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HIV/AIDS in Zambia

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Preface

This research was undertaken as part of the Country AIDS Policy Analysis Project, which is managed by the AIDS Policy Research Center at the University of California San Francisco. The project is funded by the U.S. Agency for International Development, Cooperative Agreement PHN-A-00-01-00001-00. Stephen F. Morin, PhD, is the project's Principal Investigator. The views expressed in this paper do not necessarily reflect those of USAID.

The overarching objective of the Country AIDS Policy Analysis Project is to inform planning and prioritizing of effective and equitable HIV/AIDS prevention and treatment interventions through multidisciplinary research on HIV/AIDS. The project evolved from the acute need for analysis of the epidemiology of HIV/AIDS *in tandem with* analysis of countries' political economy and sociobehavioral context — at household, sectoral, and macro levels. This multidisciplinary analysis aims to:

- help inform national HIV/AIDS policies
- strengthen ability to plan, prioritize, and implement effective interventions
- highlight the range of sectoral interventions that may affect or be affected by HIV/AIDS
- facilitate multisectoral/interministerial coordination
- facilitate intercountry information sharing
- increase national and subregional capacity for effective partnerships

The project develops and disseminates online, easy-to-download, continually updated analyses of HIV/AIDS in 12 USAID Rapid Scale-Up/Intensive Focus/Basic Program countries: Ethiopia, Kenya, Malawi, Senegal, South Africa, Uganda, Tanzania, Zambia, Zimbabwe, Brazil, Cambodia, and India. <http://ari.ucsf.edu/ARI/policy/countries.htm>

The primary audience for the country analyses is in-country HIV/AIDS planners, including those from government ministries and agencies, multi- and bilateral donors, international and local NGOs, health care institutions, prevention programs, academia, faith-based organizations, affected communities, and the private sector. International investigators and policymakers also report using the analyses in their work.

All country analyses undergo peer review at the AIDS Research Institute of the University of California San Francisco. In addition, two in-country experts from each profiled country serve as peer reviewers. A scientific advisory board also reviews all analyses.

Each analysis is linked with national strategic plans for HIV/AIDS prevention, care, and support. Analyses also include extensive links to related resources. An online database comprising 73 HIV/AIDS and socioeconomic indicators for 168 countries and 13 regions is under development and will allow users to conduct a variety of comparative analyses.

Project staff are in regular contact with national HIV/AIDS professionals who provide and verify data as needed. Staff continually assess and incorporate new data to maintain the timeliness of the analyses.

Note on Data Sources

All racial categorizations and nomenclature used in the data sources cited throughout this paper have been maintained; they do not constitute an endorsement of any particular terminology.

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Contact Information

Because this analysis is continually updated, comments and suggested sources of new data are welcome and may be sent to the coinvestigator/project director at UCSF's AIDS Policy Research Center: Lgarbus@psg.ucsf.edu

Executive Summary

Epidemiology

In 1986, the Zambian government established the National AIDS Surveillance Committee. The Zambian ANC-based National HIV/STD Sentinel Surveillance System (NSS) was launched in 1990. During the latter half of the 1990s, the dominant trend in Zambia's HIV epidemic has been a decline in HIV prevalence among women ages 15 to 19, largely limited to four sites in Lusaka. Changes in reported sexual behavior in Lusaka appear to be consistent with declining HIV prevalence among 15- 19-year-olds in Lusaka.

At the end of 2001, UNAIDS estimated that 1.2 million Zambians were living with HIV/AIDS (estimate range: 930,000 to 1.4 million). Of them, 1 million were adults (ages 15 to 49), with adult prevalence at 21.50 percent. Of adults infected with HIV, 590,000 (59 percent) are women.

Zambia's first AIDS case was identified in 1984. AIDS cases among women peak between ages 20 and 29 and among men, between ages 30 and 39, suggesting significant transmission from older males to younger females.

The epidemic is driven largely by heterosexual transmission. However, MTCT is significant, accounting for about 30,000 new infections each year. Safe blood product needs are met in Lusaka, but it is unclear whether this is occurring nationwide.

Though ANC data are widely used, they are imperfect. For example, comparative studies have shown that HIV prevalence among pregnant women in sub-Saharan Africa underestimates prevalence in women of reproductive age because fertility among HIV-positive women is substantially lower than among uninfected women. A mid-1990s population-based survey in Chelston (Lusaka) and Kapiri-Mposhi found that ANC data tended to overestimate HIV seroprevalence among women ages 15 to 19, with a reverse relationship in those ages 30 to 39. Another factor is that the population attending ANCs varies during the different stages of the epidemic. Poverty, the current food crisis, and other factors may also affect ANC attendance in Zambia.

Political Economy and Sociobehavioral Context

Zambia achieved independence in October 1964. Until two decades ago, Zambia was one of the most prosperous nations in sub-Saharan Africa. It is now one of the world's poorest countries. Zambia's 2000 per capita income of US$300 is *half* of what it was at the time of independence in 1964.

A World Bank- and IMF-guided structural adjustment program did not generate economic growth, nor did it adequately address impacts on the poor and the need for social safety nets. Other factors contributing to the deteriorating economic situation of the 1990s included the falling price for copper, extremely high debt level, drought, and persistently high population

growth rate. According to Zambia's Ministry of Finance and Economic Planning, HIV/AIDS also adversely affected economic growth and exacerbated poverty during the 1990s.

Zambia has a long history of men migrating to work in large agricultural estates as well as to the mines in Copperbelt Province. Generally, Zambian men and women have a fairly high level of mobility. Key mobile groups in Zambia include truck drivers, sex workers, fishermen/women and fish traders, migrant and seasonal workers, cross-border traders (especially young girls), miners, military personnel, prisoners, and refugees. The food crisis is also spurring population dislocation.

In May 2002, the Government of Zambia declared a national disaster due to actual and anticipated food shortages. About 2.9 million Zambians (29 percent of the population) require food aid. Reports from aid agencies who have recently conducted missions in Zambia concur that although erratic weather has contributed to the current food crisis, one of the key underlying factors is the depletion of human resources as a result of HIV/AIDS.

Despite the government's stated commitment to fighting corruption, Zambians do not believe that corruption has diminished. Hospitals and clinics, among others, are perceived to have a high level of corruption. The general health status of Zambia's population worsened substantially during the 1990s. The country bears an enormous burden of malaria. Other major health problems include TB, leishmaniasis, Guinea Worm disease, measles, malnutrition, respiratory diseases, polio, and diarrheal disease. Almost all health facilities lack adequate personnel, drugs, and/or equipment. Physical infrastructure and equipment are deteriorating. There is overlap between the Ministry of Health and the Central Board of Health, leading to duplication and other inefficiencies.
As part of structural adjustment, the government and its donor partners began a process of health sector reform in 1994. Serious concerns have been raised about underlying elements of the reform process, particularly the application of user fees.

Despite constitutional and legislative provisions, women still experience disadvantages in enforcement of laws regarding property ownership, inheritance, and marriage. Widows may be particularly vulnerable to HIV because of sexual cleansing and wife inheritance. "Grabbing," wherein close relatives take possession of the deceased's household assets, exacerbates the already precarious economic (and social) situation of widows and their children. Despite legislation to address this issue, widows continue to suffer extreme harassment from and impoverishment at the hand of their husbands' relatives.

AIDS morbidity and mortality are leading to many girls' (versus boys') being taken out of school to care for family members who are ill and to assist with household tasks and/or generate income as breadwinner die. Girls' lack of education is associated with lower formal sector employment opportunities and thus lessened economic autonomy, which may render them more vulnerable to acquiring HIV.

AIDS is also leading to increasing numbers of female orphans and household heads, who are vulnerable to exploitation, including sexual abuse. Women in Zambia have little power in sexual negotiation with their husbands. In many rural areas, HIV/AIDS continues to be viewed as disease of women and, more specifically, of sex workers.

Despite Zambians' high knowledge of HIV/AIDS, major gaps in fuller understanding of HIV transmission persist. These are particularly of concern with regard to gender and urban-rural differentials. Misconceptions about HIV/AIDS also persist and perpetuate stigma.

Condom use within marriage or other consensual unions is very low and has not risen since 1998. Condom use in nonregular relationships is much higher than for other relationships, but still low. Urban-rural disparities in condom use are often wide and may be related to limited awareness and availability of condoms in rural areas, as well as lower knowledge and higher degree of misperceptions in rural areas. Girls' vulnerability to acquiring HIV infection heightens in relationships with older partners because of a lack of power to negotiate safe sex and the threat of violence. Alcohol use at last sex is reported by about one-fifth of men and of women.

Impact

During 2000-05, Zambia will have the world's lowest life expectancy at birth: 32.4. Although Zambia's life expectancy is projected to increase, AIDS will reduce life expectancy by 26 to 39 percent through 2050. By 2000, 749,000 Zambians had died because of AIDS, with AIDS having increased the number of deaths in the country by 32 percent. By 2015, AIDS will have increased the number of deaths by 83 percent, bringing the cumulative total of AIDS deaths to 2.8 million. By 2050, 6.2 million Zambians will have died because of the epidemic.

In the medium term, Zambia will experience a 5.8 percent reduction in GDP per capita because of HIV/AIDS. The ILO projects that Zambia will lose 19.9 percent of its labor force by 2020 (compared with the labor force size without HIV/AIDS).

HIV/AIDS is consuming an increasingly larger share of the health budget. AIDS patients are projected to occupy 45 percent of all hospital beds by 2014. At least 68 percent of adult patients with TB at University Teaching Hospital, the nation's largest hospital, are HIV-positive.

High death rates among Zambian teachers are dramatically affecting the supply of education. On the demand side, the number of Zambian children of primary school age will be 20 percent lower by 2010 than pre-AIDS projections.

In most cases, households and communities have responded to HIV/AIDS with no external financial or material support. Because of HIV/AIDS, poverty, and food shortages, traditional coping mechanisms in Zambia have become largely irrelevant. To survive, some engage in activities such as sex work or border trading, increasing their risk of exposure to HIV. Households affected by AIDS report annual income 30 to 35 percent lower than unaffected households. Within households, the burden of caring for PWHA usually falls on women.

During the 1990s, there was a steady increase in the prevalence of orphanhood in Zambia. At the end of 2001, there were an estimated 570,000 AIDS orphans (ages 0 to 14) living in Zambia. The percent of Zambia's orphans due to AIDS rose from 11.5 percent in 1990 to 65.4 percent in 2001. In most cases in Zambia, extended families take in orphans who have lost both parents. These families are themselves likely to be poor and must therefore stretch already inadequate resources to provide for both orphans and their own children. As the traditional safety net of fostering fails,

orphans may be become heads of households and responsible for caring for younger siblings. Orphans are particularly vulnerable to malnutrition, illness, abuse, child labor, and sexual exploitation. Concurrently, they suffer the stigma and discrimination associated with HIV/AIDS.

A study conducted in the Konkola Copper Mines found that HIV prevalence ranged from 14.4 to 20.1 percent among employees. Firms are reporting increasing costs of productivity losses, sick leave, retraining, and funerals. A major study found that HIV prevalence among prisoners is 27 percent.

Response

The first AIDS case was reported in 1984. In 1986, Zambia created the National AIDS Surveillance Committee and National AIDS Prevention and Control Program. In 1987, a short-term emergency plan was established to deal with the blood supply. Two medium-term plans were subsequently created. Constraints to the government's response through the late 1990s included lack of high-level political commitment, strategic management of the HIV/AIDS program, analysis of HIV/AIDS in the context of macroeconomic or gender policy, programs tailored to different populations, implementation evaluation, and intragovernmental collaboration. In 2000, Zambia established the National HIV/AIDS/STD/TB Council to serve as the single, high-level institution responsible for national and technical leadership, strategic management, and effective coordination of all government and civil interventions. The national council is guided by a strategic framework (2001-03), which states that HIV/AIDS must be addressed in the country's overall development — not just health — program.

Human and financial resources remain highly inadequate. Zambia relies heavily on donor funding. It is slated to receive US$42 million from the second phase of the World Bank's Multicountry HIV/AIDS Program for Africa (MAP). In April 2002, the Global Fund to Fight AIDS, TB & Malaria approved Zambia's US$92.9 million proposal to address HIV/AIDS.

Several Zambian ministries have adopted workplace programs to raise awareness of HIV/AIDS among their staff, train peer educators, and distribute condoms. However, budget constraints are impeding full implementation of these workplans. Another concern is whether sufficient mechanisms for employee confidentiality have been established. The Ministry of Education has less than two full-time equivalent staff addressing the sector’s response to HIV/AIDS. In 1993, the Ministry of Defense created the Zambia Defense Forces HIV/AIDS Prevention, Care and Support Program. In March 2003, ZDF announced that it will implement mandatory HIV testing of potential recruits and serving personnel. Testing positive for HIV will automatically disqualify one from joining the military. Serving members with HIV will not be discharged but will be placed in lower categories and offered available medical care. The Zambia AIDS Law Research and Advocacy Network has raised concerns that mandatory HIV testing is discriminatory and a violation of the right to autonomy.

There are no HIV/AIDS-specific laws in the country. Stigma and unfair discrimination against PWHA are common in Zambia, but persons discriminated against have no system for redress.

Zambian NGOs and CBOs have played a critical role in responding to HIV/AIDS, shouldering much of the country's response to HIV/AIDS. Among their constraints are high dependence on foreign grants and little financial assistance from government, limited coverage and scale, and poor distribution across country. There are national and district interfaith HIV/AIDS working groups to sensitize religious leaders and train clergy and lay religious leaders in counseling and supporting communities. Many church leaders appear to be recognizing that they need to play a greater role in HIV/AIDS prevention and care. However, some still object to HIV prevention messages that include mention of condoms.

Some traditional leaders have played a critical role in HIV/AIDS prevention. A prime example is how some chiefs, especially in Southern Province, have been instrumental in modifying sexual cleansing practices. Traditional healers are represented on the National HIV/AIDS/STD/TB Council. Guidelines for conducting research on herbal remedies have been developed, and such research is awaiting funding.

Only 2 percent of the population estimated to need PMTCT services received them during 2001. Zambia launched its PMTCT Initiative in 1999, which is now being implemented at six pilot sites. As of January 2002, less 1 percent of Zambians living with HIV/AIDS were receiving ART. The Zambian government has developed national guidelines for ART and is establishing nine provincial treatment centers to provide ART to 10,000 people.

In response to the growing number of orphans and OVC, the Zambian government launched the Social Welfare Scheme; however, to date, it reaches only an estimated 10 percent of the target population. Zambia is seeking to establish effective legislation with regard to children, youth, and HIV/AIDS. There are numerous NGO and CBO projects targeted to orphans and OVC.

Zambia developed the *Code of Ethics and Practice for Counseling* to establish standards of competence and conduct for counselors, trainers, and supervisors. The code is reinforced through the more detailed *Guidelines on HIV/AIDS Counseling in Zambia*, produced by the Ministry of Health in 2000. By 2000, public health centers in 23 districts (out of national total of 72) were providing VCT. Outside government, NGOs and CBOs have been providing VCT for many years. During 2001, 43 percent of the estimated population in need of VCT services in Zambia was receiving them.

Zambia was one of the first countries in Africa to implement home-based care. Zambian NGOs, particularly those related to religious organizations, took the lead on HBC and developed a variety of approaches, many of which serve as best practice for other countries. Government has played a very limited role in HBC provision. There are currently over 50 HBC programs in Zambia, primarily found in urban areas and covering at most 20 percent of PWHA. Demand for HBC is enormous, and programs are overwhelmed. A recent study found that HBC is unlikely to increase significantly without greater government involvement.

In December 2002, Copperbelt Electricity Corporation announced that it would provide ART to its workers and their spouses. The Zambia Federation of Employers has encouraged its members to assist their workers in accessing ART. However, most Zambians either work in the informal sector or hold low-level, nonunionized positions that do not offer medical assistance. Although some firms have implemented HIV/AIDS prevention and care programs, the majority of Zambian employers have no such policies nor programs.

Epidemiology

At a Glance

The At a Glance section summarizes the more detailed data found below it.

HIV Sentinel Surveillance

- In 1986, the Zambian government established the National AIDS Surveillance Committee. The Zambian ANC-based National HIV/STD Sentinel Surveillance System (NSS) was launched in 1990.
- The same 22 antenatal clinics were involved in Zambia's NSS in 1994, 1998, and 2001, whereas the 1993 NSS involved just 10 sites. There was a major gap in collection of NSS data between 1994 and 1998. As of February 2003, the results from the 2001 NSS had not yet been approved by the Central Board of Health (CBOH).
- During the latter half of the 1990s, the dominant trend in Zambia's HIV epidemic has been a decline in HIV prevalence among women ages 15 to 19, largely limited to four sites in Lusaka. These sites showed an average decline in HIV prevalence from 28 percent in 1993 to 15 percent in 1998.
- Changes in reported sexual behavior in Lusaka appear to be consistent with declining HIV prevalence among 15- 19-year-olds in Lusaka.
- HIV prevalence may be declining among 15-19 in some urban areas outside Lusaka (and in one rural area), though these trends have yet to be validated.
- As the CBOH stressed in 1999, the declines mentioned above have not yet resulted in a decline in the country's overall HIV prevalence. However, declines in the 15-19 age cohort are the most encouraging because prevalence in this age group is mostly like to reflect recent trends in HIV transmission. The CBOH does believe that national prevalence is stabilizing, albeit at a very high level.
- The urban-rural differential remains wide. In several rural areas, overall HIV prevalence and HIV prevalence among the youngest age cohort appear to be increasing.
- Verification of trends is required, including examination of the 2001 NSS and 2001-02 Zambia Demographic and Health Survey findings. Moreover, persistent poverty, economic uncertainty, food crises, and inadequate funding for HIV/AIDS projects are also shaping the epidemic's dynamic, rendering it difficult to pinpoint trends and make projections.

UNAIDS Estimates

- At the end of 2001, UNAIDS estimated that 1.2 million Zambians were living with HIV/AIDS (estimate range: 930,000 to 1.4 million). Of them, 1 million were adults (ages 15 to 49), with adult prevalence at 21.50 percent (the sixth-highest adult prevalence in the world).
- Of adults infected with HIV, 590,000 (59 percent) are women. HIV prevalence among women ages 15 to 24 ranges from 16.78 to 25.18 percent; the comparable range for men in the same age cohort is 6.45 to 9.68 percent.

- There were 150,000 Zambian children (ages 0 to 14) living with HIV/AIDS at the end of 2001.

AIDS Cases

- Zambia's first AIDS case was identified in 1984.
- The Ministry of Health estimates that 100,000 Zambians develop AIDS each year.
- AIDS cases among women peak between ages 20 and 29 and among men, between ages 30 and 39, suggesting significant transmission from older males to younger females.

Transmission Patterns

- The epidemic is driven largely by heterosexual transmission. However, MTCT is significant, accounting for about 30,000 new infections each year.
- Safe blood product needs are met in Lusaka, but it is unclear whether this is occurring nationwide.

AIDS Mortality

- By 2000, 749,000 Zambians had died because of AIDS, with AIDS having increased the number of deaths in the country by 32 percent. By 2015, AIDS will have increased the number of deaths by 83 percent, bringing the cumulative total of AIDS deaths to 2.8 million. By 2050, 6.2 million Zambians will have died because of the epidemic.

Data Quality Issues

- ANC data currently serve as Zambia's primary sentinel surveillance of HIV/AIDS. Though ANC data are widely used, they are imperfect. For example, comparative studies have shown that HIV prevalence among pregnant women in sub-Saharan Africa underestimates prevalence in women of reproductive age because fertility among HIV-positive women is substantially lower than among uninfected women.
- A mid-1990s population-based survey in Chelston (Lusaka) and Kapiri-Mposhi found that ANC data tended to overestimate HIV seroprevalence among women ages 15 to 19, with a reverse relationship in those ages 30 to 39.
- Another factor is that the population attending ANCs varies during the different stages of the epidemic. Poverty, the current food crisis, and other factors may also affect ANC attendance in Zambia.

HIV Sentinel Surveillance

With technical assistance from the (then) Global Program on AIDS at WHO, the Zambian government established the National AIDS Surveillance Committee in 1986, part of its National AIDS Control Program. Currently, the Central Board of Health (CBOH) within the Ministry of Health manages the core HIV epidemiological surveillance and research system (Zam Core HIV-EPI), which comprises national sentinel surveillance in antenatal clinics (ANCs), population-based surveys (using saliva-based HIV testing), and research studies.[1]

The Zambian ANC-based National HIV/STD Sentinel Surveillance System (NSS) began in 1990 and is the main source of data on the epidemic and its dynamics. CBOH validates NSS data using population-based survey data from selected sentinel surveillance sites (these data are discussed in the Data Quality section below).[2]

Prior to 1993, NSS involved few sites and no information on age.[3] The 1993 NSS survey was carried out in 10 sites and did include information on age.[4] However, in analyzing the 1993 data, the CDC reports that the overall prevalence found appears to be correct but that age-specific prevalences are likely to be incorrect.[5] Where available, data for 1993 are included in the discussion below, but should be viewed with this caveat in mind.

In 1994, NSS underwent a major expansion to increase geographic representation (27 sites with at least one urban and one rural site in each of Zambia's nine provinces; of the 27 sites, seven overlapped with the 1993 sites). The 1994 NSS also expanded collection of sociodemographic characteristics of participants (in addition to age, marital status, residence, and educational attainment). The NSS indicated overall HIV prevalence of 19.8 percent in 1994.[6]

The next NSS survey did not occur until 1998. This was primarily because of difficulties in procuring HIV test kits.[7] The 1998 survey involved 22 sites, with Chilonga, Mporokosso, Samfya, Kamuchanga, Chitokoloki omitted; the government believed that the omission of these sites did not affect the geographical representation of the NSS.[8]

As of February 2003, the results from the 2001 NSS had not yet been approved by the Central Board of Health.[9] The 2001 NSS was conducted at the same 22 sites as in 1998; the target of enrolling 400 to 500 women at each site was met at all but two or three sites.[10]

Zambia is highly dependent on donors to fund HIV sentinel surveillance NSS, although the government covers a substantial portion of costs as well. In addition to the WHO/GPA, Sweden and Norway have been major funders.[11] Zambia is a priority country of the Global AIDS Program of the U.S. Centers for Disease Control and Prevention (CDC), and the CBOH is working closely with the CDC on NSS data collection and analysis. The CBOH is considering conducting the NSS at least every two years, if not annually.[12]

Methods

For the 1994 and 1998 NSSs, women attending ANCs for the first time were enrolled consecutively over a four-month period. In 1994, the required sample size of 500 was not achieved at clinics with low population coverage.[13] In 1998, a sample size of 500 was sought at all sites except Livingstone, Chelston, Kapiri- Mposhi, and Ndola, where the sample size target was higher to permit more refined age-specific analysis and comparison with population-based studies.[14] In 1994, a total of 11,517 women had blood collected and were interviewed;[15] in 1998, this figure was 12,001.[16]

In 1994 and 1998, HIV testing was conducted in an unlinked anonymous fashion using blood samples collected for syphilis screening, part of the routine standard of antenatal care. A venous sample of blood was collected from each ANC attendee. Trained laboratory technicians tested all sera for HIV antibody using Capillus Rapid Test HIV-1, HIV-2. Quality control and confirmatory testing was conducted at two national reference laboratories: Virology Laboratory,

University Teaching Hospital, Lusaka, and Immunology Laboratory, Tropical Diseases Research Center, Ndola. [17], [18]

In 1994, 50 percent of all HIV antibody reactive sera and 5 percent of nonreactive sera (randomly selected) were retested using RTD. Discordant results were retested using Western Blot or an enzyme-linked, immunosorbent assay (HIV-1, ELISA). No further testing of sera was performed in geographic sites with no discrepancies between the first and second test. False positives were the most common form of discrepancy detected. In all sites where false positives appeared, the remaining 50 percent of reactive samples were retested. In sites where false negatives were detected, the remaining 95 percent of nonreactive samples were retested.

In 1998, all positive samples and 4 percent of nonreactive sera (randomly selected) were retested using Wellcozyme HIV Recombinant HIV-1. Samples with discordant results were confirmed using Bionor HIV-1 and 2. For sites with false negatives, over 50 percent of negative samples were retested on Wellcozyme ELISA. [19]

Findings

In 1998, the sentinel sites with the highest HIV prevalences were:

- Livingstone: 31.0 percent (1994: 31.9 percent). A tourist town, as well as major route for truckers and railway. Many women engage in cross-border trading with Victoria Falls in Zimbabwe. Located in Southern Province, which has country's highest rates of polygamous relationships and sexual cleansing. Widow inheritance, wherein close relatives take over possessions of widows, is common in Southern Province. [20] (More detail on sexual cleansing and widow inheritance is found in the Political Economy and Sociobehavioral Context section).

- Ndola: 28.4 percent (1994: 27.5 percent). Located in Copperbelt Province. Has drawn men from around the country to work in mines. The privatization of Zambia Consolidated Copper Mines (ZCCM) entailed job losses, as have declining world prices for copper. (More detail found in Political Economy and Sociobehavioral Context section).

- Chipata: 27.3 (1994: 30.3 percent) In Eastern Province on border with Malawi; major trucking and trading route.[21]

- Mongu: 27.3 percent (1994: 28.4 percent) In Western Province on Zambezi River. Starting point for tours of Liuwa Plains National Park.

- The lowest prevalence in 1998 was found in Kasaba in Luapula Province (5.2 percent; 1994: 12.0 percent).[22] Kasaba is a rural area, sparsely populated, not on a major transport route, and with no major economic activities. Ethnic groups in the area are predominantly matrilineal, and less likely to be polygamous than in other areas of Zambia.[23]

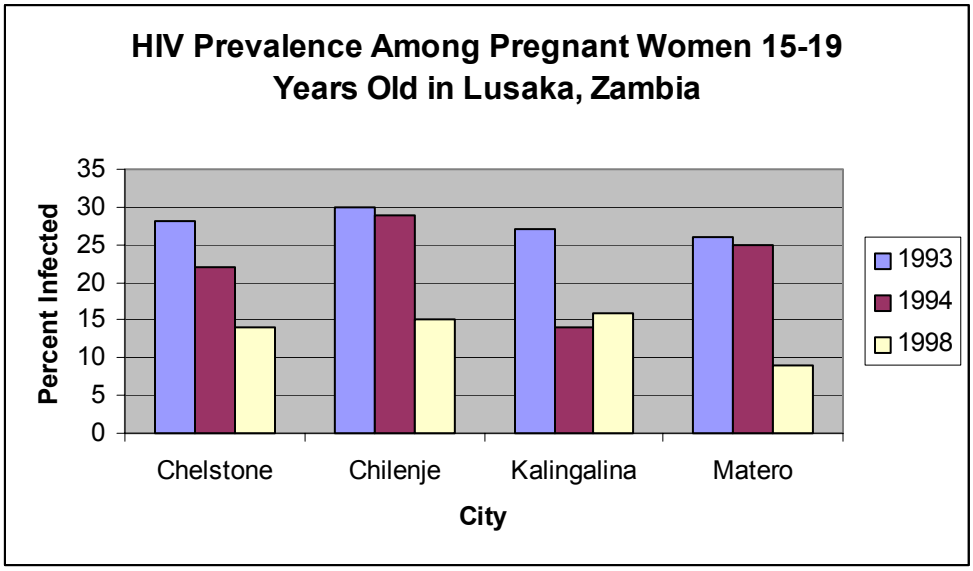
In 1998, in all sites except Kalabo, Kapiri- Mposhi (discussed below), and Kashikishi, prevalence among those ages 15-19 was lower than that for the age cohorts 20-24, 25-29, and 30-39. (NB: Data for women over age 39 not provided.) [24]

The NSS data from the 1990s indicate that the major patterns in the HIV epidemic in Zambia are:

HIV prevalence among pregnant women ages 15 to 19 is declining in Lusaka

During the latter half of the 1990s, the dominant trend in the HIV epidemic has been a decline in HIV prevalence among women ages 15 to 19, largely limited to four sites in Lusaka. These sites showed an average decline in HIV prevalence from 28 percent in 1993 to 15 percent in 1998. (Though, as mentioned above, the 1993 data may not be a useful baseline; in addition, sample sizes in 1993 were far lower compared with those from 1994 and 1998.) Data for the four Lusaka sites covering 1994 and 1998 are found in figure 1 and table 1. [25]

Figure 1. HIV Prevalence Among Pregnant Women Ages 15 to 19, Lusaka, 1993-98



Source: POLICY Project. *HIV/AIDS in Southern Africa: Background, Projections, Impacts, and Interventions*. Washington, DC: The Futures Group International, October 2001 <http://www.policyproject.com/pubs/countryreports/SoAf10-01.pdf>

Table 1. HIV Prevalence among ANC Sentinel Sites in Lusaka, 1993-1998							
Site	**Overall**				**Ages 15 to 19**		
	Year	**N**	**HIV Prevalence (%)**	**CIs**	**Year**	**N**	**HIV Prevalence (%)**

Chelston	1998	812	25.9	23.0 - 29.0	1998	199	15.1
	1994	462	24.7	20.7 - 28.6	1994	106	21.7
	1993	299	26.8	21.7 - 31.8	1993	56	28.6
Chilenje	1998	510	27.3	2.5 - 31.4	1998	114	16.7
	1994	456	35.3	30.9 - 28.3	1994	102	29.4
	1993	287	22.0	17.1 - 26.8	1993	53	30.2
Kalingalinga	1998	499	26.7	22.9 - 30.8	1998	120	16.7
	1994	512	21.7	18.1 - 25.3	1994	113	14.2
	1993	442	23.5	19.6 - 27.5	1993	100	26.0
Matero	1998	502	29.1	25.2 - 33.4	1998	123	10.6
	1994	394	28.4	24.0 - 32.9	1994	101	24.8
	1993	288	27.1	21.9 - 32.2	1993	63	25.4
Source: Zambian Ministry of Health, Central Board of Health. *Zambian HIV Sentinel Surveillance: Time Trends in the HIV Epidemic in the 1990s.* Lusaka: 1999.							

