

HIV/AIDS PREVENTION STRATEGIES IN KENYA: A CRITICAL REVIEW

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Abstract

This paper critically reviews HIV/AIDS prevention strategies in Kenya. Since HIV/AIDS was discovered over twenty years, it has continued to be a public health problem throughout the world. While global prevalence has stabilized in recent years, the number of people living with HIV is increasing because of new infections with longer survival times. High rates of transmission result from failure to use effective strategies and tools, and failure to target high risk groups. Kenya is no exception to this situation. Objective of this study is to identify gaps in HIV prevention and make recommendations for improvement.

Methods

The study methodology follows three steps.

1. A benchmark of proven HIV prevention strategies by the HIV prevention working group is identified.
2. Uganda's HIV prevention efforts, a country that has had success in the fight for AIDS, are presented to compare to Kenya's efforts
3. Kenya's prevention strategies have been identified through examination of reports and websites from three umbrella bodies representing the government, non-governmental and community organizations, and international

organizations. Examination and comparisons between the three groups will help identify gaps in Kenya's prevention efforts and make recommendations.

Results

Overall, Kenya has put effort in HIV prevention including using several proven strategies, including, voluntary counseling and testing for HIV (VCT), STI diagnoses and management, abstinence, being faithful condom use and male circumcision (ABCs), prevention of mother to child transmission (PMTCT), behavior change communication (BCC), safe blood supply and injection safety. Despite these efforts, gaps still exist. First, regional differences in HIV infection, second, most vulnerable and high risk groups need intensive programs, third, prevention efforts lack integration with other programs. Finally there are gender differentials and inequality, insufficient programs for young people and cultural barriers.

Conclusions

Universal coverage of prevention efforts is necessary. Social factors like inequalities, gender differentials and cultural barriers need to be addressed, especially women empowerment. Youths should be targeted through age specific sex education programs. High risk and vulnerable populations should be prioritized. Local leaders and peer training are necessary to reach these populations. A comprehensive and integrated approach to HIV prevention is advocated.

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PREFACE

This thesis is dedicated to my beloved son, Xavier. Son, you are so special to me. Though many a times you seized me in an effort to say ‘this is too much I need attention too’, turning to you any time made my life so complete and gave me strength to move on. Your companionship during hard and tough times renewed my strength every moment. You were indeed an inspiration for me to work hard every day.

To my beloved parents and siblings back in Kenya, miles are countless between us but we are forever united by love. Thanks for all your prayers and inspiration.

Gratitude to my dear committee, your encouragement and continued support made it possible for me to successfully finish my graduate studies. Patricia, you are more than a mentor. You spent time to work with me to the finest details and I value your dedication. Dr. Silvestre, your sacrifice despite your health situation was immense, and Dr. Sharma I value your support. I could not have done it without the support of all of you.

Finally and most important, I thank God for his unlimited Grace to me and all those in my life. With God all things have been possible.

1.0 INTRODUCTION

Kenya is one of the countries that have been hard hit by the HIV/AIDS epidemic. In 2005, it was ranked 4th in the world by HIV/AIDS population and 17th by HIV/AIDS prevalence rate (WHO 2005). However in recent years, progress in HIV/AIDS prevention has been documented. Results from the most recent Kenya AIDS Indicator Survey (KAIS) indicate that 7.4% of Kenyan adults age 15-64 are infected with HIV (KAIS 2007). An even lower prevalence had been documented in the 2003 Kenya demographic and health Survey, (6.7%) among adults aged 15-49. Notably, Kenya AIDS indicator survey (KAIS) interviewed and tested women age 50-64 and men age 55-64 that have not been included in past HIV sero surveys. This addition gives new insight into the epidemic among older Kenyan adults who have previously been considered at low risk. Overall, HIV/AIDS prevalence is estimated to have fallen from 10% in the late 1990 and the target is to reduce the rate of infections to 5.5 by 2010 (UNAIDS 2004).

On the other hand, Kenya was cited a second time by the joint United Nations program on HIV/AIDS (UNAIDS), in 2007 as one of the few countries in Africa where a return to HIV investment is starting to show. The country's accomplishment matches that of Uganda that has been cited by UNAIDS as the most effective in the developing world in controlling the spread of AIDS (UNAIDS 2007). This progress however cannot be taken for granted; enormous challenges remain. For example, the rate of new infections remains unacceptably high and there

are major differences in the risk of infection faced by different population groups (Kenya National AIDS Strategic Plan, KNASP 2005). While the highest rates of infections were initially concentrated in marginalized and special risk groups, for more than a decade, Kenya has faced a mixed HIV/AIDS epidemic with new infections occurring in the general population as well (KAIS 2008). This poses great challenges in the HIV prevention efforts.

Notably, the fight against HIV in Kenya has been intensified more than ever and the country has made impressive strides in the epidemic (KDHS 2003). In 1999, the Government of Kenya declared HIV/AIDS a national disaster and established the National AIDS Control Council (NACC). NACC facilitated the development of the Kenya National HIV/AIDS Strategic Plan (KNASP) 2000-2005 and later KNASP 2005/06-2009/10, which set out a multi-sectoral response to the epidemic. Stakeholders within government, civil society, and the private sector jointly agreed to this plan. The purpose of the strategic plan was to provide an action framework for HIV/AIDS within which HIV prevention strategies, plans and budgets should be formulated, monitored and coordinated. The goal of the strategic plan is to reduce the spread of HIV/AIDS, improve the quality of life of those infected and affected and mitigate the socio-economic impact of the epidemic in Kenya. All HIV/AIDS interventions, whether executed by government, the private sector, civil society organizations or international donors ultimately fall within this action framework. Within this action framework, several HIV/AIDS prevention strategies have been implemented and most of these have been very successful. For example, there is strong evidence to suggest that there has been a reduction in risky behavior such as increased condom use, delay in sexual debut, decreased number of partners and greater availability of Voluntary Counseling and Testing sites (KAIS 2008). At the same time, in the recent past, Kenya has witnessed considerable growth in funding for its HIV/AIDS national program from major global initiatives.

The main boost comes from the USA government under PEPFAR (US President's Emergency Plan for AIDS Relief). Kenya is one of PEPFAR's 15 focus countries, which collectively represent approximately 50 percent of HIV infections worldwide. Under PEPFAR, Kenya received nearly \$92.5 million in Fiscal Year (FY) 2004, more than \$142.9 million in FY 2005, approximately \$208.3 million in FY 2006, and \$368.1 million in FY 2007 to support comprehensive HIV/AIDS prevention, treatment and care programs. PEPFAR also provided nearly \$534.8 million in FY 2008.

Given all these efforts, why is HIV still a problem in Kenya? On one hand some people suggest that Kenya has focused too much on the behaviors that spread the virus, rather than on the social and economic conditions that promote such behaviors. (Kharsany, Inter Press Service report dated 1/10/09). According to this press report, Kenya is failing because she is not paying enough attention to who is becoming infected and how. Plans for prevention are often built on broad categorizations of the type of epidemic rather than on a careful analysis of where new infections are occurring (UNAIDS 2008). Effective HIV prevention requires the scaling-up of multiple interventions that work synergistically to achieve maximum impact. "Scaling-up" HIV prevention means ensuring that the appropriate mix of evidence-based prevention strategies achieves a sufficient level of coverage, uptake, intensity, and duration to have optimal public health effect (UNAIDS 2007). It is important that any prevention efforts are strategic to meet the current need in HIV/AIDS prevention not only by identifying the correct and most effective strategies but also targeting the right population. In this study I seek to provide an up to date review of the strategies that Kenya is and has used so far in HIV prevention and the populations at risk. The aim is to identify gaps in an effort to establish where prevention efforts may be falling short in the fight against HIV/AIDS.

2.0 BACKGROUND

2.1 DESCRIPTION OF THE COUNTRY

Kenya covers an area of 582,646 square kilometers, ranking it as the 47th largest country in the world. It borders Ethiopia in the North, Sudan in the Northwest, Uganda in the West, Tanzania in the South and Somalia in the East. Kenya lies in the East Coast of Africa, with the Equator nearly dividing it in half. The country has an unusually diverse physical environment, including savanna grasslands and woodlands, tropical rain forests, and semi-desert environments. About 80% of the country lies in the so-called arid and semi-arid lands in the northern and eastern regions. These regions suffer from frequent droughts, which invariably create economic and social problems that impact on the other sectors. The main climatic feature in the whole country is the long rainy season from March to May, followed by a long dry spell from May to October. Short rains come between October and December.

The majority of Kenya's population lives in the rural areas where they depend on agriculture for their livelihood. Agriculture is the mainstay of the domestic economy with tea, coffee and horticulture and tourism being major foreign exchange earners. Kenya's economy has been adversely affected in recent years by declining world market prices and drought conditions in the country. In the recent past, drought has led to low water levels in the hydro-electric dam reservoirs thus affecting the power supply adversely and thereby, impacting negatively on the

economy. The other factors which have impacted negatively on the socio-economic life of the nation include the world wide economic recession, refugee influx, ethnic clashes, unemployment, external debt burden and most recently political instability.

Kenya was a British colony over the period of 1895-1963 and gained independence in 1963, after a bloody liberation struggle. Between 1960 and 1969, Kenya operated as a multi - party democracy, but reverted into a one party state from 1969 to 1982. In November 1991, following strong local agitation and international pressure, the country again reverted to multi-party politics. The first president ruled between 1964 and 1978, when he died. Kenya was ruled by the second president until 2002, when the opposition defeated the ruling party in the general elections. The year 2007 marks Kenya's history because after disputed elections that elicited unrest in the country, a coalition government was formed and for the first time, Kenya now has a Prime Minister.

Geographically, Kenya is divided into eight provinces, Central, Nyanza, Western, Eastern, Northeastern, Rift Valley, Coast and Nairobi Province. The country is multi-ethnic, with 45 ethnic groups. Although Christianity and Islam are the major religions, Kenya has diverse cultural and religious communities. Each of these communities has certain rules and norms, which are their regulating mechanisms. Some communities have common cultural practices, while others are very diverse. These religious and cultural practices have relevance to social behavior, which is related to transmission and spread of HIV/AIDS.

2.2

HISTORY OF THE HIV EPIDEMIC IN KENYA

As mentioned earlier, in the early and mid 1980's, HIV/AIDS was largely uncommon in Kenya. It was a disease that affected 'others'. Initially it was viewed as a disease of homosexuals, especially American homosexuals. Later it became a disease of Ugandans, when stories of 'slim' (the name given to AIDS in Uganda supposedly because of weight loss among its sufferers) began to hit the local press. It was not until September 1984, that the medical community officially learnt of the first reported case of AIDS in Kenya, through an article published in the East African Medical Journal. The patient was a 33-year-old Ugandan journalist operating from Nairobi, Kenya. The article ended prophetically - "This case is reported to alert medical practitioners to the possibility of AIDS occurring in Africans and to emphasize the point that no race may be exempted from this highly lethal syndrome". AIDS had arrived in Kenya and from there it spread like a bush fire! (Kenya AIDS Watch Institute (KAWI) website)

2.3

SEVERITY OF THE EPIDEMIC OVER TIME

In the 80s, HIV/AIDS prevalence among Kenyan adults was below 3%. The epidemic peaked in the late 1990s with an overall prevalence of about 10% by 1997; declined to 6.7% in 2003 (KDHS 2003), and had fallen to 6.1% as of the end 2004 (NACC 2005). Evidence suggests that the dramatic decline was the result of a combination of factors which include higher death rates, lower incidence, and behavior change (KDHS 2003). Though behavior change is only one factor which may affect a prevalence decline, in the case of Kenya, evidence suggests that

significant number of Kenyans had adopted safer sexual behaviors, including increased condom use, delay in first sexual experience and reduction of partners (UNAIDS/WHO 2005). The recent KAIS of 2008 indicated an increase of the HIV prevalence to 7.4%. The explanation to the increase could be that the number of people who die from AIDS has declined due to expansion of ART services, and also largely because newly infected people survive longer, the number of people living with HIV has increased.

