

**HIV/AIDS**

**IN**

**JOMO KENYATTA UNIVERSITY  
OF  
AGRICULTURE AND TECHNOLOGY**

**A CASE STUDY**

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**Commissioned by:**

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## TABLE OF CONTENTS

	PAGE
EXECUTIVE SUMMARY	i
LIST OF ABBREVIATIONS	iii
1.0 HIV/AIDS IN KENYA.....	1
1.1 INTRODUCTION.....	1
1.1.2 HIV/AIDS IN KENYA.....	2
1.2 SOCIAL-ECONOMIC OF HIV/AIDS.....	5
1.2.1 AIDS ORHANS.....	5
1.2.2 HEALTH EXPENDITURES.....	5
1.2.3 HIV AND TUBERCULOSIS.....	7
1.2.4 IMPACT ON PRODUCTIVITY.....	7
1.2.5 DEMOGRAPHIC IMPACT.....	8
2.0 JOMO KENYATTA UNIVERSITY OF AGRICULTURE & TECHNOLOGY.....	9
2.1 MISSION.....	9
2.2 THE UNIVERSITY AND ITS HISTORY.....	10
2.3 UNIVERSITY PERSONNEL.....	10
2.4 UNDERGRADUATES AND DIPLOMA STUDENTS DURING 2000/2001 ACADEMIC YEAR.....	10
2.4.1 GRADUATE STUDENTS DURING 2000/2001 ACADEMIC YEAR.....	11
2.5 HIV/AIDS IN THE UNIVESITY.....	11
2.6 TUBERCULOSIS AND HIV/AIDS.....	12
2.7 SEXUALLY TRANSMITTED DISEASES.....	12
2.8 AIDS-RELATED DEATHS.....	12
2.9 IMPACT OF HIV/AIDS.....	13
2.10 THE RESPONSE OF THE UNIVERSITY COMMUNITY TO HIV/AIDS.....	
2.10.1 STAFF WELFARE FACILITIES.....	15
2.10.2 STAFF HOUSING.....	15
2.10.3 UNIVERSITY HEALTH SERVICE.....	15
2.10.4 PREVENTING THE TRANSMISSION OF HIV IN THE UNIVERSITY COMMUNITY.....	16
3.0 POLICY RESPONSE AND NEED FOR MORE RESOURCES.....	19
3.1 SUMMARY.....	20
3.2 FUTURE PLANS.....	21
REFERENCES.....	22

## **LIST OF ABBREVIATIONS**

AIDS	-Acquired Immune Deficiency Syndrome
GDP	-Gross Domestic Product
HIV	-Human Immunodeficiency Virus
JKUAT	-Jomo Kenyatta University of Agriculture and Technology
NASCOP	-National AIDS/STDs Control Programme
NACC	-National AIDS Control Council
STDs	-Sexually Transmitted Diseases

## **EXECUTIVE SUMMARY**

This report sets out the findings of a case study commissioned by Association for the Development of Education in Africa (ADEA) Working on Higher Education, on the way HIV/AIDS affects JKUAT, and to document the responses and coping mechanisms. The purpose of the studies is to generate understanding of the way the disease is affecting universities and to identify responses of staff, students and management that might profitably be shared with sister institutions in similar circumstances.

The report is structured in three parts. The introduction sets out the statistics of the HIV/AIDS in Sub-Saharan Africa and Kenya in particular. In sub-Saharan Africa 23.3 million people are HIV-positive and 13.7 million people have died of Aids. In Kenya, it is estimated that about 14% of all adults are HIV-infected. This means that 2.1 million Kenyans are infected and 1.1 million Kenyans have died of AIDS. Kenya has achieved some success in making information and services available to people. The level of awareness about AIDS is over 90% in both rural and urban areas.

The social-economic impact of HIV-AIDS is devastating and affects individuals, families, communities, institutions and governments. One of the worst impacts of AIDS deaths to young adults is an increase in the number of orphans. It is estimated that there are about 860,000 orphans in Kenya today. The cost of AIDS to Kenya is projected to be 15% of GDP this year. The main sectors of the economy that are worst hit by this epidemic include agriculture and education.

A brief outline is given of the Jomo Kenyatta university of Agriculture and Technology. The specific mission of JKUAT is given. This is a quality public University located in a rural set up on Nairobi to Thika highway. It's distinctive purpose is to provide a high quality/Agriculture, Engineering, and Science Programmes. Currently, it is estimated that 12% to 14% staff members are HIV-infected and 10% to 15% of the students are living with HIV. It is also estimated that between 1995 and August 2000, 22 staff members at JKUAT died of AIDS related disease. Majority of persons (82%) who died are junior ancillary staff.

From the fiscal year 1994/95 to 1997/98 the JKUAT hospital budget has increased from Kshs. 12 million to Kshs. 19 million (approximately US \$ 175,000 to US\$ 272,000). Currently, to take care for all the HIV-positive staff members, the hospital requires US \$ 1.4 million to US \$ 2.8 million.

The third section looks at the response of the University to HIV/AIDS. The University hospital runs several services in HIV control including condom supplies, HIV-testing and treatment, counselling. Counselling and outreach programmes need to be strengthened.

