Chapter 2

The Impact of HIV/AIDS on Children: Lights and Shadows in the "Successful Case" of Uganda*

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Summary: This chapter analyses the socio-economic impacts of HIV/AIDS on children in Uganda, with specific focus on their health, education and social welfare, and on the current and future policy/program responses in the field of prevention, treatment and mitigation. Ever since the first HIV/AIDS case was diagnosed in Uganda in 1982, over 2.2 million people have been infected and about 838,000 have died, leaving behind close to 1.7 million AIDS orphans. HIV/AIDS has unleashed severe impacts on children and the country as a whole, notably, the straining of the health system, socio-economic disruptions, reductions in productive capacity, increase in AIDS orphans, with related problems such as street children and child abuse, and it has also exacerbated poverty at household and community levels. Trends show a general decline in infections but these are no cause for relaxation in the fight. Uganda was one of the first countries to suffer the brunt of the scourge. Fortunately, deliberate measures have been taken at the political, medical and civil levels to deal with the crisis in a coherent manner. The study clearly finds that there has been good attempt to provide a working policy framework for the HIV/AIDS control but there are shortcomings in design of response particularly for the case of children. However, Uganda still faces the challenges of inadequate information and fact pertaining to the prevalence of HIV/AIDS infection as well as determining the effectiveness of alternative strategies in interrupting or completely stopping the further spread of HIV/AIDS.

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This study presents the views of its authors and not the official UNICEF position in this field.

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AIDS, PUBLIC POLICY AND CHILD WELL-BEING *

edited by Giovanni Andrea Cornia

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1. Introduction

1.1 Overview

This study analyses the socio-economic impacts of HIV/AIDS on children in Uganda, with specific focus on health, education and social welfare. The study uses both qualitative and quantitative methods and it draws largely on existing data from AIDS related institutions in the country. Uganda is among the countries that have been worst hit by the AIDS epidemic in the world. The results show that AIDS severely affects children both directly and indirectly and has had major impact on their welfare and that of the country as a whole. For instance, it raised the infant mortality rate from 97 in 1988-1992 to 101 per 1000 live births in 2000, and lowered life expectancy from 48 in 1990 to 42 in 2000. Uganda's Gross Domestic Product (GDP) per capita is estimated to be US\$ 220.00.

1.2 Background and Problem Statement

Uganda holds about 0.4% of the World's population, but accounts for 2.4% of the HIV/AIDS cases. The number of cumulative AIDS cases has continued to rise as a result of a large pool of HIV infected people who fall sick as indicated in Table 1.1.

Table 1.1: Cumulative reported AIDS cases by year

Year	No of cases reported in the year	Cumulative No. of cases
1983	17	17
1984	11	28
1985/86	882	910
1987	2,914	3,824
1988	3,425	7,249
1989	6,090	13,339
1990	6,616	19,955
1991	10,235	30,190
1992	6,362	36,552
1993	4,641	41,193
1994	4,927	46,120
1995	2,191	48,312
1996	3,032	51,344
1997	1,962	53,306
1998	1,406	54,712
1999	1,149	55,861
2000	2,303	58,165

Source: STD/ACPMOH Surveillance Report June 2001

Table 1.1 indicates that there were 58,165 AIDS reported cases as of December 31, 2000. Out of these, 4,286 (7.4%) are children aged 12 years and below. The table further shows a sharp increase in the number of reported cases, reaching the peak in 1991 with about 10, 235 cases. These figures only represent the reported cases, yet the total number could be much more. However, in 1992 the reported cases started declining at a fairly

consistent rate. The declining trend of the reported cases tallies with the decline in prevalence of HIV/AIDS based on surveillance studies.

The estimate of HIV epidemic with regard to number of people living with HIV/AIDS, new AIDS cases and AIDS death since the onset of the epidemic are presented in Table 1.2. These scenarios refer to women, men and children.

Table 1. 2: Estimates of HIV/AIDS epidemic in Uganda, 1999 and 2000

Situation	Cases	Year	
		1999	2000
People living with HIV/AIDS	Total	1,438,000	1,107,644
	Adults	1,294,200	996,880
	Women	761,300	543,753
	Men	532,900	453,127
	Children < 15 years	143,800	110,880
New AIDS cases in 1999 and 2000	Total	112,000	99,081
	Adults	100,800	89,173
	Women	54,982	48,640
	Men	45,818	40,533
	Children < 15 years	11,200	9,908
Cumulative AIDS death since the	Total	838,000	848,492
beginning of the epidemic	Adults	754,200	763,600
	Women	411,382	416,510
	Men	342,818	347,090
	Children < 15 years	83,800	84,892

Source: STD/ACPMOH Surveillance Report June 2001

According to Table 1.2, compared to the men, we observe a higher figure for women in all the three situations. There was a decline in both number of people living with HIV/AIDS and new AIDS cases between 1999 and 2000. This could have been due to sensitization, mobilization and government's commitment to fighting the AIDS pandemic. On the other hand, the cumulative AIDS death generally increased. This could be attributed to the high prevalence rate in the early 1990s given the time period of 7 to 10 years between infection and death.

According to the AIDS Control Programme (ACP) of the Ministry of Health, it was estimated that by September 2001, a cumulative number of 2,276,000 people had been infected with HIV/AIDS since the epidemic was first reported in the country in 1982. Of these over 838,000 people have already died. An estimated number of 83,800 children below 15 years are affected.

There were almost no intervention attempts and programs from Uganda Government and other agencies until 1986. Since then, a lot of interventions have been put in place by government, Non-Governmental Organizations (NGOs), Community Based Organizations (CBOs), People Having AIDS (PHA) networks and development partners. By 1997, over 1200 agencies were implementing HIV/AIDS related activities in the country. Due to these interventions, there has been a declining trend in adult prevalence since 1992. The average adult prevalence rate was estimated at 8.3% by the end of 1999 from about 24% in 1992

AIDS has seriously affected young children, including those who are born with HIV from infected mothers, as well as those who are orphaned when their parents die from AIDS, although not infected themselves. HIV/AIDS has a significant impact on children, families and communities. For example, AIDS is responsible for up to about 12% of deaths in Uganda and is the leading cause of adult mortality ahead of malaria. AIDS has also affected the supply of education professionals, support staff and the quality of education being provided. Labour in general and household incomes have significantly been affected where over 80% of reported cases of PHA occur in the age group of 15- 45. Also, the continued attrition rate of deaths in young adults leads to a social and economic impact that increases with the severity and duration of the epidemic. Without adequate care and support, children experience losses in health, nutrition, education, affection, security and protection. They suffer emotionally from rejection, discrimination, fear, loneliness and depression. The control process of AIDS is complex and yet the effects are touching (see also chapters 1, 10 and 11 of this compilation of studies).

Given the magnitude of the impact of HIV/AIDS on children and society in general, the government, communities, NGOs and private sector have responded positively in trying to control the rate of infection. Government has responded by setting up national programmes such as UAC, AIC and HIV/AIDS control programmes in the different ministries. On the other hand, there are several local and international NGOs directly dealing with the HIV/AIDS problem such as UWESO, TASO, UCOBAC, Save the Children Fund, Action Aid and CONCERN International. At the community level CBOs and religious based institutions have been set up.

It is therefore important that this study reviews the impact of HIV/AIDS on children, looking at the current and proposed policy responses in order to be able to suggest practical policy recommendations. This will help in designing appropriate policy response to the HIV/AIDS problem in Uganda.

2. HIV evolution, prevalence and AIDS mortality

This section presents the evolution of HIV/AIDS epidemic in Uganda, surveillance systems and determinants of the transmission mechanisms.

2.1 The Evolution of HIV/AIDS Epidemic

Since the onset of the HIV/AIDS epidemic in Uganda in 1982, the situation can be categorized in four phases namely;

Phase 1: 1982-86: The first two cases of AIDS were identified in 1982 in the southern district of Rakai on the shores of Lake Victoria. These two cases were associated with severe weight loss and commonly known as 'slim'. In 1983, 17 more cases of 'slim' disease were reported. Subsequently, in 1984 the 'slim' disease was confirmed as AIDS. The cases were limited to high-risk groups such as commercial sex workers, truck

drivers, the military and youth with multiple partners. It was largely confined within large urban areas. From 1982-86, the epidemic was largely handled by the health sector with spontaneous community initiatives to care for the infected and affected. The first government structured effort to address the epidemic was in 1986.

Phase 2: 1987-91: In 1987/88, the disease spread to the business community and smaller urban areas. Anecdotal evidence has attributed this to high mobility of this population group and long absence from their spouses. A national sero-survey conducted in 1987-88 put the average prevalence rates at 9% of the adult population. By 1990, AIDS cases had been reported in almost all the districts of the country. Urban Centers along the major roads were the most affected areas. The Northern part of the country saw increased infection rates in the early 1990s due to the breakdown of social infrastructure and population displacement due to armed conflicts. In 1987, an AIDS Control Programme was established in the Ministry of Defence to respond to the special need in the armed forces. Also, the AIDS Support Organization (TASO) to provide much needed psychosocial support for the infected and affected was established. From 1987 to 1991, there were consultations on the multi-sectoral approach to the control of AIDS. The government recognized that the impact of the epidemic went beyond the health sector, thus the need to plan and implement relevant activities in other sectors. In 1990, the AIDS Information Center (AIC) for voluntary testing and counseling services was formed.

Phase 3: This is largely in 1992. The epidemic spread to rural areas and all districts were affected. This was the peak of infection rates with the sero-prevalence going up to 30% in some hard hit areas like Mbarara Town in Western Uganda. In 1992, the government adopted the Multi-sectoral Approach to the control of AIDS (MACA) as a policy and strategy for responding to the epidemic. During the same year, the Uganda AIDS Commission was established by Act of Parliament to coordinate the multi-sectoral efforts so as to unify the response.

Phase 4: 1993 to Date: Declining trends were observed beginning 1993, but officially announced at the end of 1995 after confirming the trends. The relatively sharp decline in trends from 1992 to 1998 has been followed by a slow down in the decline as indicated in figure 2.1. Rates in the rural areas are leveling off or declining at relatively lower levels. The average adult prevalence rate was estimated at 6.9% by the end of 1999 (See Figure 2.1). Fortunately, data from various sites shows declining HIV prevalence trends. The Medical Research Council (MRC) has prevalence data from annual sero-surveys from cohort consenting respondents, both children and adults, who numbered 17,354 in the 11-year round of survey of the Kyamulibwa general population. The cohort revealed overall prevalence rates of 4.0% in the new villages (1.4% for the 12 years and below versus 6.2% for 13 years and above) and 4.5% in the original villages (2.6% for 12 years and below versus 6.1% for 13 years and above. The declining sero-prevalence is largely due to changes in risky behavior, especially in urban areas (HIV/AIDS Surveillance Report, MOH June 2001). This phase has had a number of responses to HIV/AIDS by the Government of Uganda, donor community and NGOs as indicated in section five of this

report but namely political mobilization spearheaded by the President, information and education including counseling and country wide control strategy that is district based.

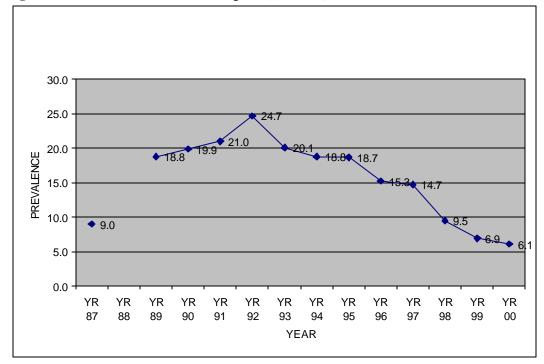


Figure 2. 1: HIV-1 Prevalence Rates In Uganda (1987 - 00)

Source: STI/ACP Surveillance Report 2001 and other previous MoH reports

Figure 2.1 above shows a summary of the trends in the prevalence rates over the different phases. Phase 2 is when the disease was spreading and is indicated by the rise in the curve (1987-91). Phase 3 is shown by the apex of the curve (1992) whereas Phase 4 which shows a declining trend is represented by the fall of the curve (1993 to date). Phase 1 is not presented due to lack of elaborate surveillance systems to generate the data.

2.2 Variation in HIV Prevalence

Regional Variation: The establishment of sentinel surveillance sites for HIV and AIDS Information Centers has made it possible to keep track of the HIV/AIDS trends. According to these data, the prevalence rates in Uganda have varied from 5% at the sites in most rural districts such as Moyo to as high as 30% at some urban ones such as Mbarara (Kayita and Kyakulaga, 1997). Kampala, Masaka, Jinja and Rakai are said to have more than 500 AIDS cases per 100,000 residents. The large number of cases in Kampala and Jinja is attributed to the high concentration of urban residents whereas in Masaka and Rakai it is mainly due to the fact that HIV/AIDS was first identified in these districts. Districts such as Gulu, Kitgum, Luwero, Kiboga, Kabarole, Kasese and Mpigi have 200 - 500 AIDS cases per 100,000 residents. The common characteristic with these districts is that they have been affected by war, thus suggesting that war situations may aggravate the spread of HIV/AIDS.

Rural-Urban Variation: In the districts of Rakai and Masaka where the epidemic was first reported, HIV prevalence ranges between 10-13 percent. The prevalence rates are higher in the trading centers along major roads. However, basing on data generated since 1989, the trend of infection is falling in both urban and rural areas.

Differentials according to age and sex: The HIV infection rate varies significantly with age and sex as indicated in figure 2.2. HIV prevalence is very low between age 0-5 and 5-14, but begins to rise in the age group of 15-19 particularly among girls. Mother to child transmission of HIV is responsible for the HIV prevalence among children. About 15% of the children fed on breast milk of infected mothers acquire the virus (WHO/UNICEF/UNAIDS, 1999). Data from the sentinel sites and AIC indicate that girls in the age group of 15-19 are three to six times more likely to be infected by HIV/AIDS than boys. This suggests that girls commence sexual activity at an earlier age. It is said that HIV prevalence is higher among the females than males aged 15-24, but the gap reduces between ages 24-29. The prevalence rate among males then supersedes that for the females aged 30 and above as indicated in figure 2.3.

The high figure of AIDS cases before one year as compared to 3-5 years in figure 2.2 can be attributed to the mother to child transmission and mainly given the fact that a number of children die before the age of three. Therefore chances are high that many live for about one year and many die between 2 and 3 years.

Figure 2.2 indicates high figure of AIDS cases during the overall productive age. This is worsened by the high number of female cases in figure 2.3 during the reproductive age. This implies high chances of mothers infecting their siblings during this age

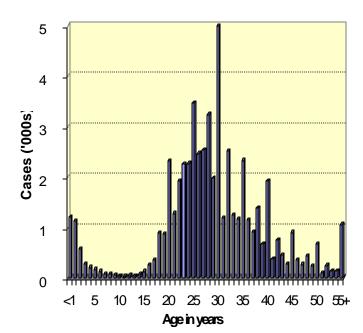


Figure 2. 2: Age of Ugandan AIDS Cases

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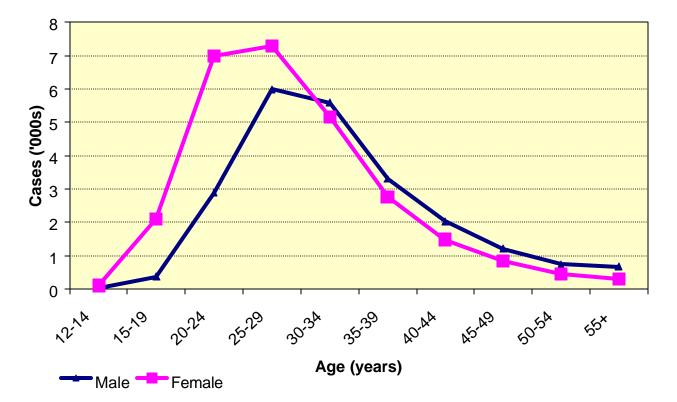


Figure 2.3: Distribution of Adult AIDS Cases by Age and Sex

2.3 Surveillance Systems

Three types of time series sero-prevalence studies are currently being undertaken. The first type includes population based cohort studies in Rakai, Masaka, Entebbe, Kabarole and Gulu districts. The second is the AIDS Information Center (AIC) by Voluntary Counseling and Testing (VCT) in various parts of the country. According to AIC (1998), people seek VCT mainly for prenuptial reasons, to plan for the future, frequent illness and need for babies. If the proportions of people attending VCT remain stable, then the time series information generated can provide useful indications of trends in prevalence. Data from AIC have helped to identify the risky or vulnerable groups, predict the future direction of the epidemic and may be used to prioritize interventions and target groups. The third is from the new antenatal sentinel sites. Although this data is not representative of the general population (since it is based on women alone) they provide a more realistic HIV prevalence situation, geographical pattern and relationship to STD.

2.3.1 HIV Sentinel Surveillance

The Ministry of Health collects data on HIV infection trends from pregnant mothers attending antenatal at sentinel surveillance sites in various parts of the country. The methodology includes collection of 250-600 blood samples quarterly from each of the fifteen (15) sentinel surveillance sites. The samples are tested centrally using ELIZA test for HIV at the Uganda Virus Research Institute. The methodology for blood collection and testing is premised on unlinked anonymous procedures. Though there was increase of

HIV infection rates from the year 1989, surveillance results show there was a sharp decrease from 1992 and the trend is downward up to the year 2000, see Figure 2.4.

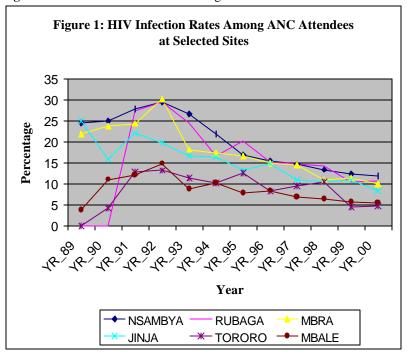


Figure 2. 4: HIV Infection Rates among ANC Attendees at Selected Sites

Figure 2.4 represents a sexually active group and characterize the stages of the evolution of the epidemic more particularly the declining trends. There is criticism that whereas this surveillance presents sexually active age group, all age groups should be covered so as to determine the trends and design corresponding interventions. It is further said that some women decide not to get pregnant once they suspect to be HIV/AIDS positive. If this is the case, then the antenatal data is constrained by the fact that many who conceive have the feeling that they are HIV/AIDS negative.

The trend in prevalence among pregnant women in urban areas tallies with the general trend of prevalence of HIV/AIDS in other population groups. The trend in figure 2.5 shows a rise from the on set of the epidemic, reaching the climax in the early 1990s and then falling consistently due to interventions against HIV/AIDS (IEC/condom distribution etc) and subsequent behavioral change.