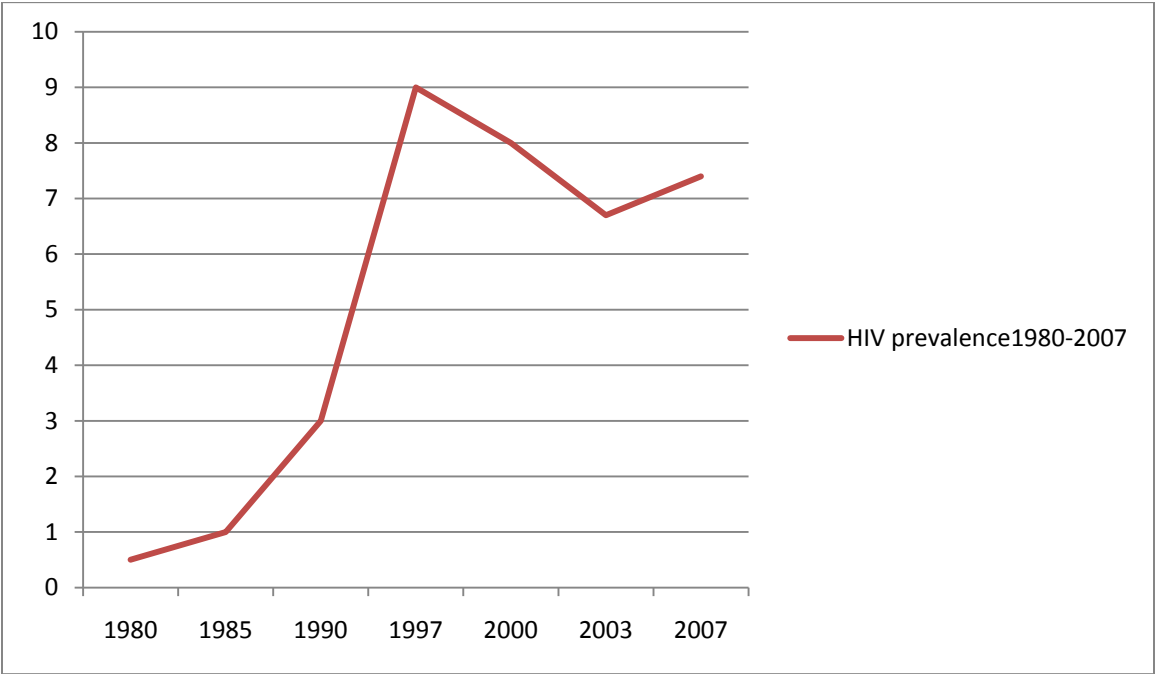


Figure 1: HIV prevalence among adults 15-49, 1980-2007

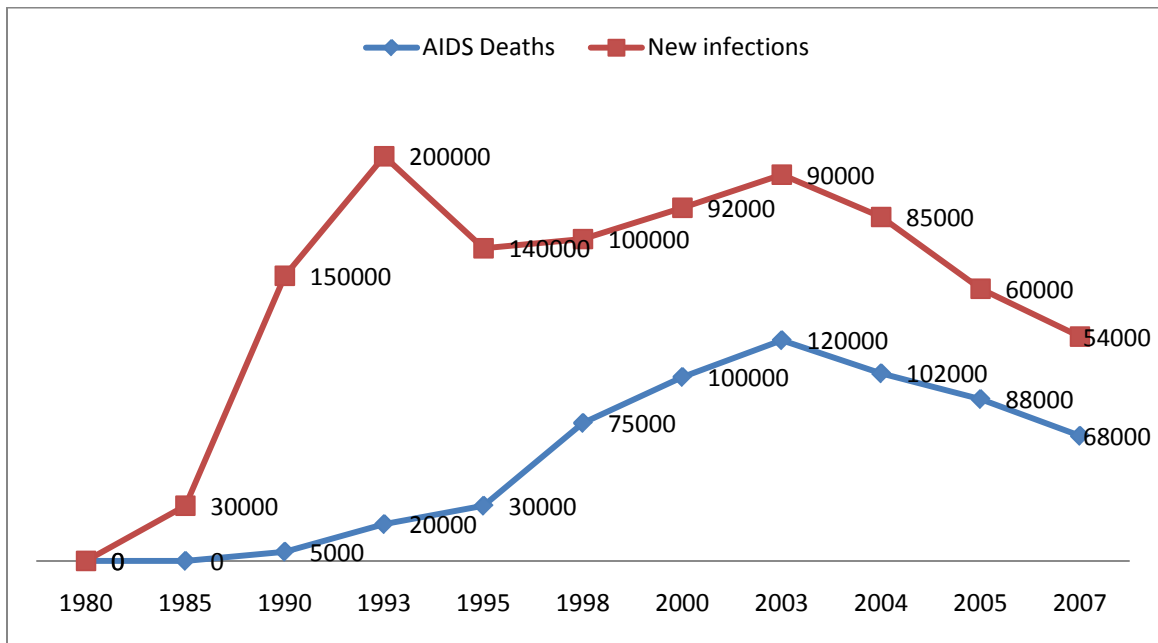


Figure 2: Number of new infections and HIV deaths among adults 15-49, 1980-2007

Throughout my review of the state of HIV/AIDS in Kenya, I realized that data on new infections is very limited and HIV/AIDS is mainly described in terms of prevalence. This data is especially not available by regions, age, sex, or other population subgroups. This has been addressed in the limitations section later on in the study. However, according to the limited information on incidence, the number of new infections increased steadily in the 90s and reached a peak of over 200 000 in 1993 after which the number started declining. Though new infections have been declining over time, the levels are still high. At least between 55,000 to 100,000 new HIV infections are reported on an annual basis mostly among married couples (KAIS 2008). The millennium goal number 6 aims at halting and reversing the spread of AIDS by 2015. Regarding HIV mortality, the epidemic has changed with the introduction of free delivery of antiretroviral treatment (ART). Annual AIDS deaths peaked at 120,000 in 2003, reflecting the expanding number of new infections in the early 1990s (KDHS 2003) AIDS deaths would have remained at

that level if it had not been for the rapid and expansive rollout of free antiretroviral treatment. By 2006, the annual AIDS mortality number had dropped to 85,000. Evidence shows that ARVs have averted about 57,000 deaths since 2001 (UNAIDS 2007)

2.4 HIV/AIDS PREVALENCE BY BACKGROUND CHARACTERISTICS

2.4.1 Pregnant women

Kenya currently has a policy to test for HIV all pregnant women attending antenatal clinics. According to the National AIDS and STD control program (NASCO) and the sentinel surveillance of HIV and STDs in Kenya, by 2005, HIV prevalence among pregnant women attending ante natal clinics was estimated to be 7.8%. This translates to 78,000 women HIV positive annually and infection among infants is estimated at 50,000 - 60,000 annually as a result of mother-to-child transmission. The situation requires availability of effective and more accessible HIV prevention, care and treatment services in the country (NASCO 2005). According to the latest survey, KAIS 2007, nearly 1 out of 10 pregnant women in Kenya are infected with HIV (9.6 percent) with minimal differences by urban and rural residence. This has increased from 7.3% among pregnant women in 2003 (KDHS 2003). These rates are higher than the national general HIV averages and pose a great concern especially to the efforts of reducing infant and child mortality. Without intervention, about 40% of HIV-positive pregnant women will pass on the infection to their babies during pregnancy, delivery and the post-natal period

through breastfeeding. Also, without preventive interventions, about 10-20% of infants born to infected mothers will contract the virus through breast milk if breastfed for two years. The risk of postnatal HIV transmission after 6 weeks of age is estimated at around 1% per month of breastfeeding (WHO 2006).

2.4.2 Marital status

Historically, having sex outside of marital relationships has been considered “high risk” sex. However, given the maturity of the epidemic, it is important to consider all unprotected sex with persons of unknown status as potentially high risk sex. In Kenya, 10% of monogamous married couples and 14% of polygamous couples are living with HIV, with one or more partners infected with HIV. According to the KAIS 2007, Kenyans in polygamous unions (one man, more than one woman) are more likely to be HIV infected (11%) than those in monogamous unions (7%). Discordant couples, where one partner is infected and the other is not are a very common situation in Kenya.

2.4.3 Education

There is no consensus about the relationship between education and HIV/AIDS. Some reports show a negative association while others show a positive association. According to the Kenya AIDS indicator survey of 2007, women age 15-64 with higher educational levels have significantly lower HIV prevalence than those with less education. Those with primary education have a prevalence of 10% compared to 7% with secondary education and 4% with tertiary

education. Prevalence among women who have never attended school is 7%. For men, there is also a decrease in HIV prevalence with higher levels of education but the differences are less pronounced and not statistically significant (KAIS 2007). Some studies have shown a positive association between education and HIV. On the other hand, a study investigating the cross-sectional relationship between HIV status and socioeconomic status in sub Saharan Africa including Kenya revealed evidence of a strong positive education gradient in HIV infection. Up to very high levels of education, better-educated respondents are more likely to be HIV-positive. According to the study, controlling for sex, age, sector of residence, and region of residence, adults with six years of schooling are as much as 50% more likely to be infected with HIV than those with no schooling. According to this study, education is positively related to certain risk factors for HIV including the likelihood of having premarital sex (Fortson JG 2008). Another study aimed at assessing whether educational status is associated with HIV-1 infection in developing countries by conducting a systematic review of published literature. The study concluded that in Africa, higher educational attainment is often associated with a greater risk of HIV infection. However, the pattern of new HIV infections may be changing towards a greater burden among less educated groups. This pattern is reflected in Kenya (Hargreaves, JR and Glynn, JR 2002).

2.4.4 Residence

About three quarters of Kenyans live in rural areas of the country. Among those ages 15-64, 7% are infected with HIV. In urban areas, the prevalence is 9%. Though the prevalence in rural areas is lower than in urban areas, the greatest burden of disease is in rural areas since most

Kenyan live in rural areas, one million rural adults are infected representing 70% of total HIV infections (KAIS 2007). Similar patterns have been previously documented, for example according to the 2003 KDHS, HIV prevalence was almost twice as high in urban areas as in rural areas (10 and 6%, respectively) (KDHS2003).

2.4.5 Age and sex

As observed in different surveys, there are distinct differences between women and men in the age pattern of HIV infection in Kenya. According to the KDHS, among women, the proportion found to be HIV positive rises rapidly with age, from 4% among the 15-19 age groups to 12 percent in the 25-29 age groups, and then stabilizes among those aged 25-39 years before dropping to 5% in the 45-49 age groups. Among men, HIV prevalence is below 1% among those aged 15-19 years then rises gradually to a peak of 9% among those aged 35-44 years and then declines to 6% in age group 45-49. The infection rates peak at a later age for men than for women and they are lower for men than women at every age group except the oldest (KDHS 2003).

According to the KAIS, a higher proportion of women age 15-64 (8.7%) than men (5.6%) are infected with HIV. This means that 3 out of 5 HIV-infected Kenyans are female. This pattern is similar to what was observed in 2003 and 1998 KDHS. For example, HIV/AIDS prevalence rate among young girls aged 15-24 was 5.8% in 2003, compared to 1.2% for young men in the same age range (KDHS 2003). The burden of infections is statistically higher among females than males until age 35 after which the ratio of male to female infections starts to approach 1 to 1 (KAIS 2008). Important to note is that for both females and males, HIV is occurring in all age

groups. However, there are some differences in prevalence across the life span. A higher proportion of Kenyans ages 30-34 are infected with HIV than in any other age category. The decline in prevalence among women after age 34, and among men after age 44 could represent a decline in new infections in older age groups or an increase in HIV-related deaths in these age groups. KAIS included results for women age 50-64 and men age 55-64 that have not been included in past HIV sero surveys. This addition gives us new insight into the epidemic among older Kenyan adults who have previously been considered at low risk. Prevalence among Kenyans age 50 and older is greater than among the youngest Kenyans and this may reflect cumulative lifetime exposure to HIV (KAIS 2007).