Changes in reported sexual behavior in Lusaka appear to be consistent with declining HIV prevalence among 15- 19-year-olds in Lusaka

The CBOH does not believe that selection bias is a factor in this trend. Data from representative surveys of urban Lusaka (1990-98) and the country as a whole (1992-98) that examined trends in knowledge and sexual risk behaviors appear to validate this trend. For example:

- A decline in premarital sexual activity has been observed in urban Lusaka. In 1990, 50 percent of never-married women reported no sexual experience, compared with 60 percent in 1998 ($p = .003$); among men, the figures were 38 and 53, respectively ($p < .001$). Fewer married women (1990: 8 percent; 1998: 2 percent; $p < .001$) and men (1990: 31 percent; 1998: 19 percent; $p = .07$) reported extramarital partners. Change in urban Lusaka was observed primarily from 1990 to 1996; the changes in men's behavior observed between 1996 and 1998 were also observed in the national estimates for those years. National figures for other indicators from 1992 to 1998 were less encouraging. Apart from an increase in having ever used condoms, no change in women's sexual behavior was observed. Fewer men had premarital sex from 1996 to 1998 (1996: 64

percent; 1998: 46 percent; $p < .001$), but condom use with nonregular partners *decreased* among men (1996: 38 percent; 1998: 29 percent; $p = .02$). [26]

- A comparison of findings from two cross-sectional surveys implemented in Lusaka between 1996 and 1999 found statistically significant reductions in casual partnerships among men and women. Respondents with higher socioeconomic status were more likely to reduce casual sex. Condom use increased but the change was not statistically significant.[27]

- The 2000 Zambian Sexual Behavior Survey found that (NB: these data are not specific to Lusaka):

  → The percentage of all unmarried women and men ages 15-19 who had ever had sex declined between 1998 and 2000.
  → In 2000, among all unmarried adolescent women, 41 percent reported condom use with a nonregular partner, whereas this figure was 33 percent for all women.
  → In 2000, unmarried urban women ages 15-24 were less likely their rural counterparts to have had sex in the last year and were more likely to have used a condom when they did have sex. They were also less likely than rural women to have had multiple partners in the last year.[28]

(The 2000 ZSBS was undertaken by the Zambian Central Statistical Office and Zambian Ministry of Health, with support from USAID and the MEASURE Evaluation Project at the University of North Carolina Chapel Hill. It was the second sexual behavior survey undertaken in Zambia, following that of 1998. [Findings from Zambia's 2001 Demographic and Health Survey have not yet been released; it was previously conducted in 1992 and 1996.] For the 2000 ZSBS, a representative national sample of 1,851 households, 2,034 women, and 1,798 men was achieved in the same clusters from which the sample for the 1998 survey was selected. The 2000 ZSBS findings were published in April 2002.)

HIV prevalence may be declining among 15-19 in some urban areas outside Lusaka (and in one rural area), though these trends have yet to be validated

CBOH also notes that this trend may also be occurring in Ndola, Livingstone, Solwezi, and Kabwe, although this requires further verification, using the findings of the 2001 NSS, among others.

A similar dynamic of declining prevalence among 15- to 19-year-olds was found in only one rural site, Macha, where prevalence declined from 10 percent in 1993 to 6.2 percent in 1994 to 5.2 percent in 1998 (overall HIV prevalence was 10.0, 9.1, and 8.0, respectively).

Any prevalence declines among 15-19 have not yet resulted in a decline in the country's overall HIV prevalence

As the CBOH stressed in 1999, the declines mentioned above have not yet resulted in a decline in the country's overall HIV prevalence. However, declines in the 15-19 age cohort are the most

encouraging because prevalence in this age group is mostly like to reflect recent trends in HIV transmission. The CBOH does believe that national prevalence is stabilizing, albeit at a very high level. [29]

HIV incidence appears to be decreasing

HIV prevalence and trend analysis is impeded by the lack of age-specific data prior to 1993. Prevalence changes within the age group 15-19 might be a better indicator of HIV incidence. CBOH posits that the decline in HIV prevalence in the 15-19 age cohort, seen primarily in Lusaka, is most likely attributable to reduced HIV incidence, which it believes has been declining since the early 1990s as a result of favorable behavior change.[30]

Further verification is needed, including examination of the 2001 NSS and 2001 ZDHS findings. Moreover, persistent poverty, economic uncertainty, food crises, and inadequate funding for HIV/AIDS projects are also shaping the epidemic's dynamic, rendering it difficult to pinpoint trends and make projections. (All discussed in detail in the Political Economy and Sociobehavioral Context section.)

The urban-rural differential remains wide

In 1994 and in 1998, the urban-rural HIV prevalence ratio was 2- 2.5/1.[31] In 1994, overall HIV prevalence in areas of Lusaka and provincial capitals ranged from 22 to 35 percent. Prevalence among predominantly rural areas averaged 13 percent, though prevalence ranged widely, from 5 to 23 percent. Among those 15- to 19-years old, 11 to 28 percent in urban areas and 4 to 11 percent in rural areas were infected with HIV.[32]

As discussed above, in some urban settings, preliminary indications are that HIV prevalence is stabilizing, albeit at high levels. In some rural areas, HIV prevalence is still rising. [33]

In several rural areas, overall HIV prevalence and HIV prevalence among the youngest age cohort appear to be increasing

In two of 10 rural areas surveyed (Kalabo and possibly Kabompo), the 1998 NSS found increasing overall HIV prevalence and increasing HIV prevalence among the youngest age cohort. In Kalabo, overall HIV prevalence increased from 4.9 percent in 1993 to 10.2 percent in 1994 to 12.8 in 1998; among 15- to 19-year-olds, these percentages were 3.7, 7.1, 8.0, respectively. In Kabompo, the small sample size renders data interpretations difficult. In 1994, n=318, the third-lowest sample size among all HIV sentinel sites nationwide; in 1998, n=259, the lowest sample size among all sites. Overall prevalence in Kabompo was 5.0 percent in 1994 and 9.3 percent in 1998. The 1994 survey found a prevalence of 0.0 among 15- to 19-year-olds (n=63); this figure was 4.1 percent in 1998 (n=74). [34]

Other

In Kapiri-Mposhi (on the highway to Dar es Salaam and a stop on the Tanzania-Zambia Railway Authority), there was marked decline in health outreach services from 1994 to 1998, resulting in a significant decline in rural women attending ANCs. The increase in overall HIV prevalence — 13.0 to 16.5 percent — and among 15- to 19-year-olds — 14.0 to 16.3 — during this period may

be related to this selection bias. Data from a follow-up population-based survey in Kapiri Mposhi found a stabilization in HIV prevalence from 1995 to 1998. [35]

The government also underscores that in 1998, changes in provision of ANC meant that data collection in some sites was conducted in district health units (versus main hospitals in 1994) and that this may have affected the population covered (e.g., women attending district health units may be more likely to have lower HIV prevalence than those attending main hospitals). For example, it believes that the large decrease in HIV prevalence found in Kasama is likely the result of this dynamic and is viewing results from this site with caution. (In Kasama, overall HIV prevalence fell from 23.8 percent in 1994 to 14.7 percent in 1998; among 15- to 19-year-olds, these figures were 12.2 and 4.0, respectively.)

2001-02 Zambia Demographic and Health Survey

Preliminary findings from Zambia's 2001-02 DHS were released in October 2002. This latest DHS round included voluntary HIV and syphilis testing. The findings are not comparable to the NSS and thus cannot be used for trend analysis. Moreover, they reflect prevalence among those who were willing to be tested for HIV. The 2001-02 DHS found that 16 percent of those ages 15 to 49 who agreed to an HIV test were HIV-positive. Prevalence among women (17.8 percent) was higher than among men (12.9 percent). Lusaka, Copperbelt, and Southern provinces had the highest HIV prevalences. Among women, HIV prevalence peaked in the 30-34 age group (29.4 percent), followed by ages 25-29 (25.1 percent), 35-39 (22.6 percent), 40-44 (17.3 percent), 20-24 (16.3 percent), 45-49 (13.6 percent), and 15-19 (6.6 percent). The urban-rural prevalences among women were 26.3 and 12.4 percent, respectively. [36]

Among men, HIV prevalence peaked in the 35-39 age group (22.4 percent), followed by ages 30-34 and 40-44 (both 20.5 percent), 45-49 (20.2), 25-29 (15.0 percent), 20-24 (4.4 percent), and 15-19 (1.9 percent). The urban-rural prevalences among men were 19.2 and 8.9 percent, respectively. [37]

The 2001-02 DHS reports that almost all individuals who agreed to an HIV test also agreed to be tested for syphilis. Preliminary results indicate that among those ages 15 to 49 who agreed to a syphilis test, 6.4 percent of women and 7.6 percent of men tested positive on RPR and TPHA/Determine. Among both men and women, prevalence was highest among those ages 25-29 (women: 9.3 percent; men: 10.4 percent) and in Copperbelt, Lusaka, and Eastern provinces.[38]

Once it is released, the final 2001-02 DHS will be integrated into this paper. Detailed background on methodology and sample characteristics will also be included.

UNAIDS Estimates

At the end of 2001, UNAIDS estimated that 1.2 million Zambians were living with HIV/AIDS (estimate range: 930,000 to 1.4 million). Of them, 1 million were adults (ages 15 to 49), with adult prevalence at 21.50 percent.[39] (At the end of 1999, UNAIDS estimated adult prevalence at 19.95 percent.[40]) Zambia's adult HIV prevalence is the sixth-highest in the world, following that

of Botswana (38.8 percent), Zimbabwe (33.7), Swaziland (33.4 percent), Lesotho (31.0 percent), and Namibia (22.5 percent).[41]

UNAIDS estimates that of adults infected with HIV, 590,000 (59 percent) are women. HIV prevalence among women ages 15 to 24 ranges from 16.78 to 25.18 percent; the comparable range for men in the same age cohort is 6.45 to 9.68 percent. [42]

According to UNAIDS, there were 150,000 Zambian children (ages 0 to 14) living with HIV/AIDS at the end of 2001. [43]

AIDS Cases

Zambia's first AIDS case was identified in 1984.[44] AIDS has been a notifiable disease since 1984. Returns for all cases of AIDS diagnosed in health facilities are supposed to be sent to the Ministry of Health. However, due to diagnostic, logistic, and personnel constraints, only a small proportion of AIDS patients are reported.[45]

The Ministry of Health estimates that 100,000 Zambians develop AIDS each year.[46] According to Zambia's National HIV/AIDS/STD/TB Council, AIDS cases among women peak between ages 20 and 29 and among men, between ages 30 and 39, suggesting significant transmission from older males to younger females.[47] (See Age Mixing section.)

Sexually Transmitted Infections (STIs)

Zambia's National STD Control Program was launched in 1980. The main source of epidemiological information from 1980 to 1996 was:

1. a passive reporting system for syphilis, gonorrhea, and pelvic inflammatory disease from outpatient clinics to the Ministry of Health
2. 64 specialized centers through the country
3. 24 sentinel sites that perform syphilis screening of ANC attendees
4. selected studies

Since 1996, national STI data have not been readily available. [48]

Transmission Patterns

The epidemic is driven largely by heterosexual transmission.[49] However, MTCT is significant, accounting for about 30,000 new infections each year. [50] Data on transmission via men who have sex with men are unavailable.

In 1987, an emergency plan on safe blood supply was launched. All district, provincial, and central referral hospitals have blood transfusion facilities. All blood products used in these health

institutions are screened for HIV and syphilis and, to a lesser extent, hepatitis B.[51] Safe blood product needs are met in Lusaka, but it is unclear whether this is occurring nationwide.[52] A residual risk of transfusion-associated HIV transmission may persist due to incomplete screening is some areas, donations made during the window period, laboratory false negatives, and human error.

AIDS Mortality

UNAIDS estimated that were 120,000 adult and child AIDS deaths in Zambia during 2001.[53] (The comparable figure for 1999 was 99,000.[54]) It estimates that at least 700,000 Zambian adults and children died because of AIDS since the epidemic's beginning through the end of 2001.[55]

According to the U.N. Population Division, by 2000, 749,000 Zambians had died because of AIDS, with AIDS having increased the number of deaths in the country by 32 percent. The U.N. Population Division projects that by 2015, AIDS will have increased the number of deaths by 83 percent, bringing the cumulative total of AIDS deaths to 2.8 million. By 2050, 6.2 million Zambians will have died because of the epidemic (tables 2 and 3).[56]

Table 2. Projected Number of Deaths with and without AIDS, 1980-2000, 2000-2015, and 2015-2050 (Thousands)

Period					
1980-2000		**2000-2015**		**2015-2050**	
With AIDS	Without AIDS	With AIDS	Without AIDS	With AIDS	Without AIDS
3,110	2,361	4,463	2,445	9,677	6,284

Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat. *World Population Prospects: The 2002 Revision. Highlights.* New York: February 2003 <http://www.un.org/esa/population/publications/wpp2002/wpp2002annextables.PDF>

Table 3. Excess Deaths Because of AIDS, 1980-2000, 2000-2015, and 2015-2050

Period					
1980-2000		**2000-2015**		**2015-2050**	
Excess Deaths (Thousands)	Percentage Increase	Excess Deaths (Thousands)	Percentage Increase	Excess Deaths (Thousands)	Percentage Increase
749	32	2,018	83	3,393	54

Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat. *World Population Prospects: The 2002 Revision. Highlights.* New York: February 2003 <http://www.un.org/esa/population/publications/wpp2002/wpp2002annextables.PDF>

The 2000 ZSBS found that causes of death most commonly reported for all persons in households were tuberculosis (17 percent), malaria (15 percent), other infectious diseases (16 percent), and diarrhea (13 percent). Among adults, tuberculosis was the main cause (32 percent), followed by malaria (14 percent) and other infectious diseases (25 percent). Although over half

of deaths were reported as having been associated with prolonged illness, AIDS was rarely mentioned as a cause of death, Given high levels of stigma, it is reasonable to assume that some percent of AIDS-related deaths were reported under other causes such as TB.[57]

Research undertaken by UNAIDS and WHO found that for Zambia, the HIV-attributable under-5 mortality rate (per 1,000 and corrected for competing causes of mortality) was 33.6 during the 1990s. (Rates among the 39 countries studies ranged from Madagascar [0.2] to Botswana [57.7].) The HIV-related population proportional attributable risk of dying before age 5 (i.e., the proportion of all-cause under-5 mortality attributable to HIV) was 20.7 percent; the average for the 39 sub-Saharan African countries studies was 7.7 percent, ranging from 0.1 percent in Madagascar to 42.4 percent in Botswana. [58]

(More information on AIDS mortality is found in the Demographic Impact section.)

Data Quality Issues

As mentioned, the same 22 antenatal clinics were involved in Zambia's NSS in 1994, 1998, and 2001, whereas the 1993 NSS involved just 10 sites. There was a major gap in NSS data between 1994 and 1998.

As Zambia enters its second decade with HIV/AIDS, dynamics continue to change. For example, the population attending ANCs will vary during the different stages of the epidemic. [59] Poverty, the current food crisis, and other factors may also affect ANC attendance.

ANC data currently serve as Zambia's primary sentinel surveillance of HIV/AIDS. Though ANC data are widely used, they are imperfect (see box 1). Comparative studies have shown that the HIV prevalence among pregnant women in sub-Saharan Africa underestimates prevalence in women of reproductive age because fertility among HIV-positive women is substantially lower than among uninfected women. [60] For example, Gregson et al. have found 25 to 40 percent lower fertility in women with HIV in high-prevalence African countries; they attribute about half of this "subfertility" directly to HIV infection.[61] Researchers from Uganda and Europe adjusted HIV prevalence among ANC attendees in Chelston (Lusaka) (1994, 1996, 1998), and Ndola (1998). They found that the nonadjusted HIV prevalence among ANC attendees underestimated HIV prevalence among the general female population by 8.0 percent in Chelston in 1998 and by about 22 percent in all other cases.[62]

In 1995-96, researchers from Zambia's University Teaching Hospital, Tropical Diseases Research Center, and National AIDS Program undertook a population-based survey (PBS) to assess the representativeness of ANC data. The PBS was carried out in Chelston (Lusaka) and Kapiri-Mposhi (rural area). Adults over age 15 were selected through stratified random cluster sampling (n=4,195). Saliva-based HIV tests were used. The researchers found that in both sites, ANC data tended to overestimate HIV seroprevalence among women ages 15 to 19, with a reverse relationship in those ages 30 to 39.[63]

Box 1. HIV Sentinel Surveillance: Evaluating Data from Antenatal Clinics

In many developing countries, estimates on the magnitude of and trends in the HIV epidemic are obtained through HIV seroprevalence surveys. These surveys are primarily conducted using sentinel populations. The most frequently used sentinel populations are women attending antenatal clinics and persons attending clinics for diagnosis and treatment of sexually transmitted infections. The objectives of sentinel seroprevalence surveys include:

1. obtaining information on the prevalence of HIV infection in the sentinel population
2. monitoring trends in HIV prevalence in the sentinel population
3. providing information for estimating future number of AIDS cases
4. providing information for program planning and evaluation of interventions

Seroprevalence surveys are usually conducted annually at preselected clinics or hospitals. Surveys of women attending antenatal clinics can provide a reasonable estimate of HIV prevalence within the general population. The surveys are conducted among women ages 15 to 49 years attending the antenatal clinic for the first time during a current pregnancy. Surveys are usually conducted in an unlinked manner, in which serum remaining from routine syphilis screening is tested for HIV infection after all personal identifying information is removed from the specimen. Sampling is usually conducted during an 8- to 12-week period, and all eligible women are sampled consecutively until the desired sample size is achieved. In general, samples of 250 and 400 women are usually sufficiently large as to provide reasonable estimates of HIV prevalence over time.

Although these surveys are extremely useful, there are several limitations to consider when interpreting the survey results. The surveys are not based upon a probability sample and therefore may not be representative of the population as a whole. True population-based surveys have found antenatal clinic data may overestimate or underestimate HIV prevalence.

Moreover, the ANC studies do not provide information on mortality or HIV-associated morbidity. In addition, although monitoring trends in HIV prevalence provide information on the magnitude of the HIV epidemic, trends in prevalence cannot be relied upon to indicate trends in HIV incidence. However, examining trends in HIV prevalence in younger populations, particularly 15- to 19-year-olds, may provide some indication of trends in recently acquired HIV infection , as this group is unlikely to have been infected for a long period of time.

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Political Economy and Sociobehavioral Context

At a Glance

The At a Glance section summarizes the more detailed data found below it.

- Many of the factors discussed in this section exist in countries that, unlike Zambia, have low HIV prevalence; these include poverty, gender inequality, and history of colonialism and political and economic disenfranchisement. The relationship between HIV prevalence and socioeconomic factors is highly complex. Increasingly, risk of HIV infection is recognized as related to, inter alia, one's socioeconomic status as well as the socioeconomic profile of the community in which one is situated. Additionally, the country's current food crisis affects and is affected by HIV/AIDS.

Economy

- Zambia achieved independence in October 1964. It had considerable financial resources at its disposal, given its mineral wealth. However, it also faced major challenges. The legacy of colonialism resulted in few trained and educated Zambians available to run the government, with the economy largely dependent on foreign expertise.
- Zambia embarked on a major program of developing its social, physical, and economic infrastructure. Education was made compulsory, and health services were provided free of charge.
- Until two decades ago, Zambia was one of the most prosperous nations in sub-Saharan Africa. It is now one of the world's poorest countries. In 1994, per capita income was estimated at one-third its value in 1978. Zambia's 2000 per capita income of US$300 is *half* of what it was at the time of independence in 1964.
- A World Bank- and IMF-guided structural adjustment program did not generate economic growth, nor did it adequately address impacts on the poor and the need for social safety nets.
- Other factors contributing to the deteriorating economic situation of the 1990s included the falling price for copper, extremely high debt level, drought, and persistently high population growth rate.
- According to Zambia's Ministry of Finance and Economic Planning, HIV/AIDS also adversely affected economic growth and exacerbated poverty during the 1990s.

Trends in Public Expenditures

- During the 1990s, Zambia's military expenditures fell dramatically, from 3.7 percent of GDP to 0.6 percent in 2000.
- Zambia's public expenditure on health increased from 2.6 percent of GDP in 1990 to 3.6 percent in 1998.
- Public expenditure on education fell from 3.1 percent of GDP during 1985-87 to 2.2 percent during 1995-97. However, the percent of the government education budget allocated to *tertiary* education rose during this period, whereas allocations to primary and secondary education fell. Zambia's net primary enrollment ratio declined from the mid-1980s to the end of the 1990s; secondary school enrollment ratios have also been falling. In addition to reduced government expenditures, these declines are likely due to AIDS mortality and poverty.

Debt

- In 1986, Zambia's total debt servicing accounted for 28.5 percent of its gross national income, rendering it one of the world's most indebted nations.
- In December 2000, Zambia qualified for debt relief under the Heavily Indebted Poor Countries Initiative (HIPC). HIPC is not debt cancellation; rather it is a restructuring of debt repayment through provision of grants. Zambia was granted US$3.8 billion as total debt relief from all its creditors.
- To date, HIPC has disbursed US$135 million to Zambia, of which US$18 million has been channeled into health and education.
- Many international NGOs and social justice groups express concern that HIPC has reshuffled Zambia's enormous debt rather than cancel it. After receiving debt relief, Zambia will need to

continue borrowing to maintain debt servicing obligations and to purchase key imports. They also express concerns that the assumptions underlying HIPC are unrealistic.

Governance

- Despite the government's stated commitment to fighting corruption, Zambians do not believe that corruption has diminished. Hospitals and clinics as well as the Lusaka City Council, among others, are perceived to have a high level of corruption.
- There were numerous allegations of fraud during the 2001 elections. Currently, a case regarding the legitimacy of President Mwanawasa's election victory is before the Zambian Supreme Court.
- In February 2003, former president Frederick Chiluba was arrested and charged with over 50 counts of theft and abuse of public office.

Declining Human Development

- Zambia's Human Development Index value, which declined during the 1990s, is 0.433, placing Zambia among "low human development" countries.
- This decline reflects the fall in national income per capita and decreased spending on education. The government's spending on health rose during the 1990s, but clearly the enormous impact of AIDS mortality drastically reduced the life expectancy component of the HDI value.
- A critical indicator of the well-being of children is the under-five mortality rate. For 2000, UNICEF reports that Zambia had the world's 10th-highest under-five mortality rate: 202 deaths per 1,000 live births. Moreover, Zambia's under-five mortality rate for 2000 (202) exceeded that of all the least-developed countries (161) and of sub-Saharan Africa (175).

Population Mobility

- Zambia has a long history of men migrating to work in large agricultural estates as well as to the mines in Copperbelt Province.
- More generally, Zambian men and women have a fairly high level of mobility. Poverty may lead to increased migration, both within Zambia and to other countries, as people move from rural to urban areas in search of work — or return to families if they lose their jobs or fall ill and cannot afford care.
- The food crisis is increasing migration to towns in Central and Eastern provinces.
- Key mobile groups in Zambia include:

→ truck drivers
→ sex workers
→ fishermen/women and fish traders
→ migrant and seasonal workers
→ cross-border traders, especially young girls
→ miners
→ military personnel
→ prisoners (in the sense that they often return to their families/communities upon release)
→ refugees

Food Crisis

- On May 28, 2002, the Government of Zambia declared a national disaster due to actual and anticipated food shortages. About 2.9 million Zambians (29 percent of the population) require food aid.
- The most vulnerable groups are located in Southern and Western provinces and include the elderly and households headed by children and women; those with persons who are disabled or ill; and those with widows not supported by other households.
- Reports from aid agencies who have recently conducted missions in Zambia concur that although erratic weather has contributed to the current food crisis, one of the key underlying factors is the depletion of human resources as a result of HIV/AIDS. Unsustainable debt and deteriorating public services have also played a role.
- Oxfam highlights that after years of World Bank- and IMF-supported agricultural sector reforms, Zambia still faces chronic food insecurity. It argues that these reforms were imposed too rigidly and too quickly, often leaving poor farmers without support from or access to either state or market institutions.

Health Sector

- The general health status of Zambia's population worsened substantially during the 1990s.
- The country bears an enormous burden of malaria. Other major health problems include TB, leishmaniasis, Guinea Worm disease, measles, malnutrition, respiratory diseases, polio, and diarrheal disease.
- Almost all health facilities lack adequate personnel, drugs, and/or equipment. Physical infrastructure and equipment are deteriorating.
- Erratic distribution methods lead to frequent shortages of essential drugs and medical supplies in hospitals and health centers.
- Conditions (low pay, inadequate equipment, poor supplies) in Zambia's public hospitals have deteriorated and have led to long-running strikes by health care providers.
- There is overlap between the Ministry of Health and the Central Board of Health, leading to duplication and other inefficiencies.

Health Sector Reform

- As part of structural adjustment, the government and its donor partners began a process of health sector reform in 1994. Serious concerns have been raised about underlying elements of the reform process, particularly the application of user fees.
- Zambia's National HIV/AIDS/STD/TB Council raises concerns about how decentralization has rapidly shifted the burden of HIV/AIDS to all districts across the country in a "one size fits all" approach.
- Poverty, debt burden, falling copper prices, and the enormous impact of HIV/AIDS have also affected the health sector.

Sexual and Reproductive Health

- UNFPA ranks Zambia a category "A" country, meaning that it is furthest from achieving the sexual and reproductive health goals of the International Conference on Population and Development (ICPD), held in Cairo in 1994.

- Zambia's maternal mortality ratio is 870 deaths per 100,000 live births.
- Young women bear a high burden of fertility.

STIs

- Herpes simplex virus-2 is highly prevalent in young women shortly after they begin sexual activity.
- Between 1998 and 2000, the proportion of Zambians who used a condom during sexual acts when they knew they were infected with an STI *declined* substantially, from 36 to 23 percent for women and 46 to 24 percent for men.

Gender

- HIV prevalence among Zambian women ages 15 to 24 ranges from 16.78 to 25.18 percent, whereas the comparable range for men in the same age cohort is 6.45 to 9.68 percent.
- Despite constitutional and legislative provisions, women still experience disadvantages in enforcement of laws regarding property ownership, inheritance, and marriage.
- A key component of women's poverty is their inability to obtain loans from banking institutions, which renders them less able to enter into safe, profitable economic activities.
- Widows may be particularly vulnerable to HIV because of sexual cleansing (*kusalazya*) and wife inheritance (*kunjilila mung'anda*).
- "Grabbing", wherein close relatives take possession of the deceased's household goods, land, livestock, clothes, and other assets, exacerbates the already precarious economic (and social) situation of widows and their children. Despite legislation to address this issue, widows continue to suffer extreme harassment from and impoverishment at the hand of their husbands' relatives.

Burden of AIDS

- AIDS morbidity and mortality are leading to many girls' (versus boys') being taken out of school to care for family members who are ill and to assist with household tasks and/or generate income as breadwinner die.
- Girls' lack of education is associated with lower formal sector employment opportunities and thus lessened economic autonomy, which may render them more vulnerable to acquiring HIV.
- AIDS is also leading to increasing numbers of female orphans and household heads, who are vulnerable to exploitation, including sexual abuse.
- Studies have found that men are more likely to share their HIV status with their wives (in the expectation of a supportive response), whereas women are much less likely to disclose their HIV-positive status to husbands for fear that this might precipitate divorce or violence.

Sexual Negotiation

- Women in Zambia have little power in sexual negotiation with their husbands.

- Polygamy, more common in rural than urban areas, also influences sexual negotiation. In 1996, 17 percent of married women in Zambia were in polygamous unions.

Perception of Women

- In many rural areas, HIV/AIDS continues to be viewed as disease of women and, more specifically, of sex workers.
- Women's own self-perception and definition of what constitutes acceptable female behavior are also factors.

Sexual Violence

- Sexual assault of girls in Zambia is widespread, including abuse of female orphans by male guardians. There are numerous institutional and sociocultural barriers to reporting and prosecuting such abuse.

Knowledge of HIV/AIDS

- Despite Zambians' high knowledge of HIV/AIDS, major gaps in fuller understanding of HIV transmission persist. These are particularly of concern with regard to gender and urban-rural differentials. Misconceptions about HIV/AIDS also persist and perpetuate stigma.

Stigma

- HIV/AIDS-related stigma in Zambia is a massive problem. The most extreme forms of stigma have been found in homes and in health clinics, where the most intensive AIDS care is provided.
- Adolescents exhibit even less acceptance of people with HIV/AIDS than do adults.

Sexual Behavior

- Condom use within marriage or other consensual unions is very low and has not risen since 1998.
- Condom use in nonregular relationships is much higher than for other relationships, but still low.
- Urban-rural disparities in condom use are often wide and may be related to limited awareness and availability of condoms in rural areas, as well as lower knowledge and higher degree of misperceptions in rural areas.
- Girls' vulnerability to acquiring HIV infection heightens in relationships with older partners because of a lack of power to negotiate safe sex and the threat of violence. Zambian men are a median of 4.8 years older than women in all nonmarital/noncohabiting sexual partnerships. The median age difference between married men and their extramarital partners is 5.6 years.

Transactional Sex

- Among unmarried Zambian women ages 15 to19, 38 percent report having recently received money or gifts in exchange for sex.

Male Circumcision

- Male circumcision is generally low (except in Northwestern Province). Some observational studies from sub-Saharan Africa have indicated that male circumcision may reduce the risk of HIV acquisition, though circumcision does not appear to affect transmission from HIV-positive men to their partners.

Alcohol Use

- Alcohol use at last sex is reported by about one-fifth of men and of women. Among young people, ever having used alcohol and drugs is a risk factor for ever having had sex, having more sexual partners over lifetime, and having more than one partner during the last three months.

Many of the factors discussed in this section exist in countries that, unlike Zambia, have low HIV prevalence; these include poverty, gender inequality, and history of colonialism and political and economic disenfranchisement. The relationship between HIV prevalence and socioeconomic factors is highly complex. Increasingly, risk of HIV infection is recognized as related to, inter alia, one's socioeconomic status as well as the socioeconomic profile of the community in which one is situated.[64], [65] Additionally, the country's current food crisis affects and is affected by HIV/AIDS.

This section does not seek to demonstrate causality; rather, it aims to analyze key political economy and sociobehavioral contextual elements to highlight the range of sectoral policies and interventions that may affect or be affected by HIV/AIDS.