Student peer educators programme has helped to breakdown the taboo on discussing HIV/AIDS in the university community. It is effective in reaching most students. The main constraint is obtaining funds to continuously train them as they graduate.

The student 'AIDS AWARENESS CLUB' encouraged by the University administration publishes on yearly basis a popular 'STUDENT'S DIGEST' containing information about HIV/AIDS and is distributed to the students.

The final section looks at the University's proposal to establish an AIDS Control Unit. The university management is aware that the response to HIV/AIDS in JKUAT and in Kenya needs to be strengthened and developed further. An effective response is required to prevent the devastation wreaked on communities around the country by the HIV epidemic.

# HIV/AIDS IN KENYA

## 1.1 INTRODUCTION

AT THE END OF 1999 UNAIDS estimated that 33.6 million people worldwide were living with HIV infection. Majority of people living with HIV/AIDS are in developing countries – 23.3 million people in sub-Saharan Africa. An estimate 16.3 million people worldwide have died of AIDS – 13.7 million people from sub-Saharan Africa. Although the epidemic is found virtually in all parts of the world, Africa, which accounts for only one tenth of the world's population, remains the global epicentre of the epidemic with 83% of all deaths to date and 9 out of 10 new infections (1,2,3). UNAIDS estimates that 8% of adults in sub-Saharan Africa are HIV positive, with heterosexual sex as the dominant means of HIV transmission (1). During 1999, 5-6 million people were newly infected with HIV. This translates to about 16,000 people being infected every day.

The world's 20 worst hit countries are in Africa. The proportion of people living with AIDS has increased dramatically since the mid 1980s. There is more concentration of HIV prevalence in the sub-Saharan Africa than it is in the northern parts of the continent. Table 1 shows the estimated number of people living with HIV/AIDS as well as estimated AIDS deaths in selected African countries.

**Table 1**

Estimated Number of People Living with HIV/AIDS in Selected African Countries 1997.

	Numbers Living with HIV/AIDS		Estimated Deaths
	Adults/Children (million)	Adult (15-49) (million)	Adult & Children (million)
Ethiopia	3.0	2.9	0.28
Kenya	2.1	2.0	0.18
Malawi	0.80	0.76	0.07
Namibia	0.16	0.15	0.018
Tanzania	1.3	1.2	0.14
Uganda	0.82	0.77	0.11
Zambia	0.87	0.83	0.099
Zimbabwe	1.5	1.4	0.16
South Africa	4.2	4.1	0.25
Total	15.95	15.21	1.405

Source: UNAIDS 1999.

## HIV/AIDS IN KENYA

In Kenya, it is estimated that about 14% of all adults are infected with HIV. This means that about 2 million people living in Kenya are infected, including 106,000 children under the age of five. Infection levels exceed 20% of all adults in Busia, Kisumu, Meru, Nakuru and Thika. In Nairobi and Mombasa about 15% of adults are HIV positive. Perhaps as many as 1.1 million people in Kenya have already died from AIDS (NASCOP, 1999).

Results of some sentinel surveillance sites are shown in Table 2 below. These results describe the trends of HIV infection in some parts of urban and rural Kenya.

**Table 2: Percentage of pregnant women testing HIV positive by sentinel site.**

### URBAN SITES

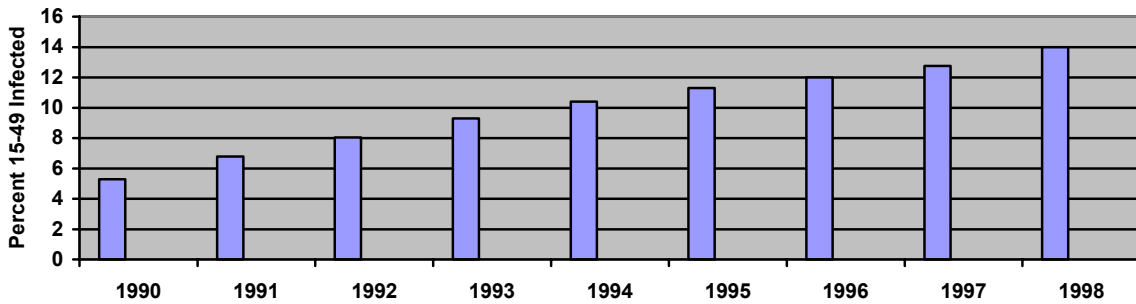
Sentinel Site	1990	1993	1996	1998
Busia	17	22	28	29
Kisumu	19	20	27	29
Meru	3	2	15	23
Mombasa	10	16	12	17
Nairobi	6	16	16	16*
Nakuru	10	22	27	26
Thika	2	27	13	34*