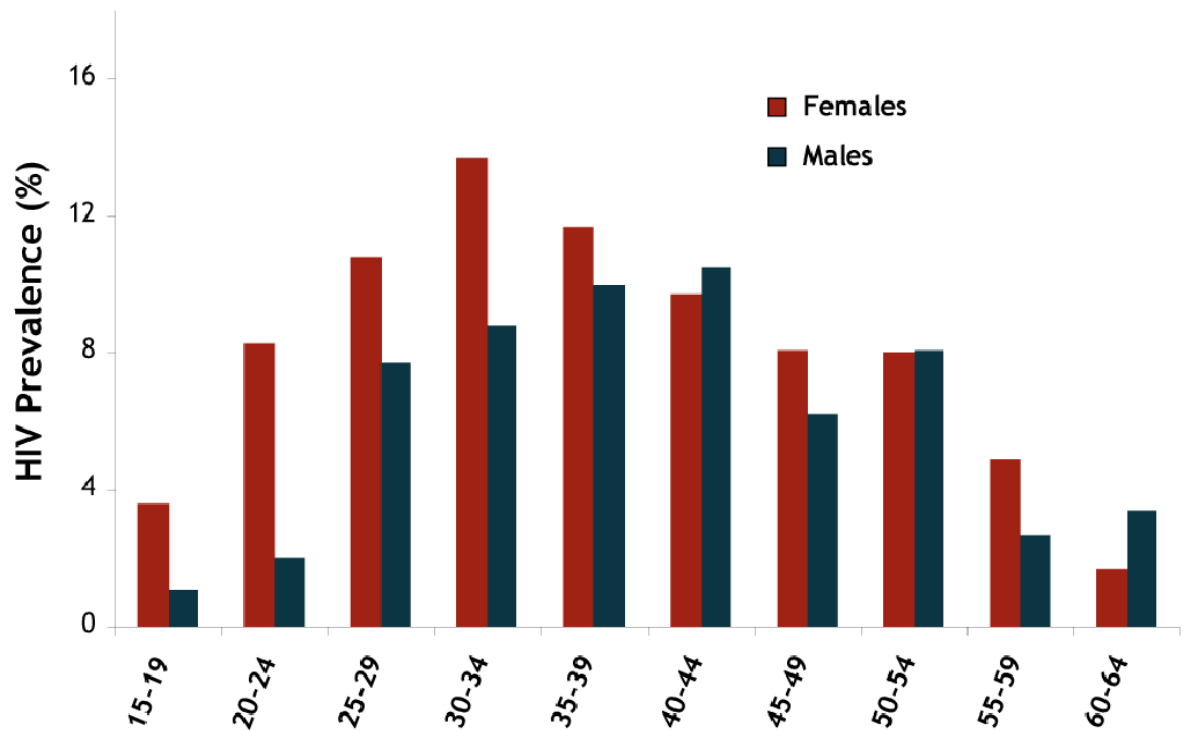


Figure 3: HIV prevalence by age among adults 15-64

2.4.6 Geography

The distribution of HIV infections varies greatly across Kenya. Prevalence remains the highest in Nyanza province at 15.3%, an increase from 14.0% in 2003 KDHS and represents more than double the national prevalence estimate. Other provinces with rates similar to or higher than the national level are Nairobi province (9.0%), similar to that observed in 2003, Coast province (7.9%), and Rift Valley province (7.0%). Prevalence in Eastern province is 4.7% and in Central province 3.8% of the adult population is infected. As observed in previous surveys, North Eastern province has the lowest adult HIV prevalence at 1% (KDHS 2003, KAIS 2007). Several explanations have been advanced for the differences in HIV prevalence and they range from culture to religion and social economic factors. A study conducted among the Muslim community that occupy part of the coast province revealed that Islamic values portraying sex outside of marriage as sinful are often believed to contribute to HIV transmission as they reject safe-sex practices. Moreover, stigma associated with sinful behavior is frequently assumed to interfere with access to care for those infected. In contrast, adherence to religious values such as abstinence is viewed as an explanation for the relatively low incidence of HIV infection in Islamic populations (Maulana et al 2009). Cultural practices and beliefs are also responsible for the high HIV rates in Nyanza and Western regions of the country. For example, Luo women are believed to acquire contagious cultural impurity after the death of their husbands that is perceived as dangerous to other people. To neutralize this impure state, a sexual cleansing rite is observed. In the indigenous setting, the ritual was observed by a brother-in-law or cousin of the deceased husband through a guardianship institution. However, with the emergence of HIV/AIDS, many educated brothers-in-law refrain from the practice and instead hire

professional cleansers as substitutes. If the deceased spouses were HIV positive, the ritual places professional cleansers at risk of infection. Thereafter, they could act as a bridge for HIV/AIDS transmission to other widows and to the general population (Ambasa 2007).

2.4.7 Other characteristics: Male Circumcision

It is generally known that some classical sexually transmitted disease pathogens such as gonorrhea and chlamydia infect the anterior urethra, whereas those that cause ulcers (e.g. syphilis) infect the shaft or the mucosa of the penis. Two lines of evidence suggest that HIV might be transmitted to men in the same way as pathogens that cause ulcer. First, men with genital ulcers appear to have an increased susceptibility to HIV infection. Second, when men are circumcised, the mucosal tissue of the penis keratinizes and evolves into stratified squamous epithelium, which would be expected to be more resistant to sexually transmitted disease pathogens (Fleming 1999).

In Kenya among men age 15-64, 85% are circumcised. Culturally, boys are circumcised by the age of 12-15 to mark their rite of passage to manhood, but this practice is not common to all regions and ethnic groups. The highest level of circumcision is in the Northeastern province (97.2%) and the lowest level is in Nyanza (46.7%). Nationally, 73% of 15-19 year old men are circumcised; the rate of circumcision increases in older age groups. In all groups except the youngest age, HIV prevalence is higher by 3 to 5 times in men without circumcision than in men with circumcision. Among uncircumcised men 35-39 years of age, 1 out of 3 is HIV-infected (KAIS 2007). Notably, the region with the lowest level of circumcised men (Nyanza) has the highest HIV prevalence and the region with the highest level of circumcision has the lowest HIV

prevalence (North Eastern). A comprehensive review of articles from three major data bases, (CENTRAL, MEDLINE and EMBASE) concluded that there is strong evidence that medical male circumcision reduces the acquisition of HIV by heterosexual men by between 38% and 66% over 24 months. According to this study, incidence of adverse events is very low, indicating that male circumcision, when conducted under medical conditions, is a safe procedure. The study concluded that inclusion of male circumcision into current HIV prevention efforts is warranted, with further research required to assess the feasibility, desirability, and cost-effectiveness of implementing the procedure within local contexts (Siegfried et al 2003).

2.5 REVIEW OF THE VULNERABLE AND POPULATIONS AT RISK

As noted earlier, Kenya has faced a mixed HIV/AIDS epidemic with new infections occurring in the general population just as much as in the vulnerable, high-risk groups. However, some groups have been identified to be at more risk and others are more affected due to their vulnerability. Women, children and young people, who account for more than 70% of the population (Central Bureau of Statistics 2008), are identified as vulnerable to HIV due to different factors as discussed below. Other groups that have been classified as high risk include sex workers, and their partners, the fishing community, including both the men and the women involved, injecting drug users and men who have sex with men.

According to the Kenya modes of transmission study in 2008, groups associated with the highest rates of new infections are the steady partners of those involved with casual sex (24.5%), those involved in casual sex (17.4%), fishing communities (15.1%), heterosexual steady partner relationships (10.5%), MSM (9.2%) and injection drug use (6.3%). Notably, 80% of new infections occur through heterosexual contact, heterosexual transmission therefore features as the most prominent mode of transmission in all areas of Kenya and it is driven by both casual and long-term partnerships (Gilmey et al 2008). According to a different study, multiple concurrent partnerships is a primary driver of the HIV epidemic, bridging infection from individuals involved in higher risk behavior (casual sex, sex workers) and their partners (Gouws et al 2006).

2.5.1 Women

As mentioned earlier, data confirms that women continue to be disproportionately infected by HIV/AIDS in Kenya. Women are more susceptible than men to infection with HIV in any given heterosexual encounter mainly due to biological factors – the greater area of mucous membrane exposed during sex in women than in men; the greater quantity of fluids transferred from men to women; the higher viral content of male sexual fluids; and the micro-tears that can occur in vaginal (or rectal) tissue from sexual penetration (Scaccabarozzi 2008). Younger women may be especially susceptible to the infection. This disparity underlines the higher HIV/AIDS risk women and girls face and illustrates the intricate relationship between gender

and youth in HIV/AIDS. In combination with these biological factors, gender norms may also have an impact on HIV transmission. For example, gender norms allow men to have more sexual partners than women, and encourage older men to have sexual relations with much younger women. This means that given heterosexual sex is the main mode of HIV transmission, infection rates are much higher among young women than among young men. Forced sex, which all too many women (and some men) experience at some point in their lives, can make HIV transmission even more likely, since it may result in more trauma and tissue tearing. According to a study on sexual coercion among young people in Kenya, among the sexually experienced respondents, 21% of females and 11% of males had experienced sex under coercive conditions. Most of the perpetrators were intimate partners, including boyfriends, girlfriends and husbands (Erulkar 2004). Due to cultural predispositions, women may remain ignorant of the facts of sexuality and HIV/AIDS because they are not “supposed” to be sexually knowledgeable, while men may remain ignorant because they are “supposed” to be sexually all-knowing. This kind of attitude has contributed greatly to the spread of HIV/AIDS, leaving women more vulnerable. Other cultural barriers identified as problems related to HIV infection include child sexual abuse, incest and older male family members sexually abusing young females in the family. A study conducted in Kenya and Tanzania concluded that first coitus occurs at a young age for many Kenyan children and adolescents. A degree of force, trickery, or material exchange is not uncommon in these sexual relations (Lalor 2004). Other cultural practices that expose women to HIV include wife inheritance and sexual cleansing rituals. According to a study investigating HIV/AIDS and cultural practices in western Kenya and the impact of sexual cleansing rituals on sexual behaviors, causal factors of unchanging sexual behaviors are deeply rooted in traditional beliefs, which the communities uphold strongly. These beliefs encourage men and women to

have multiple sexual partners in a context where the use of condoms is rejected and little HIV testing practiced (Ayikukweyi et al 2008).

2.5.2 Children and adolescents

Children and adolescents are also included in the vulnerable group. By the end of 2007, it was estimated that approximately 130,000 children aged <15 years were living with HIV/AIDS (UNAIDS 2008). This is an increase from 2003, when 100,000 children in Kenya were estimated to be living with HIV/AIDS. There were an estimated 650,000 AIDS orphans in 2003 (Kates 2005). Some cultural practices have placed the young people in a vulnerable position and promoted engagement into risky behaviors. For example a study in Kisumu Kenya, a region with a high HIV prevalence exposed some of these practices (Njue et al 2009). According to the study, disco funerals (a traditional activity characterized by mourning, music and dance usually in the home of a deceased person and sometimes performed as a way to raise money to cover funeral expenses) are an important place for young people to hang out; they increase the opportunities to meet and engage in unprotected sex. In this study many adolescents reported having casual sex on these occasions, sometimes with multiple partners, and mostly without condoms. Some girls were forced into sex, and there were several accounts of gang rape. Sex in exchange for money was reported frequently. Drugs and alcohol seemed to facilitate unprotected, multiple-partner, coerced, and transactional sex. The study concluded that since the high AIDS mortality in the region leads to frequent disco funerals, many adolescents end up having unprotected, transactional, or coerced sex at these occasions. Disco funerals might therefore contribute to the high HIV prevalence among youth, especially among adolescent girls. This

calls for HIV interventions to include outreach actions to youth who hang out at disco funerals and link up with parents and funeral organizers to reduce risk situations (Njue et al 2009). Other studies have identified several other factors predisposing out of youth to HIV/AIDS- related sexual behaviors. These include, sexual intercourse with non regular partners, low consistent condom use, alcohol intake, chewing of Khat (a green leave/ drug), low education background (Alemu et al 2007).

2.5.3 Sex workers and partners

Sex workers have been considered a high risk group for the transmission of HIV and other sexually transmitted infections and so are their regular partners, or noncommercial partners. In general the main factor that puts sex workers at risk includes the fact that they have relatively high numbers of sexual partners. This alone however does not necessarily increase their likelihood of becoming infected with HIV especially if they use condoms consistently and correctly. However, the reality is that sex workers and their clients do not always use condoms. In rare cases, this is because sex workers have no access to condoms, or are not aware of their importance. In the majority of cases, sex workers are simply powerless to negotiate safer sex, even if they try to do so. Clients may refuse to pay for sex if they have to use a condom, and use intimidation or violence to enforce unprotected sex. They may also offer more money for unprotected sex, which may be hard to refuse if the sex worker in question is in desperate need of income. Other factors contributing to the sex workers vulnerability to HIV includes that they are generally stigmatized, marginalized and criminalized by the societies in which they live. In

Kenya, sex workers are victims of rape and abuse because they are unprotected by the law. In addition the stigma that they face makes it hard to access health, legal and social services.

