevention programs.

Working with Mexican officials, USAID researchers will use the data to predict the future costs of HIV infection and AIDS and to explain differences in costs over time or between hospitals and geographic regions. They will also train five data analysts with Mexico's Ministry of Health, who will then perform ongoing cost analyses.

Woven throughout USAID's program are efforts to determine how well our various activities are working, whether they can be made more cost-effective, and how successes can be sustained and replicated in other locations.

Results of the study will help the Mexican government to select the most cost-effective interventions and to plan for financing the recurrent costs of prevention and control programs in order to ensure their long-term operation. Moreover, the methodologies developed by the USAID researchers represent a pioneering approach to determining the economic consequences of HIV infection and AIDS, and will be used to design a guide for conducting similar studies in other developing countries.

Raising Awareness

As is true with any complex social problem facing any country, a major challenge in coping with the HIV pandemic is increasing the level of awareness and understanding among all segments of society. This means a variety of audiences—government policymakers, opinion leaders, health-care professionals, the general public, and members of groups that are particularly affected—need to be provided with accurate and up-to-date information on the virus and its spread.

To help provide government officials with the information they need to develop cost-effective prevention plans, USAID is expanding on its extensive experience with using computer modeling to project the effects of family planning programs on population growth. Slowing population growth, like controlling the spread of HIV, requires projecting the future consequences of present policies. To this end, USAID pioneered development of the Resources for Awareness of Population Impacts on Development (RAPID) model for projecting population growth.

RAPID presentations have been used widely to show government leaders how their policies interrelate with family planning and population growth. In many countries, using RAPID presentations with government officials has been cred-

ited with leading to major policy changes in favor of family planning programs.

A preliminary RAPID-like presentation model for HIV infection is being developed with USAID support. Because of its simple interactive operation and easily understandable graphic displays, the model can be valuable to a variety of users. Government planners can explore the potential impact of HIV infection and AIDS on various populations within their country and investigate the possible effects of selected intervention measures by asking "what-if" questions. Planners can determine, for instance, what the level of infection will be ten years in the future, if all the members of a particular high-risk group use condoms, or how many lives might be saved if all blood used for transfusions is screened. In this way, planners will be able to allocate scarce prevention resources most effectively.

■ Communicating effectively about HIV and AIDS prevention to raise public awareness is a complex and difficult process. The risk behaviors to be changed are deeply rooted, highly personal, and frequently controversial. Different cultural, economic, political, legal, and moral factors influence each country's response. Individuals at risk often hear and understand similar prevention messages in markedly different ways, depending upon their social and psychological environments. Thus, no single communications methodology can address all of these variables simultaneously.

While the mass media can inform the public about HIV infection and AIDS, more targeted avenues of communications are likely to prove especially important in raising awareness among specific populations at high risk and promoting the crucial goal of sustained behavioral change. Toward this end, USAID's program emphasizes multi-channel communications. Activities to date include telephone hotlines, plays and television dramas, comic books, question-and-answer booklets, workshops, puppet shows, songs, school curricula, group and individual counseling sessions, and community mobilization activities. Each of these channels provides different individuals in different target audiences with a more comfortable context in which to discuss, practice, and find support for behavior change.

A variety of audiences—government policymakers, opinion leaders, health-care professionals, the general public, and members of groups that are particularly affected—need to be provided with accurate and up-to-date information on the virus and its spread.

AIDSCOM has developed a training program to help community-based organizations in developing countries start AIDS hotlines. Hotlines have proven to be integral components of prevention programs in the United States. Representatives from several countries have participated in the training, and a national AIDS hotline has been established in the Dominican Republic with support from USAID. Hotlines have also been started or planned in Mexico, Jamaica, and Peru.

In the Eastern Caribbean, USAID is supporting an entertaining and educational theater production to encourage discussion of HIV and AIDS prevention and the impact of the disease on the community. Called the Rural AIDS Education and Theater Project, it was developed and financed in collaboration with the Trinidad and Tobago Red Cross and the Norwegian Red Cross. The show examines the impact of AIDS on a family in which the son becomes infected and dies. A promotional campaign precedes the presentation and an AIDS educator leads a group discussion afterwards. More than 3,700 people in 30 villages viewed the performance during a five-week period, and the majority indicated an interest in additional educational presentations, both in dramatic and written form.

In Zaire, USAID has worked through both the mass media and alternative communications routes to raise public awareness of HIV infection and AIDS. Population Services International, a U.S. private voluntary organization (PVO)

named as an implementing partner in the country's medium-term AIDS plan, has helped develop and implement formal and informal media educational campaigns, together with the National AIDS Committee and the government's Department of Public Health.

■ To help increase awareness of HIV infection and AIDS and to improve the necessary personal communications skills among health officials and health-care providers, USAID has conducted or supported a variety of training workshops in Latin America, the Caribbean, Africa, and Asia. While the training topics vary, each program uses the same basic methodology, called "train-the-trainer." This approach seeks to improve the knowledge base and training skills of people who train others to do the work in question. In this way, results are magnified while fewer technical advisors are needed to manage fewer training programs. Also, responsibility for further training rests with host nationals rather than foreign advisors.

Behavior change is a major focus of train-the-trainer workshops. One way this is approached is through prevention counseling, through which AIDS-related knowledge, feelings, and prevention skills are discussed, and persons practicing high-risk behaviors are supported in their efforts to change their behavior in ways that are sustainable over time. The workshops concentrate on basic information about HIV infection and AIDS, prevention methodologies, psychological and social aspects of AIDS, and relevant skills.

AIDSCOM has conducted several regional prevention counseling workshops attended by 60 health-care providers from 19 English-speaking nations that are members of the Caribbean Epidemiology Centre. To assess the effectiveness of the training, the participants were reassembled several months later during two advanced counseling workshops. Data were gathered via questionnaires, interviews, and by workshop observation. Half of the participants said they had conducted some type of AIDS-related training on their own. In all, the trainers reported using their new skills in reaching more than 5,000 people through follow-up workshops and lectures, and noted that they had counseled some 3,000 people.