Source: NASCOP, 1999

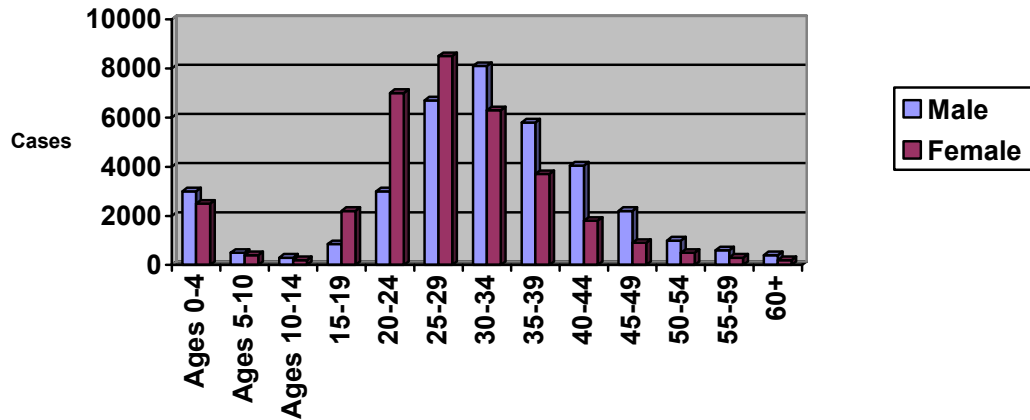
From Table 2 above, it is clear that the levels of HIV infection are alarmingly high in the major towns of Kenya. The data show the percentage of pregnant women visiting the clinic who are HIV infected. Mombasa and Nairobi are representative of towns that has had stable infection levels for some time. A stable infection level means that the number of new infections each year equals the number of people dying each year from AIDS. Meru and Thika are examples of areas that have experienced rapid increases in the number of people infected.

In urban areas prevalence is estimated to be 17-18%. That means that there are about 430,000 HIV- infected adults in urban areas. HIV prevalence in rural areas is increasing rapidly. In 1998 it was 12 – 13%. This implies that there are about 1.4 million HIV- infected adults living in rural areas. Although prevalence is higher in urban areas, the absolute or total number of people infected is larger in rural areas since 80% of Kenyans lives in rural areas.

**Trend of HIV prevalence among 15-49 age-group in Kenya (1990-98).**  
**NATIONAL HIV PREVALENCE TRENDS (1990-1998)**  
**Adult HIV PREVALENCE**



**AIDS and Sex Distribution of Reported AIDS Cases (1986 – 1998)**



The chart above illustrates the proportion of the population that is infected with HIV by age and sex. The pattern of infection is similar everywhere in Kenya. Infection levels are very high for young women. The highest levels for women are in the 20-29 age group, while for men the highest infection levels are found in the 30-39 age group.



Several studies suggest that most Kenyan teenagers report very early sexual debut. The Kenya Demographic and Health Survey (KDHS, 1998) reports that the median age at first intercourse is about 17 for women and men. Median age at first marriage is 19 for women and 25 for men.

Very large proportion of Kenyan teenagers are sexually active. A majority have experienced sexual intercourse by age 15/16 and over 90% are active by age 20. Thus, there is a significant period of sexual activity before marriage that exposes young people to the risk of HIV infection.

The chart above illustrates that more than 75% of AIDS, and therefore of the resulting AIDS deaths occur to adults between the ages 20 and 45. Since this is the most economically productive part of the population, these deaths constitute a serious economic burden. This is also the age when investments in education are just beginning to pay off. These deaths also have severe consequences for children since most people in this age group are raising young children.

## **1.2 SOCIO-ECONOMIC IMPACT OF HIV/AIDS**

The social-economic impact of HIV/AIDS is devastating and affects individuals, families, communities, institutions and governments. At the national level the cumulative impact HIV/AIDS is felt as countries are greatly stretched. The epidemic affects the health status of society. It leads to increase related expenditures at household, institution, and government levels. It also lowers the productivity and growth performance of countries, as well as reversing the gains made in human development and progress in the social sector.

### **1.2.1 AIDS ORPHANS**

One of the worst impacts of AIDS deaths to young adults is an increase in the number of orphans. It is estimated that there are about 860,000 orphans in Kenya today and this number is expected to rise to 1.5 million by 2005 (NASCP 1999). Many of these children lack proper care and supervision they need at this critical period of their lives.

The increasing number of orphans due to AIDS also causes heavy financial burdens to the extended families and the community are expected to provide basic services to these children, provide basic health care and pay school fees for these orphans. Where support of extended family is over stretched and cannot cope, the burden of orphans translates to state problems. Consequently, Government expenditure in orphan care is also expected to grow.

### **1.2.2 HEALTH EXPENDITURES**

The health expenditure effects on government, private companies and households are varied and manifest themselves in different ways. The household often experiences increased medical expenses, incur a lot of costs in transport to and from the health facilities, increased financial allocation in the provision of special diet and ultimately high

funeral expenses. Households also suffer income losses as a result of HIV/AIDS. However, the income losses are significantly different among the rural and urban households. Studies that have been conducted in the recent past point to this.

They have established that small holder rural households experiences income losses of between 58-57% of the household's income following AIDS death of an economically active adult in a three adult household. In urban households income losses range from 54% to 66%. The income losses are even higher if the second adult in the same household dies of AIDS (leighton, 1996).

Today over two million Kenyans are infected with HIV. HIV/AIDS is very expensive because of the increases in morbidity it is associated with Substantial amounts of resources to care for and treat HIV/AIDS patients are spent.