Postcolonial Context

Zambia achieved independence in October 1964. The major figure in Zambian politics from 1964 to 1991 was Kenneth Kaunda, who had led the fight for independence and traditionally bridged the rivalries among the country's various regions and ethnic groups. A new constitution introduced in August 1973 provided for a strong president and a unicameral National Assembly. In 1973, Kaunda, head of the United National Independence Party (UNIP), was the sole candidate in presidential elections. Upon his election, all other political parties were banned. President Kaunda's mandate was renewed in December 1978 and October 1983 in a "yes" or "no" vote on his candidacy.[66]

After attaining independence, Zambia had considerable financial resources at its disposal, given its mineral wealth. However, it also faced major challenges. The legacy of colonialism resulted in few trained and educated Zambians available to run the government, with the economy largely dependent on foreign expertise. Three of Zambia's neighbors — Southern Rhodesia (now Zimbabwe) and the Portuguese colonies of Mozambique and Angola — remained under white-minority rule. In addition, Zambia shared a border with South African-controlled South-West Africa (now Namibia). Zambia's sympathies lay with forces opposing colonial or white-minority

rule, particularly in Southern Rhodesia. During the next decade, Zambia actively supported movements such as the Union for the Total Liberation of Angola (UNITA), the Zimbabwe African People's Union (ZAPU), the African National Congress of South Africa (ANC), and the South-West Africa People's Organization (SWAPO). Civil war in postindependence Angola and Mozambique spurred a flow of refugees into Zambia and caused transport problems. Zambia's strong support for the ANC, which had its external headquarters in Lusaka, created security problems as South Africa raided ANC targets in Zambia. [67]

Despite this subregional instability, Zambia embarked on a major program of developing its social, physical, and economic infrastructure. Education was made compulsory, and health services were provided free of charge.[68]

In December 1990, at the end of a tumultuous year that included riots in Lusaka and a coup attempt, President Kaunda signed legislation ending UNIP's monopoly on power. In response to growing popular demand for multiparty democracy, and after lengthy, difficult negotiations between the Kaunda government and opposition groups, Zambia enacted a new constitution in August 1991. Growing opposition to UNIP's monopoly on power led to the rise in 1990 of the Movement for Multiparty Democracy (MMD). The MMD included prominent UNIP defectors and labor leaders. Zambia's first multiparty elections for parliament and the presidency since the 1960s were held in October 1991. MMD candidate Frederick Chiluba carried 81 percent of the vote to win over Kaunda. The MMD won 125 of the 150 parliamentary seats. The newly liberalized political environment heralded comprehensive economic reforms. [69]

By the end of Chiluba's first term as president (1996), the MMD's commitment to political reform had faded in the face of reelection demands. Several prominent MMD supporters founded opposing parties. Relying on the MMD's overwhelming majority in Parliament, President Chiluba pushed through constitutional amendments in May 1996 that barred former President Kaunda and other prominent opposition leaders from the 1996 presidential elections (for example, a retroactive two-term limit and a requirement that both parents of a candidate be Zambian-born). In the presidential and parliamentary elections held in November 1996, Chiluba was reelected, and the MMD won 131 of the 150 seats in the National Assembly. Kaunda's UNIP party boycotted the parliamentary polls to protest the exclusion of its leader from the presidential race, alleging in addition that the outcome of the election had been predetermined due to faulty voter registration. Other opposition parties as well as NGOs also declared the elections neither free nor fair. As President Chiluba began his second term in 1997, the opposition continued to reject the results of the election amid international efforts to encourage the MMD and the opposition to resolve their differences through dialogue. [70]

Early in 2001, supporters of President Chiluba mounted a campaign to amend the constitution to enable Chiluba to seek a third term. Civil society, opposition parties, and many members of the ruling party exerted sufficient pressure on Chiluba to abandon this attempt. [71]

Zambia held its next presidential, parliamentary, and local government elections in December 2001, with both international and local monitoring. Levy Mwanawasa of the MMD won the presidential election by a narrow margin. The opposition, which charged the MMD with voting irregularities, now holds just over 50 percent of seats in Parliament.[72] Transparency International reports that EU observers substantiated allegations of electoral fraud. Currently, a case regarding the legitimacy of President Mwanawasa's election victory is before the Supreme Court.[73]

In February 2003, former president Chiluba was arrested and charged with over 50 counts of theft and abuse of public office.[74]

Economy

Landlocked Zambia's economy is heavily dependent on copper, cobalt, and zinc mining. Copper is the country's primary export commodity; copper and other metal exports account for about 75 percent of the country's foreign exchange earnings.[75]

Most Zambians are subsistence farmers. [76] In 2000, agriculture accounted for 85 percent of total employment (formal and informal). Maize (corn) is the main cash crop as well as staple food.[77] Other important agricultural products include sorghum, rice, groundnuts, sunflower seeds, vegetables, horticultural products, tobacco, cotton, sugarcane, livestock, coffee, and soybeans.[78]

As mentioned, immediately following independence, there were improvements in Zambia's economy (and human development, see below). However, in the mid-1970s, the price of copper severely declined, reducing Zambia's export earnings; concurrently, oil prices rose drastically, increasing the country's import bill. This resulted in a severe balance-of-payment crisis and economic growth began to stagnate.[79] From the late 1980s to the late 1990s, economic growth declined. In 1994, per capita income was estimated at one-third its value in 1978.[80] Per capita income fell almost 5 percent annually between 1974 and 1990.[81] During the 1990s, per capita income fell from US$450 to US$300. (During the 1990s, per capita income for sub-Saharan Africa (from US$550 to US$470) and low-income economics (from US$430 to US$410) also declined.)

Zambia's 2000 per capita income of US$300 is *half* of what it was at the time of independence in 1964.[82] It is also is well below the average for all low-income economies (US$410) as well as for the sub-Saharan Africa region (US$470). [83]

These declines can be explained by numerous factors, including the falling price for copper, extremely high debt level, drought, persistently high population growth rate, and macroeconomic policies. Although its past effect on income per capita has not been quantified — and certainly encompasses a complex interplay with the factors just mentioned — HIV/AIDS was likely a major factor in income decline during the 1990s (for analyses that have been undertaken on the impact of HIV/AIDS on the Zambian economy, see the Impact section). Moreover, the enormous impact of HIV/AIDS can be inferred from the fact that Zambia's income continues to trial even the rest of the world's poorest countries.

In 1992, President Chiluba's government initiated an IMF-guided structural adjustment program (SAP), which included privatization of most parastatals, whose losses represented an enormous drain on public revenues and thus a diversion of public resources for investment in public and propoor expenditures [84] To date, about 300 state-owned enterprises have been commercialized or privatized, including the Zambia Consolidated Copper Mines (ZCCM), which was a condition that had to be met before donors would resume their balance-of-payment support. [85]

The public sector still represents 44 percent of total formal employment, and telecommunications and electricity parastatals still await privatization.[86] Recently, the government has stated that it does not intend to privatize the power utility ZESCO, the telephone company ZAMTEL, and the Zambia National Commercial Bank.[87] (Privatization of this last is a condition of debt relief, see Debt section below.)

Following ZCCM's privatization in 2000, the Zambian economy began to show some signs of recovery. In 2001, Zambia recorded its first year of increased productivity since 1973.[88] In December 2001, the World Bank believed — though cautiously — that Zambia's economic outlook had improved with the sale of ZCCM, fiscal reforms, improved copper prices and production, HIPC interim debt relief (see below), and favorable weather conditions. It did caution that a possible slowdown in world demand for and the price of copper could threaten growth and income. [89] Indeed in early 2002, the mining conglomerate Anglo American, citing low copper prices, announced that it was withdrawing from Zambia's Konkola copper mines, a decision expected to shrink the economy as job losses increase and export earnings fall.[90] In Zambia, as in many African countries, the loss of a job can have devastating secondary effects, as numerous family and household members may be supported by the salary of one formal sector employee. (About 105,000 formal sector jobs have been lost through privatization over the last 10 years.[91])

Moreover, favorable weather did not ensue, as the 2000-2001crop failure resulted in a massive maize shortage. The Zambia National Farmers Union anticipates more grain shortages in 2002 following erratic rains in the 2001-02 growing season.[92] Officials from the World Food Program, among others, have been stressing that HIV/AIDS has exacerbated (and been exacerbated by) the food crisis, rendering it more acute and complex than past crises (discussed in detail below). From a purely macroeconomic standpoint, the food shortage diverts the government's scarce resources to maize importation, rather than investment in job creation and social services — investments that are intertwined with HIV/AIDS prevention and treatment.

Structural Adjustment

In its 2002 Poverty Reduction Strategy Paper (which some claim is simply a new name for SAPs), Zambia's Ministry of Finance and National Planning states that SAP implementation was:

...often piecemeal and failed to fundamentally alter the economic structure. In particular, the design and implementation of SAP often failed to sufficiently address the poverty challenges that increasingly became evident as the structural changes took hold.[93]

In an analysis of structural adjustment loans between 1980 and 1999, Dr. William Easterly of the Center for Global Development states that:

This intensive adjustment lending group includes some notable disasters. Zambia received 18 adjustment loans but had sharply negative growth, large current account and budget deficits, high inflation, a high black market premium, massive real overvaluation, and a negative real interest rate....These results do not prove that adjustment lending was ineffective in promoting good macroeconomic policies and good growth outcomes. It may be that performance would have been even worse without intensive adjustment lending. However, these results place bounds on our intuition on the counterfactual outcomes. It is necessary to believe that a worst case scenario

like Zambia would have had even more negative growth, even higher inflation, even more extreme overvaluation and black market premiums, and even more financial repression without repeated adjustment lending than it did with repeated adjustment lending....The adverse selection of repeated failures is a plausible description of what happened in many countries, but this raises questions about why the Fund and Bank make new loans to countries that have failed to deliver reform in response to old loans.

Putting external conditions on governments' behavior through structural adjustment loans has not proven to be very effective in achieving widespread policy improvements or in raising growth potential. If the original objective was "adjustment with growth", there is not much evidence that structural adjustment lending generated either adjustment or growth.[94]

Easterly goes on to state that "The IMF and World Bank declaring a country eligible for debt relief is an admission that past loans, including adjustment loans, did not bring enough current account adjustment and export and GDP growth in that country to keep debt ratios within reasonable bounds."[95] (See Debt section below.)

In a paper commissioned by the World Bank, researchers from the Chr. Michelsen Institute in Norway and Michigan State University argue that both the Zambian government and donors:

have failed to express a coherent strategy of economic growth. Instead, both the government and the donors have made fiscal austerity an end in itself and a measure of reform commitment....As a result, a partial reform syndrome characterized by uneven implementation and limited commitment to policy reform has been supported by the inability of donors to apply the conditionality instruments in a coherent manner.[96]

Oxfam notes that SAPs exacerbated the exclusion of the poorest from the market while further undermining human development and food security. [97]

Poverty

Until two decades ago, Zambia was one of the most prosperous nations in sub-Saharan Africa. [98] It is now one of the world's poorest countries. Despite early human development accomplishments and general freedom from conflict since independence (although Human Rights Watch and Amnesty International voiced some concerns over government actions during elections during the 1990s), Zambia contends with worsening poverty.

Currently, 73 percent of Zambians are living below the poverty line. Poverty is more prevalent in rural areas compared to urban areas (83 percent and 56 percent respectively) but has risen faster in urban areas due to failing industries and rising unemployment. Most of the rural poor are small-scale farmers.[99]

According to Zambia's Ministry of Finance and National Planning:

In the 1990s, the HIV/AIDS pandemic and other diseases have worsened the poverty situation. At the time when resources were already low, HIV/AIDS has increased the disease burden

beyond the individual level to adversely impact on the economics of the family, the health system, the working environment as well as human capital and many others. Principally, AIDS threatens the country's capacity building efforts because it strikes the educated and skilled as well as the uneducated. Consequently, it reverses and impedes the country's capacity by shortening human productivity and life expectancy. The long periods of illness of the skilled personnel in employment has translated into severe loss in economic productivity, which leads to considerable loss to the employer in lost person-hours. The complex relationship between economic growth and HIV/AIDS is increasingly being recognized: the epidemic is as much likely to affect economic growth as it is affected by it.[100]

Shortly after taking office in 2002, President Mwanawasa's government took some concrete steps to reduce poverty. Among other things, it has eliminated cost-sharing fees in primary schools and set aside resources for free inputs for the poorer peasant farmers.[101] It remains unclear, however, whether the funding needed to underwrite these initiatives will be found.

Governance

As mentioned above, there were numerous allegations of fraud during the 2001 elections. Zambia's Auditor General reported that funds from ZESCO were diverted to fund the ruling party's campaign during the run up to the 2001 elections.[102]

In February 2003, former president Frederick Chiluba was arrested and charged with over 50 counts of theft and abuse of public office.

Several watchdog organizations, such as Freedom House, have highlighted that Zambia's privatization process has been marked by corruption.[103] In a case study of the privatization of the Luanshya/Baluba Mine, Transparency International found that:

- "The President and his Cabinet contravened the law in conducting the privatization outside the provisions of the Privatization Act.
- The Donor Community, including the World Bank, exerted undue influence on the Zambia Government to privatize quickly, resulting in costly mistakes being made.
- Multinational Corporations, such as Anglo-American Corporation, took advantage of the government vulnerability to drive a hard bargain.
- The Government has been unable to account for the sales proceeds of ZCCM assets.
- Inadequate attention was given to the social impact of the sale of the mines resulting in untold human suffering.
- The sale of the mines was compromised to some extent by the self-interest of those charged with the disposal of the mines.
- The privatization exercise as a whole has lacked transparency and has been characterized by open disregarded of the law, particularly the Privatization Act."[104]

In a recent report, Transparency International examined Zambians' perception of the prevalence of corruption in institutions with which they have daily dealings, e.g., police, schools, and local

courts. TI found that despite the Zambian government's stated commitment to fighting corruption, hospitals and clinics, the Lusaka City Council, the revenue authority, and the customs office were all perceived to have a high level of corruption. Financial institutions such as commercial banks also ranked very low in the TI survey. The public did not believe that corruption levels had diminished. [105]

Trends in Public Expenditures

In a 2001 analysis of public expenditures in Zambia, the World Bank expressed concern that Zambia's overall public sector deficit — which includes the deficits of the central government, local governments, extrabudgetary accounts, state-owned enterprises, and the Central Bank — remains very high and continues to threaten macroeconomic stability, growth, and poverty reduction. Moreover, the beneficiaries of public expenditure have generally not been the poor. [106]

The accompanying indicator table includes some information on trends in public expenditures. During the 1990s, Zambia's military expenditures fell dramatically, from 3.7 percent of GDP to 0.6 percent in 2000. However, public expenditure on education (as a percent of GNP) fell from 3.1 percent during 1985-87 to 2.2 percent during 1995-97. However, the percent of the government education budget allocated to *tertiary* education rose during this period, from 18.3 to 22.3 percent. The increased allocation to tertiary education — while allocations to primary (43.9 to 41.5) and secondary education (26.9 to 18.4) fell — is of concern. In Zambia, the poor do not benefit from the substantial subsidies to university education. Children attending primary school are more likely to be from the poorest groups than from better-off groups; those who are not yet or able to be in school are also disproportionately poor. Secondary education shares this pattern, though the effect is not as pronounced as in primary education.

UNDP notes that Zambia's net primary enrollment ratio declined from the mid-1980s to the end of the 1990s (88 to 73 percent).[107] Secondary school enrollment ratios have also been falling.[108] These declines are likely due to AIDS mortality as well as reduced government expenditures and poverty. Declining education spending and outcomes are particularly worrying, as several studies have found that education can play a protective role vis-à-vis HIV. For example, Family Health International interviewed 2,328 youth ages 10 to 24 years residing in greater Lusaka. Using these data on self-reported behaviors, FHI found that attaining higher levels of education and being currently enrolled in school were associated with a lower likelihood of ever having had sex among females and, for both genders, with a lower likelihood of having had multiple recent sexual partners, as well as a higher likelihood of consistent condom use. [109]

Zambia's public expenditure on health increased from 2.6 percent of GDP in 1990 to 3.6 percent in 1998. [110] The beneficiaries of health expenditures are generally more complex and less clear than those of education spending. For example, the largest group using public primary health facilities tends to be in the middle of the income distribution. Despite increased public health expenditures — at least through 1998, the last year for which data were available from UNDP— health outcomes have been deteriorating. This is likely the result of a combination of factors, including the burden of HIV/AIDS on the health sector as well as inefficiencies within the sector. For example, there are two national health agencies: the Ministry of Health and the Central Board of Health. In principle, MOH formulates policies, whereas CBOH implements them. Health workers are expected to be CBOH employees, subject to uniform conditions of service

and disciplinary code. However, some health workers are subject to MOH's conditions of service. This scenario leads to work disruptions through strikes, as health workers compare conditions of service. [111]

There is also a lack of transparency and expenditure wastage with regard to drug procurement.[112] Although a purchasing department exists within CBOH and although CBOH's director general is a member of the tender board, MOH continues to purchase drugs on behalf of CBOH, an inefficient system that does not respond to CBOH's priorities. Efforts are under way to change this situation.[113]

Debt

In the mid-1970s, as the price of copper plummeted and oil prices rose, Zambia turned to foreign and international lenders. It external debt more than doubled in 1976.[114] However, copper prices remained depressed, and it became increasingly difficult for Zambia to service its growing debt. In 1986, Zambia's total debt servicing accounted for 28.5 percent of its gross national income, making it one of the world's most indebted nations.[115]

In December 2000, Zambia qualified for debt relief under the Heavily Indebted Poor Countries Initiative (HIPC). HIPC is not debt cancellation; rather it is a restructuring of debt repayment through provision of grants. Zambia was granted US$3.8 billion as total debt relief from all its creditors.

To date, HIPC has disbursed US$135 million to Zambia, of which US$18 million has been channeled into health and education. [116] Programs to be supported by HIPC resources are focused on poverty reduction and social activities. In the health sector, the focus is on HIV/AIDS, malaria, essential drugs, and underfunded public hospitals.[117] According to IMF estimates, HIPC will result in continually increasing social services expenditures in Zambia through 2005, in absolute terms and as a percent of government revenues.[118] (Zambia has also received additional debt relief from several bilaterals.)

The World Bank notes that Zambia's debt will not be sustainable until at least 2004,[119] a projection that concerns, among others, Zambia's National HIV/AIDS/STD/TB Council. [120] This projection is primarily based on assumptions about Zambia's export earnings; however, sole reliance on this criterion is problematic for countries such as Zambia, dependent on one export commodity (copper).[121] Indeed, in September 2002, the IMF and World Bank noted that Zambia's debt-to-export ratio had deteriorated, as export earnings fell because of lower world copper prices and Anglo American's decision to discontinue its mining operations in Zambia (mentioned above).[122] The Bank's projections regarding debt sustainability are also based on what many see as overly optimistic assumptions, for example, that real GDP growth will be 5 percent from 2001 onward and that foreign direct investment will rise from US$250m in 2002 to US$281m in 2010. [123]

Zambia is currently in its interim HIPC period, meaning that to qualify for the full amount of debt relief available via HIPC, it must successfully meet its creditors' requirements. [124] Among these is that it sell the state-owned Zambia National Commercial Bank.[125]

Regardless, after receiving debt relief, Zambia will need to continue borrowing to maintain debt servicing obligations and to purchase key imports.[126] According to Jubilee Plus, by 2004, new debt will account for 63 percent of Zambia's overall debt. By 2019, 75 percent of Zambia's average annual debt service will be for new debt. [127]

Many international NGOs and propoor advocacy groups — including Bretton Woods Project, Catholic Fund for Overseas Development (CAFOD), Christian Aid, European Network on Debt and Development (EURODAD), Jubilee Plus, Oxfam U.K., and World Development Movement — also express concern that HIPC has reshuffled Zambia's enormous debt rather than cancel it.[128]

Declining Human Development

One method of tracking human development in Zambia is to analyze trends in its Human Development Index. The HDI was created by UNDP to measures average achievements in life expectancy at birth; adult literacy and combined primary, secondary, and tertiary gross enrollment ratios; and GDP per capita (most UN agencies are now calling this gross national income [GNI]; details on its calculation can be obtained from the World Bank). An HDI of 0.800 or above = high human development; 0.500 - 0.799 = medium human development; less than 0.500 = low human development. In 2000, Zambia's HDI value was 0.433, placing it among "low-human development" countries and ranking it 153 out of the 173 countries for which UNDP calculated an HDI. Zambia's HDI value is lower than that of the median for the world's least-developed countries (0.445) as well as for sub-Saharan Africa (0.471).[129]

What is particularly worrying is that although Zambia's HDI value is already very low, it declined further during the 1990s. Between 1975 and 1985, the HDI value rose from 0.449 to 0.480, a reflection of, inter alia, the government's concrete efforts to increase educational attainment and health outcomes. From 1985 onward, however, the HDI value has been falling, mirroring the country's economic decline. In 1990, the HDI value was 0.468, falling to 0.432 in 1995 and to 0.433 in 2000.[130] This decline reflects the fall in national income per capita, discussed above, and as the public expenditure trends section above highlights, Zambia's decreased spending on education during the 1990s. The government's spending on health rose in that decade, but clearly the enormous impact of AIDS mortality (see Impact section) drastically reduced the life expectancy component of the HDI value.

A critical indicator of the well-being of children is the under-five mortality rate. In 2000, UNICEF reports that Zambia had the world's 10th-highest under-five mortality rate: 202 deaths per 1,000 live births. The preindependence (1960) figure was 213. Moreover, Zambia's under-five mortality rate for 2000 exceeds that of all the least-developed countries (161) and of sub-Saharan Africa (175). [131]

Infant mortality, another key human development indicator, fell somewhat though not dramatically between 1960 (126) and 2000 (112). And, as with under-five mortality, Zambia's infant mortality rate for 2000 exceeds that of all the least-developed countries (102) and of sub-Saharan Africa (108). [132]

Population Mobility

Throughout southern Africa, high levels of movement between urban, rural, and mining areas facilitate HIV transmission.[133] Zambia has a long history of men migrating to work in large agricultural estates in Chinwag in rural Lusaka Province and the Namable Sugar Estates in Southern Province, as well as to the mines in Copperbelt Province. On sugar estates, for example, men leave their families to work as cane cutters from March to November.[134] Migrant labor separates men from their families, places them in close proximity to "high-risk" sexual networks, and often results in their having an increased number of sexual contacts. Concurrently, it may also lead to women's reliance on sex to supplement their incomes while their male partners are away for long periods.

Thirty-two percent of Zambia's population is urban.[135] Zambia's transport infrastructure links major urban and industrial centers, and rail lines tie it into an extensive central African railroad network.[136] The 2000 ZSBS found that Zambians have a fairly high level of mobility. Of men, 29 percent had lived less than five years in their current location; for women, this figure was 31 percent. In the last month, 18 percent of women and 23 percent of men had spent at least one night away from home.[137]

Poverty may lead to increased migration, both within Zambia and to other countries, as people move from rural to urban areas in search of work — or return to families if they lose their jobs or fall ill and cannot afford care. This scenario can place an additional burden on receiving households, which concurrently lose any remittance income from the person who has fallen ill.[138]

The U.N. reports that the food crisis is increasing migration to towns in Central and Eastern provinces.[139] The political and economic turmoil in Zimbabwe is also likely to be spurring population dislocations within the subregion.

Key mobile groups in Zambia include:

- truck drivers
- sex workers
- fishermen/women and fish traders
- migrant and seasonal workers
- cross-border traders, especially young girls
- miners
- military personnel
- prisoners (in the sense that they often return to their families/communities upon release)
- refugees

In November 1999, Family Health International undertook research in four towns along the Durban-Lusaka highway, including Chirundu, Zambia. The findings illustrate the intersection of population mobility and HIV vulnerability (see box 2).

Box 2. Chirundu: An Examination of HIV/STI Vulnerability in a Zambian Border Town

Chirundu is situated on the Zambian side of the Zambezi Valley in Zambia's Southern Province, 142 kilometers south of Lusaka and 366 kilometers north of Harare. The population is estimated at 7,000. There are no recreational facilities, apart from taverns.

The largest sources of formal income in urban Chirundu -- freight, construction, retail, customs, domestic service, teaching, immigration, and police -- employ over 400 people. The largest sources of urban informal income are sex work, money changing, and trading. Most women in Chirundu rely primarily on trading and sex work for income. Many female traders also practice sex work. Chirundu has about 300 permanent and 200 transient sex workers. Sex workers seek clients primarily at hotels and taverns. There is no street-based sex work, except on the main highway. Sex workers' major clients are truckers, especially those who pay in foreign currency. Sex workers value South African clients, reporting that they pay up to US$20, over 10 times more than local men can pay. Moneychangers are also clients. Competition for foreign clients is severe, and most sex workers remain poor, though perhaps less so than other women. Sex workers reported that they preferred to use condoms, but -- until recently -- condoms were difficult to obtain.

Many sex workers reported that they entered sex work when they became pregnant and were abandoned by their boyfriends and families. Girls as young as 12 are reported to engage in sex work. Older sex workers complained that younger rural girls would accept clients for food or soap.

Thirty-six trucking companies use the Chirundu, Zambia, route. Truckers' major southbound destination is South Africa, and their major northbound destinations are Lusaka, the Copperbelt, and the DRC. The war in the DRC increased its reliance on imports, and trucking traffic at Chirundu has increased as a result. The average age of truckers is 35, and most have been driving on the Chirundu route for five years or more. Many have steady girlfriends as well as sex worker contacts.

The farms outside Chirundu are large, employing over 400 permanent workers and 2,000 seasonal workers. These farming communities also influence the social and sexual character of Chirundu, with rural poverty spurring movement to and from the town.

Sources: Family Health International. *Corridors of Hope in Southern Africa: HIV Prevention Needs and Opportunities in Four Border Towns*. Arlington, Va.: 2000 <http://www.fhi.org/en/aids/impact/corrhope/corrfin2.html>

Truck Drivers

Long-distance trucking plays a crucial role in Zambian economy., Zambia has six major trucking routes. The Chirundu-Lusaka and Lusaka-Copperbelt routes each have 100 trucks daily. Livingstone-Lusaka has over 40 trucks a day. Lusaka-Chipata, Lusaka-Mumbwa and Mongu, and Kapiri Mposhi-Nakonde each host 20 trucks a day. On average, about 300 trucks use Zambia's main highways each day. There are 1,500 registered commercial trucks. Approximately 3,500 drivers and assistants are away from their families for extended periods. When they travel, their sex partners are mainly mobile sex workers from low-income communities.[140]

Sex Workers

Tasintha, an NGO that works with sex workers, estimates that there are at least 6,000 full-time sex workers in Zambia. Other studies put the figure at 24,000 (7,000 in Lusaka and 17,000 in major tourist locations, major highways, and border and trading towns). Sex workers are based in, inter alia, brothels, nightclubs, and the street. Male clients control use of male condoms by offering to pay more for condom-free sex. [141]

For most Zambian women, marriage remains the key to economic survival. Inability to form a long-term partnership or the collapse of a marriage can have disastrous financial consequences for women; some may be forced into sex work, which is illegal and highly stigmatized. [142], [143], [144] The penalty for prostitution is one month's imprisonment, a fine of about 80,000 Kwacha (about US$17, an enormous amount in a country where average monthly income is US$25), or both.[145]

In a study of 300 SWs in Ndola, researchers from the London School of Hygiene and Tropical Medicine and Institute of Tropical Medicine in Belgium found that 69 percent were infected with HIV. Longer duration of sex work in the city and genital ulceration and herpes simplex virus-2 infection were significantly associated with HIV infection. [146]

With funding from USAID, World Vision has been working with Zambia's Tropical Diseases Research Center, National AIDS Council, FHI, and Belgium's Institute of Tropical Medicine to reach SWs and truck drivers in five major border posts and truck stops: Livingstone, Chirundu, Chipata, Kapiri-Mposhi, and Kasumbalesa. The project seeks to change behavior through outreach and peer education, social marketing of condoms, and improved STI care. [147]

In 2000, the project recruited 636 SWs for a study: 267 at Livingstone, 145 at Chirundu, and 224 at Chipata. The study population was young, with a mean age of 23 years and a high proportion (37 percent) of adolescents. Most (81 percent) had completed at least primary school; almost half (48 percent) had ever been married. The distribution by ethnic group and religion was similar to that of the general Zambian population. The population was mobile, with 46 percent originally from a province other than the one in which they were currently residing and a median period of current residence of 5.9 years. One third (33 percent) reported an occupation other than sex work. Over half (58 percent) reported that they were supporting others. [148]

The median age of sexual début was 15 years and of starting sex work, 17 years. Almost all women (99.5 percent) reported having previously engaged in sex work elsewhere. The median time period of sex work in the current residence was 1.7 years. The median number of sexual partners in the last seven days was 3. The median price per client was 20,000 Kwacha (about US$4.40). Slightly over half of women (54 percent) reported having used a condom at last sexual contact with a paying client. The most frequent reasons mentioned for not using a condom were that the client objected (36 percent), that they themselves did not like condoms (21 percent), or that they did not think of using one (21 percent). When asked how regularly they used condoms with clients over the last 30 days, 25 percent reported using condoms every time or almost every time, 59 percent sometimes, and 17 percent never. [149]

Fifty percent of the women reported a nonpaying sex partner in the last seven days. The median frequency of sexual intercourse with this partner was four times in the last 30 days. Less than half (44 percent) had used a condom at the last sexual intercourse with this partner, and the majority reported having used condoms with nonpaying partners during the past 12 months only sometimes (66 percent) or never (18 percent). [150]

Researchers from Population Services International interviewed 14 nightclub-based and six street-based SWs in Lusaka. PSI found that SWs are subject to frequent police raids and the risk of violence from clients or members of the public. The lack of a supportive social environment may reduce their ability to adopt effective safer behaviors. [151]

Fishermen/women and Fish Traders

Fishermen/women and fish traders converge in populous lake basins. Fishermen often leave their wives and families in rural areas for several months and, in most instances, enter into "marriages of convenience." Their steady cash earnings can also support a number of temporary sexual liaisons. Married female fish traders may exchange sexual favors for preferential road and water transport to and from fishing camps. Fishermen are also reported to frequently demand sexual favors as a condition for selling fish. These communities have limited knowledge of HIV/AIDS; for example, those who die because of AIDS are presumed to have returned to their home, thus masking the effects of the disease. Access to health information and care is low, as is reported condom use.[152]

Border Traders

In Zambia, some female traders exchange sex with truck drivers for transport. Police and customs officials may demand sex from women caught crossing borders illegally or who want to avoid paying customs duties. Children are increasingly entering this trade, and young girls are especially vulnerable to sexual exploitation. [153]

Military

Zambia's military has had a high level of mobility, participating in U.N. peacekeeping initiatives in Mozambique, Rwanda, Angola, and Sierra Leone.[154]

Refugees

Zambians have shown tremendous leadership and generosity in welcoming large groups of refugees escaping conflict in other African countries. [155] Zambia is host to about 285,000 refugees, mainly from Angola and the Democratic Republic of Congo (DRC), as well as Rwanda, Burundi, and Somalia. Many refugees have been in Zambia for several years.[156]

According to UNHCR, despite progress on peace accords in the DRC, around 100 Congolese cross into Zambia each month fleeing sporadic skirmishes. (The U.N. also notes that there have been reports of gunmen from the DRC harassing Zambian villagers.) [157], [158] Influxes of refugees put increased pressure on the budgets of Zambian districts that border areas of conflict. [159]

The Zambian government imposes restrictions on refugees who seek to use government health facilities. [160] (There are some health centers in refugee camps, many run by NGOs.) According to a February 2002 report on refugees in Zambia produced by the Women's Commission for Refugee Women and Children:

Perception of HIV risk differs within the refugee population. There are few diagnosed HIV/AIDS patients, and a persistent skepticism about the existence of the disease persists. Gender-based violence is a topic most people are reluctant to discuss. Domestic violence, exacerbated by alcohol and drug use/abuse, is reported to be the most common form of violence. Most refugee health facilities lacked protocols to manage the consequences of rape. Victim Support Units are in place at some camp police stations but it is not clear that the units' staff are adequately trained to care for victims of violence. Reproductive health services for adolescents are limited and ad hoc at best. There are nascent efforts by NGOs to establish youth-friendly centers, youth anti-AIDS clubs and use

of peer educators to target the adolescent population. However, adolescents are clearly a sexually active population and are particularly vulnerable, given the lack of comprehensive services targeting their needs.[161]

In October 2002, several Western governments announced that they would provide support to Zambia and UNHCR to integrate Angolan refugees in Zambia's Western Province. Part of this process includes establishment of an STI/HIV/AIDS drop-in center to promote HIV/AIDS awareness among refugees and their host community. Zambia's approach to refugee integration through linking of relief and development is being used as a model in other countries.[162]

Food Crisis

Over the past year, the situation in Zambia has become critical. In 2001, excessive rains in parts of the country resulted in floods that destroyed large cultivated areas. Districts in Eastern and Southern provinces along the Zambezi and Laneway rivers were the most affected and overall production of maize, the staple crop, fell by an estimated 24 percent compared to the previous year. In 2002, erratic rains and drought hit large parts of the same provinces during the growing season, exacerbating an already precarious food situation. [163] Moreover, underutilization of land is a ongoing issue (currently, only 20 percent of arable land in Zambia is cultivated[164]).