USAID also supports training activities that create awareness in the health-care community. For example, the Zaire School of Public Health has developed an AIDS-intervention training module to increase the awareness of physicians, nurses, and other health professionals and improve their skills in counseling and treating people with HIV infection and AIDS. Assistance was provided by the Tulane University School of Public Health and Tropical Medicine. Developing the module began with a survey throughout Zaire of 4,500 health professionals to discover their knowledge, attitudes, and practices regarding the disease. The researchers used the results to formulate an AIDS-training strat-

egy, establish a set of intervention guidelines, and develop the actual training module. The module will be distributed for regional use during a seminar held as part of the school's regular training series.

■ Because the HIV pandemic is still relatively new, there are continual changes in the scientific community's understanding of the disease, as well as in the development and testing of technologies to help control its spread. It is important, therefore, that the latest information be distributed as widely as possible. AIDSTECH provides a bimonthly mailing of approximately 500 packages containing journal articles and other information describing research results and technological advances to USAID missions, National AIDS Committees, Ministries of Health, private voluntary organizations, and health educators around the world. Additionally, French and Spanish information packages are distributed quarterly to appropriate countries. Surveys indicate that the recipients consider the packages to be informative, timely, and technically sound.

■ One of the major obstacles facing health professionals in developing countries is their lack of regular contact with colleagues in other countries. Although information-dissemination programs can help overcome some of the effects of isolation, news of innovative prevention efforts in one country may still migrate slowly. Therefore, USAID sponsors the participation of numerous scientists, health professionals, and public health officials involved in prevention efforts in developing countries at various international HIV and AIDS conferences. Attendance not only provides participants with access to the latest information, but also provides them with a chance to exchange ideas. In the environment of a scientific conference, they have greater opportunity to discuss culturally sensitive issues with their professional colleagues, and may return home with positive new attitudes and approaches to HIV prevention.

Since it is clear that controlling the spread of HIV will depend largely upon encouraging people to change their behavior, USAID supports a variety of activities focused on understanding and effecting behavior change.

USAID sponsored the attendance of more than 100 individuals from over 40 developing countries at the Fourth International Conference on AIDS, held in June 1988 in Stockholm, Sweden. This conference was particularly significant, because it marked the first time that behavior change played a major role on the agenda. USAID also supported a one-day workshop for the sponsored attendees, many of whom held important positions in their countries' national AIDS control programs.

At the request of USAID missions, we are providing them with videotapes of sessions of this conference – in essence, moving the conference to the developing world. Some 20 missions have now received videotapes of plenary sessions, and requests are being processed for other technical sessions. The missions in turn share and distribute the tapes to their National AIDS Committees and Ministries of Health.

USAID, along with WHO/GPA, was a major sponsor of the Third International Conference on AIDS and Associated Cancers in Africa, held in Arusha, Tanzania, in September 1988. The conference focused on the problems of HIV infection and AIDS in sub-Saharan Africa, one of the hardest-hit regions in the world. This conference provided African health professionals and public policymakers with the opportunity to exchange culturally relevant information and to discuss the recent research findings in an African context.

Progress in Intervention

Since it is clear that controlling the spread of HIV will depend largely upon encouraging people to change their behavior, USAID supports a variety of activities focused on understanding and effecting behavior change. To help develop guidelines and priorities for intervention and

COMMUNICATIONS IN THE PHILIPPINES

At the request of the Philippine government, USAID has provided multifaceted technical assistance to help the country mount an effective AIDS prevention campaign. As the first priority in 1988, our advisors worked with government managers, as well as with an assessment team from WHO/GPA, to develop a comprehensive general plan tailored to the country's needs.

USAID next assisted government policymakers in reaching a consensus regarding the specific types of prevention programs to be undertaken, including communication strategies. In April, USAID sponsored a workshop for health officials, in which our advisors outlined the various communications options available. This was followed by another workshop in July, attended by managers representing 32 government and private agencies, during which participants agreed on a series of HIV-prevention policies. Covering everything from public-information campaigns and education in public schools to testing programs and requirements for confidentiality, these policies eventually became official government regulations.

Concurrently, USAID sponsored research activities to determine the behavior and attitudes regarding HIV infection of various Filipino populations that the government considers most at risk. This culminated in extensive targeted surveys. The Manila affiliate of the Gallup Organization also reran a 1987 poll of Filipino knowledge and attitudes about AIDS. The data yielded some surprising results revealing numerous public misconceptions and myths, and the insights were immediately useful to program managers as they went on the public offensive to counter misinformation.

Because newspapers and other print media are so influential in the Philippines, USAID encouraged use of this channel for carrying out an integrated prevention campaign. USAID supported a Filipino media expert in Manila to assist the government in implementing the campaign. USAID also arranged a series of small, informal meetings with key journalists and editors to discuss the government's HIV-prevention program and solicit media support. In December alone, these meetings resulted in the publication of some 20 articles in Manila newspapers. Most of the articles exceeded in accuracy and quality anything that had previously been published.

By year's end, USAID's technical advisors were assisting Philippine program managers in strengthening media relations, completing research projects, developing prevention materials targeted at specific risk populations, initiating a national public-information campaign, and training health educators and counselors in HIV infection and AIDS prevention counseling methodologies. Much remains to be done, but the Philippines has taken significant strides in protecting its citizens.

research efforts in this area, in January 1988 USAID cosponsored a workshop on anthropological perspectives on HIV infection and AIDS in Africa, in collaboration with the National Institute of Allergy and Infectious Diseases, part of the National Institutes of Health. The workshop explored ways of learning how people react to disease, to education, and to interventions, and how to use that knowledge to bring about positive changes in human behavior.

In the area of behavior change, involvement of private voluntary organizations is especially important. PVOs are often established within communities, and are trusted for the reliable information and timely assistance they can provide. Information about the spread of HIV and AIDS must be provided in a way that can be understood. PVOs are well-placed to provide this information in appropriate and sustainable ways. This community-level approach is much more likely to effect long-term behavior change necessary for HIV infection prevention.

■ A high priority of the USAID AIDS program is prevention of sexual transmission of HIV through promotion of sustained behavior change. Since abstinence and the maintenance of long-term, stable relationships may not be sustainable in all societies, the encouragement of wide-spread use of condoms is also an important prevention strategy. If condoms are to fulfill the role they optimally could play in preventing HIV infection, several challenges must be met.

