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AIDS in Africa

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SUMMARY

Sub-Saharan Africa has been more severely affected by AIDS than any other part of the world. The United Nations reports that 25.4 million adults and children are infected with the HIV virus in the region, which has about 10% of the world's population but nearly 64% of the worldwide total of infected people. The overall rate of infection among adults in sub-Saharan Africa is 7.4%, compared with 1.1% worldwide. Ten countries in southern Africa have infection rates above 10% and account for 30% of infected adults worldwide. By the end of 2004, an estimated 25.3 million Africans will have died of AIDS, including a 2004 estimate of 2.3 million deaths. AIDS has surpassed malaria as the leading cause of death in Africa, and it kills many times more Africans than war. In Africa, 57% of those infected are women.

Experts relate the severity of the African AIDS epidemic to the region's poverty, the relative lack of empowerment among women, high numbers of men living as migrant workers, and other factors. Health systems are ill-equipped for prevention, diagnosis, and treatment.

AIDS' severe social and economic consequences are depriving Africa of skilled workers and teachers while reducing life expectancy by decades in some countries. An estimated 12.3 million AIDS orphans are currently living in Africa, facing increased risk of malnutrition and reduced prospects for education. AIDS is being blamed for declines in agricultural production in some countries, and is regarded as a major contributor to hunger and famine.

Donor governments, non-governmental organizations, and African governments have responded through prevention programs intended to reduce the number of new infections and by trying to ameliorate the damage done by AIDS to families, societies, and economies. The adequacy of this response is the subject of much debate.

An estimated 310,000 Africa AIDS patients were being treated with antiretroviral drugs at the end of 2004, up from 150,000 six months earlier. However, an estimated 4 million are in need of the therapy. U.S. and other initiatives are expected to sharply expand the availability of treatment in the near future. Advocates see expanded treatment as an affordable means of reducing the impact of the pandemic. Skeptics question whether treatment can be widely provided without costly improvements in health infrastructure.

U.S. concern over AIDS in Africa grew during the 1980s, as the severity of the epidemic became apparent. Legislation enacted in the 106th and the 107th Congresses increased funding for worldwide HIV/AIDS programs. H.R. 1298, signed into law (P.L. 108-25) on May 27, 2003, authorized $15 billion over five years for international AIDS programs. President Bush announced his Emergency Plan for AIDS Relief (PEPFAR) in the 2003 State of the Union message. Twelve of the 15 focus countries are in sub-Saharan Africa. Under the FY2006 budget request, they would receive a 54% boost in aid, to $1.2 billion, through the State Department's Global HIV/AIDS Initiative. Nonetheless, activists and others urge that more be done in view of the scale of the African pandemic.

MOST RECENT DEVELOPMENTS

Senator Frist introduced S. 850 on April 19, 2005, to authorize a Global Health Corps that would send U.S. health volunteers abroad and expand the availability of health care personnel, items, and related services. That same day, the National Academies' Institute of Medicine (IOM) released a report calling for a United States Global Health Service to mobilize health personnel to work in the 15 focus countries of the President's Emergency Plan for AIDS Relief (PEPFAR) in order to help achieve PEPFAR's goals. An initial deployment of 150 key professionals would be paid full salary; others would receive $35,000 fellowships and student loan repayments up to $25,000. Some suggested that funds might better be spent training and retaining indigenous health personnel, particularly in Africa; others noted that training was a key component of the IOM proposal, which they praised as a dynamic response to the AIDS crisis. The House Committee on International Relations held a hearing on April 13 on the U.S. response to the global AIDS crisis. Chairman Henry Hyde praised U.S. AIDS Coordinator Randall Tobias for "tremendous leadership" but called for more support for organizations devoted to promoting abstinence and being faithful. On April 11, former President Bill Clinton announced that the Clinton Foundation was launching a pediatric AIDS program that would put 10,000 children on antiretroviral AIDS therapy in at least 10 countries in 2005 — doubling the number of children in treatment.

For further information, see CRS Report RS21181, *HIV/AIDS International Programs: Appropriations, FY2003-FY2006*; and CRS Report RL31712, *The Global Fund to Fight AIDS, Tuberculosis, and Malaria: Background and Current Issues*.

BACKGROUND AND ANALYSIS

Sub-Saharan Africa has been far more severely affected by AIDS than any other part of the world. In December 2004, UNAIDS (the Joint United Nations Program on HIV/AIDS) reported that in 2004, 25.4 million adults and children were living with HIV and AIDS in the region, including 3.1 million newly infected during the year. Africa has about 10% of the world's population but approximately 64% of the worldwide total of infected people. The infection rate among adults aged 15-49 averages an estimated 7.4% in Africa, compared with 1.1% worldwide. According to cumulative UNAIDS estimates, approximately 25.3 million Africans will have died of AIDS since the beginning of the epidemic through the end of 2004, including an estimated 2.3 million expected to die in that year. UNAIDS projects that between 2000 and 2020, 55 million Africans can be expected to lose their lives to the epidemic. (*Report on the Global HIV/AIDS Epidemic, 2002*, p. 46.) AIDS has surpassed malaria as the leading cause of death in sub-Saharan Africa, and it kills many times more people than Africa's armed conflicts.

Characteristics of the African Epidemic

- HIV, the human immunodeficiency virus that causes AIDS, is spread in Africa primarily by heterosexual contact. (A February 2003 article published by David Gisselquist and others in the *International Journal of*

STD and AIDS asserted that the importance of unsafe medical practices in the spread of HIV may have been underestimated. A February 2004 article in *The Lancet* rejected this hypothesis, and affirmed that sexual transmission "continues to be the major mode of spread" of HIV.[1])

- Women make up an estimated 57% of the HIV-positive adult population in sub-Saharan Africa, as compared with 47% worldwide, according to UNAIDS. Young women are particularly at risk. In 2004, an estimated 6.9% of African women aged 15 to 24 were HIV positive, compared with 2.2% of young men. (UNAIDS, *AIDS Epidemic Update, December 2004).*

- According to UNAIDS, the adult infection rate or prevalence has stabilized in sub-Saharan Africa in recent years, as both the total adult population and the number of infected people increase. Stabilization does not ease the burden of the epidemic but simply means that numbers dying approximately equal the numbers of newly infected. The disease has become endemic in many countries and will affect their people for generations to come. Prevalence is still increasing in Madagascar, Swaziland, and a few other countries, while Uganda and localized areas in some other countries have experienced declines.