2.3.2 AIDS Case Surveillance

AIDS case surveillance data is collected from health units. The AIDS case surveillance system is based on the WHO clinical AIDS case definition. AIDS case reporting is affected by factors such as accuracy and completeness of reporting by various health units. Some health units are active at reporting while others are not. Therefore, the number of cases reported does not necessarily reflect the magnitude of the AIDS situation. AIDS case distribution still depicts a bi-modal distribution indicative of vertical transmission among children and heterosexual transmission in adults.

2.3.3 Pediatric AIDS Case Reports

Pediatric AIDS case management and reporting remains a big challenge to care and support programs. The cumulative total of 4,286 children aged 12 years and below has been reported based on AIDS case definition for Uganda. Children constitute 10% of the cumulative number while adult men and women in the percentage of 39 and 51 share the remaining 90% respectively. The overall mean age for children was 2.3 years with no significant difference in mean ages of males and females

Since 1997, clinical pediatric AIDS cases, infant and under-five mortality due to AIDS has been increasing as indicated in Table 2.1 The highest annual pediatric cases ever recorded were 220 in 2000. The reported cases are estimated to be less than 25% of the prevalent cases. This is due to poor case surveillance by the health care system especially in the rural units before 1996. However, pediatric AIDS cases are on the increase because of the high adult AIDS cases especially among women who are in their reproductive age.

Table 2. 1: Pediatric Cases from 1996-2000

Year	Number of cases
Prior to Jan 96	3,754
1996	35
1997	85
1998	81
1999	111
2000	220
Total Pediatric cases	58,165

2.3.4 AIDS and Opportunistic Infections

In the health sector, HIV infection has led to the resurgence of other diseases such as tuberculosis, pneumonia and meningitis. The clinical spectrum and associated opportunistic infections is shown in Table 2.2. The table indicates that fever cases are on the increase. In a country where malaria is responsible for about 30% of the OPD attendances, this remains a big problem. On the other hand, kaposis sarcoma remains the common cancer in Uganda. This has implication for the health system if the country has to keep with the increasing cases of malaria.

Tuberculosis, Children and HIV: By September 2001, there were 35,497 reported tuberculosis cases to the National Tuberculosis and Leprosy Programme in Uganda. A study conducted among a pediatric cohort revealed that 18% of the HIV infected infants developed TB compared to 1.4% of the HIV non-infected and the successful response to treatment was 31% and 83% respectively. This has implication on the number of cases of TB treated on a long course chemotherapy and the country has had to adopt a Directly Observed Therapy (DOTs) which is largely community based not because of its costs effectiveness per se but potential shortage of beds to cope with increasing cases of tuberculosis.

Table 2. 2: Clinical Spectrum (%) of Adult Aids Cases by Year

Symptom/Diagnosis	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Kaposis Sarcoma	4.0	4.0	2.4	3.4	4.3	2.5	2.2	2.1	3.4	3.5	4.5	7.9
Cryptococcal												
Meningitis	1.3	1.6	1.7	1.2	1.9	1.6	1.1	0.7	2.5	2.6	2.7	1.7
Weight loss	80.3	81.3	83.4	89.7	87.2	92.5	96.3	87.4	91.8	90.3	91.6	83.0
Fever	76.5	77.7	78.9	88.7	86.2	93.0	94.8	64.5	91.5	87.5	90.9	86.8
Diarrhea	57.1	53.5	52.3	65.5	66.2	71.9	86.5	93.4	55.2	67.7	48.0	52.7
Oral thrush	32.6	32.6	35.5	36.5	35.2	40.2	48.3	42.5	43.5	42.0	28.4	40.6
Skin rash	33.1	32.0	38.2	46.9	44.7	47.5	45.0	54.0	45.4	45.7	45.1	50.3
Herpes Zoster	11.0	10.6	11.2	13.7	13.8	17.6	37.6	16.7	13.8	12.4	12.5	16.0
Lymphadenopathy	19.1	18.8	17.5	15.9	11.2	19.2	33.5	20.9	13.1	14.7	8.2	13.9
Cough without TB	36.6	36.3	37.3	46.3	46.2	5.0	47.0	57.7	49.4	44.2	37.5	45.6
TB	10.8	10.7	8.7	8.1	8.5	7.0	8.1	5.4	14.3	8.7	13.9	12.6
Herpes Simplex	8.6	4.9	4.6	12.8	12.9	11.2	13.2	10.4	7.7	9.4	4.7	5.4
Sample size	5418	8981	8281	7034	1616	2501	2882	1748	1877	1325	1038	2084

Source: HIV/AIDS Surveillance Report STI/ACP MoH June 2001

2.3.5 Notification

HIV/AIDS is not a notifiable disease in Uganda but a reportable one. A notifiable disease is one whose incidence above a specific threshold will cause a rapid response. Currently the Ministry of Health collects routine data on prevalence through the monthly reports from districts in the Health Management Information System (HMIS). It is not notifiable in that there is already a disease control program in place to address the consequences of HIV/AIDS to the health sector.

2.3.6 Tracking System of STDs

The prevalence of STDs and the relationship of STDs to HIV/AIDS infection are done through sentinel surveillance system at Mulago National Referral Hospital in Kampala STD Clinic as shown in Table 2.3. The country has financial and organizational constraints and as such can only carry out STD/HIV surveillance at Mulago Hospital. There has been a decline in the seroprevalence rate from 44.6% in 1990 to 20.5% in 2001. There is also an on-going study on the relationship between STI infections and HIV using a Natural Cohort at Kyamurimbwa in Masaka District. Common STDS from all cases despite their social economic background both in private and public health facilities are reported routinely to MOH through monthly Health Management Information System (HMIS) and there is program intervention.

 Table 2.3: HIV Infection Rates (%) Among STD Patients, Mulago Hospital

Year	HIV infection rates (%)
1989	44.2
1990	44.6
1991	44.2
1995	35.9
1996	35.1
1997	30.2
1998	29.4
1999	23.0
2000	20.5

Source: HIV/AIDS Surveillance Report STI/ACP MoH June 2001

Before 1989, there was no established surveillance system at the STD clinic in Mulago Hospital. The declining trend of HIV among STI patients cannot be explained by treatment but rather the general declining trend in prevalence due to largely Information, Education and Communication (IEC) and subsequent reduction in risky behavior.

2.4 Socio-epidemiology with Emphasis on Groups Affected

This sub-section addresses main routes of transmission, the incidence of the disease according to variables such as bio-medical factors, sex behavior of the different groups of people such as immigration, Internally Displaced Persons (IDP), refuges and human capital. This information provides a basis for designing of appropriate policy response.

2.4.1 Main Routes of Transmission

According to the (MOH STD/HIV surveillance report, 1997), the main routes of transmission of HIV transmission in Uganda include:

- 1. Heterosexual contact with an infected partner accounting for 75-80% of the new Infections.
- 2. Infected mother to child Transmission including breastfeeding (accounting for 18-22%).
- 3. Use of infected blood, blood products and aseptic conditions in health facilities (accounting for less than 2% of HIV infection); and
- 4. Sharing non-sterile sharp piercing instruments with an infected person (less than 1%)

Mother-to-Child HIV Transmission: A collaborative study by Makerere University/Case Western Reserve University (CCA, 1999), found that about 26% of sero-positive mothers transmit the virus to their children before, during, and after delivery. Altogether, vertical transmission (infection from the mother) accounts for over 90% of the pediatric AIDS while less than 10% of them acquire HIV from blood products containing HIV and from contact with non-sterile skin-piercing instruments. WHO/UNAIDS/UNICEF (1999) estimates that child breast-feeding from a mother who is HIV positive has a 15 - 25% risk of infection by this route. Other studies also show that about 66 per cent of the pediatric AIDS cases die by the age of three, while the mean age at death for these cases is 2.2 years. As a result, the age group 5 - 9 is relatively free of HIV infection (STD/ACP MoH, 1998). See figure 2.2.

The increasing trends in Mother-To-Child Transmission (MTCT) of HIV are attributed to the fact that many persons live long with the virus before developing full-blown AIDS. Meanwhile, they continue bearing children without knowing that they are HIV infected (UAC/UNAIDS, 2000). Some persons who contract HIV before getting a baby, go ahead and marry/get married without disclosing their sero-status so as to avoid society ostracism and ridicule at death, as well as "disappearing insight" that is to say, dying without a child or heir (Kiirya et al, 2000).

2.4.2 Biomedical Factors

Circumcision

A small number of ethnic groups in Uganda (10%) initiate young men and women into adulthood through ritual circumcision operations. These are Bakonjo and Bamba in Western Uganda and Sabiny and Bagisu in Eastern Uganda. These traditional operations are generally carried out during adolescence, often after the onset of puberty, and after the candidate has already become sexually active.

Male circumcision: Of significance in the transmission of disease, are the traditional circumcision ceremonies, which are usually preceded by a period of great mobility among the candidates, during which time the accompanying age-mates and friends are said to engage freely in sex. There are also celebrations before and at the time of the operation. Later when the wounds are healed, they are said to be accompanied by substantial alcohol drinking which tempts people into sex. Additionally, the sterility and safety of the instruments used to perform these ceremonies has been the subject of many debates, especially when only one instrument is used on several candidates (Olowo and Barton, 1992). Muslim communities who constitute about 10% of the country's total population carry out male circumcision based on religious faith. This is largely done in hospitals under sterile procedures, which limits their infection due to circumcision.

Female Circumcision: Female circumcision is another cultural practice associated with HIV transmission. According to UNFPA (2000), a few communities in Uganda practice Female Genital Cutting/Mutilation (FGC/M). Female circumcision is practiced by a small part of the population (2%). These are largely the Sabiny of Eastern Uganda; others are immigrants from the Pokot, Bok Tipeth, and those of Nandhi, Somali, and Sudanese descent. The eligible age for FGC is 15 years onwards, although some undergo this ritual earlier for prestige. This practice also confers the status of womanhood on teenage girls, including sex, thereby exposing them to the risk of HIV infection through early sex. The Sabiny, particularly those who are educated, are beginning to change their perceptions towards female genital cutting (Kirya, 1997). Records from the Reproductive, Educative and Community Health (REACH) Programme in Kapchorwa District show that 971 girls underwent FGC/M in 1990, 903 in 1992, 854 in 1994 and 544 in 1996 showing a declining trend. This falling trend is due to the fear of being infected with HIV/AIDS.

2.4.3 Sex Behavioral Factors

Data from Knowledge, Attitude, Behavior and Practice (KABP) surveys shows almost universal levels of awareness and very high levels of knowledge in excess of 75%. There is also sustained increase in the age at first sex averaging 16 years, increasing use of condoms especially with non-regular partners and low reported incidence of urethritis all across the districts surveyed, (Table 2.4). It is worth noting that although there has been an increase in non-regular partners (notably for Mbarara and Mpigi), there has been substantial use of condoms.

Table 2. 4: Comparison of Population Based KABP Findings for the Selected Districts of Mbarara, Mpigi, Masindi and Pallisa 1996/97 viz 1999/2000

	District	s Surveyed	l					
Prevention indicator	Mbarara		Mpigi	Mpigi			Pallisa	
Year	1997	1999	1996	1999	1997	2000	1997	2000
Knowledge of preventive measures	77.9	78.7	84.8	81.1	74.8	82.2	84.6	76.7
Reported non-regular sexual partners	6.6	8.7	7.3	8.6	6.3	5.2	4.6	4.0
Reported condom use with non-regular partners	31.9	48.0	54.8	71.2	41.5	50.8	30.7	53.3
Reported incidence of urethritis (for men)	12.0	14.2	11.8	8.9	6.7	8.4	13.2	7.6

Source: STI/ACP Surveillance Report 2001

Sex Workers: Ugandan laws do not allow prostitution and therefore it is difficult to ascertain the total number of sex workers in the country. Although culturally, sex was restricted to marriage, this is no longer the case possibly due to moral degeneration and poverty. As a result, the age bracket of commercial sex workers has widened and this has implications for AIDS particularly if they engage in unprotected sex. According to KABP Survey on HIV, AIDS and STDS among (166) Commercial Sex Workers (CSWs) in Kampala, Uganda (1998), a majority of the CSWs (72.9%) were young women aged 15-24 years. In Uganda, children (under 18 years) do not consent to sex, but sadly among these 31.5% were 15-19 years and 41.4% were 20-24 years. Slightly more than half of the CSWs (50.6%) were single and there was a significant proportion of 25.9% who were in stable relationships (surprisingly 14.8% were legally married and 11.1% were cohabiting). About two thirds (60.5%) of the CSWs reported having children and of these 47% had children of two years and below. Given the fact that two thirds of the CSWs had children, this puts these children at risk especially if their mothers are infected.

Interestingly, knowledge of preventive practices against HIV infection was high among CSWs. Over three quarters of CSW studied (77.1%) were able to cite two or more preventive practices against AIDS. Close to four fifths (78.7%) of the CSWs had a relative, a friend or a colleague who had AIDS, and 12.3% reported having lost a sexual partner to AIDS. Commercial sex workers had a high reported prevalence and incidence of STDs (slightly more than a quarter (26.1%) reported having an abnormal vaginal discharge in the last 12 months and 20.9% reported a history of genital sores). The incidence of reported abnormal discharge using episodes in the last 12 months was 64.4% and that of genital sores was 48.7%. Condom use during the last intercourse was reported to be 95.5%. This shows high level of awareness about AIDS and prevention is being given priority. With proper-targeted sex education this can be increased.

2.4.4 Other Social Risk Factors

HIV/AIDS and Culture: Studies show that traditional practices such as widow inheritance; polygamy and wife sharing are factors of etiologic significance in HIV

transmission. Irresponsible sexual behavior and alcohol consumption during burials, last funeral rites and other traditional ceremonies are common (Barton and Wamai, 1994). Other cultural behavioral norms such as blood brotherhood and treatment for barrenness create a conducive environment for the spread of HIV.

Many ethnic groups practice widow and children inheritance by a brother of the deceased. Traditionally, inheritance serves the purpose of protecting the widow and orphaned children within the clan while funeral rites are traditional mechanisms of giving social support to the bereaved. These practices are gradually changing owing to the fact that community members are becoming aware that such cultural practices expose them to HIV infection. Now large areas of the country have begun supporting widows and their children without direct inheritance Olowo-Freers and Barton, 1992). Other cultural factors that perpetuate HIV infection include inadequate family life education, which has led to parents and other adults to often avoid talking to young people about sex. There are also stereotype roles, which encourage submissiveness on the part of girls, and aggressiveness on the part of boys. For example, many cultures place a high premium on the virginity in girls while promoting early and active sexual behavior for boys. The Banyoro traditionally used to offer a goat to the bride's aunt if the bride is a virgin.

HIV/AIDS, Migration and Internal Conflicts: In Uganda and the Great Lakes Region, people move mainly due to civil conflict and in search for better job and trading opportunities. Direct inquiry to the office of the Prime Minister as of November 2001, shows that there are 700,000 internally displaced persons in Uganda and 224,000 refugees staying in Uganda.

Refugees, Internally Displaced Persons (IDPs) and soldiers, are increasingly at risk of HIV infection in Uganda. Refugees and IDPs comprise of mainly women, children and the elderly. These persons are highly concentrated in temporary rural camps. Although data on HIV prevalence amongst refugees and IDPs are not available, they are considered a high-risk group due to social economic and psychological breakdown. The main risk factors in refugee settings include transactional sex to secure life, escape to safety, gain access to shelter or other services, and the deliberate use of sex as a weapon to demonstrate power, inflict pain and humiliation committed by men against women, children and other men. The breakdown of social support system also leads to *poor parenting and high rate of partner change, alcohol and substance abuse* due in part to frustration, idleness worries and fears. In addition, the insecure situations common in refuge settings promote sexual immorality such as prostitution, indecent assault and adultery, unprotected sexual intercourse due to poor social services, and high underlying HIV/STD prevalence (UAC and UNAIDS 2000).

Sexual transmitted diseases studies conducted in Northern Uganda, which hosts over 50% of the refugees and IDP population, found that there is high STD prevalence linked to army movements, camp following and prostitution. Early sexual activity among boys and girls and unwanted pregnancies are also high (Barton and Mutiti 1998, Kasozi, et al 1999).

The Ministry of Education policy as communicated at Ad Hoc Experts Group meeting on the Impact of HIV/AIDS on the Education Sector in Africa, African Development Forum (Education Commission for Africa), 2000 is that though the work in education is not migratory, education personnel may share some of the HIV/AIDS infection risks of more vulnerable workers. For instance, many schools have little institutional accommodation and this does not allow teachers to stay with their families. The same applies to trainee teachers who have to make their own temporary accommodation arrangements when posted to a school for teaching practice. One of the policies of MOES is to locate teacher training programmes both pre-service and in-service, which are close to individual's local place of residence and also assign teachers near their homes in order to limit long absence from home.

HIV/AIDS and Women's Status: In Uganda, the impact of HIV/AIDS on women has been considerable. A national sero-survey conducted in 1987 revealed that females were more infected by the virus than males, although the ratio was close to 1:1. Recent studies, however, indicate that for certain age groups, the HIV prevalence among women is much higher than that of men, for instance, females aged below 25 years are two to three times at risk of being infected by HIV than men (Kayita and Kyakulaga, 1997). This is attributed to girls being sexually active at an early usually at age of 15 years. Worse still older males go for young females in belief that they are free from HIV/AIDS. Regardless of under-reporting, available data leaves no doubts as to the magnitude of the impact of the AIDS pandemic on women.

Apart from the greater risk of being HIV infected, women are also disproportionately affected by HIV/AIDS. Women bear the burden of caring for the sick, orphans and coping with the emotional trauma of the dying person. Further women forego productive activities including employment in order to fulfill this duty. Infected women are likely to suffer more anxiety about their own health and the future of their children and family.

Linkages between Alcohol and HIV: Alcohol selling is of the income-generating strategies in Uganda being adopted by women, but it is also associated with risky sexual behavior. Alcohol consumers often interact with barmaids, and under the influence of alcohol buy sex. In addition, married women and men often use drinking places and hotels as meeting points with extramarital partners with whom they have sex (Wallman 1996). Alcohol consumption at social occasions such as weddings, last funeral rights, circumcision rituals, graduation parties and discos are still associated with high levels of sexual activity and rape, which in a way is suspected to increase HIV infections (see the quote below). As a result, a number of secondary schools have either minimized the frequency of discos or completely removed discos in schools.

"Most cases of rape occur with someone known, during and after social occasions such as wedding eve parties which are traditionally known as Busiki's, discos and graduation parties. The most common offenders are relatives or friends" (Uganda Police Headquarters).