### **Annual Cost of HIV/AIDS Treatment in Sub-Saharan Africa.**

<b>Type of Treatment</b>	<b>Aproximate Cost (US\$/Patient/Year)</b>
Palliative Care	20
Opportunistic Infections	
Inexpensive	30
Expensive	200
Anti-retroviral Therapy	10,000 – 20,000

Source NASCOP 1999

Forsythe et. al (1992) estimated the cost of hospital care for an AIDS patient at Ksh. 27,200. *The sessional paper No. 4 of 1997 on AIDS in Kenya* estimates the direct cost of treating a new AIDS patient at Ksh. 34, 680 while indirect costs (lost wages) amounts to Ksh. 538,560. This brings the estimated total cost of AIDS (direct and indirect) to over Ksh. 573,240.00 or US \$ 8190 (US \$ 1 = Ksh. 70.00). The direct costs f AIDS comprise the cost of drugs, laboratory tests, radiology and hospital overhead costs while indirect costs encompass the average productive life – year lost. In 1991 the total cost of AIDS to Kenya was between 2 – 4% of GDP but was projected to increase to 15% by the year 2000 (Nalo and AOKO 1996).

Institution experience increased expenditure on staff recruitment and training, funeral expenses, medical costs and increased employees benefits. the extent of these costs is normally proportional to the institution's HIV/AIDS prevalence rate among the employees. It has been estimated that companies spend an average of 4% of their annual profits on their employees suffering from HIV/AIDS. Out of this, absenteeism

accounts for 54%, health care costs 12% and 10% for recruitment and burial expenses. Training, labour turnover and funeral attendance constitute 7%, 5% and 3% respectively. Reports from various companies in Kenya indicate that between 1992 and 2005, the cost of HIV/AIDS would rise from US \$ 20,339 to US \$ 48,402 in heavy industry, from US \$ 67,183 to US \$ 163,685 in transportation, from US \$ 184,543 to US \$ 533,054 in wood processing and from US \$ 285,847 to US \$ 866,217 on sugar estates (Forsythe 1996). HIV/AIDS is costing Kenyan companies an average of US \$ 25 per employee annually and is expected to increase to an average of US \$ 56 by the year 2000 (World Bank 1999).

### **1.2.3 HIV AND TUBERCULOSIS**

Efforts over the past 20 years to control tuberculosis in Kenya had been showing some success. However, recently the number of TB cases has been rising rapidly. This is due to the spread of HIV infection. In the absence of HIV, the number of new TB infections would be limited to about 0.2% of the population (Harries 1990). This would result in 40,000 to 60,000 new TB cases each year.

In a recent study in Kenyatta National Hospital, the proportion of TB cases among all patients admitted doubled from 8% to 16% between 1988/89 and 1997. In HIV – infected patients, the proportion that also had active TB infection rose from 18% to 27% over the same period. TB is a costly disease to treat and rising TB infections are inevitably draining resources from other essential health and welfare services if quality services are to be maintained. The control of TB is very expensive and puts considerable strain on the health budget.

### **1.2.4 IMPACT ON PRODUCTIVITY**

There are three main sources of loss of productivity, namely absenteeism, loss of skilled and unskilled labour.

Absenteeism emerges as a cost in the sense that absent employees continue to be paid for the job they do not perform.

This is especially true in the case where HIV positive workers who are suffering from opportunistic infections have to miss work as they seek medical treatment. In some cases absenteeism results in extra work for healthy employees who have to stand in for sick colleagues. This often results in either more overtime payments or pressure on healthy workers. Extending working hours lost due to absenteeism results in lower workers output. This is because healthy workers always end up being overworked or exhausted due to long hours of work, hence reduced productivity.

The main sectors of the economy that are worst hit by this epidemic include Agriculture and Education. The loss of an adult member of the family to AIDS often

leads to a shift in cropping patterns especially from cash crops to subsistence farming. The disease forces families to sell their livestock, farm equipment and land to finance AIDS related expenditure. This depletes their asset base and hence loss of productivity. In addition, agricultural knowledge and farm management skills are lost because of the disease. In Kenya, the loss in agricultural production due to HIV/AIDS represented 0.3% of the total value of production in 1999. It is expected to rise to between 1.7% to 2.4% by the year 2010 (Leighton, 1996).

HIV/AIDS is currently reducing the already achieved returns on investment in Education. Scarce resources that have preciously been spent on education and training are being lost to HIV/AIDS. By 1999 over --- of teachers in Kenya were affected by the disease.

According to a study by UNESCO (1995) the most immediate and visible impact of HIV/AIDS on the education system can already be seen and felt. Most of the children infected at birth have not lived to enroll in school, some of the children have dropped out of school in order to earn money for their families and for the care of ill relatives, teachers have fallen ill and have died. Generally the education system will be affected as it struggles to respond and cope with the pressures of HIV/AIDS on educational demand.

About 100 members of the university of Nairobi fraternity die of AIDS each year. The victims include teaching, non-teaching staff and students. Worst affected are the lower cadre staff, (Gichaga 2000).