- Southern Africa, where 10 countries have an adult infection rate above 10% (**Table 1)**, is the most severely affected region. With 2% of the world's population, these countries account for nearly 30% of infected people worldwide. However, populous Nigeria in West Africa, where an estimated 5.4% of adults are infected, has an estimated 3.6 million infected people — the largest number in the region apart from South Africa, where UNAIDS estimates that 5.3 million are infected. South Africa's is the largest infected population in the world.

- The African AIDS epidemic is having a much greater impact on children than is the case in other parts of the world. According to UNAIDS, more than 600,000 African infants become infected with HIV each year through mother-to-child transmission, either at birth or through breast-feeding. Most die before their second birthday. Nonetheless, an estimated 1.9 million African children under 14 were living with AIDS at the end of 2003. In South Africa, a sample survey reported by the Human Sciences Research Council in May 2004 showed that 6.7% of children between the ages of 2 and 9 were HIV positive.

- In 2003, there were an estimated 12.3 million AIDS orphans in Africa — that is, children 17 and under who had lost one or both parents to the disease.[2] Because of the stigma attached to the AIDS disease, AIDS orphans

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[1] George P. Schmid and others, "Transmission of HIV-1 Infection in Sub-Saharan Africa and Effect of Elimination of Unsafe Injections," *The Lancet*, February 7, 2004.

[2] UNAIDS, UNICEF, and U.S. Agency for International Development, *Children on the Brink*, July 2004.

are at high risk for being malnourished, abused, and denied an education. In November 2003, UNICEF released a report, *Africa's Orphaned Generations*, predicting that there would be 20 million AIDS orphans in Africa by 2010 and that in a dozen countries orphans from all causes would account for 15% to more than 25% of children under 15. Among other measures, the report recommended efforts to strengthen the capacity of families to protect and care for orphans.

Explaining the African Epidemic

AIDS experts emphasize a variety of economic and social factors in explaining Africa's AIDS epidemic, placing primary blame on the region's poverty. Poverty has deprived Africa of effective systems of health information, health education, and health care. Thus, Africans suffer from a high rate of untreated sexually-transmitted infections (STIs) other than AIDS, and these increase susceptibility to HIV. African health systems typically have limited capabilities for AIDS prevention work, and HIV counseling and testing are difficult for many Africans to obtain. Until very recently, AIDS treatment has been generally available only to the elite.

Table 1. Adult HIV Infection Rates (%), end of 2003

Swaziland	38.8	Tanzania	8.8	Chad	4.8	Eritrea	2.7
Botswana	37.3	Gabon	8.1	Ethiopia	4.4	Sudan	2.3
Lesotho	28.9	Cote d'Ivoire	7.0	Burkina Faso	4.2	Mali	1.9
Zimbabwe	24.6	Cameroon	6.9	Congo Kinshasa	4.2	Benin	1.9
South Africa	21.5	Kenya	6.7	Uganda	4.1	Madagascar	1.7
Namibia	21.3	Burundi	6.0	Togo	4.1	Gambia	1.2
Zambia	16.5	Liberia	5.9	Angola	3.9	Niger	1.2
Malawi	14.2	Nigeria	5.4	Guinea	3.2	Senegal	.8
Central Af. Rep.	13.5	Rwanda	5.1	Ghana	3.1		
Mozambique	12.2	Congo Brazzaville	4.9	Djibouti	2.9		

Source: UNAIDS, Report on the Global HIV/AIDS Epidemic, July 2002. The Zimbabwe estimate represents a technical correction issued in 2003. Updated estimates are expected in July 2004.

Poverty forces large numbers of African men to migrate long distances in search of work, and while away from home they may have multiple sex partners, increasing their risk of infection. Some of these partners may be women who have become commercial sex workers because of poverty, and they too are highly vulnerable to infection. Migrant workers may carry the infection back to their wives when they return home. Long distance truck drivers, and drivers of "taxis," who transport Africans long distances by car, are probably also key agents in spreading HIV. Meanwhile, poverty forces many women to turn to "transactional sex" in order to survive.

Some behavior patterns in Africa may also be affecting the epidemic. In explaining the fact that young women are infected at a higher rate than young men, Peter Piot, the Executive

Director UNAIDS, has commented that "the unavoidable conclusion is that girls are getting infected not by boys but by older men," who are more likely than young men to carry the disease. (UNAIDS press release, September 14, 1999.) UNAIDS notes that "with the downward trend of many African economies ... relationships with (older) men can serve as vital opportunities for financial and social security, or for satisfying material aspirations." (*AIDS Epidemic Update, 2002).* Many believe that the infection rate among women generally would be far lower if women's rights were more widely respected in Africa, if women exercised more power in political and economic affairs, and if donors and governments would support fidelity campaigns primarily aimed at African men. (For more on these issues, see Helen Epstein, "AIDS: the Lesson of Uganda," *New York Review of Books*, July 5, 2001; "The Hidden Cause of AIDS," *New York Review of Books*, May 9, 2002; and "The Fidelity Fix," *New York Times Magazine*, June 13, 2004.) A Human Rights Watch study released on August 13, 2003, reported that domestic violence made women in Uganda more vulnerable to HIV infection — for example by depriving them of the power to negotiate condom use.