On May 28, 2002, the Government of Zambia declared a national disaster due to actual and anticipated food shortages. [165] The government's Disaster Management and Mitigation Unit, under the office of the Vice President, is working with U.N. agencies, bi- and multilateral donors, civil society, and the private sector. In July 2002, the U.N. launched an appeal for US$71 million to combat the humanitarian crisis in Zambia. In September 2002, USAID reported that 2.9 million Zambians (29 percent of the population) would require food aid totaling 224,000 metric tons between September 1, 2002, and March 31, 2003. Concurrently, Zambia has made the least progress in filling its cereal gap, meeting less than 9 percent of its requirements, compared to the average 25 percent imported to date by the rest of the countries in the region.[166]

The most vulnerable groups are located in Southern and Western provinces and include the elderly and households headed by children and women; those with persons who are disabled or ill; and those with widows not supported by other households. Significant numbers of these households include orphans and other vulnerable children.

Reports from aid agencies who have recently conducted missions in Zambia concur that although erratic weather has contributed to the current food crisis, one of the key underlying factors is the depletion of human resources as a result of HIV/AIDS.[167] Unsustainable debt and deteriorating public services have also played a role. Oxfam highlights that the failure of agriculture liberalization policies are also a factor. After years of World Bank- and IMF-supported agricultural sector reforms, Zambia still faces chronic food insecurity. Oxfam argues that these reforms were imposed too rigidly and too quickly, often leaving poor farmers without support from or access to either state or market institutions. [168]

In August 2002, the Government of Zambia announced that it would not accept biotech-derived food aid due to health and environmental concerns. In September 2002, President Mwanawasa indicated that the he remains open to accepting to accepting biotech-derived food contingent

upon evidence demonstrating its safety.[169] (Some have suggested that Zambia's refusal of biotech-derived food is related to its desire not to offend Europe — its largest export market — which bans genetically modified food.[170])

Health Sector

The health and human development indicators in the accompanying table highlight the magnitude of the poor health status of Zambians. As discussed in the Human Development section, the general health status of Zambia's population worsened substantially during the 1990s.[171]

In 1998, public health expenditures in Zambia accounted for about 51 percent of total health care spending.[172] Almost all public health expenditure is financed by taxation; public health insurance does not play a significant role.[173] Private insurance accounts for about 30 percent of private expenditures on health. [174]

The country bears an enormous burden of malaria (see indicator table). Other major health problems include TB (see Impact section), leishmaniasis, Guinea Worm disease, measles, malnutrition, respiratory diseases, polio, and diarrheal disease.

Sexual and Reproductive Health

UNFPA ranks Zambia a category "A" country, meaning that it is furthest from achieving the sexual and reproductive health goals of the International Conference on Population and Development (ICPD), held in Cairo in 1994. Group A countries have the greatest need for external assistance and the lowest capabilities for mobilizing domestic resources to close this gap.[175]

The accompanying table provides selected indicators of sexual & reproductive health. The burden of fertility on young women is high. Although little documentation exists, UNFPA — using hospital and clinic admission data — surmises that unsafe abortions are common.[176]

STIs

As mentioned in the Epidemiology section, Zambia's National STD Control Program was launched in 1980. Since 1996, no national data have been readily available.[177]

In 2000, the National HIV/AIDS/STD/TB Council reported that STIs account for 10 percent of all documented outpatient attendance in public facilities. A 1997 study by UNICEF and Zambia's National AIDS Program found that adolescents made up 40 percent of STI clientele in public outpatient facilities.[178]

The Study Group on the Heterogeneity of HIV Epidemics in African Cities — which includes Ndola, as well as Kisumu, Kenya; Cotonou, Benin; and Yaoundé, Cameroon — found that infection with herpes simplex virus 2 is extremely prevalent in young women shortly after they begin sexual activity. [179]

What is also of concern is that between 1998 and 2000, the proportion Zambians who used a condom during sexual acts when they knew they were infected with an STI *declined* substantially, from 36 to 23 percent for women and 46 to 24 percent for men. [180]

Health Sector Reform

As part of its structural adjustment measures, the government and its donor partners began a process of health sector reform in 1994. This approach emphasizes devolution of administrative, financial, and technical responsibility for essential health services to district health and hospital management boards. (Policymaking, resource mobilization, legislation, and other facilitation and coordination functions are retained at national level.) The aim of health sector reform was to improve health status by increasing access to and the quality of a national package of essential and cost-effective health services in a decentralized health care delivery system. This process also included a shift away from (expensive) tertiary-level institutions towards primary-level healthcare. The program was estimated to cost $537 million, and received support from several donors. The World Bank's Zambia Health Sector Support Project provided US$56 million. [181] USAID developed the Zambia Integrated Health Program (ZIHP) in partnership with government to address key health problems and continue the process of the government's health reform. ZIHP is implemented by a group of American and international agencies and organizations in partnership with Zambian public and private institutions and other international cooperating agencies. With a budget of US$41 million from 1999-2002, ZIHP focuses on demonstration districts. [182]

As part of the health sector reform process, user fees at public health facilities were introduced. A system of exemptions from payment of user fees was introduced in 1993 to provide a social safety net and covers:

- children under 5 and those ages 65 and above
- all ante- and postnatal visits
- all visits for chronic illnesses such as TB, STI, and HIV/AIDS
- those affected by disaster or involved in accidents

Those who are unable to pay can seek exemption under the Health Care Cost Scheme.[183]

The World Bank characterizes the status of the health reform process as "disappointing" and slow. [184] As is usually the case when the Bank evaluates projects and policies it has championed, it lays most of the blame on poor government implementation. Certainly, this is the case to some degree, but serious concerns have been raised about underlying elements of the reform process itself. For example, there have been inequities in the exemption policy mentioned above. Research has shown that that there have been very high errors of exclusion and inclusion; those who can afford to pay or are ineligible under the criteria have been granted exemption, whereas many who were eligible have been denied exemption.[185]

Moreover, exemption mechanisms, even if they worked as intended, would not necessarily address inequalities in the use of services related to income or distance to health facility. The poorest sections of the population are found in remote areas that are not easily accessible. For example, households in several districts in Central, Northern, and Western provinces have an

average of over 60 km to the nearest health facility and an average of over 50 km to the nearest transport facility. Exemption schemes are of almost no benefit to them.[186]

Researchers from Kanyama Health Center in Lusaka, Michigan State University, and UCLA undertook a cross-sectional analysis of healthcare utilization in a large Zambian hospital for children ages 3 to 6 between August and September 2000. They found that female children may be less likely to present for care when user fees are imposed.[187]

The National HIV/AIDS/STD/TB Council raises concerns about how decentralization has rapidly shifted the burden of HIV/AIDS to all districts across the country in a "one size fits all" approach. [188] There was no analysis of individual districts' capacity to assume the responsibilities of decentralization, a particularly critical issue for those districts that were already understaffed, underfunded, and/or located in the poorest parts of the country. Nor was there analysis of the characteristics of clients served by different health centers (e.g., by occupation, mobility pattern) and how increased demands on health care staff resulting from decentralization would affect them.

Currently, the health sector struggles with many problems, including:

- Almost all health facilities lack adequate personnel, drugs, and/or equipment.
- Physical infrastructure and equipment are deteriorating.
- Erratic distribution methods lead to frequent shortages of essential drugs and medical supplies in hospitals and health centers. There have been instances of government personnel making ineligible drug expenditures and questionable contractual arrangements made by government for storage and distribution of drugs and medical supplies.
- Conditions (low pay, inadequate equipment, poor supplies) in Zambia's public hospitals have deteriorated and have led to long-running strikes by health care providers.
- The Ministry of Health gave the Central Board of Health executive responsibility for health service delivery. [189] However, as mentioned above, the functions and staff of the Ministry of Health and the Central Board of Health overlap, leading to duplication and other inefficiencies.[190]

Certainly, one cannot hold health reform solely responsible for the state of the Zambian health sector. Poverty, debt, falling copper prices, and the enormous impact of HIV/AIDS have played a role as well. In 2001, the government adopted a new five-year National Health Strategic Plan (2001-2005) to continue the reforms and improve service delivery. However, financing support from donors has been low, given the "disappointing" results of health reform thus far. [191] All this is particularly worrying with regard to the sector's capacity to manage HIV/AIDS.

Gender

HIV Prevalence among Women

As discussed in the Epidemiology section, UNAIDS published data in July 2002 indicating that HIV prevalence among Zambian women ages 15 to 24 ranges from 16.78 to 25.18 percent, whereas the comparable range for men in the same age cohort is 6.45 to 9.68 percent. [192] Researchers from the Study Group on the Heterogeneity of HIV Epidemics in African Cities

found that among sexually active 15- to 19-year-olds in Ndola (and Kisumu, Kenya), HIV was six times more prevalent in women than in men. Among 20–24-year-olds, HIV infection was three times more prevalent in women. HIV was equally widespread among women and men in the 25–49 age group.

Behavioral factors did not seem to explain this difference in HIV susceptibility. The presence of other STIs, especially those that result in ulcerated lesions, may account for some increased transmission of HIV. In both cities, for example, the rate of infection with herpes simplex virus type-2 was roughly four times greater among young women than among young men. Even when no other STI was present, however, young women were still at higher risk for HIV infection. There is evidence of high rates of HIV positivity following only a few episodes of sexual intercourse, suggesting that young women have a higher susceptibility to infection. [193]

Women's Status

The 2000 ZSBS found that 85 percent of women and 92 percent of men have had at least primary education A much larger proportion of rural (21 percent) than urban (6 percent) women have no education. Forty-four percent of men and 33 percent of women have some secondary education. The proportions of men and women with secondary education were more than twice as high in the urban compared to the rural areas.[194]

Few women hold high-level decisionmaking positions in any sector of the Zambian economy. Despite constitutional and legislative provisions, women still experience disadvantages in enforcement of laws regarding property ownership, inheritance, and marriage.[195]

UNFPA's ranking of Zambia as a category "A" country connotes a high level of gender inequality, women's low socioeconomic status, and their poor sexual and reproductive health and rights.[196] Many of the indicators found in the accompanying table are useful in analyzing women's socioeconomic status. For example, the maternal mortality ratio measures the number of deaths to women per 100,000 live births that result from conditions related to pregnancy, delivery, and related complications. It is a standard indicator not only of access to safe delivery services, but of overall human development. UNFPA estimates that Zambia's 2001 MMR was 870. This is the second-highest MMR in southern Africa (MMR for Mozambique was highest, at 980). It is over twice the global MMR; however, it is lower than the MMR for Africa (includes North Africa) and for all least-developed countries.[197]

UNDP measures gender inequality by using the unweighted average of three component indices: life expectancy, education index, and income index. Its Gender-related Development Index (GDI) value ranges from 0 (lowest gender equality) to 1 (highest gender equality). In 2000, UNDP calculated Zambia's GDI value at 0.424, ranking it 129 out of 146 countries on this index. (For comparison, GDI values range from 0.263 [Niger] to 0.956 [Australia].)

Women and Poverty

A key component of women's poverty is their inability to obtain loans from banking institutions, which renders them less able to enter into safe, profitable economic activities.[198]

Widows

Widows may be particularly vulnerable to HIV because of sexual cleansing (*kusalazya*) and wife inheritance (*kunjilila mung'anda*). The traditional practice of sexual cleansing is still highly prevalent, especially in Southern Province. To be purged of evil forces assumed to have caused the death of the spouse, the widow or widower is cleansed through sexual intercourse with a relative of the deceased. [199]

In response to analyses of sexual cleansing in the context of HIV transmission, many Zambian local leaders (especially in Southern Province) have encouraged alternative rituals. These include:

- sliding over a half-naked person or jumping over an animal ("cow-jumping")
- using herbs and roots
- cutting of hair
- applying powder
- having a (proxy) married couple perform the cleansing act of sexual intercourse

Malungo notes that many of the alternatives had been used for some time, but have only become popularized since the advent of AIDS.[200]

Another phenomenon is called "grabbing", wherein close relatives take possession of a the deceased's household goods, land, livestock, clothes, and other assets. This scenario exacerbates the already precarious economic (and social) situation of widows and their children.[201] Despite legislation to address this issue (Intestate Law of Succession and Administration of Estates acts), widows continue to suffer extreme harassment from and impoverishment at the hand of their husbands' relatives.[202]

Sexual Negotiation

Data from the 2000 ZSBS suggest that women in Zambia have little power in sexual negotiation with their husbands. Less than half of men (49 percent) and women (45 percent) who have heard of STIs believe that if a woman's husband has an STI, she can either refuse to have sex with him or ask him to use a condom. These figures were, however, an improvement over those of 1998, when only 25 percent of men and 30 percent of women believed that a woman could protect herself from an STI if her husband had one. A strong urban-rural differential was found for this indicator in 2000: percentages for urban women (55%) and urban men (58%) were much higher than in rural areas (women=37%, men=43%).[203]

Among respondents who reported that a woman can protect herself from an STI, 65 percent of respondents mentioned refusing sex; 66 percent of men and 56 percent of women mentioned condom use. A woman insisting upon condom use was a more common response among urban residents than rural residents. As the authors note, using condoms and refusing sex are largely "male-driven."[204]

Polygamy, more common in rural than urban areas, is also a factor. In 1996, 17 percent of married women in Zambia were in polygamous unions. The highest rate of reported polygamous relationships was in Southern Province (32 percent). [205]

Perception of Women

As in many countries, the image of women as the vectors of disease has been presented in the media and in public health announcements; an early Zambian anti-AIDS message, for example, read: "Avoid AIDS. Take Time to Know Her."[206] In 1999, *The Zambia Post* reported on a high-level politician's public warning that "beautiful girls tempt men and as a result fuel the HIV/AIDS scourge."[207]

In many rural areas, HIV/AIDS continues to be viewed as disease of women and, more specifically, of sex workers. [208] A recent Panos study on stigma in a rural area of Zambia also found that HIV/AIDS-related stigma was primarily directed at women, particularly poor women and single women. Blame for infection was frequently placed on women: mothers were blamed for infecting their babies; older women were accused of being "promiscuous" and "grabbing" young men at beer huts; and schoolgirls were characterized as only interested in "sugar daddies." Women traders, and especially cross-border traders, were blamed for bringing HIV/AIDS into the area, as were women seasonal workers on commercial farms.[209]

The government's 2000-03 strategic framework for HIV/AIDS (discussed in Government Response section) carefully and thoughtfully analyzes Zambian women's vulnerability to HIV, including that of sex workers. Regardless, individual politicians and community leaders may continue to demonize women, as was also found in the Panos study of stigma.

Women's own self-perception and definition of what constitutes acceptable female behavior are also factors. For example, in the 2000 ZSBS, men (62 percent) were more likely than women (55 percent) to believe that condom purchase by unmarried women was acceptable. Slightly more urban men (64 percent) than women (59 percent) believed unmarried women should be able to purchase condoms. The differences among rural respondents were greater, with 62 percent of men and 53 percent of women stating that this was acceptable. In the 1998 ZSBS, 57 percent of men and 42 percent of women believed that an unmarried woman could buy condoms, suggesting an increase in the perceived acceptability of this practice in the late 1990s. However, many women still do not regard taking control of sexual matters as within their domain. [210]

Sexual Violence

In late 2002, Human Rights Watch released a report entitled *Suffering in Silence: The Links between Human Rights Abuses and HIV Transmission to Girls in Zambia.* [211] HRW researchers visited about 36 NGOs, orphanages, and other centers for children, and interviewed approximately 100 girls under age 18. Most interviews were conducted in Lusaka, Kitwe, Ndola, and Kafue. HRW also met with government officials and staff from bi- and multilateral agencies.

It found that sexual assault of girls in Zambia is widespread and complex. It documents several categories of abuse that heighten girls' risk of acquiring HIV, including:

1. sexual assault of girls by family members, including abuse of orphan girls by male guardians or others charged with looking after them, including teachers
2. abuse of girls, often orphans, who are heads of household or otherwise extremely poor
3. abuse of girls who live on the street, a figure that is rising because of AIDS mortality[212]

HRW also found that coerced sex is occurring as men seek increasingly younger sex partners assumed to be HIV-negative. HRW also reported on the phenomenon of transactional sex (see below).

The HRW report also highlights the gender-disaggregated burden of AIDS morbidity and mortality. Many of the girls interviewed were unable to continue their schooling because their income or labor or caregiving was needed in an AIDS-affected household (whereas this is not the case for most boys, who remain in school). AIDS mortality also renders girls — as orphans and household heads — vulnerable to exploitation, including sexual abuse.[213]

There are numerous institutional and social barriers to reporting and prosecuting such abuse. One is the overarching societal structure that holds that girls be submissive to men. The criminal justice and social services systems have failed to deal appropriately with complaints of sexual abuse and to protect girls' rights. According to HRW, most of the laws that would protect girls from sexual assault are in place but are not enforced. For orphan abused by male guardians, reporting of abuse may lead to abandonment or violent punishment. Families often go to great lengths to conceal sexual abuse. Police departments are rarely child- or gender-sensitive; HRW also found that some health service providers reprimand girls who report abuse for their "promiscuity."[214]

According to UNFPA, sexual violence in general is often not reported because of cultural constraints.[215] A study cited by Panos (for which details were not provided) found that 10 percent of married women in Zambia had experienced physical violence in the last three months, and a far higher number had been assaulted at least once during marriage. Panos reports that most rape in Zambia is perpetrated within long-term relationships or by men who believe that a recently met woman "owes" him sex after he has bought her a drink, given her gifts or favors, or spent time with her. Again, Palos's source for these data is not provided, and thus they should be viewed with caution.[216] In the study of SWs along major truck routes conducted by World Vision and its partners (discussed above), 37 percent of respondents with a nonpaying partner reported forced sexual intercourse in the past 12 months by any of their sexual partners. [217]

The Panos study on stigma also found that whereas men were more likely to share their HIV status with their wives (in the expectation of a supportive response), women were much less likely to disclose their HIV-positive status to husbands for fear that this might precipitate divorce or violence.[218]

Female Circumcision

The 2000 ZSBS found that women who reported being circumcised reside in all provinces, with the highest percentages living in Northwestern Province (9 percent) (where 73 percent of men report being circumcised). Numbers were too small to permit analysis by ethnic group across the country, but several women from almost every ethnic group reported having been circumcised. The 2000 ZSBS authors note that these findings should be viewed with caution for several reasons. First, it is unclear whether women are indeed reporting female circumcision or confusing the question with something else, e.g., labia elongation. Second, some women who

reported having been circumcised may originally be from neighboring countries where female circumcision is more common. (For example, in Tanzania, the 1996 DHS found that 18 percent of women were circumcised.[219]) Finally, as mentioned, Zambia hosts many refugees, particularly from Angola and DRC, where female circumcision prevalence is presumed to be higher (although reliable data on female circumcision in Angola and DRC are not available). [220]

Intravaginal Practices

Among the Tonga and Bema of Southern and Northern provinces, respectively, initiation ceremonies and practices to prepare girls for marriage are common. These include lessons on how to use corrosive herbs and other ingredients to dry out the vagina to increase male sexual pleasure. [221]

There is limited evidence of an association between intravaginal practices and vaginal infections, which in turn may be associated with HIV acquisition.[222] Some studies have suggested that intravaginal practices may increase heterosexual transmission of HIV and other STIs by:

1. drying out and irritating the vaginal and cervical mucosa
2. disturbing the normal vaginal flora, eliminating lactobacilli that form a natural barrier against colonization of STI pathogens and transmission of HIV
3. interfering with the acceptability and efficacy of barrier methods of HIV/STI prevention[223]

Knowledge of HIV/AIDS

The 2000 ZSBS indicated that knowledge of HIV/AIDS is almost universal in Zambia. In both 1998 and 2000, 99 percent of urban women and men had heard of HIV/AIDS. However, there was a marked decline in the proportion of rural respondents who indicated that they had heard of HIV/AIDS. The proportion of rural women who had heard of HIV/AIDS declined from 98 percent in 1998 to 93 percent in 2000; among rural men, the figures were 98 and 95 percent, respectively.[224]

Despite Zambians' high knowledge of HIV/AIDS, major gaps in fuller understanding of HIV transmission persist. These are particularly of concern with regard to gender and urban-rural differentials. Between 1998 and 2000, the proportion of those who knew that HIV can be avoided increased among all men (86 to 96 percent) but remained unchanged among women (78 percent). Urban men were most likely to believe that HIV can be avoided (90 percent), rural women the least likely (72 percent). More men (71 percent) than women (65 percent) had knowledge that consistent use of condoms during sexual intercourse can prevent transmission of HIV. For both, these figures indicate an increase from 1998, when these percentages stood at 67 and 57, respectively.

Seventy-two percent of men and 65 percent of women agreed that HIV transmission can be prevented by consistently using condoms. The proportions of men (84 percent) and women (82 percent) who stated that having one faithful partner can prevent HIV transmission were much higher. People living in urban areas (91 percent) were more likely than their rural counterparts (80 percent) to believe that having one faithful partner was a way to avoid HIV infection. [225]

Eighty-two percent of men and 83 percent of women indicated that a woman infected with HIV could transmit the virus to her unborn baby; most respondents (94 percent of men and 93 percent of women) knew that MTCT of HIV could occur during pregnancy; 77 percent of men and 79 percent of women also knew that MTCT of HIV could occur during breastfeeding. The proportion of people who knew that HIV can be transmitted from the mother to the child at delivery was lower (61 percent of men and 63 percent of women). [226]

Among women, 23 percent stated that avoiding breastfeeding was a way to prevent MTCT, and only 2 percent stated that antiretroviral therapy could prevent MTCT. Among men, these figures were 23 and 3 percent, respectively. At the time of the survey in 2000, the availability of antiretroviral therapy in Zambia was extremely limited, as in other poor countries. Nevertheless, these data indicate major knowledge gaps regarding PMTCT. [227] Recently published findings from the Ndola Demonstration Project, a pilot PMTCT intervention discussed in depth below, indicate that although awareness of MTCT of HIV improved among community members between 2000 and 2002, knowledge of prevention methods remains incomplete. More generally, the project found that HIV risk reduction communication remains limited. Little change was observed among mothers in the community reporting that they had ever discussed HIV risks, including specific discussions with a sexual partner. [228]

Misconceptions

Misconceptions about HIV/AIDS persist. A little over half of Zambian men (56 percent) and less than half of Zambian women (49 percent) had no incorrect beliefs about HIV transmission. Urban residents were better informed than those in rural areas, with the difference among women (urban women=60 percent, rural women=41 percent) slightly larger than among men (urban men=66 percent, rural men=50 percent).[229]

Almost one-fourth of all respondents thought that HIV could be transmitted by mosquitoes (down from 27.9 percent in 1998). Nineteen percent of men and 26 percent of women thought HIV could be transmitted by witchcraft (down from an overall figure of 22.5 percent in 1998). [230] About 10 percent of respondents thought that HIV could be transmitted by sharing a meal with an infected person. This misconception was highest among rural women (13 percent) and lowest among urban men (8 percent). Overall, misconceptions were more common among rural residents than their urban counterparts.[231]

Youth

According to findings from the 2000 ZSBS, almost all adolescents (ages 15-19) have heard of HIV/AIDS, and the majority indicate that HIV can be avoided. However, 30 percent of men in this age cohort and 32 percent of women believed that HIV *cannot* be avoided. Twenty-one percent of men and 25 percent of women thought that a healthy person could not be infected with HIV. Levels of HIV/AIDS knowledge were lower among respondents ages 15 to 19 than among those ages 20-24 and 24-49.

Among men ages 15 to 19, 64 percent cited consistent condom use and 75 percent having one faithful partner as ways to avoid HIV. Among women of the same age, the figures were 57 and 73 percent, respectively. Adolescents were less likely to know about MTCT of HIV than those age 20 and above, and they were less likely to use condoms (see below).

With regard to misconceptions, 30 percent of men and 24 percent of women ages 15-19 reported that HIV could be transmitted by mosquitoes. Also, 14 percent of adolescent men and 22 percent of adolescent women thought it could be transmitted by witchcraft. These proportions are slightly lower than for older respondents.

Clearly, stronger, sustained efforts are needed to improve young people's knowledge of HIV. In 2000, researchers from Population Services International and Utrecht University examined the effects of a short peer education intervention aimed at improving the sexual health of adolescents in secondary schools in Lusaka. They found that changes regarding attitudes and beliefs about condoms and HIV risk perception that were observed soon after the intervention could not be sustained over time. [232]

Researchers from the University of North Carolina at Chapel Hill and Zambia's Central Statistical Office examined trends in AIDS knowledge and sexual behavior during 1990-98. They found that prevention campaigns focusing on education about AIDS and promoting safer sexual behavior appeared to have made a positive difference in the early 1990s, particularly in Lusaka. They noted that findings from more recent years indicate that further change has stagnated, which is reflected in the 2000 ZSBS. Renewed efforts are needed, particularly targeting condom use with nonregular partners.[233]

Knowledge and behavior related to voluntary counseling and testing are found in the VCT section.

Stigma

Data from the 2000 ZSBS and other sources indicate that HIV/AIDS-related stigma in Zambia is a massive problem. The 2000 ZSBS found that among men, only 21 percent had accepting attitudes towards individuals with HIV; among women, this figure was 18 percent. More respondents in urban than rural areas had accepting attitudes about people infected with HIV. [234]

About 30 percent of the respondents said that they would feel comfortable sharing a meal with an infected person and 44 percent reported that they would buy goods from an HIV-infected shopkeeper, suggesting that the majority of Zambians still believe that they may be infected by such acts. Most respondents (89 percent) expressed a willingness to care for a family member with HIV. Urban respondents (94 percent) were more willing to care for an infected family member than were rural respondents (85 percent).

Over one-third of men (38 percent) and women (39 percent) stated that if a family member were HIV-positive, they would want to keep it a secret. These responses imply that stigma and discrimination against families and individuals affected by HIV are high in Zambia.[235]

As previously mentioned, misconceptions about HIV/AIDS persist and perpetuate stigma. In its study of stigma in rural southern Zambia, Panos also found that conditions such as AIDS are frequently ascribed to witchcraft and/or traditional illnesses. However, HIV/AIDS and witchcraft are seen as relatively distinct: AIDS is "self-inflicted" whereas witchcraft "cannot be prevented or controlled."[236]

The Panos study also found that terms applied to people with, or suspected of having, HIV/AIDS drew associations with socially perceived immorality ("promiscuity"), illness, death, denial, and guilt. Dominant in such discourse was the blame assigned to people with HIV/AIDS, and assumptions made about their past sexual history. [237]

Another finding was that stigma assumed many forms, some more subtle, for example strong resentment of the free medical scheme for local sex workers (provided through an NGO). Truck drivers and migrant workers were also vilified. In addition, there was widely held resentment against people who returned sick to the study area (a rural area).[238]

The International Center for Research on Women is undertaking an analysis of HIV-related stigma and discrimination in urban areas in Lusaka as part of a multisite study in sub-Saharan Africa. Preliminary findings published in June 2002 found that, as with the Panos study, sex workers, traders, truck drivers, and other mobile populations were demonized.[239]

Panos found that the most extreme forms of stigma toward people known or suspected of being HIV-positive were reported in health care settings. Care providers themselves reported that they found patients with HIV/AIDS more difficult because of their multiple infections, their "hysteria," "attention seeking," and "many thoughts" (i.e., need for psychological as well as medical support). They also reported that HIV/AIDS patients were often not given the same services because doctors know they are going to die and, therefore, spent less time with them. [240] ICRW also found that in Zambia, stigma is reported as being most intense in the home and in health clinics, where the most intensive care is provided.[241] Panos stresses that stigma should be differentiated from HIV fatigue/stress related to caring for sick household members and sick patients in health care settings.[242]

Youth

Zambia has a young population; 44 percent of Zambians are under age 15.[243] In 2000, the median age of the population was 16.7. [244]
A worrisome finding from the 2000 ZSBS is that adolescents' scores on HIV/AIDS-related stigma and discrimination indicators were consistently lower than those for older groups, indicating even less acceptance of people with HIV than adults.[245]

Launched in late 1998, the Helping Each Other Act Responsibly Together Campaign (HEART) promotes healthy sexual behaviors among young people by encouraging them to abstain from sexual intercourse or to use a condom every time they have sex. CBOH, the USAID-funded Zambia Integrated Health Project, and Johns Hopkins University, among others, collaborate on this project. They have found that despite Zambian's youth relatively high knowledge about HIV/AIDS, stigma remains an impediment to applying that knowledge to their own personal risk

assessment and, often, real behavior change. Sexually active young people severely underestimate their risk of HIV infection due, in part, to an environment of shame and isolation Many youth do not accept the risk of HIV/AIDS at a personal level and remain reluctant to "humanize" it.[246]

This scenario was also echoed in previously mentioned research undertaken by Family Health International (based on data from interviews with 2,328 youth ages 10-24 years residing in greater Lusaka). Using these data on self-reported behaviors, FHI found that "being worried about getting AIDS" was associated with a higher probability of using a condom at last sex and, for males, with consistent, recent use of condoms. [247]

PWHA

In its 2001-03 strategic framework on HIV/AIDS, the Zambian government recognized the Zambian National Association of People Living with HIV/AIDS (NZP+) as assuming a national leadership role in reducing stigma.[248] However, work in the field examining the role of PWHA in NGOs has found that visibility of PWHA networks is low. Maintaining low visibility may be an intentional strategy, as some PWHA in Zambia have described experiences of stigma and discrimination as a result of their visible involvement in NGOs.[249]

The strategic framework also stated that government ministries and agencies now routinely include NZP+ members in deliberations related to HIV/AIDS and encourage such partnerships in civil society; however, to what degree this is actually occurring requires verification.[250]

Sexual Behavior

Age at First Sex

The 2000 ZSBS found that, based on recalled data of age at first sex (asked of all those who have had sex), the median age at first sex was 17.4 years among women ages 20-49. The 1996 ZDHS reported that the median age at first sex for women ages 20-49 was 16.4 years. [251]

Among men ages 20-49, the median age at first sex reported in the 2000 ZSBS was almost the same as for women (17.9 years). This compared with 16.7 for men ages 25-59 reported in the 1996 ZDHS. [252]

Among respondents in the 2000 ZSBS ages 15-19, the self-reported median age at first sex was 18.5 years for men and 17.6 years for women. [253]

Multiple Partners

In the 2000 ZSBS, many more men (29 percent) than women (16 percent) reported sex with a nonregular partner in the last year. There was little difference between urban and rural men, but urban women (20 percent) were more likely than rural women (13 percent) to report such activity. [254]

Among those ages 15-24, 12 percent of men and 2 percent of women reported having more than one partner in the last 12 months. Urban young men (15 percent) were much more likely to have multiple partners than rural young men (8 percent). [255]

Among adolescents with nonregular partners during the last year, 20 percent reported only one, whereas 8 percent reported two or more. Among married women, only 4 percent stated that they had at least one nonmarital partner during the past year. Almost one-quarter of unmarried adolescent women (24 percent) stated that they had at least one nonregular partner during the past year. [256]

Age Mixing

Girls' vulnerability to acquiring HIV infection heightens in relationships with older partners because of a lack of power to negotiate safe sex and the threat of violence. [257] The 2000 ZSBS found that overall, men were a median of 4.8 years older than women in all nonmarital/noncohabiting sexual partnerships. The median age difference between married men and their extramarital partners was 5.6 years. For almost one-fifth (19 percent) of married men, their nonmarital partner was at least ten years younger. [258]

The Study Group on the Heterogeneity of HIV Epidemics in African Cities found that among men in Ndola ages 15-49, 55 percent of their sexual partners were under 20.[259] For unmarried females ages 15-19, there was no effect of age of oldest partner on HIV infection. However, for *married* female adolescents, there was a significant positive association between larger age difference with husband and HIV infection. For teenage girls with less than a four-year age difference with their husbands, none was infected with HIV, whereas 34 percent were infected when the age difference with their husbands was four years or greater. [260]

Premarital Sex

In the 2000 ZSBS, of all unmarried respondents ages 15 to 24, 36 percent of men and 31 percent of women reported having had sex in the last 12 months. Among both young men and women, premarital sex was much more common in rural areas than in urban areas. This is worrying, as condom use among young people is lower in rural areas than in urban areas (mirroring the general population, see below). [261]

Condom Use

Data from the 2000 ZSBS indicate that:

- Condom use within marriage or other consensual unions is very low and has not risen since 1998.
- Condom use in nonregular relationships is much higher than for other relationships, but still low.
- Among adolescent women, 41 percent reported condom use with a nonregular partner, whereas this figure was 33 percent for all women.[262]

- Urban-rural disparities in condom use are often wide and may be related to limited awareness and availability in rural areas, as well as less knowledge and higher degree of misperceptions in rural areas (see Knowledge section above).