An estimated three percent of reproductive-aged adults in all developing countries are currently using condoms. In Africa, where condoms are not widely used nor even readily available, the number is only one half of one percent. The first priority is to increase condom use among persons practicing high-risk behaviors, as they are most likely to become infected and transmit the virus to others.

If condom use increases, there must be enough of them available to meet the increasing demand. Through 1988, USAID shipped 73 million condoms to developing countries for use in their AIDS prevention programs. Half of these were shipped in the last six months of 1988 alone. Thirty-three million went to Africa, 22 million to Latin America and the Caribbean, and 18 million to Asia.

To accommodate this growth in the condom market, new promotion and delivery approaches are needed. USAID is working with government officials in a number of developing countries that want to increase condom demand. USAID programs employ marketing techniques borrowed from the private sector to promote products and services of social value. Such techniques have been applied successfully in numerous public-health areas, including the promotion of oral rehydration therapy to prevent the death of infants from diarrhea and the promotion of contraceptives as part of family planning programs. Marketing is being employed in AIDS

prevention measures, including the use of condoms.

In Burkina Faso, USAID advisors assist government officials and WHO/GPA consultants in the design of a national marketing effort, which will be part of the country's medium-term plan for AIDS control. While preparations for the national program have proceeded, the advisors have also helped implement a pilot condom marketing program in the capital city of Ouagadougou.

In Zaire, USAID is helping to expand the marketing program already being conducted in Kinshasa by Population Services International, a U.S.-based private voluntary organization. Indeed, PVOs are ideally suited for marketing condoms, because they often can serve groups of people normally outside the reach of official health services. With USAID assistance, the organization is preparing educational materials that emphasize both family planning benefits and protection from HIV and other sexually transmitted diseases. Outlets for condom distribution will also be added in locations frequented by people who practice high-risk behaviors, and the marketing program will expand to two other cities, Matadi and Goma.

■ In an intervention project under way in Uganda, USAID is working with the Federation of Uganda Employers (FUE), a PVO made up of 600 companies throughout the country, each employing some 20 to 5,000 workers. The goal of FUE's AIDS in the Workplace program is to inform employees about HIV infection and AIDS prevention, encourage them to share this information with their families, and provide workers with easy access to condoms by distributing them in the workplace.

Private voluntary organizations are especially important in fostering behavior change. They are often established within communities, and are trusted for the reliable information and timely assistance they can provide.

AIDSCOM advisors have helped FUE hire and train staff members to carry out the program, and have worked with the staff to recruit the first six companies to participate. With assistance from FUE and USAID advisors, the companies recruit a small number of employees to serve as on-site AIDS educators. They are chosen on the basis of leadership qualities and peer respect, not on job status. After being trained in prevention counseling methods, the educators will regularly conduct workshops, held during work hours, for their fellow employees. The workshops will be kept small, perhaps ten to 15 individuals, to allow for group participation, and separate workshops will be held for men and women, since it has been found that many people are unwilling to discuss sex in mixed groups.

FUE plans to establish workplace programs in at least 90 locations, and these are expected to reach more than 44,000 employees and their family members. USAID advisors will continue to participate in training workplace educators as the program expands, and will regularly review the program's achievements.

■ USAID is working with the Mexican Federation of Private Family Planning Associations (FEMAP), a not-for-profit organization that since 1973 has been providing health services to various groups of people outside the mainstream of the country's society. FEMAP has developed a network of community-based distribution systems that rely on volunteers from targeted communities to distribute family planning information, contraceptives, and other health services. USAID advisors are helping FEMAP adapt its voluntary system to provide HIV prevention counseling and educational materials.

■ To help developing countries ensure safe blood supplies, USAID provides technical assistance in a variety of ways. Advisors have worked with approximately 15 countries, mainly in Africa, Latin America, and the Caribbean, and their assistance has ranged from evaluating immediate blood-safety needs to helping government health officials prepare and implement long-term national plans for cost-

effective and sustainable blood testing programs.

USAID helps make sure that laboratories for HIV-testing meet the requirements of a country's Medium-Term Plan for AIDS Control, developed in coordination with WHO/GPA. AIDSTECH laboratory specialists first visit the laboratories that are to be equipped in order to identify what is needed in the way of equipment and staff training. They offer technical advice about which HIV-testing methods would be most appropriate for each country, and try to ensure that compatible equipment is purchased within a country, that local maintenance is available, and that countries will ultimately be prepared to assume responsibility for keeping testing programs operating.

To date, USAID has equipped nine laboratories in Burkina Faso, Senegal, and Zimbabwe with HIV-testing equipment, including instruments, microscopes, centrifuges, and incubators. In addition, USAID has provided a supply of test kits to numerous laboratories in these countries, as well as in Cameroon.

For training laboratory technicians, USAID has developed a series of instructional modules that demonstrate how to perform various kinds of HIV tests, as well as tests for other STDs that are common in developing countries. Modules have been translated into French and Spanish. USAID advisors have conducted workshops on HIV-testing techniques, laboratory safety, and quality control for laboratory technicians in Burundi, Burkina Faso, Ecuador, Ghana, Kenya, Senegal, and Zimbabwe. Thus far, we have trained 134 technicians and laboratory supervisors in these countries. The participants in turn train others in what they have learned, thus catalyzing the spread of knowledge and technical skills.

To help developing countries ensure safe blood supplies, USAID offers assistance ranging from evaluating immediate needs to helping government health officials prepare and implement long-term national plans for cost-effective and sustainable blood testing programs.

In Burkina Faso and Cameroon, USAID advisors are also helping to implement quality-assurance programs as part of the countries' national HIV-testing efforts. This includes preparation of technical laboratory standards and development of a simple method for assessing the proficiency of laboratory technicians and evaluating reagent control. The method makes use of a reference "panel" that can be sent to technicians throughout the country. The panel contains pre-tested samples of serum that the technicians will analyze, thus providing an accurate and uniform measure of their testing skills. Randomly selected specimens from each field site will also be sent periodically to the country's national reference laboratory for repeat testing. Along with these measures, USAID is encouraging the two countries to participate in international programs designed to evaluate HIV-test performance.