Leadership Reaction in South Africa and Elsewhere

Many observers believe that the spread of AIDS in Africa could have been slowed if African leaders had been more engaged and outspoken in earlier stages of the epidemic. President Thabo Mbeki of South Africa has come in for particular criticism on this score. In April 2000, President Mbeki wrote then President Clinton and other heads of state defending dissident scientists who maintain that AIDS is not caused by the HIV virus. In March 2001, Mbeki rejected appeals that the national assembly declare the AIDS pandemic a national emergency.

Under mounting domestic and international pressure, the South African government seemed to modify its position significantly when the government announced after an April 2002 cabinet meeting that it would triple the national AIDS budget. When a treatment program had not been launched by March 2003, however, the Treatment Action Campaign (TAC) launched a civil disobedience campaign. In August 2003, the South African cabinet instructed the health ministry to develop a plan to provide antiretroviral therapy nationwide, but by March 2004, TAC was threatening a lawsuit unless the program was actually begun. Finally, on April 1, 2004, the government began offering treatment at 5 hospitals in Gauteng province, centered on Johannesburg. TAC reported in February 2005 that about 70,000 South Africans were receiving treatment, but of these only 27,000 were being treated through the public program, while the remainder were under private care. An estimated 500,000 South Africans are in need of treatment.

The delays in South Africa's response to the pandemic have been costly, many experts believe. On September 22, 2004, South Africa's Department of Health reported survey results indicating that HIV infection was continuing to spread, though at a somewhat slower rate than in previous years. Approximately 27.9% of pregnant women in South Africa were found to be HIV positive in 2003, up from 26.5% in 2002. The department estimated that 5.6 million South Africans were infected. A report released by the Bureau of Market Research at the University of South Africa on September 20, 2004, predicted that AIDS-related deaths would exceed 500,000 per year from 2007 through 2011. Nonetheless, South Africa's Health Minister Manto Tshabalala Msimang continues to question the effectiveness of antiretrovirals and to insist that a healthy diet, particularly one including raw garlic and

lemon peel, can offer protection from the disease. (*Mail and Guardian Online*, May 5, 2005). Former President Nelson Mandela, seeking to combat the stigma and secrecy associated with AIDS, announced on January 6, 2005, that his son, Makgatho, had died of the disease.

In the rest of Africa, many heads of state and other leaders are now taking major roles in fighting the epidemic. President Yoweri Museveni of Uganda has long been recognized for leading a successful prevention campaign against AIDS in his country, and Uganda's ABC (Abstinence, Be Faithful, or Use Condoms) transmission prevention program has won wide praise. ("Uganda Leads by Example on AIDS," *Washington Times*, March 13, 2003.) A Senate Foreign Relations Africa Subcommittee hearing on May 19, 2003, focused on "Fighting AIDS in Uganda: What Went Right." Dr. Anne Peterson, Assistant Administrator for Global Health at the U.S. Agency for International Development (USAID), testified that the "Uganda success story is about prevention." She said that successes had been recorded in promoting abstinence and faithfulness to partners, while increased condom use in recent years had also contributed to the decline in prevalence. Sophia Mukasa Monico, a member of the Global Health Council and a former AIDS worker in Uganda, testified that all three program elements need to be in place for prevention to work. Mukasa Monico noted that "the epidemic is still raging in Uganda, and we have much to do before we can claim victory...." On February 23, 2005, researchers from Johns Hopkins and Columbia University released a study from Rakai, Uganda, finding that a decline in HIV prevalence there was due to condom use and the deaths of infected people.[3] Abstinence and monogamy appeared not to be increasing. Some saw this as evidence that programs to encourage sexual behavior change were less important than expected, while others argued that behavior had likely already changed substantially before the study began.

The presidents of Botswana, Nigeria, and several other countries are widely seen today as in the forefront of the AIDS struggle as well. Several regional AIDS initiatives have been launched. For example, in August 2003, the Southern African Development Community (SADC) agreed to an AIDS strategic framework, including the creation of a regional fund to fight the disease.

Social and Economic Consequences

AIDS is having severe social and economic consequences in Africa, and these negative effects are expected to continue for many years. A January 2000 Central Intelligence Agency National Intelligence Estimate on the infectious disease threat, made public in an unclassified version, forecasts grave problems over the next 20 years.

> At least some of the hardest-hit countries, initially in sub-Saharan Africa and later in other regions, will face a demographic catastrophe as HIV/AIDS and associated diseases reduce human life expectancy dramatically and kill up to a quarter of their populations over the period of this Estimate. This will further impoverish the poor, and often the middle class, and produce a huge and impoverished orphan cohort unable to cope and vulnerable to exploitation and radicalization. (CIA, *The Global Infectious Disease Threat*

[3] Maria Wawer, R. Gray, and others, "Declines in HIV Prevalence in Uganda: Not as Simple as ABC," presented at the 12th Conference on Retroviruses and Opportunistic Infections, Boston.

> *and Its Implications for the United States* [http://www.odci.gov], "Publications and Reports".)

The estimate predicted increased political instability and slower democratic development as a result of AIDS. According to the World Bank,

> The illness and impending death of up to 25% of all adults in some countries will have an enormous impact on national productivity and earnings. Labor productivity is likely to drop, the benefits of education will be lost, and resources that would have been used for investments will be used for health care, orphan care, and funerals. Savings rates will decline, and the loss of human capital will affect production and the quality of life for years to come. (World Bank, *Intensifying Action Against HIV/AIDS in Africa*.)

In the most severely affected countries, sharp drops in life expectancy are occurring, and these will reverse major gains achieved in recent decades. According to UNAIDS, as a result of AIDS, average life expectancy in sub-Saharan Africa is now 47 years, whereas it would have been 62 years without the epidemic. A U.S. Bureau of the Census report [http://www.census.gov/prod/2004pubs/wp02-2.pdf], released on March 23, 2004, predicted population declines by 2010 in South Africa, Botswana, and three other African countries due to AIDS.