2.5.4 Injection drug users

Although injection drug users constitute a risk group in themselves, there is also an overlap between drug use and sex work. Individuals who fall into both categories are therefore particularly vulnerable to HIV and are perhaps doubly stigmatized. Like sex workers, drug users may find themselves engaging in unprotected sex, which increases their chances of HIV infection. An even bigger risk that drug users face is the sharing of contaminated needles. This is a particularly efficient way of exchanging blood and therefore transmitting the HIV virus from infected to uninfected users. Beyond the obvious physical risks associated with drug injection, drug users may also be vulnerable to HIV because of their social and legal status. Again just like sex workers, drug users often live on the fringes of society, away from family and friends and beyond the reach of health, education or treatment programs. In addition, many drug users simply do not see themselves as vulnerable to HIV infection and do not test for the virus.

2.5.5 Men who have sex with men (MSM)

Men who have both commercial and noncommercial male sex partners also play a major role in transmitting HIV infection. Though research on men who have sex with men is limited in Kenya, few studies have been done to establish the risk factors as well as impediments to HIV prevention. Some of the conclusions reached by these studies included that the high prevalence

of HIV in Kenyan MSM is probably attributable to unprotected receptive anal sex. This calls for HIV prevention programs to deliver targeted risk-reduction interventions and STI services to MSM in Kenya (Sanders et al 2007). A study assessing the social context, sexual risk perceptions and stigma in relation to HIV vulnerability among male sex workers in Mombasa, Kenya showed that low knowledge compounds sexual risk taking, with a widespread belief that the risk of HIV transmission through anal sex is lower than through vaginal sex. Traditional family values, stereotypes of abnormality, gender norms and cultural and religious influences underlie intense stigma and discrimination for MSM. This information is important for HIV prevention strategies especially to inform peer education programs and sensitization of health providers who are involved in addressing unmet HIV prevention needs.

2.5.6 Discordant couples

Discordant couples are another category that has recently been seen as a vulnerable category for HIV. These are couples in which the HIV status of the two partners is different. The HIV negative partner in a discordant couple is very vulnerable to infection. It was estimated that over 400,000 married couples in Kenya are HIV discordant. This calls for couple testing and counseling, and the provision of information and education on reproductive rights and preventing infection (KASP 2005). In sub-Saharan Africa, approximately 1 in 2 HIV-1-infected persons living in a couple have a sero discordant partner. Recent data suggest a large proportion of new HIV-1 infections in mature epidemics occur within discordant couples, making discordance a major contributor to the spread of HIV/AIDS in Africa (Guthrie BL 2007).

2.5.7 The fishing community

The fishing community has also been identified as a high-risk group. These are mainly the communities living around Lake Victoria in the Western and Nyanza Regions of Kenya. The factors related to this include the fisherman lifestyle, which usually involves extended periods away from home and family, large cash income with few expenses, and presence of traditional high-risk sexual practices associated with fishing. These include **Jaboya** where if a woman wants to be the primary fish buyer from a boat (so she can sell the fish at market), she has to have sexual relationships with the fishermen of that boat and **Abila** where boat owners have crew houses on several beaches, and the women hired to cook and clean in these houses are also expected to have sexual relationships with the fishermen staying there.

3.0 METHODOLOGY

3.1 SOURCE OF INFORMATION

This study provides a critical analysis of the current HIV/AIDS prevention strategies in Kenya. Efforts to fight the epidemic have been mainly delivered by three main groups: the government, as the key player, non-governmental organizations (NGOs) and community based organizations (CBOs) and the international agencies including donor agencies. The Government is represented by the National AIDS Control Council (NACC), while the NGOs and the CBOs are all under the umbrella of Kenya AIDS NGOs consortium (KANCO), most donor and international agencies work under the UNAIDS and WHO. To achieve the goals of the study, three sources of information have been examined and reported:

1. A benchmark for evidence based HIV strategies was obtained from the Global HIV Prevention Working Group. These strategies have been described and compared to those that have been in use in Kenya. The HIV Prevention Working Group is a panel of over 50 leading public health experts, clinicians, biomedical and behavioral researchers, advocates and people affected by HIV/AIDS, convened by the Bill & Melinda Gates Foundation and the Henry J. Kaiser Family Foundation. The working group seeks to inform global policy-making, program planning, and donor decisions on HIV prevention, and to advocate for a comprehensive response to HIV/AIDS that integrates prevention, treatment, and care.

2. The case of Uganda's HIV prevention efforts has been briefly discussed. Uganda has been classified as a success case in the fight against HIV/AIDS and furthermore they have been listed as a country that has successfully implemented the recommendations of the HIV prevention working group in terms of proven strategies. This has been included to be able to provide a comparison to the Kenya prevention efforts in an effort to further identify gaps.

3. To identify the HIV prevention strategies in Kenya, the study has examined reports from the three umbrella bodies. NACC and KANCO have strategic plans that were examined in detail and the reports from UNAIDS were also examined. Different organizations websites and reports were individually examined to establish the kind of prevention activities/efforts in which they are involved. In addition data from main surveys that have been conducted in Kenya over time was examined to establish HIV trends as well as prevalence and incidence over the years. Since 1990, Kenya has conducted yearly sentinel surveillance in pregnant women attending ANC sites and patients attending STI clinics, information that has for a long time been used to estimate HIV prevalence in Kenya. Other sources of information on HIV/AIDS in Kenya include programmatic data from voluntary counseling and testing (VCT), blood donations and tuberculosis clinics. Since 2003, population-based surveys (KDHS) that are done every five years have included HIV testing and the information has been very useful in establishing the state of HIV in the country. The Kenya AIDS Indicator Survey provides the most recent data on HIV/AIDS (2008).

The following table summarizes the information obtained and the sources consulted. The specific strategies and HIV prevention efforts have been discussed in the results section.

Table 1: Data sources for HIV prevention efforts

Institution	Umbrella body	Documents studied/ source of data
HIV prevention working group	Melinda Gates foundation Henry J. Kaiser Foundation	The HIV prevention working group reports
Government/ Uganda	Ministry of Health	MOH sero behavioral survey UNAIDS reports HIV prevention working group reports
Government/ Kenya	National AIDS Control Council (NACC) Ministry of Health	Kenya National AIDS Strategic Plan Population Based National Surveys- KDHS and KAIS VCT, antenatal and TB clinics sources Blood donations WebPages- NACC
CBOs NGOs FBOs	KANCO	KANCO Strategic plan KANCO website
International agencies CDC FHI Population Council	International initiatives	Agency websites UNAIDS reports WHO reports on HIV/AIDS

The results section contains three sub-sections that will contribute to the analysis as follows:

1. A listing of the proven HIV prevention strategies as stipulated by the HIV prevention working group. This will act as a point of reference for the Kenyan prevention efforts.

2. An outline briefly Uganda's HIV prevention efforts and compare it to the Kenyan approach. Uganda, as already mentioned has been one of the countries that have successfully implemented proven strategies and has achieved good results in the fight against HIV.

3. A listing of Kenya's prevention efforts as implemented by the government and other agencies and this will be compared with Uganda's and HIV prevention working group's strategies. The listings and comparisons of the prevention strategies will help to identify where Kenyan efforts against HIV may be running short. Finally I will discuss the gaps identified within the limitations of the study and make necessary recommendations based on this analysis.

4.0 RESULTS

4.1 BENCHMARK - HIV/AIDS PREVENTION PROVEN STRATEGIES BY THE GLOBAL HIV PREVENTION WORKING GROUP

According to the Global HIV Prevention Working Group, when assembling a national HIV prevention plan, each country should prioritize access to proven prevention strategies, tailoring the targeting and scale-up of HIV prevention to particular national circumstances and needs (GHPWG 2007). They provided a roster of proven HIV prevention approaches which includes a range of measures. These include:

4.1.1 Preventing sexual Transmission

- Behavior-change programs- increase condom use, delay initiation of sexual behavior in young people, and reduce the number of partners
- Condom promotion
- HIV testing
- Diagnosis and treatment of sexually transmitted infections (STIs)
- Adult male circumcision

4.1.2 Preventing blood-Borne Transmission

- Provision of clean injection equipment to injection drug users
- Methadone or other substitution therapy for drug dependence

4.1.3 Blood safety (including routine screening of donated blood)

- Infection control in health care settings (including injection safety, universal precautions, and antiretroviral prophylaxis following potential HIV exposure)

4.1.4 Preventing Mother-to-Child Transmission

- Primary HIV prevention for women of childbearing age
- Antiretroviral drugs
- Prevention of unintended pregnancy in HIV positive women
- Breast feeding alternatives
- Caesarean delivery (in the case of high maternal viral load)

4.1.5 Social strategies and supportive Policies

- HIV awareness campaigns (including mass media)
- Anti-stigma measures
- Gender equity and women's empowerment initiatives
- Involvement of communities and HIV-infected individuals

- Visible political leadership
- Engagement of a broad range of sectors in HIV awareness and prevention measures
- Legal reform to create an environment supportive of HIV prevention (such as laws decriminalize needle possession).

4.2 THE CASE OF UGANDA

For nearly two decades, Uganda has been regarded as a singular success story in sub-Saharan Africa in HIV prevention (UNAIDS 2001, 2007). In the mid-1980s, long before most other countries responded to the epidemic, Uganda initiated a public AIDS awareness campaign that emphasized sexual fidelity and delayed initiation of sex among young people. Whereas roughly 50% of 15-year-old girls in Uganda were sexually active in 1989, fewer than one in four had initiated sexual activity in 1995. In comparison with their counterparts in Kenya, Zambia, and Malawi, young men (15-19) in Uganda were significantly more likely in 1995 to have never had sex, to be married and monogamous, and to have fewer sexual partners (UNAIDS, 2001). By the late 1990s, infection levels in Kampala had fallen by two-thirds, and national HIV prevalence had been cut in half (UNAIDS, 2002.). The current HIV prevalence in Uganda is estimated to be 5.4% amongst adults (UNAIDS 2008). According to the Uganda HIV and AIDS Sero-Behavioral Survey, the number of people living with HIV is higher in urban areas (10.1% prevalence) than rural areas (5.7%); it is also higher among women (7.5%) than men (5.0%) (MOH Uganda 2006)

The success can be attributed to several factors. The country concentrated on addressing social issues like gender inequalities and women empowerment. Similarly, issues such as poverty

and economic factors especially affecting women were a priority. The HIV prevention efforts have also benefited from strong government leadership, broad-based partnerships and effective public education campaigns all contributing to the decline in the number of people living with HIV & AIDS in the 1990s and thereafter. The main HIV prevention approach used in Uganda just like in Kenya, has been the ABC approach - firstly, encouraging sexual abstinence until marriage; secondly, advising those who are sexually active to be faithful to one partner; and finally, urging condom use, especially for those who have more than one sexual partner. HIV testing has also been intensified in Uganda. Door to door screening programs and the routine or 'opt-out' testing (whereby anybody who enters a healthcare facility is tested for HIV unless they specifically ask not to be) have been implemented with success (Government of Uganda 2008). According to this report, success has also been attributed to the fact that much of the prevention work is done at the grassroots level where several CBOs have been involved. These groups worked to break down the stigma associated with AIDS, and encouraged a frank and honest discussion of sexual subjects that had previously been taboo. Others factors attributed to the success include adequate and sustained financing for prevention efforts, visible political support, targeted evidence informed action, use of mass media and other channels to raise AIDS awareness, measures to reduce HIV stigma and involvement of affected communities and diverse sectors (Global HIV prevention working group 2007). Although there is much to learn from Uganda's comprehensive and timely campaign against the AIDS epidemic, emphasizing Uganda's success story must not detract from the devastating consequences that AIDS continues to have across the country: personally, socially and economically ([avert.org/ HIV/AIDS Uganda](http://avert.org/HIV/AIDS_Uganda))

STRATEGIES

Over time, the main strategy for HIV prevention in Kenya has followed the ABC approach (abstinence, faithfulness, condom use). ABC provides hard data so people can decide how to protect themselves: the only 100% effective way to avoid HIV is to abstain or to be mutually faithful to a single, HIV-negative partner. Correct and consistent use of condoms reduces risk by approximately 90 percent (USAID 2005). In generalized epidemics however, other interventions, in addition to ABC, are needed. The Kenyan strategy recognizes this by promoting programs to minimize gender inequality, which often makes it difficult for women to negotiate A, B or C. Kenya is also increasing HIV counseling and testing to ensure that HIV-negative couples maintain fidelity and that HIV-discordant couples (one positive and one negative partner) receive counseling and condoms. Beyond sexual transmission, Kenya also focuses on prevention of mother-to-child transmission, blood safety and safe medical injections. The U.S. government supports this comprehensive approach to prevention in generalized epidemics in Kenya and many other countries through the President's emergency plan for AIDS relief. PEPFAR operates on the principle that treating people with respect by providing them with HIV prevention education and services is good public health (PEPFAR report, 2006). It fosters the value of personal responsibility that leads to healthy behaviors. More details on HIV prevention activities under PEPFAR and the Global AIDS Program has been discussed in the international agencies section later in this chapter.