Applied Research

USAID continuously monitors and evaluates our AIDS prevention activities, assessing their impact on practices and behaviors that influence the virus's spread. While this ongoing operations research will continue, we are also involved in developing improved means of prevention that are more appropriate for developing countries.

- Condoms, the oldest form of contraceptive technology, are an important defense against HIV. Used correctly, condoms are impermeable to the virus, as well as to the microorganisms that cause several other STDs that are cofactors in HIV infection. Most condoms are made of latex. Stored properly, latex condoms can be expected to last about five years. But in many developing countries, condoms are often stored in less-than-ideal warehouses where they are exposed to high temperatures, humidity, sunlight, and even insects. Such conditions can lead to rapid and severe deterioration, which increases the

potential for condom breakage. Family Health International (FHI), in collaboration with several other U.S. companies, is conducting research on a stronger and more durable condom. Early research on the new condom is promising, and it may even cost less.

To provide women with the opportunity to protect themselves against HIV infection and other STDs, USAID supports research to test and develop "barrier" methods of preventing sexual transmission of HIV for women. Viricides and "female condoms" are examples of products being developed and tested for efficacy in protection from infection by HIV.

■ Blood transfusions represent perhaps the most readily preventable mode of HIV transmission, yet screening blood to ensure safety has to date been impractical in many developing countries and transfusions remain a significant route of infection. Blood banking is often not technically or economically feasible, so there is little time for screening between donation and transfusion. Moreover, the standard test for screening blood—the enzyme-linked immunosorbent assay (ELISA)—is poorly suited to current conditions in much of the developing world. It requires trained personnel and uses sophisticated electronic equipment that requires regular maintenance. The chemical reagents used require refrigeration, and damage caused by temperature variations during shipping and storage can lower the accuracy.

To address this problem, USAID supports research on the development and evaluation of blood tests that will be rapid, simple, and less expensive. They also must work on small samples of blood and must not require refrigeration.

USAID has sponsored a study of five technologically appropriate tests that are already commercially available or nearly so. The Program for Appropriate Technology in Health (PATH) coordinated the study, which was done at the Mama Yemo Hospital in Kinshasa, Zaire. Three of the tests performed satisfactorily and were judged suitable for use under conditions typical of developing countries. As a follow-up, AIDSTECH is coordinating field trials to evaluate two of the rapid tests that did well in the PATH study, along with a new test that has recently come on the market. The trials are being conducted in more than 23 laboratories, most in rural areas, in Ghana, Senegal, Kenya, Zaire, and Zambia. It marks the first large-scale trial of rapid tests under typical field conditions. One of the tests is being evaluated as a screening tool for HIV and the other two as possible confirmatory tests.

USAID also supports research by International Health Systems, a PVO based in California, to develop a new test that will take only five minutes to perform, and that can be packaged to avoid problems of shelf life, reagent preparation, and contamination. Field trials are planned in Cameroon. The cost of manufacturing the test will also

be evaluated, with an eye toward eventual production in developing countries.

■ In another approach to improving blood transfusion screening, USAID supports studies of blood pooling. Pooling holds potential for reducing the cost of screening programs, and may prove important in national surveillance [illegible] as an affordable way to estimate HIV seroprevalence in large population surveys. In pooling, small amounts of blood from five to 15 individual samples are mixed together and the "pool" is then analyzed. If a pool tests HIV-negative, all the samples can be considered safe. If positive, each of the original samples must be tested individually. Thus, fewer samples overall will need to be tested in order to evaluate a large number of blood specimens. Pooling will be best suited to countries or regions where infection rates are relatively low, perhaps no higher than ten percent. USAID is therefore providing technical assistance and funding for studies in the Philippines, Ecuador, the Eastern Caribbean, and the Dominican Republic. When validated, pooling could well become an important blood screening method in many low-prevalence developing countries.

■ The HIV pandemic has hastened ongoing USAID research to produce affordable, nonreusable syringes. While needles and syringes used for therapeutic injections do not pose a significant risk of transmitting HIV, nonreusable syringes would eliminate the possibility of infection with HIV or other microorganisms that could result from improper use of needles. For example, researchers have developed a pre-filled injection device that holds a single dose of vaccine or other medication. Called SafeTject, it has been licensed to a U.S. company for manufacture. After a series of field trials, the device is expected to be available to developing countries by 1990.

Condoms, the oldest form of contraceptive technology, are an important defense against HIV. USAID is working with government officials in a number of developing countries that want to increase condom demand.

USAID-sponsored research has also led to the development of a system that renders disposable syringes incapable of being reused. Pre-sterilized disposable syringes meant to prevent contamination problems are growing in popularity, but the syringes are frequently reused, often without sterilization. SyringeLOCK is a device that allows only one filling of the syringe. After the injection is given, the device permanently locks the plunger at the base of the syringe. SyringeLOCK has been licensed to a U.S. manufacturer; after field trials, it may be available commercially by 1990.

The foregoing are samples of USAID assistance efforts to monitor the spread of HIV, to increase public awareness of the pandemic, to conduct interventions to reduce transmission of the virus, and to improve the effectiveness of such prevention and control activities. Within the framework established by WHO/GPA, this multifaceted approach complements the AIDS activities being carried out in developing countries by national governments, PVOs, and community-based groups, as well as by other members of the international donor community. As such, it represents a significant portion of a broad range of international AIDS activities being carried out by the U.S. government.

Coordinating U.S. Efforts

Because of its potential for causing broad societal, political, and economic effects worldwide, the HIV infection and AIDS pandemic has become a major domestic and foreign policy issue for the United States. The pandemic is a priority concern of several federal departments and agencies and an important interest of many others. Therefore, coordination of the U.S. government's international HIV-related activities is essential to ensure that they are cost-effective and focused on sound priorities.

Three areas of coordination are important: multilateral coordination, coordination within the U.S. government, and coordination with the U.S. private sector. Formal mechanisms are in place to meet each of these needs. In addition, the value of informal coordination through close and continuing relationships among the various groups and individuals involved in HIV prevention and control efforts cannot be overstated.