According to many reports, AIDS has devastating effects on rural families. The father is typically the first to fall ill, and when this occurs, farm tools and animals may be sold to pay for his care. Should the mother also become ill, children may be forced to shoulder responsibility for the full time care of their parents. The Food and Agriculture Organization of the United Nations reports that since the epidemic began, 7 million agricultural workers have been killed in Africa. The agricultural workforce has been reduced by more than 20% in five countries (FAO, *HIV/AIDS, Food Security, and Rural Livelihoods*, May 2002), and a number of experts are relating serious food shortages in southern Africa in 2002 and 2003 to production losses caused by AIDS. (See "Cursed Twice Over — AIDS and Famine in Southern Africa," *The Economist*, February 15, 2003.) World Food Program Executive Director James Morris, testifying before the Senate Foreign Relations Committee on February 25, 2003, and the House International Relations Committee on February 27, said that HIV/AIDS was a central cause of the famine. On June 22, 2004, Morris said that southern Africa was in a "death spiral" due to the consequences of the AIDS pandemic, including the loss of human capacity and the devastation of rural areas, with resulting negative consequences for food security (WFP press release).

AIDS is being blamed for shortages of skilled workers and teachers in several countries. A May 2002 World Bank study, *Education and HIV/AIDS: A Window of Hope,* reported that more than 30% of teachers are HIV positive in parts of Malawi and Uganda, 20% in Zambia, and 12% in South Africa. AIDS is also claiming many lives at middle and upper levels of management in both business and government. Although unemployment is generally high in Africa, trained personnel are not readily replaced.

AIDS may have serious security consequences for much of Africa, since HIV infection rates in many armies are extremely high. Domestic political stability could also be threatened in African countries if the security forces become unable to perform their duties due to AIDS. Peacekeeping is also at risk. South African soldiers are expected to play an important peacekeeping role in Africa in the years ahead, but this could be threatened.

Estimates of the infection rate in the South Africa army run from 17% to 40%, with higher rates reported for units based in heavily infected KwaZulu-Natal province.

Responses to the AIDS Epidemic

Donor governments, non-governmental organizations (NGOs) working in Africa, and African governments have responded to the AIDS epidemic primarily by attempting to reduce the number of new HIV infections through prevention programs, and to some degree, by trying to ameliorate the damage done by AIDS to families, societies, and economies. A third response, treatment of AIDS sufferers with antiretroviral drugs that can result in long-term survival, has not been widely used in Africa until recently; but treatment programs are expanding. (See below, **AIDS Treatment Issues**).

Programs and projects aimed at combating the epidemic typically provide information on how HIV is spread and on how it can be avoided through the media, posters, lectures, and skits. Some success has been claimed for these efforts in persuading young people to delay the age of "sexual debut" and to remain faithful to a single partner. The United States is now advocating an expansion of prevention programs focusing on abstinence until marriage as an effective means of slowing the spread of HIV, although some critics maintain that this may be unrealistic in a social environment destabilized by poverty. Some also question whether approaches stressing abstinence and faithfulness can benefit poor married women in Africa, who have little power to deny their husbands, whether infected or not.

Donor-sponsored voluntary counseling and testing (VCT) programs, where available, enable African men and women to learn their HIV status. In Botswana, HIV tests are now offered as a routine part of any medical visit, and many experts are urging that this be done continent-wide. AIDS awareness programs can be found in many African schools and increasingly in the workplace, where employers are recognizing their interest in reducing the infection rate among their employees. Many projects aim at making condoms readily available and on providing instruction in condom use. Several projects have had success in reducing mother-to-child transmission by administering the anti-HIV drug AZT or nevirapine, before and during birth, and while the mother is nursing. Many AIDS activists argue that it would be far better to put all infected pregnant women into long-term treatment programs, which would reduce the likelihood that their children would be orphaned.

On December 13, 2004, the Associated Press (AP) reported that a number of flaws had been found in a study of the nevirapine conducted in Uganda under the sponsorship of the National Institutes of Health (NIH). According to the AP report, researchers acknowledged that thousands of bad reactions were not disclosed. The allegations provoked criticism in Africa, including a furious response from the South Africa's ruling Africa National Congress (ANC). In a December 17 statement, the ANC charged that top U.S. officials had "entered into a conspiracy with a pharmaceutical company to tell lies and promote the sales of nevirapine in Africa ..." That same day, NIH issued its own statement affirming that "single-dose nevirapine is a safe and effective drug for preventing mother to infant transmission of HIV." The statement termed as "absolutely false" any implication of thousands of adverse reactions in the Uganda study. AIDS activists and others were concerned that the controversy would discourage use of the drug, often the only available means of preventing mother to child transmission (MTCT) of HIV. The National Academies' Institute of

Medicine, after investigating the Uganda study, reported that the Uganda study was valid and that nevirapine should continue to be used for MTCT.

Church groups and humanitarian organizations have helped Africa deal with the consequences of AIDS by setting up programs to provide care and education to orphans. Public-private partnerships have also become an important vehicle for responding to the African AIDS pandemic. The Bill and Melinda Gates Foundation has been a major supporter of vaccine research and a variety of AIDS programs undertaken in cooperation with African governments and donors. The Rockefeller Foundation, working with UNAIDS and others, has sponsored programs to improve AIDS care in Africa, and both Bristol-Myers Squibb and Merck and Company, together with the Gates Foundation and the Harvard AIDS Institute, have undertaken programs with the Botswana government aimed at improving the country's health infrastructure and providing AIDS treatment to all who need it. In Uganda, Pfizer and the Pfizer Foundation are funding the Infectious Diseases Institute (IDI), expected to train 250 AIDS treatment specialists annually, many of whom will work in rural areas.

The Global Fund to Fight AIDS, Tuberculosis, and Malaria, created in January 2002, commits about 60% of its grant funds to Africa, and about 60% of its grants worldwide go toward fighting AIDS. For further information, see CRS Report RL31712, *The Global Fund to Fight AIDS, Tuberculosis, and Malaria: Background and Current Issues*.