The 2000 ZSBS found that very few respondents in a consensual union reported condom use during the last sexual act with their spouse(s) or cohabiting partner (6 percent of men and 5 percent of women). Particularly worrying is that these percentages did not change among respondents who had reported an STI in the last year.[263] They also show almost no increase from those found in the 1998 ZSBS. [264]

Findings from the Ndola Demonstration Project indicated that women's condom use at last sex with a regular partners was low (13 percent) and had remained stable between 2000 and 2002. The data suggested that although women were reducing their number of sexual partners, no significant reduction was observed among men.[265]

The 2000 ZSBS did not include a question on main reason for condom use within marriage, but other research has shown that condom use within marriage is primarily for pregnancy prevention.[266] The proportion of the 2000 ZSBS respondents who used a condom during last intercourse with a spouse or cohabiting partner was slightly higher for urban men (10 percent) than for all other respondents. Of men with an extramarital partner during the last 12 months, 11 percent reported condom use with their spouse. Among the 15 women who reported an extramarital partner, none reported using a condom with a marital or cohabiting partner. [267]

Among those who reported sex with a nonregular partner during the past year, 39 percent of men and 33 of women reported condom use at the last sexual act with a nonregular partner. Those in urban areas (men=48 percent, women=38 percent) were more likely to report condom use than those in rural areas (men=34 percent, women=29 percent). [268]

Among sexually active, unmarried young people (15-24), 38 percent of men and 36 percent of women reporting condom use at last sex. Condom use among both urban young men (49 percent) and urban young women (48 percent) is much higher than among those living in rural areas (men=32 percent, women=28 percent). This is of concern, as among both young men and women, premarital sex is much more common in rural areas than in urban ones.

Among adolescents (15-19) reporting a nonregular partner in the past year, 35.7 percent of men and 40.8 percent by women used a condom at last sex with their regular partner. Among women, the adolescent percentage is considerably higher than that found among older age groups. [269]

Transactional Sex

According to an analysis of demographic and health surveys undertaken by Population Reference Bureau, 38 percent of unmarried Zambian women ages 15 to19 reported having recently received money or gifts in exchange for sex; the comparable figures were 13 percent in Zimbabwe, 21 percent in Kenya, 26 percent in Mali, and 31 percent in Uganda. [270]

The 2000 ZSBS collected data on payment during the last sexual act with a nonregular partner. It found that one-quarter of women reported receiving payment, with large differences between urban (19 percent) and rural (32 percent) respondents.[271]

In interviews with youth ages 15 to 20 in Ndola, researchers from the Study Group on the Heterogeneity of HIV Epidemics in African Cities found that material gifts from men to women were often part of sexual relationships. [272] Persistent, high levels of poverty and the current food crisis may also be increasing situations in which sex is exchanged for food, money, or basic needs.[273]

Male Circumcision

Some observational studies from sub-Saharan Africa have indicated that male circumcision may reduce the risk of HIV acquisition,[274], [275] though circumcision does not appear to affect transmission from HIV-positive men to their partners.[276] The limitations of these studies have been highlighted, and further study is needed on both biomedical and sociobehavioral issues before promoting male circumcision as a public health intervention.

The 2000 ZSBS found that male circumcision rates exceeded 10 percent in five provinces. In Northwestern Province, 73 percent of men reported being circumcised; this province is home to several ethnic groups that traditionally circumcise. [277] Moreover, this province borders Angola and DRC. In Angola, MC prevalence is greater than 80 percent; in the DRC, it ranges between 20 and 80 percent.[278]

In Copperbelt Province, a mining center with high population mobility, 21 percent of men reported being circumcised in the 2000 ZSBS. In Western, Lusaka, and Central provinces, male circumcision prevalence was 18, 14, and 12 percent, respectively.[279] Generally in sub-Saharan Africa, male circumcision prevalence under 20 percent is considered low. [280]

Researchers from the Study Group on the Heterogeneity of HIV Epidemics in African Cities found that prevalence of male circumcision in Ndola was only 9 percent and that HIV infection in Ndola was significantly associated with lack of male circumcision.[281] , [282]

Alcohol Use

The 2000 ZSBS found that alcohol use at last sex was reported by 23 percent of women and 20 percent of men. Among urban women, 35 percent reported alcohol use at last sex; among rural women, this figure was 14 percent. The corresponding figures for men were 32 and 14 percent, respectively.[283]

The FHI study on youth previously mentioned found that having ever used alcohol and drugs was a risk factor for ever having had sex, having more sexual partners over lifetime, and having more than one partner during the last three months.[284] In interviews with youth ages 15 to 20 in Ndola, researchers from the Study Group on the Heterogeneity of HIV Epidemics in African Cities found that alcohol use often accompanied sex.[285]

Impact

At a Glance

The At a Glance section summarizes the more detailed data found below it.

Demographic

Population Size

- Zambia's population is already 8 percent smaller than it would have been in a "no-AIDS" scenario. By 2050, it will be 43 percent smaller than it would have been in the absence of AIDS.

Life Expectancy

- During 2000-05, Zambia will have the world's lowest life expectancy at birth: 32.4. For 2045-50, Zambia will have the world's sixth-lowest life expectancy at birth: 52.3.
- Although Zambia's life expectancy is projected to increase, AIDS will reduce life expectancy by 26 to 39 percent through 2050.

Mortality

- By 2000, 749,000 Zambians had died because of AIDS, with AIDS having increased the number of deaths in the country by 32 percent. By 2015, AIDS will have increased the number of deaths by 83 percent, bringing the cumulative total of AIDS deaths to 2.8 million. By 2050, 6.2 million Zambians will have died because of the epidemic.
- The U.S. Bureau of the Census estimates that Zambia's infant mortality rate was 100.2 deaths per 1,000 live births in 2002, whereas it would have been 76.5 without AIDS. The comparable figures for under-five mortality were 170.8 and 132.7, respectively.

Macroeconomic

- In the medium term, Zambia will experience a 5.8 percent reduction in GDP per capita because of HIV/AIDS; of this percentage, 1.0 percent is due to total factor productivity, 1.7 percent to the capital/labor ratio, and 3.1 percent to "experience" (aggregate knowledge and skills of the workforce, lost due to AIDS mortality and to the lack of such experience among new labor force entrants).

Labor Force

- The ILO projects that Zambia will lose 19.9 percent of its labor force by 2020 (compared with the labor force size without HIV/AIDS).

Health Sector

- HIV/AIDS is consuming an increasingly larger share of the health budget.
- AIDS patients are projected to occupy 45 percent of all hospital beds by 2014.
- Increases in AIDS morbidity and mortality among health workers have reduced personnel and increased stress and overwork. Lost time and labor have rendered health care more scarce and more expensive, leaving households to take on a significant burden.
- At least 68 percent of adult patients with TB at University Teaching Hospital, the nation's largest hospital, are HIV-positive.

Education

- High death rates among Zambian teachers are dramatically affecting the supply of education.
- On the demand side, the number of Zambian children of primary school age will be 20 percent lower by 2010 than pre-AIDS projections.

Households

- In most cases, households and communities have responded to HIV/AIDS with no external financial or material support, bearing the brunt of caring for sick relatives and other community members.
- Because of HIV/AIDS, poverty, and food shortages, traditional coping mechanisms in Zambia have become largely irrelevant. With an increasing number of dependents, household food stores are drastically inadequate. To survive, some engage in activities such as sex work or border trading, increasing their risk of exposure to HIV.
- Households affected by AIDS report annual income 30 to 35 percent lower than unaffected households.
- Within households, the burden of caring for PWHA usually falls on women.
- Whether households and communities can sustain current coping strategies, which are exacting an enormous psychosocial toll as well, is unclear.

Orphans and Other Vulnerable Children

- During the 1990s, there was a steady increase in the prevalence of orphanhood in Zambia. The number of double orphans (those who have lost both parents) tripled between 1992 and 2000.
- At the end of 2001, UNAIDS estimated that 570,000 AIDS orphans (ages 0 to 14) were living in Zambia. A USAID report estimated that the percent of Zambia's orphans due to AIDS rose from 11.5 percent in 1990 to 65.4 percent in 2001; it projected that this percentage will rise to 77.2 percent in 2010.
- In most cases in Zambia, extended families take in orphans who have lost both parents. These families are themselves likely to be poor and must therefore stretch already inadequate resources to provide for both orphans and their own children. Orphans in foster families may experience inferior treatment vis-à-vis nonorphans.
- As the traditional safety net of fostering fails, orphans may be become heads of households and responsible for caring for younger siblings. Orphans are particularly vulnerable to

malnutrition, illness, abuse, child labor, and sexual exploitation. Concurrently, they suffer the stigma and discrimination associated with HIV/AIDS.

- Partly as a result of HIV/AIDS — but also because of poverty and weakening social safety nets (themselves intertwined with HIV/AIDS) — Zambia has a large number of street children; in 1997, there were an estimated 70,000 to 150,000 children either living or working in the streets. Most lived in Livingstone, Lusaka, Kitwe, and Ndola, and few attended school.

Industry

- A study conducted in the Konkola Copper Mines found that HIV prevalence ranged from 18.1 to 20.1 percent among permanent employees and 14.4 to 15.2 percent among contract employees.

- When they identify common causes of employee ill health, Zambian firms often mention TB, an OI frequently associated with AIDS. They also cite the costs of productivity losses, paid sick leave, cost of employee replacement, and funerals.

Prisons

- A major study found that HIV prevalence among prisoners is 27 percent. Among men, age, marital status, number of casual lifetime partners, and syphilis serology were all significantly associated with HIV status. Although the major source of HIV infection among Zambian prisoners is heterosexual intercourse outside jail, the risk of HIV transmission from penetrative anal sex while incarcerated is high.
- Condom distribution in prisons remains illegal, as their distribution would be seen as condoning homosexuality, which is illegal in Zambia.

Burial

- Because of AIDS mortality, Zambia is facing a shortage of burial space, particularly in urban areas.

Demographic

In February 2003, the U.N. Population Division estimated Zambia's population at 10.812 million; 50.3 percent of the population is female. The U.N. Population Division reported that HIV adult prevalence had already peaked in Zambia at 23.2 percent in 1996, and that prevalence would fall to 10.0 percent by 2050.[286]

The UN. examined population under a "no-AIDS" scenario. Zambia's population is already 8 percent smaller than it would have been in a "no-AIDS" scenario. (tables 4 and 5). By 2050, it will be 43 percent smaller than it would have been in the absence of AIDS.[287]

Table 4. Projected Population with and without AIDS, 2000, 2015, and 2050 (Thousands)

Period					
2000		2015		2050	
With AIDS	Without AIDS	With AIDS	Without AIDS	With AIDS	Without AIDS
10,419	11,360	12,670	16,845	18,528	32,283
Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat. *World Population Prospects: The 2002 Revision. Highlights.* New York: February 2003 <http://www.un.org/esa/population/publications/wpp2002/wpp2002annextables.PDF>					

Table 5. Projected Population Reductions, 2000, 2015 AND 2050					
Period					
2000		2015		2050	
Population Reduction (Thousands)	Percentage Reduction	Population Reduction (Thousands)	Percentage Reduction	Population Reduction (Thousands)	Percentage Reduction
941	8	4,175	25	13,755	43
Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat. *World Population Prospects: The 2002 Revision. Highlights.* New York: February 2003 <http://www.un.org/esa/population/publications/wpp2002/wpp2002annextables.PDF>					

Life Expectancy

During 2000-05, Zambia will have the world's lowest life expectancy at birth: 32.4. For 2045-50, the U.N. projects that Zambia will have the world's sixth-lowest life expectancy at birth: 52.3. [288]

Table 6 indicates that although Zambia's life expectancy is projected to increase, AIDS will reduce life expectancy by 26 to 39 percent through 2050. [289]

Table 6. Life Expectancy with and without AIDS, 2000-2005, 2010-2015, and 2045-2050											
Period											
2000-2005				2010-2015				2045-2050			
With AIDS	Without AIDS	Reduction in Life Expectancy	% Re-duction	With AIDS	Without AIDS	Reduction in Life Expectancy	% Re-duction	With AIDS	Without AIDS	Reduction in Life Expectancy	% Re-duction
32.4	53.4	21	39	35.3	57.4	22	39	52.3	70.3	18	26
Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat. *World Population Prospects: The 2002 Revision. Highlights.* New York: February 2003 <http://www.un.org/esa/population/publications/wpp2002/wpp2002annextables.PDF>											

AIDS Mortality

UNAIDS estimated that were 120,000 adult and child AIDS deaths in Zambia during 2001.[290] (The comparable figure for 1999 was 99,000.[291]) It estimates that at least 700,000 Zambian adults and children have died because of AIDS since the epidemic's beginning.[292]

According to the U.N. Population Division, by 2000, 749,000 Zambians had died because of AIDS, with AIDS having increased the number of deaths in the country by 32 percent. The U.N. Population Division projects that by 2015, AIDS will have increased the number of deaths by 83 percent, bringing the cumulative total of AIDS deaths to 2.8 million. By 2050, 6.2 million Zambians will have died because of the epidemic (tables 7 and 8).[293]

Table 7. Projected Number of Deaths with and without AIDS, 1980-2000, 2000-2015, and 2015-2050 (Thousands)

Period					
1980-2000		**2000-2015**		**2015-2050**	
With AIDS	Without AIDS	With AIDS	Without AIDS	With AIDS	Without AIDS
3,110	2,361	4,463	2,445	9,677	6,284

Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat. *World Population Prospects: The 2002 Revision. Highlights.* New York: February 2003 <http://www.un.org/esa/population/publications/wpp2002/wpp2002annextables.PDF>

Table 8. Excess Deaths Because of AIDS, 1980-2000, 2000-2015, and 2015-2050

Period					
1980-2000		**2000-2015**		**2015-2050**	
Excess Deaths (Thousands)	Percentage Increase	Excess Deaths (Thousands)	Percentage Increase	Excess Deaths (Thousands)	Percentage Increase
749	32	2,018	83	3,393	54

Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat. *World Population Prospects: The 2002 Revision. Highlights.* New York: February 2003 <http://www.un.org/esa/population/publications/wpp2002/wpp2002annextables.PDF>

According to the U.S. Bureau of the Census, Zambia's infant mortality in 2002 was 100.2 deaths per 1,000 live births; in the absence of AIDS, it would have been 76.5. The comparable figures for under-five mortality are 170.8 and 132.7, respectively. [294]

By 2010, the Census Bureau estimates that infant mortality will be 92.3, whereas it would have been 64.7 in a "no-AIDS" scenario. The comparable figures for under-five mortality are 153.4 and 108.3, respectively. [295]

The 2000 ZSBS found that causes of death most commonly reported for all persons in households were tuberculosis (17 percent), malaria (15 percent), other infectious diseases (16 percent), and diarrhea (13 percent). Among adults, tuberculosis was the main cause (32 percent), followed by malaria (14 percent) and other infectious diseases (25 percent). Although over half of deaths were reported as having been associated with prolonged illness, AIDS was rarely mentioned as a cause of death, Given high levels of stigma, it is reasonable to assume that some percent of AIDS-related deaths were reported under other causes such as TB.[296]

Research undertaken by UNAIDS and WHO found that for Zambia, the HIV-attributable under-5 mortality rate (per 1,000 and corrected for competing causes of mortality) was 33.6 during the 1990s. (Rates among the 39 countries studies ranged from Madagascar [0.2] to Botswana [57.7].) The HIV-related population proportional attributable risk of dying before age 5 (i.e., the proportion of all-cause under-5 mortality attributable to HIV) was 20.7 percent; the average for the 39 sub-Saharan African countries studies was 7.7 percent, ranging from 0.1 percent in Madagascar to 42.4 percent in Botswana. [297]

Macroeconomic Impact

As mentioned above, Zambia's Ministry of Finance and National Planning states that:

> In the 1990s, the HIV/AIDS pandemic and other diseases have worsened the poverty situation. At the time when resources were already low, HIV/AIDS has increased the disease burden beyond the individual level to adversely impact on the economics of the family, the health system, the working environment as well as human capital and many others. Principally, AIDS threatens the country's capacity building efforts because it strikes the educated and skilled as well as the uneducated. Consequently, it reverses and impedes the country's capacity by shortening human productivity and life expectancy. The long periods of illness of the skilled personnel in employment has translated into severe loss in economic productivity, which leads to considerable loss to the employer in lost person-hours. The complex relationship between economic growth and HIV/AIDS is increasingly being recognized: the epidemic is as much likely to affect economic growth as it is affected by it.[298]

Haacker from the IMF has modeled the impact of HIV/AIDS on the Zambian economy under several scenarios. He estimates that in the medium term under an "open-economy" model, Zambia will experience a 5.8 percent reduction in GDP per capita because of HIV/AIDS; of this percentage, 1.0 percent is due to total factor productivity, 1.7 percent to the capital/labor ratio, and 3.1 percent to "experience" (aggregate knowledge and skills of the workforce, lost due to AIDS mortality and to new entrants in labor force lacking such experience). In the long term, he projects a 1.8 percent decrease in GDP per capita because of HIV/AIDS. The lower figure for the long-term reflects, partly, that the decline in experience will be partly reversed as the weight of younger cohorts in the working-age population declines, reflecting lower birth rates. [299]

The impact on *overall* public expenditures may be relatively negligible, as Zambia is highly dependent on external donors for HIV/AIDS funding.[300] Moreover, the costs of HIV/AIDS care have thus far been largely assumed by households and communities.[301] However, HIV/AIDS is consuming an increasingly higher share of the health budget.[302]

Labor Force

The International Labor Organization projects that Zambia will lose 19.9 percent of its labor force by 2020 (compared with the labor force size without HIV/AIDS). [303]

Government is the largest employer in Zambia. There have been no official data released on the impact of HIV/AIDS on the civil service; however, several ministries have reported on increases in staff mortality and rising indirect and direct personnel costs, including funeral disbursements.[304] In its 2001 workplan, Zambia's Ministry of Labor and Social Security declared AIDS a "national disaster" that threatened productivity of factories, farms, mines, and other enterprises. The Ministry of Energy and Water Development has reported high AIDS mortality among its highly mobile staff. In addition to staff lost to AIDS, the ministry reports loss of production hours due to attendance of funerals and incurred costs of recruitment and retraining. The Ministry of Commerce, Trade, and Industry has also reported staffing and productivity losses because of HIV/AIDS. The Ministry of Education states that high death rates among teachers are massively affecting its work. It also notes that the budgetary allocations of provincial education officers are inadequate to meet the costs of coffins and funerals resulting from the high death rates among teachers.[305]

Dependency Ratio

The dependency ratio may be defined as:

$$\frac{\text{population ages 0 to 14 + population ages 50 and above}}{\text{working age population (15-49)}}$$

The U.S. Census Bureau estimated that Zambia had the southern African region's highest dependency ratio in 2000 at 121.5. During the initial stages of the epidemic, dependency ratios increase as most deaths occur among the working age population, thus decreasing the denominator. This scenario means that there are fewer working adults to support the nonworking youngest and oldest members of the population. During later stages of the epidemic, as birth rates decline — given the high mortality among women of reproductive age and lower fertility of HIV-positive women, thus decreasing the numerator — dependency ratios may fall. The Census Bureau projects that Zambia's dependency ratio will be 106.7 in 2010, whereas it would have been 108.4 without AIDS. [306]

Health Sector

As mentioned above, HIV/AIDS is consuming a higher share of the health budget.[307] There are few reliable data on number of HIV/AIDS patients occupying hospital beds nor on costs (public and private) of treating OIs. At Monze and Choma hospitals in Southern Province, patients with HIV/AIDS accounted for 43 and 47 percent, respectively of bed days in 1995. [308] Zambia's Ministry of Finance and National Planning reports that AIDS patients will occupy 45 percent of all hospital beds by 2014 and that an estimated US$200 per AIDS patient per day is needed for hospitalization. [309] (Current per capita public expenditure on health is approximately US$9 per year [using data from Haacker and World Bank.[310])

With regard to supply, those working in the health sector are also affected by HIV/AIDS. Mortality rates for nurses in Monze and Choma districts increased fourfold between 1980-85 and 1985-88; between 1980-85 and 1989-91, the increase was 13-fold. Information available from

death certificates suggested that AIDS was the probable cause in the rise in mortality; moreover, the district health systems recorded concurrent increased costs associated with funeral grants. [311]

Increases in health worker illness and death rates have reduced personnel and increased stress and overwork. Lost time and labor have rendered health care more scarce and more expensive, leaving households to take on a significant burden. [312] Haacker notes that if Zambia were to maintain its current numbers of doctors and nurses, and assuming HIV prevalences for health sector staff are similar to those of the general population, training of doctors and nurses would have to increase by about 25-40 percent between 2000-10.[313] Concurrently, increasing workloads and concerns over HIV infection may prompt some health personnel to avoid assignments in areas worst affected by HIV/AIDS and provide additional incentive to emigration, thereby exacerbating brain drain. [314]

Haacker has also examined the costs of HIV/AIDS-related health services in nine southern African countries. To provide a common indicator to compare data across countries, his analysis was based on the assumption that the coverage rate for palliative care and prevention of OIs is 30 percent, coverage rate for clinical treatment of OIs is 20 percent, and the coverage rate for ART is 10 percent. In Zambia, he found that total HIV-related health services, assuming these rates of coverage, would account for 2.3 percent of GDP in 2000 and 2.8 percent of GDP in 2010.[315] (The HIV/AIDS-related costs were broken down as follows: Costs for palliative care and prevention of OIs were estimated at 0.2 percent of GDP for 2000 and 2010; for clinical treatment of OIs: 0.8 and 0.9 percent of GDP, respectively; and for ART: 1.3 and 1.7 percent of GDP, respectively. NB: These estimates were published in February 2002.) [316]

Tuberculosis

(See also the above section on AIDS mortality.)

According to WHO, TB notification rates (all cases) increased from 91 per 100,000 population in 1980 to 98 in 1985, 285 in 1990, 390 in 1995, and 478 in 2000. In 2000, only Botswana, Lesotho, Namibia, and Swaziland had higher TB case notification rates.[317] In April 2002, Zambia's National HIV/AIDS/STD/TB Council released a statement indicating that at least 68 percent of adult patients with TB at University Teaching Hospital, the nation's largest hospital, were HIV-positive. [318]

Zambia does not use the Directly Observed Short-Course Treatment (DOTS). However, CBOH has begun to train district health workers on use of DOTS. Thus far, 35 districts have received training, and some have started to implement DOTS. By the end of 2003, all 72 districts are anticipated to have received DOTS training and to have begun implementation.[319]

Education

Educators may be particularly vulnerable to HIV infection given their comparatively high incomes, sometimes remote postings, and geographic and social mobility — all of which may increase their number of sexual partners and contacts with different sexual networks.[320]

HIV/AIDS has a direct impact on the supply of and demand for education. On the supply side, budgets are having to accommodate higher teacher hiring and training costs to replace teachers who have died because of AIDS, as well as the payment of full salaries to sick teachers who are absent and additional salary costs for substitute teachers. Zambia's Ministry of Education reports that high death rates among teachers are massively affecting its work. It also notes that the budgetary allocations of provincial education officers are inadequate to meet the costs of coffins and funerals resulting from the high mortality among teachers.[321]

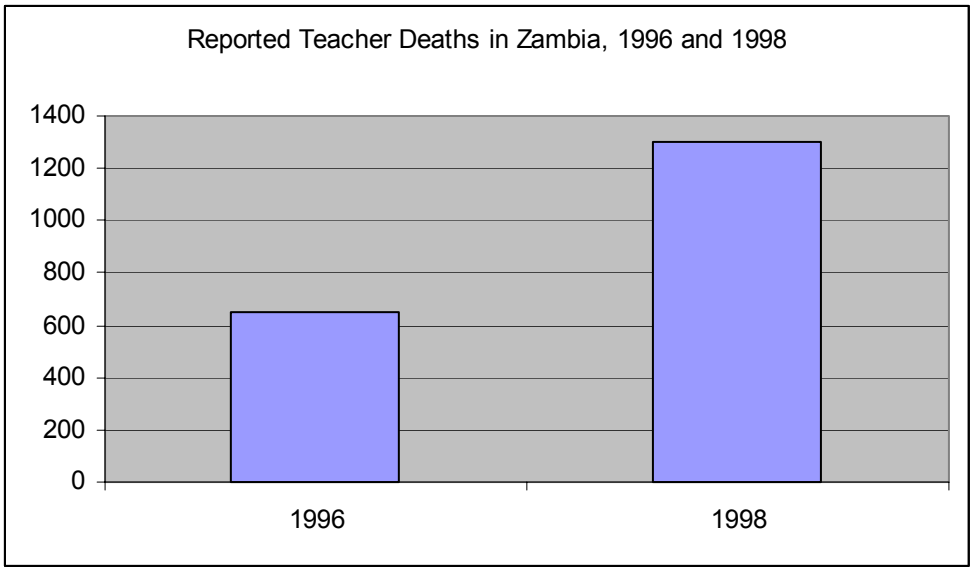
The World Bank notes that in Zambia, 1,300 teachers died in the first 10 months of 1998, compared with 680 teachers in 1996. Based on the assumption that teachers have the same infection rate as estimated for the general population, the Bank projects that 1.7 percent of Zambia's teachers will die because of AIDS annually between 2000 and 2010.[322]

Researchers from the Bank and Imperial College London estimate that there are currently 37,500 primary school teachers in Zambia, of whom 7,900 are estimated to be HIV-positive. The estimated number of primary school teachers who died because of AIDS in 2000 is 815, corresponding to 45 percent of all teachers trained that year. This figure will rise to 1,250 by 2010. The Ministry of Education will need to double it annual teacher output from training colleges to meet Education for All goals. By 2010, the major projected financial cost associated with HIV/AIDS will be teacher training (US$15 million) followed by absenteeism (US$8 million).[323]

In Zambia, over two-thirds of a survey sample of teachers with relatives who were ill with or had died because of AIDS were unable or unwilling to talk about the problem with friends or family. Such isolation, as well as fear about their own HIV status, affects psychological well-being and ability to teach. Posting teachers to rural areas in Zambia has become increasingly difficult, with the result that teachers tend to be concentrated in urban areas; part of this is also due to AIDS-affected teachers' desire to be close to hospitals or clinics.[324]

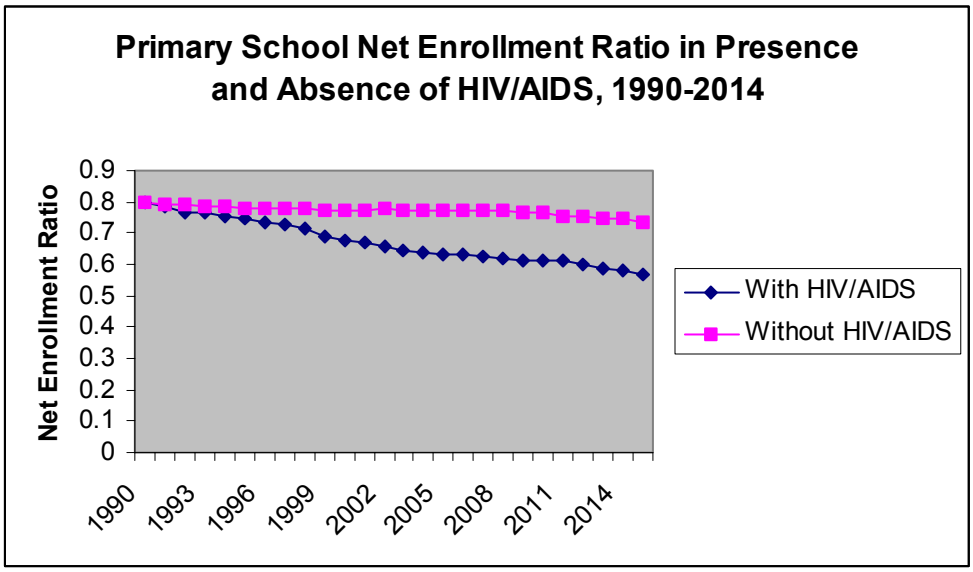
On the demand side, the World Bank projects that the number of Zambian children of primary school age will be 20 percent lower by 2010 than pre-AIDS projections. Assuming a primary student-to-teacher ratio of 46:1, a deficit of approximately 3,900 teachers is expected by 2010. These conclusions assume current low enrollment rates and high dropout rates, especially for orphans and girls. If a higher share of children were to attend school, the teacher-student gap would increase, and greater human and financial resources required to enhance supply. [325]