U.S. coordination with multilateral organizations such as WHO/GPA and other United Nations agencies, as well as with other governments and bilateral donors, occurs through the committees of WHO/GPA. These include the Management Committee, which meets twice yearly to discuss prevention and control activities, and the scientific and technical committees, which monitor prevention strategies and research. USAID, a major donor to WHO/GPA, is a charter member of the Management Committee, and U.S. government scientists are members of most of the scientific and technical advisory bodies.

As mandated by Congress through the Foreign Assistance Appropriations Act of 1988, USAID is responsible for coordinating the international HIV-related activities of U.S. government agencies. Since October 1988, USAID has chaired the International Subcommittee of the Federal Coordinating Committee on the HIV Epidemic (FCCIS), convened by the U.S. Public Health Service. Members of the FCCIS, including representatives of the Departments of State, Defense, and Health and Human Services, meet regularly to review the prevention and control activities and related research under way or being planned by all agencies. This process not only ensures a full sharing of information, but also is an opportunity to foster a high level of interagency cooperation and collaboration.

The FCCIS has compiled a comprehensive database of the agencies' international activities. The database allows the activities to be analyzed in a number of ways—for example, by agency, by country, and by type of activity—enabling the FCCIS and other government planning groups to examine the overall scope and direction of U.S. efforts. Using the database, the FCCIS has prepared a three-year action plan for international efforts against HIV infection, with emphasis on developing countries. Built on the framework of WHO/GPA's program, the

plan summarizes the current international efforts by federal departments and agencies.

This coordinating mechanism has now been extended to include all embassies and field missions. At the direction of the Secretary of State, AIDS Coordinators are being appointed in all these countries. The coordinators, usually USAID health officers where we have missions, receive printouts of the database of federal activities and a variety of other types of HIV-related information. All designated representatives of U.S. government agencies have also agreed to inform the coordinators of any prevention or research activities scheduled to take place within their respective countries. In this way, the coordinators will be kept continually up-to-date concerning in-country efforts and can ensure effective coordination.

Coordination of the U.S. government's international HIV-related activities is essential to ensure that they are cost-effective and focused on sound priorities.

In addition to chairing the FCCIS, USAID participates in the State Department's Interagency Working Group on International Aspects of AIDS. Established in 1985, the group reviews the impact of the HIV infection and AIDS pandemic on other countries and on U.S. foreign policy. USAID is also a member of the Interagency Working Group on AIDS Models and Methods (IWG/M), a subcommittee of the larger working group, convened by the State Department in May 1988. As described earlier, USAID supports efforts to monitor the spread of HIV infection and AIDS and gauge the impact of the pandemic on development. The IWG/M serves to coordinate USAID's activities with the modeling efforts of other government agencies, including the Centers for Disease Control, the National Institutes of Health, and the State Department.

Recognizing the major role that private voluntary organizations (PVOs) have to play in controlling the spread of HIV infection and AIDS, the U.S. government has instituted a process of regular consultations with PVOs, working through the National Council for International Health (NCIH). PVOs in both the United States and in developing countries have already responded to the pandemic with a variety of community-based education and health services. By working with NCIH, an umbrella organization that fosters collaboration between U.S. PVOs and the federal government, the hope is to get even more of these critically important groups involved in global prevention efforts. For example, PVOs were represented on the U.S. Delegation to the WHO/GPA Management Committee. USAID is also exploring similar consultations with the U.S. private, for-profit sector, through the National Leadership Coalition on AIDS, a consortium of leading U.S. firms committed to AIDS prevention and control.

Looking Ahead

It was only in 1981 that U.S. physicians first recognized that something was destroying the immune systems of some of their patients, producing a strange—and deadly—pattern of symptoms. At about the same time, doctors in other parts of the world, including Africa and the Caribbean, began to report patients with similar conditions. The new disease came to be called AIDS, and in 1983 researchers in the United States and France confirmed its cause: the human immunodeficiency virus.

Recognizing the destructive potential of the spreading HIV infection and AIDS pandemic, the global health community has responded in a fashion unprecedented in scope, speed, and intensity. The World Health Organization (WHO) has rightly assumed central leadership, creating the Global Programme on AIDS (GPA) to coordinate international control efforts. WHO/GPA has assisted growing numbers of countries in the design and evaluation of national HIV prevention plans and programs. As one of its earliest and strongest backers, the U.S. Agency for International Development remains fully committed to providing financial and technical support for WHO/GPA activities.

Within the framework of WHO/GPA's strategy, USAID also conducts an active bilateral assistance program to help developing countries cope with the burdens that the virus has placed upon their fragile health and education systems. Our program is consistent with the major international recommendations in the 1988 report of the Presidential Commission on the Human Immunodeficiency Virus Epidemic, chaired by Admiral James D. Watkins. In approximately 43 countries, USAID is supporting national AIDS prevention and control activities by providing commodities, technical assistance, and training.

WHO/GPA is dependent upon an effective national AIDS control effort. Ninety percent of the support for these national AIDS control programs in developing countries must come from bilateral and other regional and multilateral donors. USAID bilateral assistance is a leading contributor to this effort.

USAID's bilateral program is on target to help developing countries reach their AIDS prevention goals. While much work remains, a number of our efforts have begun to yield glimmerings of success. So, too, have the efforts of others. There is growing evidence that people, when informed of the risks and given the means to achieve safer behavior, will take the steps necessary to increase their safety. And when appropriate technical equipment and training are made available, health professionals and officials in developing countries will employ them to develop effective and sustainable prevention programs.

