

Investigate The Factors Influencing The Prevalence Of HIV/AIDS In Zambia; What Must Be Done In Order To Eradicate This Pandemic In Zambia? Strategies And Solutions.

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Abstract—1.0 Introduction

Overview:

This chapter begins with a brief background to an investigation of factors influencing the prevalence of HIV/AIDS in Zambia taking into account the interventions put in place by the government to reduce the pandemic of HIV/AIDS. Thereafter, the chapter presents the statement of the problem, research objectives and questions linked to the objectives of the study. It then presents the significance of the study, theoretical framework, and conceptual framework, limitations of the study, Delimitation of the study and definition of terms.

1.1 Background to the study

In the history of mankind, no other disaster has ravaged both capital and human resources as much as HIV/AIDS. It is no wonder that the disease has drawn global attention. In many sub-Saharan African societies, the disease emerged at a time when there were universal poor conditions of living such as high poverty rate, squalor, hunger, and unemployment. HIV/AIDS thus continues to flourish on these poor conditions. The region is therefore ill equipped to respond to the curse of HIV/AIDS, hence the continuous growth of HIV/AIDS prevalence in the region (Fylkesnes, 1997).

All over the world the prevalence of Human Immunodeficiency Virus (HIV)/Acquired Immune Deficiency Syndrome (AIDS) has become an unsure stone in progress of human civilization and is a huge concern for people worldwide. Since the identification of the HIV in the early 1980s, much has been cultured about how the virus is transmitted and how it attacks the body's immune system and causes the AIDS. The HIV/AIDS epidemic has grown on an extraordinary scale in the last three decades since it was first recognized, and now it is considered a global crisis. The countries, which have to fight with the determined or generalized HIV/ AIDS epidemic, are facing enormous socioeconomic problems. In 2011, the total number of people living with HIV was 34.2 million, newly infected with HIV was 2.5 million, and AIDS deaths was 1.7 million¹. The cases have been reported in all regions of the world, but largest part those existing with HIV (97%) reside in low- and middle-income countries, particularly in sub-Saharan Africa (ibid).

The majority new infections are transmitted heterosexually, while the risk factors differ. In some countries, men who have sex with men (MSM), injecting drug users (IDUs), and sex workers (SW) are at important risk. Most people living with HIV or at risk for HIV do not have

access to prevention, care, and treatment, and there is still no treatment. HIV/AIDS is a burning public health problem all over the world. The HIV disease is an important cause of deaths worldwide and the number one cause of death in Africa. HIV primarily affects those in their most productive years; about half of new infections are among those below the age 25 years. The women, especially younger women, are biologically more inclined to HIV. As a result, young women are twice more likely to become infected with HIV than that of male globally. Women personified about half of all people living with HIV globally, and more than half (60%) in sub-Saharan Africa. HIV is the leading cause of deaths among women in their reproductive age (15-49 years). Gender inequalities, differential access to services, and sexual violence increase women's openness to HIV. Young adolescent girls are not only biologically more disposed to HIV infection; they are more likely to have older sexual and partners who are IDUs, consequently increasing their potential exposure to HIV (Buvé, 2001).

A joint of two infections disorders can have a synergistic effect on mortality and morbidity. In fact, HIV not only affects the health of persons, it impacts households, communities, and the development and economic growth of nations. The prevalence of HIV disease levels can vary significantly between different countries and between different populations within a country as well as globally. It is associated with much more difference in socio-demographic and health factors than is admitted in broad statements and projections about pandemics based on crude epidemiological data. Differences between cultures and countries in terms of contraceptive use, educational attainment, circumcision practices and access to treatment for sexually transmitted diseases (STDs) can therefore explain much of the observed distinction in HIV prevalence levels. These differences may relate to and reflect standards and styles of living, especially in family life, rearing of children, adolescence and occupational preferences (ibid).

This variety is usually attributable to a range of socioeconomic, biological, demographic and

behavioral factors. The positive relationship between lower socioeconomic status and HIV progression is well recognized. Numerous studies have been conducted globally and especially in sub-Saharan Africa on risk factors of HIV infection. These determinants or risk factors can be grouped into two categories, including sexual behavioral risk factors and influential risk factor. Thus, much has been known about what determines the spread as well as prevention of the HIV/AIDS epidemic. From best of our knowledge a few studies have been undertaken on the associations of socioeconomic and health factors with HIV/AIDS epidemic in the global framework. So, it will differ from other studies in several important aspects and it will use a broader range of explanatory variables based on more recent and relevant data to offer a more comprehensive view of HIV implication (Nampanya, 2000).