Figure 2. Reported Teacher Deaths in Zambia, 1996 and 1998



Source: POLICY Project. *HIV/AIDS in Southern Africa: Background, Projections, Impacts, and Interventions.* Washington, DC: The Futures Group International, October 2001 <http://www.policyproject.com/pubs/countryreports/SoAf10-01.pdf>

Figure 3. Primary School Net Enrollment ratio in Presence and Absence of HIV/AIDS, 1990–2014



Source: World Bank. *Education and HIV/AIDS: A Window of Hope*. Washington, DC: 2002 <http://www1.worldbank.org/education/pdf/Ed & HIV_AIDS cover print.pdf>

Households

Throughout its HIV/AIDS strategic framework for 2001-2003, the government praises households for "adapting new coping strategies" such as new income-generating activities, home care of patients, and formation of informal extended families. It also pays tribute to communities for "owning" the problem of HIV/AIDS and bearing the brunt of caring for sick relatives and other community members. The framework underscores that in most cases households and communities have responded to HIV/AIDS with no external financial or material support.[326]

The 2000 ZSBS found that 66 percent of households in which a member had died or had been ill for at least three months during the last year received no external assistance. Of households that did receive assistance, most was from friends and family (56 percent), health care workers (18 percent), churches (49 percent), and community organizations (10 percent) — all of which are themselves being severely affected by HIV/AIDS. The authors of the 2000 ZSBS inferred that only about 20 percent of households affected by AIDS received any government assistance. [327]

Despite the government's praise, whether households and communities can sustain current coping strategies, which are exacting an enormous psychosocial toll as well, is not mentioned in the strategic framework. And, as discussed in the Stigma section, those who are most involved in care of AIDS patients may be more prone to stress and anger, emotions that be made manifest in ways that convey stigma or discrimination toward PWHA.[328]

Because of HIV/AIDS, poverty, and food shortages, traditional coping mechanisms in Zambia have become largely irrelevant. With an increasing number of dependents, household food stores that might have once lasted through seasonal shortages are now drastically inadequate. Household assets are being sold as families try to buy commercially available foods, which have escalated in price. To survive, some engage in activities such as sex work or border trading, increasing their risk of exposure to HIV. [329]

A study of the economic impact of AIDS at household level found that in urban areas, family displacement (resulting from the death of the breadwinner and thus loss of housing tied to his/her job) was highly predictive of a shift for the surviving family members to poorer housing, with most families losing electricity or piped water supply, experiencing food shortages, and transitioning into relative poverty. In rural areas, adult mortality forced families to withdraw older children from school to help maintain current levels of food production. In urban areas, educational continuity was most severely jeopardized for girls and for children in low-income families. In both urban and rural areas, age was the principal factor predictive of nutritional and health status in AIDS-affected families, with younger children the most vulnerable.[330] , [331]

In a recent study of two areas in Kafue (Central Province), for example, households affected by AIDS reported annual income levels 30 to 35 percent lower than unaffected households. The affected households also reported selling assets such as bicycles and radios to pay costs such as health and funeral expenses. [332]

Within Zambian households, the burden of caring for PWHA usually falls on women. This additional caregiving role — which, as mentioned above, usually involves no external assistance — and its mental and physical demands occur just as household resources are likely to be diminishing.[333] (The 2000 ZSBS found that 23 percent of households are headed by women,

with the proportion in rural areas [24 percent] somewhat larger than in urban areas [21 percent].[334]

As mentioned above, the HRW report on sexual abuse of girls also highlighted the gender-disaggregated burden of AIDS morbidity and mortality. Many of the girls interviewed were unable to continue their schooling because their income or labor or caregiving was needed in an AIDS-affected household (whereas this is not the case for most boys, who remain in school).[335]

Orphans and Other Vulnerable Children

The 2000 ZSBS indicated a steady increase in the prevalence of orphanhood, from 3 percent in 1992 to 7 percent in 2000 for maternal orphans and 6 percent in 1992 to 11 percent in 2000 for paternal orphans. The study suggests that the number of double orphans (those who have lost both parents) tripled between 1992 and 2000. Urban children were slightly more likely than rural children to be orphaned, perhaps due to higher HIV/AIDS prevalences in urban areas.[336]

At the end of 2001, UNAIDS estimated that 570,000 AIDS orphans (ages 0 to 14) were living in Zambia.[337] *Children on the Brink 2002*, a report on AIDS orphans commissioned by USAID, estimated that the percent of Zambia's orphans due to AIDS rose from 11.5 percent in 1990 to 65.4 percent in 2001; it projected that this percentage would rise to 73.8 percent in 2005 and 77.2 percent in 2010. [338]

In most cases in Zambia, extended families take in orphans who have lost both parents. These families are themselves likely to be poor and must therefore stretch already inadequate resources to provide for both orphans and their own children.[339] Moreover, orphans in foster families may experience inferior treatment vis-à-vis nonorphans. For example, a psychosocial baseline survey of OVC in four Zambian districts conducted by FHI and SCOPE-OVC found that orphans had high levels of sadness, felt they were roughly (or mis-) treated compared to nonorphans, and had low involvement in decisionmaking affecting their lives. [340]

As the traditional safety net of fostering fails, orphans may be become heads of households and responsible for caring for younger siblings. [341] Orphans are particularly vulnerable to malnutrition, illness, abuse, child labor, and sexual exploitation. Concurrently, they suffer the stigma and discrimination associated with HIV/AIDS. [342]

Partly as a result of HIV/AIDS — but also because of poverty and weakening social safety nets (themselves intertwined with HIV/AIDS) — Zambia has a large number of street children; in 1997, there were an estimated 70,000 to 150,000 children either living or working in the streets. Most lived in Livingstone, Lusaka, Kitwe, and Ndola, and few attended school.[343]

In October 2002, the International Labor Organization reported that HIV/AIDS and famine had led about 500,000 Zambian children to drop out of school and work in farms and factories, often under dangerous conditions. ILO noted that child labor laws, which stipulate that children under 14 should not be engaged in any form of employment, are poorly enforced. (How ILO arrived at the figure of 500,000 was not mentioned; it is likely an estimate based on field staff's observations and thus should be viewed with caution.)[344]

Agriculture

Data quantifying the impact of HIV/AIDS on agriculture in Zambia are unavailable, although the World Bank notes that HIV/AIDS (and malaria) have reduced agricultural productivity. [345]

Industry

In a study conducted by the Institute of Economic and Social Research at the University of Zambia, London School of Hygiene and Tropical Medicine, and Bart's & The London School of Medicine, employers and employees (n=108) in eight Zambian firms were interviewed to assess the direct and indirect costs of illness. The main causes of ill health were TB (46.8 percent), diarrhea (12.9 percent), and STIs (5.8 percent). Annual treatment costs incurred by employers ranged from US$4 to US$100 per person treated. Other employers costs included productivity losses, paid sick leave, cost of employee replacement, and funerals. Employees incurred costs of US$13 on average per episode of illness. The researchers note that the common causes of ill health were those most frequently associated with AIDS. They were often ineffectively treated. One recommendation, therefore, is improving disease management to reduce costs to both employer and employee. More broadly, the study illustrates that the impact of HIV/AIDS on firms is high, and that employers must adopt strategies to address it. [346]

Researchers from Boston University and the University of Witwatersrand conducted HIV testing among (predominantly male) employees in Zambia, South Africa, Namibia, and Botswana. Between 1999-2001, with the consent of management and labor representatives, they carried out 43 voluntary anonymous, unlinked HIV prevalence surveys in mining, manufacturing, and other workplaces involving a total of 42,827 employees. Individual company surveys ranged in size from 350 to 9,000 subjects. [347]

Findings for the entire cohort were released in Barcelona in July 2002 (data for Zambian participants only is not yet available). Among the entire sample, HIV seroprevalence was 16.8 percent. Seroprevalence differed by job category and age. Professionals and managers (3.3 percent) had the lowest HIV seroprevalence, whereas unskilled (18.6 percent) and contract employees (21 percent) had much higher HIV seroprevalences. HIV seroprevalence was highest among employees ages 31 to 40 (21.2 percent). [348] These data raise several key points:

- Will Zambian employers increase outsourcing of tasks requiring low skills levels and decrease their reliance on unskilled workers in an effort to minimize HIV/AIDS-related costs? How will this approach play out in a context of economic uncertainty, job losses, and worsening poverty?

- Given that Zambia has no HIV/AIDS legal framework — including legislation related to discrimination and preemployment testing — nor a strong HIV/AIDS legal and advocacy network (discussed in Response section below), how will be inequities in access to ART be addressed?

Mining

In 2001, an anonymous unlinked, saliva-based HIV prevalence survey was carried out in the Konkola Copper Mines, a major mining company in the Zambian Copperbelt region. In total, 9,024 employees were surveyed, representing 55 to 88 percent of employees in the various company divisions. Preliminary findings were presented in Barcelona in July 2002 and indicated that HIV prevalence in the various sites ranged from 18.1 percent to 20.1 percent among permanent employees and 14.4 percent to 15.2 percent among contract employees.[349]

Military

HIV prevalence figures for the military have not been released by the government. See the Response section below for detail on the Zambian Defense Force's HIV testing policy

Prisons

There are 13,000 to 15,000 inmates in Zambia's prisons, most of whom are men. Researchers from Zambia's Copperbelt University and Tropical Diseases Research Center visited three of the country's main jails — Mukobeko, Kamfinsa, and Solwezi — between November 1998 and June 1999. Mukobeko is a maximum-security prison keeping long-stay inmates, whereas the other two hold prisoners on short sentences. The study was voluntary and approved by Zambia's Prison Service, National AIDS Program, and Permanent Human Rights Commission.

The researchers found that 27 percent of inmates tested HIV positive (n=1,566, of whom 43 were women.). There was no significant difference in HIV prevalence between male prisoners (26.7 percent) and female prisoners (32.6 percent). Among inmates ages 20 years and below, HIV prevalence was 14.5 percent, compared with 31.5 percent among those 30 to 39. HIV prevalence among unmarried prisoners was 23.7 percent; among those currently married, 27.2 percent; and among those separated, divorced, or widowed, 36.3 percent. These findings are much higher than the HIV seroprevalence of 16.1 percent reported in similar studies conducted in 1988-89. They are also higher than the adult HIV prevalence of 20.5 percent reported by UNAIDS at the end of 2001.

Because of the small number of female prisoners in the study, risk factor analysis was only performed for male inmates. Similarly, heroin use was excluded as only five inmates reported using heroin in prison. Tattooing and the sharing of shaving equipment were common, but were not associated with infection with HIV. Age, marital status, the number of casual lifetime partners, and syphilis serology were all significantly associated with HIV status, whereas the duration of sentence and prison of incarceration were not. The risk of HIV infection increased with increasing lifetime number of casual partners: among those reporting no casual partner or only one casual partner, HIV prevalence was 25.9 and 24.5 percent, respectively, whereas among those reporting over nine casual partners, it was 38.7 percent.

All male inmates had had heterosexual contacts outside jail. Fifty-nine (3.8 percent) inmates reported having sex (penile anal intercourse) with other men in prison. No association was found between having sex with another man and HIV infection. This lack of association may be attributed to the small number of inmates who reported sex with other men.

However, when all inmates were asked, "How common is sex between men in prison?", the responses included: "not practiced at all" (3.4 percent); "a few are involved" (20.9 percent); "many are involved" (52.9 percent); "almost all are involved" (5.9 percent); and "don't know/not sure" (16.9 percent). In addition, information from group discussions suggested very high numbers of MSM.

The researchers concluded that the major source of HIV infection among prisoners in Zambia is heterosexual intercourse outside jail. Nevertheless, they believe that the risk of HIV transmission from penetrative anal sex is high in Zambian prisons. They also stressed that the poor socioeconomic conditions within most prisons may be facilitating transmission of HIV and other infectious diseases.[350]

Based on the findings of the study discussed above, the Copperbelt University researchers launched an initiative to provide intensive HIV/AIDS education (including training of staff and inmates as peer educators and counselors), voluntary counseling and testing, and funding for the treatment of STIs and TB. They recommended use of noncustodial sentences for juvenile and first offenders, conjugal visits, and release of inmates terminally ill with AIDS.

However, despite CU's recommendations, condom distribution in prisons remains illegal (as their distribution would be seen as condoning homosexuality, which is illegal in Zambia). There is no provision of sterile needles and bleach. Tattooing has been banned (though to what degree this has served as a deterrent is unknown). The CU researchers note that in Zambia, as in many other countries, the development of effective and appropriate interventions in prisons has been hampered by often competing public health, legal, and security concerns. There is therefore little consensus about what should be standard HIV/AIDS prevention and care in prisons.[351]

Burial

Because of AIDS mortality, Zambia is facing a shortage of burial space, particularly in urban areas. Cremation, therefore, is being undertaken and encouraged. There are concerns, however, that cremation excludes the burial rites that are thought to ensure that the deceased's soul is "settled" and will thus not be widely adopted.[352]

Response

At a Glance

The At a Glance section summarizes the more detailed data found below it.

Government

1984-1999

- The first AIDS case was reported in 1984. In 1986, Zambia created the National AIDS Surveillance Committee and National AIDS Prevention and Control Program. In 1987, a short-term emergency plan was established to deal with the blood supply. A medium-term plan (1988-92) was also created in 1987. A condom social marketing program was launched in 1992.
- In 1993, a second medium-term plan (1993-98) was launched. It acknowledged that the government's initial response to HIV had been inadequate and purely biomedical, with no intersectoral coordination or collaboration.
- In the late 1990s, the government consulted with a wide range of stakeholders to analyze its response to HIV/AIDS. Among its key findings:
  - → There was no high-level political commitment to and advocacy for HIV/AIDS prevention and care measures; rather, technical and line ministry officials were the most vocal and active with regard to HIV/AIDS.
  - → There was a no strategic management of the HIV/AIDS program at central level. Also, despite that Zambia had been undertaking a process of decentralization and health sector reform, district health systems were underutilized in the national response.
  - → There was no framework for analyzing HIV/AIDS in the context of macroeconomic policy. Nor was HIV/AIDS planning informed by gender analysis.
  - → The medium-term plans had a blanket approach and were not tailored to different populations. Moreover, there was no mechanism to evaluate their implementation nor their impact.
  - → Intragovernmental collaboration was highly fragmented.
  - → Key policy barriers persisted, for example the ban on distributing condoms to prisoners and the prohibition on refugees' access to public health care facilities.
  - → There was limited involvement of the private sector.

National HIV/AIDS/STD/TB Council and Strategic Framework

- In 2000, Zambia established the National HIV/AIDS/STD/TB Council to serve as the single, high-level institution responsible for national and technical leadership, strategic management, and effective coordination of all government and civil interventions. A committee of cabinet members guides the council.

- In November 2002, the Zambian Parliament passed a national AIDS bill, which, among other things, makes the National HIV/AIDS/STD/TB Council a legal body that may solicit funding.
- The national council is guided by a strategic framework (2001-03), with the following priorities:
  - → mobilization of multisectoral response
  - → behavior change: abstinence, mutual fidelity, or condom use
  - → reduction of high risk behaviors (e.g., multiple partners, sexual cleansing)
  - → increased and improved STI prevention and control
  - → destigmatization of HIV/AIDS
  - → increased VCT
  - → reduced MTCT of HIV
  - → improved HBC and support to PWHA
  - → community-based support to orphans and OVC
  - → improved drug supply for treatment of STIs and TB, and for HIV-positive clients
  - → improved hospital-level care
- The strategic framework also states that HIV/AIDS must be addressed in the country's overall development — not just health — program. Zambia faces very difficult decisions as it concurrently seeks to address HIV/AIDS (an immediate need) and liberalize its economy; this latter involves — at minimum — short- and medium-term hardships that disproportionately affect the poorest and that may lead to coping strategies that increase vulnerability to HIV acquisition.
- The framework identifies "catalytic" projects — or best practices — for scaling up; many of these are operated by NGOs.

Budgets

- Human and financial resources remain highly inadequate.
- The 2001-03 strategic framework estimated that the cost to implement it would be US$560 million (this figure includes US$158 million for ART). The government estimated that it would provide US$126 million. By early 2002, U. N. and donor agencies had pledged US$113 million to implement the strategic framework. In August 2002, Health Minister Brian Chituwo reported that the government portion to implement the framework had fallen far short of projections.
- The government has established budget lines for HIV/AIDS in 14 ministries. Many of these ministries continue to have focal points for HIV/AIDS, but funding is insufficient.

Donors

- Zambia relies heavily on donor funding. Donors funding HIV/AIDS programs include DFID, CIDA, EC, GTZ, Ireland Aid, JICA, Netherlands, DANIDA, NORAD, SIDA, USAID, and CDC. Zambia is slated to receive US$42 million from the second phase of the World Bank's Multicountry HIV/AIDS Program for Africa (MAP).
- In April 2002, the Global Fund to Fight AIDS, TB & Malaria approved Zambia's US$92.9 million proposal to address HIV/AIDS. It also approved US$59.9 million for TB and US$39.3 million for malaria.

Blood Supply

- All district, provincial, and central referral hospitals have blood transfusion facilities. The Zambian National Blood Transfusion Board provides the relevant national guidelines and technical assistance. Safe blood product needs are met in Lusaka, but it is unclear whether this is occurring nationwide.

Ministries Outside Health

- Several Zambian ministries have adopted workplace programs to raise awareness of HIV/AIDS among their staff, train peer educators, and distribute condoms. However, budget constraints are impeding full implementation of these workplans. Another concern is whether sufficient mechanisms for employee confidentiality have been established.
- The Ministry of Information and Broadcasting Service is producing HIV-related mass media campaigns and providing condom distribution; also trains peer educators for employee support groups. Collaborates with Ministry of Sports, Youth, and Child Development to reach out-of-school youth through a network of 15 youth resource centers.
- The Ministry of Education has less than two full-time equivalent staff addressing the sector's response to HIV/AIDS. It adopted compulsory, examinable, comprehensive HIV/AIDS education, though it is unclear at which grade this is introduced and to what degree it is being implemented. Works on school anti-AIDS clubs, which promote prevention of HIV/STI and of drug & alcohol abuse.
- The Ministry of Agriculture, Food and Fisheries has a workplan that includes a behavioral survey of fishing communities. It is developing an HIV/AIDS handbook for its over 80 district/provincial focal points.
- The Ministry of Tourism plans to target hotel managers, tour guides, tour operators, travel agents, wildlife police officers and their spouses, as well as tourists with HIV education. However, only 10 percent of needed funds to carry out the plan are available.
- In 1993, the Ministry of Defense created the Zambia Defense Forces HIV/AIDS Prevention, Care and Support Program, to be implemented by the Zambia Defense Forces Medical Services (ZDFMS). The program targets military personnel, their spouses, dependents, and populations near military bases. STD care and prevention, VCT, condom distribution, peer education, counseling training, home based care, and training of caregivers for home visits. A draft Army HIV/AIDS Policy was elaborated in 2000. Full implementation of the policy would cost over US$1 million, but the ministry currently has only US$18,000 budgeted.
- In March 2003, ZDFMS announced that it will implement mandatory HIV testing of potential recruits and serving personnel. Testing positive for HIV will automatically disqualify one from joining the military. Serving members with HIV will not be discharged but will be placed in lower categories and offered available medical care.
- The Zambia AIDS Law Research and Advocacy Network has raised concerns that mandatory HIV testing is discriminatory and a violation of the right to autonomy.

Human Rights

- The government has stated that a legal framework that protects PWHA should be instituted. However, the Zambian AIDS Law Research and Advocacy Network reports that there are no

HIV/AIDS-specific laws in the country. Stigma and unfair discrimination against PWHA are common in Zambia, but persons discriminated against have no system for redress.

- Mandatory HIV testing, breaches of confidentiality, and dismissal on grounds of seropositivity have been reported. Few institutions are researching the relevant legal, ethical, and human rights issues.
- The Constitution of Zambia (Bill of Rights, Article 11) outlaws discrimination but does not make reference to discrimination on the basis of infirmity due to illness or physical handicap. Neither the Employment Act nor the Industrial and Labor Relations Act offers protection from discrimination on the grounds of infirmity.
- There are no laws specifically covering employment-related HIV/AIDS issues such as preemployment HIV testing or pensions for HIV-positive employees. The government does, however, endorse the policies recommended by WHO, ILO, and SADC with regard to HIV/AIDS in the workplace.

NGOs and CBOs

- Zambian NGOs and CBOs have played a critical role in responding to HIV/AIDS, shouldering much of the country's response to HIV/AIDS.
- Among the constraints faced by NGOs and CBOs are:
  - → high dependence on foreign grants and little financial assistance from government, rendering continuation of their operations uncertain
  - → limited coverage and scale, primarily because of funding constraints
  - → poor distribution across country: most are concentrated in Lusaka and major towns; even in urban areas, they are not evenly distributed throughout wards
  - → those involved in care of PWHA may be highly vulnerable to stress and anger, emotions that sometimes manifest themselves as discrimination
  - → lack of evaluation of interventions

Faith-based Organizations

- Particularly in rural Zambia, the church represents a strong community structure for decisionmaking and problem solving. There are national and district interfaith HIV/AIDS working groups to sensitize religious leaders and train clergy and lay religious leaders in counseling and supporting communities.
- Many church-affiliated organizations play crucial roles in developing and implementing home-based care. Some have also developed support programs for widows, orphans, street children, and other vulnerable populations.
- Many church leaders appear to be recognizing that they need to play a greater role in HIV/AIDS prevention and care. However, some still object to HIV prevention messages that include mention of condoms.

Traditional Leaders

- Some traditional leaders have played a critical role in HIV/AIDS prevention. A prime example is how some chiefs, especially in Southern Province, have been instrumental in modifying sexual cleansing practices.

Traditional Healers

- Traditional healers are represented on the National HIV/AIDS/STD/TB Council. Guidelines for conducting research on herbal remedies have been developed, and such research is awaiting funding.

- Zambia's Traditional Healers Association has attempted to eliminate members who claim to offer "AIDS cures." However, these types of products continue to be sold on the streets and in markets.

PMTCT

- According to WHO, 5,307 clients received PMTCT services in Zambia during 2001. There were 11 public/NGO sites providing basic PMTCT services in 2001; 15 percent of such services were provided by the commercial sector. Only 2 percent of the population estimated to need PMTCT services received them during 2001.
- Zambia launched its PMTCT Initiative in 1999, which is now being implemented at six pilot sites.
- Zambia's Ministry of Health and its National Food and Nutrition Commission collaborated on the National Policy on Breastfeeding Practices and HIV/AIDS Transmission from Mother to Child, which recommends provision of VCT in maternal & child health settings.

Treatment of OIs and Provision of ART

- The supply of anti-TB drugs in Zambia has been erratic.
- According to WHO, 2,116 Zambian adults with HIV received isoniazid prophylaxis during 2001, representing 1 percent of the population in need of such service. No HIV-positive adults nor children received cotrimoxazole prophylaxis during 2001. Access to HIV/AIDS-related care and support services in rural areas is deemed minimal.
- WHO reported that there were no public/NGO sites providing ART during 2001. In January 2002, UNAIDS reported that less 1 percent of Zambians living with HIV/AIDS were receiving ART. In public facilities, there has been very limited access to ART through PMTCT projects. ART has been available in the private sector for some time, but is too expensive for most Zambians.
- There are only two centers for CD4 and viral load testing in the country. During 2001, Zambia reached deals with GSK, BMS, and Merck to reduce the cost of HAART to about US$2.00 a day, still out of reach for most Zambians.
- The Zambian government has developed national guidelines for ART.
- In August 2002, the Ministry of Health announced that it was accelerating access to ART by establishing nine provincial treatment centers. The entry point will be through PMTCT and the aim is to reach approximately 10,000 people.

Male Condoms

- There is considerable social marketing of condoms — primarily in urban areas — by NGOs funded by the U.S. and the Planned Parenthood Association of Zambia (PPAZ).

Female-Controlled Prevention Technologies

- During 1995-96, the female condom was introduced in Zambia on a pilot basis. In 1997, it was launched by the Ministry of Health and its partners (USAID, DFID, Population Services International, and Zambia's Society for Family Health) as the "Care Contraceptive Sheath" in Lusaka. The price of "Care" was heavily subsidized, yet the cost to the consumer was much higher than that for male condoms.
- An exit survey of customers at retail outlets found that only 2 percent of respondents had used only the female condom in the last year, whereas 11 percent used both the male condom and the female condom. Among those who had used both the female and male condom in the last year, 49 percent did not intend to use the female condom in the future.

Orphans and Other Vulnerable Children

- In response to the growing number of orphans and OVC, the Zambian government launched the Social Welfare Scheme; however, to date, it reaches only an estimated 10 percent of the target population.
- Zambia is seeking to establish effective legislation with regard to children, youth, and HIV/AIDS.
- There are numerous NGO and CBO projects targeted to orphans and OVC.

Young People

- There are many HIV/AIDS projects in Zambia that work with young people, e.g., many schools have established anti-AIDS clubs.
- Given that so many youth are already caring for family members with AIDS, some youth projects are launching related training for them. As with other HIV/AIDS projects, there has been almost no M&E of projects serving youth.
- Among the key findings of various youth projects in Zambia:
  - → Youth in rural areas are extremely underserved.
  - → Although youth-led efforts can translate into better youth-focused programming in both NGOs and government, youth involvement in designing projects has been low.
  - → For effective youth involvement, young people need to be equipped with skills in management, budgeting, finance, and report writing. Youth also need financial resources and sustained emotional support.
  - → Many youth programs usually do not include key groups such as video shop owners and truck and minibus operators, whom youth report as sources of information for sexual & reproductive health.
  - → Some youth-friendly sexual & reproductive health clinics have opened in recent years — primarily in urban areas; these need to be scaled up and expanded to rural areas.
  - → Stigma around HIV/AIDS remains high among youth and affects self-assessment of risk and may be a barrier to sustained behavior change.
  - → Messages simply promoting safe sex are insufficient; young people must be linked to, e.g., youth friendly health services, counseling, and support groups.
  - → A sole focus on HIV/AIDS topics may lead to "AIDS fatigue." Messages must be entertaining and constantly updated and repackaged to keep them new.
  - → Follow up to interventions is crucial, as sustained behavior change messages require continual reinforcement.

VCT

- Zambia developed the *Code of Ethics and Practice for Counseling* to establish standards of competence and conduct for counselors, trainers, and supervisors. The code is reinforced through the more detailed *Guidelines on HIV/AIDS Counseling in Zambia*, produced by the Ministry of Health in 2000.
- By 2000, public health centers in 23 districts (out of national total of 72) were providing VCT, with 3,000 counselors having been trained by the National HIV/AIDS Program. Outside government, NGOs and CBOs have been providing VCT for many years.
- According to WHO, during 2001, 213,000 clients were seen at Zambia's 56 publicly funded/NGO VCT centers. (There were no VCT services offered in the commercial sector.) Of the African countries for which WHO provided data, the number of clients seen in Zambia was by far the highest.
- During 2001, 43 percent of the estimated population in need of VCT services in Zambia was receiving them.
- The 2000 ZSBS found that about three-quarters of men (76 percent) and women (71 percent) knew where they could get tested for HIV. However, only 59 percent of adolescents knew of a place where an HIV test is available.

Home-based Care

- Zambia was one of the first countries in Africa to implement HBC.
- Zambian NGOs, particularly those related to religious organizations, took the lead on HBC and developed a variety of approaches, many of which serve as best practice for other countries.
- Government has played a very limited role in HBC provision.
- There are currently over 50 HBC programs in Zambia, primarily found in urban areas and covering at most 20 percent of PWHA. Demand for HBC is enormous, and programs are overwhelmed.
- A recent study found that HBC is unlikely to increase significantly without greater government involvement.

Industry

- In December 2002, Copperbelt Electricity Corporation announced that it would provide ART to its workers and their spouses.
- The Zambia Federation of Employers has encouraged its members to assist their workers in accessing ART. However, most Zambians either work in the informal sector or hold low-level, nonunionized positions that do not offer medical assistance.
- Among firms that have implemented HIV prevention (and some care) programs are Barclays Bank, Nakambala Sugar Estates, Caltex Oil, INDENI Petroleum Refinery Company, Copperbelt Electricity Corporation, Zambian Breweries, Mopani Copper Mines, British Petroleum, Konkola Copper Mines, and AHC Mining Municipal Services.
- However, the majority of Zambian employers have no HIV/AIDS policy nor program.

