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# **HIV/AIDS in Uganda:**

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A comprehensive analysis of the epidemic and the  
response

**Uganda AIDS Commission**

**Compiled for UAC by**

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## LIST OF ACRONYMS

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AAFB	:	Acid Alcohol Fast Bacilli
CAO	:	Assistant Chief Administrative Officer
ACP	:	AIDS Control Program
ACFODE	:	Action for Development
AIC	:	AIDS Information Center
AIDS	:	Acquired Immunodeficiency Syndrome
ART	:	Anti-Retroviral Therapy
AZT	:	Zodovidine
BECCAD	:	Basic Education, Child Care and Adolescent Development
CAO	:	Chief Administrative Officer
CARE	:	Carry American Relief
CBOs	:	Community Based Organizations
CG11	:	Core Group of Eleven Members
CHUSA	:	Church Human Services
CIDA	:	Canadian International Development Agency
DACCs	:	District AIDS Coordination Committees
DECs	:	District Executive Committees
DFID	:	Department for International Cooperation
DHCTP	:	Decentralization of HIV Counseling and Testing Project
DHT	:	District Health Team
DHS	:	Demographic and Health Survey
DIBs	:	District HIV/AIDS Information Bases
EEC	:	European Economic Commission
FAO	:	Food and Agriculture Organization
FOCA	:	Friends of Children Association
FP	:	Family Planning
ICRC	:	International Committee of the Red Cross
IFAD	:	International Fund for Agricultural Development
GDP	:	Gross Domestic Product
GLR	:	Great Lakes Region
GNP	:	Gross National Product
GTZ	:	German Development Cooperation
HBC	:	Home-Based Care
HIV	:	Human Immunodeficiency Virus
IEC	:	Information, Education and Communication
IGAs	:	Income Generating Activities
IMAU	:	Islamic Medical Association of Uganda
JCRC	:	Joint Clinical Research Council
LCs	:	Local Councils
MACA	:	Multi-Sector Approach to the Control of AIDS
MCH	:	Maternal and Child Health
MDM	:	Medicin du Monde
MFPED	:	Ministry of Finance, Planning and Economic Development

MIS	:	Management Information System
MISR	:	Makerere Institute of Social Research
MoE	:	Ministry of Education
MoG&CD	:	Ministry of Gender and Community Development
MoH	:	Ministry of Health
MoI	:	Ministry of Information
MoJ	:	Ministry of Justice
MoLG	:	Ministry of Local Government
MoLSA	:	Ministry of Labor and Social Affairs
MoPS	:	Ministry of Public Service
MRC	:	Medical Research Council
MSI	:	Marie Stopes International
MTCT	:	Mother-to-Child Transmission
NACWOLA	:	National Community of Women Living with HIV/AIDS
NADIC	:	National Documentation and Information Center
NCC	:	National Council for Children
NCPA	:	National Committee for the Prevention of AIDS
NCST	:	National Council of Science and Technology
NGEN <sup>+</sup>	:	National Guidance and Empowerment Network
NGOs	:	Non Governmental Organizations
NHRB	:	National Health Research Body
NOP	:	National Operational Plan
NORAD	:	Norwegian
NTCs	:	National Teachers' Colleges
ODA	:	Overseas Development Agency
PEARL	:	Program for Enhancing Adolescent Reproductive Life
PHA	:	People Living with HIV/AIDS
PHC	:	Primary Health Care
PLE	:	Primary Leaving Examination
PLI	:	Philly Lutaaya Initiative
PTC	:	Primary Teachers' Training Colleges
PTCs	:	Post Test Clubs
RAIN	:	Rakai AIDS Information Network
RDC	:	Resident District Commissioner
REACH	:	Reproductive, Educative and Community Health Project
RESCUER	:	Rural Extended Service for Care and Ultimate Emergency Relief
RH	:	Reproductive Health
SACCs	:	Sub-county AIDS Co-ordination Committees
SHEP	:	School Health Education Project
SIDA	:	Swedish International Development Agency
SOMARC	:	Social Marketing for Change
STD	:	Sexually Transmitted Disease
STIs	:	Sexually Transmitted Infections
SWOT	:	Strength, Weaknesses, Opportunities and Threats
TASO	:	The AIDS Support Organization

TB	:	Tuberculosis
TBAs	:	Traditional Birth Attendants
UAC	:	Uganda AIDS Commission
UACE	:	Uganda Advanced Certificate of Education
UBTS	:	Uganda Blood Transfusion Service
UCE	:	Uganda Certificate of Education
UGANET	:	Uganda Network on Law and Ethics
UNAIDS	:	United Nations Joint Program on AIDS
UNCST	:	Uganda National Council for Science and Technology
UNDP	:	United Nations Development Program
UNHCR	:	United Nations High Commission for Refugees
UNISE	:	Uganda National Institute for Special Education
UNFPA	:	United Nations Population Fund
UNICEF	:	United Nations Children Fund
UPE	:	Universal Primary Education
USAID	:	United States Aid for International Development
UVRI	:	Uganda Virus Research Institute
UWESO	:	Uganda Women Efforts to Save Orphans
UYNAS	:	Uganda Youth Network on AIDS and STDs
VCT	:	Voluntary HIV Counseling and Testing
VSO	:	Voluntary Service Overseas
WFP	:	World Food Program

## **Preamble**

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The Government of Uganda fully recognized that HIV/AIDS poses a real and serious threat to the socioeconomic life and development of the country. It further recognizes that the establishment of a strong HIV/AIDS information base and information sharing mechanism are very essential for enhancing HIV/AIDS prevention and control efforts at community, district, national and international level. The national AIDS Documentation and Information Center (NADIC) was therefore established in 1994 at the Uganda AIDS Commission (UAC) to address these concerns. Since then NADIC has established a library where different kinds of information on HIV/AIDS are collated, analyzed and disseminated to the local and international community.

As part of the strategy for availing the local and international community up-to-date and concise information on HIV/AIDS in Uganda, Government through the UAC initiated the development of a NADIC WEB Page containing a range of issues related to HIV/AIDS that can be easily accessed on the Internet.

A consultant was identified and contracted to collect, analyze and document the relevant information to serve as a basis for an informative website. The consultant was specifically charged with tasks of collecting up-to-date information on HIV/AIDS in Uganda basing on the guidelines and any other information relevant to the national response to HIV/AIDS; to synthesize and systematically organize and present the collected information; and to guide in developing the website.

This report has been developed with funding of US\$ 1,308 (equivalent to Uganda Shillings 1,700,000/-) from the Embassy of France in Uganda. The consultant is grateful to all government departments/institutions, international and local NGOs and funding agencies, and individuals that volunteered information for the developing the Report.

## 1.0 INTRODUCTION

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### 1.1 Background

Uganda covers a total area of 236,036 square kilometers, and is situated in Eastern Africa bordered by Sudan to the north, Kenya to the east, Tanzania and Rwanda to south and the Democratic Republic of Congo (former Zaire) to the west. It lies astride the equator with the minimum altitude of 620 meters and maximum of 5,110 meters above sea level, and has a landscape that generally consists of mountains, highlands, undulating plains, water lakes, rivers and marshland. Almost 25 per cent of the country's surface is water and rivers, the largest and longest being Lake Victoria and river Nile respectively (Winsbury, 1995).

Figure1: International and district boundaries of Uganda

Source: UNICEF Uganda, 1998

Uganda experiences tropical climate all year round with temperatures that rarely go below 15 degrees centigrade or above 30 degrees centigrade. The rainfall patterns vary across regions, and occurs in two seasons in most parts of the country. The areas in the lake Victoria basin and the mountainous regions of Uganda receive the highest amount of rainfall (Isingoma, 1996).

## 1.2 Uganda's Population Status

### 1.2.1 Demography

#### Population Size and Growth Rate

Uganda's projected population by mid-1998 is 21.0 million. About 51% are female with 43.5% of whom belonging to the 15 – 49 age group. The percentage of the population in the age group 0 – 9 (children) is 33.9%, 10 – 19 (early adolescence) is 24.1%, 10 - 24 (early and late adolescence) is 33.3%, 25 – 30 (young adults) is 12.3%. The percentage of population aged 15 – 64 is 47% and above 65 years is 3%. The percentage of urban and rural population is 14% and 86% respectively. Orphans (defined as a child with one or both parent(s) dead) account for about 7% of Uganda's population. Annual population growth rate (natural increase) is 2.7% and death per 1,000 population is 21 (Population Secretariat, 1998; Population Reference Bureau, 1998).

#### Life Expectancy

Life expectancy at birth is 40 for male and 41 for female (Population Reference Bureau, 1998). Low life expectancy is attributed to preventable diseases during prenatal, natal and post natal circumstances (20.4%), malaria (15.4%), pneumonia (10.5%), AIDS (9.1%), diarrhea (8.4%), low levels of nutrition/eating food with low basic nutrients, and poor water and sanitation facilities (MFPED, 1998).

## 1.3 Economic Status

### 1.3.1 Gross National and Domestic Product (GNP & GDP)

Uganda is one of the poorest countries in the world with a per capita gross national product (GNP) of about US \$ 300 (Population Reference Bureau, 1998). The gross domestic product (GDP) varies annually depending on the social, economic, political, health and environmental dynamics pertaining.

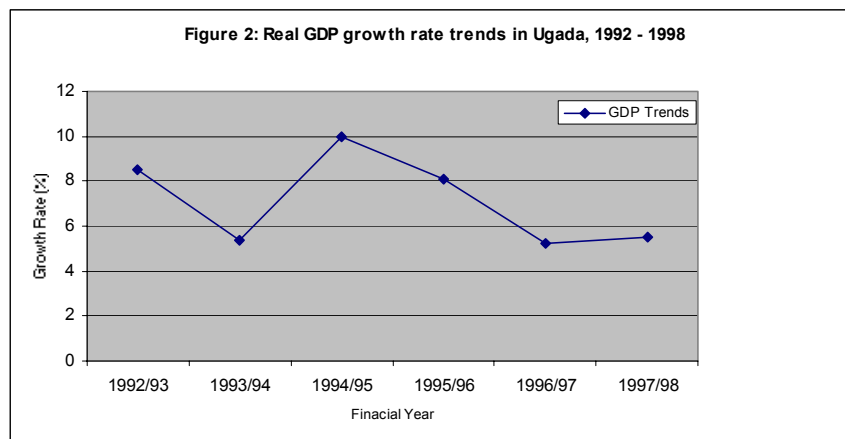


Figure 2 above shows that real GDP growth rate was highest in 1994/95 with 10% and lowest in 1996/1997 with 5.2%. However, the drop rate in real GDP was highest in 1993/94 (3.1%) and 1996/97 (2.9%). On average per capita GDP has grown at an average rate of 3% since 1987, but it is unlikely to substantially improve people's living standards in the short run given the 2.7% annual population growth rate (World Bank, 1996; Population Reference Bureau, 1998).

### Health and Education Share of GNP

The health and education share of GNP is about 2% and 15% respectively (MFPED, 1998).

#### 1.3.2 Economic Growth Rate

Since 1994, the construction, manufacturing, mining and quarrying, and of recent the transport and communication sectors of the economy have recorded higher growth rates compared to the agriculture, community services, electricity and water, and other sectors (MFPED, 1998). Accelerated growth in especially the agriculture and community service sectors have been partly hampered by environmental and health calamities such as *el-nino* rains and the AIDS epidemic respectively (Armstrong, 1995). It is projected that the number of persons with HIV/AIDS in Uganda would increase to at least 1.9 million by the end of 1998, with a majority being in the productive age group. A considerable proportion of whom will die of AIDS (World Bank, 1996; MFPED, 1998).

#### 1.3.3 Human Development Index

Available data indicates that Uganda's human development index is one of the lowest in the world.

- Life expectancy is 40 years for males and 41 years for females;
- Average literacy rate is 54% with only 14.8% of the population having completed senior four;
- Real gross domestic product per capita is less than US\$ 300;
- Life expectancy index is estimated at .25;
- GNP index is .21; and
- Human development index value is .328 (Population Reference Bureau, 1998; MFPED, 1998).

#### 1.3.4 Monthly Household and per Capita Expenditure

About 90% of Uganda's population live in rural areas and depend on agriculture to earn a living. Most of them are highly impoverished: with an annual income of less than US\$ 200. This population is less involved in the market than those who live in urban areas. The share of home-produced food is much higher for the poor and lower for the relatively rich mainly because a majority of the latter obtain most of the food from outside the family (World Bank, 1996). On average:

- Monthly expenditure per household is 86,358; and
- Monthly per capita consumption expenditure is 17,179.

However, monthly expenditure on successive surveys is 2 – 4 times higher for urban households and residents compared to rural ones (Third Monitoring Survey, 1996, cited in MFPED, 1998).

## 1.4 Health

### 1.4.1 Fertility, Contraception and Mortality

Based on the Demographic Health Survey Data (1995) and the Population Reference Bureau (1998), maternal and child health in Uganda is still poor. For example:

- Total fertility rate (TFR) is 6.9;
- Annual maternal mortality rate (MMR) is about 506 per 100,000 live births;
- Annual infant mortality rate (IMR) for under age 1 is 81 per 1,000 live births;
- Annual infant mortality rate (IMR) for under age 5 is about 174 per 1,000 live births;
- Percentage of women in the age group 15 – 19 giving birth each year is 20;
- The proportion of married women who use modern methods of contraception is 8%;
- The proportion of married women using all contraception methods is about 15%;
- Percentage of women who give birth with the direct assistance of health personnel 53%;
- Percentage of women who deliver at health facilities is 35.4%;
- The percentage of population that encounters stunted growth is 38%;
- The percentage of population that encounters wasted growth due to childhood malnutrition is about 5.3%; and
- The percentage of children under-five who are underweight is about 25%.

### 1.4.2 Hygiene and Sanitation

The standard of sanitation and hygiene in Uganda is poor and calls for rigorous people-centered efforts to improve people’s living environment and wellbeing, and reduce associated diseases. A sanitation assessment conducted in 1986 – 1988 showed that:

- The percentage of households in urban areas with toilet facilities is 40%;
- The percentage of households in rural areas with toilet facilities 10%;
- The percentage of households in urban areas in access to safe drinking water 45%;
- The percentage of households in rural areas in access to clean water is 12%; and
- The percentage of households within 15 minutes radius of drinking water is 11%.

Although the sanitation and hygiene standards are still low throughout the country, there has been considerable improved over the last ten years. Table 1 below shows that there was a considerable improvement in the sanitation status of Ugandans in 1995 compared to 1991. However, the quality of hygiene/sanitation and accessibility to health services, safe water, proper sanitation and toilet facilities vary across households and communities. Households with least access to toilet facilities and safe water are mostly found in the northern and northeastern parts of Uganda. According to the DHS (1995), about 20-30% of the households in these areas had pit latrines, and households with poor toilet facilities and access to safe water recorded high prevalence of sanitation related diseases such as diarrhea (Kiyonga, 1998).

Table 1: Sanitation Status of Uganda's Population, 1991 and 1995

Hygiene and Sanitation Indicator	Percentage of Population	
	1991	1995
Access to health facilities	49%	49%

Access to safe water	26%	48%
15 minutes walk to safe water sources	-	11%
Access to proper sanitation	64%	-
Household access to safe toilet facilities	71.4%	80%

Source: Population and Development Newsletter, 1998; Demographic Health Survey, 1995

According to Kiyonga (1998), proper disposal of feces and washing hands with clean water after excretion/visiting the toilet and before handling foods could significantly reduce sanitation-related diseases and mortality possibly by 65%. As a result, the ministry of health is preparing a comprehensive health education program to deal with poor sanitation and hygiene, and legal provisions to deal with households, practitioners and authorities that do not adopt proper sanitation and hygiene measures.

#### 1.4.3 Health Personnel

According to the Health Services Inventory (1996), the major implementers of health services in Uganda are Government (central and local), NGOs and the private sector. Government is responsible for providing 40% of the curative health services while the remaining 60% are provided by NGOs and the private sector.

The main providers of health services are doctors, medical assistants, registered nurses, midwives, orthopedic and anesthetic assistants, radiographers, dispensers, lab technologists, technicians and assistants, public health nurses (health visitors), health inspectors and assistants, dentists, community based distribution agents and counselors, traditional birth attendants, and traditional healers.

Although a number of health service providers have been trained, a few of them work in rural areas where a majority of Uganda's population live. As a result, more than 40% of the population obtain services from untrained health personnel and, 47% of the women give birth without the assistance of trained personnel (Demographic Health Survey Report, 1995).

#### 1.4.4 Population per Health personnel

Although there is an improvement across a range of health indicators, the population per health personnel in Uganda is very low. Recent data shows that:

- Population per doctor is 19,759;
- Population per nurse is 4,730; and
- Population of women of child bearing age (15 – 49) per midwife is 1,700 (Inventory of Health Services, 1996).

#### 1.4.5 Health Facilities

According to the Inventory of Health Services (1996), there are 1,505 health facilities in Uganda. These include hospitals, health centers, dispensary maternity units, dispensaries, sub dispensaries, maternity units, leprosy units, refugee units and aid posts.<sup>1</sup> Of these, 1,085

<sup>1</sup> A hospital is where comprehensive health care is provided and services of doctors are always available for inpatient and outpatients. A health center is where elementary health care is provided to in and outpatients by medical assistants, and has occasional services of a doctor and home visits conducted by health visitors. A dispensary maternity unit is where ordinary health care and midwifery service is provided to outpatients by a medical assistant and midwives respectively. A dispensary is where elementary health services are provided to in and outpatient by a medical assistant or a lower grade auxiliary staff, while a sub-dispensary offer elementary health services to outpatients and is delivered by a trained auxiliary staff. A maternity unit is where midwifery services are provided to in and outpatients by a qualified midwife, while an aid post offers elementary health care to outpatients and is provided occasionally by health personnel from a "parent" health center/unit. A leprosy unit offers comprehensive leprosy services to in and outpatients and is usually provided by specialists in leprosy, while a refugee unit offers

are for the government, 383 for NGOs and 37 belong to private practitioners. Most of the hospitals (over 60%) are located in urban/town areas, health centers are situated near trading centers and private clinics are located within or close to urban areas/trading centers; implying that a vast majority of rural residents do not access adequate health services. On average, about 27% of the population live within a radius of 5 kilometers of a health facility. However, the distance from households to the health facility is considerably long particularly for people living in the north and northeastern parts of Uganda (see *Table 1 in appendix*).

#### 1.4.6 Utilization of Health Facilities

According to the Inventory of Health Services (1996), the utilization of health facilities in Uganda varies according to location and distance. Of the 45 districts in Uganda, Mbale and Kampala have the highest average number of outpatients per health facility per day with 90 and 80 respectively, while Nebbi and Kalangala have the lowest average with an average of 4 and 11 out patients per health facility per day. The large number of outpatients at each health facility compared to the usually small number of health service providers, equipment and consumables/drugs implies that health facilities are over stretched.

In addition, more than 60% of beds for in-patients are found in government health facilities. However, bed utilization in a number of these health facilities is low compared to the health facilities that belong to NGOs and the private practitioners. Bed capacity utilization in the latter is greater than the former by about 50% partly due to poor pay of the government health staff leading to low morale, inadequate health equipment, dilapidated health facilities and shortage of drugs (White Paper, 1993).

Studies show that more than 50% of the population seek care outside the modern health care system. Of those who seek care from the modern health care system, 40% obtain services from government health facilities, 35% from private clinics and 25% from NGOs (White Paper on Health, 1993). The percentage of people who seek service from the government health facilities is likely to drop further as cost sharing in government health facilities picks up (Kiyonga, 1998).

#### 1.4.7 Population per Health Facility

According to the Uganda Social Sector Strategy Report (1997), the estimated population per health facility in Uganda is 13,954. The ratios per district drop or increase depending on the population, number and geographical distribution of health facilities in each area. For example, Kalangala district has the lowest population per health facility (2,571), while Kisoro district has the highest (25,778). The high population per health facility in some areas is due to the uneven distribution of health facilities relative to the population of a given area.

#### 1.4.8 Population per Hospital Bed

The number of hospital beds per population in Uganda is low primarily because the expansion of the health infrastructure has not been proportionate to population growth rate. According to the Inventory of Health Services (1996), the hospital beds per population in Uganda is averaged at about 880. Kampala district has the lowest bed population ratio of 1:240 because it has many health facilities compared to Ntungamo and Kalangala with 1:4,068 and 2,000 respectively. Overall, districts that are largely urban and semi-urban have a small population per bed ratio compared to the largely rural ones (see *appendix3*).

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elementary health care to refugees in a refugee settlement (Definitions adopted from: White Paper on Health policy, 1993; Inventory of health Services, 1996).

### 1.4.9 Top Ten Diseases

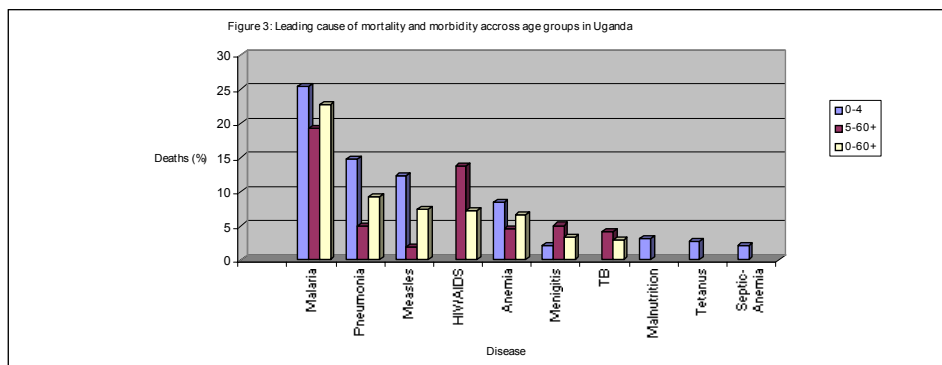
According to the Population and Housing Census (1991) and Demographic Health Survey (1995), infant mortality rate and under-five mortality rate dropped from 122 - 97 and 203 -147 per 1,000 live births from 1991 to 1995 respectively, while death per 1,000 population dropped from 50 - 35 during the same period. However, recent data shows that IMR and death per 1,000 population has further dropped to 81 per 1,000 live births and 21 respectively (Population Reference Bureau, 1998).

The cause of mortality and morbidity varies with age groups. Table 2 and Figure 3 below show that the leading cause of mortality and morbidity among infants, under-five children, adolescents and adults is malaria and the least is septic-anemia. Ranking for each of these diseases as the cause of mortality and morbidity varies with age groups. Among those aged above 5 years, HIV/AIDS is the second leading cause of death, and would most probably rank first as a cause of death in this age group by 2003 (UNAIDS/WHO Global Report on HIV/AIDS Epidemic, 1998).

Table 2: Leading cause of mortality and morbidity across age groups in Uganda

Disease	Under-5 Children	Above 5 years	All Age Groups
Malaria	25.4%	19.2%	22.8%
Pneumonia	14.7%	4.9%	9.2%
Measles	12.4%	2.0%	7.5%
HIV/AIDS	-	13.8%	7.3%
Anemia	8.4%	4.5%	6.6%
Meningitis	2.1%	5.1%	3.4%
Tuberculosis	-	4.1	2.9
Malnutrition	3.1	-	-
Tetanus	2.8	-	-
Septic-Anemia	2.1	-	-

Note: The dash appearing against some diseases and age groups implies that absolute number of cases was missing at the time of computation.



Source: Ministry of Health Mission Statement, 1998

Poor hygiene, sanitation and nutritional practices; low access to safe water and maternal and child care services; inadequate knowledge on risk-reduction health and sexual behaviors are the main causes of these diseases in Uganda (Kiyonga, 1998).

## 1.5 **Education**

### 1.5.1 Education System

The education system of Uganda consists of pre-school, primary, secondary, tertiary and university education. Pre-school educational institutions are privately owned and run on commercial or voluntary basis by individuals/groups. The ministry of education is in the

process of developing a syllabus, setting the enrollment criteria, training teachers and defining the duration for pre-school education.

The school system consists of primary education which lasts seven years and leading to the award of primary leaving examinations certificate, lower secondary education which last four years leading to the Uganda Certificate of Education, and higher secondary which lasts two years leading to the Uganda Advanced Certificate of Education. In addition, there are options for pursuing academic and technical/vocational careers at each education level. The different government ministries such as education, agriculture and animal industry, cooperatives and health have training colleges that enroll students who have completed primary and lower secondary education (UCE). There are also options for pursuing university and tertiary education for students who complete successfully upper secondary education (UACE) (Education Census, 1998).

### 1.5.2 Number and Type of Educational Institutions

According to the Education Census (1996), about 90% of the primary schools are government aided and 10% are private. At secondary level, a majority of schools (76%) are government aided and 24% are private. Table 3 below shows the distribution of government and private educational institutions at different levels.