Truckers, fishermen and other related occupations: Truckers, taxi drivers, fishermen and those in forces, waitresses, barmaids and market vendors were referred to as high risk compared to subsistence farmers, government workers, referred to as low risk groups. Kirunga, 1997 found that 38.3 percent of the high-risk groups were HIV positive compared to 24.2 percent of other groups and 17.7 percent of low risk groups. In one population based serosurvey conducted to determine the HIV-1 prevalence and evaluate various risk factors in three parishes in Western Uganda, it was found that because of their large proportion of migrating persons, the fishing villages presented populations with high risks for HIV infection (Kipps, et al.1995). In another study, it was found that members of the regular army were more than twice likely to be HIV-1 infected compared to those in military police (Mugerwa et al 1994). About seventy five percent (75%) of the death of truck drivers is said to be as a result of AIDS. The main factor that makes this group of transport workers behave in a manner that exposes them to the risk of HIV infection is linked to the adverse conditions under which they carry out their work. The population of the border crossing points is predominantly engaged in trade and provision of services to the passing traffic. Activities that are visibly thriving on the traffic that passes through these centers is the selling of alcohol in bars, commercial sex, lodges and hotels, which truckers have immensely subscribed to. Furthermore, irresponsible sex behavior especially engaging with multiple sexual partners was cited as the greatest predisposing factor. The proposed solutions are measures aimed at behavioral change and IEC.

The UNAIDS report shows that HIV prevalence has increased among the army, police and prisons tested in Kampala, from 16% in 1992 to 27% in 1996 (AIDS in Africa Country by Country African Development Forum 2000). Uganda Military Authorities argue that the prevalence of HIV/AIDS in military recruits is the same as that of the young rural population of less than 20 years (5%) since recruits are largely from the villages (personal communication from the Directorate of Health Services, Uganda Peoples Defence Forces).

All in all, although there is a decline in HIV/AIDS prevalence rates in Uganda, HIV/AIDS still remains a big problem with a number of interventions required to minimize the impact of the problem. The next section looks at interventions against HIV/AIDS.

3. Interventions against HIV/AIDS

This section addresses prevention and mitigation interventions against HIV/AIDS as well as treatment response in the sectors of education, health, and social welfare. The involvement of NGOs and bilateral as well as multilateral agencies is also highlighted(see also chapters 1, 11, 12 and 13 of this compilation of studies)

Uganda has been cited as one of the two success stories in Sub-Saharan Africa, the other being Senegal (see chapter 4 of this compilation of studies), in its efforts to reduce HIV prevalence levels. The key interventions mainly focus on prevention, care and mitigation

of the impact of HIV/AIDS. There has been a gap of placing the HIV/AIDS problem in the broader context of national development and relate it to other national policies on health and poverty eradication. The current National Strategic Framework for HIV/AIDS Activities 2000-1 to 2005/6 is an attempt to address these concerns in addition to the MACA and National Operation Plan. The Multi-sectoral Approach to the Control of AIDS (MACA) concluded in 1993, the National Operational Plan for HIV/AIDS/STD prevention, Care and Support 1994-1998 and the National Strategic Framework for HIV/AIDS activities drawn up to cover 1998-2002 is provided.

3.1. Prevention of HIV/AIDS Infection

3.1.1 IEC to Promote Behavioral Change and Reduce Vulnerability

The intensive HIV/AIDS Information, Education and Communication (IEC) provision at community levels has had a considerable impact on the population. The country established a health education network up to the lowest level of administration with a focus at district level. The number of Health Educators (HE) and Assistant HEs rose from 7 in 1986 to 347 in 2000. The Health Educators and Assistant HEs were already health personnel in service who were given additional training and skills in Information, Education and Communication (IEC). By 2000, 12 Mobile film vans had been purchased to ease IEC work. Print and electronic media is also being used. There is a weekly page on HIV/AIDS in the local newspaper and daily slots on national radio and television to inform the masses about the danger of HIV/AIDS and how it can be avoided.

The IEC programme has led to an increase in knowledge of HIV/AIDS. Two in every three persons are able to cite at least two acceptable ways of protecting against HIV (UDHS, 1995). Also, the proportion of sexually active persons who have ever used a condom has increased from 71% in 1989 to 72.2% in 2000 in some districts (MOH Surveillance report 2001). This is attributed to commercial marketing of the condoms and promotion of the condoms by MoH in its facilities coupled with IEC. However, this has not been considered a significant increase due to the fact that condoms are still inaccessible and unaffordable to a majority of people, particularly in rural areas. The target population for the condom distribution is 15-49 years, though Uganda has no clear set target condom coverage and this largely affects planning with the Health Sector. The government spends on average US 50 cents per condom provided at service point. However, there are shortages and at times condoms are out of stock for periods even more than three months. The condom position and procurement plan is presented in Table 3.1. However, estimated needs have been worked out based on anticipated demand not on target coverage which is not available.

Table 3. 1: Condom Consumption and Future Needs (in Millions)

Year	2001	2002	2003	2004	2005
Need	80	100	120	120	120
Total available	111	87	80	-	-
Orders confirmed/being processed	5	25	80	-	-
GAP	00	00	40	120	120

The STI/ACP program has a target to increase the use of condoms up to 185 million in 2002 and 324 million by 2005. The Government is interested in providing free condoms to cater for increasing usage in both urban and rural areas. However usage is still very low as indicated in Table 3.2 and also, the way condoms are used (effective use and consistency) is not known. The data for 2000 is being analyzed and will come out in the 2001 UDHS report. In 1989 condom use and distribution were not major undertakings of the health sector in relation to HIV/AIDS control.

Table 3. 2: Percentage Use of Condoms in all Women Country Wide

Year				1989	-			
Age	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Total
Group								
%	0.6	1.2	1.3	0.8	0.4	0.6	0.0	0.8
Female								
Year				1995				
Age	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Total
Group								
%	4.9	7.8	7.3	5.5	3.0	2.8	0.5	5.5
Female								

Source: Uganda Demographic and Health Survey 1995

At the start of the design of the interventions against HIV and AIDS in 1980s, community leaders were very keen on restricting the opening hours of discothèques and other places of amusement for youth where alcohol is consumed in large amounts. However, with time this has been dropped and reliance is on use of condoms and public education and information on control and prevention of HIV/AIDS. In any case, drug abuse seems not to be a big public health problem in Uganda.

According UDHS, 1995, there has been a reduction in the number of sexual partners. About 57% of women and 64% of men reportedly changed their sexual behavior by restricting to one or fewer sexual partners. However, 62% of women and 83% of men never changed their sexual behaviors due to the threat posed by HIV/AIDS. This implies that the high awareness has not been translated into positive behavioral change mainly due to inadequate IEC messages and limited personal perception of the risk of HIV infection. There has been an increase in the Median age at first sex intercourse in girls by about six months between 1989 and 1995 to about 16 years.

All in all, the outcomes of the IEC has been constrained by the social and cultural obstacles to behavior change, inadequate/lack of research on the impact of IEC messages on change in behavior in the different categories of the population and inappropriate IEC messages in terms of medium, context target group and proposition of safer behavioral alternatives. For example special IEC messages should be developed for the vulnerable population such as children, adolescent women and high-risk groups such as fishermen, IDPs and refugees, the military, truck drivers and commercial sex workers.

3.1.2 Voluntary HIV Counseling and Testing (VCT)

Voluntary testing and counseling has proven critical in determining changes in behavior, attitudes and intentions that would be necessary to reduce or eliminate individual risk of exposure to HIV. VCT services were pioneered by an NGO, the AIDS Information Center in the early 1990s. So far, over half a million people have accessed VCT services. VCT sites are available in 31 out of 56 Districts and have received financial and technical support from United Nations Fund for Population Activities (UNFPA). AIC provides VCT to about 130 clients every day in four sites in Uganda. More than 50% of AIC's clients are served at the main branch in Kampala. The unit cost of VCT at AIC between 1994 and 1996 was about US\$ 12.00 but recent analysis showed that the cost in 1997 was US\$ 13.39 (\$4.59 as cost for testing, \$1.02 for counselor time). Taking into account all costs related to direct services, the variable cost per client was \$5.46 and the fixed costs for the building, administration, supervision and monitoring was \$ 7.93. Costs of additional family planning services were \$ 1.17 per client and STD detection and treatment, \$1.76. The costs exclude cost of drugs and commodities. The Ministry of Health STI/ACP program estimates that the average cost of one VCT encounter is US\$12:00.This excludes cost of buildings and counselor time. These costs compare favorably with costs recently reported for VCT Kenya (\$27) and Tanzania (\$29).

The Ministry of Health in Uganda recognizes VCT as the core service supported by other services such as STD care, prevention of the spread of HIV, care and support for persons with HIV/AIDS management of tuberculosis and reproductive health services. The Ministry of Health has linked these integrated services to the "bicycle wheel" where VCT is the hub and associated services form the rim. It is Government's policy that voluntary counseling and testing is universally available and accessible to all citizens of Uganda. Informed consent and confidentiality is observed and HIV testing is not part of the routine medical examinations without the knowledge of the client." (*Prof F.G. Omaswa*, *Director General of Health Services, Ministry of Health Uganda 2001*).

The rationale for the VCT strategy is to encourage safe sex practices to ensure prevention and positive living for those already infected. Since the implementation of the VCT strategy, considerable progress has been made. This includes:

Voluntary Testing and Counseling (VCT) has been promoted through its integration into the health services at district levels. This has led to over 400,000 individuals being tested for HIV countrywide since large-scale counseling and testing was initiated. This however has been limited by the inadequate HIV testing and counseling services particularly in rural areas and also the fear of breach of confidentiality, which has made many people either not to be tested or being tested at a health unit far from their place of residence. Self-stigmatization has also led to a high proportion of people not being tested.

There has been an expansion in the supply of HIV/AIDS information and increased demand for STD treatment and counseling, particularly among those aged 15-24 years which has led to the promotion of peer social support and positive living through post-test

clubs, improved quality of information provided by networks and associations for PHAs, and an approved plan of extending VCT services to health centers at sub county level.

The VCT programme has been generally limited by the limited number of VCT counselors, low quality of testing facilities (for example, staff, laboratories and consumables) available at some sites, and high population mobility, which makes it difficult for certain populations such as children and youth to access VCT services.

In addition to the VCT, there is compulsory testing and quarantine of high-risk groups. The 1993 Operational Plan set out to carry out compulsory HIV/AIDS testing of students going for long courses abroad because of the State investment in their education. This has been dropped and the only group that is still with this requirement is the army, police and prison recruits. The argument is that the training is very vigorous and the recruits are expected to serve for a long-term of over 10 years.

3.1.3 Prevention of Blood Borne HIV Transmission

Uganda Blood Transfusion Services (UBTS) Project started in 1987 as part of HIV/AIDS activities under the AIDS Control Programme in the Ministry of Health. The project was largely funded by the European Union with significant contribution from Uganda Government and other donors. The total EU support is expected to be US\$ 10.5 million by 2004, and thereafter Uganda Government will fund UBTS up to 100%. The main objective of UBTS is to reduce the incidence of HIV/AIDS and other diseases transmissible by Blood, and ensure adequate supplies of safe blood and blood products to meet the needs of the hospitals (see chapter 11 of the study). Over 60% of the recipients of blood transfusions are children less than 12 years; therefore safe blood transfusion is a key strategy in prevention of HIV/AIDS in children The amount of blood collected increased from 45,000 units in 1986 to 78,000 units in the year 2000. The HIV prevalence was 14% in 1989 and dropped to 1.3% in 2000 among blood donors. This has resulted in over 98% blood safety. Currently, UBTS is the best in Africa and serves as a regional training center for Anglophone Africa, a role it has played since 1997. Reduction in infection through blood transfusion has been achieved through the following activities: Development of national guidelines for blood transfusion; Continued recruitment of low risk blood donors; Screening all blood for transfusion against HIV using ELISA Test, syphilis and hepatitis B virus infection; and distribution to hospitals and supervision of the utilization of safe blood. These are limited by the inadequate blood quality control, supply and prevention of blood borne HIV transmission through appropriate use of blood and blood products during service delivery.

There has been sensitization of blood donors, medical workers and the public on the dangers of excessive use of blood transfusion and sharing of no sterile skin piercing instruments with another person but with no specific training for Traditional Birth Attendants, Traditional Healers and barbers in HIV prevention. Red Cross society takes extra caution to recruit donors who have low prevalence rate of HIV/AIDS basically voluntary, repeating non-remunerated donors (largely school children that have 0.7% HIV prevalence).

Even though, regional blood screening and transfusion services have been established, the inadequacy in disseminating of new techniques for detecting contaminated blood is still a big constraint.

3.1.4 HIV Vaccine

Discussions on the ethical and legal issues related to vaccine trials in Uganda began in 1997 and actual trials commenced by mid 1999 under the auspices of the International AIDS Vaccine Initiative (IAVI). The project is supposed to work with Scientists at the Uganda Virus Research Institute to carry out the initial studies on a small number of volunteers, then expand the test in the final phase beginning 2002 or 2003. The vaccine, code-named DNA-MVA, which is given by injection, has been tested in Kenya and Britain. The second vaccine is dubbed Salmonella vaccine. These are to be used in the trial. The Government of Uganda in collaboration with UNAIDS has committed itself to support the project in terms of vaccine development and evaluation. The review of ethical legal issues related to vaccine development and the strengthening of capacity to participate in vaccine research and trials more effectively are underway.

In spite of the progress so far made in vaccine development and trial, there are still a number of constraints to be addressed. There is lack of guidelines to address ethical and legal issues particularly those relating to the participation of the public in the vaccine trials. Also, sensitization and awareness about the vaccine development and trials has not been carried out.

3.1.5 STD Prevention and Treatment

Activities which were implemented to address issues related to STD care include; development and provision of IEC on STD training service providers in diagnosis, syndromic management of STD and provision of STI treatment drugs; and integrating STD services with Health Care and Mother and Child prevention services. A study by Center of Population and Family Health, Columbia University and Institute of Public Health Makerere University has shown that there is no effect of STD intervention on the incidence of HIV-1 infection, a substantial proportion of HIV-1 acquisition appears to occur independently of treatable STD cofactors. This tallies with the preliminary results from a study carried out by MRC in Kyamulibwa in a neighboring district of Masaka.

3.2 Care and Treatment of HIV/AIDS and Related Illnesses

3.2.1 HIV/AIDS and ARVs

Policy on ARVS: The Ministry of Health does not have a policy on use of ARVs. However, it has identified this policy gap and consideration is being made (personal communication from the Department of Disease Control, MoH Uganda 2001).

Uganda is participating in the UNAIDS pilot project on provision of ARV therapy (see chapter 14). The major hindrance has been prices but the global advocacy for reduction of prices has resulted into increased access. The estimated costs of ARV treatment has reduced by almost 70% since 1995 according to UNAIDS. Patients on ARV drugs have

increased from 55 in 1996 to 540 in 2000 (see figure 3.1) but far less than 1% of the would be benefiting population. This is partly due to increased awareness and reduction in costs.

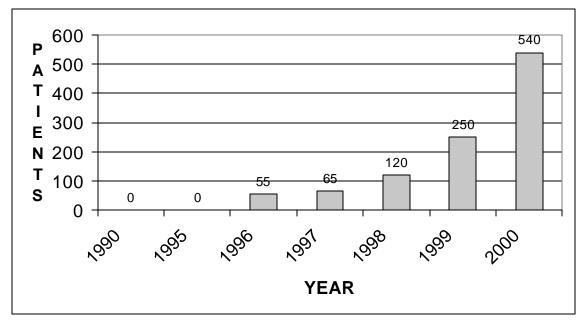


Figure 3. 1: Number of Patients on ARVs Treatment in the 1990's

Source: Drugs Access Initiative, UNAIDS office, Kampala 2001

The AIDS Control Project has made provisions for availing and increasing access to drugs for the treatment of HIV and opportunistic infections. The emphasis is to make ART drugs available and accessible. At the moment the Government position is to provide drugs for opportunistic infections, which are affordable, (particularly drugs for treatment of TB) and to make available ARVs for those who can afford the cost. In Masaka District, an NGO (AIDS Health Care foundation) plans to build a center to provide low cost anti-retroviral drugs to AIDS patients, and this will improve on accessibility to these drugs. The communities continue to demand for these drugs and it should be noted that PHAs often seek medical care late when they are sick with full-blown AIDS and hospitalization.

Prevention of Mother to Child Transmission (MTCT) using anti-retroviral (ARV) drugs can reduce HIV transmission by 30-50%. Table 3.3 shows ARV Drug Costs for PMCT based on Modified Thai, Petra arm A and Nevirapine.

Table 3. 3: ARV Drug Costs for PMCT

Number of mother-baby pairs	Cost per Regimen		
	Modified Thai1	Petra arm A 2	Nevirapine
One mother-baby pair	\$ 125.0	\$90.0	\$1.0
109,200 mother-baby pair	\$13,650,000	\$9,828,000	\$109,200
54,600 mother-baby pair	\$ 6,825,000	\$4,914,000	\$54,600

Source: MOH Uganda, PMCT Scale Up Plan 2001-2005

The costing of the plan for PMCT has been drawn by GOU, UNAIDS and UNICEF. This covers advocacy, communication and social mobilization, education and training of health workers as well as service delivery including provision of ARV. The cost is US \$ 7,120,438 over five years. However this does not fully capture the cost of personnel, hospital beds provided in Public and NGO facilities. With the falling price of ARV, pressure is likely to mount so that subsidy on treatment is provided to the general affected population and not only pregnant mothers.

Service outputs of PMCT: The service delivery statistics by end of November 2001 are provided in Table 3.4. There are 1,963 mothers who accessed Nevirapine/ AZT.

Table 3.4: PMCT Programme Coverage by November 2001

Services delivered	Output (no)	
New ANC attendances at all sites	54,057	
Women counseled	41,409	
Women tested	27,076	
Women tested positive	3,613	
Women delivered	1,607	
Number of accessed Nevirapine	1,620	•
Number of women accessed AZT	343	•

Source: MOH Uganda, PMCT Scale Up Plan 2001-2005

In spite of the above benefits, prevention of MTCT of HIV faces a number of constraints ranging from cultural practices to health care system. In a cultural context where large family sizes are traditionally associated with security and supremacy, prevention of MTCT of HIV services may encourage HIV positive couples to have children. The country has inadequate alternatives to breast-feeding and the fact that breast feeding is the norm, children born to HIV positive mothers stand a high risk of acquiring HIV through breast milk. There is inadequate supervision and adherence to medical precautions of mothers who give birth at home. The health system has limited staffing positions to offer counseling, testing and follow up of clients after delivery. The Health sector needs at least 4 counselors per hospital and at the moment there are no staff to do this work. There are no counseling rooms and space. Laboratories lack inputs and their functionality is sub-optimal in offering basic investigations necessary for monitoring the women who are on antiretroviral therapy. In the absence of a cure or vaccine and given the long period that elapses between infection and actual death, provision of AIDS care and social support are important components of previous plans. Current estimates indicate that 2.2 million people and their families need psychosocial support, health care and sources of income.