The number of individuals infected with human immunodeficiency virus (HIV) continues to increase worldwide. HIV/AIDS is, at present one of the greatest threats to health in sub-Saharan Africa, with 3.1 million new cases in 2004 as stated by Todd et al (2006). Despite the greater availability of antiretroviral therapy, such therapy is costly and logistically complex, and effective HIV prevention remains an urgent priority. Toddy et al (2006) further states that, HIV prevention requires a clear understanding of the social, behavioral, and biomedical risk factors that influence the prevalence and incidence of HIV infection, but few prospective studies in general populations in Africa have documented the relative importance of different factors. Several studies have reported the aspects of sexual behavior that increase exposure to the virus, as well as biomedical cofactors that influence the risk of transmission per exposure. The prevalence of HIV infection has been found to be higher in men and women in most African countries particularly in sub-Sahara Africa.

For biomedical cofactors, the evidence that other sexually transmitted infections (STIs) enhance HIV transmission has been reviewed extensively.

Longitudinal studies in Africa have demonstrated strong associations between ulcerative and non-ulcerative STIs and the prevalence of HIV infection, and STIs are assumed to increase the infectiousness of HIV-positive subjects and the susceptibility of HIV-negative subjects. According to Buvé (2001), worldwide, an estimated 5%–10% of HIV infections are caused by unscreened blood transfusions and a further 2%–4% are caused by unsafe medical injections. Some researchers have suggested that the latter may be an underestimate although their conclusions have been challenged.

Fylkesnes (1997) states that, globally a number of countries found in a contiguous belt stretching from Uganda southward to Zambia and Botswana, have experienced HIV prevalence rates far above any others. He further states that, in this main HIV belt, the proportion of the population in urban areas that is HIV infected (15 – 44 years age-group) ranges from 15–30%, with striking urban/rural differentials. Outside this belt the HIV prevalence levels are still relatively low, except from a few countries in West Africa.

According to Nampanya (2000), Zambia is among the countries in sub-Saharan Africa most seriously affected by the HIV/AIDS pandemic. An estimated 40,000-90,000 AIDS-related deaths would have occurred by the end of 2000. At the beginning of the epidemic in the mid-80s and early 90s, the majority of AIDS-related deaths in the adult population occurred among men in the age group 20- 45 years a period when they were at their most productive stage. Loss of the breadwinners had an immense economic and financial impact on widows, their children and other dependants from the extended family.

In the absence of a vaccine or cure for Acquired Immune Deficiency Syndrome (AIDS), the spread of Human Immunodeficiency Virus (HIV) must be controlled through programs designed to distribute antiretroviral therapy (ART) and encourage devotion. This is in addition to prevention strategies such as Elimination of Mother to Child Transmission (EMTCT),

voluntary medical male circumcision and Pre and Post disclosure prophylaxis. To mitigate and eventually eliminate HIV epidemics around the world, it remains essential to extend and implement HIV prevention interventions that modify individuals' behaviors and practices. These are as important as developing technologies, such as vaccines, microbicides, and antiretroviral drugs, which attack and immobilize the virus and reduce the risk of its transmission. It's also necessary to legislate social and policy changes that transform social structures and environments that constrain individuals' ability to reduce their vulnerability to HIV infection. Such intervention would attend to fundamental social drivers of HIV vulnerability, such as economic dependence, poverty, gender inequality, lack of education, stigma and discrimination, including sexism, racism, and homophobia. Such interventions have produced some evidence of efficiency (Auerbach, 2009).

The implication of HIV/AIDS has varying severity across the world. Effective management of interventions undertaken to curb severity is paramount to make sure the desired outcomes are attained. This also advises the stakeholders to make informed decisions on related matters. It's only in proper management that the sixth Millennium Development Goal (MDG 6) which is to combat HIV & AIDS, malaria and other diseases can be achieved.

According to World Bank (2008), HIV/AIDS remains a fundamental development challenge in many African countries that threaten growth, livelihoods, and human capacity, and inflicting tragedy on millions of families in Africa. The environment for combating HIV/AIDS keeps on changing dramatically, with new donors, increased funding, more affordable treatment, better understanding of the disease and its transmission, and a new pleasure of gender inequality in the feminization of the disease in Africa.