Nonetheless, UNAIDS maintains that a significant funding gap remains. In September 2003, the organization issued a report entitled *Accelerating Action Against AIDS in Africa*, which estimated that $8 billion was required to fight the African AIDS epidemic in 2004, whereas $6 billion was likely to be provided from all sources, including donors, the Global Fund, African governments, and African households. UNAIDS expects the resource gap to widen further in 2005. In January 2005, Gordon Brown, Britain's Chancellor of the Exchequer, proposed a $10 billion per year program to revitalize the struggle against AIDS. Many AIDS activists welcomed the proposal, but some said it would focus too heavily on vaccine research, which they regard as problematic.

Further information on the response to AIDS in Africa may be found below under **AIDS Treatment Issues** and at the following websites:

CDC: [http://www.cdc.gov/nchstp/od/nchstp.html]
Global Fund to Fight AIDS, Tuberculosis, and Malaria: [http://www.theglobalfund.org/en/]
International AIDS Vaccine Initiative: [http://www.iavi.org]
International Association of Physicians in AIDS Care: [http://www.iapac.org/]
Kaiser Daily HIV/AIDS Report: [http://www.kaisernetwork.org/daily_reports/rep_hiv.cfm/]
UNAIDS: [http://www.unaids.org/en/default.asp]
USAID: [http://www.usaid.gov/], click on "Health."
World Bank: [http://www.worldbank.org/], click on "Topics."

Effectiveness of the Response

The response to AIDS in Africa has had some successes, most notably in Uganda, where the rate of infection among pregnant women in urban areas fell from 29.5% in 1992 to 5% in 2001 (UNAIDS, *AIDS Epidemic Update, December 2002)*. The infection rate has continued to drop, and in 2003, adult prevalence nationwide was 4.1%, compared with 5.1%

in 2001. HIV prevalence among young urban women in Zambia has also reportedly fallen, and UNAIDS indicates that urban sexual behavior patterns among young people in cities in other countries may be changing in ways that combat the spread of HIV. (However, increases in infection rates continue in cities in several other countries.) South Africa has recorded a drop in infections among pregnant women under 20, and Senegal is credited with preventing an AIDS epidemic through an active, government-sponsored prevention program. Despite some success stories, however, the number of infected people in Africa continues to grow.

Experts point out that there are a number of barriers to a more effective AIDS response in Africa, such as cultural norms that make it difficult for many government, religious, and community leaders to acknowledge or discuss sexual matters, including sex practices, prostitution, and the use of condoms. However, experts continue to advocate AIDS awareness and AIDS amelioration as essential components of the response to the epidemic. Indeed, there is strong support for an intensification of awareness and amelioration efforts, as well as adaptations to make such efforts more effective.

The lives of infected people could be significantly prolonged and improved, some maintain, if more were done to identify and treat the opportunistic infections, particularly tuberculosis, that typically accompany AIDS. Millions of Africans suffer dual infections of HIV and TB, and the combined infection dramatically shortens life. Tuberculosis can be cured by treatment with a combination of medications over several months, even in HIV-infected patients. However, according to the World Health Organization, Africans often delay seeking treatment for TB or do not complete the course of medication (*Global Tuberculosis Control: WHO Report 1999,* Key Findings), contributing to the high incidence of death among those with dual infections. Pfizer Corporation has signed an agreement with South Africa to donate the anti-fungal Diflucan (fluconazole) for treating AIDS-related opportunistic infections, including cryptococcal meningitis, a dangerous brain inflammation. On December 1, 2001, Pfizer announced that it would sign memoranda of understanding on donating fluconazole with six other African countries. UNAIDS and the World Health organization have recommended that Africans infected with HIV be treated with an antibiotic/sulfa drug combination known by the trade name Bactrim in order to prevent opportunistic infections. Studies indicate that the drug could reduce AIDS death rates at a cost of between $8 and $17 per year per patient.

AIDS Treatment Issues

Access for poor Africans to antiretrovirals (ARVs) has been perhaps the most contentious issue surrounding the response to the African epidemic today. Administered in a treatment regimen known as HAART (highly active antiretroviral therapy) these drugs can return AIDS victims to normal life and permit long-term survival rather than early death. Such treatment has proven highly effective in developed countries, including the United States, where AIDS, which had been the eighth leading cause of death in 1996, no longer ranked among the 15 leading causes by 1998. (U.S. Department of Health and Human Services Press Release, October 5, 1999.)

The high cost of HAART treatments has been the principal obstacle to offering the therapy on a large scale in Africa, where most victims are poor and lack health insurance. The cost of administering HAART was once estimated at between $10,000 and $15,000 per person per year. In May 2000, five major pharmaceutical companies announced that they

were willing to negotiate sharp reductions in the price of AIDS drugs sold in Africa. UNAIDS launched a program in cooperation with the pharmaceutical companies to boost treatment access and, in June 2001, reported that 10 African countries had reached agreement with manufacturers. The agreements significantly reduced prices in exchange for health infrastructure improvements to assure that ARVs are administered safely.

Initiatives to expand the availability of HAART continued, and treatment became a major focus of the programs of the Global Fund and of the President's Emergency Plan for AIDS Relief (PEPFAR, see below). On December 1, 2003, the World Health Organization formally launched its $5.5 billion "3 by 5" plan to treat 3 million AIDS patients in poor countries by 2005, with resources to come from the Global Fund and donors. Earlier, in October 2003, former President Bill Clinton announced that his foundation had organized a program to provide generic three-drug antiretroviral treatment for AIDS patients in Africa and the Caribbean for about $.38 per day. Generic pharmaceutical manufacturers in India and South Africa would make the drugs, and funding would come from private donors, some donor governments, and other sources. In April 2004, the Clinton Foundation announced an agreement with UNICEF, the World Bank, and the Global Fund to expand the program to more than 100 developing countries worldwide. As a result of the impending increased availability of treatment, an estimated 310,000 sub-Saharan patients were receiving HAART at the end of 2004, up from 150,000 six months earlier.[4] However, an estimated 4 million Africans are in need of HAART.