### **1.2.5 DEMOGRAPHIC IMPACT**

Most demographic projections vary in predicting the affects of the HIV/AIDS pandemic on Africa' s population growth. These projections, however, agree that there will be a decrease in annual population growth in the African region by the year 2010. A number of researchers have argued that HIV/AIDS will affect population growth in African countries and the growth rates may become negative in a few decades. Others still argue, that, it is unlikely that the HIV/AIDS will reach such severe portions in African countries. Kenyan studies are in support of the latter argument. They have revealed that AIDS will not lead to a zero or negative growth rates since Kenya still has high birth rate. It is also important to note that AIDS increases the death rate at all ages, but the impact is most severe among young adults (i.e age 15-49) and children under the age of five.

The concentration of AIDS related deaths in these age groups imply that demographic patterns are being destabilized and so too are the population policies and programmes that are already in place.

## **JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY (JKUAT)**

### **MISSION**

As one of the public national universities in Kenya, it is inevitable that Jomo Kenyatta University of Agriculture and Technology has much in common with the other institutions. Such overlaps occur in pursuit of excellence in teaching, research and scholarship, provision of learning opportunities, enhancement of public welfare, prosperity and culture by encouraging application of learning and research, securing and administering resources in the most effective manner.

What distinguishes Jomo Kenyatta from other Universities?

What does Jomo Kenyatta envisage itself doing in order not to become a replica of any other institution in Kenya.

The specific mission of Jomo Kenyatta may be identified by the following:

To train manpower at both managerial and supervisory grades for sustainable growth of the economy.

To pursue excellence in education and training, research and scholarship in the fields of Agriculture, Engineering, Technology: Applied Science and Enterprise Development.

The ultimate objectives is to up-lift the quality of education and training managerial excellence.

To expand opportunities for education and training by developing appropriate programmes for specialized non-degree training in the areas of agriculture production, processing, engineering, technology, entrepreneurship.

To promote both basic and applied research in the service of this country.

To promote linkages with organization in the Agricultural and Industrial sectors in order to:-

Facilitate improvement and relevance of training.

Collaborate in research and facilitate dissemination and application of research findings.

Improve production activities by various departments and institutes in the university.

To promote collaboration with small scale industrialist for design and development of Agricultural tools.

To promote linkages with other universities of renown for research and dissemination.

## **2.2 THE UNIVERSITY AND ITS HISTORY**

Jomo Kenyatta University of Agriculture and Technology (JKUAT) is a public university. It is the smallest of the six public universities in Kenya. Approximately 2,400 undergraduate and postgraduate students are enrolled.

The University is situated in Juja on Nairobi to Thika highway, about 42 KM from Nairobi and 14 km from Thika town. The institution was founded with assistance from the Government of Japan and the first diploma students were admitted on 4<sup>th</sup> May, 1981. In September 1988, the college became affiliated college of Kenyatta University and subsequently changed its name to the Jomo Kenyatta College of Agriculture and Technology (JKUCAT). In 1994 the name of the college was changed to Jomo Kenyatta University of Agriculture and Technology (JKUAT), signaling its newly acquired authorization to grant degrees.

JKUAT, has three faculties:-

- (1) **The Faculty of Agriculture**, offering degrees and diplomas in:- Agricultural Engineering, Food Science and Postharvest Technology, and Horticulture,
- (2) **Faculty of Engineering**, offering degrees and diplomas in, Architecture, Civil Engineering, Electrical and Electronic, and Mechanical Engineering.
- (3) **Faculty of Science**, offering degrees in Biological, Physical Sciences and Computer Sciences.

## **2.3 UNIVERSITY PERSONNEL**

### **Staff**

Academic (Lecturers and Researchers)

285

Support (Professionals, Technical and Administrative)	307
Ancillary	513
<b>Total</b>	<b>1105</b>

## **2.4 Undergraduate and Diploma Students During 2000/2001 Academic Year.**

<b><u>Faculty</u></b>	<b><u>Male</u></b>	<b><u>Female</u></b>	<b><u>Total</u></b>
Agriculture	487	143	630
Engineering	818	67	885
Computer Science	39	1	40
General Science	556	154	710
<b>Total</b>	<b>1900</b>	<b>365</b>	<b>2265</b>

### **2.4.1 Graduate Students During 2000/2001 Academic Year.**

<b><u>Faculty</u></b>	<b><u>Male</u></b>	<b><u>Female</u></b>	<b><u>Total</u></b>
Agriculture	4	3	7
General Science	10	4	14
Human Resources	10	15	25
<b>Total</b>	<b>24</b>	<b>23</b>	<b>46</b>

## **2.5 HIV/AIDS IN THE UNIVERSITY**

Information from JKUAT Hospital indicates that, currently there are 130 to 150 (11.7% to 13.5%) staff members infected with HIV. Approximately 11% of academic staff, 13% of middle level personnel and 12% of ancillary staff are living with HIV.

About 14 percent of all adults in Kenya are infected with HIV. In Nairobi about 16% and Thika about 34% of adults are HIV positive. These prevalence estimates are based on sentinel surveillance systems, whereas, JKUAT estimates are based on hospital records.