Table 3: Type and number of educational institutions in Uganda

Type of Institution	Ownership			Qualification
	Private	Government	Total	
Primary schools	897	8326	9,223	PLE
Secondary schools	157	493	650	UCE & UACE
Post-ordinary institutes	-	33	33	Certificate
Technical colleges	-	5	5	Ordinary Diploma
Polytechnic	-	1	1	Ordinary & Higher Diploma
PTCs	-	64	64	Teacher training Certificate
National Teachers' Colleges	-	10	10	Diploma in Education
Institute of Special Education	-	1	1	Certificate and Diploma
ITEK	-	1	1	Diploma & Degree
Commercial Colleges	-	5	5	Certificates & Diploma
Universities	2	7	9	Diploma & Degree

Source: Education Census, 1996

The polytechnic and technical colleges train students in different technical fields leading to the award of certificates, and ordinary and higher diplomas. Teacher training colleges including Institute of Teacher Education Kyambogo (ITEK) trains teachers in a range of arts and science disciplines leading to the award of certificates, diplomas and degrees. UNISE trains teachers of children with disabilities and awards certificates and diplomas. National Colleges of Commerce offer training in a range of business disciplines leading to the award of certificates and diplomas. These colleges have been taken over by the Makerere University Business School. Universities offer a range of courses leading to the award of diplomas and degrees.

### 1.5.3 Enrollment in Primary Schools

The total enrollment in primary schools is 3,129,379. Of these, 1,682,633 (54%) are boys and 1,446,746 (46%) are girls. Enrollment systematically drops as pupils/students advance to secondary and higher education, as does the number of girls compared to boys. A census conducted by ministry of education (1996) shows that 60% of the children who are of school age get access to education, 34% reach primary seven, 9% complete secondary and only 4.4% go through tertiary institutions. More specifically, girls account for about 26% of the

pupils enrolled in primary one, 18% in primary two, 16% in primary three, 14% in primary four, 11% in primary five, 9% in primary six and 6% in primary seven (Education Census, 1996).

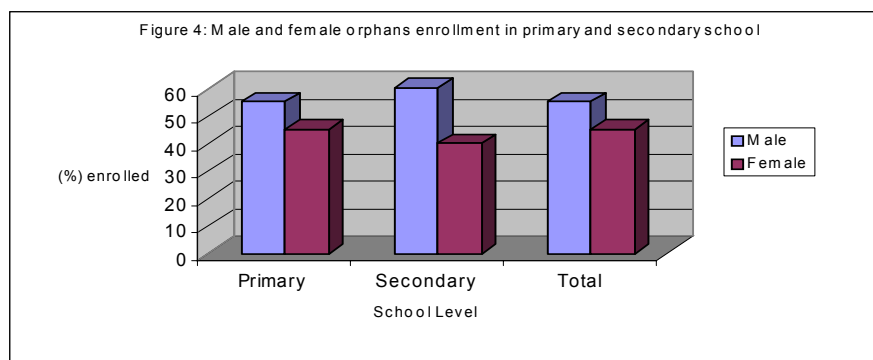
This implies that apart from the small number of girls enrolled in the education mainstream, a majority of them drop out as they advance in class, grade and level due lack of school fees, pregnancies and early marriages. Lack of school fees accounts for about 61% of the drop out at primary and secondary school level, while early pregnancies and marriages are responsible for 13% of girls who drop out at primary level (Education Census, 1996; Kayita & Kyakulaga, 1997). Free primary education for four children per family (Universal Primary Education) was introduced in 1997 to address inequities in *inter alia* enrollment and retention of pupils in primary school. The impact of UPE remains to be seen.

#### 1.5.4 Proportion of Orphans Enrolled

It is estimated that the population of orphans in Uganda is close to 2 million. Of these, 369,448 were enrolled in primary and secondary school by the end of 1996: constituting about 17% of the overall enrollment in primary and secondary education (Education Census, 1996). Figure 4 and Table 5 show that a majority of the orphans enrolled in primary and secondary schools are males.

Table 4: Orphans Enrollment in primary and secondary school by sex

Education Level	Orphans Enrollment				Total N
	Male		Female		
	n	(%)	n	(%)	
Enrollment in Primary	193,308	(55)	158,624	(45)	351,932
Enrollment in Secondary	10,440	(60)	7,076	(40)	17,516
Total	203,748	(55)	165,700	(45)	369,448



Source: Education Census, 1996

The districts of Rakai, Mpigi, Masaka, Mbarara, Iganga and Kitgum account for the highest orphan population (between 14,374 - 21,893) enrolled in primary and secondary school. The large orphan population enrolled in most schools in Kitgum and other districts in Northern Uganda is attributed to war and of recent AIDS, while in Rakai, Mpigi, Masaka, Mabarara, Iganga and other districts in Southern Uganda is primarily due to the AIDS epidemic (Education Census, 1996; Kayita & Kyakulaga, 1997). A study conducted among 100 orphans and 100 non-orphans enrolled in ten primary schools in Kampala district showed that AIDS accounts for 70 percent of parental deaths for the orphan sample (Kiirya, 1996). By interpretation, AIDS orphans may account for 70% of the orphan population enrolled in primary and secondary school if all factors were held constant.

The ministry of education has been extending bursaries to orphans, but these bursaries are usually meager compared to their educational needs and often delay. As a result, there is some degree of apprehension among a number of head teachers to admit orphans. However, with the introduction of Universal Primary Education, enrollment of orphans in primary schools has significantly increased (Ministry of Education and Sports, 1998).

#### 1.5.5 The Proportion of Pupils to Teachers

According to the Education Census (1996), there are 81,564 primary teachers in Uganda. Of these, 59,747 (73%) are trained and 21,817 (27%) are untrained. The highest qualification for a majority of the untrained primary school teachers (88%) is Uganda Certificate of Education (UCE) and below. Of the trained teachers, 37,996 (64%) are male and 21,751 (32.4%) are female, while among the untrained ones, 16,014 (73.4%) are male and 5,803 (26.6%) are female.

At primary level, the student population per teacher (trained and untrained) is 38:1, while student population per trained teacher is 52:1. However, implementation of the universal primary education scheme has resulted to increased enrollment and proportion of pupils per teacher, as does the number of pupils per class and school

Table 5: Number of teachers by grade and training

Trained Teachers		Untrained Teachers	
Grade	Number	Grade	Number
I and II	5,002	UCE and Below	19,322
III and IV	48,576	UACE	2,300
V	5,784	Graduates	195
Graduates	385		
Total	59,747	Total	21,817

Source: Education Census, 1996

#### 1.5.6 Illiteracy Rate

According to the Population Census (1991), the population of Ugandans aged above 10 is 11,003,860 and 91% of these live in rural areas. The illiteracy rate is high in rural areas (50%), and among females (55%) compared to urban areas and males (37%). High illiteracy rate among females is attributed to the fact that a majority of parents are more keen to send boys to school compared to girls because boys are generally perceived to be of more assistance to the family when they are educated.

#### 1.5.7 Health-Related Programs

The School Health Education Project (SHEP) was initiated in the Ministry of Education with support from BECCAD program of UNICEF. It was meant to provide HIV/STD/AIDS-related information to in-school young people with a view to assist them make positive health choices and influence change in behavior in the short run, and influence reduction in infant mortality and morbidity and STD/HIV infection among children aged 6-19.

Through this project health education materials for primary school children were developed and distributed to schools. However, funding for this project ended in 1994 before achieving the overall objective of integration of health education in primary, secondary, tertiary and university curriculum. A part from SHEP, there has not been any other program that specifically addresses HIV/AIDS/STDs in the education sector (Life Skills Manual, 1996).

## **1.6 Public Administration**

### **1.6.1 System of Administration**

Uganda's public administration system is partly centralized and decentralized. The central and local governments have non-conflicting powers and functions exercised in their areas of jurisdiction. The system of central government is based on the Parliament as the national legislative body and the different government ministries as administration units, while the system of local government is based on the district council and departments as the administration unit. Below the district, there are lower local governments and administrative units (Constitution of Uganda, 1995; Local Government Act, 1997).

Local governments in a rural area include the district councils, sub county councils in the districts, and a city council and city division councils in the city, municipal council and municipal division councils in the municipality, and town councils in towns. All these are corporate bodies with perpetual succession, a common seal and powers to sue or be sued in their corporate name. The city is equivalent to a district and exercises all powers and functions conferred upon a district council, while a division is equivalent to a sub county and exercises all powers conferred upon sub county councils Local Government Act (1997).

### **1.6.2 Uganda's Administrative Arrangement**

#### **Central Government**

The central government includes Parliament as the legislative body, Cabinet as the executive and the different ministries that act as national administrative units. Parliament comprises of 279 representatives and the Speaker presides over the sessions, while Cabinet comprises of 60 ministers who are appointed by the President upon the approval of parliament. The cabinet is mostly drawn among the members of the National Assembly and is headed by the Prime Minister who also acts as head of government business (Ogoso-Opolot, 1998; Constitution of Uganda, 1995).

#### **District/Urban local Governments**

The district/urban local governments include district/city councils, and are 45 countrywide. Each district/city council is comprised of a directly elected chairperson, councilor representing a sub-county or its equivalent in a city (division), female and male councilor representing youths in the district, and female and male councilor representing persons with disabilities. Every district has an executive committee (district cabinet) consisting of the chairperson, vice chairperson and five councilors (who are appointed as secretaries) and a number of subcommittees/commissions appointed by the district council from within the council members who are not on the executive committee (The Local Governments Act, 1997).

In addition, each district/urban local government has a chief administrative officer (CAO) and resident district commissioner (RDC) appointed by the district service commission and the

president respectively. The CAO is the head of administration and accounting officer of the district local council, RDC is senior civil servant representing the president and the central government in the district, and the chairman is the political head in the district (The Local Governments Act, 1997).

### Lower Local Governments

Lower Local Governments include councils in sub-county/city division, municipal, municipal division and town councils totaling to 891 (Local Governments, 1998). Each of these is comprised of a directly elected chairperson, councilor representing each parish or its equivalent in a city/municipality/town, female and male councilor representing youths in the sub-county/division/municipal/town council, and female and male councilor representing persons with disabilities in that area of jurisdiction. Every sub-county or area of its equivalent has an executive committee (sub-county cabinet) and sub committees whose representation and appointment arrangement is similar to the way it is done at district level. The sub county chief is the head of administration and accounting officer for the sub-county council administrative units (The Local Governments Act, 1997).

### Local Administrative Units

The local administrative units include a county, parish and village in rural areas, and parish/ward and village in urban areas. There are 164 and 4,341 administrative units at county and parish levels respectively<sup>2</sup>, while the village administrative units are more than 21,000 through the country (Local Governments, 1998). Each of these has a council comprised of different cadres of people. The county administrative council consists of all members of the sub-county executive committee in the county, parish councils comprise of members of the village executive committee, and village councils are made up of all village residents aged 18 and above (The Local Governments Act, 1997).

Each county and city/municipal division/town council has an assistant chief administrative officer (ACAO) and town clerk respectively appointed by the district service commission. The ACAO is responsible for the county administrative unit, a town clerk for the urban/municipal/town council administrative unit, a deputy town clerk responsible for city/municipal division council administrative units. The ACAO and town clerk are the officers in charge of administration and accounts for the county and city/municipal divisions/town council administrative units respectively (The Local Governments Act, 1997).

The government of Uganda recognizes that through this administrative structure, activities for preventing the spread of HIV and mitigating its effect can be initiated/planned, implemented, supervised and monitored more effectively. It also ensures direct participation and involvement of the community leadership and members. In an effort to increase community response to the HIV/AIDS epidemic, the government has deliberately shifted the loci of planning and implementing programs, including HIV/AIDS ones, to district and lower local government councils (STI Project Document, 1998; The Local Governments Act, 1997).

#### 1.6.3 Administrative Powers

The central government is the highest national authority and has legislative, executive and judicial powers that are exercised through various central government organs. Local Councils are the highest political authority within the area of jurisdiction of a local government and

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<sup>2</sup> This total includes all newly created district and lower local governments, and administrative units in Uganda.

have legislative and executive powers that are exercised at district, sub-county and lower administrative units in accordance with the Constitution and Local Government Act (Constitution of Uganda, 1995; Local Government Act, 1997).

### Parliament

Parliament is responsible for:

- Enacting of laws;
- Scrutinizing the consistency of local government bills and ordinances with the Constitution; and
- Deliberating on all policy issues that affect the country.

### District Councils

District Local Government Councils are responsible for:

- Enactment of laws and planning in their areas of jurisdiction;
- Provision of services as deemed fit;
- Protect contributions and other laws of the country;
- Promote democratic governance and ensure implementation and compliance with government policy; and
- Monitor services provided by central government and the performance of persons employed to provide them in their areas of jurisdiction; and
- Give guidance to lower local government councils (The Local Governments Act, 1997).

### Lower Local Government Councils

Lower Local Government Councils are responsible for:

- Enactment of laws and planning within their areas of jurisdiction;
- Provision of services as deemed necessary;
- Protect contributions and other laws of the country;
- Promote democratic governance and ensure implementation and compliance with government policy;
- Monitor services provided by the central government or the district local government, the performance of persons employed to provide them in their areas of jurisdiction; and
- Give guidance to parish and village councils (The Local Governments Act, 1997).

### Administrative Unit Councils

The administrative unit councils are responsible for:

- Drawing the attention of the district chairperson, CAO and ACAO at county level or chiefs at the parish level to any matter that is of interest;
- Advise the members of parliament;
- Solve or resolve problems/disputes referred by the relevant councils;
- Monitoring the delivery of services;
- Maintenance of law/order/security in their areas of jurisdiction; and

- Carrying out functions assigned by the higher local government councils (The Local Governments Act, 1997).

### District Administrative Structure

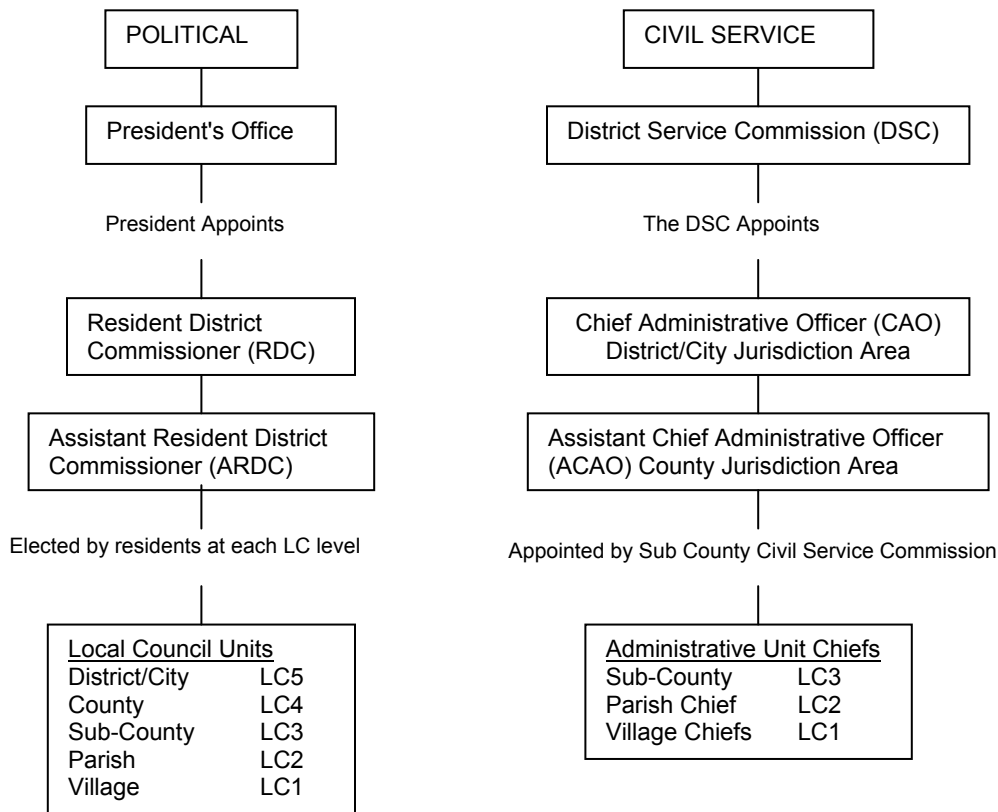


Figure 5: District Administrative Structure. Adapted from Barton and Gimono and modified accordingly

### 1.6.4 Executive Functions

#### Cabinet

Cabinet discusses various policy issues that arise from the different government ministries before forwarding them to Parliament for approval. Through different government ministries, the cabinet:

- Prepares and executes the national budget;
- Establishes national priority program areas;
- Provides grants to local governments;
- Approves local government borrowing where loans exceed 25% of locally raised funds;
- Prepares and executes the national censuses and statistics, national development plan, and issues planning guidelines to district councils;

As regards personnel and institutional development, cabinet:

- Establishes terms and conditions of service, and seconds personnel requested by district and urban councils;

- Approves members of the district service commission;
- Establishes standards and guidelines for district service commissions;
- Listens to and determines grievances of persons appointed by the district service commissions;
- Provides technical advice/supervision/training to local governments;
- Fosters elimination of corruption, abuse of office and adherence to the rule of law and principles of natural justice and good governance.

As regards service delivery, the cabinet:

- Takes charge of arms and defense;
- The judiciary;
- Foreign relations and external trade;
- Taxation and taxation policy;
- Banks and banking;
- Regional referral hospitals;
- Land and natural resources;
- National parks and antiquities;
- Epidemics and disasters;
- Pilot projects; and
- National elections, standards and policies (MoLG, 1998).

#### District Executive Committees (DECs)

The District Executive Committees:

- Initiate and formulate policies for approval by the council;
- Oversee implementation of all policies;
- Monitor and coordinate activities of NGOs;
- Monitor and implement programs of the council and take remedial action where necessary; and
- Recommend persons to the Council for appointment to the district commissions.

#### Lower Local Government Executive Committees

The functions of lower local government executive committees are more or less the same those for the district executive committees. These include to:

- Initiate and formulate local policies for approval by the relevant councils and oversee their implementation;
- Assist in maintenance of law, order and security;
- Monitor or where necessary take action on the implementation of programs for the council;
- Receive and solve problems/disputes forwarded to it by lower local councils;
- Consider and evaluate the performance of the council against the approved work plans and programs at the end each financial year;
- Initiate and support self help projects through mobilizing human and material assistance;
- Monitor administrative details in their areas and report to the district council;
- Supervise projects and other activities undertaken by the higher governments and NGOs; and

- Serve as the communication channel between the central government, district councils and the people in the area.

### Parish and Village Executive Committees

The functions of parish and village executive committees are to:

- Oversee implementation of policies and decisions made by its council;
- Initiate and support self help projects through mobilizing human and material assistance;
- Vet and recommend persons who wish to join the army/police/prison/local defense service;
- Monitor administrative details and report to higher local governments;
- Oversee projects and activities undertaken by governmental and non-governmental organizations; and
- Maintain law, order and security in their areas of jurisdiction.

The government of Uganda recognizes that through this administrative structure, activities for preventing the spread of HIV and mitigating its effect can be initiated/planned, implemented, supervised and monitored more effectively. It also ensures direct participation and involvement of the community leadership and members. In an effort to increase community response to the HIV/AIDS epidemic, the government has deliberately shifted the loci of planning and implementing programs, including HIV/AIDS ones, to district and lower local government councils (STI Project Document, 1998; The Local Governments Act, 1997).

## **1.7 Agriculture**

### **1.7.1 Agricultural Systems**

Various communities in Uganda have adopted different agricultural systems and methods for their livelihood. The diversity in agricultural systems and methods across communities is due to the influence of topography, climatic conditions, traditions and customs on land tenure, superstition, and socioeconomic place of agriculture in the each household and community. These also bear influence on the type and quantity of crops grown, land utilization and productivity at household and community level. According to World Bank (1995), about 90% of the people in Uganda are absorbed in agriculture. Of these, a large proportion is involved in crop farming while a few are involved in pastoral farming.

The local farming systems include:

- The Teso system common in the North Eastern parts of Uganda, and characterized by pastoral and crop farming with millet and cotton as the main crops;
- The Banana-Robusta coffee system common in the area around Lake Victoria, and involved in cultivation of cash crops alongside food crops (e.g. bananas, coffee, potatoes and maize);
- The Northern system in which cultivation of cotton, millet, sorghum, cassava, simsim and ground nuts is common;
- The West Nile system practiced by the Alur, Madi, Lugbara, etc., and characterized by cultivation of cotton, tobacco, coffee, cassava, finger millet, sorghum, simsim and peas;

- The Mountain system practiced in Kigezi, Rwenzori, Bugishu and Sebei, and characterized by cultivation of tea, sugar, Arabic coffee, Irish potatoes and Tobacco; and
- The pastoral system particularly practiced by the Karimajong and Bahima, and characterized by livestock keeping and cultivation of drought resistant crops such as sorghum and bulrush millet.

Communities that have adopted each of these agricultural systems have been affected differently by the HIV/AIDS epidemic. For example, communities that are involved in cultivation of crops that require a lot of labor force and time such as finger millet, sorghum, cotton tend to leave them over grow particularly if they have an AIDS patient in the household to care for (Barnett & Blaikie, 1992'; Sekatawa & Kiirya, 1997).

### 1.7.2 Agricultural Economy

Agriculture has remained the major sector in Uganda's economy. It accounts for 42.5% of the GDP, generates 97% of the export earnings, employs 83% of the labor force (MFED, 1998), and provides raw materials for a number of manufacturing and processing industries in Uganda (World Bank, 1995). Crops contribute 84% to annual GDP, while animal products, fisheries and forestry contribute only 13%, 1% and 2% respectively (MFED, 1998). A considerable proportion of the population cultivates food crops such as bananas, finger millet, sorghum, maize, cassava, sweet potatoes, beans and groundnuts, while the most important cash crops are coffee, cotton, sugar and tea (MAAIF, 1998).

The total livestock in Uganda is about 12.8 million. Of these, 42% is cattle, 7.6% is sheep, 46% are goats, and 4% are pigs. In addition, dairy and beef farming is carried out in a few areas and on specialized farms, while fishing is done mainly in lakes Victoria, Kyoga, Albert, George, and river Nile (MFED, 1998). However, recent studies suggest that livestock farming is declining in favor of crop farming, meanwhile, there is a tendency towards integration of livestock and crop farming in a number of communities that were predominantly pastoral. And fish catch in 1997 was about 218,680 tones, but is expected to consistently drop in future due to the water hyacinth (MFED, 1998).

### 1.7.3 Agriculture and AIDS

Uganda's population is essentially rural and poor thus its ability to cultivate food enough for the household is threatened. Therefore, even in normal times, a large proportion of Uganda's population encounter inadequate diet, and the per capita calorie intake for a majority of Ugandans is below the minimum nutritional standards (MFED, 1998). With the advent of the AIDS pandemic, an additional threat has been exerted to the already poor food production levels and nutritional situation of PHAs, their families/ relatives, and the community as whole.

The negative effects of the epidemic are already being felt in the economy particularly in the agriculture sector which is primarily dependent on human labor for production. According to Barnett and Blaikie (1992), the AIDS epidemic has already made the agriculture sector inherently fragile through reducing the labor force availability on rural farms and plantations and food supplies in rural areas, and changing the patterns of labor use.

### 1.7.4 Agricultural Personnel and AIDS prevention

The Agriculture sector falls under the ministry of agriculture, animal industry and fisheries (MAIAF). Apart from the administrative staff that includes the minister as the political head and permanent secretary under secretaries and commissioners as heads of civil servants, the ministry has a wide range of field staff. These include researchers, agricultural extension

staff and field extension agents. Researchers disseminate the research findings and field extension workers teach community members modern principles and practices essential for increasing agricultural production. Field extension workers also play an important role in educating the public about HIV/AIDS, improved nutrition, and poverty reduction techniques.

#### 1.7.5 HIV-related programs

The MAAIF has initiated an AIDS control program whose overall objective is to strengthen AIDS education, promote nutrition standards for PHAs and their families, and reduce poverty through establishing profitable agro-enterprises which are energy and time saving so that they are better equipped to cope with the epidemic.

The program is being piloted in the districts of Arua, Lira, Gulu, Tororo, Jinja, Mukono, Mpigi, Rakai, Masaka, Kabale, Mbarara, Kabarole and Mbale. In order to provide general information on facts about nutrition and care for PHAs and the affected families, the program developed a book on nutrition and HIV/AIDS for field extension agents. It has also developed a book on the feeding guidelines for PHAs for purposes of guiding field extension agents during the sensitization seminars and the public in knowing how to feed (importance of proper nutrition) when HIV infected.

### 1.8 **Transport and Communication**

#### 1.8.1 Transport

The main mode of transportation in Uganda is by road, rail, water and air. However, a vast part of Uganda's countryside is accessed through road transport. The road transport network consists of bitumen roads and high quality gravel roads linking the city with most of the major towns, and graded roads linking a number of villages to the major towns. Most of them are usable throughout the year. Along the bitumen, gravel and graded roads are trading posts and centers with population concentrations and activities that are similar to some of those undertaken in urban areas (MFED, 1998).