Despite the limited capacity of the health sectors, a number of achievements have been made in partnership with the NGO/CBO sectors. These include promotion of improved health care services for PHAs through home-based care and community outreaches by NGOs/CBOs and hospitals. Training of at least two counselors per hospital and up to 4 in hospitals carrying out PMCT program and over 500 others by a number of organizations Training of officers from districts in infection control techniques with a focal person at a hospital level and one in the district health office to take care of infections control in

health centers. Nursing Care Guidelines and a Training Guide for counselors have been developed. Distribution of Drugs for the treatment of opportunistic infections and homecare kits to government and NGO health units have been distributed. At least one service provider per facility has been trained in administration of drugs for opportunistic infections. Uganda has 85 hospitals and 1,800 health centres (dispensaries, sub dispensaries and maternity centers).

Inspite of these achievements, there are some shortcomings in the care and treatment of HIV/AIDS. These include inadequate involvement of PHAs and their networks in HIV/AIDS prevention and control. A considerable proportion of PHAs do not acknowledge their sero-status. Stigmatization and discrimination against PHAs by community members including medical personnel still exists. Although there are now agreed regimens for treating various opportunistic diseases related to HIV/AIDS, the current regimens used are too expensive for a large proportion of PHAs. Some herbal medicines that have been identified to be effective in the treatment of certain infections have proved too expensive. There has been inadequate lobbying for the reduction of the cost for ARVs hence resulting into limited accessibility and affordability of appropriate AIDS care especially among the poor and rural residents. The country still has inadequate diagnosis, use and monitoring of anti-retroviral drugs. For example there are informal reports of black market ARV on the street being used outside licensed practice. Lack of clear policies on HIV drugs including ARVs is still an outstanding issue. The impact of herbal treatment for opportunistic infections has been evaluated. There is no adequate involvement of AIDS caregivers, and referral systems between the home, health unit, hospitals and specialized palliative centers.

3.3 The Role of NGOs, CBOs and International Agencies in HIV/AIDS Prevention, Care and Support

3.3.1 The Role of NGOs and CBOs

Both local and international Non Governmental Organizations (NGO) have played a major role in assisting and protecting the children. Some NGOs have emphasized assistance to HIV/AIDS orphans in areas like Rakai and Masaka. This assistance is in form of providing food, school fees, shelter, clothing, basic training, income generating schemes and counseling. Community based Organizations (CBO), Faith Based Organizations (FBO) and NGOs that have got an HIV/AIDS component in their activities/programmes have formed a nationwide network called Uganda Network of AIDS Service Organizations (UNASO). UNASO was formed in October 1996 by a number of AIDS service organizations with the aim of coordinating and networking AIDS activities. UNASO is a registered NGO with the national NGO Board and has membership of over 2000 NGOs/CBO/FBOs. UNASO is affiliated to the African Council of AIDS Services Organizations (AFRICASO). The coordinator of UNASO represents parent organizations on the Board of Uganda AIDS Commission. Its objectives include:

1. Promoting cooperation and coordination through common resource mobilization, sharing of information and expertise.

- 2. Promoting common standards through developing guidelines/standards for planning counseling, homecare, monitoring and evaluation for use by UNASO
- 3. Strengthening organizational development activities among NGOs/CBOs/FBOs/CBOs for effective delivery of their services.

UNASO has embarked on formation of district Networks of AIDS Service Organizations so as to be effective at District level. The major achievements include; the establishment of operational secretariat headed by a coordinator and six (6) other staff, development of capacity of 65 NGO/CBO/FBOs in the area organizational skills, and formation of four (4) district networks have already been formed and 8 district focal point NGOs for information sharing and coordination. There are limitations of involvement of UNASO in HIV/AIDS control activities. Capacity has to be built in UNASO itself, the local NGOs and CBOs. All the local NGOs largely depend on external donor support or on Government money raised through loans and grants. There is hardly any sponsorship from local organizations and this raises sustainability questions. Some information on the key organizations is provided in the next sections.

Two bishops of the two largest Christian churches (Roman Catholic and Anglican) sit on the Board of Uganda AIDS Commission with one representative of the Islamic Faith Of the Uganda's population, Christians constitute over 85% and Muslims 10% and the rest of other religions make 5% (Source: 1991 National Housing and Population Census and UBOS Projections). The Chairperson of the Commission is a retired Roman Catholic Church Bishop. The previous Chairperson was a retired Anglican Church Bishop. This has kept the Commission close to Religious Institutions.

Among the major players is the **Uganda Community-Based Association for Child Welfare (UCOBAC)**, which was established as a network of organizations aimed at providing support to vulnerable children. This institution, with support from UNICEF and other international NGOs has developed a "Grants Bank" which has helped donors, CBOs and NGOs to work together. UCOBAC provides a monitoring and support function for such programs, and it trains CBOs and NGOs.

The AIDS Support Organization (TASO): TASO was the first indigenous community based organization founded in 1987 by a group of 16 committed volunteers, most of whom were directly affected by AIDS. Many of the cornerstone members have since passed away but others such as Mrs. Noreen Kaleeba, the founder and first director of TASO, are still keeping the candle burning. Noreen now works for UNAIDS in Geneva. TASO has grown into one of the biggest organized national response to the HIV/AIDS epidemic and currently has 8 branches countrywide and so far 65,000 people have benefited from its services. It works closely with the AIDS Information Center (AIC) and other related institutions. TASO receives funding from Ministry of Health, International agencies such as DFID and European Union.

Concern International: Concern is an International NGO, which was established in Uganda in 1992, to respond mainly to HIV/AIDS in Rakai District. Concern activities in Uganda are funded by European Union, DFID, Concern International and some

communities in the respective areas of operation. It has eight departments among which is an HIV/AIDS service.

Concern International has no programmes specifically geared to cater for HIV/AIDS affected children although before UPE, it used to pay fees for some HIV/AIDS orphans. Concern collaborates with CBOs such as Buwama Home Care volunteers in Mpigi District, Uganda Domestic Sanitation in Kampala District and Kitovu Mobile in Rakai District. Concern International relies on foreign donations and links up with local communities through local organizations like churches. The government does not provide budget support to this organization.

The Straight Talk Foundation: The Straight Talk Foundation has influenced sexual behavior change of many young Ugandans. It publishes two monthly newspapers; *Straight Talk and Young Talk*. These reach over one million young people in primary and secondary schools. *Straight Talk* has a two-fold mission: "keeping adolescents safe" and "communication for better health" Specifically straight talk aims at increasing understanding of adolescence, sexually and reproductive health; and promoting safer sex, life skills and child and adolescent rights.

The *Straight Talk* newsletter was launched in 1993 with the aim of providing in-school teenagers with reliable information about sexual and reproductive health. The newsletter started with a print-run of 30,000 and immediately generated an enthusiastic response from young people and teachers. By October 1999, 155,000 copies were being printed every month. *Straight Talk* advocates abstinence and condom use as protective strategies for its readers, who are school-going adolescents and youth aged 15-24. It is supplied to all the 1,400 secondary schools in Uganda (30 copies per school) and to over 400 tertiary institutions. Approximately 400,000 young people now read the publication regularly. *Young Talk* was launched in February 1998, and now has a print-run of 270,000 per month. It targets young adolescents, aged 10-14 attending primary school. It advocates for sexual abstinence, but provides information about condoms whenever requested by readers. The newsletter is sent to all the 12,000 primary schools in Uganda, with each school getting 15 copies. Copies are also sent to teacher training colleges.

AIDS Information Center (AIC)

AIC contributes to the national effort to prevent further spread of HIV infection by providing counseling and advice for those already infected and affected by HIV/AIDS and promoting the adoption of healthy lifestyles. AIC currently operates in four (4) towns of Kampala, Jinja, Mbale and Mbarara. It is in the process of decentralizing its HIV counseling and testing services to enable it to reach 16 districts. The services offered include:

- Voluntary and anonymous HIV Counseling and Testing (VCT). This service is offered daily (except on Sundays) at a minimal fee. In the provision of VCT services, confidentiality is upheld, no certificate of clients' results is given and counseling is a prerequisite for HIV testing.
- Rapid syphilis testing and on-site treatment for those testing positive is also offered.

- Syndromic detection and management of other STDs. All clients who consent to take the HIV test are also screened for syphilis. However, those clients interested in testing for syphilis only also benefit from this service. Those who have syphilis are treated with their sexual partners at a fee.
- Condom education and distribution.
- Information about family planning (FP) and FP counseling commodities. All clients who come to AIC receive information; education and counseling on FP. Counselors and reproductive health volunteers help clients make informed decisions about which methods to use. AIC provides clients with pills, condoms, spermicides, injections and referrals for the other methods. Pregnancy tests are also done at no cost.
- TB education and referrals: Information and counseling on TB is given to all clients who seek VCT services.
- Psychosocial and medical services through the Post Test Club.
- Special services for discordant couples.
- Philly Lutaaya initiative with HIV-Positive clients "going public" to advocate for VCT and behavioral change.
- The Post Test Club/Philly Lutaaya Initiative (PTC) is a voluntary association for clients tested for HIV irrespective of their test results. Members who test HIV positive are free to go public to share their personal experience with HIV/AIDS. Philly Lutaaya Initiative members distribute free condoms provided by Ministry of Health.

The Uganda Women's Effort to Save Orphans (UWESO): UWESO is Uganda Women's effort to Save Orphans. It is an indigenous charitable organization founded in 1986 to help Uganda war Orphans initially. It was relief-oriented, providing relief supplies such as food, clothing, shelter and medical care. Today, UWESO endeavors to help all orphans of war, AIDS and other causes beyond welfare. It favors sustainable interventions and solid Programmes that build local capacity, empowerment and sustainable mechanisms for the support of orphans.

UWESO programmes support orphans in the area of vocational training, HIV/AIDS counseling, income generating activities including credit schemes, day care centers and school fees sponsorship. It has over 5000 active members/women that volunteer time to time to identify needy orphans, link them with foster-families, serve as foster parents, monitor school fees payments, and engage in income-generating and food-generating activities.

By the end of November 2001, UWESO was looking after 120,271 orphans. UWESO takes in orphans from all causes that fit the admission criteria. Their admission criteria is that one should either be a single or double orphan, the orphan should be living with a relative, the guardian becomes a member to UWESO and the orphan should be less than 18 years. The organization largely supports families to raise their incomes in order to look after the orphans. The target of UWESO is to take aboard all orphans but the financial limitations do not allow at the moment. UWESO operates through distinct branches, which over a long time have built capacity to monitor projects.

To date, some success has been registered by a range NGOs, CBOs and FBOs, with more than 100,000 children benefiting from the actions of UCOBAC, TASO, UWESO, Action AID, AMREF Uganda, AWOFS, Feed the Children, FXB Foundation, Horizon, NACWALA, Plan International, Save the Children Funds (Denmark, Norway, and UK), Uganda Children Charity Foundation, and World Vision. It is estimated that there are over 150 organizations providing support and care for children and orphans. However, these organizations need better coordination, integration, financial support and monitoring in order to reduce duplication.

Traditional healers and other private enterprises: In an effort to diversify the efforts against HIV/AIDS, the Ministry Health through the AIDS Control Project encouraged traditional healers to work with the modern trained health providers thus forming a local NGO (Traditional and Modern Health Practitioners Together Against AIDS, THETA) in 1992. A similar NGO called Traditional Healers, Women and AIDS Prevention (THEWA) focusing on working with traditional healers to educate and counsel women for preventing STDs and HIV/AIDS exists. An evaluation was done in 1998 by the Creative Research Center supported by UNAIDS and the results showed that herbal treatments for herpes zoster and chronic diarrhea among HIV/AIDS patients, improved significantly in some instances, better than those on available modern medicines. In order to improve on the traditional providers' skills on making diagnosis and recognizing cases, which need modern treatment, a training programme has been designed by the Ministry of Health. The training curriculum covers patients' care, counseling, record management, hygiene, prevention of HIV/AIDS, and identification and referral of cases. The healers, who have been identified with rich knowledge in the management of the common ailments among HIV/AIDS patients such as diarrhea, coughs, and loss of appetite, are required to attend monthly meetings and are normally followed by the THETA working group (THETA Report, 1999). A participatory evaluation report (CRC, 1998), indicated that out of the 125 traditional healers trained, 60% reported distributing condoms, 80% reported counseling of patients and 82% were giving AIDS community education. In the Multi-Sectoral Approach Project for HIV/AIDS 2001-2006, the approach for use of herbal medicine and the collaboration with the healers has been emphasized.

As the response to HIV/AIDS is being widened, involvement of potentially critical stakeholders, such as the private sector, NGOs and CBOs, becomes a challenge. The different sectors are required to meet their expected obligations, as regards the prevention and control of HIV/AIDS as well as the mitigation of its impact. The private sector has to be fully brought on board; to finance some of the interventions as may be agreed with Government. It is good that the Global Fund to fight Tuberculosis, AIDS and malaria has already put the private sector on the agenda. At the same time, some of the interventions (such as condoms and ART drugs) may have to be financed with contributions from private expenditures. NGOs and CBOS, which are already playing a major role, will require further support, though this must not be at the expense of weakening the public sector. All these will require coordination for planning and better results, maximum utilization and efficient use of resources, monitoring and evaluation.

3.3.2 The Role of Extended Family and Support for People with AIDS

Traditionally, the extended family in Africa has been providing a safety net for individuals in times of need but this is declining fast because of poverty and immediate family demands. A study by MRC (UK) based on data collected by counselors on the care given to 30 (17 women, 13 men) AIDS patients by their families showed that 27 of the 30 cases received limited care. This was due to lack of food and money for medication and other family responsibilities. For 17 clients who died during the study period, records of seven cases show that other relatives were asked to help with care but refused on the grounds of poverty or other commitments. Only one of these cases extended families did provide assistance for the funeral. The major constraint at the household level is the lack of enough income to sufficiently care for every body in the household.

3.3.3 The Role of the Business Sector

In addition to International business firms involved in HIV/AIDS treatment, there are two-business organizations with secretariats spear heading the role of the business sector. Uganda Business Coalition (UBC)-HIV/AIDS aims at reducing the rate of new HIV/AIDS infections in business workplaces and mitigate the social-economic impact of HIV/AIDS in the private sector. Key actors in this organization are the Private Sector Foundation, Small Scale Industry Organization, Uganda Chamber of Commerce and Industry and Federation of Uganda Employers. The organization has linkages with international organizations such as Global Business Council on HIV/AIDS and pharmaceutical Companies. Another sister organization is the Uganda Business Council on HIV/AIDS which is focused on work related HIV/AIDS interventions. Both organizations are actively involved in negotiations on Global Health Fund Against HIV/AIDS, Tuberculosis and Malaria.

3.3.4 Interventions in the Education Sector

The education and sports sector is a unique tool for spreading HIV/AIDS information and awareness. As an already organized infrastructure, it is cost-effective and can reach a large audience of teachers/instructors and administrative staff, pupils and their parents, as well as sportsmen and women outside the education mainstream. Since 1994, there have been initiatives to institutionalize preventive education in the sector through integration of HIV/AIDS issues into the curricula at different levels of formal education. These initiatives include:

• The School Health Education Project (SHEP): This is a component of the 1985-89 and 1990-95 Uganda Government/UNICEF Country Program, aimed at influencing a reduction in STD and HIV infection among youth in all primary school classes. Through this project, a wide range of health education materials for primary school children were developed and distributed to schools. However, the project did not achieve its overall objective of integrating health education in primary, secondary, and tertiary and university curriculum.

- Early Life Skills Initiative, which trains the youth in skills such as: interpersonal relationships; self awareness and self-esteem; problem solving; effective communication; decision making; negotiation skills; resisting peer pressure; critical thinking; formation of friendships and apathy. Life skills were developed to bridge the gap between high HIV knowledge and awareness levels and lagging behavior change.
- The UNICEF-supported Sara Communication Initiative (SCI), aimed at developing the life skills of girls in order to meet the challenges of life; population and Family Life Education in Uganda's Formal education project, aimed at equipping youth with essential knowledge, skills, attitudes and practices that would prepare them for responsible parenthood and fair relationships with persons of the opposite sex.
- **IEC** in support of reproductive health in school, aimed at impacting RH knowledge and skills and not just STD and HIV transmission among the youth;
- **Sensitization seminars** for Ministry of Education and Sports staff at headquarters about the epidemic with almost all the work force of 500 people sensitized.

However, lack of policy, plan and funding inhibited effective sensitization and advocacy relevant to the epidemic.

3.3.5 The role of the State in Tackling the Problems Induced by HIV/AIDS in the Fields of Poverty and Orphans

Poverty from all causes is largely being addressed through Poverty Eradication Action Plan (PEAP). PEAP has four pillars and Interventions against HIV/AIDS are components of these pillars. These are **improving the quality of life for the poor**: This is a major essential component of the PEAP and places emphasis on provision of basic services, particularly health care, safe water supply, sanitation and, education. Malaria and HIV/AIDS are major contributors to rampant ill health. The second pillar is **economic growth and structural transformation for poverty reduction**: This includes strengthening external trade, expansion of private sector, better tax administration and other measures aimed at raising domestic revenue. The third one is **good governance and security**: Improved security and good governance are cornerstones for effective poverty reduction. Efforts are geared towards peace building, conflict resolution and enjoyment of certain rights and freedoms by Ugandans. The Anti corruption Action Plan and strengthening payroll management and pay reform is included as well. The fourth and last is **increasing the ability of the poor to raise their incomes**: This addresses improvement of agriculture, roads, good markets, and improved land use.

Interventions related to HIV/AIDS and orphans have been adhoc and largely limited to design and situation analysis. The government does not have special school provision except UPE, for orphans from any cause, leave alone from HIV/AIDS. UPE is not an orphans programme but benefits non orphans as well. The NGOs have more down -to-earth projects, which are comprehensive, but cash limited. Most of the NGOs provide medical care, social welfare benefits such as payment of school fees and provision of scholastic materials. Home care needs such as soap, food are considered as well.

3.4 Conclusion

It has been recognized that HIV/AIDS epidemic would result in serious social and economic consequences due to a changed pattern of public expenditures and private savings. The morbidity and mortality rates of the workforce would increase leading to a serious loss of manpower. It was proposed that a working group should be established under the ACP of the Ministry of Finance and Economic Planning to address the budgetary implications of the AIDS epidemic. NGOS and CBOs have been the lead agencies in the provision of social support to PHAs. Government ministries, through their ACPs have also extended social support to the respective employees and their dependants.