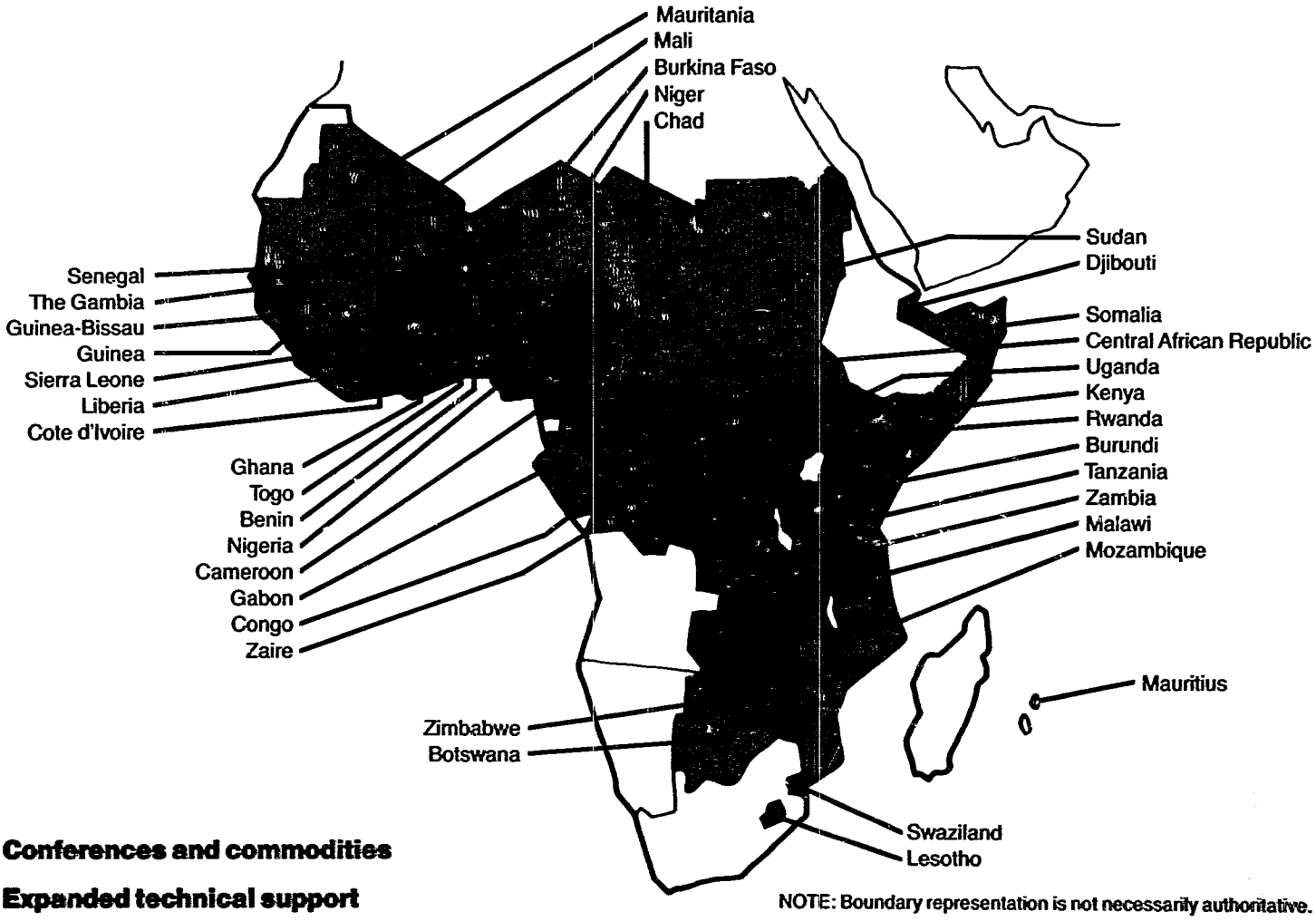
The challenge now is to build on these hopeful signs as rapidly as possible. HIV infection and AIDS will not yield to anything less than a concerted and continuing effort by individuals, private groups, and governments in virtually every country of the world.

APPENDIX A

AFRICA

HIV infection and AIDS activities suppored by USAID: Ongoing and completed

	Benin	Botswana	Burkina Faso	Burundi	Cameroon	Central African Republic	Chad	Congo	Cote d'Ivoire	Djibouti	Gabon	Gambia, The	Ghana	Guinea	Guinea-Bissau	Kenya	Lesotho	Liberia
CONFERENCES AND COMMODITIES																		
Condom Provision	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●
Conference Travel		●	●	●	●	●		●	●						●	●	●	
EXPANDED TECHNICAL SUPPORT																		
Applied Research				●	●				●				●			●		
Blood Transfusion Screening			●	●	●								●			●		
Health Care Financing Needs Assessment			●	●	●				●				●			●		
PVO Activities Public Information Campaigns				●					●				●					
Resident Advisors STD Control																●		
Surveillance			●	●														
Targeted Behavior Change			●	●	●				●									



NOTE: Boundary representation is not necessarily authoritative.

	Malawi	Mali	Mauritania	Mauritius	Mozambique	Niger	Nigeria	Rwanda	Senegal	Sierra Leone	Somalia	Sudan	Swaziland	Tanzania	Togo	Uganda	Zaire	Zambia	Zimbabwe
CONFERENCES AND COMMODITIES																			
Condom Provision	●	●	●	●	●	●		●	●	●		●	●	●	●	●	●	●	
Conference Travel	●	●			●	●	●		●		●	●	●	●	●	●	●	●	●
EXPANDED TECHNICAL SUPPORT																			
Applied Research								●	●					●		●	●	●	●
Blood Transfusion Screening	●								●										●
Health Care Financing																	●		
Needs Assessment							●	●	●	●			●	●		●	●	●	●
PVO Activities	●													●		●	●	●	
Public Information Campaigns									●					●		●	●	●	●
Resident Advisors																			
STD Control									●				●						
Surveillance									●					●					
Targeted Behavior Change							●		●					●		●	●	●	●