4.3.1 Government effort towards HIV/AIDS

During the period 1985-1989, right after the first AIDS case was diagnosed, the government developed and launched a 5 year Medium Term Plan to focus on prevention through blood screening, promotion of safer sexual practices and early diagnosis of STDs. At that time, a National AIDS Committee and an AIDS Program Secretariat were also formed. In 1992 National HIV/AIDS Control Program was formed and it was merged with the National STD Control Program to form the National HIV/AIDS and STD Control Program – NASCOP. In 1997 Parliament approved Session Paper No. 4 of 1997 on AIDS in Kenya and among its recommendations was the formation of NACC- National AIDS Control Council. NACC's mission was to provide policy and a strategic framework for mobilizing and coordinating resources for prevention of HIV transmission and provisions of care and support to the infected and affected people in Kenya (NACC/ UNGASS 2008). Its functions included to coordinate and supervise HIV/AIDS activities, mobilize resources for prevention and control of HIV/AIDS, develop policy, strategy and guidelines relevant to prevention and control of HIV/AIDS, develop sector specific HIV/AIDS programs, collaborate with local and international agencies working in AIDS control and to develop mechanism and guidelines to help implementing agencies on selection of HIV/AIDS interventions. One of NACC tasks was to formulate a National HIV/AIDS Strategic Plan, which was first published in the year 2000 as a Policy Guide for the fight against HIV/AIDS and covering the period 2000-2005 and later expanded to cover the period 2005/6 – 2009/10. The priority area of the NACC under the Kenya National HIV/AIDS Strategic Plan (KNASP) is prevention of new infections. KNASP aims to reduce the number of new infections through decreasing the risk of infection among the general population and

decreasing high-risk behaviors which make particular groups vulnerable to HIV. The prevention strategies are informed by the achievements, weaknesses and lessons learnt from previous prevention programs. New, evidence-based, approaches to prevention of HIV infection ensure that KNASP effectively responds to changes in the epidemic among the general population and the key vulnerable groups. KNASP also recognizes that different factors drive HIV infection in various population groups. Therefore, the effectiveness of the prevention strategies to a large extent depends on how well the focus is on the inherent differences among the key populations. There are high-risk behaviors which need to be prioritized and specific strategies developed to target them. Under the strategic plan, groups that are identified as particularly vulnerable and therefore should be specially targeted include commercial sex workers and their clients, injecting drug users, discordant couples, women and young girls, migrant workers, including fishermen, prisoners and uniformed services (police, military personnel) (NACC report 2007). Earlier responses to HIV/AIDS were largely centralized and health sector led. However since 1999, with increased recognition of HIV/AIDS as a development problem affecting every aspect of life, there was a shift to a multisectoral response. This response to the epidemic is based upon the “Three Ones” principle - one national strategic action plan, one national coordinating authority, and one national monitoring and evaluation system (KNASP 2005/ 2009). Under the new strategic plan, (KNASP 2005/6-2009/10), and following the three ones principle, National AIDS Control Council, has adopted a combination of HIV prevention strategies, which include

4.3.1.1 Increasing availability and access to counseling and testing

Counseling and testing is a key sexual behavior change strategy. Individuals who test HIV negative are motivated to guard their sero-status, while those that test HIV positive can be

counseled on how to protect their partners from infection, and be referred for ART where appropriate. KNASP 2005/06-2009/10 focuses on scaling up voluntary counseling and testing services in the country as a key HIV infection prevention strategy. The 2010 target is to have at least one Voluntary Counseling and Testing (VCT) site fully operational in every administrative division (approximately 700 sites nationally) and at least 2 million Kenyans to test for HIV annually (comprising 500,000 VCT and 1.5 million clinical testing including pregnant women). According to the UNAIDS, this target had been reached by 2007. The cumulative number tested has grown from a thousand in 2000 to more than 2 million in 2007 (UNAIDS 2008). This has largely been due to expansion of counseling and testing services. For example, the number of VCT sites increased from 3 in 2000 to almost 1000 in 2007. The quality of services provided through VCT, including testing, counseling and referral of those testing positive has constantly been strengthened. Interventions include direct capacity building, such as training and provision of test kits, and the establishment of a national VCT quality assurance framework. KNASP seeks to achieve equity in the provision of VCT services by ensuring that there is at least one VCT centre in each administrative division in the country. The VCT communication strategy plays a key role in ensuring increased VCT uptake. The communication strategy is focused and targeted at those at high risk of contracting HIV. The strategy is also used to raise awareness about the issue of discordant couples and encourage couples to seek testing and counseling services (KNASP 2007).

4.3.1.2 Condom promotion

Condom promotion consists of a combination of activities designed to encourage the acceptance and use of condoms to prevent the sexual transmission of HIV and other STDs. The

WHO observes that while ensuring that good quality condoms are affordable and available is essential, potential condom users need to be informed, motivated and inspired to adopt condoms and to sustain such use. Condom social marketing programs use commercial marketing strategies and distribution systems to increase the availability of condoms among large target groups by marketing them at affordable prices in accessible outlets. Condom distribution programs must ensure a constant supply of condoms to all sexually active people and to those most vulnerable to HIV infection either through public or private channels. In Kenya, condoms have been distributed at low or no cost through clinics, community based distribution (CBD), and commercial channels (KNASP 2005). Population Services International is one agency that has been at the forefront in social marketing of condoms. They started social marketing in Kenya in 1993, which has since then been actively promoting the use of condoms (NACC, Kenya). Through PSI, there is also free distribution of condoms through existing public sector reproductive health channels. Condoms are also available on the commercial market through private channels.

Condom use has remained a key strategy for prevention of HIV and other STIs. KNASP continues to promote correct and consistent condom use among the general population and those at higher risk of HIV infection. KNASP also supports the distribution of female condoms as a means of empowering women to choose safer sex. The target for 2010 is to distribute 160 million female condoms annually (KNASP 2007). Family Health International has been at the forefront in promoting female condom use in a bid to empower women to take charge of their sexuality.

4.3.1.3 Strengthening STI and HIV program linkages

Preventing, diagnosing and treating STIs are essential component of the HIV prevention strategy. It is widely known that sexually transmitted infections are critical in the transmission of HIV and that prompt and efficient management of the STIs reduces prevalence and incidence of HIV (NASCOP, Kenya). Key achievements that have been made by NASCOP include availability of STI drugs in most health facilities and STI clinics in all health facilities and dispensaries. The KNASP seeks to build the capacity of STI units to provide HIV testing and counseling through training of STI health workers and provision of testing kits to STI units. Others include monitoring quality of STI care and management, strengthening the monitoring and evaluation for STI service and to ensure high quality comprehensive STI services (KNASP 2005)

4.3.1.4 Expanding Prevention of Mother to Child Transmission of HIV (PMTCT)

The Kenya PMTCT program adopted the United Nations General Assembly Special Sessions on HIV/AIDS (UNGASS) goal, which aims to reduce the proportion of infants infected with HIV by 50% by 2010. In line with this, by 2007, the program had increased access to PMTCT of HIV services to reach at least 80 % of health facilities. The objectives of the PMTCT of HIV program include, strengthening the existing policy & structures to support PMTCT, to strengthen management system and planning to support PMTCT, to strengthen monitoring, evaluation, data collection and quality service provision and to educate the community through Information Education and Communication (IEC) materials (NASCOP Kenya). Prevention of mother-to-child transmission (PMTCT) services is currently provided in about 400 antenatal clinics (ANC) in Kenya. KNASP 2005/06-2009/10 seeks to expand PMCT services countrywide

to increase access to ARV for HIV positive pregnant mothers from 10% to at least 50% and reduce the proportion of HIV positive babies born to HIV positive mothers from 33% to below 23%. Expansion of the PMTCT program is meant to ensure that HIV positive mothers continue to receive ARV after giving birth. To achieve these goals it's critical to increase the level of general knowledge of transmission of the virus from mother to child and reduce the risk of transmission by use of anti-retroviral drugs (KDHS 2003). According to the recent service provision assessment survey report of 2004, four components of PMTCT include counseling and testing, ARV prophylaxis to prevent transmission, counseling on infant feeding and family planning counseling and referral (Kenya Service Provision Assessment Survey, 2004)

4.3.1.5 More effective, targeted behavior change communication (BCC)

Behavior change communication is an approach used to support individuals' ability to adopt and maintain a new positive behavior. It aims at increasing knowledge, stimulating dialogue and ensuring that people are given accurate and timely information about HIV and AIDS in their preferred language or medium. Behavior change communication (BCC) entails using communication approaches and tools with a view to empowering people with skills and capabilities to enable them to promote and manage their own health and development. It helps foster positive change in people's behavior, as well as in their knowledge and attitudes. For example, BCC motivates men to collaborate with their families, educational institutions, health service providers and communities to influence the social norms and policy environments within which they function (Wangulu, F 2008). On the other hand, KNASP is focused on enhancing injection safety through interventions which include capacity building of health workers through training and provision of re-use prevention injection equipment and appropriate healthcare waste

management. The BCC strategy focuses on reducing demand for unnecessary injections among the community. In addition to injection safety, infection prevention and control policy is also promoted to serve as a means of reducing health worker exposure to HIV infection. KNASP 2005/06-2009/10 therefore supports the development of a national BCC strategy and BCC coordination mechanism to provide overall guidance to all partners implementing BCC programs; help ensure messages are evidence-based and effectively targeted; and, very importantly, avoid counter-productive and stigmatizing campaigns. The national BCC strategy must also reflect the potential impact on prevention messages of the increasing availability of HIV/AIDS treatment in Kenya

4.3.1.6 Promoting abstinence, consistent safe sex and delayed sex debut among young people

KNASP 2005/06-2009/10 aims to reduce the number of young people especially girls having sex by age 15, and promote abstinence and /or consistent practice of safe sex. KNASP 2005/6-2009/10 recognizes that education is one of the key preventive approaches against HIV/AIDS and can help ensure that school age children grow up free of infection. The most recent skill based HIV/AIDS prevention education program was evaluated in 2000 and proven to be effective at promoting healthy behaviors and reducing the risk of infection. This program is targeted for expansion over years within the KNASP 2005/06-2009/10 (KNASP 2007)

4.3.1.7 Availability of safe blood supplies

KNASP has put in place strategies to ensure all blood in Kenya is effectively screened for HIV. The plan supports enhancement of capacity of the National Blood Transfusion Centre to

ensure that all blood-transfusing facilities are provided with adequate supplies of screened blood. CDC has been at the forefront in ensuring blood safety in Africa. Through the President's Emergency Plan for AIDS Relief (PEPFAR), CDC works in partnership with countries to strengthen laboratory capacity, epidemiology, surveillance, public health evaluation, workforce capacity, and prevention initiatives. These are essential components for strong sustainable public health systems (PEPFAR 2006). A key part of CDC's health systems strengthening activities has been five years of support to improve national blood transfusion services in countries in Africa and the Caribbean, Kenya being one of them. This support has included needs assessments, strategic planning, development of guidelines and training materials, and assistance for procuring vitally needed commodities. Over the five years, these 14 countries have substantially increased total blood collections from low risk, voluntary, non-remunerated donors; strengthened laboratory capacity to ensure that all collected units are screened for HIV and other transfusion-transmissible infections; and seen a decrease in the prevalence of HIV-infected units. In Kenya, the National Blood Transfusion Service was only providing 20% of blood needed in 2003. Since then, there has been a six-fold increase. Today over 140 of the 181 Kenyan hospitals that transfuse blood get 80% of their blood supply from the national blood service (CDC 2006).

4.3.2 Kenya AIDS NGOs Consortium (KANCO)

KANCO is a premier national membership network of non-governmental organizations, community and faith based organizations, involved in HIV/AIDS activities in Kenya. KANCO was established in 1990 by a group of NGOs who had begun responding to the HIV & AIDS epidemic. The concern at the time was how they could respond to the epidemic and relate with

the Government in the coordination of AIDS activities. As years went by, more organizations realized the same need and joined the founder members of KANCO; currently there are over 900 members (KANCO 2007). KANCO manages diverse programs guided by the KNASP to reduce the spread of HIV, improve the quality of life for those affected and infected and mitigate the socio-economic impact of the epidemic. KANCO's mission is to promote leadership, solidarity and collaboration and enhance capacity among its members for collective action towards an effective response to HIV/AIDS and its impact.