In the undergraduate population of 1900 males and 365 females, the HIV prevalence is unknown. In Kenya, most teenagers are sexually active. A majority of them experience sexual intercourse by age 15/16 and over 90% are active by age 20 (Johnston 1999). Up to 22 percent of teenage girls in Kenya are estimated to be HIV –positive (Daily Nation 14/7/2000).

According to the JKUAT Hospital information pregnancies and sexually transmitted infections (STI) have been on the decline. Data collected from focus group discussions and in-depth interviews, conducted with undergraduate, postgraduates and student halls caretakers (mature females) revealed that majority of the students are sexually active, 100% know what HIV/AIDS is and still engaged in risky unprotected sex. The students estimate that 10-15% of their colleagues are HIV-positive. The female students felt that about 10% of the female student population engage in sexual relationships because of poverty, peer pressure, looking for emotional support and sense of security. Some young females also do not enjoy relationships with their agemates, because they consider them immature. Every year atleast 8 (2%) of female students are pregnant. This indicates the existing levels of unsafe sex.

According to the UNDP 1997 Human Development Report, poverty “offers a fertile breeding ground for the epidemics spread and infection sets off a cascade of economic and social disintegration and impoverishment”.

## **2.6 TUBERCULOSIS AND HIV/AIDS**

Closely linked to the HIV/AIDS epidemic is the tuberculosis (TB) epidemic. HIV increases the risk of developing active TB for those who have been infected with TB earlier in life. In Mbagathi Hospital, the leading tuberculosis treatment centre in Nairobi, TB patient numbers at the institution have been rising steadily in recent years, from about 55,000 outpatients in 1996 to over 70,000 in 1999 of these, at least 2,300 patients were treated for TB in 1996, a figure that rose to 2,800 in 1999 (East Africa 11/9/2000). Health experts attribute the rising number of TB patients to the increase in HIV infections. At least 60% of all people found with TB in the country are HIV-positive. At JKUAT Hospital, records show that between January to June 2000, there were only 7 cases of TB. On average the hospital treats 1700 patients per month. In Kenya, TB is the most frequent cause of death for people infected with HIV. In JKUAT Hospital the TB prevalence rate appears to be low 0.4%.

According to Harries (1990) in the absence of HIV infections, the number of new TB infections would be limited to about 0.2% of the population. This indicates that even at JKUAT Hospital there is an increase in TB cases.



## **2.7 SEXUALLY TRANSMITTED DISEASES.**

There is compelling evidence of importance of both ulcerative and non-ulcerative STDs as major determinants of HIV transmission. At JKUAT Hospital, approximately 1.4% of patients treated have urinary tract infections. STDs contribute to higher rates of HIV transmission.

## **2.8 AIDS-RELATED DEATHS**

Available information indicates that at least 2.1 million Kenyans are HIV-positive and 1.1 million Kenyans have so far died due to AIDS. On average close to 500 people in Kenya die daily because of AIDS (R. Muga, , DMS 2000).

It is estimated that between 1995 and August 2000, 22 staff members at JKUAT died of AIDS related diseases of these 12 were females, average age at death 31 years and ten males average age at death 38.4 years old. Eighteen were ancillary staff, three middle-level and one academic. AIDS will increase the death rate in all cadres. However, the impact is now felt in the lower cadre of staff and among young adults. Although, AIDS does not spare the elites or middle class, it appears that, currently in this university, the most affected are the poorly educated with low income. It is possible that poor people are often unable to seek treatment for STDs. And poor women may need to resort to casual sex to provide for their families.

Prior to the HIV epidemic, prime-age adult death was rare in Kenya. Sadly, it is now common enough that, it is creating generation gaps and leaving behind poor young families, and especially, the children in such households are likely to face severe hardships.

Currently 130-150 (11.7% to 13.5%) JKUAT personnel are infected with the HIV, their body's immune system is weakening.

Majority of these persons are in their prime age (30-40 years) and with young families. About 70 (6%) persons living with HIV are in the academic and professional grades. This is the group the university has invested in their long-term training either abroad or locally. These individuals are or soon will be suffering from opportunistic infections. The infected individuals will eventually die leaving orphans behind.

## 2.9 IMPACT OF HIV/AIDS

From 1995 to August 2000, the University lost 22 persons to AIDS – related diseases.

<u>Year</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
2000	2	0	2
1999	2	1	3
1998	2	7	9
1997	1	3	4
1996	2	1	3
1995	1	0	1
<b>Total</b>	<b>10</b>	<b>12</b>	<b>22</b>

HIV/AIDS is more prevalent in the lower grades. Of 22 AIDS – related deaths, 18 were unionisable staff in grades I-IV, three from middle level grades A-F and one from the academic group.

It is estimated that the University paid approximately Ksh. 550,000 as terminal benefits and Ksh. 840,000 as funeral expenses during that period.

If a member of staff dies, the University contributes Ksh. 5,000/= towards the cost of the coffin. A vehicle is also provided to carry the body and another one to carry the immediate family members to the funeral. Alternatively, one vehicle with the capacity for both purposes is provided. If a dependant of a member of staff dies, the University provides a vehicle to carry the body and the immediate family members to the funeral.