Region activity totals

CONFERENCES AND COMMODITIES

Condom Provision	33
Conference Travel	25

EXPANDED TECHNICAL SUPPORT

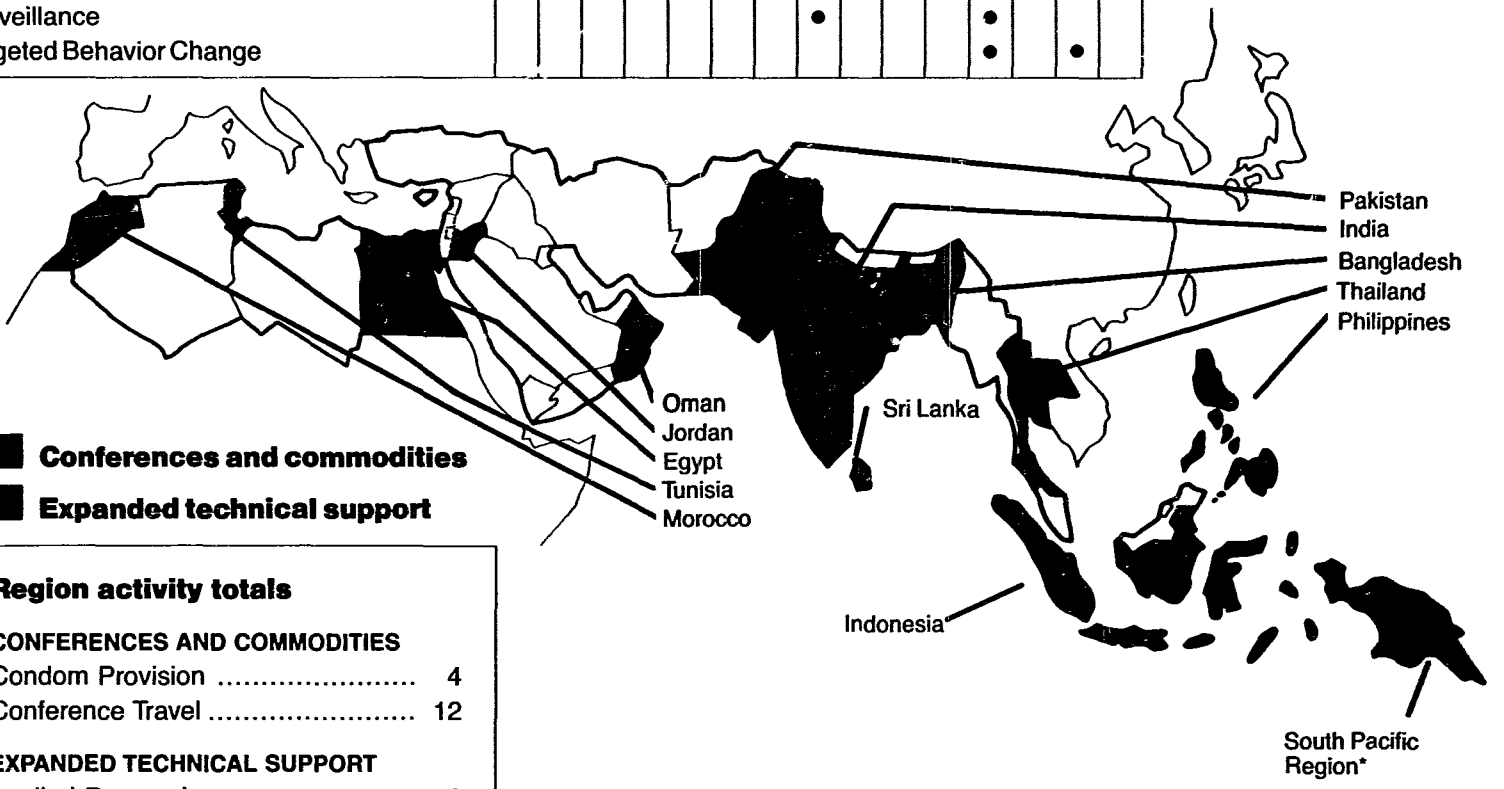
Applied Research	12
Blood Transfusion Screening	8
Health Care Financing	1
Needs Assessment	16
PVO Activities	5
Public Information Campaigns	9
Resident Advisors	1
STD Control	2
Surveillance	4
Targeted Behavior Change	11

APPENDIX A

ASIA/NEAR EAST

HIV infection and AIDS activities suppored by USAID: Ongoing and completed

	Bangladesh	Egypt	Fiji	India	Indonesia	Jordan	Kiribati	Morocco	Oman	Pakistan	Papua New Guinea	Philippines	Sri Lanka	Thailand	Tunisia
CONFERENCES AND COMMODITIES															
Condom Provision												●	●	●	●
Conference Travel	●	●		●	●	●	●	●	●			●	●	●	●
EXPANDED TECHNICAL SUPPORT															
Applied Research												●			
Blood Transfusion Screening		●													
Health Care Financing															
Needs Assessment			●		●			●		●	●	●		●	●
PVO Activities		●			●							●		●	
Public Information Campaigns												●			
Resident Advisors												●			
STD Control															
Surveillance								●				●			
Targeted Behavior Change												●		●	



Conferences and commodities

Expanded technical support

Region activity totals

CONFERENCES AND COMMODITIES

Condom Provision	4
Conference Travel	12

EXPANDED TECHNICAL SUPPORT

Applied Research	1
Blood Transfusion Screening	1
Health Care Financing	0
Needs Assessment	8
PVO Activities	4
Public Information Campaigns	1
Resident Advisors	1
STD Control	0
Surveillance	2
Targeted Behavior Change	2

*In addition to Papua New Guinea, the South Pacific regional mission serves Cook Islands (N.Z.), Fiji, Kiribati, Niue (N.Z.), Solomon Islands, Tonga, Tuvalu, Vanuatu, and Western Samoa

NOTE: Boundary representation is not necessarily authoritative.

APPENDIX A

LATIN AMERICA/CARIBBEAN

HIV infection and AIDS activities supported by USAID: Ongoing and completed

	Antigua/Barbuda	Barbados	Belize	Bolivia	Brazil	Chile	Colombia	Costa Rica	Dominican Republic	Ecuador	El Salvador	Guatemala	Haiti	Honduras	Jamaica	Mexico	Peru	St. Kitts/Nevis	St. Lucia	St. Vincent/Grenadines
CONFERENCES AND COMMODITIES																				
Condom Provision		●		●	●							●	●		●	●	●			
Conference Travel	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●
EXPANDED TECHNICAL SUPPORT																				
Applied Research				●			●		●			●			●	●	●			
Blood Transfusion Screening				●					●	●	●	●					●			
Health Care Financing									●							●	●			
Needs Assessment	●	●		●	●		●		●	●	●	●	●		●	●	●	●	●	●
PVO Activities		●	●						●	●		●	●		●	●	●			
Public Information Campaigns		●			●				●	●	●				●		●			
Resident Advisors									●						●					
STD Control											●				●		●			
Surveillance										●	●	●				●				
Targeted Behavior Change	●	●							●	●	●	●			●	●	●	●	●	●

*The Eastern Caribbean regional mission serves Antigua and Barbuda, Barbados, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines

NOTE: Boundary representation is not necessarily authoritative.