The contributions made by Government, NGOs and the donor communities towards the mitigation of the social economic impact of the epidemic include among others, the development and support of Income Generating Projects (IGPs); provision of food stuffs, counseling services, mutual support activities, encouraging HIV testing and spiritual and moral support to PHAs; training community based counselors to enable community members to handle HIV/AIDS issues; addressing the educational needs of AIDS orphans through the universal primary education; and absorption of AIDS orphans by the relatives and families.

Despite these achievements, there are shortcomings in the provision of socio-economic support to infected and affected families. These include; inadequate foodstuffs donated to PHAs; some IGPs have lacked personnel with basic knowledge of business and have failed; inadequate information on socio-economic impact of HIV/AIDS; gender disparities and cultural practices tend to render the girl child particularly exposed to exploitation and heavy domestic responsibilities.

Uganda's experience indicates that integration of other services (family planning, STD treatment) with VCT is well received by clients. This can serve as a catalyst for strengthening health services.

4 Impact of HIV/AIDS on the well-being of all children

The impact of HIV/AIDS on the well being of children in Uganda has been profound and affected almost all the domains of the child's well being. This section concentrates on the health, education and social impacts on the children.

4.1 The Impact of HIV/AIDS on the Health of Children

Since 1985, life expectancy at birth has been decreasing from 48 years in 1985 to 42 years in 2000, and it is projected to decline further although at a reduced rate. In terms of

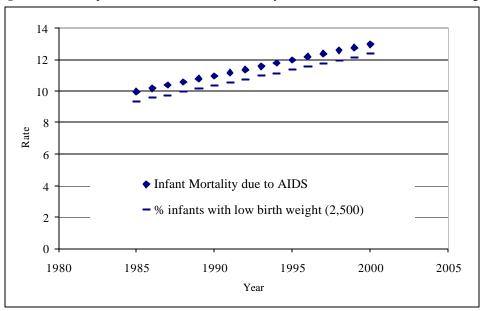
IMR, there is no clear trend but projections show an increasing trend due to AIDS (See table and figure 4.1)

Table 4. 1: Selected Indicators of Child Well-being (Health) in Uganda

Year	1985	1990	1995	2000
Life expectancy at birth	48	43	41	42
Infant mortality rate	88	89	90.5	88.4
Infant mortality due to AIDS	10	11	12	
Under 5 mortality rate	164	163.2	162.9	152
Under 5 mortality rate due to AIDS				
% Infants with low birth weight less than 2.500 grams		10	12	12
% Children under 5 suffering from moderate to severe wasting	5	26	23	13
DPT3 Immunization coverage	31	67	61	46.6
Immunization coverage measles		60	59	56.6
ORT use			46	43
15-49 women attended by professional during pregnancy		91	91	89.2
Proportion of birth attended by skilled personnel (midwife, nurse, doctor etc)		38	38	25.2

Source: Various reports

Figure 4.1: Extrapolated Trends of Infant Mortality due to AIDS and Percent Underweight



Source: Authors own generation

The figures are based on extrapolation from table 4.1. There is an increase in the percentage of infants with low birth weight (defined as less than 2,500 grams. For non-AIDS specific childhood indicators, it is unclear how the performance of intervention programs, like immunization and delivery under supervision, affects these indicators.

Although there has been a tendency for immunization coverage to decline (from 67 in 1990 to 46.6 in 2000 for the case of DPT 3), this effect is likely to be felt in years to come (see table 4.1). HIV/AIDS does not only affect childhood mortality but also the pattern of illness and diseases observed in children as indicated in figure 4.2.

Ntozi (1997), conducted a study in 6 districts of Uganda in relation to HIV/AIDS and its impact is shown in figure 4.2. In this study, a sample of households that had experienced death in the last ten years was selected and household heads or competent persons interviewed. For each household member who was ill or had been sick in the last four weeks before the survey, questions on name, sex, age, type of illness and duration of sickness were asked. The results show that the under fives of all the children are the most affected by HIV/AIDS as shown by the percentage of AIDS and related diseases (Ntozi, 1997).

Although, this study relied on respondent's perception, it provides a picture on the pattern of morbidity. Again, the perception of illness determines the behavior of the patient subsequent to onset of illness (Coreil, 1983).

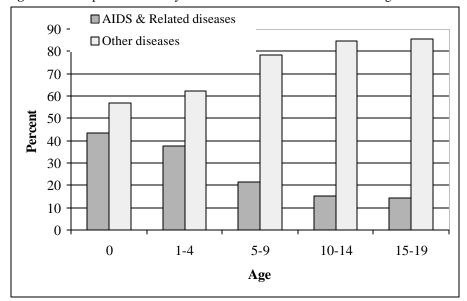


Figure 4. 2: Reported Illness by Cause for Children in 6 Districts in Uganda

Source: Ntozi, 1997

Nutrition: Orphaned children are less likely to get enough food to eat. Results from the baseline findings in a study of making a difference for children affected by AIDS June 2001 reveal that nearly a fifth (19.6%) of older children and 15.2% of younger children, report not getting enough food to eat a few times a week or more. Interestingly, older orphans are the most likely to report not getting enough to eat a few times a week or more (24.8%). Exclusive breastfeeding at six months is at 68%. (*Making a Difference for Children Affected by AIDS*). MOAAF has produced various guidelines for People Living with HIV/AIDS spelling out the importance of good nutrition in patients with HIV infection, common nutritional disorders in HIV infection (Protein Energy Malnutrition-

PEM), specific micronutrient deficiencies such as Iron, Vitamin B, A, E, Selenium, albumen and Zinc. Also clinical conditions affecting gastro-intestinal tract such as diarrhea and dysphasia are spelt out. The guidelines elaborate on specific menus, recipes and the respective nutrient values. The guidelines for use by HIV/AIDS patients for nutritional purposes in a clinical setting are about to be drafted by MOH.

4.2 Impact of HIV/AIDS on the Health Sector

In Uganda, like the rest of Sub Saharan Africa (SSA), HIV/AIDS is the leading cause of mortality ahead of malaria and tuberculosis among other diseases (see chapter 13). AIDS is responsible for up to 12% of the deaths in Uganda and is a leading killer of adults aged 15-49 years, and the fourth leading cause among under-five children, according to the Ministry of Health Management Information System Fifty five percent (55%) of the Hospital beds are occupied by HIV/AIDS cases and related opportunistic infections. This is the same range in Rwanda, Democratic Republic of Congo (DRC), Zambia, Botswana and Republic of South Africa (RSA). The doctor/person ratio in Uganda is 1:18,000 whereas the population/ nurse ratio is at 1:3000. The number of nurses and doctors in public health care institutions per 1000 population is steadily going up due to increased establishment of training institutions and the government policy of providing facilities for every 5,000 people. This has not been driven by the presence of the HIV/AIDS epidemic, but the policy to bring services nearer to the people.

According to the MoH (1995), HIV/AIDS accounts for 9.1% of the disease burden in Uganda. Other causes are prenatal and maternal conditions (20.4%), Malaria (15.4%), Acute lower respiratory tract infections (10.5%) and Diarrhea (8.4%). The rest of the causes include tuberculosis, malnutrition (Source: Ministry of Health Burden of Disease Study, 1995).

4.2.1 Crowding in and out of the health facilities

Only 49% of Ugandans reside within 5 Km of a health facility while 47% of the population are accessing units provided by the national minimum health care package. Only two fifth (40%) of the units have achieved a minimum staffing norm. The staffing and access to health services problems are being addressed through the creation of Health Sub-Districts. Forty three percent (43 %) of the people in rural areas and 36% in urban areas who were sick could not seek health care because of lack of money, when cost sharing was in public institutions. In some districts, it could go up to 71%. Cost sharing in public facilities was abolished on 1st March 2001 so as to minimize restrictions on access to health services due to finances (*Uganda Poverty Status Report 2001*).

There is anecdotal evidence that provision of drugs for treatment of HIV/AIDS as well as STI has produced a lot of increase in attendances at health facilities. However, public health facilities in Uganda (about 70%) do experience severe shortages of basic drugs such as chloroquine, measles vaccine, oral rehydration salts and cotromoxazole

(antibiotic). For example, Mulago Hospital, the National Referral and Teaching Hospital has a budget for drugs to last only eight (8) days in a month (communication by Director Mulago Hospital to the Health Sector Budget Workshop October 01). Presence of drugs in a facility therefore causes a rush, which is largely patient's moral hazard and some times a need to stock drugs at home for use when there are stock outs in facilities.

4.2.2 Personnel by level

Over the years, there has been an increase in personnel at all levels as indicated in Table 4.2 partly due to increase in a number of training institution and infrastructure development

Table 42: Staffing Levels by Category of Health Facility

YEAR	PRIMARY	SECONDA	RY	TERTIARY		
	Nurses N	Doctors N	Nurses	Doctors N	Nurses N	OTHERS N
1990	1625	232	627	1023	937	1735
1995	3298	701	1566	2225	4747	2817
1996	3471	824	1648	2473	4945	2874
1997	3857	915	1735	2747	5494	3017
1998	4060	1017	1827	2892	5784	3126
1999	4273	1071	2030	3213	6427	3290
2000	4499	1128	2255	3383	6765	3606

The percentage increment in recruited doctors between 1995 and 2000 was 60.9% and 52.0% for secondary and tertiary facilities respectively. For nurses in the same period, the increment has been 36.4%, 44.0% and 42.5% for primary, secondary and tertiary levels. With both categories of health workers, the increment in secondary is higher than tertiary levels whereas for the nurses, the percentage increment is least in primary facilities and almost the same for the remaining two levels. The staffing policy of nurses is contrary to the primary health care concept of having to reach more people especially the underserved areas. Recruitment has not been driven by the presence of HIV/AIDS, but the policy to increase geographical access and improve the quality of service.

Estimated number of people existing services due to HIV/AIDS in the health sector/Ministry has remained low (less than 15 per year) see figure 4.3. Nurses are slightly more affected than other cadres. Out of a total work force of 250 and establishment of 505 (many unfilled vacancies due to a ban on recruitment) 14.5% of the staff had attrition due to death. The average attrition due to death was 3.8% per year, which is above the overall yearly attrition of 2.5% in civil service due to retirements, abscondments, transfers out and death.

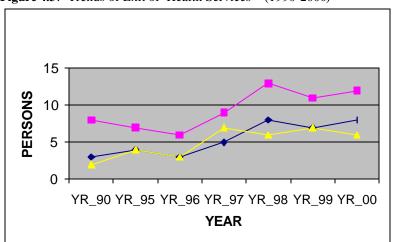


Figure 4.3: Trends of Exit of Health Services (1990-2000)

Previous studies indicated that health workers are affected as much as other civil servants, but later work by Amadua (2001) shows different results (see table 4.3 below). This study calls for more focused research on categories of health workers and relationship with occupational risk.

Table 4.3: Causes of Mortality Among Workers in Arua Hospital

Disease	Number	%
HIV/AIDS	26	72
ALCOHOL	6	17
OTHERS	4	11
TOTAL	36	100

4.2.3 Budget Estimates and Burden of Disease

Comparing the earmarked government budget and the burden of disease, while AIDS accounts for 9.1% of the burden of disease, it accounts for only about 1.2% of the health budget, though obviously also a considerable part of the general health infrastructure is used for AIDS care (see table 4.4). Note that this burden of disease does not include the burden prior to death. Therefore the years lived with disability are not included, so the magnitude is likely to be higher. This study did not establish contributions from other sectors like the civil society, NGO and multi-lateral organizations, which could explain whether government is allocating resources commensurate to the burden.

Comparing the percentage expenditure of the total budget on education and health, there has been an increase for the case of education overtime especially after 1997/98. The reverse is true for health. It should be noted that the increase in expenditure for education is attributed to UPE.

Table 4.4: GOU Expenditure on Education, Health and AIDS 1990/91 to 20003/04 in trillion Shs

Years	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	2001/02	2002/03	2003/04
Total Budget	127.3	199.9	245.1	317.9	403.3	473.6	597.2	823.4	1283.2	1226.1	1463.4	1918.1	2108.2	2259.6
Education & Sports	11.3	35.5	48.1	59.3	58.1	53.1	597.2	204.7	273.3	322.3	365.8	459.9	518.3	572.9
% of Total Budget	8.9	17.8	19.6	18.7	14.4	11.2	10	24.5	21.3	26.29	24.9	23.9	24.6	25.4
Health	17.9	16.4	20.4	22.2	23.9	19.2	20.6	48.3	67.5	78.2	105.1	170.2	213.9	241.4
% of Total Budget	14.1	8.2	8.3	6.9	5.9	4.1	3.4	5.9	5.3	6.4	7.2	8.9	10.2	10.7
Uganda Aids Commission											1.1	2.2	2.5	2.6
% of Health Budget											1.2	1.3	1.2	1.1
% of Total budget											0.075	0.115	0.119	0.115

Source: Draft Estimates of Revenue and Expenditure (Re-current and Development); 90/91 to 99/00-

budget Outturns. 2000/01 to 2001/02 - budget Estimates, 2002/03 to 2003/04 -Projections.

Year ending on 30/June; Ministry of Finance, Planning and Economic Planning

4.3 Impact of HIV/AIDS on the Education of Children

The impact of HIV/AIDS on the education of children can be viewed in two different perspectives; the first is the children themselves regarding their performance at school, drop-out and lack of parental guidance. The second is the impact on the sector in terms of staffing and the quality of education. It should be noted that literature on the number of orphans or children of HIV/AIDS patients dropping out of school was not readily available. However, combining information from the Ministry of Health and the existing surveys on causes of orphanhood, it was possible to get an indication of the impact of HIV/AIDS on school drop out. Table 4.5 shows the total enrolment and drop-out rate for primary school. Data on enrolment and drop-out rate was obtained from the Ministry of Education and Sports. The percentage of children dropping out due to AIDS has increased from 45% in 1995 to 53% in 1999. This shows the impact AIDS might be having on child education and unless controlled, could lead to worse socio-economic problems. Another survey conducted in Uganda (Ntozi 1997) revealed that 43.0%, 11.6% and 45.4% of the orphans are due to AIDS, AIDS related and other diseases respectively. Of these 58% percent, irrespective of the cause of death, had problems with money. Although the children can attain free primary education due to UPE, they have to incur costs of scholastic materials. It is therefore plausible to assume that this percentage fails to get money to go to school. Even those who manage to remain at school face problems of lack of parental guidance, inadequate socialization, financial and material support; inadequate socialization of orphaned children leading to low self-esteem and performance.

Table 4.5: Impact of HIV/AIDS on the School Children

Year	All Primary S	School Childre	en	All Orphans							
	Enrolment	Dropouts	%dropout	Enrolment	% dropout	% dropout due to AIDS					
1995	4357	2794	64%	593	77%	45%					
1996	5020	3492	70%	789	83%	48%					
1997	6403	4871	76%	892	91%	53%					
1998	6403	4822	75%	797	90%	52%					
1999	6414	4879	76%	870	91%	53%					

Source: Hyde et al (2002)

The impact of HIV/AIDS on the education of children can be summarized as diminished capacity to attain the goals and opportunities among children living with HIV/AIDS. As a result, a number of them end up dropping out of school and performing poorly partly due to absenteeism, while caring for the sick parents or relatives. In general, there is said to be an increase in sexual abuse and other forms of exploitation among school children, partly due to the misconception that they are free from HIV/AIDS.

4.4 Impact of HIV/AIDS on the Education Sector

The structure of Uganda's formal education consists of nursery education for children aged 3 to 5 years, primary education for the 6 to 12 years (P1 to P7), lower secondary for the 13 years to 16 years (S1 to S4), upper secondary-A levels for the 17 and 18 years (S5 to S6), tertiary-college and University (18 years and above). This study focuses mainly on primary education where a majority of the children are, and to a less extent lower secondary. There are public and privately owned schools at all other levels except nursery education which is not provided by government. Given this structure, the impact of AIDS on the education sector can be viewed from two fronts: the supply of education professionals and support staff; and the quality of education being provided.

4.4.1 Supply

The effect on supply of the education professionals is as a result of absenteeism and attrition due to death from AIDS. Absenteeism from work by professional and support staff is mainly due to intermittent sickness, fear, stigmatization, worries, distress, and apathy. There are no reliable estimates of the magnitude of absenteeism in schools due to AIDS in Uganda. The attrition from the service due to death is however better documented (table 4.6). According to the MoES, in 1998, 16.5% of primary teachers, trained and untrained left their schools. More untrained (24.34%) than trained teachers (13.9%) left. This might be attributed to the policy of employing trained teachers only, which on the other hand could not lead to the dismissal of all untrained teachers due to the implementation of the UPE policy. The attrition rate due to death from HIV/AIDS is higher in secondary than in primary schools (average of 3% for primary school and 4% for secondary schools) for the previous four (4) years, see table 4.6. Similarly, there is a higher proportion of orphans compared to total enrolment in secondary school than primary school.

Table 4. 6: Attrition and Mortality in Primary and Secondary Teachers¹

		PRIM	IARY			SECON	DARY	
	1995	1996	1997	1998	1995	1996	1997	1998
Total Death	646	792	987	948	166	158	137	160
Total in Post	74401	81564	88751	100946	12918	13997	13470	16206
Attrition rate	6.5	5.3	4.3	5.3	4.2	3.6	3.2	4.1
Total Mortality rate	0.87%	0.97%	1.11%	0.94%	1.28%	1.13%	1.02%	0.99%
Total Mortality as % of all attrition ²	13	17.9	25.45	17.66	30	31.2	31.9	23.95
AIDS death as a result of total attrition	2.65	3.82	5.34	3.71	3.71	6.54	1.34	5.03
Estimated AIDS death among teachers (21% of total mortality) ³	136	166	207	199	35	33	29	34
AIDS death at 2003 rate for general population	320	320	382	434	56	60	53	70

Source: Hyde et al (2002)

Today, the current pupil-teacher ratio is 65:1. This indicates a marginal fall from 68:1 in 1999. The levels were even higher for P1(six years) and P2 (seven year) that is 82:1 and 75:1 respectively in 1999. All these ratios are high compared to the expected target of 48:1 (Uganda Poverty Status Report, 2001).

The pupil- teacher ratio for primary school has been on the increase while for secondary has almost remained constant (see figure 4.4). This is largely attributed to presence of UPE.

Over the years, the number of primary and secondary teachers has been increasing. There has been a sharp increase from 7,916 in 1996 to 16,283 in 2,000 in the primary section (see table 4.7), while higher and tertiary institution staff has almost remained constant for the past 10 years despite expansion of enrollment of students. Out of the primary teacher recruitment, the number of females enrolled per year is almost half that of males.

¹ Data on attrition and mortality for other years except 1995-98, were not available.

²Teacher attrition includes leaving the service through resignation, leaving without notice, death or retirement. Transfers, secondment or leaving for training is not regarded as attrition.