Keywords-HIV/AIDS, Prevalence, factors, Zambia

I. INTRODUCTION CHAPTER ONE:

A. 1.0 Introduction

This chapter begins with a brief background to an investigation of factors influencing the prevalence of HIV/AIDS in Zambia taking into account the interventions put in place by the government to reduce the pandemic of HIV/AIDS. Thereafter, the chapter presents the statement of the problem, research objectives and questions linked to the objectives of the study. It then presents the significance of the study, theoretical framework, and conceptual framework, limitations of the study, Delimitation of the study and definition of terms.

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and implement HIV prevention interventions that modify individuals' behaviors and practices. These are as important as developing technologies, such as vaccines, microbicides, and antiretroviral drugs, which attack and immobilize the virus and reduce the risk of its transmission. It's also necessary to legislate social and policy changes that transform social structures and environments that constrain individuals' ability to reduce their vulnerability to HIV infection. Such intervention would attend to fundamental social drivers of HIV vulnerability, such as economic dependence, poverty, gender inequality, lack of education, stigma and discrimination, including sexism, racism, and homophobia. Such interventions have produced some evidence of efficiency (Auerbach, 2009).

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II. EASE OF USE

A. 1.2 Statement of the Problem

Zambia has adopted a rigorous combined HIV prevention strategy, as outlined in the country's National AIDS Strategic Framework (NASF 2017-2020). The government of Zambia further created an AIDS surveillance committee as early as 1986 and created an emergency plan to control the spread by 1987. Zambia's provision of free

condoms in health facilities was intensified in 2014 with the number of free condoms available more than replicating from 7.8 million in 2013 to 19.6 million in 2014. If behavior is to be changed, young people must be a main concern target as around 46% of all Zambians are between 0 and 14 years old. Working towards this, by 2016, inclusive sexuality education (CSE) was being introduced into school curriculums and strategies were being implemented to reach out to adolescents who were not in school. Through CSE classes students can learn about HIV, condom use, inter-generational sex and gender relations.

Zambia as a country also runs a number of behavior change campaigns to improve health-seeking behavior. For example, Zambia's Condomize campaign aims to increase access to knowledge and information for young people on the benefits of both male and female condoms. In 2017, 92% of pregnant women living with HIV received antiretroviral treatment (ART) (65,680 of a total of 71,000 women). Coverage dipped in 2015, when 87% of pregnant women living with HIV received effective ART, but this latest figure indicates that the country was back on track to reach coverage similar to 2012, 2013 and 2014 levels when it stood at 93%, 96% and 91% respectively (Zambia National AIDS Council, 2014). Despite the above efforts made by the Zambian government to reduce the HIV/AIDS pandemic, the reduction in the prevalence of HIV/AIDS in Zambia still remains questionable. As indicated by Nampanya (2000), Zambia is among the countries in sub-Saharan Africa most seriously affected by the HIV/AIDS pandemic. An estimated 40,000-90,000 AIDS-related deaths would have occurred by the end of 2000. It is for this reason that this study is being undertaken to investigate factors contributing to the prevalence of HIV/AIDS in Zambia. The study will also ascertain strategies that need to be put in place in order to overcome the pandemic.

B. 1.3 Objectives of the study

C. 1.3.1 General objective

The main objective of the study was to investigate factors influencing the prevalence of HIV/AIDS in Zambia and suggest intervention

and solutions to eradicate this pandemic; The case study of Kasama General Hospital.

1.3.2 Specific Objective

1. To determine factors influencing the prevalence of HIV/AIDS
2. To determine the extent of HIV/AIDS prevalence
3. To suggest measures that need to be put in place in order to eradicate the pandemic of HIV/AIDS

1.4 Research Questions

1. What factors influence the prevalence of HIV/AIDS?
2. To what extent is the prevalence of HIV/AIDS?
3. What measures need to be put in place in order to eradicate the HIV/AIDS pandemic?

B. 1.5 Significance of the study

The HIV/AIDS pandemic is an area of great concern from every aspect of society today, more especially among policy makers. The worsening HIV/AIDS pandemic has brought many debates amongst governments worldwide, international organizations, local organizations and many well-wishers on how best to tackle this problem. In this post Sustainable development goals era, HIV/AIDS eradication is one of the priorities to see about development in any country in the world today. This research will contribute to the generation of knowledge or information on factors contributing to the prevalence of HIV/AIDS.