KANCO promotes networking, collaboration and co-ordination of HIV/AIDS activities among its members and government AIDS Control Councils on a national, district and community levels. KANCO also facilitates access to HIV/AIDS information and materials. Additionally, KANCO supports the capacity building of its members to improve the provision HIV/AIDS services and intervention approaches. They organize capacity building workshops on a variety of topics such as: treatment education and literacy, gender and HIV/AIDS, stigma and discrimination, human rights, care and support for People Living with HIV/AIDS (PLWHA) and their relatives, project management and fundraising. However though the efforts of KANCO target up to community level, some resource constraint areas that are hard to reach still remain without services (KANCO 2007) KANCO complements government efforts to develop and articulate relevant national legislation and policies for HIV/AIDS prevention. They also promote a comprehensive and human rights based response to HIV/AIDS which takes the interests and rights of PLWHAs (infected and affected) into account.

4.3.3 International Agencies

Behind the numerous government efforts lies the support of development partners. Several International organizations have been involved in HIV prevention in Kenya. This section will discuss efforts in place by a few of those organizations including Family Health International, The Population Council, and Centers for Disease Control and the joint United Nations Program on HIV /AIDS (UNAIDS). It is important to note that these are just but a few of the agencies involved and have been described as examples to show the diverse prevention efforts across organizations.

Family Health International has been at the forefront for the HIV/AIDS prevention in Kenya. Between the years of 1999 and 2007, FHI implemented the IMPACT Project in Kenya through close collaboration with governmental agencies, non-governmental, community-based and faith-based organizations. At IMPACT's outset, USAID and FHI selected five community sites in Western, Rift Valley, and Coast provinces for prevention programming, based on HIV prevalence and intervention needs. Activities included community outreach focusing on salaried workers, female sex workers, women, and youth; health care sector upgrading in sexually transmitted infections (STIs), maternal health, and voluntary counseling and testing (VCT) services and PMTCT (FHI/IMPACT 2007). FHI/Kenya reached an important milestone in 2008- the number of hospitals, health centers, and dispensaries FHI supports across the country to implement services that prevent mother-to-child transmission of HIV (PMTCT) has topped the one-thousand mark, up from as low as 169 in 2006 (FHI/country profiles 2009). FHI has also been in the center stage of behavior change interventions by assisting local partners to implement effective peer education programs in workplaces, with commercial sex workers, with women in

low-income communities, and among youths both in school and out of schools. These interventions included developing a national sex education curriculum for primary schools, youth outreach programs, and general HIV/AIDS information campaigns. IMPACT/Kenya used a variety of methods and channels to reach the youth with HIV and AIDS messages and make appropriate referrals. The BCC activities included peer education/facilitation, Magnet Theatre, radio soap opera, and comics (FHI/IMPACT 2007). FHI also assisted with interactive radio programs that targeted particular communities, reinforcing interpersonal and group communication activities. Under support interventions, FHI has worked with partners to establish, upgrade, and manage resource centers to provide policymakers and program managers with the latest information on HIV/AIDS, and to improve research and surveillance efforts through behavioral surveillance surveys (BSS) and other evaluative research. FHI/IMPACT has also worked with the government to improve the country's capacity to provide a safe and adequate blood supply to meet the needs created by medical conditions, surgical procedures, accident casualties and natural disasters (FHI/IMPACT 2007). FHI has also recently been involved in promotion of adult male circumcision. The Male Circumcision Consortium (MCC), funded by a grant to FHI from the Bill & Melinda Gates Foundation from August 2007 to February 2013, works with the Government of Kenya and other partners to prevent HIV and save lives by expanding access to safe and voluntary male circumcision services. The Male Circumcision Consortium's objectives are to: Support the Government of Kenya and other partners in developing and implementing a national male circumcision strategy, expand a male circumcision research and training center in western Kenya to train providers, build the capacity of health facilities, and monitor clinical outcomes, identify and address any misunderstandings about male circumcision for HIV prevention and conduct research to identify the safest, most

effective ways to provide voluntary male circumcision as part of a comprehensive package of HIV prevention services. The consortium's activities are primarily focused in western Kenya, but the knowledge it generates will guide the government's national initiative on male circumcision as well as inform other countries' approaches to male circumcision for HIV prevention (FHI website).

The Population Council is another agency that has done some elaborate HIV prevention work in Kenya. In response to the AIDS pandemic, the Council carries out innovative research and tests a wide range of interventions to reduce sexual and mother to child transmission of HIV, to highlight the particular vulnerability of young women, and to mitigate its impact on individuals, families, and society. Notably, for nearly 20 years, the Population Council has been working to develop safe and effective microbicides. Vaginal microbicides are developed primarily as female-initiated methods for reducing male-to-female transmission of HIV and possibly other sexually transmitted infections when used during sex. Women need more options to protect themselves from infection because current prevention strategies are not always feasible, given the position of women culturally. The Population Council also pioneered services for prevention of mother-to-child transmission of HIV/AIDS in Nairobi, Kenya (Council website).

The Centers for Disease Control (CDC) has been involved in HIV prevention in Kenya through various activities: According to the CDC, preventing new infections represents the only long-term, sustainable means to stem the global HIV/AIDS pandemic (CDC 2006). The CDC Global AIDS Program (GAP) in Kenya was launched in March 2000 and is in operation in most parts of the country. Since then, CDC in collaboration with many US Government agencies and the government of Kenya, has supported counseling and testing, prevention of mother to child

transmission, and abstinence and be faithful prevention programs. CDC also supports blood and injection safety, comprehensive HIV prevention and care programs for the military, antiretroviral treatment (ART), palliative care, and TB/HIV activities. In addition, CDC provides critical support to build the laboratory capacity to support these programs. In 2003, US President George W. Bush announced the President's Emergency Plan for AIDS Relief (PEPFAR). Kenya was designated a focus country of the initiative and the CDC GAP Kenya became a part of this unified US Government effort to turn the tide against the epidemic. For example, The United States Global AIDS Program approved a 2008 budget of US\$534.8 million for a comprehensive program of HIV prevention, care, and treatment in Kenya. Under the program, efforts to prevent the spread of HIV are organized across five areas: Helping over 96,000 HIV-positive mothers protect their newborn infants from HIV (\$29 million), preventing sexual transmission among populations at higher risk for HIV infection, including new initiatives for prevention with youth and those who are HIV-positive (\$26 million), reaching over seven million Kenyans with abstinence and faithfulness messages (\$40 million), promoting a safe blood supply by collecting 180,000 uninfected units of blood (\$7 million), and supporting safer medical injection practices (\$3 million) (Pitman et al 2008). Together, these programs aimed at preventing nearly 200,000 infections that might otherwise have occurred by 2008. Following this, CDC Kenya in collaboration with other partners has engaged in a number of activities throughout the country. They include supporting HIV counseling and testing through fixed-site services, community-based services, such as mobile and door-to-door VCT and within health institutions, as part of a general package of services in both out-patient and in-patient units. They have also been collaborating with partners on HIV prevention interventions through abstinence and be faithful messaging, as well as through the promotion of condoms and the reduction of risky sexual

behavior. They pioneered 'Implementing Families Matter', in Kisumu Kenya, an intervention that equips parents to discuss HIV prevention with young people that was adapted from a highly successful intervention used in the United States. CDC has also been involved with scaling up prevention initiatives with PLWHA and their families, including prevention messaging, family planning, and sexually transmitted infection (STI) detection and treatment. They helped the government of Kenya build a national blood transfusion system, which is a model for East Africa, including increasing the supply of safer blood from volunteers no remunerated donors. CDC supports the Injection Safety program to reduce unnecessary injections and enhance the safety of necessary injections through training of health care workers, informing policy efforts, and providing commodities (CDC report 2008)

The UNAIDS has been involved in the efforts to fight HIV/AIDS. Through a series of goals, resolutions and declarations adopted by member nations of the United Nations, the world has a set of commitments, actions and goals to stop and reverse the spread of HIV and scale up towards universal access to HIV prevention, treatment, and care and support services. UNAIDS actively supports Kenya's response to its AIDS epidemic, which centers on efforts to prevent new infections, to provide treatment to people living with HIV, to provide care and support to those affected by the epidemic and to mitigate the epidemic's overall impact. UNAIDS has been instrumental in advocating for an effective translation of the "Three Ones" from rhetoric to reality, and assisting in the coordination and harmonization of stakeholder inputs to the national response (UNAIDS newsletter 2006).

5.0 DISCUSSION

As mentioned earlier, Kenya's HIV prevalence has halved in a decade, which indicates a dramatic and sustained decline that has rarely been seen in Africa. The most recent surveys and sentinel surveillance data indicates that prevalence stood at less than 7% among adults at the end of 2008 compared with 10% in 1997/98. This turnaround as indicated in the review in this study can be attributed to greater awareness and the resulting behavior change as well as a lower incidence of new infections and higher death rates. There is strong evidence to suggest that there has been a reduction in risky behavior, such as increased condom use, delay in sexual debut and fewer partners. VCT sites are more widely available so that a greater number of Kenyans can now know their status. New adult infections peaked at 200,000 in 1993 but have since then been declining. The epidemic has also moved into the death phase, which means that the mortality rate now exceeds the rate for new infections.

Kenyan efforts are comparable to Uganda's response to HIV prevention efforts. Kenya, just like Uganda has intensified strategies such as the ABC promotion, PMTCT of HIV, promotion of testing and counseling and blood safety measures. However it is important to note that Uganda concentrated efforts on measures to reduce HIV stigma and involvement of affected communities and diverse sectors. Specifically Ugandan efforts have intensified HIV awareness campaigns (including mass media), promotion of anti-stigma measures, gender equity and

women's empowerment initiatives, involvement of communities and HIV-infected individuals, visible political leadership, engagement of a broad range of sectors in HIV awareness and prevention measures and legal reform to create an environment supportive of HIV prevention. Kenya should intensify similar measures in its HIV prevention efforts.

On the other hand, Kenya has also to a great extent utilized majority of the proven strategies. Notably prevention efforts just like stipulated by the global health prevention working group have included testing and counseling for HIV, promotion of abstinence, being faithful, condom use and adult male circumcision. Others are prevention of mother to child transmission, STI diagnoses and treatment, behavior change communication, safe blood supply and injection safety. Just like in the Ugandan case comparison, promotion of the use of social strategies in HIV prevention is necessary.

Despite the great progress in HIV prevention, HIV/AIDS remains a major challenge in Kenya. After an analysis of the HIV prevention efforts and weighing these against the proven strategies and the Ugandan example, the major issues that emerged include

1. The need for promotion and use of social strategies for HIV prevention such as anti-stigma measures, involvement of communities and HIV infected people, strong political involvement, engagement of a broad range of sectors and legal reform as necessary.
2. Addressing social and economic inequalities such as gender differentials and poverty, especially among women.
3. Addressing deep rooted cultural barriers to HIV prevention such as taboos and sexual practices, male attitude that favors multiple partners and casual sex, elimination of violence against women- sexual, emotional, and physical.
4. Intensifying HIV prevention for young people, which should include age appropriate sex education, training health care providers for youth friendly services, peer education and outreach programs for out of school youths who

have been left out in most prevention efforts, sex education promotion and support. 5. Prioritizing high risk populations. 6. Expanding male circumcision 7. A comprehensive approach and integration of programs and services is lacking and would be very yielding in HIV prevention. The gaps identified have been discussed in the next section.

5.1 SOCIAL AND ECONOMIC INEQUALITIES AND CULTURAL BARRIERS TO HIV/AIDS PREVENTION

While the HIV epidemic continues to pose a problem in developing countries and in Kenya specifically, it's even more worrying to see how the epidemic has taken toll on the women. For the most part, HIV prevention strategies in Kenya have yet to tackle effectively the gender dimensions of HIV prevention, treatment and impact mitigation. As mentioned earlier, while women form a majority of the population in Kenya (52%) and play an active role in the development of the society, Kenya remains a patriarchal society, and the lives of women are marred by inequalities and inequities in many aspects of life. Women continue to suffer marginalization and discrimination in almost all aspects of their lives, a situation reinforced by the existing laws and policies, as well as the socio-cultural factors. In addition to being more biologically and physiologically vulnerable to HIV infections than men (Scaccabarozzi 2008), women face a whole range of social, economic and legal disadvantages that severely limit their ability to protect themselves against the infection. One main factor that has been identified to make women most vulnerable is economic dependency on men (NACC 2002). This limits women's ability not only to access HIV prevention services and commodities but also diminishes

their decision making power. Most married men in Kenya have 'other' casual sex relationships and women in most cases do not have the power to go against this practice. After all with the man providing everything the woman needs, what does she have to complain about?