³ This is based on a WHO estimate that HIV/AIDS accounted for 20.6% of the mortality in Sub-Saharan Africa in 1999.

Figure 4.4: Pupil/teacher ratio

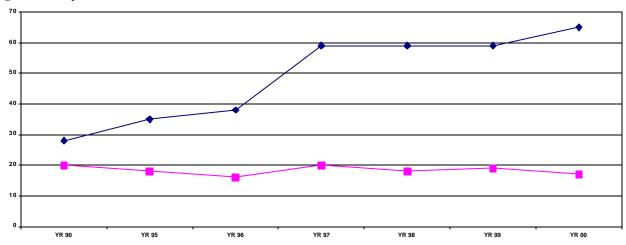


Table 4.7: Number of teachers by year

	1990	1995	1996	1997	1998	1999	2000
Primary education	81590	76111	81564	89247	98878	110298	1103366
Secondary educ.	11069	14447	18500	16696	16206	22599	30384
Higher education	1554	2006	1874	2108	2242	2346	
Tertiary education	2221	2772	2737	3202	3380	3414	

Teachers in primary schools have been exiting the service because of death from HIV/AIDS or other diseases, ill health, retirement resignation and other causes as indicated in figure 4.5. HIV/AIDS epidemic caused death of 450 teachers in the year 2,000 compared to 53 in 1995 an increase of over 8.5 times. A reasonable number of primary teachers left since 1997 because of their age (retirement age). The demand for teachers continues to be high in primary and secondary schools. Though UPE is the leading cause of this, HIV/AIDS is also a contributing factor. The increase in the number of schools as indicated in table 4.8 is also a big contributing factor.

2000

Figure 4.5: Teachers exiting education

4.4.2 Quality of Education and HIV/AIDS

YR96

YR 97

YR 98

YR 95

The Jomtien World Conference on Education for All called for universal quality education with particular focus on the World's poorest citizens. In line with this declaration Uganda Government has been increasing the ratio of teachers to students. In 1998, there were 98,878 teachers in government aided primary schools. Of these, 33,238 (34%) were female. Grade 1, Grade II and untrained teachers constitute 12.2% of the total number of teachers. There were 5,276,209 students in primary schools. The overall ratio of students to teachers was 58:1. The ratio of students to qualified teachers (Grade III or higher) was 90:1. Generally private schools have lower pupil/teacher ratios than government schools, 32:1 and 58:1 respectively (MOES, 1999).

YR 00

The average primary student per textbook ratio for all subjects is approximately 5:1. However, this masks variations between different subjects and classes. For instance, the number of students sharing a science textbook is seven compared with four for Mathematics, English and Social Studies (MOES, 1999). There were a total of 74,500 classrooms, 31,000 (42 percent) of which were incomplete. Of the complete classrooms, 25,426 (58 percent) were permanent, while the rest were semi permanent or temporary.

Those classes without classrooms are either held in the open or in other facilities, such as churches, or mosques. However, specific data on these are not available (MOES, 1999).

The impact of AIDS on the quality of education is characterized by low productivity and efficiency of staff due to intermittent sickness, absenteeism, desperation and complacency; diminished capacity to attain the set career goals and opportunities among professional staff living with HIV/AIDS. It is also estimated by UNAIDS and UNICEF that in 2000, out of 5 million primary school students, 81 000 lost a teacher due to AIDS. This has increased the workload of the remaining teachers in addition to UPE. UPE for primary going age (six to thirteen years) was declared in 1996 by government. The underlying principle behind UPE is to increase literacy levels in Uganda by reducing the proportion of the cost of education borne by parents and hence making primary education compulsory and free. Over 90% of children are in government aided primary schools. The government meets statutory primary school fees requirements for a maximum of four children per family. Government also undertakes to provide non-locally available building materials such as iron sheets, timber, cement and nails in addition to instructional materials and payment of teachers' wages. All orphans are entitled to attend primary school under UPE. As a result of the above arrangements, enrolment doubled following the implementation of UPE. This increase aggravated existing problems of shortages in school facilities. Arising from the rapid growth of enrolment at primary level, the government aims to increase access to, and improve the overall quality of, secondary education. Privately owned schools are encouraged in order to meet the growing educational demand. Transition rates between primary and secondary are relatively low and fell between 1995 and 1997 (from 41.6% to 35.8%), with the number of secondary school places being the limiting factor. This calls for an arrangement by government for orphans regarding secondary education or technical training to equip them with useful practical skills.

Table 4.8: Number of schools in Uganda by year

YEAR	PRIMARY	SECON	DARY	TOTAL
	N (%)	N	(%)	
1990	7667 (93.8)	510	(6.2)	8177
1995	8531 (93.2)	619	(6.8)	9150
1996	8550 (93.2)	619	(6.8)	9169
1997	10490 (94.4)	621	(5.6)	11111
1998	11211 (92.5)	913	(7.5)	12124
1999	11382 (86.7)	1743	(13.3)	13125
2000	11480 (84.3)	2139	(15.7)	13619

Source: Authors Computations from survey data

The proportion of secondary schools in Uganda has been on the increase since 1998 (see Table 4.8). Between 1995 and 2000, primary schools have grown by over 50%. The increase in both primary and secondary schools is to due UPE policy, which Uganda is implementing. It ought to be noted that both private and government aided schools are included.

In government primary schools, proportions of boys and girls to the entire population within the same age bracket have remained almost equal (see figure 4.6). For the

secondary education, such proportions have remained almost below 10% for the past ten years.

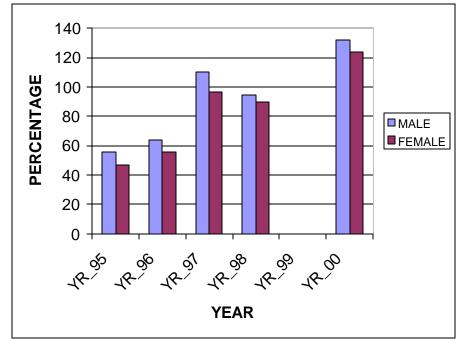


Figure 4.6: Proportion of pupils in primary schools to the population

4.5 Impact of HIV/AIDS on the Social Welfare of Children

The impact of HIV/AIDS on the welfare of children has a number of dimensions ranging from orphanhood, depletion of family assets, families splitting, child abuse, drugs and lack of proper homes (for example, street children).

4.5.1 Orphanhood

HIV/AIDS, war, and civil strife have taken an enormous toll on Ugandan society in the past two decades, causing the deaths of tens of thousands of people, and particularly decimating the young and middle-aged portion of the population. The Uganda AIDS Commission (UAC, 2001) estimates that at least 800,000 (an estimated 84,492 in 2000) people have died of AIDS in Uganda since its onset, that 1.4 million Ugandans are presently living with HIV/AIDS, and that at least 1.7 million children have been orphaned by AIDS. Hunter and Williamson (2000) placed the number of Ugandan orphans as high as 2.35 million in 2000. What is clear is that the numbers of orphans are of massive proportions--by some estimates orphans in Uganda constitute around 20% of all children.

Parental death from HIV/AIDS has a particularly powerful effect on a child. Table 4.7 summarizes some of the socioeconomic impacts of orphans at different levels (USAID 2002).

Table 4.7: Socio-economic Impact of HIVAIDS on Orphans

Level	Potential Socioecon	nomic Impacts	Mitigating/ Aggravating
	Short-Term	Long-Term	Factors
Orphan	 Loss of inheritance Reduced health, nutrition Reduced school attendance Increased labor Increased social isolation, vulnerability, and abuse Increased homelessness 	Reduced productivityReduced socialization	 Cause of death of parent(s) Family or non-family living arrangement Head of household Personal characteristics (age, health, sex) Family, community factors
Family	 Increased dependency ratio Increased poverty Increased workload Reduced per person food consumption and uptake of services (education, health) 	 Entrenched poverty Genderization of poverty Further breakdown of traditional extended family structures 	 Previous family income and assets Number, age, health of orphans Cause of death of parent(s) Head of household Availability of aid
Community and Nation	 Increased poverty Reduced child health, school enrollment Increased inequalities Increased crime, homelessness Increased social instability Changes in cultural practices Diversion of resources for orphan care 	 Reduced quality of human capital Entrenched poverty Increased inequalities Reduced economic growth, development Increased social, political instability Diversion of resources for orphan care 	 Historical economic strength Access to services Availability of assistance Effective anti-poverty programs Effective programs for orphans

Source: USAID (2002), Situation Analysis of Orphans in Uganda

According to USAID (2002), on average, the implicit annual "tax" on orphan households from reduced income in 1999/2000 is estimated to equal US\$ 246, representing nearly one-fourth the average annual income of households; when summed up across all orphan households, the tax totals US\$ 258 million, nearly 4% of Uganda's GDP. Also, orphans would lose an estimated 10% of lifetime income from one lost year of education, while the stunting associated with orphanhood may cost orphans 18% of future income. Nationwide, childhood malnutrition among orphans will likely reduce earnings by close to US \$90 million.

Orphanhood can lead to a number of situations such as street children, child abuse and specifically torture and stress. This however does not mean that only orphans experience these situations.

A study on psychological effect of orphan hood in Rakai district (which is one of the districts with the highest sero prevalence of HIV/AIDS) (Sengendo, Ntambi 1997) found that orphans living with their fathers were 7.3 %, mothers 20.2%, grandparents were 22.8%, other relatives 11.9% and on their own (child headed) 25.3%. Children in intact families were slightly more than a tenth (12.4%). This compares well with another study on effects of AIDS on children (Ntozi 1997) where almost half of the orphans were

staying with remaining parent (41%), a quarter were staying with grandparents and one fifth with relatives. Majority of the decision making on the care of orphans were by clan members 30%, parent 27%, orphan themselves 25% and grandparents 15%. The rest of the decision-making was by friends and other relatives. Evidence showed that half of the children (49.2%) were depressed and their conditions were affected when their parents became sick. About 9% dropped out of school and 5% left school to care for sick parents. Almost a third (28%) continued with undisrupted schooling and another a third (27%) were too young to tell how affected they were whereas 7% continued schooling, along with caring for the sick parents.

Based on the findings of this study, after the parents' death, only a fifth (19%) continued with undisrupted schooling, 21% lost school time and 12% left school and 29% were too young to tell. Further, this study revealed that the highest chances of continuing with their education were for those with a surviving parent (mother 43% and father 31%). Those fostered by grandparents before and after death of the parents had the least chances, only 7% of undisrupted education. The same study also revealed children's reactions at parents death as sad and scared 11%, very sad and helpless 50%, cried 11% sad but determined to face the future 2% and 25% were to young to tell. There was no response from 4%. The study found that young children (10-14 years) living with their widowed fathers are significantly more depressed than older children, living with widowed fathers. This could be explained in terms of bereavement and ability to deal with it. Young children are said not to understand the finality of death and therefore unable to deal effectively with grief. Children whose mother died of AIDS were found to be significantly more depressed than those from intact families. This can be explained by loss of psychological support that mothers normally provide. Children living with widowed fathers were more depressed than those living with widowed mothers

Orphans face a number of other problems other than depression. Ntozi in his study on problems of orphans found that more than half (57.6%) had serious lack of money and unable to go to school, almost a third (31.4%) lack parental care and a small proportion lacked household spirit and self- caring (1.7 and 0.3% respectively). Close to a tenth (7.1%) were not affected. Provisional results of the UDHS, 2001 have provided information on the extent of child labor, which has a net effect of denying children a chance to get education. Five percent (5%) of children aged 5-17 worked for some one who is not a member of the household. The situation is made worse by poverty (6.4% in lowest and 3.3% in the highest wealth index quintile). Most children (85%) help around the house with chores such as cooking, shopping, cleaning, washing dishes, fetching water and caring for animals with no gender differences in these roles.

4.5.2 Street Children

It is known that not all street children are orphans but are also a result of breakages in families, of which AIDS is among the causes. In Uganda it is not possible to ascertain the proportion of street children who lost their parents to AIDS leave alone the actual numbers. A survey on Full time Street Children in Kampala in 1996 by FOCA and ANPPCAN revealed a total of 273 full time children on the streets of Kampala of which

96% were males and 4% were females. The dominant age group was 10-14years, which constituted 70% with the least being 5-9 years, which were 8%. The survey revealed that only 30% had not attended school, 69% were primary school dropouts and 1% were senior one dropouts. Of the primary dropouts, 42% were primary one to primary two dropouts and 27% were primary four to primary five dropouts. The survey found out that the biggest percentage of 39% survived by carrying luggage, 29% on packing waste, 12% on cleaning streets, a surprising 7% survived on stealing, while 7% on begging. The others (6%) survived on doing petty jobs such as fetching water, empting dustbins, working in markets to off load or load goods.

In the same survey it was revealed that 56% had no contact at all with their relatives, 20% had no relatives at all, 18%, however, were in contact with their relatives and 6% actually lived with their relatives. 73% of the street children were found to be using drugs such as petrol, marijuana and glue. This increases their vulnerability to HIV infection in this era of AIDS.

Among the health problems of the street children, AIDS constituted 9%, 21% had skin diseases, 18% had a problem of fever, while 12% were affected by injuries. Twenty eight percent (28%) suffered from other minor diseases. It was found out that while 28% knew children who had died of AIDS, 26% didn't want to talk about AIDS, 13% did not understand AIDS and only 2% used condoms and other 31% knew some street children who had died of AIDS. The survey also revealed that the biggest percentage (29%) had been on the street for 1-2 years, 17% for 3-4 years, 12 for 5-6 years and only 2% for over 10 years. This indicates an increase in the number of children.

4.5.3 Child Abuse

Being a street child in itself is child abuse. However, this is distinguished because abuse can as well happen within a stable home. A media analysis report on child abuse and neglect reveals that defilement is the most widely reported form of child abuse, making up to 38% of the reported cases. Neglect and kidnap made up to 4.1% of each of the reported cases. Murder and battering cases make up to 15.5 and 13.5% respectively, while dumping makes up to 5.6% of the reported cases. The report reveals that of the abused children, 60% are females. The males are the dominant abusers making up to 64.9%, while the female abusers make up to 23.4% with 11.7% being both male and female.

In an attempt to find out the parental status of the abused children, it was revealed that 17.3% were maternal orphans, 16.4% were paternal orphans and 46.2% were total orphans. It was further revealed that children living with grandparents are abused more than children living with any other relative including own parent, yet grandparents are the only next of kin to foster children in many instances. The extent to which child abuse is linked to HIV is not known, but AIDS has created orphans and the most abused children are orphans.

4.6 Economic Impact

4.6.1 Impact of HIV on Labor and household income

Loss of skilled labor in the public and private sector is increasingly affecting productivity and increasing expenditure on the labor force. Preliminary findings of a survey (Ministry of Public Service, 2000) on the trends and impact of HIV/AIDS on public service in the country reflect that 15.2% to 27.4% of the public officers are suspected to have died of AIDS between 1995 and 1999. The study estimates 4.6 to 13.2% of the public officers as PHA.

The study also shows that government spent about US\$120,0000 on HIV/AIDS related sickness and the deaths of public officers in 1995, a figure that rose to about \$3,000,000 in 1999. These figures constituted 42% and 56% of the total expenditures on staff morbidity and mortality (medical and burial expenses, pension and gratuity) in 1995 and 1999, respectively. There is also an increase in indirect costs related to loss of skills and experience, hiring of new personnel, training and loss of man-hours. As costs increase production is affected as well. The impact on productivity at sectoral level gradually translates into grave implications for the National Economy. There is an estimated annual loss to GDP of 0.9% due to AIDS.

The situation is worsened by over 80% of the reported AIDS cases occurring in people aged 15-45 years. Of these, a majority are adults and parents (MoH, 1999). This age group constitutes the largest part of the potential and most productive labor force in a way affecting household income. A survey in one district (Rakai) showed that 25% of the households are cultivating less and less lands. Of these 35% attributed it to HIV/AIDS-related sickness or death. This has threatened food security of affected families, worsened the nutritional status at household level, and led to a decline in cash-crop production. compared with an average monthly household income of US\$18, AIDS related expenditure was US\$ 20 for burial and US\$ 40 for the medical costs of a terminal patient. In addition, 65% of the household members were found to increase by two-to-four hours to make up for the lost income especially in cases where the male head had died (Topouziz, 1994). Action AID International is studying the extent of the effect of HIV/AIDS on household income and Uganda is one of the case studies.

4.6.2 Staff Absenteeism and Employment Costs due to HIV/AIDS

The extent of staff absenteeism is not known, due to lack of roll calls as well as sign-in and out programmes. However, in some cases, it is difficult to tell whether some people get absent because of illnesses or other problems

The costs of labor at company level have also increased due to increase in health costs borne by enterprises in treatment of opportunistic infections. According to Seketawa (1998), the estimated cost of HIV/AIDS patient when hospitalized is 300 times the cost of an average employee. The study pointed out that the HIV/AIDS pandemic has more

than doubled the expected number of death occurring among the work force of some enterprises.

4.6.3 HIV/AIDS and the Workplace

HIV/AIDS has caused employment insecurity and discrimination in the labor force. Some organizations subject prospective employees to mandatory but covert screening test before recruitment, and infected ones are denied opportunities. Those who get infected during employment are often discriminated against and their job contracts terminated on the basis of their sero-status (The National Strategic Framework for HIV/AIDS Activities in Uganda: 2000/1-2005/6)

4.7 Impact of the Measures as Perceived by Stakeholders

Information on the perceptions of stakeholders was collected from three NGOs (Action AID Uganda, Concern International and TASO) and two Community Based Organizations (CBOs). All the data from NGOs and CBOs were collected from urban areas. NGOs and CBOs were selected using a criteria developed by ICR Florence, Italy. Three NGOs (two international and one local) as well as two CBOs were visited. From the findings, it can be deduced that the policy measures adapted by the three sectors are suitable and linked to the problems of the communities. However, it should be noted that the results of the studies are not representative of the entire country.

4.8 Positive impact of HIV

Whereas HIV/AIDS has severe negative consequences on the social sector and the economy, some interventions have had positive impact on service delivery outside the scope of HIV/AIDS. The number of health educators increased from 7 to 347 over a decade and 12 health education films were bought. This was an innovative strategy to combat the epidemic. Health education sessions do not only target HIV/AIDS but other top killer diseases such as diarrhea and malaria. Facilities with PMCT have improved obstetric services by way of introduction of better practice (for example counseling, laboratory check ups, postnatal care). Screening of blood is not only done for HIV but also for other endemic diseases transmitted through blood transfusions such as syphilis and hepatitis B. Infections control has been addressed especially the use of gloves in obstetric care and sterilization of equipment. Before the advent of HIV, this was not being done. All in all, it may be argued that the extent of the HIV/AIDS problem may have led to some significant improvements in the general health service delivery in Uganda.