III. 1.5 SIGNIFICANCE OF THE STUDY

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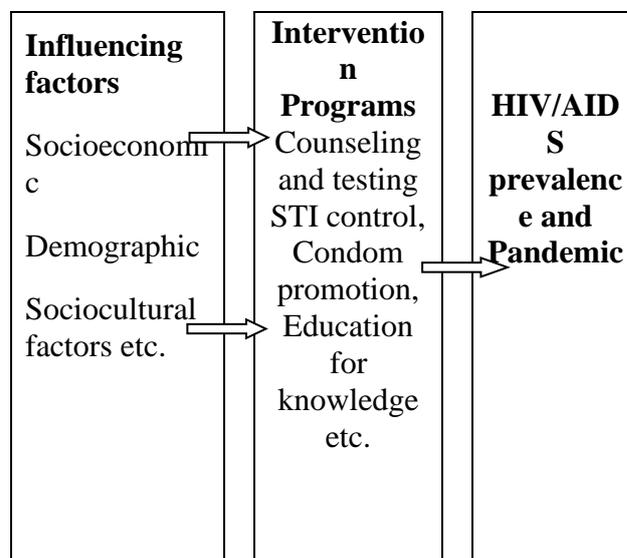
The discoveries/findings of this research will be of great use to someone wishing to research on the above subject matter, various organizations and government ministries concerned in policy formulation, analysis and implementation with the welfare of HIV/AIDS affected people. Above all, this study was done as a partial fulfillment for the award of my Master's degree in project planning and Management at Information and Communication.

A. 1.6 Theoretical/conceptual framework

The conceptual framework has been highlighted below with socioeconomic, demographic and social cultural factors and many other more factors that have not been mentioned being the independent variables. These factors are seen to have an influence on the prevalence of HIV/AIDS and its pandemic. Intervention programs in this case can be said to be counseling programs and testing, STI control and many other more. The dependent variable is the HIV/AIDS pandemic and its prevalence.

Independent variables Moderating Variables

Dependent Variables



1.7 Limitations and delimitations of the study

1.7.1 Limitations of the study

During data collection, the researcher was required to travel to the selected study site (Kasama general hospital) for primary information; this process needed enough funding for transport. The other challenge of this research is the amount of time within which the research was undertaken. The researcher was likely to face difficulties as they undertook their research in that the research was being undertaken in a short period of time.

1.7.2 Delimitation of the study

The site of the study was Kasama General Hospital.

1.8 Ethical considerations

- The study took into account all possible and potential ethical issues. The measures that were undertaken to ensure compliance with ethical issues included keeping the identity of respondents confidential. The basic ethical requirements demand that the researcher respects the rights, values and decisions of respondents. In this study, the values of the respondents were given due respect. Informed consent was obtained from both the respondents and the people in charge of the places where the research was carried out and all the respondents were treated equally.
- 1.9 Operational definition of concepts
- Prevalence: The quality of prevailing generally; being wide spread.
- AIDS: A set of symptoms caused by HIV
- HIV/AIDS Prevalence: The wide spread of HIV/AIDS
- Viral load
- Also known as viral burden, is a measure of the severity of an active viral infection, and can be calculated by estimating the live amount of virus in an implicated body fluid. The aim of HIV treatment is to

reduce the amount of viral pack to undetectable levels (AidsMap, 2014).

- Human Immunodeficiency Virus (HIV)
- This is a lentivirus that causes the acquired immunodeficiency syndrome, a condition in humans in which progressive failure of the immune system allows life intimidating opportunistic infections and cancers. HIV affects specific cells of the immune system, called CD4 cells, destroying such that the body can't fight off infections and disease. This is what leads to AIDS (CDC, 2015).
- HIV Prevalent rate
- This is the measure of the relative load of disease in population. HIV prevalence is the percentage of the population living with HIV (NASCO, 2014).
- HIV incidence
- This is the measure of original HIV infections in a population over time, usually within the previous year. Incidence is theoretically the best way to evaluate the HIV epidemic's proliferation, and a combination of these figures would provide the most accurate representation of the HIV/AIDS burden. It provides important information on the status of the HIV epidemic and can be used for efficient targeted HIV prevention planning in groups that are most vulnerable to recent infection and to measure impact of HIV prevention programs (NASCO, 2014).
- Access to HIV prevention services
- Provision of health services aimed at female sex workers that will ensure that they are not at risk of
- HIV infection through access of relevant information and services
- Condom Use
- It is the correct and consistent use of both male and female condoms during all types of sexual encounters, by all sex workers with all their sexual partners. Structural Issues