Dr. Jim Yong Kim, director of HIV/AIDS programs at WHO, said in February 2005 that the 3 by 5 campaign was struggling to attain its goal.[5] In Africa, Botswana and Uganda would likely meet their targets, but South Africa and Nigeria were lagging behind. South African Health Minister Tshabalala-Msimang said on May 5 that some were trying to "scapegoat" South Africa for the failure of 3 by 5 and that South Africa could not do a blanket rollout of antiretrovirals because patients had to be closely monitored due to side effects. She added that she would continue to inform patients that they had three options: improving nutrition, taking micronutrients, or enrolling in an antiretroviral program. (*Mail and Guardian Online*, May 5, 2005.)

Whether African countries are ready to "absorb" dramatically increased funding for treatment has been another issue. AIDS activists believe that millions of Africans could quickly be given access to AIDS drugs. Others maintain that African supply channels cannot make the drugs consistently available to millions of patients and that regular monitoring of patients by medical personnel is not possible in much of the continent. Monitoring is necessary, they maintain, to deal with side effects and to adjust medications if drug resistance emerges. Many fear that if the drugs are taken irregularly, resistant HIV strains will emerge that could cause untreatable infections worldwide; although a September 2003 report indicated that African patients follow their AIDS therapy regimens more consistently than

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[4] World Health Organization, *"3 by 5" Progress Report*, December 2004. Dr. Jim Yong Kim, director of HIV/AIDS programs at the World Health Organization (WHO), said on February 22, 2005, that the campaign was struggling to attain its goal. In Africa, Botswana and Uganda would likely meet their targets, but South Africa and Nigeria were lagging behind.

[5] "Global AIDS Effort Still Short of Goal," *Boston Globe*, February 23, 2005.

American patients.[6] For some, the correct response to weaknesses in Africa's basic health care systems is to devote resources to strengthening those systems.[7]

Botswana's President Mogae told a November 12, 2003 meeting, convened in Washington by the Center for Strategic and International Studies, that the widely-praised treatment program in his country is being hampered by a "brain drain" of health personnel. Physicians, nurses, technicians, and other are often hired away by foreign governments, international organizations, and non-governmental organizations. The health minister of Mozambique, which has launched a pilot antiretroviral treatment program, said in May 2004 that the country was unable to launch a nationwide program because of serious shortages of staff and equipment. The Harvard-based Joint Learning Initiative on Human Resources for Health and Development issued a report on November 27, 2004 finding that Africa had the lowest ratio of health workers to population of any region. At least one million new workers are needed, according to the report. On December 3, 2004, Britain announced that it would provide $100 million to boost salaries of health workers in Malawi and increase the number of medical staff being trained.

AIDS activists have urged that African governments issue "compulsory licenses" to allow the manufacture or importation of inexpensive generic copies of patented AIDS medications. In November 2001, a ministerial-level meeting of the World Trade Organization(WTO) in Doha, Qatar, approved a declaration stating that the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS agreement) should be implemented in a manner supportive of promoting access to medicines for all. The declaration affirmed the right of countries to issue compulsory licenses and gave the least developed countries until 2016 to implement TRIPS. The question of whether countries manufacturing generic copies of patented drugs, such as India or Thailand, should be permitted to export to poor countries was left for further negotiation through a committee known as the Council for TRIPS.

Although the Doha declaration drew broad praise, some AIDS activists criticized it for not permitting imports of generics. Some in the pharmaceutical industry, on the other hand, expressed concern that the declaration was too permissive and might reduce profits that, they argued, were used to fund research. Others, however, maintained that the declaration would have little practical impact, because in their view, poverty rather than patents is the principal obstacle to drug access in Africa. (See Amir Attaran and Lee Gillespie-White, "Do Patents for Anti-retroviral Drugs Constrain Access to AIDS Treatment in Africa?" *Journal of the American Medical Association*, October 17, 2001.) On August 30, 2003, the WTO reached agreement on a plan to allow poor countries to import generic copies of essential medications, but the debate over access to antiretrovirals in Africa seems likely to continue. In March 2005, India's parliament completed passage of patent legislation expected to sharply raise prices in Africa and elsewhere for Indian-manufactured generic copies of newly discovered AIDS medications. Cheap generic copies of existing medications can still be sold, although sellers will have to pay licensing fees to patent holders.

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[6] "Africans Outdo Americans in Following AIDS Therapy," *New York Times*, September 3, 2003.

[7] Holly Burkhalter, "Misplaced Help in the AIDS Fight," *Washington Post* op-ed, May 25, 2004.

U.S. Policy

U.S. concern over AIDS in Africa began to mount during the 1980s, as the severity of the epidemic became apparent. In 1987, in acting on the FY1988 foreign operations appropriations, Congress earmarked funds for fighting AIDS worldwide, and House appropriators noted that in Africa, AIDS had the potential for "undermining all development efforts" to date (H.Rept. 100-283). In subsequent years, Congress supported AIDS spending at or above levels requested by the executive branch, either through earmarks or report language. Nevertheless, a widely discussed July 2000 *Washington Post* article called into question the adequacy and timeliness of the early U.S. response to the HIV/AIDS threat in Africa. (Barton Gellman, "The Global Response to AIDS in Africa: World Shunned Signs of Coming Plague." *Washington Post*, July 5, 2000. See also Greg Behrman, *The Invisible People: How the U.S. Has Slept Through the Global AIDS Pandemic, the Greatest Humanitarian Catastrophe of Our Time* (New York: Free Press, 2004).

As the severity of the epidemic continued to deepen, many of those concerned for Africa's future, both inside and outside government, came to feel that more should be done. On July 19, 1999, then Vice President Al Gore proposed $100 million in additional spending for a global LIFE (Leadership and Investment in Fighting an Epidemic) AIDS initiative to begin in FY2000, with a heavy focus on Africa. Funds approved during the FY2000 appropriations process supported most of this initiative. On June 27, 2000, the Peace Corps announced that all volunteers serving in Africa would be trained as AIDS educators.