5. Policies and programmatic response

This section provides an analysis of responses on the effects of HIV/AIDS on children. Although some of the responses do not specifically target children, they indirectly help to offset the impacts on them. Institutions and organizations have worked either individually or in partnership to design interventions and policy responses to reduce the impact of HIV/AIDS on children and society as a whole.

Children, especially those orphaned by HIV/AIDS have specific and special needs for protection of their welfare, rights and entitlements because they may not have the benefit of this protection from their caretakers. Thus, it is the responsibility of both government and the civil society to provide legal protection to children and orphans due to AIDS. In Uganda, programmes and statutes that identify this protection of children such as the Uganda National Program of Actions for Children (UNPAC-1992) and the Children's Statute (1996) have been developed. Government has responded by establishing the National Council for Children (NCC-1999) and improving the structure of the Ministry of Gender, Labor and Social Development (MoGLSD), which directly deals with the problems of children. In this section, we focus our discussion mainly on different levels of response by the public sector. Other interventions and responses have been discussed in details in section 3.

5.1 National Policy Response

There has been an increased attention towards the development of policies that address the problems of children and are relevant to the AIDS epidemic since 1992. Today, thousands of children need special protection and this number is increasing due to the rapid rise in prime adult deaths owing to HIV/AIDS, armed conflicts and other natural causes. However, many institutions recognize the need for children to have this protection yet not all children receive it. In response, government has set some legal statutes and policies to address this.

5.1.1 Uganda's National Program of Action for Children (UNPAC)

The Convention on the Rights of the Child (CRC-1990) set the stage for the development of the Uganda National Program of Action for Children (UNPAC-1992/3). The UNPAC outlines specific human rights for children and provides specific legal and policy frameworks for orphan care and protection, and emphasizes community care and protection of children in need (NCC, 1999). Specifically, the plans of UNPAC include the OAU Charter on African Child Rights and Welfare, the National Council of Children (NCC) and the Children Statute. According to the CRC, the children's rights are based upon four principles: i) protection, ii) participation, iii) survival and development, and iv) non-discrimination. Specifically, the orphan's rights include issues related to the loss of parents, the loss of the children's primary caregiver, increased vulnerability and exposure to exploitation and abuse, and the need for psychosocial treatment/support.

The government of Uganda formulated and ratified the Children's Statute in 1996. This statute provides a comprehensive legal and institutional framework for the protection of children. It also addresses the rights of children as stipulated by the UN Convention and in the Organization of African Unity (OAU) charter on the rights and welfare of children (NCC, UNICEF et al, 1999). According to this statute, the local councils and communities have the duty to protect children whose parents have died. Although this statute is in place, there are still several gaps that make it weak and unable to adequately address the problems of children. For instance, inheritance laws are still weak and specific legal laws, which protect orphaned children do not exist. Orphaned children have been subjected to harsh conditions such as child labor, abuse and neglect, gender discrimination and in many cases they fall out to the streets.

Uganda has also established the National Council of Children (NCC) by Statute in 1996 mainly "to provide a structure and mechanism to ensure proper coordination, monitoring and evaluation of all policies and programmes relating to the survival, protection and development of the child and other connected matters" (NCC, 1999). At the district and community levels, there are Probation Officers, Secretaries for Children's Affairs and Public Welfare Assistants to promote and supervise the implementation of the Children Statute. The Family Protection Unit in the Uganda Police has also been established to help in solving family issues, including the ones of vulnerable children. However, the existence of these laws and staff establishments does not ensure enforcement. For instance, currently, there exists a gap between what the NCC stipulates and what is being implemented. There are still weaknesses that render the Council ineffective in addressing the problems of children. Besides, there are no separate polices in the NCC relating to HIV/AIDS orphans and there caretakers.

However, on a broader scale, the UNAIDS in collaboration with Governments formulated some principles to ensure that interests of children related to HIV/AIDS are promoted and addressed. These principles include access to HIV/AIDS prevention education, information and the rights to confidentiality and privacy in regard to their HIV status. Access to health care services and programmes, adequate treatment and care for HIV/AIDS and no discrimination in leisure, recreational, sport, and cultural activities due to HIV/AIDS status are also key aspects of these principles. Another principle is to prevent and minimize the impact of HIV/AIDS caused by trafficking, protection from prostitution, sexual exploitation, inability to negotiate safe sex, sexual abuse, use of injecting drugs, and harmful traditional practices.

The pervasive effect of HIV/AIDS on the socioeconomic aspects of the country and its implications for implementing poverty eradication strategies resulted in the development of various other national policies, not specifically addressing the issues of children but to which HIV/AIDS policy principles are subordinate. These include: National Health Policy (1999) which takes care of he prevention and management of the epidemic; the National Strategic Framework for HIV/AIDS Activities in Uganda: 2000/1-2005/6 which sets the current framework for HIV/AIDS control; the Draft Health Services Bill, 1998 which provides for an Advisory Board on HIV/AIDS and Epidemic Control; the National Population Policy (1995), which aims at ameliorating the pervasive effect of epidemics on demographic trends; Universal Primary Education Policy (1996); the

Gender Policy (1996) whose long term plan is to protect and empower vulnerable groups; the Local Governments Act (1997), which aims at community empowerment; the National Nutrition Policy (1998), whose goal is to ensure food security and healthy livelihoods; the Land Policy (1999), which protects rights of vulnerable groups regarding access to land; Vision 2025 (1999), whose long term plan is to combat HIV/AIDS epidemic; the Poverty Eradication Action Plan (2000), which is the five-year national operational plan for which HIV/AIDS control is an integral part; and the Debt Relief Initiative (1996/97).

5.1.2 Strategic Framework for the Control of HIV/AIDS

The government of Uganda is at the forefront of controlling the spread of HIV/AIDS. The National HIV/AIDS response is estimated to cost US\$ 181,466,030 over the 5-year period. As a percentage of Government of Uganda expenditure, it is expected to constitute 3.31%, while it takes 0.51% of GDP. Of the total cost estimate, about 16% is estimated to come from the provisions under the Health Sector Strategic Plan while an estimated 16% to 30% is expected to come from other Government sectors. Tables 5.1 and 5.2 show HIV/AIDS estimated cost versus Government of Uganda funding as well as estimated funding from the Health Sector Strategic Plan. This reflects an estimated total of US\$ 60m to 88m from the Government sectors leaving a funding gap of US\$ 94M - 122M. This is likely to be reduced by the existing funding for NGOs, Agencies and bilateral organizations that may not have been reflected in the financing of the plan. These budgetary allocations cover all categories and there are no specific allocations to children.

 Table 5. 1: Estimated Cost for HIV/AIDS Strategy versus GoU Expenditure and GDP

	2000/01 million	2001/02 million	2002/03 million US\$	2003/04 million	2004/05 million	5yr total million	% of GoU	% of GDP
	US \$	US \$,	US \$	US \$	US \$		
Total GoU expenditure	896.03	974.76	1081.87	1192.47	1332.22	5477.34	-	-
GDP	6218.75	6575.88	6977.22	7647.70	8382.82	35802.37		
HIV/ AIDS Strategy						181.47	3.31	0.51

Source: MTEF projections (MoFPED). Figures for the first three years are derived from 19 Jan 2000 MTEF projections of MoFPED

Table 5.2: Estimated Funding from the Health Sector Strategic Plan (in US \$)

	2000/01	2001/02	2002/03	2003/04	2004/05	5yr total
STI/HIV/ AIDS (100%)	1,646,999	1,687,501	1,723,059	1,772,690	1839,009	8669,258
Tuberculosis (60%)	847,695	868,541.4	886,842.6	912,387	946,521	4,461,987
Sexual and reproductive health (30%)	2,972,119.2	3,045,209.1	3,109,375.2	3,298,937.8	3,318,614.7	15,644,256
IEC (30%)	389,556.3	372,462.6	363,499.8	362,946.3	352,597.8	1,841,062.8
UAC (30%)	470,647	470,647	470,647	470,647	470,647	2,353,235
Total	6,329,016.5	6,444,361.1	6,553,423.6	6,717,608.1	6,927,389.5	329,669,998.8

Source: The National Strategic Framework for HIV/AIDS Activities in Uganda: 2000/1-2005/6

Table 5.3 below shows that priority has been placed on the reduction of the rate of HIV infection (i.e. prevention) at all levels, taking a share of 46.1% of the estimated total cost. Mitigation of the health and socio-economic effects of HIV/AIDS follows with a share of 32.9%, while strengthening national capacity to respond to the epidemic takes 21.0% of the total estimated cost. It should be noted that these figures include all categories of society and are not specific to children.

Table 5. 3: Breakdown of Cost Estimate for the HIV/AIDS Plan by Goal/Major Activity (in US \$)

Item	5 year cost estimate	%
Goal 1: Reduction of HIV infection by 25% by 2005/6	83,707,680	46.1
Goal 2: Mitigation of effects of HIV/AIDS	59,672,693	32.9
Goal 3: Strengthening National Capacity for response	38,085,657	21.0
Grand Total	181,466,030	100.0

Source: The National Strategic Frame Work for HIV/AIDS Activities in Uganda 2000/1-20005/6 March 2000

The current costing does not mention whether HIV/AIDS control activities covered by education, agriculture and socio-welfare sectors are funded under the relevant sector plans. If so, the costs need to be captured as done for the health sector. The costing of PMCT intervention plan was not captured as well.

5.1.3 President's Initiative and Formulation of AIDS Control Programmes.

The country's response to HIV/AIDS between 1982 and 1986 was largely confined to the health sector and handled like other epidemics. Most Ugandans thought of the disease as witchcraft, later a disease of the immoral, which led to stigmatization of PHA. In 1986, a new government came in power and the new Minister of Health announced the existence of HIV/AIDS in the country during the World Health Assembly in Geneva. This admission marked the beginning of openness about the epidemic, and served as a springboard for mass awareness campaigns spearheaded by President Museveni. He referred to the menace of AIDS in his speeches as he toured the country, urging his audience to avoid reckless sexual behavior to minimize the spread of AIDS. The first lady supported this campaign against AIDS by urging people to support families affected by AIDS. She later founded the Uganda Women's Efforts to Save Orphans (UWESO), which was originally founded to assist war orphans but quickly expanded to include those orphaned by AIDS. Consultations into the multi-sectoral approach, spearheaded by the President resulted into the formulation of the National AIDS Commission in 1992. The President himself chaired initial meetings that led to the formation of Uganda AIDS Commission. Every politician was required to campaign against HIV/AIDS at every mass gathering. This slowly demystified the disease as people gained more insight into their vulnerability to infection and prevention measures.

In October 1986, the Uganda Government established AIDS Control Programme in the Ministry of Health, which marked the first structural response to AIDS. It was first established as the National Committee for Prevention of AIDS and later in 1987, it was named STI/ACP in recognition of the links between STI and HIV/AIDS. This was the

first AIDS control programme in the World. The health sector has since been the backbone of the country's response. The Government then organized an International Donors conference in the Capital City, Kampala, to gain financial and technical support for AIDS prevention and control activities. The world was impressed by the Government's frank admission of the seriousness of the epidemic, and 21 international donors attended the conference and pledged immediate support towards HIV/AIDS prevention and control activities. By 1987, it was recognized that AIDS was not only a public health problem but also a social and economic disaster that called for interventions from all sectors. This policy calls upon the involvement of everyone within their capacity and mandates to fight HIV/AIDS. In August 1990, a national task force on AIDS was appointed by the government of Uganda to review all AIDS control programmes in the country and to suggest a framework for implementation of multi-sectoral AIDS control. The Uganda AIDS Commission (UAC) was legally established in 1992 under the office of the President, to lead supra-sectoral coordination of the multi-sectoral efforts. AIDS control programs were established in more line Ministries by 1994. International agencies led by the World Bank including UNICEF, WHO, USAID, UNDP supported the development of these structures from inception to the establishment of the Commission (UAC - April 1992; AIDS Control in Uganda: The Multi-sectoral Strategy).

Uganda AIDS Commission adopted a holistic approach on realizing that HIV/AIDS problem is not sole responsibility of the Government. Instead the Government has strengthened the role of all related actors according to their specific mission, which is very essential for success of the control program. This has been achieved by full involvement of the private sector, business, NGO, individual families and communities. There are various community efforts targeting economic support to dependants of the sick or deceased to sustain income flow and to develop vocational skills especially for widows and orphans.

5.1.4 Poverty Action Fund (PAF)

The Poverty Action Fund is jointly mobilized by contributions from the GoU, and donors. Among the donors are multilateral institutions such as the World Bank and IMF, USAID, EU, CIDA, and bilateral donors (countries) such as Netherlands, Sweden, UK, Belgium, Ireland and Australia.

In 2000/01, the total PAF resources amounted to Uganda shillings 356.24 billion and this is expected to gradually increase to about 670 billion (Uganda shillings) by 2003/4 (see Table 5.4). In Uganda, PAF expenditures are allocated to particular sectors and districts. Most of the PAF expenditure is aligned to the programmes in the PEAP. In an effort to improve the quality of life of the poor, the PAF provides support to the Uganda AIDS Commission, AIDS orphans and children's rehabilitation.

Table 5. 4: The PAF Expenditure Projections for 1998/9 – 2003/4 to the UAC and for the Support of AIDS Orphans and Children's Rehabilitation.

Year	1997/8	1998/9	1999/00 Budgeted	1999/00 Outturn	2000/01 App. Budget	2000/01Pro v. Outturn	2001/02 Projected	2001/02 % Increase	2002/03 Project	2002/03 % Increase	2003/04 Projected	2003/04 % Increase
Uganda Aids Commission	0.43	0.51	0.62	0.62	1.00	1.13	2.23	122.9	2.45	10	2.64	7.6
Support to AIDS orphans and children's Rehabilitatio n	0.03	0.02	0.05	0.03	0.50	0.50	1.50	200.0	2.00	33.3	2.10	5.0
Primary Education	108.59	170.48	222.42	211.57	274.8	254.66	294.44	73	330.22	12.2	360.37	9.i

1US\$=UShs1,800.00

5.2 Specific Sector Response

5.2.1 The Social Welfare Sector

The Ministry of Gender, Labour and Social Development (MoGLSD) has played a significant role in helping and protecting children. It has contributed towards the establishment of laws and policies that help children through the Children Statute of 1996. The MoGLSD has a department that focuses on the welfare of children, supervises institutional care, foster placement and adoption and the tracing of relatives. This department manages short-term assistance, and helps children in problems, some of whom are HIV/AIDS orphans. However, most of the activities of this department are carried out at the district level and yet they are understaffed, lack sufficient training, and therefore cannot adequately handle the needs of the children at lower levels.

Although there is a department for Youth, it does not target HIV/AIDS intensively. Program for Enhancing of Adolescent Reproductive Life (PEARL) emphasizes basically reproductive health in general among adolescents. PEARL has recruited officers in 143 sub-counties from the 22 districts where it operates. Information network, posters, newsprint and media are used in disseminating information for preventing HIV/AIDS. PEARL, which was established in 1995, has trained people up to parish level as a way of building capacity. Some of the trained individuals have been offered logistical support in terms of transport.

Staff sensitization and awareness on HIV/AIDS and condom distribution are the prevention programmes within the MoGLSD. Counselling services are also provided by trained counsellors within the Ministry. The MOGLSD has registered successes in some aspects of preventing HIV/AIDS. This is evidenced in the utilization/consumption rate of condoms in sectors under the Ministry and expansion of programs such as PEARL in various parts of the country. Further, there are plans to resettle street children in a rehabilitation center and provide educational facilities.

5.2.2 The Education Sector

The education sector is a unique tool for spreading HIV/AIDS information and awareness. As an already organized infrastructure, it is cost-effective and can reach a large audience of teachers/instructors and administrative staff, pupils and their parents, as well as sportsmen and women outside the education mainstream.

The education sector through the Ministry of Education and Sports (MOES) is governed by the Education Sector Investor Plan 1998 - 2003 (ESIP). ESIP arose from the need to place investment in the education sector, particularly the UPE initiative of 1997, within a framework that is fully consistent with the 1992 white paper on education. The purpose of ESIP at primary level is to achieve universal access to high quality education. There is no specific HIV/AIDS policy statement from MOES. A task force on HIV/AIDS was formed in the second half of 2000 and has come up with a strategic plan.

There are major implications of the education sector on the economy through production of skilled labour and overall improvement of the standards of living of the population. Through the Education Sector Review of April 2001, the sector has produced an HIV/AIDS Strategic plan 2000/1-2005/6 in order to streamline the HIV/AIDS response. Costing for the first year activities has been done as indicated in Table 5.5.

Table 5.5: Costing for the First Year of the HIV/AIDS Strategic Plan 2000/1-2005/6, MoES

Outcome	Cost in Billion Shs
Production of Policy guidelines and legal provisions	1,05130
Advocacy for HIV in Educational Institutions	0.21442
Incorporation of HIV/AIDS into the curriculum	0.28000
Total	1.54572

Source: Fifth Education Sector Review April 2001, HIV/AIDS Strategic Plan 2000/1-2005/6, MoES).

The education sector is intending to focus on the key intervention areas such as, developing policy guidelines that promote prevention and mitigation of HIV/AIDS epidemic, HIV/AIDS education, advocacy and mobilization which will include establishment of VCT services in institutions, establishment of staff and orphan welfare programs in the sector which involves identification, tracking and follow up of weak staff and students due to AIDS related sickness, initiation of a welfare scheme response for staff and students living with HIV/AIDS. Palliative care and funeral/burial support are included. There is a plan to establish an AIDS orphan scheme, which will include education bursaries/scholarships and material support for school children, particularly AIDS orphans. In addition the orphan scheme will initiate income-generating activities such as poultry, horticulture, arts and craft. Also, establishing partnership and networking is one of the interventions. This is basically with government departments, NGO, CBO including private groups such as fathers and mothers union in provision of AIDS education, counselling and care in various institutions

It is evident that the education sector does not have a clear strategy to tackle education concerns of orphans (see Table 5.5). In particular, educational bursaries, which are a major way of intervention, are also not included in the costing provided in Table 5.5. Furthermore, the plan does not provide a clear coherent way to tackle the problem of attrition, which is mainly caused by HIV/AIDS. This costing has a limitation in that, it is only confined to the first year of the plan whereas a plan should usually be costed for the entire specified planning period, and further elaborate on the sources of financing. It is therefore important that other components are included in the subsequent years of the plan.