Railway transport is the main mode of transportation for bulky imports and exports into Uganda from the ports of Mombasa in Kenya and Tanga in Tanzania. It also operates passenger and freight services from Kampala to all major towns along Pakwach and Kasese railway line. Uganda Railways Corporation is the sole proprietor of railway services in the country including marine transport on Lake Victoria (MFED, 1998).

Marine transport includes large steamers, ferries, boats and canoes. Large steamers and ferries are operated by Uganda Railways Corporation, and usually carry passenger and cargo between Port Bell and Kisumu in Kenya and Mwanza and Musoma in Tanzania.

Uganda has one international airport and eleven airstrips located in different parts of the country: a few of them are non-operational. Apart from Uganda Airlines, several airlines operate in the country. Notable among these is Sabena Airlines, British Airways, Air France, Gulf Air, Ethiopian Airways, Air Tanzania, Kenya Airways, Alliance Air and Egypt Air. These have linked Uganda to the rest of the world through air travel (MFED, 1998).

#### 1.8.2 Communication

The major means of communication in Uganda is through mass media and posts and telecommunication. Mass media includes radio, television and newspapers and is run by the

Government and private sector. Of these, radios reach the largest population. Rural residents account for over 60% of population that listen to radios while urban residents are the major television and newspaper users (Media Council, 1998).

### Media Sector

Since 1995, the communication sector has expanded greatly. Apart from Radio Uganda and Uganda Television which were established by government after independence, there are at the moment seven F.M radio stations, five television stations and over 15 newspaper agencies that are privately owned throughout Uganda. Examples of F.M radio stations include Central Broadcasting Service, Capital Radio, Radio Freedom, Radio Maria, Star Radio, Sanyu Radio, Radio One, Top Radio, Radio Toro, Radio Paidha, Radio Simba and the British Broadcasting Corporation and Canal France International Radio. Private Televisions are Sanyu Television, Light Television and Multi-choice Television Canal France International Television. Newspapers include The East African, The Monitor, The New Vision, The Crusader, The People, The Market Place, The Financial Times, The Financial Post, Njuba Times, Straight Talk, Young Talk, etc. These media often carry messages and articles that are related to the HIV/AIDS epidemic and have contributed to the increase in awareness on the epidemic (Media Council, 1998).

### Post and Telecommunication Sector

The post and telecommunication sector was, until 1995, exclusively in the hands of Uganda Posts and Telecommunication Services. It owns and operates a network of post and sub-post offices located in all major towns and trading centers in the country. However, following the implementation of the privatization policy, private investors have been attracted in this sector. In respect to the posts sector, the private investors include DHL, TNT, World Express, Yellow Pages, etc., while the investors in the telecommunication sector include MTN, Celtel Cellular, and Starcom Communications. Liberalization of posts and telecommunications services has resulted to a general improvement in communication and exchange of information on a range of issues within and outside Uganda (MFED, 1998).

A number of individuals, research institutions, NGOs and government departments have established WEB sites and E-mail services via the internet through which the local and international public accesses information on a range of issues including HIV/AIDS. POPLINE and MEDLINE are online data bases based in the United States of America only accessible at the Institute of Statistics and Applied Economics and Faculty of Medicine, Makerere University respectively. Joint Clinical Research center has also introduced a Help Line offering free phone-in services to the public on HIV/AIDS Counseling (Sekatawa & Kiirya, 1997).

Nevertheless, use of help lines and the Internet as means for accessing and exchanging information, particularly on HIV/AIDS, is still very low in Uganda. This is largely because these services are not accessible and affordable by the majority of people. Further exploitation of this sector is still needed in order to ensure easy access and exchange of HIV/AIDS information by the local and international users.

## 2.0 HIV/AIDS EPIDEMIOLOGICAL SITUATION

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### 2.1 HIV/STD Surveillance

The concern over the HIV/AIDS epidemic in the world generally and in Uganda particularly stems primarily from its unique features. It is one of the current epidemics whose principal route of transmission is through sexual contact. Owing to this feature, it mainly affects the sexually active population. Thus, sexual activity is the main defining risk factor for the variation of its incidence and prevalence across sex, geographical location, culture and other socioeconomic antecedents. Those infected often remain asymptomatic for a long period before they develop full-blown AIDS and can infect others and re-infect themselves. Moreover, HIV/AIDS has a wide set of symptoms, manifests itself in ways that bear close resemblance to other diseases, and can only be confirmed by a laboratory HIV test (Sekatawa & Kiirya, 1997).

Figure 6: Distribution of old and proposed HIV testing sites in Uganda

Since the first AIDS cases were reported in 1982, innovation of strategies for monitoring the dynamics of the AIDS epidemic relative to individual sexual behavior has preoccupied epidemiological research in Uganda. A wide range of intervention strategies that aim at preventing HIV transmission, providing care and support of people with HIV/AIDS, and building national and community capacity to deal with the HIV/AIDS epidemic have been instituted. Most important has been the establishment of a number sentinel surveillance sites for monitoring HIV transmission and progress of the epidemic, and population surveys on HIV/AIDS undertaken in different parts of the country. By 1997, sentinel surveillance sites were at least 20 and located at STD and antenatal clinics in Nsambya, Mbarara, Mbale, Soroti, Kagadi, Rubaga, Jinja, Kilembe, Matany, Tororo, Palisa, Hoima hospitals, among others (STD/HIV Surveillance Report, 1998).

### 2.1.1 Quality of Surveillance Data

Sentinel surveillance involves collection of data on HIV prevalence over time in selected sites and groups of people who visit STD and antenatal clinics. This data is analyzed and used to impute HIV prevalence, trends and impact of HIV intervention measures on the population. Antenatal and STD clinic attendees are used to monitor HIV infection trends because they constitute the population that is well defined, accessible, regularly examined through the blood samples, and whose sexual practices mirror those for the sexually active population (STD/HIV Surveillance Report, 1998).

Although sentinel surveillance data is not representative of the general population (since it is based on women alone), it provides a realistic HIV prevalence situation, geographical pattern, and relationship to STDs. On the other hand, data from the AIC have particularly 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 (Sekatawa & Kiirya, 1997).

### 2.1.2 Modes of HIV transmission

According to the STD/HIV surveillance report (1998), the main routes of HIV transmission in Uganda are:

- Heterosexual contact with an infected partner accounting for 75 – 80% of new infections;
- Infected mother-to-child transmission accounting for 18 – 22%;
- Use of infected blood and products accounting for less than 2% of HIV infection as of 1991; and
- Sharing non-sterile sharp-piercing instruments with an HIV infected person accounting for less than 1%.

However, more research is needed to establish the extent of other modes of HIV transmission such as injecting drug use and homosexuality.

### 2.1.3 HIV Risk Factors

Because the dominant route for HIV transmission is through sexual contact, the risk factors are closely associated with the frequency of unprotected sex or poor use of condoms with infected partners. Therefore, the main risk factors for heterosexual HIV infection in Uganda are:

- Having sexually transmitted diseases such as genital ulcer and discharge;
- Having multiple sexual partners;
- Having sex without a condom;

- Having sexual contact with a menstruating partner; and
- Having sexual intercourse before sexual organs are mature (Sekatawa & Kiirya, 1997).

#### 2.1.4 HIV Predisposing Factors

The main predisposing factors to HIV infection in Uganda are:

- Little knowledge on the dynamics of HIV infection and prevention;
- Inadequate negotiation and life skills;
- Unsatisfied basic household needs such as food/clothing/shelter;
- Inadequate STD care;
- Widow inheritance;
- Excessive consumption of alcohol and other intoxicants and child abuse;
- Urban residence which is often characterized by more extensive sexual network tends to predispose urban residents to HIV infection;
- Being part of a polygamous union spreads the risk of HIV transmission to all partners in the union (Sekatawa & Kiirya, 1997).

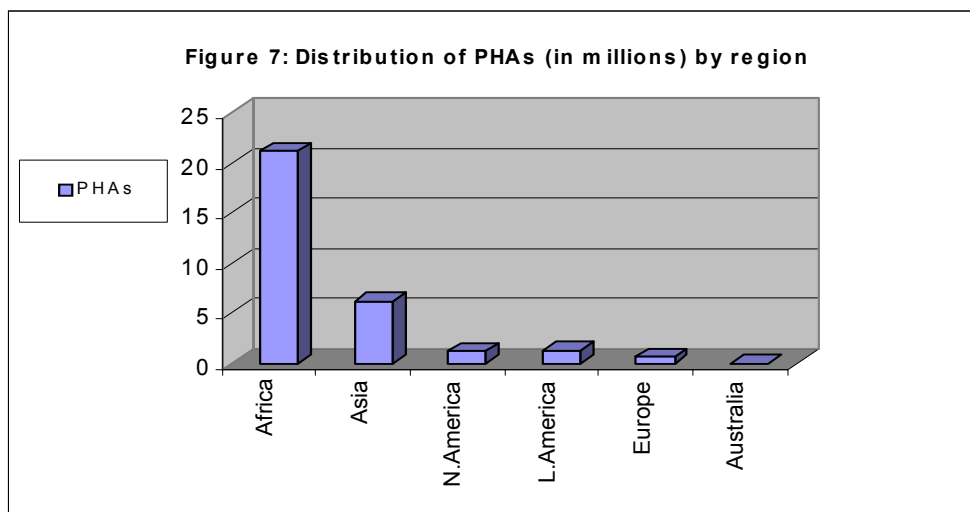
The vulnerable groups/situations include:

- Persons living in roadside trading centers; and
- Persons in displaced, confine and very mobile circumstances such as refugees, the military, prison inmates, commercial sex workers, fishermen and street children (UNICEF, 1995).

## 2.2 **HIV/AIDS Situation**

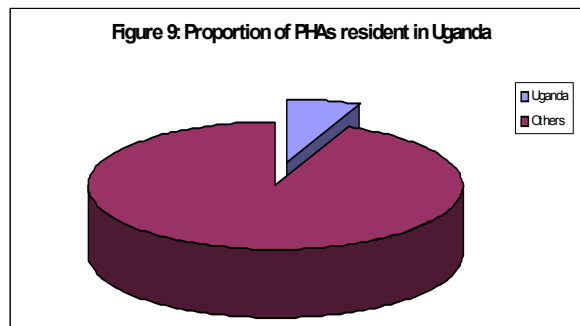
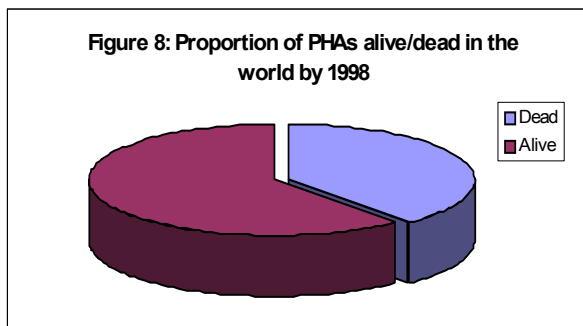
### 2.2.1 Global Context

Estimates by UNAIDS and WHO (1998) indicate that by the beginning of 1998 over 30 million people were infected with HIV around the world, and 11.7 million of them had already lost their lives (figure 8). This has resulted to a population of over 8 million AIDS orphans since the beginning of the epidemic.



Source: UNAIDS/WHO Report on the Global HIV/AIDS Epidemic, June 1998

Figure 7 above shows that of all HIV infected persons in the world, about 21.2 million live in Africa, 6.2 million in Asia, 1.3 million in Latin America, 1.17 million in North America and the Caribbean, .67 million in Europe and less than 12,000 live in Australia.



Source: UNAIDS/WHO Report on the Global HIV/AIDS Epidemic, June 1998

Furthermore, virtually all PHAs in Africa (99%) live in sub-Saharan Africa with Uganda accounting for about 4.4% of them in this part of Africa. Of all PHAs in the world, about 6.3% reside in Uganda (figure 9).

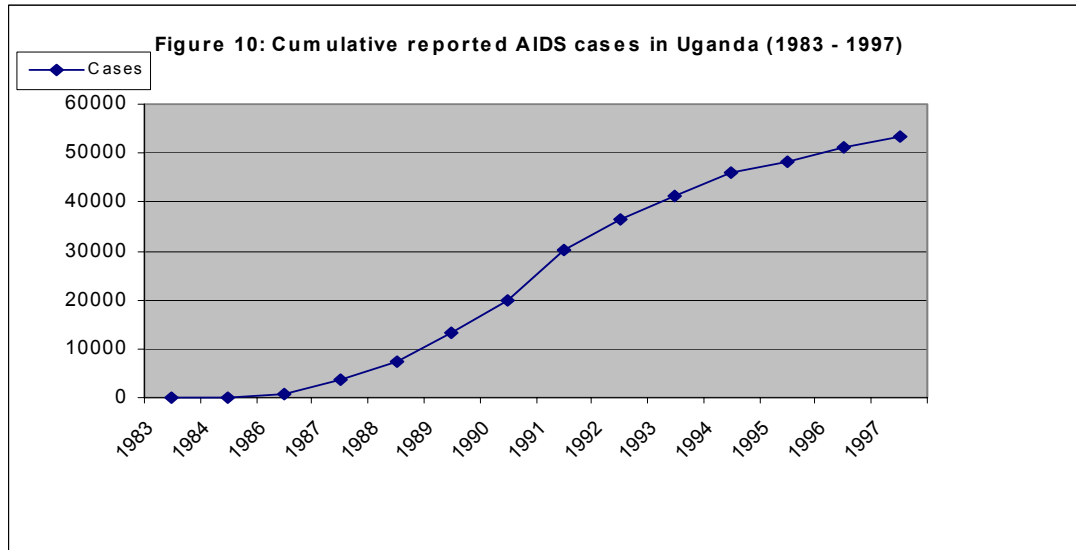
### 2.2.2 National AIDS Incidence

It suffices to emphasize that estimates of rates of new cases of HIV infection are rare in Uganda, and requires longitudinal community studies. Therefore, determination of the AIDS incidence could better be done through following up a cohort of initially healthy people and note the rate at which they become infected (Sekatawa & Kiirya, 1997). Studies in Rakai and Masaka districts show rates of less than 2% (i.e. less than 20/1000 HIV uninfected adults become infected in the course of one year) in rural general populations (Kayita & Kyakulaga, 1997). The same studies show that the incidence rate in Masaka and Rakai is lower than it was in the 1980s.

### 2.2.3 National HIV Prevalence

Uganda has for the last 15 years experienced an ever-increasing number of individuals being infected by HIV/AIDS. By the end of 1997, there were 53,306 cumulative reported AIDS cases (HIV/STD Surveillance Report, 1998). However, it is believed that only a small fraction of cases is reported to health facilities; the overwhelming majority of cases are not reported. As figure 10 shows, it is projected that the number of HIV infected persons would peak by the end of 1998 before it declines to by 2002 (Kayita & Kyakulaga, 1997).

Of the 53,306 reported AIDS cases, 49,435 (92.7%) were young people and adults aged 12 years and above while 3, 879 (7.3%) were children below 12 years. Overall, the average age for adult cases is 32.57 years and when stratified for sex is 34.38 years for males and 30.59 years for females. Male cases (46.2%) are nearly equal to female ones (53.8%). On the other hand, average age for pediatric AIDS cases is 2.18 and when stratified for sex is 2.1 for males and 2.2 for females (HIV/STD Surveillance Report, 1998). Data generated at the AIDS Information Center (AIC) further indicate a consistently high HIV prevalence rate among women as compared to men. However, these rates are not representative due to the fact that AIC data is based on voluntary HIV testing and a category of population who suspect to be infected with HIV (AIC, cited in Kayita & Kyakulaga, 1997).

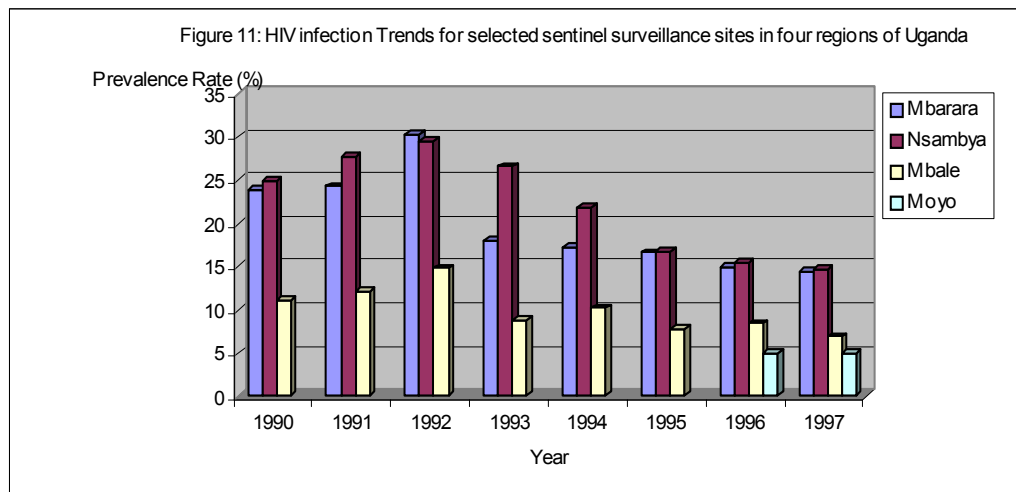


Source: STD/HIV Surveillance Report (1998)

Note: Latest figures about the national HIV incidence and prevalence in Uganda are available in the months of March and December each year. The incidence and prevalence figures on the web site will therefore be adjusted accordingly.

#### 2.2.4 Regional Variations of HIV

The establishment of HIV sentinel surveillance sites and AICs, made it possible to keep track of the HIV/AIDS trends. Based on this data, the prevalence rates in Uganda have varied from 5% at the sites in most rural districts like Moyo in northwestern Uganda to as high as 30% at some urban ones like Mbarara in southwestern Uganda (Kayita & Kyakulaga, 1997).



Source: HIV/STD Surveillance Report, 1998

Whereas Kampala in central and Mbarara in southwestern regions were the areas initially most affected by HIV, one of the areas most affected in the recent past is Gulu in northern region. According to UNICEF (as cited in Sekatawa & Kiirya, 1997), of the twelve districts with more than 90 AIDS cases per 100,000 residents, six are located in the northern Uganda. For example, Gulu district is currently third to Kampala and Masaka districts in AIDS prevalence. The high prevalence is partly attributed to the war situation and inadequate information and education (IEC) on HIV/AIDS in the district.

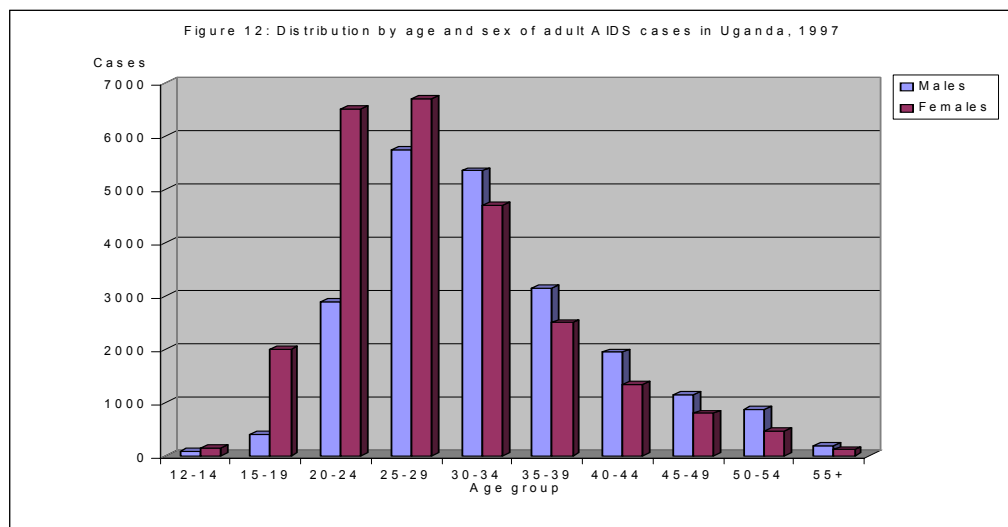
## 2.2.5 Rural-Urban Variations of HIV/AIDS

In districts such as Rakai and Masaka where the epidemic was first reported, HIV prevalence ranges between 10% - 13%. The prevalence rates are higher in the trading centers along major roads. However, basing on data generated since 1995, the trend of infection in urban and rural areas is changing. A number of urban sites recorded a downward trend in infection rates. Some rural sentinel surveillance sites have recorded a drop in infection rates (GTZ, 1996; STD/HIV Surveillance Report, 1997).

According to the 1991 - 1997 sentinel surveillance data of the STD/ACP of ministry of health, HIV prevalence dropped from 30.2% in Mbarara and 13.2% in Tororo in 1992 to 14.5% and 9.5% in 1997 respectively. However, given the fact that a number of persons who are HIV infected do not seek HIV tests or treatment at sentinel surveillance sites, a number of areas could be experiencing HIV infection rates higher than what is recorded. In addition, the current HIV prevalence rate of about 12% in 1996 is considered still high, and would most likely increase pediatric AIDS cases particularly if HIV infected women continue bearing children (Kayita & Kyakulaga, 1997).

## 2.2.6 HIV differentials by Age and Sex

HIV infection rates vary significantly with age. Mother-to-child transmission has contributed considerably to the increase in number of children with HIV. According to a Makerere University/Case Western Reserve University collaborative study, cited in Kayita & Kyakulaga (1997), it is estimated that about 25% of HIV infected mothers will transmit the virus to their children before, during and after delivery. This is responsible for the high HIV prevalence among the under-five children. The risk attributed to feeding on breast milk is low: only about 2% of the children who feed on breast milk of an HIV infected mother acquire the virus.



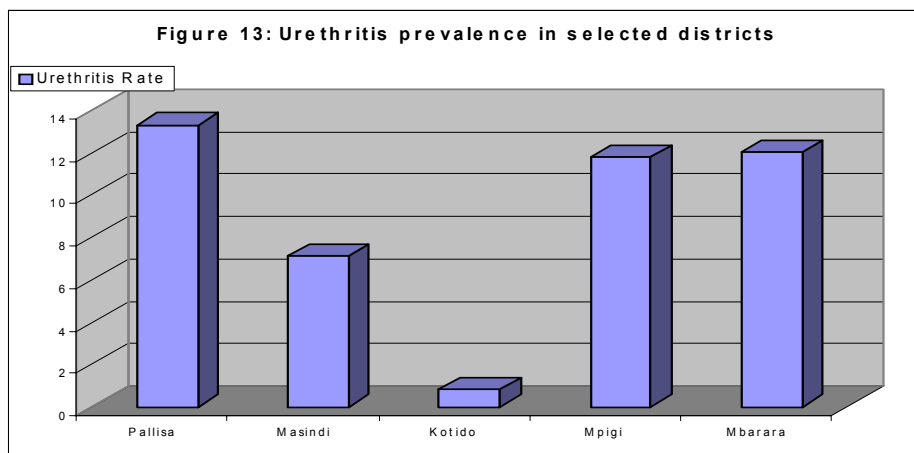
Source: HIV/STD Surveillance Report, 1998

Figure 12 shows that HIV prevalence is very low between ages 5 - 14. However, in the 15 - 19 age group, the prevalence rises, particularly among girls. Data from the sentinel sites and AIC have continued to show that girls are three to six times more infected than boys among the age group 15 -19. This reflects the earlier age at which girls commence sexual activity. The HIV prevalence gap then reduces from ages 20 - 30 while from age 30 and

above, HIV prevalence rates among males supersede that for females (STD/HIV Surveillance Report, 1998).

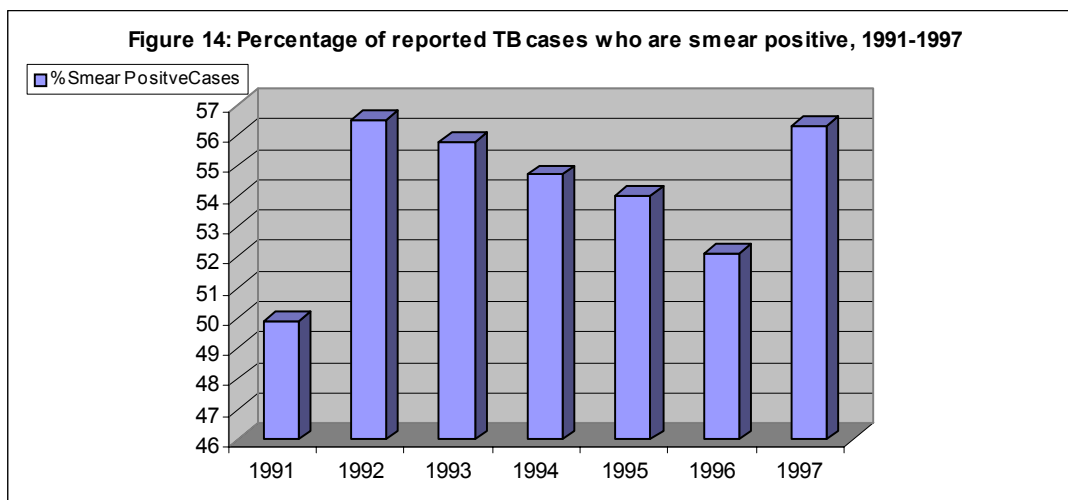
### 2.2.7 STD and TB cases

In Uganda, sexually transmitted diseases (STD) and Tuberculosis (TB) are co-factors and prevention indicators for HIV/AIDS. According to population-based knowledge, attitude and behavioral practices conducted in 1996 and 1997, the incidence of reported urethritis in men ranges from .8% to 13% in the districts of Kotido and Pallisa respectively (*shown in figure 13*). HIV prevalence among male urban-based STD patients is 33.9% (UNAIDS/WHO, 1998).