The prevalence of AIDS in Kenya is highest among the 20-49 year age group, who form the pool of trained man-power required to work in industry.

By 2000, the National AIDS Control Council estimates that over 1.1 million Kenyans had died of AIDS since the epidemic was first diagnosed in Kenya in 1984. Currently about 2.1 million Kenyans are infected with HIV. This explains why in 1999 the President of the Republic of Kenya declared HIV/AIDS pandemic as a National disaster that needed all concerted efforts to curb and at all costs if the nation was to have a future. Indeed if it is not controlled, the socioeconomic impact of the diseases would be monumental. It was estimated that the cumulative economic impact would be as high as 15% of the GPD by the year 2000, up from 2% in 1994.

The virus that causes AIDS already infects many Kenyans in all walks of life. At JKUAT 11.7%-13.5% of members of staff are infected. Elsewhere in the country, for every 18 adults, one is infected. In urban areas, one of every nine adults is infected. Most of these people do not know that they are infected. In the University there is no attempt at present moment to collect AIDS – related information from staff or students. In Kenya, HIV surveillance studies are conducted in district and provincial hospitals, and involve donor blood as well as groups such as women attending antenatal clinics. The information from these studies may not reflect the reality on the ground. These reported

AIDS cases represent the visible part of the epidemic. However, the truth is that not all AIDS cases are reported. This can happen even in the University hospital for several reasons: some members of staff and students never seek hospital care for AIDS or opportunistic infections.

Some Doctors may not want to record a diagnosis of AIDS because of the stigma attached to AIDS, some people with HIV infections may die of other diseases before they are diagnosed as having AIDS, and some rural health care facilities may not have the capacity to test for HIV infection.

On costs of health care, Forsythe et al 1992 estimated that the cost of hospital care for AIDS patients average about Ksh. 27,200 during the course of their illness. If that expenditure rate remained constant then the total JKUAT hospital costs for AIDS care expressed in 1992 Kenya shillings would be Ksh. 3.5 million to Ksh. 4.1 million. From 1994/95 to 1997/98 the JKUAT Hospital budget has increased from Ksh. 12 million to Ksh. 19 million.

If the University hospital is treating all the estimated 130 to 150 members of staff infected with HIV for

-Palliative US \$2800

-Opportunistic Infections.

(i) The inexpensive drugs US\$4200

(ii) Expensive drugs US \$ 28000

Anti-retroviral therapy \$1,400,000 – 2,800,000.

This is equivalent to Ksh. 98 million to Ksh. 196 million to care for all the staff members infected with HIV per year. Some of the best – educated people, young and holding responsible teaching or administrative positions are living with HIV. When they start succumbing to AIDS the impact in the University teaching and administration are likely to be significantly felt.

## **2.10 THE RESPONSE OF THE UNIVERSITY COMMUNITY TO HIV/AIDS**

### **2.10.1 STAFF WELFARE FACILITIES**

The following aspects of staff welfare have been developed by the University and are in full operation:

Staff housing  
Staff catering services  
Medical services  
Nursery and primary school

### **2.10.2 Staff Housing**

The University operates two Housing systems and members of staff are required to opt for either housing allowance or subsidized institutional house. This policy enables spouses to live together.

### **2.10.3 University Health Services.**

The University offers Health services to all students, members of staff and their families through the University Hospital. This quality service has now been extended to the outside community at an affordable fee. The JKUAT Hospital is manned by four full-time Doctors, three visiting specialist Doctors, six Nurses, six Clinical Officers, three Laboratory technologists, three Pharmaceutical Technologists, one Public Health Officer, and Enrolled Community Nurses and eighteen Support staff. There are plans to recruit four more community Nurses and four patients/clinic attendants.

### **AVAILABLE SERVICES**

Out Patient Clinic: Open 24 hours daily  
Maternal and Child Welfare Services,  
Family Planning /Counselling  
Consultant Psychiatric Clinic  
Counselling Services  
Laboratory Services for all routine tests.  
Pharmacy: Fully stocked and manned 12 hours daily.  
Dental Service: All range of Dental services offered.  
Orthopedic Services: For reduction of fractures and immobilization with POP.  
Theatre Services: For minor operations under Local Anesthesia.

Ambulance Services: A 24 hour stand-by Ambulance Services for all.  
Plans are in place for equipping the Theatre, x-ray unit and Physiotherapy unit.

#### **2.10.4 PREVENTING THE TRANSMISSION OF HIV IN THE UNIVERSITY COMMUNITY**

The impact of AIDS will be severe in the University if HIV infection continues to spread at the current rapid rate. However, there are several things that the University is doing to slow the spread of HIV. In Kenya majority of HIV infections are transmitted through heterosexual contact.

##### **Promoting the Use and Availability of Condoms.**

Prevention of HIV transmission through behaviour change, condom promotion and STD treatment is many times more cost-effective than either providing hospital treatment for AIDS patients or trying to prevent the spread of the virus with anti-retroviral therapy.