5.2.3 The Health Sector

The Health Policy 2000/1 to 2009/10 and the Health Sector Strategic Plan (HSSP) for the years 2001/2 -2004/5 provide components for the Uganda National Minimum Health Care Package (UNMHC). There are six components, which include control of communicable diseases such as STI/HIV/AIDS, Malaria and Tuberculosis. In the MoH, services are organized largely into a two-tier system; a National and District System. The

national level, which takes care of the regional and national hospitals, autonomous institutions such as the National Drug Authority, which controls policy on drugs and National Medical Stores (a drugs procurement agency). Regional referral hospitals provide tertiary level of care for about two million people. The District Health Care system is headed by a Director of Health Services and has Health Centers (largely primary care) and General Hospitals, (with secondary care). There are specific disease control programmes under the Ministry of Health, such as the Sexually Transmitted Infections and AIDS Control Programme (STI/ACP), National Tuberculosis and Leprosy Control Program and Malaria Control Program.

The STI/ACP programme handles sexually transmitted infections and HIV/AIDS control and prevention. This programme is manned by a work force of ten (10) full-time staff consisting of epidemiologists, public health physician and health educators. The objectives of the STI/ACP program are to prevent further transmission of STD/HIV/AIDS in Uganda, mitigate the impact of the HIV/AIDS epidemic through the provision of care and support to those infected and affected, and create capacity for the prevention and control of the HIV/AIDS epidemic in Uganda. The programme carries out HIV/AIDS control activities and has seven broad areas of operation, namely infections control, information education and communication, care and support, laboratory and blood transfusion services, condom promotion, epidemiological surveillance, and sexually transmitted infections control. The program has a draft STI/AIDS control strategic plan 2001/2-05/06 which aims at preventing transmission and also mitigating the impact of HIV/AIDS on individuals, families and communities. However, this plan has not been costed, is not child focused and therefore its implementation is adhoc.

Infection control related to HIV/AIDS is handled through infection control committees in hospitals and focal persons in Health Centers. The MoH has 15 sentinel sites in hospitals for establishing prevalence rates in the country. In addition, it has health educators in all districts to spearhead IEC activities. There are plans to ensure that each referral facility has a health educator. The Ministry of Health through STI/AIDS control programme offers refresher courses to these committees and key persons. There is an on-going programme of training health workers in counselling. Also, staff training programs in use of ARV commenced and its administration is in process. The MoH in conjunction with the Mild-May Center started training patients in management of terminal cases of HIV/AIDS. The training of health workers to manage opportunistic infections has been incorporated into an on-going pre-service and in-service training programme as one of the key health problems in the country. It should be noted that there are no specific insurance schemes for doctors, nurses, administrators, clerical staff and other personnel. They are treated with Anti Retro Viral (ARV) therapy in specified public institutions like any other person at a fee of US\$ 100:00 per month. However, the government is considering the feasibility study report on social health insurance for all formal sector workers. ARVs are not to be part of the benefit package. Like the rest of the country's working force, health workers benefit from the Workman's Compensation Act, which spells out benefits of workers who get injured at work places.

There is staff shortage in all health facilities. Despite this, there are no overtime arrangements to address this shortcoming. Lunch allowance was introduced in the mid 90s largely to address working during lunch hours and to supplement the low pay. Other measures introduced to sustain the capacity of MOH to deliver services are: training of school leavers in a basic Nursing Assistants course for three months. There has been massive recruitment of doctors, nurses and paramedics to address gaps in service delivery. This however has not been necessarily due to HIV/AIDS epidemic *per se*.

There has been strengthening of the home-based care and community outreach work so as to promote greater reliance on home and community care programmes. The Government has given budget support to NGOs through project funding and consolidated fund. This will be strengthened through the Community Health AIDS Initiative (CHAI) of the World Bank funded project.

Anti Retro Viral drugs are supplied free of charge to pregnant mothers who have tested positive in 12 districts in Uganda, largely those with referral hospitals, VCT facilities and laboratory services. There are plans to provide ARV at subsidized prices to the public at all the 10 regional hospitals. Also, anti-tuberculosis drugs are being supplied free of charge to all cases. This helps children infected with HIV/AIDS who have developed tuberculosis. Other medications such as anti-fungal are supplied free of charge on adhoc basis, that is to say, when funds are available.

Condoms are provided through two channels: routinely through all health facilities and through private agencies such as Commercial Marketing Strategies (CMS), a USAID funded non-profit NGO. The utilization rate of condoms across the country is estimated to about 30%. Countries such as Thailand have utilization of close to 100% largely because of a policy of 100% condom access and developed PHC delivery system.

In some cases, the quality of health services has been influenced by the attitude of health workers to HIV/AIDS patients. This is evidenced in Pakistan (Khandalla et al 2000) and China (Lew-Ting and Twu, 1997). In Uganda, all health workers have been sensitized and there is no stigma towards patients with STI or HIV/AIDS. There is no segregation in both Public and Non Governmental health facilities including faith based ones.

On the issue of the health budget, the challenges of HIV prevention threaten to absorb the public health budget while the increasing burden of HIV in health facilities puts similar strain on curative services. There is inadequate funding of the health sector with total per capita health expenditure in the range of US\$7 to US\$12.00, with only US\$ 4:00 attributed to government and donor spending, the balance coming from individuals out of pocket payments (Health Policy 2000-2010). However, there has been a general increase in public expenditure in health over time as indicated in figure 5.1 below.

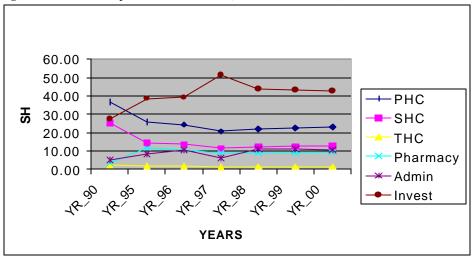


Figure 5. 1: Public Expenditure on Health (thousand of million)

There was a rise in investment expenditure from Ug. Shs. 27,000 million in 1990 to 51,000 million in 1997, which was the highest, representing an increase of six times. Expenditure at tertiary level remained almost constant for ten years (see figure 5.1). Since 1995, expenditure for all levels was almost constant. Note that expenditure on health services may not have been necessarily driven by HIV/AIDS epidemic but government policy to increase access within the sector allocation.

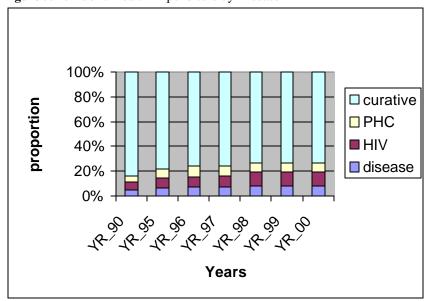


Figure 5. 2: Public Health Expenditure by Disease

Curative services cost over 60% of all the health expenditure. HIV/AIDS programme and other related programmes account for less than 10% of the total health budget. It ought to be noted that HIV/AIDS related diseases are under curative services. Since 1995, the

number of health facilities (226), inpatient care beds (28479) and number of beds dealing with infectious diseases including HIV/AIDS has remained constant at both tertiary and secondary levels.

In order to increase financial access to health care, the Ministry of Health abolished user fees in all Government owned units other than the private wings on 30th March 2001 after introduction of user fees for ten (10) years. The Government has established secondary level referral facilities (with a theatre, an anesthetic officer, a doctor, public health nurse) in all counties to cover an average population of 100,000 people. This has led to construction of 134 Referral Health centers, which are largely mini-hospitals. Most of the recruited staff has been posted to rural health facilities and most NGO facilities located in rural underserved areas. The Government provided grants to NGO hospitals and health centers. These grants cover up to about 50% of the recurrent expenses. The government has posted doctors to NGO units, which are in the rural areas. The sector plan provides for construction of a health center for every 5,000 people so as to increase geographical access. The establishment of the World Bank funded Sexually Transmitted Infections Project under Ministry of Health worth US\$ 73 million in 1994 brought in the necessary capital injection in the control of HIV/AIDS in the health sector.

5.3 The District Response Initiative (DRI)

The goal of DRI is to create AIDS competent communities where all elements of society are enabled to appreciate the reality of the epidemic, take action to prevent its spread and improve the quality of lives of infected people and support affected people, families and the community at large. The key strategies include, fostering local community ownership of the problems and its solutions, ensuring reliability, quality and responsiveness of the support from various sectors to the community action, and strengthening the development of local partnership between communities and sources of support.

The DRI was developed through a consultative process involving government ministries, AIDS service organizations, development partners both at district and national level with technical assistance from UNAIDS. The districts are being facilitated in the process of intensifying and expanding community response to HIV/AIDS. This involves empowering communities to assess their HIV/AIDS situation, design programmes to address the identified problems and implement them. The communities will be able to mobilize local and international resources and mainstream HIV /AIDS control activities across all sectors. However, DRI is note child specific. At the moment UAC has participating partners in training district facilitators and this program is scheduled for completion in 2002. However with highly decentralized governance and a regular electoral system there is a high chance of success in DRI.

In conclusion, openness, political support and commitment marshalled tremendous support especially from the non-government non-profit sector. By 1997, over 1200 agencies were implementing HIV/AIDS-related activities in the country. These comprised of the government agencies, NGOs, CBOs, PHA networks the private business sector and development partners. UAC brings together these partners to review progress, identify gaps and set national priorities and strategies for implementation to ensure timely

delivery and even coverage of prevention and care services. Women have been empowered both socially and economically to handle the HIV/AIDS problem. Preventive messages are broadcast in all local languages and in local newspapers to cover the whole country.

5.4 Best Policy Programmes

- 1) The government ratified the Children's Statute in 1996 thus providing a comprehensive legal and institutional framework for the protection of children. Uganda has also established the National Council of Children (NCC) by Statute in 1996 mainly "to provide a structure and mechanism to ensure proper coordination, monitoring and evaluation of all policies and programmes relating to the survival, protection and development of the child and other connected matters" (NCC, 1999).
- 2) Government is in the process of developing a National Orphans Policy and Strategy so as to have a comprehensive approach for orphans and other vulnerable children. A draft report of a situation analysis study is already in place being. The Social welfare sector (specifically MOGLSD), Uganda AIDS Commission, development partners and other stakeholders are expected to draft the policy.
- 3) Uganda Government has a policy of openness and there is a strong Presidential Commitment to control HIV/AIDS. This is a pillar for strong and sustainable action. The President has received numerous awards, the recent one being *The Distinguished Leadership Excellence in the Fight against HIV/AIDS* award given by a US-based AIDS Health-Care Foundation, the UK's Community Health and Information Network and Uganda's Business Coalition on HIV/AIDS, at a conference on HIV/AIDS care and support held in early September 2001, in Kampala
- 4) The first structured response which led to the creation of AIDS Control Program (ACP) in Ministry of Health in 1986 and subsequent mobilization of resources from within and outside the country provide impetus for control of the Epidemic
- 5) The establishment of Uganda AIDS Commission (UAC), which has a multisectoral focus with a holistic approach and overall responsibility of spearheading HIV/AIDS control activities. There are District AIDS Control Committees with one of the heads of Departments as a focal person to coordinate district AIDS control activities and sector AIDS control programs in the Ministries of Education, Health, Agriculture, Local Government, Labor and Social Welfare, the Army, Police and Prisons
- 6) Involvement of the NGO sector with AIDS control programs (for example Protestant, Catholic and Muslim Medical Bureaus, grass root CBOs such as TASO and the media). The Government offers financial support to NGOs involved in HIV/AIDS control activities (for example TASO, Mildmay from the consolidated fund). An understanding of local and religious values of various communities is essential for any strategy. Involvement of the civil society, faith-based organizations, Media and PHA is invaluable due to their direct contact with communities.

- 7) Currently, all the three sectors of Health, Education and Social Welfare have Sector Wide Approaches (SWAP). Through the SWAP process, donors and Government support an agreed program headed by the government. Most of the development partners are involved in Planning, resource mobilization and guiding implementation. This has been a key element in prevention, control and mitigation of affects of HIV/AIDS. This SWAP process needs all the support and enabling environment.
- 8) Because HIV/AIDS does not have territorial borders, sustained progress can only be achieved through combined efforts at Regional and global levels. There is regional network working on HIV/AIDS. The Commonwealth Regional Health Secretariat for East and Southern Africa assists 13 countries in promotion of good health practice. There has been an active move to have collaboration as the Great Lakes Region and early September 2001, a regional network on HIV/AIDS held its first meeting in Uganda.

6. Lessons learnt, conclusions and recommendations

6.1 Lessons Learnt

- The prevention, treatment and mitigation of HIV/AIDS and its effects on children can succeed if there is political commitment from the lowest to the highest level of government. In Uganda, most of the achievements made so far, are attributed to the policies of openness, advocacy and resource mobilization adopted by the Government.
- The effects of HIV/AIDS on children are long lasting and profound. Since children are the future of Uganda, the control and prevention of HIV/AIDS must be placed high on the development agenda of the country. There is need for more efforts to ensure that as many children who are born to HIV positive are without the virus. However, in Uganda, HIV/AIDS is accorded the same status as other priority development areas such as agricultural research and extension, maintenance of roads, basic education, rural water supply and primary health care, thus giving HIV/AIDS the priority it deserves.
- There is need to provide educational opportunities to vulnerable children at primary, secondary, vocational and tertiary levels of education so as to enable them attain some degree of economic independence.
- Use of a holistic approach. The civil society and private business firms should play an active role in prevention and care of HIV/AIDS. The involvement of Local and International Non-Government Organizations, Community Based Organizations as well as Faith Based Organizations (NGOs/CBO/FBOs) in all areas of service delivery and policy making has put every key stakeholder on board and reached a wide coverage of the country. Communities and individual families have been involved in the control, treatment and mitigation of the consequences of HIV/AIDS. Although these are very good lessons for other countries, there are some big gaps that need to be addressed if the current momentum is to be kept on track.

6.2 Conclusions

Despite the fact that the control and prevention of HIV/AIDS in Uganda has been considered a success story, the epidemic continues to exert significant pressure on the socio-economic systems of the country. HIV/AIDS has had both social and economic impacts on children as far as their health, education and social welfare are concerned.

Since the onset of HIV/AIDS in 1982, the prevalence rate was on the rise till 1992 (sero prevalence of 24.7%) when it started declining. The current HIV/AIDS prevalence of 6.9% is still very high and grossly affecting the welfare of children and the national economy. Although there is limited data and information on children in Uganda, existing evidence suggests that HIV/AIDS has had a pervasive effect. In the short run, children directly or indirectly affected by HIV/AIDS face educational, nutritional, health, social and psychological problems. Children affected by HIV/AIDS are at risk of not having access to preventive health care and treatment of common illness. Malnutrition is a major threat to the health of children and its long run effects may be severe and costly.

Education is a key determinant of household welfare. Children affected by HIV/AIDS usually face both short term and long term problems in their educational careers. Education affects an individual's quality of life, participation in social and economic activities, and life-long productivity and income. Children affected by HIV/AIDS usually cannot afford to go to school, and may face reduced productivity and incomes for most of their lifetimes. These children are also deprived of other educational related benefits such as reduced fertility and mortality. The major obstacles faced by vulnerable children in particular HIV/AIDS orphans include the lack of school related supplies to complement free primary tuition, poor quality of UPE, high exit of teachers due to HIV/AIDS, limited opportunities for further education and poor caretakers who are usually unable to provide educational and moral support.

The stigma and fear caused by HIV/AIDS has serious emotional and psychological effects on children. These effects can be devastating especially if the primary caretaker is not able to provide moral support, guidance, tender care, love and protection. The effects are worse if the child is infected and also likely to lose other family members to the same illness. Children affected by HIV/AIDS are particularly vulnerable to abuse, hostility, ostracism, ridicule, banishment, and violence from family, clan and community members.

Loss of labor in the household is increasingly affecting productivity. This situation is worsened by over 80% of the reported AIDS cases occurring in people aged 15-45 years. This age group constitutes the largest part of the potential and most productive labor force in a way affecting household income, savings and children's welfare. The loss of labour has an impact on productivity at sectoral level, which gradually translates into grave implications for the national economy. There is an estimated annual loss to GDP of 0.9% due to AIDS.

6.3 Recommendations

Interventions and responses to HIV/ AIDS with a child specific component must be included on the national agenda, with a budget commitment in order to achieve further reduction in HIV infection. The current move to strengthen capacity and coordination for protection of children at national and district level should be enhanced. Strengthening of the district response through strategies such as District Response Initiative (DRI) and CHAI should be encouraged. Also, the Children Statute should be implemented and the NCC strengthened.

Behavioral change remains the main stay of HIV/AIDS control and therefore innovative strategies need to be put in place to influence behavioral changes. These include 100% condom distribution policy to all vulnerable groups, involvement of PHAs, students' organizations and children groups such as scouts and guides

There is need to collect child specific data. Also, information on sero-prevalence rates for specific groups of the general population needs to be collected so that a management information system can be developed. This will help in designing specific interventions, not only for children but also for all the specific vulnerable groups. The information for the specific groups should also be linked to knowledge, attitude, beliefs and practices regarding HIV/AIDS so as to establish the causal mechanisms that influence the sero-prevalence trends.

Uganda lacks specific legislation on HIV/AIDS. This leaves the population at risk, and much more so the vulnerable groups such as children and women. The current efforts to develop an orphan's policy using a multi-sectoral and holistic approach must be commended and enhanced. It should be noted that the existing laws focusing on children have not been effectively implemented and some need to be amended.

Despite the contributions by government, NGOs and donor communities towards the control and treatment of HIV/AIDS, the country still faces limitations in resources to combat HIV/AIDS pandemic. Efforts must be intensified so as to mobilize resources both from within and outside the country. This should also include efforts to foster regional groups such as Great Lakes Initiative (GLI) to increase availability of incentives such as drug access and condom production through economies of scale. By encouraging regional grouping, there can be sharing of experiences by the members of such initiatives, which can promote successful practices.

There is limited use of modeling while designing interventions against HIV/AIDS epidemic. There is need to adopt prudent economic methods in planning for responses. In this respect, Uganda AIDS Commission in collaboration with UNAIDS, line ministries and agencies might have to consider convening a working party composed of multi-disciplinary professionals but with a critical mass of health economists so as to address these policy gaps. Of urgency, the country needs to develop a policy towards ARVs on how to administer and use the drug. This will guide health workers and the public at

large. There is need to carry out further research on the cost-effectiveness of intervention programs such as large-scale use of anti-retroviral drugs.

Finally, given the fact that there is no HIV/AIDS cure at the moment, there is need to put much emphasis on prevention programs especially targeting high-risk groups such as PMCT. In addition, there is need to encourage and strengthen the holistic approach if long term behavioral change has to be realized in all groups of the population. The government of Uganda, NGOs, CBOs and the donor communities should put in place more benefits for orphans, though not necessarily only HIV/AIDS orphans as a way of addressing such problems as street children and the related consequences on the general public. The fight against AIDS will continue to require strong partnership and commitment from Government, business sector, NGOs, the donors and the civil society including the general population. The joint effort in the fight against HIV/AIDS will help in reducing the impact of the epidemic on children and the general population.

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