Government

1986-1999

The first AIDS case was reported in 1984. In 1986, with assistance from then WHO Global Program on AIDS, Zambia created the National AIDS Surveillance Committee and National AIDS Prevention and Control Program. In 1987, a short-term emergency plan was established to deal with the blood supply. A medium-term plan (1988-92) was also created in 1987 and prioritized TB; information, education, and communication; counseling; laboratory support; epidemiology and research; STI prevention and treatment; and home-based care. [353], [354] A condom social marketing program was launched in 1992.[355]

In 1993, a second medium-term plan (1993-98) was launched. It acknowledged that the government's initial response to HIV had been inadequate and purely biomedical, with no intersectoral coordination or collaboration. The second plan integrated the AIDS, TB, and STI programs (as well as the leprosy program). The plan emphasized monitoring of impact indicators through sentinel surveillance system, population-based surveys, demographic and health surveys and sexual behavior surveys. To ensure intersectoral approaches, an HIV/AIDS focal person was identified in each line ministry.[356], [357]

Between June 1998 and June 1999, the government consulted with a wide range of stakeholders to analyze its response to HIV/AIDS. Among its key findings:

- There was no high-level political commitment to and advocacy for HIV/AIDS prevention and care measures; rather, technical and line ministry officials were the most vocal and active with regard to HIV/AIDS.
- There was a no strategic management of the HIV/AIDS program at central level; for example, no one was ensuring that traditional chiefs and other key opinion leaders were involved in HIV/AIDS policy and programming. Also, despite that Zambia had been undertaking a process of decentralization and health sector reform (see Health section), district health systems were underutilized in national response.
- There was no framework for analyzing HIV/AIDS in the context of macroeconomic policy.
- Nor was HIV/AIDS planning informed by gender analysis.
- The medium-term plans had a blanket approach and were not tailored to different populations. Moreover, there was no mechanism to evaluate their implementation nor their impact.
- Intragovernmental collaboration was highly fragmented. The roles and responsibilities of the HIV/AIDS focal persons located in each ministry had never been clearly defined.
- Key policy barriers persisted, for example the ban on distributing condoms to prisoners and the prohibition on refugees' access to public health care facilities.
- There was limited involvement of the private sector. [358]

With funding from DFID, the Futures Group Europe analyzed the government's response to HIV/AIDS. Its analysis, published in 1998, identified many of the same constraints as those identified during the government's consultative process. These include:

- The AIDS program had the greatest impact on organizations directly involved in providing health care, whereas it was less successful in gaining the support traditional systems of government and of nonhealth organizations.
- Those working in HIV/AIDS perceived that senior members of government were hostile to liberal AIDS interventions; this sometimes discouraged HIV/AIDS projects from undertaking high-profile activities.
- Families, households and communities were still largely responsible for caring for PWHA.
- Discrimination, although decreasing, remained widespread.

The report suggests that greater success might be achieved if:

- Donors avoid creating small, specialist policy networks dependent on external funds and developed closer links with local NGOs and CBOs.
- Civil society and CBOs become more actively involved in development of HIV/AIDS prevention, care, and treatment policies
- Strong legislation on HIV/AIDS-related discrimination is formulated and implemented[359]

Finally, the MEAURE Evaluation Project at the University of Carolina Chapel Hill notes that although Zambia is one of the few countries in which the AIDS and TB programs are combined, there have been no apparent benefits of this integration.[360]

National HIV/AIDS/STD/TB Council

In 2000, Zambia established the National HIV/AIDS/STD/TB Council. Its aim is to serve as the single, high-level institution responsible for national and technical leadership, strategic management, and effective coordination of all government and civil interventions. A committee of cabinet members has been appointed to guide the council. At national level, 14 ministries are to implement the strategic framework, coordinated by the National HIV/AIDS/STD/TB Council and its secretariat.[361]

The task of coordinating 14 ministries — with varying levels of commitment to HIV/AIDS and in a climate of severe poverty and economic uncertainty — is formidable and one that constrains a truly multisectoral approach in many countries, not just Zambia.

In November 2002, the Zambian Parliament passed a national AIDS bill. Among other things, it makes the National HIV/AIDS/STD/TB Council a legal body that may solicit funding.[362] After passage of the bill, officials anticipated that the council's activities would largely be funded by the grant made to Zambia by the Global Fund to Fight AIDS, Tuberculosis & Malaria (see below).[363]

HIV/AIDS Strategic Framework 2001-2003

The national council is guided by a strategic framework (2001-03), which includes key intermediate steps to ensure that future initiatives are results-based.[364] Throughout the framework, there is an emphasis on results. The framework includes careful analysis of different segments of the population and their prevention and care needs. It outlines priority geographical areas, populations, and interventions. It has been crafted to be flexible to permit it to respond to the epidemic's changing dynamic, as well as the country's socioeconomic context.

Priority Interventions

- mobilization of multisectoral response
- behavior change: abstinence, mutual fidelity, or condom use
- reduction of high risk behaviors (e.g., multiple partners, sexual cleansing)
- increased and improved STI prevention and control
- destigmatization of HIV/AIDS
- increased VCT
- reduced MTCT of HIV
- improved HBC and support to PWHA
- community-based support to orphans and OVC
- improved drug supply for treatment of STIs and TB, and for HIV-positive clients
- improved hospital-level care

Macroeconomic Policy

The strategic framework states that it is intended to be part of the country's overall development — not just health — program. Indeed, it discusses structural obstacles to the HIV/AIDS response, including the country's overreliance on copper for foreign exchange. The fall in copper prices has had an enormous impact on the government's ability to fund health and HIV/AIDS projects. The country's high debt burden also diverts funds from government services. Additionally, the country heavy reliance on donor funding calls into question its ability to sustain — let alone scale up — current projects.

The framework states that structural adjustment and market liberalization are constraints to the response to HIV/AIDS. As discussed in the Economy section, structural adjustment was not carried out with adequate social safety nets. The rapid pace of privatization has also not addressed safety nets for those who have lost jobs (about 105,000 formal sector jobs have been lost through privatization over the last 10 years).[365]

However, to qualify for HIPC and other aid, governments must adopt economic policies prescribed by the international financial institutions.[366] Thus, Zambia, and other countries, face very difficult decisions as they concurrently seek to address HIV/AIDS (an immediate need) and liberalize their economies; this latter involves — at minimum — short- and medium-term hardships that disproportionately affect the poor (or in Zambia, the poorest) and that may lead to coping strategies that increase vulnerability to HIV acquisition . What is not mentioned in the framework, however, but is widely seen as a key constraint to African socioeconomic development, is Western protectionism. Increasingly, African leaders and others are calling for

elimination of the massive agricultural subsidies that Western Europe and U.S. governments pay to their own farmers.[367]

Decentralization

The framework follows the government's focus on decentralization and is designed for use at central as well as district/community level. It outlines that district and community level implementation of the framework will be coordinated by district health management teams, which are provided funds through the District Basket Funding System to carry out activities in their catchment area.

NGOs

The framework identifies "catalytic" projects — or best practices — many of which are operated by NGOs. The framework acknowledges that NGOs and CBOs have shouldered much of the country's response to HIV/AIDS, but notes that their coverage is limited due to funding constraints. (Most NGOs are highly dependent on external donor funding; some receive small grants from the government.) It also stresses that most NGO interventions have never been evaluated. The national response is centered on learning from and scaling up these catalytic projects.

Communities

As previously mentioned, throughout the strategic framework, the government praises households for "adapting new coping strategies" such as new income-generating activities, HBC, and formation of informal extended families. It also pays tribute to communities for "owning" the problem of HIV/AIDS and bearing the brunt of caring for sick relatives and other community members. The framework underscores that in most cases households and communities have responded to HIV/AIDS with no external financial or material support. However, whether households and communities can sustain these strategies, which are exacting an enormous psychosocial toll, is not mentioned. And, as discussed in the Stigma section, those who are most involved in care of AIDS patients are stressed and angry, emotions that be made manifest in ways that convey stigma or discrimination toward PWHA.[368] Some coping strategies increase vulnerability to HIV acquisition, especially for womenand girls. In sum, the degree to which the government can and is willing to mitigate the HIV/AIDS burden on households remains unclear.

Box 3. Zambia: Kaunda Soldiers on In Anti-AIDS Campaign

Zambia's first president Kenneth Kaunda was commander-in-chief of the armed forces for close to three decades. Today, in his retirement years, he is marshalling the country in a war against HIV/AIDS. "I have declared a war (on AIDS) and at 78-years-old, I am its strongest and fiercest enemy. I will look AIDS in the face and say, 'I will fight you with every ounce of energy'. I am like a mad man because I see the devastation. I want to stop this scourge before it annihilates mankind," he told PlusNews. One in four Zambians are infected with HIV. Kaunda lost his fifth born son, Masuzgyo, to AIDS in 1988.

"I draw courage from the deaths of the millions of people all over the world. I have lost so many family members, my grandchildren, to AIDS. I cannot sit by and watch this disease run riot in my family. I have to protect and defend them. Since every one is affected by AIDS, we should all be fighting together," he said. But Kaunda tests the

boundaries of Zambian culture when he talks about HIV and its transmission, in a country where public discussion of sex is a taboo. Kaunda describes it as "breaking the wall of silence".His contemporaries, those that were in his government, have spurned requests to join him in his crusade. That has left Kaunda as the only high profile political figure in Zambia - who clearly and repeatedly enunciates the words "sexual intercourse" - to lead the campaign.

His openness remains a little unnerving for Zambia's conservative 10 million population. People have come to accept talk of HIV from health personnel and NGOs working in the field. Politicians and civic leaders only ever mention it when there is an international donation or "event", and that is never voluntarily or with any profundity. Bashi mpundu (father of twins) as Kaunda likes to refer to himself, says this is the one instance in which he agrees that 'silence kills'. "I prefer to keep silent over contentious issues and act quietly. But on this one, I cannot ... culture merely regulates social behaviour, it is meant to help society, if it becomes an impediment or harmful, get rid of it."

A strong traditionalist himself, Kaunda said breaking the taboo on sex-related issues was not easy, but when he saw what AIDS was doing, he had to overcome his inhibitions. To the church's mortification, Kaunda, a staunch catholic, has embraced the use of condoms, especially among the young. The response from the catholic church, which wields considerable influence in Zambia, has been acerbic. The more milder attacks have been from religious leaders like evangelical churches director Joseph Banda, who labelled Kaunda's anti-AIDS vigour as "misdirected" as far as the use of condoms was concerned. He urged people not to listen to him.

Kaunda's response was to tell the church to open its eyes and see how AIDS was ravaging congregations. "The church is the one that is misdirected. They have misunderstood my message. What I am saying is, control your sexual temper and behave yourself. [But] since we can neither monitor or control people's urges, let them use a condom. I myself have never needed to use one, but that does not mean I should stop others." He added that he was pleased to hear that there was now a "woman's" (female) condom.

The church should be at the forefront of the anti-AIDS campaign, Kaunda said, arming people with information to allow them to make informed choices. Anything else was cowardice. "If they do not want to talk about condoms and sex in their churches I will do it for them ... The clergy perhaps are not happy, but the congregation are very receptive," he added.

While the accolades are piling up for his work in the area of HIV/AIDS, the question that is being asked is why Kaunda is talking about AIDS now, when he is no longer president, with considerably less national influence. The experience in Uganda has shown that when President Yoweri Museveni led his country in talking about AIDS and condoms openly, backed by government programmes, transmission levels fell to one of the lowest in Africa.

Kaunda claims he discussed AIDS while he was in office, especially after his son died, but it fell on deaf ears. He said people are more inclined to hear him now, because the AIDS situation has reached crisis proportions.

However, a check with public records showed that, apart from admitting that Masugzyo died of AIDS during a press conference in 1988, there are only a couple of general public statements that Kaunda made on AIDS while he was president.

Retired politician Grey Zulu, a close friend of Kaunda, tried to explain. "For serving government officers or politicians to talk about AIDS means they must commit to resource allocation and mobilisation. Zambia did not have and still does not have resources to combat or deal with AIDS. It represents a failure which politicians don't want to talk about much," he told PlusNews. But in the meantime, in his twilight years, Kaunda has taken up the challenge and soldiers on.

Source: IRIN PlusNews/U.N. Office for the Coordination of Humanitarian Affairs, May 27, 2002.

Budgets

The strategic framework highlights that human and financial resources remain highly inadequate. Donors provide a substantial proportion of the financial and human resources for the national

response. The framework notes that there is a clear need to mobilize resources within the country (i.e., from the private sector).

The 2001-03 strategic framework estimated that the cost to implement it would be US$560 million (this figure includes US$158 million for ART). The government estimated that it would provide US$126 million.[369] By early 2002, U. N. and donor agencies had pledged US$113 million to implement the strategic framework.[370] In August 2002, Health Minister Brian Chituwo reported that the government portion to implement the framework had fallen far short of projections.[371]

The government has established budget lines for HIV/AIDS in 14 ministries.[372] Many of these ministries continue to have focal points for HIV/AIDS, but funding is insufficient.[373]

Donors

As mentioned, Zambia relies heavily on donor funding. Brief descriptions of the major donors funding HIV/AIDS programs are provided in the Links section; these include DFID, CIDA, EC, GTZ, Ireland Aid, JICA, Netherlands, DANIDA, NORAD, SIDA, USAID, and CDC.

Zambia is slated to receive US$42 million from the second phase of the World Bank's Multicountry HIV/AIDS Program for Africa (MAP). To quality for MAP, Zambia had to meet the following criteria:

1. satisfactory evidence of a strategic approach to HIV/AIDS, developed in a participatory manner
2. existence of a high-level HIV/AIDS coordinating body, with broad representation of key stakeholders from all sectors, including people living with HIV/AIDS
3. government commitment to quick implementation arrangements, including channeling grant funds for HIV/AIDS activities directly to communities, civil society, and the private sector
4. agreement by the government to use multiple implementation agencies, especially NGOs and CBOs[374]

Among the MAP project's aims:

1. Median age at first sex increased by one year among both males and females by 2008.
2. Reported condom use at last sex encounter with nonregular partner increased from 30 to 45 percent for males and from 17 to 30 percent for females by 2008.
3. Percentage of women ages 15-19 having given birth or pregnant with their first child reduced from 59 to 45 percent by 2008.
4. Primary school enrollment and completion rate among orphans and vulnerable children will have increased by 10 percent in beneficiary communities supported by the project by 2008.
5. Reduced HIV prevalence among youth ages 15-19 by 2008.
6. Reduced HIV prevalence among antenatal women under age 20 by 2008.
7. National adult HIV prevalence begins to decline by 2008.[375]

With regard to ART, the project appraisal document states:

> The project will not be prescriptive as to whether the drugs are used....More generally, beyond just the provision of ART, resources under the project could be used to increase access to care and to increase the capacity of the health care system to provide and administer these services. [376]

Global Fund to Fight AIDS, Tuberculosis & Malaria (GFATM)

The Government of Zambia has itself pledged US$19,000 to the GFATM.[377]

In April 2002, the GFATM approved the following HIV/AIDS grant to Zambia:

Agency	Title	Component	Year 1	Total
CCM Zambia (c/o Ministry of Health)	Zambia's Coordinated Proposal to Combat HIV/AIDS, Tuberculosis, and Malaria	HIV	US$19,858,000	US$92,847,000
Source: Global Fund to Fight AIDS, Tuberculosis & Malaria, April 2002 <http://www.globalfundatm.org/files/Proposalslist_40.doc>				

The GFATM also recommended that Zambia's proposals to address TB and malaria be "fast-tracked," i.e., they were approved for deferred funded pending further adjustments and clarifications:

Agency	Title	Component	Year 1	Total
CCM Zambia (c/o Ministry of Health)	Zambia's Coordinated Proposal to Combat HIV/AIDS, Tuberculosis, and Malaria	TB	US$12,800,000	US$59,846,000
CCM Zambia (c/o Ministry of Health)	Zambia's Coordinated Proposal to Combat HIV/AIDS, Tuberculosis,	Malaria	US$8,400,000	US$39,274,000

	and Malaria			
Source: Global Fund to Fight AIDS, Tuberculosis & Malaria, April 2002 <http://www.globalfundatm.org/files/proposalslist_18.doc>				

In addition, a proposal by PACT, Community-led Multisectoral Response to HIV/AIDS, involving Zambia and Ethiopia, was also recommended for deferred funding.[378]

In January 2003, the Zambian Ministry of Health announced that US$19 million of its HIV/AIDS award was to be released during 2003.[379]

Blood Supply

All district, provincial, and central referral hospitals have blood transfusion facilities. The Zambian National Blood Transfusion Board provides the relevant national guidelines and technical assistance. [380] Safe blood product needs are met in Lusaka, but it is unclear whether this is occurring nationwide.[381]

Ministries Outside Health

- Several Zambian ministries have adopted workplace programs to raise awareness of HIV/AIDS among their staff, train peer educators, and distribute condoms. However, budget constraints are impeding full implementation of these workplans. Another concern is whether sufficient mechanisms for employee confidentiality have been established.[382]

- Ministry of Information and Broadcasting Service: with World Bank funding, producing HIV-related mass media campaigns and providing condom distribution; also trains peer educators for employee support groups. Collaborates with Ministry of Sports, Youth, and Child Development to reach out-of-school youth through a network of 15 youth resource centers. [383]

- Ministry of Education: Has less than two full-time equivalent staff addressing the sector's response to HIV/AIDS.[384] Adopted compulsory, examinable, comprehensive HIV/AIDS education (though unclear at which grade this is introduced and to what degree it is being implemented). Works on school anti-AIDS clubs, which promote prevention of HIV/STI and drug & alcohol abuse. Participating in development of a national policy on HIV/AIDS and orphans; collaborates with Ministry of Community Development and Social Services to strengthen bursary schemes for care of orphans; works with UNICEF, Zambia Community Schools Secretariat, Life Skills Association, Teachers Against HIV/AIDS Network, Children in Need Network, U.S. Peace Corps, VSO Volunteers, and NGOs on projects to provide education to orphans and OVC. Works with University of Natal in South Africa on Education Mobile Task Team. Collaborates with Ministry of Science, Technology, and Vocational Training.

- Ministry of Agriculture, Food and Fisheries: HIV/AIDS workplan for 2001 includes behavioral survey of fishing communities. Developing HIV/AIDS handbook for its over 80 district/provincial focal points.[385]

- Ministry of Tourism: plans to target hotel managers, tour guides, tour operators, travel agents, wildlife police officers and their spouses (as well as tourists) with HIV education. However, only 10 percent of needed funds to carry out the plan are available. [386]

- Ministry of Defense: In 1993, created the Zambia Defense Forces HIV/AIDS Prevention, Care and Support Program, to be implemented by the Defense Forces Medical Services (ZDFMS). The program targets military personnel, their spouses, dependents, and populations near military bases. STD care and prevention, VCT, condom distribution, peer education, counseling training, home based care, and training of caregivers for home visits. A draft Army HIV/AIDS Policy was elaborated in 2000. Full implementation of the policy would cost over US$1 million, but the ministry currently has only US$18,000 budgeted. [387] (The South African Civil Military Alliance to combat HIV/AIDS is based in Lusaka.)

- In March 2003, ZDFMS announced that it will implement mandatory HIV testing of potential recruits and of serving personnel. Testing positive for HIV will automatically disqualify one from joining the military. Serving members with HIV will not be discharged but will be placed in lower categories and offered "available medical attention."[388]

- The Zambia AIDS Law Research and Advocacy Network has raised concerns that mandatory HIV testing is discriminatory and a violation of the right to autonomy.[389] In response, ZDFMS states that "Our discrimination is positive in a way, as we feel it is pointless to subject our young Zambians to rigorous training when it is going to accelerate their progression from HIV to AIDS. We reached at this decision after experiences and scientific studies to support this have been conducted."[390]

Human Rights

In the HIV/AIDS Strategic Framework 2001-2003, published in 2000, the government stated that a legal framework that protects PWHA should be instituted.[391] However, the Zambian AIDS Law Research and Advocacy Network reported in July 2002 that there are no HIV/AIDS-specific laws in the country. It reports that stigma and unfair discrimination against PWHA are common in Zambia, but persons discriminated against have no system for redress. [392], [393]

Mandatory HIV testing, breaches of confidentiality, and dismissal on grounds of seropositivity have been reported. Strongly discriminatory public attitudes are also evident from media reports of calls for harsh punitive laws against PWHA, as well as the proposals for the mandatory testing of presidential candidates in the elections in late 2001. Few institutions are researching the relevant legal, ethical, and human rights issues. [394], [395]

The Constitution of Zambia (Bill of Rights, Article 11) outlaws discrimination but does not make reference to discrimination on the basis of infirmity due to illness or physical handicap. Neither the Employment Act nor the Industrial and Labor Relations Act offers protection from discrimination on the grounds of infirmity. [396], [397]

There are no laws specifically covering employment-related HIV/AIDS issues such as preemployment HIV testing or pensions for HIV-positive employees. The government does, however, endorse the policies recommended by WHO, ILO, and SADC with regard to HIV/AIDS in the workplace. [398]

In August 2001, the POLICY Project elaborated *Guidelines on Employment, HIV/AIDS, and Human Rights in Zambia*. These guidelines appear to be targeted to employees, more so than employers. To what degree they have been disseminated and utilized is not known. Moreover, neither the Zambian Ministry of Labor and Social Security nor employer federations appear to have been involved in drafting the guidelines.[399] The guidelines state that "The policy of the Zambia Federation of Employers is that employers should not require prospective job applicants to undergo an HIV test." [400] As mentioned above, however, preemployment HIV testing is occurring.

The Zambian AIDS Law Research and Advocacy Network states that a human rights framework is a fairly new concept in the country, HIV/AIDS & human rights even newer. Human rights education interventions that reach the grassroots as well as nonhealth sectors are vital. The network stresses that the role of the law should be acknowledged as central to the national response to HIV/AIDS.[401], [402]

Traditional Leaders

Some traditional leaders have played a critical role in HIV/AIDS prevention. As previously discussed, a prime example is how some chiefs, especially in Southern Province, have been instrumental in modifying sexual cleansing practices.[403]

Traditional Healers

Traditional healers are represented on the National HIV/AIDS/STD/TB Council. Guidelines for conducting research on herbal remedies have been developed, and such research is awaiting funding.[404] Zambia's Traditional Healers Association has attempted to eliminate members who claim to offer "AIDS cures." [405] However, these types of products continue to be sold on the streets and in markets.

NGOs and CBOs

Zambian NGOs and CBOs have played an critical role in responding to HIV/AIDS. Indeed, as mentioned above, the government has acknowledged that many NGO HIV/AIDS projects are best practices and is basing its strategic framework for HIV/AIDS on them. The Links sections lists Zambian NGOs and CBOs and is continually updated.

Among the constraints faced by NGOs and CBOs are:

- high dependence on foreign grants and little financial assistance from government, rendering continuation of their operations uncertain
- limited coverage and scale, primarily because of funding constraints
- poor distribution across country: most are concentrated in Lusaka and major towns; even in urban areas, they are not evenly distributed throughout wards
- those involved in care of PWHA may be highly vulnerable to stress and anger, emotions that sometimes manifest themselves as discrimination
- lack of evaluation of interventions

The National HIV/AIDS/STD/TB Council has compiled a directory of organizations undertaking HIV/AIDS projects.

Faith-based Organizations

The predominant religion in Zambia blends traditional beliefs and Christianity.[406] Recently, there has been an increase in those joining Christian (particularly Pentecostal) congregations. [407]

Particularly in rural Zambia, the church represents a strong community structure for decisionmaking and problem solving.[408] There are national and district interfaith HIV/AIDS working groups to sensitize religious leaders and train clergy and lay religious leaders in counseling and supporting communities.[409]

As mentioned, many church-affiliated organizations play crucial roles in developing and implementing HBC. Some have also developed support programs for widows, orphans, street children, and other vulnerable populations; many of these programs include income-generating activities.[410] (See the Links section.)

Many church leaders appear to be recognizing that they need to play a greater role in HIV/AIDS prevention and care. [411] However, some still object to HIV prevention messages that include mention of condoms. For example, in 2001, the Catholic Church and Christian Council of Zambia objected to a HEART campaign that featured an advertisement with two young women discussing condoms. These church groups contended that the ad promoted promiscuity and demanded that the government remove it. The government complied, prompting donors to question its commitment to HIV/AIDS.[412] At local level, some churches continue to view HIV/AIDS as punishment and refuse to discuss realistic HIV prevention strategies such as condoms.[413]

PMTCT

According to WHO, 5,307 clients received PMTCT services in Zambia during 2001 (i.e., basic counseling, testing, and AZT or NVP treatment). There were 11 public/NGO sites providing basic PMTCT services in 2001; 15 percent of such services were provided by the commercial sector. Only 2 percent of the population estimated to need PMTCT services received them during 2001. [414]

Zambia launched its Prevention of Mother-to-Child Transmission (PMTCT) Initiative in 1999. The program is coordinated by a national working group and, as of January 2002, was being implemented at six pilot sites. The core components of the PMTCT program include VCT; infant feeding counseling; provision of infant formula; safer delivery practices; and prophylactic antiretroviral drugs to reduce vertical transmission [415] Zambia's Ministry of Health and its National Food and Nutrition Commission collaborated on the National Policy on Breastfeeding Practices and HIV/AIDS Transmission from Mother to Child, which recommends provision of VCT in maternal & child health settings. [416]

- The first PMTCT pilot site was Chipata Clinic, located in a periurban section of Lusaka. The clinic's PMTCT Program collaborates with the Horizons Project of the Population Council. Working with Horizons, Zambia's PMTCT Working Group undertook a cohort study to track clients' experience with the program. Preliminary findings presented in Barcelona in July 2002 found that 97 percent of women in the study had an HIV test and 96 percent of those tested received their results. Despite pre- and posttest counseling, attitudes toward the benefits of HIV testing changed only slightly from the time of enrollment to the postpartum interview. The main perceived benefit of an HIV test before (70 percent) and after (79 percent) counseling was that it provides knowledge of one's status either positive or negative. Only a minority of women said that an HIV test would assist with PMTCT (15 percent and 13 percent at enrollment and follow-up, respectively) or help them plan for the future (16 percent and 12 percent at enrollment and follow-up, respectively).[417]

- The Ndola Demonstration Project was initiated in 1999 and integrates infant feeding and VCT into existing MCH and community services within a strengthened antenatal care package as part of national PMTCT efforts. It also assesses the nutritional status and incidence of illness among children of women who choose to breast- or bottle-feed by HIV status of mother and baby. It works with several USAID-funded projects, including ZIHP, Horizons, and LINKAGES.[418] As other districts expressed interest in the Ndola approach, the project expanded to northern Ndola District, Mtendere Clinic in Lusaka District, and Kabwe and Livingstone Districts in 2002.[419]

- The Lusaka District Health Management Team and University Teaching Hospital are implementing the Zambia Exclusive Breastfeeding Study (ZEBS). This NIH-funded clinical trial seeks to determine if short, exclusive breastfeeding can reduce breastfeeding-associated HIV transmission and infant mortality. Important to the study is adherence to counselors' advice to breastfeed exclusively. Partners include Boston University, University of Alabama at Birmingham, Columbia University, and the LINKAGES Project.

- Chelstone and Mtendere clinics in Lusaka are MTCT-Plus demonstration sites. The MTCT-Plus Initiative is coordinated by the Mailman School of Public Health at Columbia University and supports provision of HIV-specific care — including access to standardized antiretroviral options when clinically indicated — to HIV-infected women and children identified in PMTCT programs, and to their HIV-infected family members as appropriate.

Treatment of Opportunistic Infections and ART

The supply of anti-TB drugs in Zambia has been erratic. [420] According to WHO, 2,116 Zambian adults with HIV received isoniazid prophylaxis during 2001, representing 1 percent of the population in need of such a service. No HIV-positive adults nor children received cotrimoxazole prophylaxis during 2001.[421] Access to HIV/AIDS-related care and support services in rural areas is deemed minimal.[422]

WHO reported that there were no public/NGO sites providing ART during.[423] In January 2002, UNAIDS reported that less 1 percent of Zambians living with HIV/AIDS were receiving ART.[424] In public facilities, there has been very limited access to ART through PMTCT projects (see PMTCT section above). ART has been available in the private sector for some time, but is too expensive for most Zambians.[425]

There are only two centers for CD4 and viral load testing in the country.[426] During 2001, Zambia reached deals with GSK, BMS, and Merck to reduce the cost of HAART to about US$2.00 a day, still out of reach for most Zambians. [427]

The Zambian government has developed national guidelines for ART. Along with international and Zambian NGOs, it has been analyzing issues related to introduction of ART, including the challenges posed by monitoring, sustainability, adherence, and drug resistance.[428]

Through in-country workshops, the International HIV/AIDS Alliance has identified key issues, including:

- Even if HAART were distributed to Zambians, their severe undernourishment is likely to affect treatment outcomes.
- Many essential drugs are regularly unavailable due to inadequate and interrupted drug supplies.
- Sensitizing community members about their right to health is also a way of advocating for improved access to treatment. Participants also suggested informal education with community members as an effective method of advocating for change.
- Clear national guidelines and policies for treatment that are easily accessible are an important national advocacy goal. [429]

In August 2002, the Ministry of Health announced that it was accelerating access to HAART by establishing nine provincial treatment centers, each with a team consisting of a physician, faith healer, counselor and social worker. The entry point will be through PMTCT. HIV-positive mothers and fathers, and their babies will be the first to receive treatment. The initial funding for the project has been budgeted for and approved by parliament. A portion of the money awarded to the country by the GFATM (see above), as well as a World Bank loan, will finance the project, which is targeted to reach approximately 10,000 people. [430]

Male Condoms

The Zambian government aims to distribute 45 million condoms over the next three years, using the existing bulk supply health system. Parallel to this, a drug kit system for community health workers and rural health centers distributes up to 10 million condoms each year.[431] There is considerable social marketing of condoms — primarily in urban areas — by NGOs funded by the U.S. and the Planned Parenthood Association of Zambia (PPAZ).[432]

Female-Controlled Prevention Technologies

During 1995-96, the female condom was introduced in Zambia on a pilot basis (using the "Reality" packaging). In 1997, it was launched by the Ministry of Health and its partners (USAID, DFID, Population Services International, and Zambia's Society for Family Health) as the "Care Contraceptive Sheath" in Lusaka.[433] The price of "Care" was heavily subsidized, yet the cost to the consumer was much higher (US$0.19 for 2 Care condoms) than that for male condoms (US$0.15 for 3 Maximum condoms). In 1998, PSI conducted a study using data from an exit survey of customers at retail outlets that sell the female condom. A small proportion of respondents (2 percent) had used only the female condom in the last year, whereas a larger proportion (11 percent) used both the male condom and the female condom. Among those who had used both the female and male condom in the last year, nearly half (49 percent) did not intend to use the female condom in the future. PSI surmised that the female condom is likely to be most important for a subgroup of the population unable or unwilling to use the male condom, but that the male condom would likely remain the preferred method of protection for condom users.[434] The published findings of this study did not include discussion of constraints to using the female condom, which have been encountered during its introduction (e.g., lack of comfort in inserting, noise during intercourse, "messiness").

Orphans and Other Vulnerable Children

In response to the growing number of orphans and OVC, the Zambian government launched the Social Welfare Scheme; however, to date, it reaches only an estimated 10 percent of the target population.[435] Zambia is seeking to establish effective legislation with regard to children, youth, and HIV/AIDS. An array of ministries and agencies are examining creation of a juvenile justice system and a system of care for youth at risk, including street children.[436]

There are numerous NGO and CBO projects targeted to orphans and OVC (see the Links section).