To realize any impact, traditional concepts of gender roles and the power differential inherent in relationships between women and men must be incorporated in the design of HIV interventions. The most important avenue to empower women is a commitment and investment in the education of women. It is important to ensure universal access to education for all women in the country including those living in very remote and hard to reach areas. Higher education levels for girls is associated with a higher age of marriage, reduced fertility, improved health-seeking behavior, lower vulnerability to genital mutilation, and reduced risk of HIV and other sexually transmitted infections (Grown et al., 2005). It's therefore important to work towards increasing literacy and essential skills among all women including out of school women and girls. In addition ensuring expanded opportunities in terms of availability and equity in jobs among educated women is crucial and yet this has not been targeted in HIV prevention strategies. Finally efforts to eliminate all forms of inequalities from as early as childhood will place women in a position to benefit from the HIV prevention efforts. Women should be allowed and empowered socially and economically to have access to prevention without relying on the control of men. They should also be allowed to control their own sexuality including decisions to protect themselves just as the men do. For example decisions like use of the male condom in Kenya rests almost entirely on the man especially in a marriage situation. Promotion of methods of prevention that women could have a direct control over is a great step towards empowering women to take care of their own sexuality. The female condom is one method in Kenya that has never been fully adopted and is usually associated with prostitution. Family Health international

has done several projects promoting the female condom especially among sex workers. However, education and awareness campaigns should be intensified to all women to remove the negative attitude and empower women.

Other elements that must be addressed include breaking cultural barriers to HIV prevention. This may involve changing the attitude of men and boys towards women and girls, including their involvement in ending gender inequalities and changing the patterns of male behavior that put women at risk. Prevailing taboos and sexual practices like wife sharing and wife inheritance need to be addressed (Ayikukwei et al 2008). The areas that these practices are rampant in Kenya also represent areas where HIV prevalence is highest (KAIS 2007). Extensive awareness coupled with women empowerment is needed in these areas and even other areas in the country. This kind of empowerment may include elements such as improving their knowledge about HIV/AIDS and their health services-seeking behavior, especially in relation to reproductive health. It will also need to include increasing awareness on the risk of HIV infection and how to protect themselves. Using influential women leaders and CBOs would be most effective because these are the people that understand the culture and its roots.

The disproportionately high rates of HIV infection among women and girls also trigger an awareness of violence against Kenyan women and its effects. Women have been subjected to not only physical, emotional but also sexual violence and they have been placed at the lowest position when it comes to decision making regarding sexual issues (NACC 2002). In fact in most cases sexual relationships are more male dominated to an extent that even within marriages, sexual coercion is common. Other groups of women that experience sexual coercion are house maids, where some of them find themselves trapped and coerced into sexual encounters with their male bosses and even their sons behind their female employer's back (FHI 2007). Family

Health International is currently undertaking an HIV prevention project with house maids (baby sitters) and the experiences are astonishing. The project is based on the findings of an assessment in 2007, which showed that house girls are just as vulnerable to HIV and unintended pregnancy as other girls their age. However, the conditions of the domestic labor sector make them hard to reach with information and services on HIV prevention, and expose them to an increased risk of sexual abuse and coercion (FHI website). Traditional, deep-rooted gender inequalities are often expressed in violence, coercion or physical or emotional intimidation. Other cultural issues include the practice of having multiple partners which is commended and acceptable among men but for women, sex outside of marriage is an abomination. As a matter of fact, single women are despised in the society and some women will put up with every form of promiscuity and unsafe sex on the part of the husbands just to maintain the status of a married life (De Walque, 2007). These are all cultural orientations that put women at a risk of HIV and would need to be at the top agenda on any prevention efforts.

5.2

HIV PREVENTION EFFORTS FOR ADOLESCENTS

In addition to women, young people both girls and boys are vulnerable to HIV/AIDS. Young people who need HIV prevention services include school students and young people who do not attend school, sexually inexperienced young people and those who are sexually active, and a substantial percentage (especially among girls) who are already married. Due to this diversity, no single prevention approach will meet the needs of all young people. To be effective, HIV prevention services for young people should be widely accessible, evidence-based,

grounded in human rights, age-specific and gender responsive. Most important, they should help build life skills to enable young people to reduce their vulnerability.

In Kenya, several youth programs have been initiated with an aim to reduce the impact of HIV&AIDS among young people. Most of the programs aim at behavior change, reducing the level of HIV infection among young people, enhancing access to youth friendly services including VCT, treatment for opportunistic infections and STIs and access to ART. Several agencies like the Centers for Disease Control, USAID, and PEPFAR among others have worked together with the local organizations, CBOs and government agencies to reach the young people. Despite the efforts, several challenges and gaps exist that need to be addressed.

Sexual issues are still not an open topic both at home and in schools. Parents are not as free to talk about sex issues and the schools have for a long time struggled with incorporating sex education in the school curriculum, with some parties like some churches opposing the move (Friedman 1995). Although this has improved over time with churches getting more involved in HIV prevention, extensive awareness and training of mentors of young people – parents and even teachers and most of all training of peer educators need to be incorporated in HIV prevention efforts for young people. Peer education typically involves the use of members of a given group to effect change among other members of the same group. It is often used to effect change at the individual level by attempting to modify a person’s knowledge, attitudes, beliefs, or behaviors (UNAIDS 1999). Peer education can be an effective strategy against HIV prevention and should be intensified in all areas. Resources should also be channeled towards developing age appropriate sex education which just refers to introducing the right kind of sexual information at the right age. This does not necessarily start at the teenage stage but should start as early as possible in life. In that way, the children will grow up with the knowledge.

Introducing children to age appropriate sex education makes it easier to introduce them to specific issues such as HIV /AIDS later in life as appropriate. Finally, training health care providers both in private and public health facilities to provide youth friendly health services is very important to overcome the barriers in youth health seeking behavior that has for a long time in Kenya been impeded by non youth friendly services.

5.3

OTHER HIGH RISK POPULATIONS

In 2007, Kenya HIV prevention efforts prioritized key populations at higher risk of HIV. While the general trend is a generalized epidemic affecting all people, the modes of transmission study conducted in 2008, identified key populations by mode of transmission. As mentioned earlier, these include those who engage in casual sex and their partners, men who have sex with men, injection drug users and occupation related sex workers including the fishermen and truck drivers.

Individuals who have casual sex and their partners account for the largest proportion of new infections in Kenya. The primary mode of HIV transmission remains casual heterosexual sex. While 16% of new infections come through casual heterosexual sex itself, another 24% come when those infections are passed on to their partners. Casual sex is very popular and for a lot of people it's something that either satisfies a desire or serves a purpose. In Kenya, casual sex is practiced by all and especially married men having sex outside of their unions with single women. However, married women and young people are adopting the practice and this has

played a major role in the spread of HIV. One issue to note is that the problem is culturally rooted and has to do with societal acceptance of multiple partnerships. As mentioned in the previous section, it is vital for HIV prevention efforts to target awareness campaigns aimed at breaking cultural factors that impede such efforts. Women in most cases are hardest hit by casual sex, especially when their partners engage in risky sexual behaviors and the women continue to have unprotected sex with the exposed partners. Again, this requires empowering women and breaking down deep rooted culture practices that allows men to engage in such relationships and the practice still continue to be culturally accepted.

Other higher risk groups identified in the study were MSM and injecting drug users. For the injecting drug users, given the legal standing of the practice in Kenya, the most effective prevention efforts should target harm reduction counseling and support programs. Harm reduction programs are not only effective in preventing injection related HIV infections, but also provide a low threshold entry point to drug treatment, counseling and other interventions for sexual risk reduction. The programs also provide for support for HIV treatment and care and other health, social and economic interventions. Use of outreach workers in these programs and especially training community members/ peers who may or may not have been former IDUs would be very effective to reach this population. Such a broad approach will be an effective and sensitive way to HIV prevention among IDUs. Men who have sex with men account for about 10% of new infections in Kenya. While active populations of MSM have long been known to exist in Africa, their vulnerability to HIV infection has been largely ignored. As a matter of fact, the first HIV study among MSM from Africa was not conducted until 2005, more than 20 years into the epidemic. The impeding factor to research in this area has mainly been that sex between men remains illegal and most of all; it is socially and culturally stigmatized. Most of these men

do not identify themselves as gay and the most of them are married to persons of the opposite sex. This poses a great challenge for HIV prevention efforts because multiple populations are involved. The spouse is also put at risk of HIV because though most of the MSM may practice safer sex with their male counterparts, it is not the case with their marriage partners. To effectively target MSM, counseling and support programs are necessary and especially through peer support programs which will help reduce the stigmatization. Illegality of MSM has been an obstacle for HIV prevention. Therefore research into the relationship between MSM and HIV would provide tangible evidence for lobby groups and interested partners to move for reforms against criminalization. This would create a more enabling environment for awareness and campaigns to promote safer sex among MSM. It would also make the support groups more effective as more people in this population would be willing to participate. HIV prevention strategies for MSM could also be easily integrated in other health promotion efforts like STI prevention and drug treatment programs.

Finally, occupational related sex has been a problem in Kenya and is a major drive to the spread of HIV. The main ones include the fishing industry and truckers. As described earlier, in the Nyanza and Western provinces of Kenya, a practice commonly referred to as 'Jaboya', has contributed to the HIV epidemic. In this practice, women and girls engage in sexual practices with fishermen or middle men in exchange for fish which they sell or consume. Addressing economic situation of the women in these areas is important in HIV prevention. If these women had better means of living, then they would not necessarily depend on the men. Small business financial support in terms of loans would give the women the power to run their fish business without manipulation by the men.

A successful HIV prevention program therefore would need to take a multidimensional approach that targets the economic, social and cultural factors contributing to the practice. Local support groups and awareness creation campaigns should be intensified and especially to target the younger generation who are increasingly getting into the practice. Older women and their families have resorted to giving off their younger girls to the fish owners since they are vibrant and therefore more competitive to bring home a larger share of the fish. Long distance truckers always find themselves away from home and family for extended periods. To satisfy their sexual desires, they engage in casual sex in the towns where they stop on their long trips. The truck drivers, who are mainly men, have multiple relationships and often times due to factors such as unavailability of protection methods when needed, the risk of HIV infection is greater. Alcohol use during these stops accounts for the high risk sexual behavior. This is a hard population to reach because of their mobile nature and little prior efforts have targeted the population through the employers and work site HIV prevention. Outreach programs, with a well established follow up system could be useful in reaching this population, both when in transit and later follow up to their communities.

To effectively prevent HIV among sex workers, an increased level of condom use and safer sex amongst sex workers and their clients is inevitable. Also to empower the sex workers, increased involvement and control over their working and social conditions would help them to be able to negotiate safer sex. Finally, a reduction in the number of sexually transmitted infections occurring amongst sex workers is a critical step in HIV prevention.

5.4

MALE CIRCUMCISION

Efficacy studies in Kenya, South Africa, and Uganda indicate that male circumcision reduces the risk of female-to-male sexual HIV transmission by roughly 60%. (Bailey, 2007; Gray, 2007; Auvert, 2005). As discussed earlier, failure to be circumcised for men has been associated with higher HIV infection rate. The regions with lowest levels of circumcisions in addition to other factors have higher HIV infections. Three clinical trials in South Africa, Uganda and Kenya have shown the procedure to reduce the risk of infection by 50%.

Male Circumcision will be a great way to involve men directly in the HIV prevention efforts. Over time, it's been hard to get men involved in reproductive health matters including seeking for services, except for the ABC approach which has for long favored men at the expense women. This strategy will specifically involve men and it would be a great opportunity to strengthen their involvement not only in the practice but also in other strategies included in the comprehensive approach to HIV prevention. For example, counseling and testing for HIV, condom promotion, prevention of other STIs among others could all be integrated together with the male circumcision to achieve even greater results.