USAID reported in 2001 that it had been the global leader in the international response to AIDS since 1986, not only by supporting multilateral efforts but also by directly sponsoring regional and bilateral programs aimed at combating the disease. (USAID, *Leading the Way: USAID Responds to HIV/AIDS*, September 2001). The Agency had sponsored AIDS education programs; trained AIDS educators, counselors, and clinicians; supported condom distribution; and sponsored AIDS research. USAID claimed several successes in Africa, such as helping to reduce HIV prevalence among young Ugandans and to prevent an outbreak of the epidemic in Senegal; reducing the frequency of sexually transmitted infections in several African countries; sharply increasing condom availability in Kenya and elsewhere; assisting children orphaned by AIDS; and sponsoring the development of useful new technologies, including the female condom. USAID reported that it spent a total of $51 million on fighting AIDS in Africa in FY1998 and $63 million in FY1999 (*Leading the Way*, 121). In addition, some spending by the Department of Health and Human Services was going toward HIV surveillance in Africa and other Africa AIDS-related efforts.

Bush Administration

Combating the AIDS pandemic in sub-Saharan Africa has been an important focus for the Bush Administration's foreign assistance program. In May 2001, President Bush made the "founding pledge" of $200 million to the Global Fund, and on June 19, 2002, he announced a $500 million International Mother and Child HIV Prevention Initiative (IMCPI) to support programs to prevent mother-to-child transmission of the virus. Eight African countries were named as beneficiaries.

The President's Emergency Plan for AIDS Relief (PEPFAR) is resulting in major spending increases for HIV/AIDS prevention, care, and treatment in 12 focus countries in Africa: Botswana, Cote d'Ivoire, Ethiopia, Kenya, Mozambique, Namibia, Nigeria, Rwanda, South Africa, Tanzania, Uganda, and Zambia. (The other focus countries are Guyana, Haiti, and Vietnam.) President Bush announced the launching of PEPFAR in his January 2003 State of the Union address, pledging $15 billion for fiscal years 2004 through 2008, including $10 billion in "new money," that is, spending in addition to then current levels. The program aims to prevent 7 million new infections worldwide, provide anti-retroviral drugs for 2 million infected people, and provide care for 10 million infected people, including orphans. The new funds are coming through the Global HIV/AIDS Initiative (GHAI), headquartered at the Department of State. The GHAI is headed by the United States Global AIDS Coordinator, Randall Tobias, who coordinates not only the GHAI programs in the focus countries, but also the HIV/AIDS programs of USAID and other agencies in both focus and non-focus countries.

President Bush made AIDS a special focus of his five-day trip to Africa in July 2003. On July 10, speaking in Botswana, the President said that, "this is the deadliest enemy Africa has ever faced, and you will not face this epidemic alone." On July 8, in Senegal, the President told Africans, "we will join with you in turning the tide against AIDS in Africa." On September 22, 2003, then Secretary of State Colin Powell told a U.N. General Assembly special session on AIDS that the epidemic was "more devastating than any terrorist attack" and that the United States would "remain at the forefront" of efforts to combat the epidemic.

On February 23, 2004, the Department of State issued a report [http://www.state.gov/s/gac/rl/or/c11652.htm] providing details on the PEPFAR initiative. At the same time, the Administration announced plans to release PEPFAR funds for treatment programs conducted by the Elizabeth Glaser Pediatric AIDS Foundation, Harvard's School of Public Health, Colombia's Mailman School of Public Health, and Catholic Relief Services.

Many AIDS activists and others have praised the President's initiatives, but critics maintain that PEPFAR in particular is getting off to a slow start and have urged increased appropriations. Some also see the program as too strongly unilateral and would like the United States to be acting in closer cooperation with other countries and donors, particularly the Global Fund to Fight AIDS, Tuberculosis, and Malaria. Some are questioning whether PEPFAR will do enough to strengthen African health care institutions and capabilities for coping with AIDS over the long term; or whether the funds will flow primarily to U.S.-based organizations.

U.N. Secretary General Kofi Annan, during an interview at the July 2004 international AIDS conference in Bangkok, urged the United States to contribute $1 billion annually to the Global Fund to Fight AIDS, Tuberculosis, and Malaria; but U.S. Global AIDS Coordinator Randall Tobias said "It's not going to happen." (For further information, see CRS Report RL31712, *The Global Fund to Fight AIDS, Tuberculosis, and Malaria: Background and Current Issues*.) Annan asked the United States to show the same leadership in the AIDS struggle that it had shown in the war on terrorism. U.S. State Department spokesman Richard Boucher rejected the implied criticism, saying that the Bush Administration had taken the AIDS crisis very seriously and that the $15 billion pledged to fight the epidemic over five years was an "enormous and significant amount." In a speech

interrupted by protestors, Tobias told the conference that "At this point, perhaps the most critical mistake we can make is to allow this pandemic to divide us."

Treatment. The *Financial Times* reported in April 2004, that the United States was withholding support from a program intended to treat 140,000 AIDS patients in Kenya with antiretrovirals because the program would rely on a generic 3-drug combination (FDC) pill. Many favor approval of FDCs, including copies of drugs manufactured by different companies, on grounds that they are simpler to prescribe and need to be taken just once or twice a day. U.S. officials had expressed concerns that further study was needed to assure that their widespread or improper distribution did not contribute to the emergence of resistant HIV strains.