Source: HIV/STD Surveillance Report, 1998

Meanwhile, HIV/AIDS seems to have contributed significantly to the increase in cases of Tuberculosis in Uganda. According to STD/HIV surveillance reports (1991 - 1998), new TB cases progressively increased from 19,016 in 1991 to 27,196 in 1997 respectively. Likewise, as *figure 14* shows, that the percentage of TB cases who are smear positive increased from 49.9% in 1991 to 56.3% in 1997. Of the 27,196 clinically diagnosed TB cases reported in 1997 alone, 15,312 (56.3%) were new acid alcohol fast bacilli (AAFB) positive, 6,554 (24%) were negative and 982 (3.6%) were relapse cases. The high new AAFB positive cases indicate a growing correlation between HIV/AIDS and TB diseases among patients.



Source: National TB and Leprosy Control Program Report, 1997

### 2.2.8 Trends of infection

Based on routine testing since 1989 of pregnant women attending antenatal clinics in a number of locations in Uganda, there is increasing evidence that though the rate of HIV infection is still high (30.2%) in a number of rural and urban areas, HIV prevalence is declining (*see figure 11*). The decline is particularly pronounced among pregnant women aged 15 - 19, as is case in pregnant women aged 20 - 24. For example, in one site in Kampala, 15 - 19 year old women had an HIV prevalence rate of 26% in 1992, but this had declined to 9% in 1996. And in one of the sites in Eastern Uganda (Palisa), HIV prevalence in antenatal clinic attendees was as low as 3.2 while at Matany in Northern Uganda prevalence was 1.6. These trends are consistent with a 50% reduction in HIV incidence in women aged 15 -19 (STD/HIV Surveillance Report, 1998).

At the same time, behavioral surveys strongly indicate an increase in the age of sex debut, a reduction in casual sexual partners, an increase in general condom use, and especially in condom use with casual sexual partners. These findings appear to indicate that declines in HIV prevalence in Uganda are likely to be causally linked to changes in risky behavior such as abstinence from sex or delayed sex onset, and fidelity in marriage. (STD/HIV Surveillance Report, 1998).

### 2.2.9 Information Sources and Knowledge about HIV/AIDS

#### Main Sources of HIV/AIDS Information

The main sources of information about HIV/AIDS transmission in Uganda are:

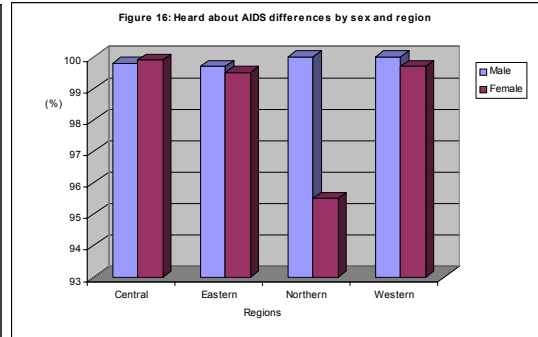
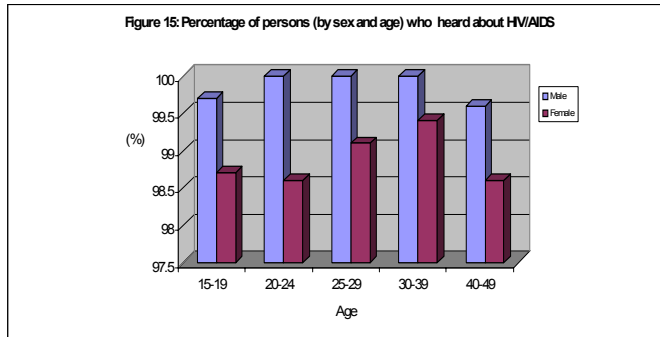
- The media;
- Community group meetings;
- Sensitization seminars; and
- Discussions within informal social groupings, schools and the different health service delivery points.

The print and mass media is the major source of HIV/AIDS information for a majority of educated persons and urban dwellers while the schools are a common source for the in-school young people. Health workers, teachers, community AIDS groups, friends/peers, relatives and significant others in the community are the major providers of this kind of information.

Recent studies indicate that a majority of the women (82%) and men (70%) obtain HIV/AIDS information from friends/peers and relatives, and a few of the women (15%) and men (20%) access it through health workers. Similarly, a small proportion of women (17%) and men (28%) obtain HIV/AIDS information from significant others during community meetings. Apart from providing HIV/AIDS information, community-based AIDS groups also extend health education, care and counseling to PHAs and community members as a whole (Demographic Health Survey, 1995).

#### Heard About HIV/AIDS

The population of Uganda that has ever heard about HIV/AIDS does not significantly differ according to sex, age and regions. According to the demographic health survey (1995), at least 99% of the males and 98% of the females have ever heard about HIV/AIDS, as does males and females aged 15 - 24, 25 – 39 and 40 – 54.



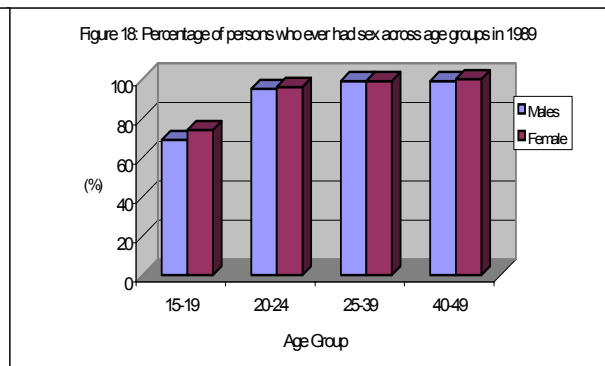
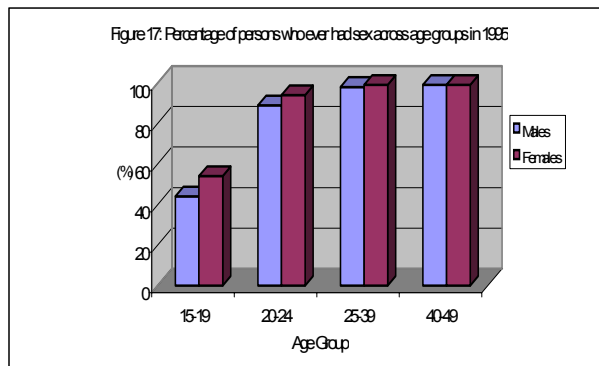
Source: Demographic Health Survey, 1995

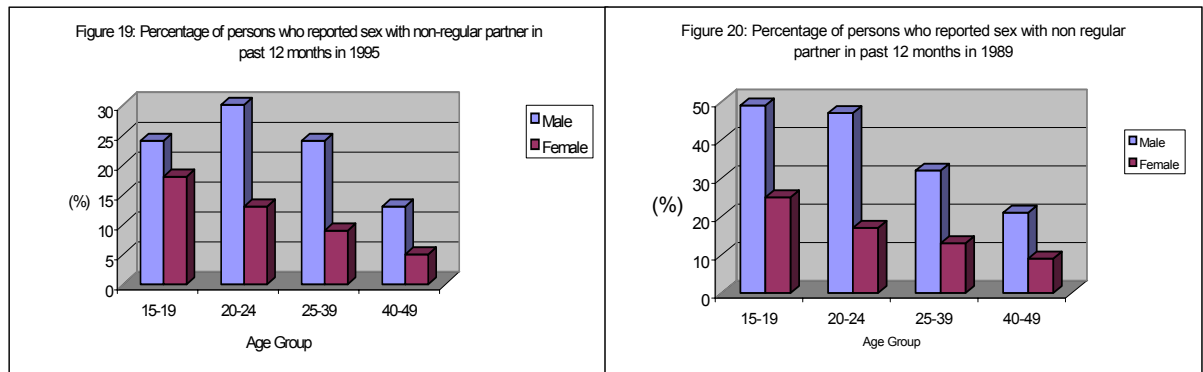
Figure 15 shows that virtually all males (100%) and females (99.4%) aged 25 – 39 in Uganda have heard about HIV/AIDS. Likewise, at least 95% of the females and 99.7% of males in the central, eastern, northern and western regions of Uganda have ever heard about AIDS. On the other hand figure 16 shows that northern Uganda fewer females (95%) compared to males (100%) had heard about the AIDS. However, in the central, eastern and western regions, the percentage of males and females that heard about AIDS is almost equal (above 99.5%).

This implies that a vast majority of Ugandans have had access to some information on AIDS. However, hearing or having access to information about HIV/AIDS is not synonymous with understanding or knowledge about the epidemic, thus high percentage responses on this question across sex and age may not imply that 99 – 100% of Ugandans are knowledgeable about the HIV/AIDS epidemic.

### 2.2.10 Behavior change relative to HIV/AIDS

According to the Demographic Health Survey (1995), about 60% of the people in Uganda believe that having one or fewer partners reduces HIV transmission, and 25.2% males and 12.6% females reported non-regular sexual partnerships. These data suggest that there has been positive change with regard to adoption of some risk reduction behaviors in the different age groups between 1989 to 1995. Figures 17 and 18 shows that the percentage of persons who are reported to have ever had sex dropped in the age groups 15 - 19 and 20 - 24. Likewise, figure 19 and 20 shows that the percentage of persons who are reported to have had non-regular sex in past 12 months dropped in all age groups.





Source: HIV/STD Surveillance Report, 1998

According to UNAIDS & WHO (1998), the condoms available per capita is 6, and about 50% of the population have had access to the condom. More specifically, more males (32%) compared to females (21%) believe that condom use prevents HIV transmission. Likewise more males (64%) compared to females (49%) have reported condom use with non-regular partners. Moreover, every one (1) in every ten (10) persons avoid blood transfusion and one (1) in every three (3) persons avoid using non-sterilized skin-piercing instruments such as needles as a measure against HIV infection (Demographic Health Survey, 1995).

Education level and where the individual lives, works or spends most the leisure time determines access to information on safer practices related to AIDS such as abstinence condom use and reduction in number of sexual partners. More urban residents cite use of condoms as an effective measure against HIV infection, while a majority of rural residents cite restriction of the number of sexual partners. More specifically, more men (11%) compared to women (2%) have adopted condom use while restriction of sexual partners is almost equal among males (55%) and females (53%). As a result, a considerable percentage of rural residents, especially women (38%) have not changed their sexual behavior compared to urban residents (21%) (Demographic Health Survey, 1995).

## 2.3 Risky/Vulnerable Situations and Groups

### 2.3.1 Hotels/Bars

In Uganda, alcohol is sold and consumed mainly in bars/pubs, alcoholic beverage shops and hotels. Alcohol consumption is a common practice among Ugandans. According to Malamba (as cited in Olowo-Freers & Barton (1992), a majority of people involved in brewing and selling alcohol are women while the biggest consumers are men. A study conducted among Makerere University students, cited in Barton and Wamai (1994) shows that three quarters of undergraduates consume alcohol, and of these, at least 90% begin consuming alcohol at an early age.

Like elsewhere in the world, excessive consumption of alcohol is one of the predisposing factors of HIV transmission in Uganda. In drinking places, individuals who consume alcohol often interact with people of opposite sex especially bar maids, and under the influence alcohol tend to involve in risky practices such as sex without the benefit of condoms and commercial sex. A study conducted in Rakai shows that bar maids involve in commercial sex despite being aware that it could lead to HIV infection and transmission. This category of population account for a considerable percentage of individuals infected with HIV/AIDS in Rakai (Hooper, 1987).

A number of men especially married ones, visit bars, pubs and hotels as an easy way to access other women, and have extra marital sex with them. In addition, heavy and light vehicle drivers and other persons often use these places as meeting points with their partners, while bar maids, sale sex alongside alcohol to supplement their daily income (Wallman, 1996). On the other hand, according to a study conducted in a Kampala suburb (Kamwokya), brewers do not seek medical examination or treatment because of their risky sexual history, suspicion of HIV infection and fear of knowing their HIV status (Wallman, 1996).

### 2.3.2 The Military and Prison Inmates

Although actual data on HIV/AIDS incidence in the military and prison inmates is not readily available, HIV prevalence in these sub-populations is high. By 1996, HIV prevalence in a non-specified military site was 26.5% (UNAIDS/WHO, 1998). Among prisoners, anecdotal data generated from Arua prison indicate that 50 of the 500 prisoners died of diseases related to AIDS and tuberculosis in 1997, and a majority are infected before detention (Neudek, cited in Mucunguzi, 1998). This implies that about one (1) out of ten (10) deaths of Ugandan prisoners is possibly due to AIDS and Tuberculosis.

A majority of them, particularly the military who are deployed far from their spouses tend to acquire HIV often through sharing non-sterilized skin-piercing instruments and sexual contacts with prostitutes (HIV/STD Surveillance Report, 1998), while few prisoners contract it through homosexuality (Neudek, cited in Mucunguzi, 1998). According to Kaddu (as cited in Ndawula, 1998), heterosexual contact, homosexuality, rape, confinement and injecting drug use are not key determinants for HIV transmission among prisoners in Ugandan cells. This is because male and female prison inmates are detained in separate environments, and are cared for by prison warders of the same sex thus making it difficult for prison warders to have sexual contact with inmates.

A number of HIV/AIDS prevention programs targeted at the military and prison inmates have been initiated in Uganda since 1994. Among prison inmates, an AIDS care and management program is on going in 24 prisons in Uganda with support from the DFID. The program trains prisoners on the palliative care and management of patients with AIDS-related symptoms such as diarrhea, TB and fever, how to get along with AIDS patients, and in artisan work like carpentry and weaving. There are also plans to start providing condoms to prisoners, and initiate out-of-custody community detention for people with less serious offences to reduce concentration in cells and risky health behavior caused by living in crowded cells such as homosexuality (Neudek, cited in Mucunguzi, 1998).

The HIV/AIDS initiative in prisons has gone a long way in instilling empathy and love for AIDS patients, artisan skills, and knowledge on HIV/AIDS prevention and palliative care among prison inmates. Similar programs are being undertaken among the military. However, their continuity and effectiveness seem to be constrained by limited funding (ACP Reports for Ministries of Internal Affairs and Defense, 1997).

### 2.3.4 War and Insurgency Zones

Consistent wars have contributed to the spread of HIV/AIDS in the northern, eastern and western parts of Uganda. Since the 1980's, displacement and separation of families have not only resulted to death and breakdown of social services, but also to rape and defilement of young girls and women. This has hampered community access to HIV/AIDS-related information, education and care, and aggravated HIV transmission (Sekatawa & Kiirya, 1997).

### 2.3.5 Women

According to UNAIDS (1997), HIV/AIDS is the major cause of death for women aged 20 – 40 in Uganda, as does elsewhere in the world. Young women aged 15 - 19 are four to six times more infected with HIV compared to boys of the same age group (HIV/STD Surveillance Report, 1998). Women are more vulnerable because a number of them have unprotected sex in order to communicate love and trust and for fear of causing violence with their partners (Marge, 1995; AHRTAG, 1997).

### 2.3.6 Commercial Sex Workers

The major risk factors for prostitutes in Uganda is having unprotected sex with many partners. Many sex workers enter into a dependent relationship because of poverty, thus exchange sex for food and shelter (UN.1997). In Masaka, prostitution is a side source of income for a number of alcohol producers and bar maids (Lubega, 1989). In addition, some widows especially those with HIV/AIDS adopt it as a strategy for obtaining material and financial support for their children (Vander, 1990).

### 2.3.7 Cultural Practices

#### Widow Inheritance, Treatment of Barrenness and Polygamy

Sexual inheritance of women who lose husbands is a common practice in many communities in Uganda, particularly among the Sabiny, Bagishu, Basoga, Acholi and Langi (UNICEF, 1997). Traditionally widows undergo a cleansing process that involves engaging in sexual intercourse with the person identified as the heir (Olowo-Freers & Barton, 1992), and among the Karamajong of Jie ethnicity, sisters of the deceased often chose the person to sexually inherit the widow (Lamphear, 1973).

In addition, treatment of barrenness is a common traditional practice, and risky in the context of HIV/AIDS transmission. It is done differently according to tribe. Among a number of communities in northern Uganda, it involves inserting herbs in vagina through direct sexual contact (using the penis) with the traditional healer, while among the Bagishu, it (Shikongo) involves have sex with as many men as possible (UNICEF 1997). Apart from poor marital relationships and religious customs, barrenness is a key determinant of polygamy in Uganda (Olowo-freers & Barton, 1992). The practice of polygamy is common among the Banyankole, Langi, Basoga and Madi communities particularly Muslims. Studies so far done shows that 27 - 30% of the married men in Ankole and Lango are polygamous (Ntozi & Kabeera, 1991; Curley, 1973), while among the Madi, about 20% of the married men and 33% of married women are in polygamous unions (Schopper, 1991). These practices increase the risk of HIV infection and transmission.

#### Male and Female Circumcision

Circumcision of males in Uganda is common among the Bakonjo, Bamba, Bagisu, Sabiny and Samia, and is used as ritual to initiate boys into manhood, sex, and symbolize courage (Sommerfeit, 1959; Kisekka, 1989). All individuals who undergo circumcision have wounds that provide good grounds for HIV infection, especially if it is done one after the other or if the knife is not sterilized. These characterize the circumcision in most of these areas because a number of them believe that using separate knives is anti-culture and sterilizing the knife with boiled water makes the blade dull (Pande, 1995).

On the other hand, female genital cutting (FGC) is common among the Sabiny, and usually done in small groups using the same knife (Vaizey, 1995; Tajjaba, 1990). A number of women who undergo the practice encounter excessive bleeding, genital ulcers and complications during labor, and penetrative sexual intercourse. These situations facilitate sexually transmitted infection including HIV (Kakuba, 1997; UNFPA, 1997). McNamara (1995) attributed the high infertility among women and prevalence of sexually transmitted infections among the Sabiny to FGC.

Nevertheless, following the inception of a community-driven reproductive, educative and community health program (REACH), community members especially elders, surgeons, school children, political and religious leaders, and providers of reproductive health services are being consistently sensitized on the dangers associated with FGC including HIV/AIDS. Consequently, surgeons and traditional birth attendants no longer use the same knife/blade/instrument on two people during circumcision or birth. Community member's attitudes towards the practice are also changing thus leading to a drop in FGC by 36% (Kiirya, 1997).

### 3.0 IMPACT OF THE HIV/AIDS EPIDEMIC

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#### 3.1 Demography

Since the late 1980's, the number of adults infected with HIV has been increasing. HIV prevalence in adults was 9% in 1980 and increased to 15% by 1993, but HIV infection rates were lower in rural areas compared to urban areas. However, infection trends have since reduced especially in urban areas (HIV/STD Surveillance Report, 1998). As of March 1998, 51,344 AIDS cases were recorded. However, because a number of AIDS related deaths are neither reported nor recorded the above figure is an underestimation. It is projected that the number of HIV infected persons would peak at 1.84 million this year before it declines to 1.81 million by 2002 (Kayita & Kyakulaga, 1997). Individuals aged 15 – 49 account for more than 60% of the AIDS cases, and more specifically, a majority of men with AIDS are older than women implying that the latter are infected at an early age than the former (Armstrong, 1996).

In addition, the AIDS epidemic has increased the crude death rate and dependency ratio among the Ugandan population. For example, in the districts of Rakai and Masaka, where the epidemic was experienced as early as 1980's, the number of households with toddlers aged above 15 years is high, as is the elderly (Armstrong, 1996).

##### 3.1.1 Children aged 0 - 9

Among the under-five children, AIDS is the fourth leading cause of death, and is expected to increase infant mortality rate in Uganda. According to Armstrong (1996) mortality among the children under age five is estimated to drop from 182 per 1,000 (recorded in 1990) to about 117 per 1,000 by the year 2020 without AIDS, but with the AIDS epidemic, child mortality rate is projected to increase to 150 – 170 by 2020).

A majority of the pediatric AIDS cases acquire HIV through mother-to-child transmission (MTCT) which often occurs before and during delivery through mother-to-child blood mixing, and after delivery through breast milk. A small proportion acquires HIV from blood products containing HIV and from contact with non-sterile skin-piercing instruments. Of the pediatric AIDS cases, about 66% die by the age of three. Therefore, the 5 –9 age group is relatively free of HIV infection, but share the burden of other consequences of HIV/AIDS with other children (Sekatawa & Kiirya, 1997). However, if this MTCT is not controlled, AIDS may increase infant mortality by 75% and under-five mortality by more than 100% (UNAIDS, 1997).

HIV/AIDS has specifically impacted this population in a variety of ways. According to Sekatawa and Kiirya (1997), a number of them encounter orphan-hood at the age parental guidance and socialization is needed most, fail to gain adequate weight, experience delayed development, and those who develop symptoms much later in childhood tend to experience stigmatization and discrimination. For children whose parents are bed-ridden or dead, the quality of care, education, nutrition and socialization is often poor. Failure of the traditional support systems to cope with an ever-increasing number of HIV/AIDS orphans has contributed to an increase in the number of street children. Moreover, young girls are usually withdrawn from school to care for the younger siblings and ailing parents, and manage households while a number of them are sexually abused by adults who especially think that they are free from HIV/AIDS (Barnett & Blaikie, 1992).

### 3.1.2 Young People aged 10 - 24

Young people<sup>3</sup> are yet another group of individuals who have been affected greatly by HIV/AIDS. HIV infection cases begin to increase in the 15 - 19 age group and peak in the age range 20 - 40. In the former age group, the number of girls with HIV is three to six times more than that of boys while among those aged 20 -24, the rates for women are twice as much (HIV/STD Surveillance Report, 1998).

Young peoples' increased vulnerability to HIV infection is attributed to the fact that a number of them initiate sex early, with older partners and are unable to negotiate for safer sex. Most of the sexual encounters are without the benefit of consistent and correct condom use, and are often a result of defilement (Olowo-Freers & Barton, 1992).

For girls, the normal transition from childhood to adulthood is often cut short by early marriages and subsequent pregnancy (PEARL, 1996). These girls hardly benefit from on-going AIDS and or reproductive health programs targeting young people. They are also unlikely to benefit fully from those programs that target women (Kiirya, 1996). The young people who become household heads upon the death of both parents often seek employment in the informal sector where they are underpaid, and often sexually abused. These factors also tend to make young people, especially girls, vulnerable to health hazards including HIV/AIDS. Child headed households already occur in Rakai and Masaka districts, and are expected to increase in Uganda particularly if the epidemic is not effectively contained (Barnett & Blaikie, 1992).

The continued civil strife and armed conflicts in Uganda have led to massive movements of people, and family disintegration. In these circumstances, young people (particularly girls) are often subjected to sexual abuse through rape and defilement (Laenkholm & Cuijpers, 1997). These forms of abuse increase HIV transmission among women and girls.

Furthermore, owing to the AIDS epidemic, a number of young people have found their way on the streets and slums in urban areas. A recent survey conducted by Fehling, Muhumuza and El-Wambi (1996) found that many street children are orphans who left their homes in search of company and new ways of survival. These children have had little or no education, engage in criminal or risky behavior such as theft and prostitution. Further, 27% of the street children use drugs such as Marijuana, Mairungi, and take alcohol. These factors coupled with low knowledge on AIDS and inaccessibility to services tends to make young people who live on the streets especially vulnerable to HIV infection.

### 3.1.3 Orphans

HIV has caused huge increases in death rates among young adults, just the age when a majority of people in Uganda are forming families and bearing children. This has led to an increase in AIDS orphans. According to UNAIDS and WHO (1998) an estimated cumulative 1.7 million children have lost one or both of their parents due to AIDS in Uganda.

Loss of a parent(s) in Uganda often results to inadequate family guidance, limited access to education, and inadequate socialization and material or financial support particularly if relatives do not step in. Although the burden of AIDS orphans in Uganda is being absorbed by the relatives particularly grand parents, extended family caregivers are being over-stretched by the ever-increasing number of orphans, and the potential ones are scared of

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<sup>3</sup> This term is adopted from the World Health Organization (WHO), United Nations Children Fund (UNICEF) and United Nations Population Fund (UNFPA) who define young people as individuals aged 10 – 24.

taking up the responsibility of caring and paying school fees for them (Natukunda-Tagboa, 1993).

A part from failure to access formal education, others especially with relatives unable to pay all school fees dropout (World Bank, 1993). As a result, a few of them have been absorbed in the education mainstream. This implies that as HIV/AIDS continues to take a heavy toll of the productive population in Uganda, the family structures and traditional coping mechanisms are stretching to a breaking point thus creating a big population of children without adequate care, socialization and education.