Introducing male circumcision will require much attention to local context, attitudes, and potential sources of opposition. In some communities like the Nyanza province of Kenya where circumcision practice is lowest, the practice has for a long time been viewed as disrespect for genital integrity, no matter whether it is performed for cultural, religious or medical reasons. Recently, the need for the procedure is reaching out and getting accepted. For example,

“I will accept this denigration of the male tool only if one’s life is in danger and the only way to save that life is to get the cut. I am inclined to accept that Prime Minister Hon. Raila Odinga believes that the lives of men in Kenya is in danger and one of the ways to save them is to get cut” (Nyanja API Sep 2008)

This section of a report by Nyanja reporting for African Press International represents an important view that is likely to influence to a very great extent the acceptance of the practice among these communities that the Prime Minister belongs to and represents. It is therefore very important bear in mind the cultural context of the communities targeted. Education and awareness campaigns should be intensified. Messages should be carefully tailored, culturally sensitive, draw on local language and symbols, and be appropriate to the particular level of development and understanding of the population groups for which the messages are designed. It is also important that the messages are addressed to both men and women.

Male circumcision promotion will also require infrastructure and technical resources. As mentioned, the aim of the MCC is to advance research to identify safer ways to perform the practice including training of the providers. Hospitals, both public and private should be equipped with the necessary equipment and all providers of the practice should be thoroughly trained and to provide physical as well as emotional and psychological support. Follow up systems should be put in place to ensure that the recipients adhere to care instructions as failure to do so can also be detrimental. It is recommended that to reduce the risk of HIV infection, circumcised men should abstain from sexual relationships for up to six weeks (WHO/UNAIDS 2007).

As is the case with other medical and health procedures, promoting male circumcision for HIV prevention raises human rights, legal and ethical issues. Taking a human rights-based approach to the development or expansion of male circumcision services requires measures that ensure that the procedure can be carried out safely, under conditions of informed consent, and without coercion or discrimination. It is extremely important that communities where male circumcision for HIV prevention is promoted have access to clear and comprehensive information about what is known and not known about male circumcision and HIV prevention. Men opting for the procedure should be able to receive full information on the benefits and risks of the procedure so that they can make informed decisions. For the male circumcision program to be effective, it must be incorporated into the comprehensive HIV prevention strategy and must be in addition and not to substitute other strategies. Involving local CBOS and NGOs as well as Government agencies would be a good strategy because these agencies better understand the social, political, economic as well as the cultural contexts of the target populations. Resources to roll out the MC strategy should therefore be channeled through these agencies to ensure maximum benefits.

5.5

COMPREHENSIVE APPROACH

While addressing the individual issues addressed above is necessary, more important is the adoption of a comprehensive approach to HIV prevention. Kenya has specialized in individual HIV prevention strategies as opposed to a comprehensive approach. It's clear that the steady growth of the AIDS epidemic in Kenya could stem not from the deficiencies of available

prevention strategies but rather from the failure to target the right groups and to use the available resources where they can be most effective, including targeting the hard to reach areas.. Looking at the prevention strategies in Kenya as presented under the results section, specific high risk and vulnerable groups have not been accorded enough attention and this poses a great challenge to the fight against AIDS. However in 2007, following the Joint HIV/AIDS Program review (JAPR), these groups were prioritized and progress in reducing new HIV/AIDS infections has been documented (UNAIDS 2008). According to a 2006 report on the global AIDS epidemic, HIV prevention, like treatment, is for life. Bearing this in mind then, instead of short-term or isolated prevention initiatives, effective national programs need to sustain essential programmatic and policy actions at a sufficient scale over the long term, adapting them as the epidemic evolves, and responding to changes in infection patterns and social environments. In recognition of the inherent long-term nature of the HIV prevention enterprise, implementation and scaling up of available prevention strategies should be coupled with longer-term efforts to address human resource challenges and to develop new prevention technologies, including the ultimate prevention tool, a preventive vaccine (Global AIDS report 2006).

Following the analysis of HIV prevention strategies, a comprehensive approach would yield better results. There are different approaches to the comprehensive approach to HIV prevention and irrespective of the approach the aim should be to maximize available resources to meet the needs. Kenya so far looks at the comprehensive approach in terms of the ABCCs: Abstain, be faithful, correct and consistent condom use and recently circumcision has been included. Resources and prevention efforts should be channeled to combat all social, economic, infrastructural, political as well as cultural factors that drive the epidemic. This would also call for integration of HIV/AIDS prevention with all services and efforts to maximize the benefits

and reduce the cost. For example integration of HIV prevention with the fight against other diseases such as TB and malaria would be an important step towards maximum utilization of resources.

A comprehensive approach would also mean not just concentrating prevention efforts in areas of high HIV levels but overhaul coverage of the country. Though it is obvious that some areas/ regions are more affected than others, it is also true that the areas have not been necessarily neglected when it come to HIV prevention efforts. Much of the inequalities in HIV/AIDS infections have to do with specific characteristics of the regions and not a lack of prevention programs. For example, Nyanza and western parts of Kenya have most of the deep rooted cultural practices that favor the spread of HIV. Similarly, fishing, which has been identified as an industry that promotes spread of HIV spread is the main source of income in these regions. As a matter of facts, numerous HIV prevention programs exist in areas of high HIV levels as shown in the background and results. It is important to intensify prevention efforts in all parts of the country, especially addressing the underlying social, economic, cultural and political factors that promote the spread of HIV.

In addition to the above aspects of a comprehensive approach, CDC's comprehensive approach to HIV prevention is a good model. CDC being one of the partners in the HIV prevention efforts in Kenya can extend their template of comprehensive HIV prevention. Comprehensive HIV prevention is seen as a broad term that incorporates surveillance, research, prevention interventions and evaluation. CDC's surveillance and research activities help to better define and understand the HIV/AIDS epidemic, while prevention interventions and capacity building efforts are based on behavioral, laboratory and medical science and work to contain the spread of HIV and AIDS. Program evaluation and policy research and development assess

intervention effectiveness and refine prevention approaches (CDC 2006). Kenya would benefit from such a comprehensive approach. Clearly given the evolving nature of the epidemic, it's important that continuous surveillance and monitoring of the epidemic is put in place. Most of such surveillance takes place only after certain time intervals, for example the KDHS only done every five years. The AIDS indicator survey also just kicked in 2007 and is not scheduled until 2011.

Finally, there should be a simultaneous and balanced scaling up of prevention and treatment for HIV/AIDS. Globally, it is estimated that a response focusing solely on treatment would result in only 9 million averted new HIV infections. In contrast, simultaneous scaling up of both prevention and treatment would avert 29 million new HIV infections by the end of 2020 (Salomon et al., 2005). In 2003, Kenya's total antiretroviral therapy was estimated to be about 190,000 people, and Kenya declared a national treatment target of reaching 95,000 people with antiretroviral therapy by the end of 2005 (WHO 2005). According to the service provision assessment survey of 2004, only 7% of all health facilities in Kenya offered ART (SPAS 2004). There are two forms of care and treatment available for HIV positive people. First, the Ministry of Health recommends that everyone diagnosed with HIV take cotrimoxazole (also known as Septrin), an antibiotic that reduces the risk of early mortality by 25-46 percent as well as rates of hospitalization, malaria, diarrhea, and pneumonia (MOH 2005). According to the most recent KAIS of 2007, there is an unmet need for cotrimoxazole (KAIS 2007). However the great majority of unmet need can be attributed to low level of awareness of HIV status among those infected with HIV – 84% who are in need of cotrimoxazole do not know their status. Likewise, 63% of those in need for ART do not know their status (KAIS 2007). The take home message here is the need to intensify HIV testing and counseling and then match this with treatment and

care. In addition to scaling up VCT services that are already in place in the Kenya, rigorous awareness campaigns should be launched, together with mobile testing services. Focus should be on the communities that are hard to reach and who have no access to the services. Community based organizations should be utilized for easier and more intensive campaigns. The campaigns should be intensified to cover public gatherings like schools, churches, political meetings, local group meetings and functions such as burials and weddings. Care and treatment should be expanded to these areas to ensure those getting tested are followed up as necessary.

6.0 LIMITATIONS

This study aimed at establishing gaps in HIV/AIDS prevention by determining whether and how existing efforts are effective in stopping the epidemic. To a great extent, an attempt was made towards this goal. However, too many HIV/AIDS prevention efforts are in place within Kenya; thousands of organizations are all working together towards prevention of HIV/ AIDS. It was obviously beyond the scope of this study to look into all the efforts in place. However the study took the approach of reviewing efforts of umbrella bodies where appropriate and also concentrated on the government effort that to a great extent guides the functioning of other agencies. The study assumes that most of the efforts follow the framework stipulated in the strategic plans. For example the study has reviewed extensively the efforts under the Kenya National Strategic Plan (KNASP) for HIV/AIDS.

There are limited articles specifically on HIV/AIDS prevention strategies; furthermore the study was not looking at a specific strategy but into all possible prevention strategies. As a result this study relied heavily on information in the websites of the different organizations. The limitation lies in the fact that this information may not necessarily be up to date and furthermore agencies and implementers may not necessarily be doing exactly the things they report to be doing. This could be exaggerated or tuned to suit funders requirements and may not necessarily be what is on the ground. Mostly the strategies that had a well established monitoring and

evaluation system in place were targeted because the assumption is that there will be a compelling force to implement strategies as stipulated in the planning.

The bench mark strategies that have been used as proven strategies have to the greater extent been developed and tested for developed countries. Different circumstances exist for a developing country and the comparison may not necessarily be valid. In this particular study, an effort was made to describe the applicability of the proven strategies to a developing world setting. That is why the study touched on the case of Uganda a country with more or less similar social, economic, cultural and political circumstances as Kenya.

Data on new HIV/AIDS infections is not as extensively available as data on prevalence. Therefore, though efforts have been made to include incidence, prevalence is mainly used in this study. It would be necessary for Kenya's HIV/AIDS data collection systems to include incidence because prevalence alone does not fully explain the epidemic.

Finally the goals of this study would have been best achieved by collecting primary data so as to obtain up to date information on HIV prevention strategies and also background and up to date information on prevalence as well as incidence of HIV/AIDS. This would give a chance of collecting the views of not just the implementers of prevention strategies but also recipients as well as funding agencies and other stakeholders. This would provide a basis for better recommendations and future prevention planning. It was beyond limits in terms of finances and time to obtain this kind of information. Given resources, follow up on this study at that level will allow for establishing further the gaps in HIV prevention. I plan to work on this for a PhD dissertation or look for a grant to enable me to do this kind of study.

7.0 CONCLUSIONS

As discussed earlier, Kenya's HIV prevention efforts have been identified to be intense and to a great extent yielded positive results. As a matter of fact, Kenya is one of the countries that have received enormous support, financial or otherwise for HIV prevention. However, despite this HIV still continues to pose a problem in the country and still poses a challenge to the social, economic, political and overall health of the communities. To be effective, HIV prevention strategies must target the resources to the right channels.

Critical to this is addressing social and economic inequalities and cultural factors which in most cases do not favor women. Therefore targeting women especially focusing on empowering them economically and socially and eliminating cultural barriers will help them to be independent including ability to independently control their sexuality and make decisions to protect themselves from HIV/AIDS. This will also involve engaging men in the prevention programs, an effort that addresses the negative impact men's non involvement has on the woman's decision making.

Though the epidemic can largely be described as a generalized epidemic, it's still important to channel resources to the "most at risk populations" which have been shown to constitute high proportion of the HIV infections. Important populations to target in Kenya are those engaging in casual sex and their partners. It is not easy though to identify this population

since most of these people are married and have stable relationships. A study to try and identify such relationships would be most helpful (e.g. asking people about whether they think their spouses have other sexual relationships). These questions could be incorporated into already existing surveys. Casual sex is also practiced largely in social functions like weddings and other gatherings that permit social interactions and this is also common. It's also important to realize that young people are also very involved with this kind of casual sex.

The regional disparities in HIV prevention warrant an intensive study into the contributing factors. This will shed light into issues that need to be addressed like the underlying social-cultural factors. The issue of male circumcision is a classic example given the great evidence there is that the region with lowest circumcision levels has the highest HIV/AIDS prevalence in the country.

No single strategy would be a solution to the HIV/AIDS problem in the country. As such, a combination of methods and strategies tuned into the specific needs of the country would yield great results. Thus a comprehensive approach using all methods in combination as appropriate, targeting all the populations as deemed necessary and directed to all sectors is what would work best. An HIV prevention approach based solely on one element does not work and can hinder the AIDS response. Since there is no single magic bullet for HIV prevention, countries need to use a mix of behavioral, biomedical and structural HIV prevention actions and tactics to suit their actual epidemic.

Finally to be able to timely focus on the epidemic as it develops, it is very critical to have incidence data as readily available as prevalence or any other HIV/AIDS data. Since this data is barely available in Kenya, my recommendation would be that data collection systems within the

government and other agencies involved in HIV/AIDS should give attention to collecting HIV/AIDS incidence data.

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