The University hospital on regular basis supplies adequate condoms in the student halls of residents, and, in all the toilets in the University.  
In the hospital, Family Planning Clinic, there is a complete section fully stocked with condoms and accessible to anyone anytime.

##### **Use of Condoms**

<b><u>Year</u></b>	<b><u>Condoms Used</u></b>
January-August 2000	27,668
1999	20,322
1998	34,810
1997	39,702
1996	34,440
1995	35,990

According the JKUAT Hospital records the supplies of condoms has led to tremendous reduction of STDs and pregnancies among the students.  
The hospital is properly equipped to detect and treat STDs.

##### **Promoting Abstinence, faithfulness**

Beyond treatment of diseases and illnesses, the University hospital staff provides other integrated programmes aimed at preventing diseases, promoting good health and protecting the University community and surroundings from environmental, industrial and other health risks.

The strategies for mitigating the impact of HIV/AIDS includes mobilizing students, staff and local communities to recognise their strengths and weaknesses in handling AID-related concerns; stimulation of communities to identify and to participate in community based programmes (e.g eradication of illicit alcohol brewing and drinking)

### **Peer Education and Counseling.**

Because of the need for a multi-disciplinary approach to AIDS prevention and control, the importance of effective mobilisation, and the co-ordination of activities and resources of the various departments, the university, through the hospital encouraged the students to form a AIDS Awareness Club.

The Club enjoys support from the University management. In consultation with the hospital staff and Dean of students, the Club organizes “AIDS DAY” and on such a day students from other Universities are invited and participate in educational drama, dance, song or walks. Workshops, seminars, debates or video show talks which are conducted by invited guests are held regularly.

On yearly basis the Club publishes “STUDENT’S DIGEST” containing information about HIV/AIDS. The copies are distributed at the beginning of each year to all the students in the University, and some copies are given, to the secondary schools and other universities. This is a very effective way of passing HIV/AIDS information to the young people.

The first volume of the “Student’s Digest” was printed in 1998 and was funded by the Family Life International. Second volume 1999 and third volume 2000 were funded by the Ford Foundation. Articles are prepared by the club members in consultation with the Club patron and sponsors. This is a very popular booklet and demand from all the universities, polytechnics and secondary schools cannot be met. However, the club supplies enough copies to all the university libraries, polytechnics and nearby secondary schools.

About 20 students were trained as peer counsellors and this team has helped to breakdown the taboo on discussing HIV/AIDS in the University community. The peer educators are effective in reaching most students.

### **3.0 POLICY RESPONSES AND NEED FOR MORE RESOURCES.**

Effective response to the HIV/AIDS pandemic, requires a full appreciation that the pandemic is not only a health issue but a social, cultural, and economic problem that needs the participation of all stakeholders. To combat the epidemic, we must embrace multi-sectoral and an inclusive approach that brings all actors in the economy to play

their respective role. Whereas the entry point in tackling the transmission of HIV remains the **individual**, action must take place at community, institution, national and even at international level if meaningful progress is to be made in the campaign against HIV/AIDS. The target should be the individual to influence change in the sexual behaviour with a view to curbing the continuing spread of the disease while at the same time addressing the needs of those infected and affected.

### **3.1 SUMMARY**

Most institutions in Kenya have responded directly in their attempts to tackle the problem of HIV/AIDS. Response to the epidemic, however, depends upon the stage of the disease and impact it has. So far, majority of the persons (82%) who have died of AIDS-related diseases at JKUAT are junior ancillary staff who could be replaced easily. No university programme has been disrupted because of AIDS impact. However, the effect will be felt in the very near future, because many young well – educated members of staff are HIV-positive. At the early stages of the epidemic there is more of denial and lack of appreciation of the dangers of the problem. This may be the position at JKUAT. In this university the failure to recognise that HIV/AIDS poses major threats to the society, has led to failure to respond adequately and in good time. Given that the university has qualified human resources which could be deployed to educate the communities near and far, the university spends more money in curative than in promotive and preventive measures. There is no budget for HIV/AIDS control, research or education. HIV/AIDS has not been integrated into the university's teaching, research and advisory/consultancy activities, or into its institutional or strategic planning. This failure to recognize and integrate HIV/AIDS into the planning and policy system of the University exacerbates the problem.

It is critical that as approaches to deal with AIDS are sought with vigor, we must not forget that this university and other public universities rely on Kenya Government for funding. Money from the Exchequer has been completely inadequate to run the University's basic requirements. The consequences of HIV/AIDS on health expenditures are far reaching such that health curative budgets in JKUAT continue to rise, posing serious challenges to the other University programmes.

Future trends indicate that University should lay more emphasis on the preventive than curative aspects of HIV/AIDS control.

Given high levels of poverty in Kenya, most of the affected persons cannot afford the cost of HIV/AIDS treatment, and nearly all of them will die prematurely before age of 40, just as they are reaching their most productive years.

### **3.2 FUTURE PLANS**

Establishment of AIDS Control Unit in the University to deal with spread of HIV/AIDS; Counselling; support people living with HIV; co-ordinate research, source for funding, develop a data-base of information, and monitoring of the implementation of HIV/AIDS activities and giving guidance at the national, local and community level.



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