#### 3.1.4 Women of Productive Age

The impact of HIV/AIDS on women has been considerable in Uganda. A national HIV prevalence survey conducted in 1987 revealed that females were more infected by the virus than males although the ratio was close to one. Recent studies however indicate that for certain age groups, the HIV prevalence among women is much higher than for the men: females aged below 25 are two to three times more likely to be infected by HIV than men (AIC, 1995; Mulder, cited in Kayita & Kyakulaga, 1997).

The high HIV infection rate among women in Uganda is attributed to the greater chance of being HIV infected through sexual intercourse due to a larger mucus surface area, likelihood of living with STDs without knowing, and surgical operations particularly during labor (HIV/STD Surveillance Report, 1998). Women are also exposed to many other risks that go with their gender roles such as polygamy (one HIV infected person in the union is likely to spread the disease to others) and depending on men not only for socioeconomic survival but also in sexual and reproductive life decisions.

This has tended to make them prone to risky reproductive behavior including early marriage and non-use of condoms where the partner objects. In addition, because fewer women go through the formal education system, a number of them have limited access to information on AIDS and the available preventive options. This tends to limit their knowledge on HIV and use of the prevention options, such as condoms and behavior modification (Sekatawa & Kiirya, 1997).

#### 3.1.5 The Individual, Family and Community

AIDS has had far-reaching consequences to individuals, families, communities, and the country as a whole. Whereas the proportion of households that have AIDS patients in Uganda is not known, it is believed that nearly every household is affected by the epidemic in some way.

At the individual level, besides the physical suffering, persons living with AIDS are usually isolated and denied the needed care and psychosocial support. As a result, they encounter stigma, distress and depression. Their savings drop partly because they spend most of or all income on treatment, and individual and household productivity declines due to inability to cultivate or report for work and because family members spend most of the productive time giving care to the sick (Sekatawa & Kiirya, 1997).

At family level, women and children especially young girls, are the most important actors in giving care to AIDS patients partly because husbands often die before their wives and children. In situations where family/household members are unable to cope, extended family members such as auntie, uncles, cousins, grandparents and in-laws step in to help. Their help is often in form of providing practical help in domestic tasks/ and or a person to care for

the sick, financial and material contributions and accommodation for the patient particularly if the household of the relative is near the health center (Joling, 1996).

However, proper care to PHAs at family level is often limited by the many other household tasks and responsibilities that household and or extended family members have and inadequate supply of basic care necessities such as detergent powder, antiseptics, clothes and medicines. It is also negatively affected by the inadequate knowledge on care for AIDS patients and HIV prevention or understanding and communication of emotions and wellbeing of bedridden PHAs, and low knowledge on good nutrition for AIDS patients (Sekatawa & Kiirya, 1997). Owing to the increased psychosocial stress and trauma, spending on medical care (that often results to selling-off agricultural produce to meet treatment costs) and time to care-giving (that leads to a reduction in income) family members are becoming apprehensive of giving care to AIDS patients and their children (Joling, 1996).

At community level, religious groups and NGOs extend social support to AIDS patients and affected families through prayers, counseling, provision of basic necessities such as food, clothing and voluntary labor. Notable among these groups/organizations is The AIDS Support Organization (TASO), Philly Lutaaya Initiative (PLI), AIDS Information Center (AIC), National Community of Women Living with AIDS (NACWOLA), Islamic Medical Association of Uganda (IMAU), Catholic Secretariat, Church Human Services (CHUSA), and others. However, a number of community members are unwilling to give care and social support to AIDS patients because some think that they are “reaping what was sown” (Joling, 1996).

### 3.1.6 Culture and Traditions

Traditional practices such as widow inheritance, polygamy and wife sharing are factors of etiologic significance in HIV transmission in Uganda (Olowo-Freers & Barton, 1992). Irresponsible sexual behavior and alcohol consumption during burials, last funeral rites and other traditional ceremonies are also common (Barton & Wamai, 1994), and among the Sabiny, female genital cutting is one of the cultural practices that tends to increase HIV transmission and other reproductive health problems (REACH, 1997).

Widow and children inheritance is also common among many ethnic groups. 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 (Sekatawa & Kiirya, 1998). These practices are gradually changing owing to the fact that community members are becoming aware that such cultural practices expose them to HIV infection. For example some areas have began supporting widows and their children without direct inheritance (Olowo-Freers & Barton, 1992), and the Sabiny particularly those who are educated are changing their perceptions towards female genital cutting (Kiirya, 1997).

### 3.1.7 The Agriculture and Labor Sectors

A vast majority of Uganda’s population is absorbed into agricultural production (Armstrong, 1996). The impact of the AIDS epidemic on the agriculture and labor sectors in Uganda has been enormous given that over 80% of the reported AIDS cases are among people aged 15 – 45: a majority of whom being adults and parents. This age group constitutes the largest part of the potential and most productive labor force. Death of these cases has therefore correspondingly affected the production in the economy and the ability of family structures to cope with AIDS-related health and social needs (Sekatawa & Kiirya, 1997).

AIDS-related sickness and death of individuals in this age group has reduced the quality/quantity of family labor force, land under cultivation, the availability of disposable cash

income used to purchase agricultural inputs, food security, and education opportunities for children (Armstrong, 1996). A survey done in Rakai district showed that 25% of the households were cultivating less and less land, and 35% of these attributed it to AIDS-related sickness or death (UNICEF, 1994; UAC, 1996). There was also a shift from high to low labor intensive crops, a decline in the production of cash crops, and an attempt to sell food crops for cash (Barnett & Blaikie, 1992).

In Northern Uganda, where the staple crops grown (millet, sorghum, etc.) are annual and labor-intensive and labor is already a relatively scarce factor of production, the AIDS impact has been even more pronounced. Apart from households cultivating small holdings and producing crops enough to cover household subsistence and a little for the market, such crops are often left to over grow due to the fact that most of the time is spent on giving care to the sick (Sekatawa & Kiirya, 1997). These factors have threatened food security of affected families, worsened nutritional status at household level, and led to a decline in cash crop production (Armstrong, 1996).

The epidemic has also considerably affected the educated and skilled and professional personnel. A study of 443 HIV infected people drawn from different backgrounds indicated that a majority of them were educated up to senior four. Another study found that 15 out of the 20 deaths recorded at Makerere University in 1991 were due to suspected AIDS (UAC, 1996), and 22 - 25% of the students at Makerere University and Institute of Teacher Education Kyambogo had HIV (Dossier Panos, 1992).

However, recent studies suggest that infection rates are tending to reduce with higher educational status (GTZ, 1996). Small business people and salary/wage earners and medium and large businessmen, farmers, vendors and skilled tradesmen are more at risk of HIV infection probably because of despondency to the epidemic and their risky day-to-day lifestyles (Kayita & Kyakulaga, 1997). Since it takes more than 15 years of education for one to attain skilled/professional training, the same time would be required to replace a single death of such quality labor force. Therefore, even if life support drugs such as anti-retroviral therapy were made available to everybody in Uganda, it is unlikely that the productive labor status can be restored as the case before the AIDS epidemic.

### 3.1.8 The Work Environment

HIV/AIDS has caused employment insecurity and discrimination in the labor force. Some organizations particularly in the private sector subject prospective employees to a mandatory HIV screening before recruitment thus contravening the national anonymous and voluntary HIV testing policy. While the infected ones are denied job opportunities, those who become infected during employment are often discriminated against and their job contracts terminated on the basis of their HIV status (Sekatawa & Kiirya, 1997).

In addition, the HIV epidemic appears to have contributed to a decline in labor productivity at individual and company level. This is because opportunistic diseases often encountered by PHAs call for regular absenteeism from work and increased individual and company spending on treatment and socioeconomic support. As a result, the cost of labor at company level also increases due to low output and increased health costs borne by an enterprise in the treatment of opportunistic diseases (Sekatawa & Kiirya, 1997).

In the family and community social spaces, the epidemic has caused stigmatization, bereavement and grief among family and community members. Death of children before their

parents makes it difficult for them (parents) to obtain sufficient care/support and results to disgraceful death during old age. In addition, a number of spouses who lose partners due to suspected or confirmed AIDS migrate to other areas and get new partners as a psychosocial coping mechanism (TASO, 1994).

The other significant social cost in a family and community environment has been conflicts in marriage, property inheritance, rape and defilement/child sexual abuse, deliberate/willful HIV transmission, and a growing number of AIDS orphans and apprehension of relatives and community members to adopt and educate them (Sekatawa & Kiirya, 1997).

### 3.1.9 The Health Sector

#### Manifestations of HIV/AIDS on Uganda's health care system

Uganda's health care services are only accessible to a small percentage of the population. According to the Demographic and health Survey (DHS, 1995), about 12% of the population live within 10 km of a health unit, but most of these units lack trained personnel and supplies to effectively deliver health care. Furthermore, AIDS cases are continuing to increase. For example by 1996, the adult and pediatric AIDS cases were estimated to be 153,000 and 44,000 respectively. These cases are predicted to increase to 218,000 and 65,400 respectively by the end of 1998 (Kayita and Kyakulaga, 1997).

As more adults and children become infected with the virus, important gains in the quality of care and life are being reversed. The demand for preventive and curative care services by patients with HIV/AIDS is also increasing. According to the Health Facility Inventory (1996), the current health system capacity is already under considerable strain due to the ever-increasing number of patients with AIDS-related diseases. A recent study indicated that the population per hospital bed has risen to 800 per year with about 50% of the beds occupied by AIDS patients and 70% of them having Tuberculosis (Kayita & Kyakulaga, 1997).

The AIDS epidemic has also challenged the care provision skills of health workers. Because health personnel are now attending to many more patients as a result of the HIV/AIDS epidemic, they experience stigma and psychosocial stress due to fear of being infected. Therefore, a number of practitioners have either resented, been judgmental while providing care or formed negative impressions about giving care to PHAs thus turning a way a proportion of them (NACWOLA, 1998).

#### Opportunistic Diseases

Tuberculosis (TB) has increasingly become one of the common HIV-associated diseases. According to the National TB/Leprosy Control Program (1997), 27,196 TB cases were diagnosed. Of these 15,312 (56.3%) were clinically diagnosed as new acid alcohol fast bacilli (AAFB) positive, 982 (3.6%) were relapse and 6,554 (24%) were negative TB cases. Data collected from 1991-1997 shows a progressive increase in the reported TB cases with a majority of the cases aged above 15 being females. A study conducted among a pediatric cohort revealed that 18% of HIV infected infants developed TB compared to 1.4% of HIV non-infected and successful response to treatment was 31% and 83% respectively (Mudindo-Musoke, et al., cited in Sekatawa and Kiirya, 1997). Because the cost of TB treatment spreads over a long period, patients with TB often crowd out patients with other illnesses and the capacity of hospitals and other health delivery points is over-stretched.

Also common among HIV infected individuals are pneumonia, cryptococcal meningitis, Kaposi sarcoma, cryptosporidial diarrhea, candidacies of the esophagus and herpes

diseases. Management of some of these diseases also involves long periods of stay in hospitals and is expensive. Therefore, there has been a general shift of emphasis from hospital to home-based care in Uganda as a means of reducing pressure on the fixed health infrastructure and accessing similar services to PHAs and community members wherever they may be (Kiyonga, 1998). Integration of primary health care (PHC), reproductive health and AIDS care and counseling into home based care (HBC) has been adopted as one of the strategies for enhancing the quality and cost of care for PHAs (Chela, cited in Kayita & Kyakulaga, 1997).

HIV/AIDS has also altered the disease patterns and expenditure. For example, in 1988, AIDS ranked sixth as the disease exerting the largest burden on the health system and the leading cause of death among in-patients but shifted to the second position in 1990 and has since then maintained the second rank (Kiyonga, 1998; Armstrong, 1995). Given that many unidentified HIV positive patients are included among other diagnosis or opportunistic diseases such as diarrhea, TB, pneumonia, upper respiratory tract infections, malnutrition, anemia and cancer, it is possible that the HIV/AIDS burden on the health system is far more than what is recorded.

### Traditional Treatment

The use of traditional medicine as a form of therapy for AIDS is steadily growing in Uganda. A number of individuals including PHAs believe that some herbal medicines actually work. As a result funding agencies, governmental and non-governmental organizations are supporting research in HIV/AIDS herbal/traditional medicines. The traditional healers association (THETA) is one of the NGOs that has made significant contribution to herbal research, and recruited and subjected a number of PHA cohorts on traditional medications. This development indicates a positive change in attitude on the role of traditional medicines in the treatment of AIDS. However, more support is needed to promote herbal research, and increase awareness and accessibility to traditional medicines that work.

### Expenditure on essential drugs for AIDS-related illnesses

The costs involved in caring for AIDS patients are significant and include direct costs such as medical manpower costs and hospital overheads. However, the actual cost of treatment for each AIDS patient is difficult to determine in Uganda partly because AIDS is a combination of various illness and a number of AIDS cases do not actually seek care from the formal health care sector. However, a study conducted in 1991 estimated the cost of drugs required per adult AIDS case at US \$ 13.8 per year (excluding costs on anti-retroviral drugs) compared to US \$ 3 actually spent on all health care services per person per year. It was estimated that an additional US \$ 1.4 million would be spent in 1991 and escalate to 2.3 million (in 1990 prices) by 1995 if all drugs were available and AIDS patients sought medical care. Cost estimations measured in terms of cost on essential drug requirements over a five-year period with the epidemic further indicate an increase in spending on drugs for opportunistic diseases and a serious impact on the general public health budget (MFPED, 1998; Kiyonga, 1998).

Another study found that by 1995, drugs for AIDS patients accounted for 8 – 23% of a constant public sector drug budget with medical costs accounting for major shares of the budget. Individual and household expenditure on AIDS-related illnesses also mirrors public sector spending (Armstrong, 1996). There is need to further investigate and delineate the average number of episodes per AIDS case and the cost of treatment for opportunistic infections in the formal and informal health care sectors in order to clearly understand the realistic expenditure on AIDS illness.

### Expenditure on Highly Active Retroviral Therapy (HART)

Although anti-retroviral therapy (ART) is not yet available in all government health service delivery points, a few health facilities and research institutions have been authorized to privately administer it to PHAs. It is evident that a small number of PHAs have obtained ART medications, and had their quality of life improved. Low response to ART medication is attributed to the high optimal cost of treatment, priced at 1.5 million shillings (about US \$ 1,800) per month (JCRC, 1997). However, the inclusion of Uganda in the UNAIDS AIDS Drugs Access Initiative has lowered the cost of ART medication to shillings 700,000 per PHA per month (UAC, 1998; JCRC, 1998). It is also expected that this initiative would ensure availability of ART medications in major hospitals, accessibility to it by more PHAs, and reduce mother to child HIV transmission which accounts for 18 – 22% of pediatric AIDS (Sekatawa & Kiirya, 1998).

### HIV Vaccine Trials

Preparations for trial of an HIV candidate vaccine are under way in Uganda in collaboration with the Case Western Reserve University based in the United States of America. The details about preparations for the trial can be obtained directly from the Coordinator based at Makerere University, Faculty of Medicine, and Joint Clinical Research Center. More information about this trial will be incorporated into the NADIC Web Page soon as it is available and ready for publication.

## 4.0 UGANDA'S RESPONSE TO THE HIV/AIDS EPIDEMIC

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### 4.1 Background

The first documentation of AIDS cases was in 1982 but anecdotal information indicates that AIDS-associated deaths occurred as early as 1981 in Rakai district. Inadequate knowledge and denial about the AIDS disease characterized the initial response by the community and government. This was compounded by the socioeconomic crises, political unrest and lack of political commitment towards the AIDS problem pertaining before 1985 (UAC, 1996).

Uganda's response to the AIDS epidemic is a collective effort of the government, non-governmental organizations, religious groups, individuals, and local and international donors, and characterized by openness, political support and commitment at the highest and lower levels of Government (Sekatawa & Kiirya, 1997). Effective national response began in 1986 after the government recognized that the HIV/AIDS epidemic caused enormous danger to the community, and was a problem that required collective response from a variety of perspectives.

### 4.2 National Response

#### 4.2.1 Government Response

Between 1980 and 1986, Government and public response to the new disease was initially *ad hoc* and slow. During this period, Government was silent about the epidemic and virtually nothing was done to address the epidemic. However, the community members (families and clans), NGOs and religious groups provided limited care and support to PHAs (NADIC Fact Sheet, 1997).

The first major response of government began between 1986 and 1990 following the establishment of the National Committee for the Prevention of AIDS (NCPA) in 1985. In October 1986, the AIDS Control program was established in the ministry of health with support from the world health organization (WHO) and specifically charged with the responsibility of tackling the AIDS problem. Through support from the WHO, substantial progress was made in HIV/STD epidemiological surveillance, safe blood supply, care and counseling, and provision of HIV/AIDS information, education and communication. Other external and local organizations also committed resources towards a range of activities especially those that were directed towards public education and information about HIV transmission and AIDS, care for people infected and affected by HIV/AIDS, HIV counseling and testing, and education on condom use and their distribution mechanism.

The creation of ACP in the ministry of health resulted to some degree of improvement in coordination of AIDS activities in the country and access to major information that resulted to an increase in individual and community awareness about the disease. In addition, a number of people began to adopt preventive measures such as abstinence, zero grazing and condom use (NADIC Fact Sheet, 1997).

During the 1988 review of the ACP, it was recognized that HIV/AIDS had effects that transcended health and medical issues. It specifically caused diverse psychosocial, economic, cultural, moral, ethical and legal implications in the community, yet the public felt its prevention and control was not their responsibility. As a result, there was inadequate response and participation by the public and private sectors in HIV/AIDS prevention and control. It was therefore apparent that all sectors and levels of government and the community needed to be involved in these efforts.

Following the review of the country's approach to the epidemic, Government appointed a national task force in 1990 comprised of representatives for major international and local agencies active in the field of HIV/AIDS to work out modalities for a new national AIDS control strategy. This resulted to the adoption of a multi-sector approach (MACA) in dealing with the AIDS epidemic (UAC, 1996).

Uganda AIDS Commission and its Secretariat were then established by statute in 1992 and specifically charged with coordinating the formulation and development of the national plan to address the HIV/AIDS problem in a broad context. As a result, the National Operational Plan for HIV/AIDS/STD Prevention, Care and Support (NOP) for 1994-1998 was developed of institutionalize the multi-sector approach. Since then, Uganda has evolved a participatory process to HIV/AIDS prevention and control that encompasses all sectors and addresses all dimensions of the epidemic.

### The multi-sector approach

#### *a) Premise of the approach*

The multi-sector approach is based on the premise that:

- All Ugandans at the various administrative and political levels have the individual and collective responsibility to be actively involved in AIDS control activities;
- The fight against HIV/AIDS is should not only be directed at prevention, but also on active response and management of all aspects of the epidemic; and
- The organizational capacity building is especially essential for initiating sustainable activities among sectors and the different organizations.

Recognizant of individual, community and the organizations' contributions in the fight against HIV/AIDS, Government was to further enhance AIDS control activities through effective program planning, increased resource availability, and constant supervision for HIV/AIDS-related services delivery (NADIC Fact Sheet, 1997).

#### *b) Development process*

The development of the document articulating the multi-sector approach to the control of HIV/AIDS was initiated in July 1991 by the UAC Secretariat in collaboration with Uganda AIDS Commission's Advisory Committee<sup>4</sup>, and concluded in February 1993. The advisory committee was comprised of managers and coordinators of key AIDS control programs in the public and private sectors. This document defines and gives direction to the process of changes required to address the problem of HIV/AIDS in Uganda.

The approach established five goals for the national HIV/AIDS control strategy. These include:

- To stop the spread of HIV infection with a focus on children and youth, women and gender issues, and risky situations and environments;
- To mitigate the health and social impacts of HIV/AIDS including medical treatment and care, support of individuals, families and the community;

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4 This Committee is responsible for advising the Uganda AIDS Commission on policy and program needs and gaps.

- To strengthen the national capacity to respond to the epidemic;
- To establish an effective national information base on HIV/AIDS; and
- To strengthen the national capacity to undertake research relevant to HIV/AIDS (NADIC Fact Sheet, 1997).

The National Operational Plan (NOP) was then developed in 1993 as the first step to effect the multi-sector approach to AIDS control. The development of NOP was spearheaded by UAC Secretariat and involved representatives of government ministries, NGOs, donors and individuals active in the field of HIV/AIDS. The NOP describes priority areas of intervention, the nature of intervention, and resource allocation. UAC has been responsible for overseeing the realization of the multi-sector approach (UAC, 1996).

### Old Uganda AIDS Commission

#### *a) Composition*

Uganda AIDS Commission with its Secretariat was established by statute Number 2 of 1992 in the office of the president to facilitate coordination in the implementation of the multi sector AIDS control strategy. The UAC Board has 13 members including a Chairman, Vice Chairman, Director General and 10 other members drawn from the government ministries, Parliament, non-governmental organizations, religious organizations and individuals active in the field of HIV/AIDS; all of them appointed by the President. UAC was located in the Office of the President to reduce bureaucratic obstacles and maintain neutrality in AIDS prevention and control.

#### *b) Mission*

The mission of the UAC is to:

- Enhance efforts of government, NGOs and the community against the epidemic; and
- Coordinate national program activities such as planning, monitoring, formulating policy and developing national guidelines of all AIDS prevention and control programs in the country.

#### *c) Advisory Committees*

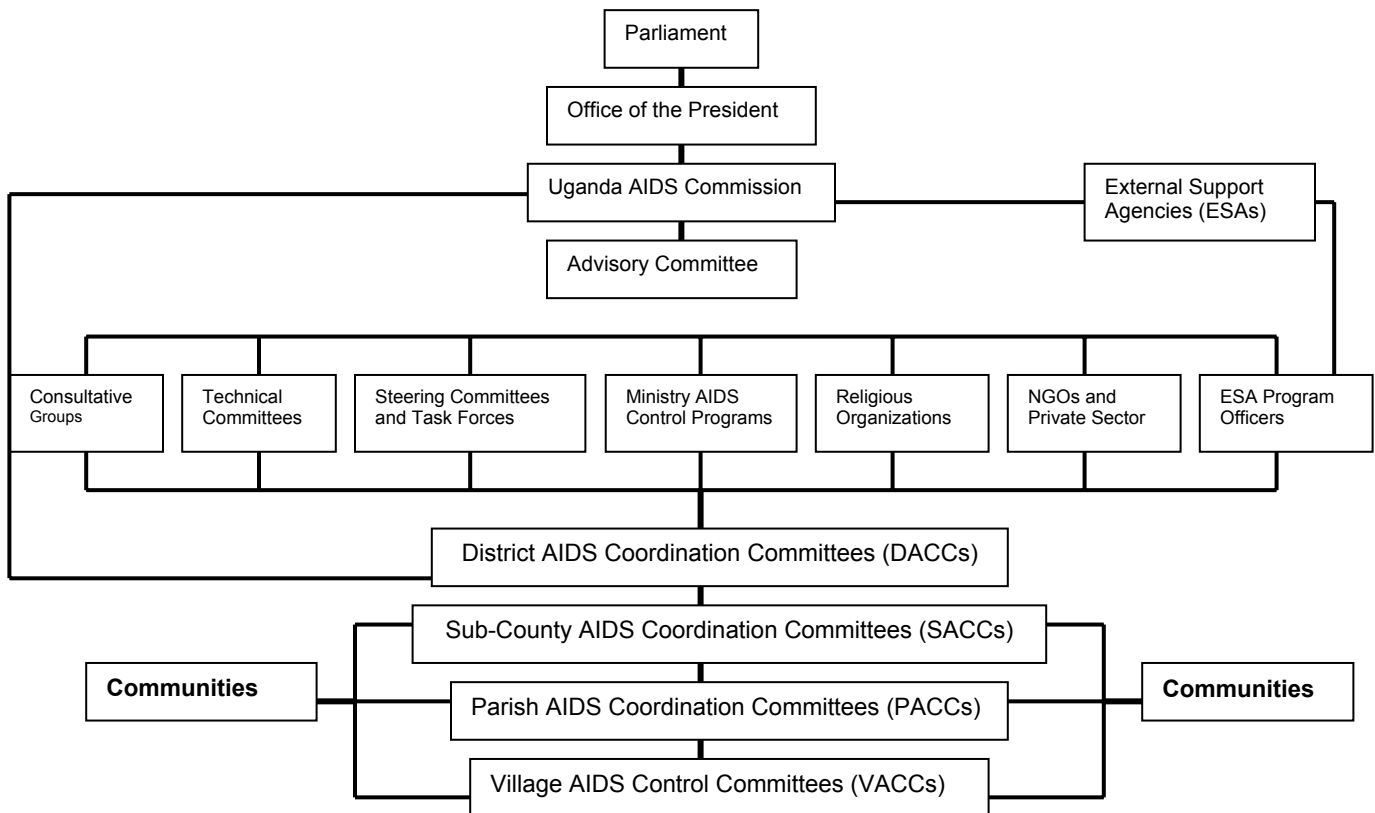
UAC has advisory committees and a Secretariat. The former is a forum of senior managers of HIV/AIDS programs for different sectors, while the latter consists of a technical and support staff headed by the Director General. The Commission also has technical committees in the areas of research and development, prevention and control, care and support, traditional practices, and policy and planning. These committees advise the Commission indirectly through the Advisory Committee. Moreover, Task Forces and Steering Committees focusing on women, youth, law and ethics, traditional medicine, PHAs, and NADIC have been set up.