Young People

There are many HIV/AIDS projects in Zambia that work with young people (again, see the Links section). For example, many schools have established anti-AIDS clubs.[437] Given that so many youth are already caring for family members with AIDS, some youth projects are launching

related training for them. As with other HIV/AIDS projects, there has been almost no M&E of projects serving youth.[438]

Among the key findings of various youth projects in Zambia:

- Youth in rural areas are extremely underserved.
- Although youth-led efforts can translate into better youth-focused programming in both NGOs and government, youth involvement in designing projects has been low.
- For effective youth involvement, young people need to be equipped with skills in management, budgeting, finance, and report writing. Youth also need financial resources and sustained emotional support.
- Many youth programs usually do not include key groups such as video shop owners and truck and minibus operators, whom youth report as sources of information for sexual & reproductive health.
- Some youth-friendly sexual & reproductive health clinics have opened in recent years — primarily in urban areas; these need to be scaled up and expanded to rural areas.
- As discussed in the Stigma section, stigma around HIV/AIDS remains high among youth and affects self-assessment of risk and may be a barrier to sustained behavior change.
- Messages simply promoting safe sex are insufficient; young people must be linked to, e.g., youth friendly health services, counseling, and support groups.
- A sole focus on HIV/AIDS topics may lead to "AIDS fatigue." Messages must be entertaining and constantly updated and repackaged to keep them new.
- Follow up to interventions is crucial, as sustained behavior change messages require continual reinforcement.

VCT

Zambia developed the *Code of Ethics and Practice for Counseling* to establish standards of competence and conduct for counselors, trainers, and supervisors. The code is reinforced through the more detailed *Guidelines on HIV/AIDS Counseling in Zambia*, produced by the Ministry of Health in 2000. [439]

By 2000, public health centers in 23 districts (out of national total of 72) were providing VCT, with 3,000 counselors having been trained by the National HIV/AIDS Program.[440] Outside government, NGOs and CBOs have been providing VCT for many years. Many have made it a central element of their prevention and care interventions. (See list of NGOs and CBOs in the Links sections.)

According to WHO, during 2001, 213,000 clients were seen at Zambia's 56 publicly funded/NGO VCT centers. (There were no VCT services offered in the commercial sector.) Of the African countries for which WHO provided data, the number of clients seen in Zambia was by far the highest; the second-highest number of clients seen was 97,375 in Zimbabwe (See WHO June 2002 for discussion of methodology and limitations of cross-country comparisons.) [441]

During 2001, 43 percent of the estimated population in need of VCT services in Zambia was receiving them. Of the African countries for which WHO provided data, only Mauritius had a higher percentage (100 percent); the next highest after Zambia was Senegal (37 percent). [442]

The 2000 ZSBS found that about three-quarters of men (76 percent) and women (71 percent) knew where they could get tested for HIV.[443]

In the 1998 ZSBS, only 9 percent of men and 7 percent of women stated that they had been tested for HIV. The percentage of respondents who reported having taken an HIV test in the 2000 ZSBS increased. Overall, 13 percent had been tested, (men: 14 percent; women: 12 percent). Of those tested, 42 percent were tested in the last year, and 83 percent knew their test results (86 percent of men and 80 percent of women). [444]

Worryingly, however, the 2000 ZSBS found that only 59 percent of adolescents knew of a place where an HIV test is available. Only 5 percent of adolescent men and 7 percent of adolescent women had had an HIV test. Of those tested, 83 percent knew their serostatus.[445]

Constraints to uptake of VCT include:

- stigma[446]
- belief that no treatment is available (this is largely correct with regard to ART, with limited exceptions for PMTCT, but treatment for OIs and other forms of care are available, though, again, to limited degrees) [447]
- belief that appearance of symptoms (often the first point at which people consider being tested) guarantees early death[448]

In Zambia, VCT projects allied with HBC have found that with the availability of basic treatments and consequent longer survival, people became more hopeful and more willing to have an HIV test and act on advice about healthy living and prevention.[449] Community mobilization on VCT is also crucial to uptake. [450]

Many of the NGOs and CBOs listed in the Links section provide VCT.

Home-based Care

In response to the an underfunded, overburdened formal health care system and rising costs of providing care to PWHA in public health facilities (especially hospitals), the government encouraged home-based care. [451] Zambia was one of the first countries in Africa to implement HBC. Zambian NGOs, particularly those related to religious organizations, took the lead on HBC and developed a variety of approaches, many of which serve as best practice for other countries.[452] Government has played a very limited role in provision of home-based care. Apart from the secondment of several government-paid nurses to one HBC project, there has been very little material, financial, or technical support from the Zambian government. [453]

There are currently over 50 HBC programs in Zambia, ranging in size from approximately 4 to 30 volunteers. HBC covers only about 5 to 20 percent of PWHA; areas covered tend to in urban areas. Demand for HBC is enormous, and programs are overwhelmed. There have been anecdotal reports of decreases in the quality and frequency of current HBC services (e.g., fewer home visits, less provision of food or medicine). [454]

A DFID-funded analysis of HBC conducted by the Nuffield Institute for Health found that HBC is unlikely to increase significantly without greater government involvement. It recommended that government provide some form of basic HBC for all communities or strengthen support to other organizations providing such care. However, the scaling up of home-based care programs may present a number of challenges, such as:

- sustaining volunteer motivation when workloads increase substantially
- finding a balance between providing high quality services and maximizing coverage and accessibility
- coping with more bureaucratic and inflexible management systems[455]

Industry

The Zambia Federation of Employers has encouraged its members to assist their workers in accessing ART. Yet, as the Southern African Regional HIV/AIDS Information Network notes, most Zambians either work in the informal sector or hold low-level positions, such as gardeners, house workers, or nannies; they are not unionized and depend on the generosity of their employers for medical assistance. [456]

Among firms that have implemented HIV prevention programs are Barclays Bank, Nakambala Sugar Estates (which has a small HBC component), Caltex Oil, and the INDENI Petroleum Refinery Company. [457], [458] Firms with HIV/AIDS policies include Copperbelt Electricity Corporation, Zambian Breweries, Mopani Copper Mines, British Petroleum, Konkola Copper Mines, and AHC Mining Municipal Services. In December 2002, Copperbelt Electricity Corporation announced that it would provide ART to its workers and their spouses.[459]

However, the majority of Zambian employers have no HIV/AIDS policy nor program. FACEAIDS, an HIV/AIDS workplace consortium involving the Society for Family Health, ZHIP, Planned Parenthood Association of Zambia, DFID, Kara Counseling Services, and the Zambia Business Coalition on HIV/AIDS, found that among 71 workplaces surveyed in Lusaka

and Copperbelt towns, 73 percent had no HIV/AIDS program. Seventy percent reported that they would welcome such a program.[460]

As mentioned, the POLICY Project elaborated *Guidelines on Employment, HIV/AIDS, and Human Rights in Zambia* in August 2001. These guidelines appear to be targeted to employees, more so than employers. To what degree they have been disseminated and utilized is not known. Moreover, neither the Zambian Ministry of Labor and Social Security nor employer federations appear to have been involved in drafting the guidelines.[461]

Links

Government

- National HIV/AIDS/STD/TB Council <mailto:aidsec@zamnet.zm>
- Ministry of Health <http://www.health.gov.zm>
- Central Board of Health <http://www.cbohresearch.org.zm/index.html>
- Zambia National Malaria Programme <mailto:malaria@zamnet.zm>
- Government of the Republic of Zambia <http://www.statehouse.gov.zm>

Academic and Research Institutes

- University of Zambia School of Medicine <http://www.medguide.org.zm/somnew/Default.html>
- University of Zambia Medical Library <http://www.medguide.org.zm>
- Institute of Economic and Social Research, University of Zambia <mailto:inesor@zamnet.zm>
- Center for Infectious Disease Research in Zambia (CIDRZ) <http://www.hptn.org/hptn_structure/hptu/performance_site_details.asp?Site+ROC+ID+%23=PTN+09%2D006 >
- Center for Health, Science, and Social Research **<>**
- Matero Reference Clinic <http://www.hptn.org/hptn_structure/hptu/performance_site_details.asp?Site+ROC+ID+%23=PTN+09%2D003 >
- Kalingalinga Clinic <http://www.hptn.org/hptn_structure/hptu/performance_site_details.asp?Site+ROC+ID+%23=PTN+09%2D002>
- Kanyama Clinic <http://www.hptn.org/hptn_structure/hptu/performance_site_details.asp?Site+ROC+ID+%23=PTN+09%2D001>
- Child Development and Research Centre <>
- ZAMBART (a collaboration between the University of Zambia's Department of Medicine and LSHTM) <>
- University Teaching Hospital <>
- Tropical Diseases Research Centre <http://www.tdrc.org.zm> Based in Ndola.
- Chainama Hills College Hospital <mailto:chcohesc@zamnet.zm>

International Partners

- The Study Group on the Heterogeneity of HIV Epidemics in African Cities <http://www.itg.be/itg>
- International Development Research Centre (Canada) **<**http://www.idrc.ca/cntryprof/prn_cntryprof.cfm?ovr_id=33>

- HIV Prevention Trails Network: Zambia <http://www.hptn.org/hptn_structure/hptu/HPTN_sites_by_country_Sites.asp?Country=Zambia>
- LSHTM <http://www.lshtm.ac.uk>
  - → Zambart Project <> Collaborative HIV/AIDS/TB research project involving University of Zambia School of Medicine, University Teaching Hospital, and LSHTM
- Imperial College London <http://www.ic.ac.uk>
- Belgian Institute of Tropical Medicine <http://www.itg.be/itg>
- Netherlands Royal Tropical Institute <http://www.kit.nl/about_kit/html/projects.asp?Action=ProjectsByCountry&CountryID=237>
- Chr. Michelsen Institute <http://www.cmi.no> Norway.
- Southern Africa AIDS Information Dissemination Service (SAfAIDS) Based in Harare <http://www.safaids.org>
- University of Alabama at Birmingham <http://main.uab.edu/show.asp?durki=17500> Collaborates with Zambian researchers through epidemiology and trial design, execution of multicenter large-scale clinical trials, toxicity and efficacy trials of vaginal microbicides, STI diagnosis and prevention, PMTCT, HIV vaccines, antiretroviral therapies, laboratory monitoring of viral load, and mucosal immunology and immunogenetics. Provides training to Zambian collaborators at UAB, as well as to on-site staff at University Teaching Hospital.
- CDC: Global AIDS Program: Zambia: <http://www.cdc.gov/nchstp/od/gap/countries/zimbabwe.htm>
- Mailman School of Public Health, Columbia University <http://www.mailman.hs.columbia.edu>
  - → MTCT-Plus <http://www.mtctplus.org/project.html>
- John Hopkins University Center for Communication Programs <http://www.jhuccp.org/africa/projects.htm#zambia>
- MEASURE Evaluation/University of North Carolina Chapel Hill <http://www.cpc.unc.edu/projects/measure/topics/hiv_aids/hiv_aids.html>
- Michigan State University <http://www.msu.edu/home>
- UCLA School of Public Health <http://www.ph.ucla.edu>
- Center For International Health, School of Public Health, Boston University
  - → Applied Research on Child Health Project (ARCH) <http://www.international-health.org/ARCH>
  - → Zambia Exclusive Breastfeeding Study <http://www.international-health.org/ZEBS>
  - → AIDS Economic Program <http://www.international-health.org/AIDS_Economics>
- Population Council <http://www.popcouncil.org/africa/zambia.html>
- International Center for Research on Women <http://www.icrw.org/projects/hivrelatedstigma/hivrelatedstigma.htm> Undertaking research on HIV/AIDS-related stigma and discrimination in Zambia.

National NGOs and CBOs

- Adolescent Reproductive Health Consortium <>

- Africa Alive! <http://www.africaalive.org> Behavior change projects relating to adolescent reproductive health and HIV/AIDS.
- African Extended Family system Support for Orphans and Vulnerable Children (AFESS-OVC) <mailto:afessovc@hotmail.com>
- Anricia Health Care Development Agency Ltd (AHCDAL) <>
- Bwafwano Community Home Care Organization <>
- Canaan Center <mailto:sarahb@coppernet.zm> Support to orphans and OVC.
- Catholic Secretariat National Health Programme <mailto:zecheal@zamnet.zm> Home-based care; support projects for widows and orphans.
- Care for Children in Need Organisation (CAFOCHIN) <>
- Child Assistance Development and Support Organisation <mailto:chin@zamnet.zm>
- Child Care and Adoption Society of Zambia <>
- Chikankata Health Services <> Based in Mazabuka and managed by Salvation Army. Has served as best practice in care of PWHA. Includes OI treatment and nutrition counseling.
- Chipata Youth Friendly Resource <>
- Christian Council of Zambia <>
- Christian Enterprise Trust of Zambia (CETZAM) <> Supported by Opportunity International<http://www.opportunity.org>; microloans, insurance coverage for death and funeral expenses.
- Churches Medical Association of Zambia <mailto:cmazm@zamnet.zm> Provides general health and HIV/AIDS-related services. Pharmaceutical training program has been expanded to cover HIV/AIDS-related treatment.
- Churches Medical Association of Zambia <mailto:cmaz@zamnet.zm> VCT, training, orphan and OVC support, research.
- Community Youth Concern <mailto:chin@zamnet.zm>
- Copperbelt Health Education Project <mailto:chep@zamnet.zm> Extensive program of HIV/AIDS research, training, and IEC. Also includes bursary schemes for orphans and OVC and support to PWHA.
- Development Aid from People to People (DAPP) – Hope Humana <> Ndola.
- Family Health Trust <mailto:fht@zamnet.zm> HIV/AIDS education for communities throughout Zambia; HBC.
- Family Life Movement of Zambia <mailto:flmz@zamnet.zm> Faith-based organization involved in sexuality education for adolescents.
- Fountain of Hope <mailto:fountainofhope@hotmail.com> Aids street children in Lusaka.
- Gospel Mission Sport Outreach <mailto:salemchildrens@yahoo.com> Support to orphans and OVC.
- HIV/AIDS and Human Rights Project <mailto:unzahr@yahoo.com> Based at the University of Zambia.
- Human Resource Trust <> Peer education and HIV prevention activities in Lusaka.
- In-Community Care for Orphans (I-CCO) < http://www.i-cco.org.uk>
- International Trust for the Education of Zambian Orphans (ITEZO) <http://www.itezo.org >
- Jesuit Center for Theological Reflection <>
- Justice, Peace and Development Center <>
- Kaoma Cheshire Care Home <mailto:kaompres@zamnet.zm> Support to orphans and OVC.
- Kasaba Home Based Care <>

- Kara Counselling and Training Trust <mailto:kara@zamnet.zm> Offers free VCT services, training in psychosocial counseling, and HBC in Lusaka, Choma, and Ndola. Spearheading ProTest, to encourages VCT as an entry point to integrated case management and prevention of HIV-related TB.
- Kenneth Kaunda Foundation for AIDS Orphans <>
- Kwasha Mukwenu <> Support to orphans and OVC in Matero.
- Lubasi Home Trust <mailto:ranjan@zamnet.zm> Support to orphans and OVC.
- Makeni Ecumenical Centre <mailto:makenec@zamnet.zm> Supports primary and adult education, health, family planning, and community development proejcts.
- Mandevu HIV/AIDS Multi-sectoral Initiative <>
- Mansa Community Home Based Care, Sisters of Mercy <>
- Movement of Community Action for the Prevention and Protection of Young People Against Poverty, Destitution, Diseases and Exploitation (MAPODE) <> HIV/AIDS outreach work involving street children in Lusaka; also provides vocational skills training; in August 2002 introduced mobile clinic equipped to treat young people for STIs.
- Ndola Catholic Diocese HBC Programme
- Girl Child Adolescent Reproductive Health Consortium <>
- Planned Parenthood Association of Zambia <mailto:ppaz@zamnet.zm>
- Positive and Living Squad (PALS) <mailto:zuluwin@zamnet.zm> AIDS awareness activities in the workplace, schools, and colleges, with emphasis on promotion of visibility of PWHA through sharing of personal experiences.
- Programme Against Malnutrition <mailto:pam@zamnet.zm>
- Ray of Hope <> Based in Livingstone. Provides microloans and vocational training to widows.
- Strengthening Community Partnerships for the Empowerment of Orphans and Vulnerable Children (SCOPE-OVC) <mailto:scope@zamnet.zm> Funded by USAID and managed by CARE International and Family Health Trust.
- St Francis Community Home Based Care <> Livingstone.
- Society For Family Health <mailto:sfh@zamnet.zm> An affilicate of Population Services Internaitonal. S\Safer sex information, social marketing, and condom distributiun.
- Society for Women and AIDS in Zambia <>
- Steadfast Action Foundation <mailto:steadfast@zamtel.zm> Support to orphans and OVC.
- Street Kids, Orphans and Widows Association (SKOWA) <> Kapiri-Mposhi.
- Tachimbwalubilo Community Development Programme <>
- Tasintha <> Founded in 1992. Safer sex education and vocational skills training for sex workers in Lusaka, Copperbelt, and Northern provinces.
- Teachers Against HIV/AIDS Network <>
- Traditional Health Practitioners Association of Zambia <mailto:thpaz@zamnet.zm>
- White Lily Orphans Support Project <mailto:mpalankonko@yahoo.co.uk>
- Young Christian Education Club of Zambia <> HBC.
- YWCA <> VCT and other HIV/AIDS programs.
- Youth Activists Organization <mailto:trends@zamnet.zm> Seeks to increase men's participation in sexual & reproductive health, HIV/AIDS prevention, family planning, and child health through sports.
- Youth Media <http://www.youthmedia.org.zm> Specializes in information dissemination to young people through the use of mass media. Publishes *Trendsetters*, a sexual &

reproductive health newspaper, and *Trendsetters School*, managed by an editorial board of school-going youths and distributed to all secondary school students. Also has online interventions.
- Zambian Business Coalition on AIDS <mailto:zbcas@zamtel.zm>
- Zambia Children Education Foundation <http://www.chin.org/zacef.htm>
- Zambia Federation of Employers <>
- Zambia National AIDS Network <mailto:znan@zamnet.zm>
- Zambia Network of People Living With HIV/AIDS (NZP+) <mailto:mahoney@zamnet.zm>
- Zambia AIDS Law Research and Advocacy Network (ZARAN) <mailto:kaumbu@yahoo.com>
- Zambian Nurses Association <>
- Zambian Red Cross Society < >

International NGOs

- See InterAction for comprehensive list of (primarily U.S.-based) international NGOs working in Ethiopia: <http://www.interaction.org/members>
- ActionAid <http://www.actionaid.org/ourpriorities/hiv/hiv.shtml>
- Adventist Development and Relief Agency <http://www.adra.org>
- Africare <http://www.africare.org/about/where-we-work/zambia>
- Amnesty International Zambia: http://web.amnesty.org/ai.nsf/countries/zambia
- Canadian Interagency Coalition on AIDS and Development <http://icad-cisd.com>
- Canadian Physicians for Aid and Relief <http://www.cpar.ca>
- Canadian Public Health Association <http://www.cpha.ca>
- Catholic Agency for Overseas Development <http://www.cafod.org.uk>
- Catholic Relief Services <http://www.catholicrelief.org/where_we_work/africa/zambia>
- CARE International U.K. <http://www.careinternational.org.uk/cares_work/where/zambia.shtml> Manages Partnership for Adolescent Sexual and Reproductive Health; also works with Population Council on training youth to care for PWHA.
- Children International <http://www.children.org>
- Christian Aid U.K. <http://www.christian-aid.org.uk/world/where/safrica/zambip.htm>
- Concern Worldwide <http://www.concernusa.org/ourwork/countries.asp?cid=31>
- Family Care International <http://www.familycareintl.org>
- Family Health International <http://www.fhi.org>
- Girl Guides and Boy Scouts <> Build HIV/AIDS into life skills training.
- International Family Health <http://www.ifh.org.uk>
- International Federation of Red Cross and Red Crescent Societies <http://www.ifrc.org>
- International HIV/AIDS Alliance <http://www.aidsalliance.org>
- Marie Stopes International <http://www.mariestopes.org.uk/ww/zambia.htm>
- Mothers Without Borders <http://www.motherswithoutborders.org> Support to orphans and OVC.
- Norwegian Church Aid <http://www.nca.no>
- Oxfam UK <http://www.oxfam.org.uk>

- PACT <http://www.pactworld.org/programs/country/zambia/index_zambia.htm> Supports local institutions seeking to address HIV/AIDS from a multisectoral perspective and increase citizens' participation in political processes affecting their lives.
- Pentecostal Assemblies of God <> Support to orphans and OVC, VCT training.
- Plan International <http://www.plan-international.org/wherewework/eastafricaeurope/zambia>
- Project Concern International <http://www.projectconcern.org/zambia.html> Community- and home-based care and support services for PWHA. Manages Africa KidSAFE, which seeks to create a safety net (Shelter, Advocacy, Food, and Education = SAFE) for children orphaned, displaced, or made vulnerable due to HIV/AIDS. Under USAID-funded <http://www.pactworld.org/reach>Community REACH</ilink> project, developing standardized national training program for HBC. Funds project in Livingstone that reaches sex workers, truckers, border traders, and currency traders.
- Salvation Army <http://www1.salvationarmy.org> Chikankata Health Services (see above). Also, Masiye Camp for orphans and OVC<mailto:masiyeca@telconet.co.zw>.
- Save the Children UK <http://www.savethechildren.org.uk/functions/indx_wedo.html>
- Transparency International <http://www.tizambia.org.zm>
- World Council of Churches <http://www.wcc-coe.org>
- World Vision <http://www.wv.org.za/Countries/ZAMBIA.HTM> Faith-based relief and development NGO. Collaborates on HIV/AIDS project involving truck drivers.

U.N. and Other Multilateral Agencies

- UNAIDS Zambia <mailto:kofosu-barko@unicef.zm> <http://www.unaids.org>
- Global Fund to Fight AIDS, Tuberculosis & Malaria <http://www.globalfundatm.org>
- WHO <http://www.who.int/country/zmb/en>
- UNDP <http://www.undp.org.zm>
- UNICEF <http://www.unicef.org/uwwide/8bd2.htm>
- UNHCR <http://www.unhcr.ch>
- UNFPA <http://www.unfpa.org/regions/africa/countries/zambia/1zam0206.doc>
- ILO < http://www.ilo.org/public/english/protection/trav/aids>
- U.N. Office for the Coordination of Humanitarian Affairs <http://www.reliefweb.int>
- World Food Programme <http://www.wfp.org/country_brief/indexcountry.asp?country=894> Includes School Feeding Scheme for HIV/AIDS Orphans in Lusaka and support to AIDS-affected families struggling to cope with the impact of the disease and rising food prices.
- FAO <http://www.fao.org/countryprofiles/index.asp?iso3=ZMB&x=9&y=9>
- International Fund for Agricultural Development (IFAD) <http://www.ifad.org/operations/projects/regions/pf/ZM_all.htm>
- UNDCP <http://www.unodc.org/southafrica/projects.html?id=2002>
- World Bank <http://lnweb18.worldbank.org/AFR/afr.nsf/dd4ae27820d2780f852567cf004cff45/54544aea448ca671852567d1004465e1?OpenDocument>; National Response to HIV/AIDS Project in pipeline <http://www4.worldbank.org/sprojects/Project.asp?pid=P003248>
- IMF <http://www.imf.org/external/country/ZMB/index.htm>

- African Development Bank (AFDB) <http://www.afdb.org/african_countries/home_zambia.htm>

Bilateral Aid Agencies

- Canadian International Development Agency (CIDA) http://www.acdi-cida.gc.ca/index-e.htm
- Commonwealth <http://www.thecommonwealth.org>
- Danish Agency for Development Assistance (DANIDA) <http://www.um.dk/english/dp/ba.asp>
- U.K. Department for International Development (DFID) http://www.dfid.gov.uk/DFIDAroundWorld/africa/Zambia.htm
  - → British Council: http://www.britishcouncil.org/
- European Commission: http://europa.eu.int/comm/index_en.htm
- Gesellschaft für technische Zusammenarbeit (GTZ): http://www.gtz.de/home/english/
- Ireland Aid: http://www.irlgov.ie/iveagh/irishaid/default.asp
- Japan International Cooperation Agency (JICA): <http://www.jica.go.jp/> Includes support for the National Virology Lab at University Teaching Hospital as well as for HIV/AIDS surveillance.
- Netherlands Development Organization (SNV) < http://www.snv.nl>
  - → Royal Danish Embassy <http://www.ambassade.dk/dkzambiluse.php3>
- Norwegian Agency for Development Cooperation (NORAD) <http://www.norad.no> Includes support for HIV/AIDS surveillance.
  - → Royal Norwegian Embassy <http://www.norwemb.org.zm/cgi-bin/wbch3.exe?html=../publishing/top/index.html&p=3518>
- Swedish Agency for International Development (SIDA) <http://www.sida.se/Sida/jsp/polopoly.jsp?d=364> Includes support for HIV/AIDS surveillance.
- U.S. Agency for International Development (USAID) <http://www.usaid.gov/regions/afr/country_info/zambia.html>
  - → USAID/Zambia mission web site <http://www.usaid.gov/zm> Last updated March 7, 2001.
  - → Funds:
    - AIDSMark/Population Services International <http://www.psi.org/where_we_work/zambia.html>
    - Famine Early Warning Systems Network (FEWS NET) <http://www.fews.net>
    - Horizons Project/Population Council <http://www.popcouncil.org/africa/zambia.html> Operations research on HIV/AIDS, including project to reduce STI prevalence on agricultural estates; also participates in Ndola Demonstration Project.

  - International HIV/AIDS Alliance <http://www.aidsalliance.org/_docs/_languages/_eng/_content/_1_about/_fieldprog/_africa/zambia.htm> Parrtners wiht ZIHP, Copperbelt Health Education Project (CHEP), and Chikankata Health Services; spearheading Zambia VCT Partnership.
  - LINKAGES Project/AED <http://linkagesproject.org/download/worldzambia.pdf>
  - POLICY Project/The Futures Group International <http://www.policyproject.com/countries.cfm?country=Zambia>
  - Rational Pharmaceutical Management Project/Management Sciences for Health <http://www.msh.org/projects/dmp40_345za.html>
  - Southern Africa Regional HIV/AIDS Programme <http://www.rhap.org.za>
  - Strengthening Community Partnerships for the Empowerment of Orphans and Vulnerable Children (SCOPE-OVC) <mailto:scope@zamnet.zm> Managed by CARE International and Family Health Trust.
  - Zambia Integrated Health Program <mailto:zihp@zihp.org.zm> Includes HEART Campaign.

- U.S. Centers for Disease Control and Prevention (CDC) <http://www.cdc.gov/nchstp/od/gap/countries/zambia.htm> Three major program areas: sentinel surveillance, TB, and STIs. Focus on training, building laboratory capacity, fostering improved monitoring & evaluation, and improving information technology.

- U.S. Peace Corps <http://www.peacecorps.gov/countries/zambia/index.cfm>

Foundations

- Bill & Melinda Gates Foundation <http://www.gatesfoundation.org> In 2001, awarded US$4 million to the Zambian Ministry of Health and Center for Research in Women's Health at the University of Alabama at Birmingham to develop a state-of-the-art, electronic, obstetric and newborn medical record system in Lusaka.

- Rockefeller Foundation <http://www.rockfound.org> Has supported Zambia's Center for Health, Science, and Social Research and the Malawi-Mozambique-Zambia Integrated Disease Surveillance Network, among other projects.

Subregional Organizations and Projects

- Catholic Institute for International Relations/International Cooperation for Development <mailto:ciir@mango.zw>
- Health Systems Research in the Southern African Region <http://www.healthnet.org/afronets>
- International Federation of Red Cross and Red Crescent Societies Southern Africa AIDS Campaign <http://www.ifrc.org> Support to orphans and OVC.
- Media For Development Trust <http://site.mweb.co.zw/mfd> Assists local NGOs to develop capacity to use film and video in their work.
- Organization of African Instituted Churches <mailto:oaic@skyweb.co.ke> Provides support to orphans and OVC.

- Panos Southern Africa AIDS Programme <http://www.panos.org.zm> Based in Lusaka. Works with media and other information actors to enable developing countries to shape and communicate their own development agendas through informed public debate; particular focus on amplifying the voices of the poor and marginalized. Numerous HIV/AIDS-related activities and publications.
- Project Support Group <mailto:psg@gmx.net> Assists southern African districts, municipalities, nonprofits, and faith-based partners to develop, manage, and sustain HIV/AIDS prevention and mitigation projects in priority migrant communities and areas.
- South African Civil Military Alliance to combat HIV/AIDS <> Based in Lusaka.
- Southern Africa Communications for Development <http://www.sacod.org.za/default.htm> Coalition of filmmakers and organizations that produce and distribute socially responsible films and videos, including those related to HIV/AIDS.
- Southern Africa Flood and Drought Network <http://edcw2ks40.cr.usgs.gov/sa_floods>
- Southern Africa Orphanage Hope Foundation < >
- Southern African AIDS Information Dissemination Service (SAfAIDS) <http://www.safaids.org.zw> Based in Harare.
- Southern African Development Community (SADC) <http://www.sadc.int>
    - → SADC AIDS Network for Nurses and Midwives (SANNAM) <>
- Southern African AIDS Training (SAT) Programme <mailto:info@satregional.org> Based in Harare.
- Southern African Network of AIDS Service Organizations (SANASO) <mailto:sanaso@mango.zw> Based in Harare.
- Southern African Regional Poverty Network <http://www.sarpn.org.za> Managed by South Africa's Human Sciences Research Council.
- Steps for the Future <http://www.steps.co.za> Collection of films about life in southern Africa in the presence of HIV/AIDS.
- Women in Law in Southern Africa Research and Education Trust (WLSARET) <mailto:wildaf@mango.zw> Manages an HIV/AIDS research project.
- Women In Need, Inc. <> Provides support to women and children affected by HIV/AIDS.
- Women's Media Watch <http://www.womensmediawatch.org.za> NGO that conducts training, research, and advocacy to combat sexism, racism, classism, and homophobia in the southern African media.

News Services

- AllAfrica.com: Zambia <http://allafrica.com/zambia>
- Health-L <http://www.hivnet.ch:8000/africa/zambia> Electronic discussion forum on HIV/AIDS in Zambia. Supported by the Fondation du Présent.
- IRIN/U.N Office for the Coordination of Humanitarian Affairs <http://www.irinnews.org/frontpage.asp?SelectRegion=Southern_Africa&SelectCountry=Zambia>
- ZAMNET <http://www.zamnet.zm> For-profit Internet service provider.

Other Resources

- Stanford University Library: Sub-Saharan Africa: Zambia <http://www-sul.stanford.edu/depts/ssrg/africa/zambia.html>
- University of Pennsylvania Zambia Page and Search Engine <http://www.sas.upenn.edu/African_Studies/Country_Specific/Zambia.html>
- AIDS channel <http://www.aidschannel.org> Based in Lusaka.
- University of Zambia Medical Library: HIV/AIDS in Zambia <http://www.medguide.org.zm>
- International Planned Parenthood Federation Profile of Zambia <http://www.ippf.org/regions/countries/zwe/index.htm>
- The World Factbook 2002: Zambia <http://www.cia.gov/cia/publications/factbook/geos/za.html>

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