The issue was submitted to a panel of experts instructed to report by mid-May 2004. Several members of Congress subsequently wrote to President Bush asking that the United States join an international consensus that generics are safe and essential for the treatment of AIDS. On May 16, 2004, Health and Human Services Secretary Tommy Thompson announced that the United States Food and Drug Administration (FDA) was instituting an expedited process that could lead to the approval of the use of FDCs in programs funded by PEPFAR. Many hailed the announcement as a step forward in making cheaper and more reliable antiretroviral therapy available in Africa, but critics said it placed an unnecessary hurdle in the way of distributing such pills. They maintained that the United States should have relied on the approval process of the World Health organization, which had already cleared such pills. In January 2005, the FDA cleared the first generic FDC for use in the PEPFAR program. Manufactured by Aspen Pharmacare of South Africa, the three-drug FDC will is expected to make treatment available for $20-$30 per patient per month, compared with $55 for the three brand-name drugs. On January 28, 2005, the U.S. Government Accountability Office (GAO) issued a report (GAO-05-133) finding that the regimen of antiretroviral drugs (ARVs) offered under PEPFAR is narrower and more costly than regimens offered by other programs.

On March 23, 2005, the Department of State released *Engendering Bold Leadership: The President's Emergency Plan for AIDS Relief* (PEPFAR), the first annual report to Congress on the President's initiative. Global AIDS Coordinator Randall Tobias called PEPFAR "coordinated, accountable, and powerful," and the report stated that 152,000 patients in sub-Saharan Africa were receiving AIDS treatment as a result. According to the report, 119 million had been reached with mass media campaigns promoting abstinence and being faithful, while 71 million had been reached with messages promoting other prevention measures, including the use of condoms.

Spending. **Table 2** reports available information on recent U.S. spending levels on AIDS programs in Africa. Under the FY2006 request, GHAI assistance to the 12 focus countries in sub-Saharan Africa would grow by 54% to just over $1.2 billion, or 61% or the total GHAI request. Prior to the launching of PEPFAR, USAID, and the Global AIDS Program (GAP) of the Centers for Disease Control (CDC) in the Department of Health and Human Services were the principal channels for HIV/AIDS assistance to Africa. The drop in USAID funding in Table 2 from FY2004 to FY2005 results from the shift in funds in the 12 GHAI focus countries in Africa to the Office of the Global AIDS Coordinator at the Department of State. This was done in order to simplify the budget and enhance transparency. Most USAID spending on HIV/AIDS in Africa is through the Child Survival

and Health Programs Fund, but limited amounts are provided through the Economic Support Fund. Information on GAP spending in Africa for FY2004 and subsequent years is not yet available (NA) due to a change in budget structure at the Department of Health and Human Services. The Defense Department (DOD) has undertaken an HIV/AIDS education program primarily with African armed forces. As in other recent years, the Administration has not requested funding for this program in FY2006, but in FY2005 Congress continued to support it by appropriating $7.5 million. Funds from the Foreign Military Financing (FMF) program are also used to support this initiative. Meanwhile, a Department of Labor (DOL) program supports AIDS education in the workplace in four sub-Saharan countries. (For more information, see CRS Report RS21181, *HIV/AIDS International Programs: Appropriations, FY2003-FY2006.*) Additional U.S. funds reach Africa indirectly through the AIDS programs of the United Nations, the World Bank, and the Global Fund to Fight AIDS, Tuberculosis, and Malaria.

Table 2. U.S. Bilateral Spending on Fighting AIDS in Africa
($ millions)

	FY2000	FY2001	FY2002	FY2003	FY2004 Est.	FY2005 Est.	FY2006 Request
USAID	109	144	183	320	234.0	82.3	82.4
CDC (GAP)	30	77	84	107	NA	NA	NA
GHAI (State)	-	-	-	-	263.8	781.5	1,206.3
DOD	0	5	14	7	4.2	7.5	0
FMF	0	0	0	2	1.5	2.0	2.0
DOL	0	3	6	5	2.1	NA	0
Total	139	229	287	441			

The scale of the response to the pandemic in Africa by the United States and others remains a subject of intense debate. The U.N. Special Envoy for HIV/AIDS in Africa, Stephen Lewis, has been a persistent critic, telling a September 2003 conference on AIDS in Africa that he was "enraged by the behavior of the rich powers" with respect to the epidemic. The singer Bono said he had a "good old row" with President Bush in a September 16, 2003 meeting on the level of U.S. funding for fighting the international AIDS epidemic. Nonetheless, as noted above, others have argued that Africa's ability to absorb increased AIDS funding is limited and that health infrastructure will have to be expanded before new funds can be spent effectively.

Legislative Action, 2000-2004

In August 2000, the Global AIDS and Tuberculosis Relief Act of 2000 (P.L. 106-264) became law. This legislation authorized funding for fiscal years 2001 and 2002 for a comprehensive, coordinated, worldwide HIV/AIDS effort under USAID. In the 107th Congress, a number of bills were introduced with international or Africa-related HIV/AIDS related provisions. A major international AIDS authorization bill, H.R. 2069, passed both the House and Senate during the 107th Congress but did not go to conference. (For information on appropriations for HIV/AIDS programs, see CRS Report RS21114, *HIV/AIDS: Appropriations for Worldwide Programs in FY2001 and FY2002*.)

In May 2003, Congress approved and President Bush signed into law H.R. 1298/ P.L. 108-25, the United States Leadership Against HIV/AIDS, Tuberculosis, and Malaria Act of 2003. This bill backs the President's Emergency Plan for AIDS Relief by authorizing $3 billion per year for FY2004 through FY2008 (a total of $15 billion) and creating the office of the Global AIDS Coordinator at the Department of State. Appropriations measures have supported a variety of programs helping Africa fight the pandemic; for further information, see CRS Report RS21181, *HIV/AIDS International Programs: Appropriations, FY2002-FY2004.*

Legislation in the 109th Congress

Bills introduced in the 109th Congress, with provisions related to the African AIDS pandemic, include the following.

H.R. 155 (Millender-McDonald), Mother to Child Plus Appropriations Act for Fiscal Year 2005.

H.R. 164 (Millender McDonald), International Pediatric HIV/AIDS Network Act of 2005.

H.R. 1409 (Lee)/S. 350 (Lugar), Assistance for Orphans and Other Vulnerable Children in Developing Countries Act of 2005.

S. 850 (Frist), Global Health Corps Act of 2005.