#### *d) Secretariat*

UAC Secretariat is headed by the Director General, and is responsible for guiding the deliberations of the commission, implementing the decisions reached, and giving advice to government and NGOs on all matters related to HIV/AIDS through providing background information, analytical reports and draft position papers. Figure 21 below shows linkages and

relationships between the Commission and the different partners in the AIDS Control program.

Figure 19: Linkages and relationships between the Commission and the different partners in the AIDS Control program



Source: NADIC Fact Sheet, 1997

### AIDS Control Programs in line Ministries

In order to effectively institutionalize the multi-sector AIDS control strategy, AIDS control programs were established in the ministries of information, labor and social affairs, local government, gender and community development, defense, internal affairs (police and prisons), education and sports, finance and economic planning, public service, and justice. Some key NGOs such as TASO and AIC were also co-opted into this program (Sekatawa & Kiirya, 1997).

### AIDS Coordination in Districts

District and community level AIDS committees were established in all districts of Uganda to further improve coordination of HIV/AIDS activities. Like Uganda AIDS commission, these committees are composed of individuals representing different sectors that are active in the field of HIV/AIDS. These innovations have gone a long way in broadening Government response at national, district and community levels (NADIC Fact Sheet, 1997).

#### 4.2.2 Community Response

There have been commendable efforts to mobilize community members against the AIDS epidemic. Various community groups have been organized and facilitated to provide information, education, communication, care and social support such as counseling in the area of HIV/AIDS prevention and care. For example TASO community initiative was formed

in November 1987 to provide counseling to PHAs and other family members, conduct training of counselors and also provide social support, clinic and home-based-care to PHAs. The AIC was established in 1990 to provide voluntary and anonymous HIV testing/counseling and has since then extended these services to at least 300,000 individuals. Religious groups have initiated programs in their communities to extend care and support to HIV infected and affected persons. Hospitals such as Kitovu Hospital in Masaka and St. Francis Hospital in Nsambya initiated mobile AIDS home care programs that reach-out to PHAs, and a number of hospitals including Mulago Hospital are utilizing this service delivery model.

In addition, several organizations focusing on children issues such as Uganda Women Effort to Save Orphans (UWESO), Feed the Children, Kakiri Children Village and Friends of Children Association (FOCA) were established to provide care and support to orphaned children lacking or with inadequate support from relatives. And a number of organizations such as the Uganda Co-operative Alliance, Federation of Uganda Employers and Educational Institutions have initiated model projects on AIDS in the workplace (Sekatawa & Kiirya, 1997). As a result of these efforts, there are currently between 1,020 - 1,050 NGOs and CBOs undertaking AIDS prevention and mitigation activities in Uganda (NGO/CBO Inventory, 1997).

#### 4.2.3 Donors Response

Since 1987, a number of multilateral, bilateral and private external support agencies have responded by supporting AIDS-related activities in Uganda. The support covered a number of aspects including technical and financial assistance. Funds have been secured for HIV/AIDS activities undertaken in governmental and non-governmental organizations, research institutions and religious groups. Uganda's experience has been widely adopted in other countries (UNAIDS, 1996).

#### 4.2.4 Achievements of the National AIDS Control Program

The implementation of the multi-sector AIDS control strategy has yielded important results Government sectors and the community. These include:

- Initiation of the multi-sector AIDS control approach and adoption of the national operational plan by government. These have guided sector planning, resource mobilization and implementation of HIV/AIDS activities at national, district and community levels;
- Formulation of broad policies to guide implementation of HIV/AIDS prevention and control activities in the different sectors and levels of society. Currently, UAC in collaboration with other partners is developing policy AIDS guidelines for children and young people;
- Establishment of AIDS coordination mechanisms in the government ministries, districts and the community which have actually created an enabling environment for collaboration in HIV/AIDS prevention, care and research between the informal (e.g. traditional health practitioners) and the formal health sector;
- Establishment of a functional NADIC at the Uganda AIDS Commission. NADIC, at present, serves as a collection and dissemination center for HIV/AIDS information in Uganda;
- Provision of support to local NGOs, community based organizations, religious groups and private institutions undertaking HIV/AIDS prevention and control activities in Uganda;
- Involvement of traditional organizations/institutions such as traditional healers, clan leaders, etc in the fight against the epidemic;

- Collaboration between UNAIDS Agencies (World Bank, UNDP, UNICEF, UNFPA, UNESCO and WHO) and bilateral donors (USAID, DANIDA, etc.) in mobilization of resources for the national AIDS control program;
- Clinical trials of highly active HIV/AIDS therapies such as AZT, Kemron, etc.; and
- Preparations for HIV Vaccine Trials.

#### 4.2.5 Challenges

Although the multi-sector national AIDS control program scored several achievements, a number of obstacles in effective implementation still exist. These include:

- Difficulty in local mobilization of resources for HIV/AIDS activities given the declining support from the external support agencies (ESAs);
- Difficulty in translating to the 90-95% public awareness on the epidemic to sustained adoption of risk-reduction behaviors;
- Ineffective co-ordination of HIV/AIDS activities, particularly at district and community levels which has sometimes resulted to duplication of services and wastage of resources;
- Minimal HIV/AIDS advocacy by district and community leaders which has resulted to low community participation in HIV/AIDS work;
- Inadequate involvement of a number of other sectors essential in AIDS prevention and control such as associations and networks of PHAs, legal practitioners, academic and research institutions, the private commercial enterprise, the media, traditional and cultural institutions, commercial sex workers, and substance or injecting drug users (alcohol consumption and drug);
- Lack of a preventive vaccine and access to an effective HIV/AIDS care/treatment by a majority of the people in Uganda;
- Inadequate basic and operational studies on behavioral and psychosocial aspects of HIV/AIDS, and absorption of interventions that have been proven to work elsewhere; and
- Difficulty in finding mutually acceptable avenues for close cooperation and collaboration in funding HIV/AIDS activities in Uganda other than those already existing (NADIC Fact Sheet, 1997).

#### 4.2.6 Conclusion

Through the multi-sector approach, Uganda has been able to tackle the epidemic through multi-pronged intensive education campaigns, condom education and distribution, voluntary HIV testing and counseling, STD treatment and control, and the provision of safe blood supplies. Programs providing long-term supportive care and terminal care for persons living with AIDS have also been implemented in many areas, and counseling has become available in many areas. Persons living with AIDS have formed associations to provide mutual support and educate individuals, families and, communities on the socioeconomic impact of the epidemic (Sekatawa & Kiirya, 1997).

Efforts to control and respond to the AIDS epidemic through the multi-sector approach have been greatly enhanced by the strong political commitment and leadership at every level. These efforts have resulted to, high level of awareness on the diseases, behavioral change including reduction in the number of casual sexual partners, increased adoption of condom use and trends towards a later age of sex debut, and decline in the rate of HIV infection (UAC, 1996; Sekatawa & Kiirya, 1997).

Uganda's success in the implementation of the multi-sector AIDS control strategy, at present, has been dependent upon the high degree of cohesion, collaboration and cooperation

between Government, non-governmental organizations, community-based organizations, religious organizations, the private sector, and external support agencies (NADIC Fact Sheet, 1997).

Since a cure and a vaccine for HIV/AIDS are not yet available, mitigation of the epidemic in Uganda can better be achieved through intensification of AIDS information, education, counseling, and home based care for PHAs and support for the ever-increasing population of orphans.

### **4.3 National AIDS Information and Documentation Center (NADIC)**

#### **4.3.1 Background**

The National AIDS Documentation and Information Center (NADIC) began in 1995 as resource center within the Uganda AIDS Commission mainly to fulfil one of the five goals of the national AIDS control strategy i.e. "To establish a national information base on HIV/AIDS". It was established to specifically collect a wide range of up to date HIV/AIDS-related information from local and international sources and avail/access it to different organizations or individuals involved in the struggle against the epidemic.

With financial and material assistance from the Governments of France and Japan, the resource center at UAC developed into the NADIC. This assistance was extended after extensive bilateral discussions between the UAC and the Governments of France and Japan through the Center Regional d' Information et de Prevention du SIDA (CRIPS) based in Paris and the Japanese International Co-operation Agency (JICA). Alongside these discussions, extensive consultations with representatives for local organizations that are active in the struggle against HIV/AIDS were conducted on the nature, structure and management of the proposed resource center.

Through these consultations, it was agreed that NADIC should operate under the UAC so as to ensure easy access to counterpart funding and to even dissemination of information to all sectors. A NADIC Task Force comprising of 14 members drawn from different organizations active in the field of HIV/AIDS, information and documentation, and within the donor community was set up to guide the establishment of NADIC. A memorandum of understanding stipulating the staffing, technical support and equipment requirements was prepared and signed in July 1995 between the Ambassadors of the Governments of Japan and France in Uganda and the Minister of Finance and Economic Planning representing the Government of Uganda.

As a result, the UAC resource center was upgraded into the NADIC with facilities to enable it serve the national information needs and later assume a regional role in information sharing and exchange by the year 1999.

#### **4.3.2 Roles and functions of NADIC**

According to UAC (1998), NADIC was initiated to:

- Promote appropriate HIV/AIDS information gathering and processing in Uganda;
- Put in place a national information base on all aspects of the AIDS epidemic for use by partners in and outside Uganda;
- Collate and avail to the public a range of up-to-date HIV/AIDS information;
- Extend technical assistance to local communities in the collection and documentation of information;

- Strengthen national capacity to analyze, assess and update existing information on HIV/AIDS; and
- Serves as a national clearing house of all information related to the AIDS epidemic.

#### 4.3.3 NADIC Services

NADIC, at present, has endeavored to build capacity and broaden its services to reach a wide range of users. It operates a Library, an Audiovisual Unit and a Computer Database on a range of HIV/AIDS issues.

##### The Library

- Has more than 3,000 titles of published and unpublished literature collected from local and international sources;
- Develops HIV/AIDS-related materials and distributes them to local and international users; and
- Serves as an HIV/AIDS information source and sharing/exchange center for all sorts of users.

##### The Database Unit

- Develops and maintains databases;
- Offers database searches from the local and international databases mainly on Compact Disks (DC); and
- Produces simple publications such as HIV/AIDS information leaflets, fact sheets, brochures and Bulletin.

##### The Audiovisual Unit

- Has audiovisual capture, display machines and other facilities that are used in video editing;
- Lends out some equipment to different partners upon request;
- Assists a number of partners to edit/produce educational video information; and
- Has collected at least 150 audiovisual materials that are accessing at NADIC or outside with prior arrangements.

##### Technical Assistance

- Provides specialized assistance on HIV/AIDS information and documentation to different community initiatives;
- Disseminates selective information to specialized HIV/AIDS organizations; and
- Jointly generates and documents information with partners already active in this field.

#### 4.3.4 Achievements

Since 1995, NADIC has been able to:

- Gather literature on the different aspects of the epidemic and accessed it to a range of users through its library facility;
- Build an information base of references on HIV/AIDS/STD surveillance, care and prevention efforts, meetings, seminars/workshops, conferences and courses held or going on in and outside the country;

- Set up an inventory of organizations that provide HIV/AIDS services and funding for AIDS activities have been included in the data base;
- Include in the database at least 2,000 information and educational items in form of brochures, newsletters, posters, manuals, teaching guides, audio-visual tapes, review and research reports, textbooks and journals have been collected;
- Collect several press articles on different HIV/AIDS issues and compile them into a file of news clippings;
- Establish an HIV/AIDS profile to provide basic information for planning and monitoring AIDS activities in each district;
- Established a library with a collection of local and international publications and unpublished literature on the epidemic;
- Introduced E-mail services to assist users in accessing HIV/AIDS information through the Internet;
- Developed, publish and distribute to different partners national guidelines, papers and reports presented in different seminars/workshops;
- Set up an audio-visual section with an audio-visual capture, display and editing facilities;
- Develop/edit a number of video tapes on HIV/AIDS for different partners; and
- Lent to partners still cameras, cassette recorders, audio/video tapes when undertaking HIV/AIDS related activities (NADIC, 1998).

#### 4.3.5 Constraints and challenges

Whereas NADIC has recorded a number of achievements, it still encounters structural and logistical constraints and challenges. These include:

- Inadequate flow of information from different sources;
- Lack of an effective HIV/AIDS information management system at district and lower level to assist in generating data and feed it into the national information base;
- Shortage of expertise and logistics needed to establish and sustain a management information system at district and lower levels;
- Inadequate analysis, use and delays in reporting of HIV/AIDS information due to negligence and low training in information management and remuneration of personnel at different levels; and
- Lack of comprehensive information on the impact of HIV/AIDS on the economy and low public knowledge on the kind of services available at the NADIC and how to access it (NADIC, 1998).

### **4.4 The National Strategic Framework for HIV/AIDS Activities (1998 – 2002)**

#### 4.4.1 Background

The national strategic framework for HIV/AIDS Activities (1998 – 2002) in Uganda was an outcome of a protracted process of extensive consultations among a wide range of stakeholders involved in the field of HIV/AIDS in Uganda. This included government and non-governmental organizations (NGOs); networks and associations of persons living with HIV/AIDS (PHAs); research institutions; religious and social-cultural institutions; individuals knowledgeable in HIV/AIDS; and a team of consultants.

A core group of representatives from eleven key organizations (CG 11) involved in HIV/AIDS activities in Uganda undertook the task of drafting this framework. These are Uganda AIDS Commission (UAC), Ministry of Health (MoH), Ministry of Local Government (MoLG), Ministry of Finance, Planning and Economic Development (MFPED), Joint United Nations Program

on AIDS (UNAIDS), United Nations Population Fund (UNFPA). Others included Islamic Medical Association of Uganda (IMAU), The AIDS Support Organization (TASO), Joint Clinical Research Center (JCRC), Medical Research Council (MRC), and Networks and Associations of PHAs. The CG 11 was later expanded to include a representative from United Nations Children Fund (UNICEF) and Uganda Youth network on AIDS and STDs (UYNAS).

The drafting exercise was achieved through a series of meetings of the CG 11 and its thematic sub committees. Relevant information was obtained from a range of commissioned studies. These included: the National AIDS Control Policy Proposals (1996); HIV/AIDS research Results and its Summary (1997); HIV/AIDS Status Report (1997); HIV/AIDS Research Inventory (1997); and STD/HIV Sentinel Surveillance Reports of the Ministry of Health (1991 – 1997). Other information was obtained from Progress Review Reports for a number of local and international agencies, and through interviews with individual specialists and partners in the field of HIV/AIDS.

The draft framework was scrutinized and refined during the two workshops that involved major partners in the area of HIV/AIDS in Uganda. The first workshop was held from September 15 – 18, 1997 in Hotel triangle in Jinja, and the second was held from November 24 – 26, 1997 at Hotel Equatoria in Kampala. The latter followed the incorporation of the recommendations reached during the retreat of major partners held in Jinja, and of the inter-ministerial committee that reviewed the institutional arrangements of UAC vis-à-vis the ministries of health presidential affairs, and the coordination mechanisms for HIV/AIDS activities at district and lower levels. The Kampala workshop brought together all partners in the field of HIV/AIDS at national and district level. Participants included chief administrative officers and district medical officers of all districts in Uganda, and representatives of NGOs, religious organizations and relevant government ministries. This workshop provided the opportunity to further refine the second draft framework, build consensus on the proposed AIDS activities and adopt the framework as a working document (Sekatawa & Kiirya, 1997).

#### 4.4.2 Purpose of the Framework

The new strategic framework is intended to:

- Provide overall guidance for all activities geared towards preventing the spread of HIV/AIDS and mitigating the adverse health and socioeconomic effects of the epidemic in Uganda; and
- Serve as the basis for the mobilization of resources to implement the national AIDS program.

More specifically this framework is meant to assist partners in designing appropriate interventions and in redefining their roles in the fight against HIV/AIDS through 1998 – 2002. Different partners are expected to “buy into” the framework through developing interventions and funding project activities that are in line with the national goals, objectives, strategies and activities cited in the framework. Designed interventions may vary according to the different loci of operation at national, district and community levels.

#### 4.4.3 Structure of the Framework

The framework comprises of six chapters. Chapter one re-states the national philosophy regarding HIV/AIDS and lists the ideals to be preserved and nurtured even in the face of the AIDS epidemic. These include promoting individual and collective community participation at all levels, national security, an independent and self-sustaining economy, equitable and non-

discriminatory attention to the HIV/AIDS problem and aspirations that are in line with the HIV/AIDS trends.

Chapter two gives a situational analysis of the HIV/AIDS trends. Chapter three highlights the planned strategies, activities, achievements and the outstanding issues under the national operational plan covering the period 1993 – 1997, to which the framework is sequel. Chapter four outlines the seven program goals and objectives, strategies, activities, lead actors and process and outcome indicators under each goal for the period 1998 – 2002, Chapter five indicates the institutional arrangements for implementing and coordinating HIV/AIDS activities over the five-year plan period. Chapter six outlines the desirable mechanisms for monitoring and evaluating HIV/AIDS activities at various levels.

#### 4.4.4 General Observations

It is generally observed that:

- There is neither a vaccine nor cure for HIV/AIDS;
- Although the prevalence of HIV/AIDS recorded at sentinel surveillance points shows a downward trend, the current national prevalence of about 12% is high, and decline in prevalence rates suggests a change in behavior;
- Current interventions alone are unlikely to stop the spread of HIV/AIDS in Uganda;
- Certain populations such as children, adolescents, refugees and displaced persons, migrants, fishermen and commercial sex workers are especially vulnerable to HIV infection;
- Non-awareness of individual's HIV status is a factor of etiologic significance in HIV transmission;
- HIV/AIDS testing, counseling and STD treatment services are unevenly distributed over space and across socioeconomic groups, and rural residents are particularly less accessible to these services;
- PHAs and their families encounter a number of psychosocial and other health-related problems such as stigmatization, discrimination and lack of treatment for opportunistic infections, but have the potential of playing a pivotal role in HIV/AIDS prevention and control;
- A number of leaders at various levels exhibit low levels of awareness and negative attitudes towards HIV/AIDS issues;
- Apart from having a few interventions that specifically address HIV/AIDS-related concerns of vulnerable subgroups such as out-of-school youth, children, refugees, commercial sex workers (CSWs) and fishermen, a majority of HIV/AIDS programs in the country operate under serious technical, material and financial constraints;
- A programmatic approach to HIV/AIDS information sharing, joint planning, implementation and supervision would enhance effective utilization of the scarce resources;
- The clinical and basic science, and psychosocial aspects of the AIDS epidemic are under researched thus a multidisciplinary approach to HIV/AIDS research would greatly enhance people's understanding of the different dimensions of the epidemic.

#### 4.4.5 General Recommendations

In view of the gaps identified during the implementation of the national operational plan for 1993 – 1997, it was proposed to:

- Promote innovative and community-friendly prevention and control strategies on HIV/AIDS in order to accelerate behavior change;
- Ensure availability, accessibility and affordability of condoms, HIV/AIDS-related drugs and information;
- Encourage voluntary HIV counseling and testing particularly among new couples and expand these services to rural areas;
- Strengthen STD case management and promote the syndromic treatment of STDs;
- Strengthen protection of rights and concerns of children, youth and women in the area of HIV/AIDS, and equip them with information and skills for abstaining from sex/ and or negotiating for safer sex;
- Specifically strengthen the protection of legal, ethical and social rights of PHAs, AIDS orphans and children;
- Promote training of community-based HIV/AIDS counselors, educators and health service providers, and programs on AIDS counseling, care and social and spiritual support in the community;
- Advocate for civic and political participation, involvement and commitment on HIV/AIDS activities at national, district and community levels;
- Put in place mechanisms and guidelines for operating a district and community development support fund with particular emphasis to HIV/AIDS-related problems;
- Promote utilization of existing technical institutions and expertise in HIV/AIDS activities;
- Further involve traditional, cultural and religious groups in HIV/AIDS activities;
- Promote effective resource mobilization approaches for HIV/AIDS activities in Uganda;
- Strengthen HIV/AIDS information gathering, sharing and management system at all levels, and increase the capacity of NADIC to handle more HIV/AIDS data and serve more clients;
- Mobilize funds and support for priority research in clinical and basic science, psychosocial economic and epidemiological issues related to the epidemic;
- Reorganize national, district and community level structures to be able to coordinate and participate in AIDS research (Sekatawa &Kiiry, 1997).

As a way to address the gaps identified during the implementation of the national operational plan, the goals were modified and increased from five to seven. These are:

**Goal 1:** To reduce and eventually stop HIV infection;

**Goal 2:** To reduce the vulnerability of individuals and communities to HIV/AIDS with a specific focus on youth and women;

**Goal 3:** To mitigate the adverse health and socioeconomic impact of the HIV/AIDS epidemic;

**Goal 4:** To promote care, support and protection of the rights of the PHAs;

**Goal 5:** To strengthen the national capacity to respond to the HIV/AIDS epidemic;

**Goal 6:** To Strengthen the National Information Base on HIV/AIDS; and

**Goal 7:** To strengthen the National Capacity to undertake Research relevant to HIV/AIDS.

#### 4.4.6 Selected Indicators

A set of process indicators of indicators for monitoring and evaluation of the 1998 - 2002 AIDS prevention and control program have been proposed. They are selected according to the planned activities under each goal and listed alongside the possible sources of information for monitoring. The identified and under mentioned indicators are only indicative of the main yardsticks for assessment of progress. More detailed will have to be worked out by various organizations that will develop HIV/AIDS projects based on the framework. These include:

**Goal 1:** To reduce and eventually stop HIV infection

- Number and effectiveness of IEC messages developed for different population sub-groups such as children, youth, men, other vulnerable groups, and change in attitude towards safer sex;
- Number of PHA organizations, activities and their capacity; and
- Established centers and quality of trainees that use the syndromic approach in STD management, a viable established distribution systems for STD drugs, and decline in STD prevalence.

**Goal 2:** To reduce the vulnerability of individuals and communities to HIV/AIDS with a specific focus on youth and women

- A reduction in age difference between sex partners and debut, and use of alcohol and other intoxicants; and
- Increased use of female-controlled methods such as female condoms and vagina microbicides.

**Goal 3:** To mitigate the adverse health and socioeconomic impact of the HIV/AIDS epidemic

- Increased number of clients for voluntary counseling implying positive change of attitude towards voluntary testing and counseling;
- Reduced hospitalization of patients particularly for PHAs with helpers;
- Number of organizations offering social support to PHAs, and increased amount of support offered;
- Expanded home care services for PHAs; and
- Increased support for PHAs from the community.

**Goal 4:** To promote care, support and protection of the rights of the PHAs

- Number of PHA organizations, their capacity and activities;
- Reduction in the incidence of cases of discrimination against PHAs; and
- Reduction in cases of PHAs subjected to mandatory HIV test before any placement.

**Goal 5:** To strengthen the national capacity to respond to the HIV/AIDS epidemic

- Number of networks/associations for youth, women, and health service providers supported and/or carrying out activities; and
- Number of district, community, cultural and religious leaders sensitized and sensitization seminar reports available.

**Goal 6:** To Strengthen the National Information Base on HIV/AIDS

- Free flow of HIV/AIDS information to and from NADIC;
- Amount of HIV/AIDS materials (numbers of articles, type, origin, etc) at NADIC; and
- Number and effectiveness of behavioral surveillance sentinel points.

## **Goal 7: To strengthen the National Capacity to undertake Research relevant to HIV/AIDS**

- An increase in the proportion of laboratory, psychosocial studies in the area of HIV/AIDS;
- Increased number of HIV/AIDS priority studies undertaken; and
- Number of follow up interventions to priority studies (Sekatawa & Kiirya, 1997).

### **4.4.7 The New Uganda AIDS Commission**

Following the expiration of the national operational plan for HIV/AIDS/STD prevention, care and support in 1997, a new national strategic framework for HIV/AIDS activities in Uganda (1998 – 2002) was developed. This framework articulates major changes in the UAC structure as proposed by the inter-ministerial committee set up to review its authority, mandate, membership, appointment, roles and functions and relationship with the ministry of health and president's office.

#### **Authority**

According to the review, the new Uganda AIDS Commission and its Secretariat shall derive its authority from Parliament and Cabinet, and will be established by statute as an independent agency with mandate to carry out its statutory roles such as policy and administrative matters. It will be self-accounting, and receive funds direct from the ministry of finance from the consolidated funds.