Conferences and commodities

Expanded technical support

Region activity totals

CONFERENCES AND COMMODITIES	
Condom Provision	8
Conference Travel	19
EXPANDED TECHNICAL SUPPORT	
Applied Research	7
Blood Transfusion Screening	6
Health Care Financing	3
Needs Assessment	16
PVO Activities	9
Public Information Campaigns	7
Resident Advisors	2
STD Control	3
Surveillance	4
Targeted Behavior Change	12

APPENDIX B

USAID FY 1988 obligations for HIV infection and AIDS: Country totals

USAID Missions	AIDS Account	Development Fund for Africa	Economic Support Fund	Health Account	Population Account	Other Funds	Totals
AFRICA	$174,000				$100,000		$274,000
Benin	18,022						18,022
Botswana	14,825						14,825
Burkina Faso	171,894	$68,000					239,894
Burundi	72,683	201,101					273,784
Cameroon	266,746	199,000					465,746
Central African Republic	14,725						14,725
Chad	29,231						29,231
Congo	18,388						18,388
Cote d'Ivoire	137,257						137,257
Djibouti	18,242						18,242
Gabon	18,462						18,462
Gambia, The	7,253						7,253
Ghana	350,545	100,000			2,000		452,545
Guinea	18,242						18,242
Guinea-Bissau	9,231						9,231
Kenya	473,136				21,000		494,136
Lesotho	18,242						18,242
Liberia	18,315						18,315
Malawi	45,348	200,000					245,348
Mali	49,541				3,000		52,541
Mauritania	14,652						14,652
Mauritius	9,231						9,231
Mozambique	7,253						7,253
Niger	24,404						24,404
Nigeria	60,648						60,648
Rwanda	127,154	30,000			1,000		158,154
Senegal	169,693	267,683			50,000		487,376
Sierra Leone	24,176						24,176
Somalia		3,703					3,703
Sudan	18,242						18,242
Swaziland	32,578	40,000					72,578
Tanzania	354,372	113,593					467,965
Togo	13,187	3,700					16,887
Uganda	1,054,578	170,000			30,000		1,254,578
Zaire	584,863	1,129,000			76,000		1,789,863
Zambia	1,024,722	68,000					1,092,722
Zimbabwe	342,590	95,899					438,489
REDSO/WCA*	18,273	100,000					118,273
Subtotal	**$5,824,944**	**$2,789,679**			**$283,000**		**$8,897,623**

*Regional Economic Development Support Office/West and Central Africa

USAID Missions	AIDS Account	Development Fund for Africa	Economic Support Fund	Health Account	Population Account	Other Funds	Totals
ASIA/NEAR EAST	$50,000				$100,000		$150,000
Bangladesh	5,186				4,000		9,186
Egypt	4,397		$3,000,000		3,000		3,007,397
India	46,982						46,982
Indonesia	73,513			$8,500	20,000		102,013
Jordan	5,184						5,184
Morocco	42,313						42,313
Oman						$5,000	5,000
Pakistan	55,311						55,311
Philippines	254,496				2,000,000		2,254,496
South Pacific	124,192						124,192
Sri Lanka	59,197						59,197
Thailand	836,787				37,000		873,787
Tunisia	36,071						36,071
Subtotal	**$1,593,629**		**$3,000,000**	**$8,500**	**$2,164,000**	**$5,000**	**$6,771,129**
LATIN AMERICA/CARIBBEAN							
Belize	105,056						105,056
Bolivia	170,773						170,773
Brazil	906,861			70,000	20,000		996,861
Chile	2,632						2,632
Colombia	91,760				87,000		178,760
Costa Rica	5,377						5,377
Dominican Republic	458,377			13,400	6,175		477,952
Eastern Caribbean	732,189			223,800		75,000	1,030,989
Ecuador	22,274		200,000				222,274
El Salvador	50,882			193,500	15,000		259,382
Guatemala	47,844			40,984	60,000		148,828
Haiti	461,060			20,000			481,060
Honduras	48,616			132,800	3,000		184,416
Jamaica	554,457			290,000	100,000		944,457
Mexico	810,459				96,000		906,459
Peru	131,310				495,520		626,830
Subtotal	**$4,599,927**		**$200,000**	**$984,484**	**$882,695**	**$75,000**	**$6,742,106**
INTER-REGIONAL	2,981,500			15,000	281,000		3,277,500
WHO/GPA	15,000,000						15,000,000
TOTAL	**$30,000,000**	**$2,789,679**	**$3,200,000**	**$1,007,984**	**$3,610,695**	**$80,000**	**$40,688,358**

APPENDIX C

U.S. Institutions involved in USAID-funded AIDS prevention activities

Academy for Educational Development (AIDSCOM)	Washington, DC
African Medical and Research Foundation	New York, NY
American Association for the Advancement of Science	Washington, DC
Annenberg School of Communications	Philadelphia, PA
Columbia University	New York, NY
Eastern Virginia Medical School	Norfolk, VA
Experiment in International Living	Brattleboro, VT
Family Health International (AIDSTECH)	Research Triangle Park, NC
The Futures Group	Glastonbury, CT
Howard University	Washington, DC
Johns Hopkins University	Baltimore, MD
Management Sciences for Health	Boston, MA
The Pathfinder Fund	Watertown, MA
The Population Council	New York, NY
Population Services International	Washington, DC
Porter/Novelli	Washington, DC
PRISM Corporation	Washington, DC
Project HOPE	Milwood, VA
Tulane University	New Orleans, LA
University Research Corporation	Bethesda, MD