#### **Mandate**

Uganda AIDS Commission's new mandate will include liaison with the MoH on policy issues, making policy decisions, providing leadership to all partners in the HIV/AIDS response, ensuring fulfillment of national goals and monitoring and evaluating the progress in implementing the national plan. UAC will have the ministry of health as its line ministry, and be answerable to it on policy matters. The MoH will present HIV/AIDS matters in cabinet.

#### **Composition**

The new commission will be composed of a chairman not belonging to any government ministry and a maximum of seven members who are men and women of integrity and influence and, with knowledge and experience in HIV/AIDS. These will include one PHA, youth and at least one woman.

Appointment of Commissioners and Director General for the Secretariat will be done by the President through an established political procedure that will involve the minister for presidential affairs proposing names to the prime minister, approval of suitable candidates by cabinet and appointment of the successful candidate.

#### **New Roles and Functions**

Uganda AIDS Commission, being the lead agency for the coordination of the implementation of all AIDS programs, its principal role shall be to:

- Provide overall leadership, guidance and coordination of HIV/AIDS partners and activities in planning, implementing, managing and evaluating the national AIDS program;
- Institutionalize a national joint planning team (NJPT) for the purpose of over seeing the national HIV/AIDS program, specify data needs for evaluation, convene quarterly

- meetings of the NJPT for purposes of planning and harmonizing plans and reports, and effectively monitoring and evaluating the national program;
- Spearhead information gathering and sharing by way of strengthening NADIC, convening regular conferences/workshops with the purpose of sharing research findings, and disseminating information on any evidence of HIV/AIDS-related behavior change, drugs, vaccines development and other related issues; and
  - Cause the establishment of HIV/AIDS technical committees in different sectors and an investigation into alleged misappropriation of funds for HIV/AIDS activities.

### Coordination

Uganda AIDS Commission through its Secretariat is primarily responsible for overall coordination of all AIDS activities in Uganda, and for periodic evaluation and monitoring of the national program. According to the new strategic framework, the responsible bodies in line ministries and at district and sub county level will directly coordinate, monitor and evaluate projects under their purview. In addition to designing a system of collecting, collating and analyzing information from the implementing agencies, the commission shall cause its Secretariat to develop their in-house capacity for monitoring and evaluation. In particular, implementing institutions and NGOs shall develop regular reporting systems using guidelines from the Secretariat and prepare more frequent reports (quarterly, monthly, etc.) to feed into the national report.

Coordination at district and lower levels is to be done by a committee/body that either already exists or established for that purpose as deemed fit by the respective district and lower level authorities. The committee mandated to coordinate HIV/AIDS activities at each local government level has to maintain a link with Uganda AIDS Commission which by law established is responsible for overall coordination of the national HIV/AIDS program (Sekatawa & Kiirya, 1997).

## **5.0 SUMMARY RESEARCH AND INTERVENTIONS ON HIV/AIDS**

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### **5.1 Introduction**

Because HIV/AIDS is a new and unique disease, research is the basis to the epidemic's effective prevention and control in Uganda. As a result, a considerable amount of research has been undertaken in the field of prevention, socioeconomic, epidemiological laboratory, clinical and behavioral issues related to HIV/AIDS. Since 1992, about 359 studies on HIV/AIDS have been undertaken. Of these, 87 are clinical, 12 are laboratory, 97 are epidemiological, 111 are psychosocial and 52 are economic (Ntozi, et. al., 1997). However, given that some of the studies related to HIV/AIDS are not reported or are just beginning or ongoing, the actual number studies so far done supersedes the above figure by far.

Individuals who have made significant contribution to HIV/AIDS research have come from:

- HIV/STD Epidemiological Unit of Ministry of Health;
- Makerere University;
- Joint Clinical Research Center;
- Uganda Virus Research Institute/Medical Research Council;
- Collaboration Universities outside Uganda; and
- Of recent some NGOs (NCST, 1998).

The distribution of AIDS related studies undertaken clearly shows that laboratory studies are under-represented. Likewise, psychosocial research particularly on the effects of HIV/AIDS on PHAs and their families, the causative and predisposing factors of HIV/AIDS and effects of HIV/AIDS on infected children and adult lifestyles were not adequately addressed. In addition, evaluation of existing interventions on behavior change, STD diagnosis and treatment, vaginal microbicides, HIV counseling and testing, HIV vaccines and cost effectiveness and sustainability is still wanting. Also wanting is evaluation of interventions on identification of best clinical practice to control HIV associated infections, use of anti-retroviral drugs, vaccine development, application of molecular virology to HIV transmission, HIV pathogenesis, host susceptibility, and community involvement in HIV/AIDS research (Sekatawa & Kiirya, 1997).

### **5.2 Indicative Priority Research Areas**

#### **5.2.1 Priority Research Areas in Basic Science**

For the period 1998 – 2002, priority research in the field of basic science will focus on:

- Vaginal microbicides;
- HIV retroviral drugs;
- Molecular and biological characterization in relation to HIV transmission;
- Progression and vaccine research;
- Pathogenesis such as viral and host factors and co-infections and improved diagnostics;
- Molecular epidemiology and its tools;
- Progression markers;
- Immunity and viral interactions between HIV and other diseases;
- Vertical HIV transmission;
- HIV and other viruses like herpes; and
- Correlates of protective immunity and resistance to HIV and in-vitro studies on herbal medicines (HIV/AIDS Research Prioritization Seminar Report, 1997).

### 5.2.2 Priority Areas of Research in Clinical Science

In clinical science, priority research areas include:

- Preventive chemotherapy and cost effectiveness of treatment for opportunistic diseases;
- Care improvement and rapid diagnostics;
- Alternative treatment for HIV/AIDS;
- Cost effectiveness of treatment options;
- Causes of mortality;
- Trends in symptomatology;
- HIV and cancer of the cervix or other cancers;
- Herbal medicine for HIV;
- Pediatric AIDS management;
- Pregnancy and HIV transmission;
- Drug resistance trends or validation of treatment algorithm and partner notification in STD treatment; and
- Neuro-psychiatric problems and nursing care (HIV/AIDS Research Prioritization Seminar Report, 1997).

### 5.2.3 Psychosocial and Economic Sciences

The research areas under economic and psychosocial sciences to be given top priority include:

- Dynamics of the decline in HIV/AIDS prevalence;
- Psychosocial context of AIDS;
- Accessibility to drugs;
- Determinants of long term survival with HIV/AIDS;
- Discordant HIV status issues;
- Gaps in knowledge on the epidemic and behavior change;
- Linkages between culture and HIV/AIDS;
- Dimensions of HIV transmission among vulnerable groups;
- Demographic impact of HIV/AIDS;
- Cultural constructions on STDs;
- AIDS and economic dependency; and
- The relationship between alcohol/drug abuse and HIV/AIDS (HIV/AIDS Research Prioritization Seminar Report, 1997).

### 5.2.4 Epidemiological Priority Research Areas

The priority research areas include:

- Trends in HIV/STD prevalence and individual sexual behavior;
- Traditional practices and alcohol/drugs vis-a-vis HIV transmission;
- Impact of AIDS on fertility/mortality and morbidity;
- Developing care indicators for monitoring and evaluation; and
- Evaluation of existing interventions (HIV/AIDS Research Seminar Report, 1997).

## **6.0 MAJOR ONGOING HIV/AIDS PROGRAMS**

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### **6.1 Major HIV/AIDS Organizations, Donors and Interventions**

The first AIDS cases in Uganda were observed in 1982. Before then, little was known about HIV, the virus that causes AIDS. As a result, government and society response was negligible. As HIV spread and more scientific evidence appeared, the number of AIDS cases increased considerably. By 1986, virtually all parts of Uganda had reported deaths with symptoms of AIDS, and subsequently became clear that the implications of AIDS were immense and multidimensional (UAC, 1996). Therefore, government and the civil society initiated a wide range of programs with the view to address all aspects of HIV transmission and the impact of AIDS on the community. Most of these programs focus on HIV/AIDS/STD surveillance, testing, patient care, counseling, education, communication and information provision; socioeconomic support to PHAs and the affected families; research; vaccine development; and resource mobilization and capacity building at national and community level.

#### **6.1.1 Major Intervention Agencies**

Under the leadership of Uganda AIDS Commission, a number of governmental and non-governmental organizations have especially been active in implementing these programs/initiatives in Uganda. The major implementers of AIDS activities in the government sector include the ministries of health, gender and community development, information, internal affairs, education, defense, public service, and planning and economic development. The key NGOs include TASO, Uganda Red Cross Society, AIDS Information Center, Islamic Medical Association of Uganda, Joint Clinical Research Center, Medical Research Council, Medicin du Monde, Delivery of Improved Health Services (DISH), Youth Alive, Church Human Services (CHUSA) and Catholic Secretariat. Others include Rakai AIDS Information Network (RAIN), CONCERN Worldwide, Associations and Networks of Girls Guides, Boy Scouts, Youth and People Living with HIV/AIDS such as National Community of Women Living with AIDS (NACWOLA) and National Guidance and Empowerment Network (NGEN+).

#### **6.1.2 Major Donor Agencies**

These organizations are being facilitated by different multilateral and bilateral external support agencies to implement a range of HIV/AIDS activities. Examples of multilateral agencies include UNICEF, WHO, UNAIDS, UNFPA, UNDP, UNESCO, World Bank, UNHCR, WFP, FAO, Carter Center Global 2000, EEC, IFAD, ICRC, Lutheran World Federation. The bilateral support agencies include USAID, DANIDA, AVSI, CUAMM, DFID, CARE, NORAD, GTZ, Irish AID, CIDA, SIDA, and the governments of Italy, Japan, France, Belgium, Sweden and Spain. These support agencies have extended funds either directly to government departments and NGOs/CBOs implementing activities-related to HIV/STD/AIDS or indirectly to the different partners through a few mandated government agencies. Examples of government agencies through which resources for HIV/STD/AIDS activities are channeled include the STI project, Population Secretariat, Project Implementation Unit for HIV/AIDS and Poverty Reduction Program and the National Execution Unit.

Among the bilateral support agencies, the Italian government specifically extends funding towards the national tuberculosis program, national AIDS control program, primary health care program, district health projects, and the rehabilitation of orthopedic and physiotherapy services in various referral hospitals in Uganda. These include Mulago, Mbarara, Kabarole, Hoima, Lacor, Arua, Maracha, Angel, Aber, Yumbe, and St. Joseph and Kalongo hospitals

in Kitgum district. In addition, the government of Ireland supports priority health activities including HIV/AIDS services in the districts of Kibaale, Ntungamo, Kumi, and Norway supports HIV/AIDS activities in the districts of Masaka, Rakai, Kalangala, Mpigi, Mbale, Soroti, Kapchorwa, Pallisa and Tororo through the Lions AID project. Meanwhile, the government of Spain funds the expansion of health centers and the bed-capacity for hospitals in Kisoro and Kamuli (Inventory of Health Services, 1996).

USAID funded Uganda AIDS Commission and its activities from 1990 to 1995. Furthermore, with support from UNAIDS, government has carried out a national review of the national AIDS control program, a number of sensitization seminars, workshops, symposia, conferences involving managers/leaders of NGOs and community, religious and cultural groups active in the field of HIV/AIDS. Recent support from UNAIDS was committed towards carrying out an extensive review of HIV/AIDS activities in Uganda, and the development of the HIV/AIDS NGO/CBO Inventory (1997) and the National Strategic Framework for HIV/AIDS Activities in Uganda (1998-2002).

### 6.1.3 Amount Spent on HIV/AIDS activities

Although the actual amount of funds committed towards HIV/AIDS prevention and control activities in Uganda is difficult to determine, it is known that government and donor agencies have committed significant resources towards these efforts with most (over 70%) of the funding coming from donor agencies. During the period 1994-1996, an estimated US \$ 117 million (about 117 billion shillings) was spent on HIV/AIDS activities. It is further projected about US\$ 130.7 million will be spend on HIV/AIDS activities between 1998-2001 (Kayita & Kyakulaga, 1997).

The government and community self-help initiatives are the other sources of funding. Government support is usually in the area of procurement of essential drugs, capacity building through training, payment of service provider's salaries, and strengthening HIV/AIDS coordination at national, district and lower levels (UAC, 1997).

Through the ministry of health and in collaboration with donor agencies, government is working out an approach for assessing all forms of donor/local resources mobilized and used on HIV/AIDS prevention and control activities in Uganda in order to determine how much is actually spent each year.

### 6.1.4 Major Ongoing Interventions

Since 1992, the UNDP supported HIV/AIDS Prevention and Poverty Reduction Program has been one of the major programs in the field of HIV/AIDS in Uganda. This program however, expired in December 1997 after making significant impact in this area.

According to the Inventory of health Services (1998) the major ongoing interventions include:

- Decentralization of HIV counseling and testing project (DHCTP);
- Program for enhancing adolescent reproductive life (PEARL) in Uganda;
- The STI project in the Ministry of Health;
- The Uganda Blood Transfusion Services;
- Delivery of Improved Health Services for Health (DISH) Project;
- Voluntary HIV Counseling and Testing Project at AIDS Information Center;
- Basic Health Services Project in Kabarole District funded by GTZ;
- Basic Education, Child Care and Adolescent Development Program;

- Family Health Project supported by DFID;
- TASO Community Care, Counseling and Training Initiatives;
- District Management Program supported IFAD;
- Mildmay's Palliative Care Services for PHAs; and
- IMAU Family AIDS Education and Prevention through Imams.

More specifically, AIC and TASO have extended HIV/AIDS-related testing and psychosocial support services to different communities in Uganda. The AIC mainly offers HIV counseling and testing services to the districts of Kampala, Masaka, Mbarara, Jinja, Luwero, Kabarole, Arua, Kamuli, Mbale, Rakai, Kasese, Ntungamo and Tororo, while TASO extends psychosocial support services mainly to PHAs in the districts of Kampala, Masaka, Mbarara, Tororo and Arua. However, in order to maximize resources and sustain ongoing HIV counseling and testing services at community level, there is a growing collaboration between AIC and TASO and a move towards the integration of HIV testing and psychosocial support services.

In addition, various NGOs such as NACWOLA, NGEN+, Plan International, Oxfam, IMAU, ACFODE, CHUSA, UWESO, ACTION AID, CONCERN Worldwide, RAIN, Philly Lutaya Initiative, STI project and the GTZ integrated community health project have collaborated with district and civic groups and extended HIV/AIDS activities to rural communities. As a result, duplication of HIV/AIDS prevention and control services has been limited, and a number of rural residents especially PHAs who reside in districts where AIC and TASO do not operate have been able to access HIV/AIDS testing, care, education, information and counseling services.

## **6.2 Profile of Some Major Programs**

### **6.2.1 Decentralization of HIV Counseling and Testing Project (DHCTP)**

The DHCT project builds on the experience of ministry of health and that of NGOs working in the area of voluntary counseling and testing (VCT) such as AIC to make VCT services accessible to a wider proportion of the population in Uganda. This project is located in, and implemented by the Care and Support Unit of the STD/ACP of the Ministry of Health. It is supported by UNFPA with the Norwegian Trust Funds totaling US\$344,859 equivalent to 4.5 billion Uganda Shillings (DHCTP Document, 1998).

This project aims at preventing the spread of HIV/AIDS and improving the quality and length of life of PHAs through behavior modification following knowledge of personal HIV sero-status: attainable through phased decentralization of voluntary counseling and testing services to the districts. The project seeks to provide VCT services and early knowledge on HIV status to 40% of the adult population, and confirm suspected cases of HIV/AIDS in health care facilities in the districts of Iganga and Hoima. And in so doing, promote the adoption of positive living behavior among HIV positive and negative persons and better management (DHCTP Document, 1998).

This project is being piloted in the districts of Iganga until the end of 1998, and the experiences gained would be used to replicate the project in ten, twenty, and thirteen additional districts of Uganda in 1998/1999, 1999/2000, and 2000/2001 respectively. It builds on already existing health personnel and infrastructure, and utilizes an innovative implementation strategy of integration of VCT services with maternal child health and family planning services at the already existing HIV test sites (DHCTP Document, 1998).

According to the DHCTP document (1998), the activities for project component on VCT in the pilot districts include training relevant personnel counseling and testing, procurement of equipment supplies and test kits, mobilization of district health teams, supervision, and monitoring and evaluation. For the community mobilization and promotion of positive health behavior among tested persons components, the project carries out mass media activities, sensitization meetings for TBAs and local and religious leaders, interpersonal communications by counselors, and established post test clubs (PTCs), procured recreational equipment for PTCs and hold monthly PTC meetings.

VCT is carried out three days per week in four static HIV-testing centers and once in a month in the eight outreach-testing areas respectively. The static VCT centers include Iganga, Mayuge, Hoima and Kigoroby hospitals, while the outreach VCT areas include Kiyunga, Namutumba, Kigandalo, Busala, Mparangasi, Kikuube, Kabwoya and Kyangwali health units. Laboratory assistants and counselors (trained nurses) based at the static HIV-testing centers carry out VCT outreaches (DHCTP Document, 1998).

Preliminary results on this project available at the STD/ACP of the ministry of health (1998) indicate that the number of persons seeking HIV tests is progressively increasing at the fixed and outreach centers. However, the impact of the project particularly on the health behavior of those tested is yet to be determined through an evaluation study.

#### 6.2.2 STI Project

The sexually transmitted infections (STI) project is implemented by the ministry of health, NGOs and CBOs for 5 years up to 1999 with credit from the World Bank of US\$50 million, and specifically targets men and women at risk in their reproductive age groups and their dependants in Uganda. The main components of this project include:

- Prevention of sexual transmission of HIV and other STDs. Under this component the project finances awareness and mass and community mobilization campaigns using government and NGOs/CBOs, targeted behavioral interventions and services aimed at risky groups through NGOs/CBOs programs, provision of condoms/drugs and care/treatment of STDs, and staff training;
- Mitigation of the personal impact of AIDS. Under this component, support is extended to community and home-based health care and to PHAs through district and community-based NGOs/CBOs. It also gives support for staff orientation and purchase of drugs, clinical and protective supplies to deal with or treat or prevent opportunistic infections, and the diagnosis and case management of tuberculosis; and
- Institutional development: which includes supporting the development of central and district local governments capacity to plan and manage STD/AIDS programs, surveillance, operational research, innovative NGO/CBO activities, and monitoring and evaluation of activities (STI Project Document, 1994).

The implementation framework for this project is in line with Uganda's movement towards decentralization and community mobilization, and involves supporting and facilitating NGOs and the community to coordinate AIDS-related activities regardless of the funding sources. Besides developing guidelines and providing training, technical and commodity support to districts, the STD/ACP of the ministry of health conducts activities related to mass awareness and mobilization, while some central level activities such as social marketing of condoms is organized and undertaken by NGOs (STI Project Review, 1997).

According to the mid-term review of the STI Project (1997), it is evident that since 1994, when this project was initiated, a number of activities particularly on promotion of condoms,

safe sexual behavior and STD care have been supported and implemented at national and community level. Other areas where significant impact has been caused by this project include promotion of activities for associations/networks of PHAs and community and home-based care, purchase and distribution of drugs for opportunistic infections and protective supplies to all district health facilities, and training various staff cadre to deal with STIs. And through guidelines developed at national level, the capacity for districts, NGOs, and CBOs to plan, implement, monitor and evaluate health programs has been strengthened.

It is expected that by the end of 1999 when this project will expire, considerable change would have been caused in reducing sexual transmission of HIV and other STDs, mitigating personal impact of AIDS and institutional development at national and lower levels.

### 6.2.3 PEARL Program

PEARL is a community-based program whose overall objective is to enhance adolescent reproductive health in Uganda through the creation of a more conducive environment and provision of adolescents with appropriate reproductive health counseling and services. It is funded by UNFPA, executed by the ministry of gender and community development, and ongoing till the year 2,000 in the districts of Iganga, Mubende, Kabarole, Gulu, Kiboga, Kibaale, Tororo and Kotido. It is managed by a national steering committee that draws its representatives from key Ministries and NGOs such as Ministry of Education (MoE), Ministry of Local Government (MoLG), Ministry of Health (MoH), United Nations Children Fund (UNICEF), Population Secretariat (PopSec), and Ministry of Planning and Economic Development.

Although the out-of-school adolescents are the major target population, school going ones and community members especially elders, political and religious leaders are also targeted. Activities include:

- Sensitization of community members on a range of reproductive health issues;
- Training already existing health service providers in delivery of quality RH services;
- Provision of RH drugs and equipment to health units, peer education;
- Establishment of youth centers for recreation, RH counseling and skill development.

Through these interventions, the number of adolescents who seek RH-related counseling, condoms and other services at the youth multipurpose centers has increased markedly. Likewise, there is growing support for the program by community leaders, parents and adolescents themselves (Kiirya, 1996).

This program has demonstrated that adolescent reproductive health/life can be enhanced within a community framework, and collaboration among social sectors with a stake in RH issues is a pre-requisite for easy access by adolescents to RH services. In addition, with proper coordination, special RH services can be provided to adolescents using already existing health infrastructure, and through creating an adolescent-specific social space for interaction, young people can mobilize themselves in promoting their own reproductive health/life. However, improving reproductive life particularly among out-of-school adolescents at community level is difficult to achieve and sustain without creating an enabling environment to generate their own income (Kiirya, 1996).

### 6.2.4 Uganda Blood Transfusion Services (UBTS)

Supply and transfusion of safe blood and products is an essential part of saving life of those in dire need of blood, and preventing HIV infection. Therefore, with funding from the

Government of Uganda, European Development Fund and Uganda Red Cross Society, UBTS was established in the ministry of health to:

- Collect and test blood for hepatitis and HIV virus and distribute it free of charge to all health units where transfusion is done; and
- Carry out public education on the safety of blood donation and transfusion (UBTS, 1998).

UBTS has seven fixed safe blood collecting, processing and distribution centers located in Nakasero, Mbale, Mbarara, Gulu, Fort Portal, Arua and Kitovu hospitals. Each of these has a mobile team that goes to schools, churches and the community as a whole to educate and recruit blood donors. The team then deposits the collected blood to the blood bank for testing and subsequent distribution. All laboratory tests are done in strict confidence (Kataaha, cited in Winsbury, 1995).

Apart from direct recruitment of blood donors, UBTS works closely with the Uganda Red Cross Society and its clubs located in different parts of the country to recruit voluntary donors. A majority of donors are school children (UBTS, 1998).

Except for the Northern and a few other parts of Uganda where insecurity make direct supplies difficult to deliver, the UBTS is supplying virtually all the hospitals in Uganda with almost all supplies they need of safe blood, and is contributing to medical research in HIV transmission. As a result, UBTS has saved lives, not only of those admitted in hospitals and need blood transfusion and those who have received AIDS education as potential donors but also for those who seek a blood test to know their HIV status (Winsbury, 1995). Recent evaluation studies at UBTS suggests that blood transfusion service may be preventing at least 5,400 new HIV infections a year, as against 18,800 prevented by other means such as condom use, abstinence and reduction in sexual partners (Winsbury, 1995).

#### 6.2.5 DISH Project

DISH is an integrated reproductive health services project being implemented in the districts of Kampala, Jinja, Jinja, Kamuli, Luwero, Masindi, Masaka, Mbarara, Rakai, Ntungamo and Kasese, and is expected to expand to 29 additional districts by the year 2,000. Its major services include:

- Family planning;
- STD diagnosis and treatment;
- HIV testing and counseling;
- Social marketing for change;
- Maternal and child health care;
- Better preparation and utilization of home resources; and
- Reproductive health (RH) information provision and education.

USAID is the major funding agency for most of these services. However, other agencies have also contributed towards the implementation of different components of the project. These include Pathfinder International, Ernie Petrich and Associates, John Hopkins University Center for Communication Programs, African Medical Research Foundation and University of North Carolina Program for International Training Health supporting management, health finance, IEC, training for service providers and improved RH service delivery components of the project respectively. Another funding partner is the Fortunes

Group based in Washington D.C. It supports the social marketing of condoms and oral contraception promotion component.

Through these activities, the DISH project has contributed to the overall increased contraceptive prevalence, condom use and HIV/AIDS awareness among Uganda's population (Kiyonga, 1998; DISH, 1997).

#### 6.2.6 Reproductive Health Services Program

This is an integrated RH service program whose overall objective is to improve the RH status of Ugandans by contributing to a reduction in total fertility rate, maternal mortality and infant mortality rate. It is funded by UNFPA and is being implemented for a period of four years (up to 2000) by the MCH Department of Ministry of Health. The objectives of this program include to:

- Increase contraceptive prevalence rate from 15 - 30% by the year 2000;
- Increase supervised deliveries by trained personnel from 38 - 60% by the year 2000;
- Improve the health management information system for routine monitoring of RH services in 26 districts and at national level;
- Strengthen the quality of RH service delivery of a range of service providers; and
- Improve program management capacity of health units and managers at national and district-level.

This program specifically provides:

- Information education and communication/counseling on reproductive health;
- Contraceptives;
- Reproductive health equipment to a range of health delivery points; and
- Training a wide range of service providers in the delivery of quality and friendly reproductive health services.

Another key component of the reproductive health services program is the rural extended service for care and ultimate emergency relief (RESCUER) project being implemented in Iganga district and six other districts. RESCUER is an innovative community-based projects that addresses maternal delivery complications and mortality in rural areas through:

- Training TBAs and midwives in RH service delivery;
- Equipping health units with safe motherhood facilities; and
- Providing a cost-effective referral system between the health units and the referral hospitals in the pilot district.

Through this project component it has been possible to create a systematic reporting/recording mechanism of the referred cases, and reduce maternal mortality at the pilot referral centers from 48, 36 and 0 cases in 1995, 1996 and 1997 respectively.

The reproductive health services program, has since its inception in 1994, contributed considerably to improvement in the quality of reproductive health services in the targeted communities, and to the overall downward trend in total fertility rate, and maternal and infant mortality rates in Uganda (UNFPA/Government of Uganda, 1998).

### 6.2.7 HIV Counseling and Testing at AIC

The AIC was established in 1990 with funding from USAID to:

- Provide HIV counseling and free voluntary and anonymous testing up to the year 2000; and
- Specifically reduce HIV transmission and enhance psychological adjustment of those already infected.

The main activities include:

- Pre and post HIV counseling and testing;
- Dissemination of HIV/AIDS information;
- Promotion of public awareness on HIV testing;
- Promotion of recreation and education through post test clubs;
- Training HIV/AIDS counselors for main and indirect sites;
- Carrying out data management and evaluative research-related to HIV testing and counseling; and
- Provide technical assistance to projects/NGOs with similar services such as TASO (AIC, 1998).

Initially, HIV testing and counseling was being carried at one center based in Kampala, but due to the growing demand for these services, AIC opened up branches in the districts of Mbarara, Jinja and Mbale. Each branch provides outreach services to different health units within the district where the branches are located and outside in the districts of Ntungamo, Rakai, Masaka, Luwero, Nakasongola, Masindi, Kamuli, Soroti, Katakwi, Kumi, Pallisa and Tororo. By the year 2000, AIC services would have been extended to Moyo, Adjuman, Nebbi, Gulu, Kitgum, Lira, Moroto, Kapchorwa and Kasese (AIC, 1998).

Since 1990, AIC has tested over 300,000 persons for HIV and provided ongoing psychosocial support to clients through post-test clubs, trained and equipped a number of laboratory technicians in handling HIV testing/counseling and kits respectively, and developed and distributed IEC materials on HIV testing to a range of users. These efforts have greatly contributed to the general decline in HIV infection rates in Uganda (Sekatawa & Kiirya, 1997). It is expected that as AIC replicates its services to different parts of the country, especially in rural areas, the number of individuals who seek HIV tests and counseling is likely to increase markedly (AIC, 1998).

### 6.2.8 TASO Community Care, Counseling and Support Services

The TASO community program was initiated in late 1987 by a group of volunteers to address the psychosocial needs people living with HIV/AIDS encounter in their families and communities. The overall objective of the program is to:

- Provide counseling and AIDS education to PHAs and their families;
- Conduct training of counselors; and
- Provide social support, clinic and home-based care to PHAs.

Whereas TASO's program began as a community initiative based in and around Kampala, it later attracted funding from a number of bilateral and multilateral support agencies. The bilateral organizations include USAID, DFID (then ODA), Voluntary Service Overseas (VSO), Danish Red Cross Society, Action AID, Germany Emergency Doctor Service, John

Hopkins University, the Pentecostal Church, WHO, UNFPA, UNICEF and UNDP. This support has enabled TASO to expand its program to the districts of Masaka, Mbarara, Tororo, Mbale, Entebbe, Jinja, Arua. TASO also has intentions to extend its program services to other districts of Uganda by the year 2,000 (WHO/TASO, 1994).

The services offered at each of the TASO centers include:

- Counseling and counselor training;
- Day center service;
- AIDS clinic, home care and children's clinic;
- Material assistance.

Counseling of clients is done every working day of the week, AIDS and children's clinic operate three clinic days per week, day centers runs throughout the week while home visits are conducted once a week. These services are emphasized for several reasons. First, counseling helps PHAs and their families to cope with a range of social and emotional problems arising from HIV/AIDS. Second, day centers provide an opportunity for PHAs and their families to meet, share experiences, make friends and access information on several issues related to the epidemic. Third, the AIDS and children's clinic provides medical care to PHAs and their children whenever need arises at the center. Fourth, home visits (carried out by counselors) give follow up counseling to PHAs who are unable to report on clinic days or at day centers, either because they are too sick, lack transport or fear being seen at the TASO centers (WHO/TASO, 1994).

As a result, more PHAs are becoming interested in TASO services. A recent evaluation of TASO services (1994) shows that the number of PHAs seeking a range of services at TASO centers has been progressively increasing since 1990: with each of them receiving an average of 200 clients per visiting day (Hampton, 1992; WHO/TASO, 1994). In addition, since initiation of the TASO program, a good referral system between TASO centers and hospitals has been created. As a result, a number of TASO-registered PHAs with critical health conditions are often referred to hospitals for admission, while hospitals also refer those diagnosed with HIV to TASO for specialized AIDS counseling (Hampton, 1992). In addition, apart from supplying PHAs with food items, cloths and other items, TASO has been helping a number of orphaned children, particularly those both of whose parents are dead, to identify friends and relatives of the deceased and their eventual placement and adoption.

#### 6.2.9 BECCAD Program

BECCAD is an integrated program whose overall objective is to promote full cognitive and psychosocial development of children and adolescents within a supportive family and community environment conducive to education for all, prevention of HIV/AIDS/STDs, and adequate care and protection for children and adolescents from birth to adulthood.

This program specifically seeks to:

- Enhance and strengthen community capacities to meet and sustain basic education demands, initiate and manage intervention for care, protection and development of children and adolescents, and support HIV/AIDS prevention among young people;
- Strengthen the capacity of schools, extension workers, NGOs and CBOs to provide integrated services in basic education, child care and protection and prevention of HIV/ADS/STDs among children and adolescents;

- Strengthen the capacity at all levels to mobilize and manage resources, basic education, child care and protection and prevention of HIV/AIDS/STDs among adolescents;
- Strengthen national capacity of advocacy, planning, monitoring, evaluation and development of national policies sensitive to gender issues pertaining to basic education, life skills education, child care and protection and prevention of HIV/AIDS; and
- Provide technical support to coordinate and manage BECCAD program.

According to the UNICEF (1995), the new phase of UNICEF support to BECCAD began in 1995 and will expire by the year 2000. The implementation framework for this project is in line with Uganda's movement towards decentralization and community mobilization. BECCAD supports and facilitates government departments, NGOs and CBOs to develop and implement initiatives that are geared towards promoting basic education, childcare and protection, adolescent and prevention of HIV/AIDS/STDs among youth.

According to the mid-term review of the BECCAD program (1997), it is evident that since 1995, community capacities in support of basic education, protection and psychosocial support initiatives for children particularly those affected by conflict have been supported through government departments, district local governments, NGOs and CBOs. The different areas where significant impact has been caused by this program include *inter alia*:

- Promotion of straight talk and young talk on HIV/AIDS/STD;
- Promotion of life skills education in primary schools;
- Expansion of activities for associations/networks of PHAs such as Philly Lutaaya Initiative to rural communities;
- Training various staff cadre at national and district levels to deal with a range of basic education, child care and protection and adolescent development issues;
- Development of guidelines for promotion of developed at national level; and
- Strengthening the capacity for districts, NGOs, and CBOs to plan, implement, monitor and evaluate basic education, childcare and protection and adolescent development initiative.

It is expected that by the end of the 2000, change would have been caused in terms of creating supportive and conducive family and community environment for promotion of cognitive and psychosocial development, and adoption of a range of behaviors that reduce HIV/AIDS/STD transmission among children and adolescents.

#### 6.2.10 The Basic Health Services Project in Kabarole District

This project is an integrated project being implemented in Kabarole district with support from the German Technical Assistance (GTZ) whose overall objective is to raise awareness of HIV/AIDS with the first priority being to establish HIV facilities for surveillance, and voluntary counseling and testing purposes. This project focuses specifically on awareness raising and behavior change, care and counseling, STD treatment, condom education, procurement and distribution, reducing personal and social impact of HIV/AIDS, training and capacity building, and HIV/AIDS/STD research surveillance monitoring and evaluation (UAC, 1996). These activities are mainly targeted towards community members through schools, churches and market places.

Through this project, an HIV laboratory, STD lab, and numerous other services have been established at the district hospital. It is evident from the Review of AIDS Prevention and

Control Activities in Uganda (1996) that as a result of undertaking these activities, the project has also been able *inter alia* to:

- Raise awareness and cause behavior change among community members using health education, drama groups, puppet theatre, counselors, peer educators and community workers, and posters produced in local language;
- Establish a number of home based care sites that currently care for over 478 terminally ill patients;
- Trained community health workers to go out from these sites to provide simple medical care and basic drugs, teaching of home care to family care givers, and emotional support for the patient and family members;
- Initiate a systematic screening and treatment of pregnant mothers for syphilis at the district hospital, and extending similar services to health units throughout the district;
- Train health unit staff in the syndromic approach to STD management, and operate a daily referral clinic at the district hospital;
- Train staff and volunteers associated with other organizations such as religious groups, rural development agencies and private health units in basic health service delivery and management;
- Procure and distribute STD drugs, condoms, etc to all health units in the district; and
- Conduct sentinel surveillance for HIV and STDs every six months, and monitor effectively infection rates and trends in the district (Kagimu, Marum, et al., 1996).

The basic health services project in Kabarole provides an outstanding model of a well planned and implemented project that not only addresses HIV/AIDS issues but also other health problems in the district. Project data and findings from evaluations are routinely used to modify and improve project components and activities, and there seems to be a strong interest and commitment at the community level towards these services. This health service model has been recommended for replication in other districts of Uganda.

#### 6.2.11 The Capacity Building Program for District Network

Towards the end of 1997, the Uganda Network on Law, Ethics and HIV/AIDS (UGANET) obtained funding from the World bank through the STI project of the ministry of health to implement the "capacity building program for districts networks". Through this program, UGANET seeks to establish, build and strengthen the capacity of district networks on law, ethics and HIV/AIDS. It also seeks to sensitize grass root communities on the legal, ethical and human rights implications of HIV/AIDS, and mobilize them to play an active role in promoting a supportive legal and ethical framework. The specific objectives of this program are to:

- Increase awareness of stakeholders about the legal and ethical implications of HIV/AIDS;
- Build consensus towards establishing legal solutions to socioeconomic and cultural circumstances which lead to the spread of HIV/AIDS;
- Build capacity through establishing an appropriate legal and ethical response to HIV/AIDS; and
- Empower district networks with the necessary skills to enable them propagate the mission of UGANET which include developing action plans with activities that promote respect for ethical and legal rights of PHAs and their families.

Program activities include carrying out sensitization seminars, capacity building workshops, lobbying and advocacy on the critical legal and ethical issues related to HIV/AIDS. These

activities have so far been implemented in 20 districts of Uganda. It is expected by the end of the program, all districts of Uganda would have been covered. The impact of this program on the different levels of the community is yet to be evaluated.

### **6.3 Major Target Groups**

According to the HIV/STD surveillance Report (1998), HIV prevalence is highest among individuals aged 15-35. This age group has been the center of focus for most of ongoing programs in Uganda. Special emphasis has been laid to activities that target the most vulnerable groups such as adolescents especially girls out-of-school, women, street children, PHAs, refugees, internally displaced persons, the military, prison inmates, and of recent commercial sex workers. For example, HIV/AIDS-related activities implemented with funding from the STI project mainly target adolescents, women and men in the community, as does the program for enhancing adolescent reproductive life (PEARL) and the basic education, child care and adolescent development program (BECCAD). This is because adolescents and women constitute the most sexually active population, and individuals that often encounter STDs and a range of sexual and reproductive life problems associated with HIV/AIDS (NOP, 1994; PEARL, 1997; HIV/STD Surveillance Report, 1998).

### **6.4 Timeframe**

Because there is no cure and vaccine for HIV/AIDS, most of the major AIDS programs/activities in Uganda are preventive and epidemiological (Sekatawa & Kiirya, 1997). The timeframe for a number of these programs is 1 – 5 years and is subject to extension depending on the availability funding from donor agencies and government and non-governmental organizations, and local/community support.

### **6.5 Collaborative HIV/AIDS Initiatives**

#### **6.5.1 Local Initiatives**

NGOs and CBOs have played an essential role in HIV/AIDS prevention and control in the different districts of Uganda. A number of them support each other and work together in implementing AIDS activities. For example, in Rakai district, the medical research council carries out research activities in collaboration with a range of NGOs and community groups. In addition, the Makerere University faculty of medicine and the ministry of health carry out collaborative HIV/AIDS research with the Case Western Reserve University, John Hopkins/Colombia University and local NGOs, among others. These partnerships have resulted to generation of data on HIV sero-prevalence and guided HIV/AIDS planning, vaccine development and appropriate intervention models in Uganda (Kayita & Kyakulaga, 1997).

In addition, due to the enormous legal and ethical issues the HIV/AIDS epidemic has caused to the public, the Uganda Network on Law, Ethics and HIV/AIDS (UGANET) was formed to map out an all round ethical and legal response to the epidemic in Uganda. It specifically set out to address the legal and ethical aspects that affect people living with HIV/AIDS and their families, and initiate protection mechanisms against abuse of the related rights at various levels. This is undertaken in collaboration with networks on law ethics and Africa and a number of multilateral agencies such as UNDP. These collaborative efforts have resulted to a greater degree of information exchange and collective action on all the different forms of abuse of legal and ethical rights of PHAs and their families in Uganda in particular and the African region in general (UGANET, 1998).

### 6.5.2 Regional Initiative

There is growing evidence that the HIV/AIDS epidemic is not only spreading rapidly in Uganda but also in the neighboring countries of East Africa in particular and the Great Lakes Region (GLR) in general. According to the UNAIDS (1997), HIV prevalence of countries in the GLR is between 12 – 30% and expected to increase if no region prevention and control efforts are initiated. The high HIV prevalence in the GLR is largely due to consistent civil unrest and wars which have created large numbers of refugees and internally displaced persons, and inhibited implementation of HIV/AIDS prevention and control activities.

According to the report of the consultative meeting of AIDS control program managers in the GLR (1998), the ministers and managers responsible for AIDS control in the GLR in collaboration with UNAIDS have begun the process of initiating a joint AIDS prevention and control program in the GLR. The major initiatives in this program would include developing an HIV/AIDS/STD surveillance system to address cross border issues, developing an HIV/AIDS/STD information exchange system between countries within the GLR and integrating HIV/AIDS into the socioeconomic development agenda's of all countries in the GLR. The program would address issues related to establishing a regional team to monitor HIV/AIDS research, promoting safer sexual behavior among the population who live along the main GLR road axes, and establishing a joint system of coordination and collaboration in HIV/AIDS/STD prevention and control in the region.

A task force comprising of representatives from each country in the GLR will be established to identify donors and mobilize resources for implementation of these initiatives. It is hoped that implementation of these initiatives would go a long way to harmonize and strengthen HIV/STD surveillance, research, policies and strategies/activities on prevention and control across borders, and enhance a common HIV/AIDS information management and exchange system in the GLR.

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## APPENDICES

### Appendix 1: Type, Number and Distribution of Health Facilities by District

District	Type of Health Facility					
	Hospitals	Health/Maternity Dispensary Units	Sub- Dispensary	Maternity Units	AID Posts	Beds
Apac	2	9	15	1	4	425
Arua	4	20	33	0	3	1,139
Bundibugyo	1	7	10	0	2	149
Bushenyi	2	13	16	0	8	542
Gulu	3	15	11	2	0	835
Hoima	1	7	18	1	0	206
Iganga	3	41	55	0	6	680
Jinja	3	36	0	5	0	702
Kabale	1	11	28	0	0	459
Kabarole	3	54	5	1	0	821
Kalangala	0	1	6	0	0	09
Kampala	14	24	0	5	0	3,563
Kamuli	1	35	1	0	1	656
Kapchorwa	1	7	11	0	0	161
Kasese	2	33	7	0	0	465
Kibaale	1	9	20	0	0	209
Kiboga	1	11	5	0	1	158
Kisoro	2	1	5	1	0	327
Kitgum	3	13	15	0	0	905
Kotido	2	8	20	0	0	529
Kumi	3	3	13	1	0	502
Lira	1	15	18	1	7	462
Luwero	4	25	8	1	6	617
Masaka	3	29	21	4	0	1,179
Masindi	2	21	3	1	5	277
Mbale	2	33	23	1	7	757
Mbarara	3	19	30	0	0	817
Mpigi	5	31	41	4	1	731
Moroto	2	8	12	0	1	442
Moyo	2	16	8	1	0	639
Mubende	2	25	19	0	2	311
Mukono	6	27	15	0	0	361
Nebbi	3	18	16	0	1	668
Ntungamo	0	5	6	0	2	88
Pallisa	1	17	5	2	0	215
Rakai	1	18	19	0	0	394
Rukungiri	3	17	16	1	0	627
Soroti	2	12	36	0	0	507
Tororo	3	20	13	0	0	683
<b>Total</b>	<b>98</b>	<b>714</b>	<b>603</b>	<b>33</b>	<b>57</b>	<b>23,717</b>

Source: Inventory of Health Services, 1996

**Appendix 2: Number of out patients per health facility in all districts of Uganda**

District	Health Facilities	Outpatients/day	Mean outpatients/facility
Apac	31	1,460	47
Arua	60	2,343	39
Bundibugyo	20	519	26
Bushenyi	39	2,440	63
Gulu	32	1,981	62
Hoima	27	558	21
Iganga	104	4,178	40
Jinja	44	2,192	50
Kabale	40	1,831	46
Kabarole	63	1,607	26
Kalangala	7	77	11
Kampala	43	3,423	80
Kamuli	38	1,232	32
Kapchorwa	19	622	33
Kasese	42	1,210	29
Kibaale	30	926	31
Kiboga	18	412	23
Kisoro	9	340	38
Kitgum	31	1,241	40
Kotido	30	1,255	42
Kumi	20	438	22
Lira	42	756	18
Luwero	44	1,121	26
Masaka	57	2,377	42
Masindi	32	776	24
Mbale	56	5,059	90
Mbarara	82	2,389	29
Mpigi	82	4,442	54
Moroto	23	726	32
Moyo	27	1,916	71
Mubende	48	1,421	30
Mukono	48	1,499	32
Nebbi	39	156	4
Ntungamo	13	961	74
Pallisa	27	1,090	40
Rakai	48	1,791	37
Rukungiri	37	1,766	48
Soroti	50	1,618	32
Tororo	36	1,987	55
<b>Total</b>	<b>1,505</b>	<b>63,569</b>	<b>42</b>

Source: Inventory of Health Services, 1996

**Appendix 3: Health Facility and Hospital Beds per Population by District**

District	Population	Beds	Beds/Pop.	Health Facilities	Facility/Pop.
Apac	521,300	425	1227	31	16,816
Arua	755,000	1,139	663	60	12,583
Bundibugyo	148,800	149	999	20	7,440
Bushenyi	695,800	542	1,284	39	17,841
Gulu	412,600	835	494	32	13,400
Hoima	214,600	206	1,042	27	7,948
Iganga	1,094,000	680	1,609	104	10,519
Jinja	357,600	702	509	44	8,127
Kabale	534,600	459	1,165	40	13,365
Kabarole	864,300	821	1,053	63	13,719
Kalangala	18,000	09	2,000	7	2,571
Kampala	854,300	3,563	240	43	19,867
Kamuli	577,400	656	880	38	15,195
Kapchorwa	137,800	161	856	19	7,253
Kasese	403,700	465	868	42	9,612
Kibaale	248,000	209	1,187	30	8,270
Kiboga	162,400	158	1,028	18	9,022
Kisoro	232,000	327	709	9	25,778
Kitgum	437,300	905	483	31	14,106
Kotido	228,500	529	432	30	7,617
Kumi	305,700	502	609	20	15,285
Lira	588,000	462	1,273	42	14,000
Luwero	553,900	617	898	44	12,589
Masaka	969,400	1,179	822	57	17,007
Masindi	321,900	277	1,162	32	10,059
Mbale	832,100	757	1,099	56	12,608
Mbarara	937,300	817	1,147	82	18,025
Mpigi	1,066,400	731	1,459	82	13,005
Moroto	234,200	442	530	23	10,183
Moyo	202,700	639	561	27	7,507
Mubende	572,200	311	1,840	48	11,921
Mukono	997,900	361	2,764	48	20,790
Nebbi	284,000	668	575	39	10,105
Ntungamo	358,000	88	4,068	13	27,538
Pallisa	424,400	215	1,974	27	16,976
Rakai	432,300	394	1,097	48	11,376
Rukungiri	488,000	627	778	37	13,189
Soroti	570,300	507	1,125	50	11,406
Tororo	663,900	683	972	36	18,442
<b>Total</b>	<b>21,000,000</b>	<b>23,717</b>	<b>886</b>	<b>1,505</b>	<b>13,954</b>

Source: Inventory of Health Services, 1996

**Appendix 4: Cumulative Clinical Adult and Pediatric AIDS cases by District**

District	Adult Cases (1997)	Pediatric Cases (1997)	Total Adult and Pediatric AIDS
Apac	831	71	902
Arua	841	34	875
Bundibugyo	50	2	52
Bushenyi	668	23	691
Gulu	1,474	47	1,521
Hoima	282	7	289
Iganga	615	43	658
Jinja	1,885	67	1,952
Kabale	607	18	625
Kabarole	1,912	115	2,027
Kalangala	17	1	18
Kampala	10,794	1,515	12,309
Kamuli	289	27	316
Kapchorwa	29	1	30
Kasese	1,190	59	1,249
Kibaale	65	2	67
Kiboga	15	0	15
Kisoro	102	1	103
Kitgum	955	85	1,040
Kotido	110	0	110
Kumi	147	7	154
Lira	841	16	857
Luwero	1,724	132	1,856
Masaka	9,943	767	10,710
Masindi	199	12	211
Mbale	413	33	446
Mbarara	992	25	1,017
Mpigi	3,088	265	3,353
Moroto	468	29	497
Moyo	30	1	31
Mubende	905	54	959
Mukono	1,625	87	1,712
Nebbi	646	17	663
Ntungamo	28	0	28
Pallisa	34	0	34
Rakai	2,163	143	2,306
Rukungiri	264	6	270
Soroti	735	10	745
Tororo	680	22	702
Outside Uganda	82	6	88
Unrecorded	1,694	124	1,818
<b>Total</b>	<b>49,432</b>	<b>3,874</b>	<b>53,306</b>

Source: HIV/STD Surveillance Report, 1998

**Appendix 5: District and Lower Local Governments and Administrative Units in Uganda**

	District	Counties	Sub-Counties	Parishes	Total
1.	Adjumani	1	6	17	24
2.	Apac	5	21	110	136
3.	Arua	8	32	116	156
4.	Bugiri	1	14	53	68
5.	Bundibugyo	2	10	37	49
6.	Bushenyi	5	28	149	182
7.	Busia	2	10	34	46
8.	Gulu	5	23	117	145
9.	Hoima	2	13	51	66
10.	Iganga	5	31	117	153
11.	Jinja	3	11	50	64
12.	Kabale	4	19	117	140
13.	Kabarole	7	35	174	216
14.	Kalangala	2	4	17	23
15.	Kampala		5	96	101
16.	Kamuli	4	23	133	160
17.	Kapchorwa	3	11	54	68
18.	Kasese	2	21	105	128
19.	Katakwi	3	14	79	96
20.	Kibaale	3	19	69	91
21.	Kiboga	1	14	67	82
22.	Kisoro	1	13	38	52
23.	Kitgum	4	25	115	144
24.	Kotido	3	22	95	130
25.	Kumi	3	16	106	125
26.	Lira	6	28	155	189
27.	Luwero	3	20	134	157
28.	Masaka	4	22	121	147
29.	Masindi	4	14	45	63
30.	Mbale	6	49	156	211
31.	Mbarara	8	46	221	275
32.	Mpigi	6	33	250	289
33.	Moroto	6	21	92	119
34.	Moyo	2	8	22	32
35.	Mubende	4	20	140	164
36.	Mukono	6	37	201	244
37.	Nkasongola	1	6	29	36
38.	Nebbi	3	16	71	90
39.	Ntungamo	3	14	82	99
40.	Pallisa	4	22	80	106
41.	Rakai	4	24	104	132
42.	Rukungiri	3	19	119	141
43.	Sembabule	2	7	35	44
44.	Soroti	6	25	97	128
45.	Tororo	4	20	71	95
	<b>Total</b>	<b>164</b>	<b>891</b>	<b>4341</b>	<b>5396</b>

Note: This list includes all newly created district and lower local governments, and administrative units in Uganda.

Source: Ministry of Local Government, October 1998.