- These are social and legal factors that increase susceptibility to HIV infection among female sex workers and undermine prevention and treatment efforts like. These include criminalization of sex work and societal attitudes towards sex work.
- Incidence of H IV among female sex workers
- Incidence of HIV among female sex workers is the number of HIV new cases per given population determined by uptake of HIV testing, STI screening and enrolment into care and treatment.

IV. CHAPTER TWO: LITERATURE REVIEW

A. 2.1 Introduction

This chapter presents a review of relevant literature on the factors influencing the prevalence of HIV/AIDS and the solutions and interventions needed in order eradicate the HIV/AIDS pandemic.

B. 2.1 Overview

All over the world the prevalence of Human Immunodeficiency Virus (HIV)/Acquired Immune Deficiency Syndrome (AIDS) has become a tentative stone in progress of human civilization and is a huge anxiety for people worldwide. Since the identification of the HIV in the early 1980s, much has been cultured about how the virus is transmitted and how it attacks the body's immune method and causes the AIDS. The HIV/AIDS epidemic has grown on an unprecedented scale in the last three decades since it was first recognized, and now it is considered a global crisis.

More than two decades have passed ever since the detection of the first cases of acquired immunodeficiency syndrome (AIDS). Furthermore, the HIV epidemic has continued to spread quickly in many countries despite national and international labors to control it. The World Health Organization (WHO) has suggested the use of HIV prevalence as an indicator to examine the effectiveness of national AIDS control

programmes. The present review has been prepared in order to support WHO in its HIV-related activities all along with youths. The review focuses on the degree to which data sources usually used in HIV surveillance may provide reliable estimates of the extent of the epidemic in the population.

AIDS is one of the most public health and social harms threatening the humanity. Furthermore, the greatest burden of the HIV/AIDS pandemic is in the sub-Saharan African region. According to the Joint UN Committee on HIV/AIDS UNAIDS (2004), an estimated 38 million people worldwide were living with HIV in 2003, of which 5 million were lately infected. In 2003, two-thirds of all people living with HIV/AIDS 25 million were in sub-Saharan Africa, which has about 10 percent of the global population. Malawi has one of the maximum national prevalence rates in the world. Heterosexual contact can be said to be the principal mode of HIV transmission, while mother-to-child transmission (MTCT) accounts for about 25 percent of all new HIV infections.

Monitoring and evaluation data for 2004 show a meaningful enhancement in program intervention treatment. Subsequently, some positive changes in behavior, especially among men, have been observed and recognized (NAC, 2004). The National AIDS Commission (NAC) has coordinated the development of a National AIDS Framework for 2005 to 2009, which is likely to galvanize a decentralized complete multi-sectoral national reaction. Furthermore, the strengthening of the multi-sectoral national response to HIV and AIDS is expected to bring about a decline HIV transmission. However, HIV prevalence will be likely to remain high or even increase for some time, as antiretroviral therapy is scaled up as a result and deaths due to AIDS are reduced. In most sub-Sahara African countries, Malawi monitors HIV prevalence primarily through antenatal clinic (ANC) sentinel surveillance. The surveillance is usually conducted every one to two years using constant methodology in the same population group. The system can be said to have collected data from 19 sentinel sites dating back to 1994. Some sentinel sites started data collection as early as 1990.

Data from the Malawi HIV sentinel surveillance showed that HIV prevalence among antenatal attendees increased rapidly and steadily from the late 1980s to the early 1990s. By the middle of the 1990s, prevalence stabilized and has ever since remained fairly constant. ANC sentinel surveillance systems use unlinked anonymous methods for specimen collection and testing to avoid contribution bias which can significantly affect the HIV prevalence rates. Health facilities are not randomly selected and tend to be urban; pregnant women may be having uncovered sex at a greater rate than the general population, which could overestimate the prevalence; the prevalence in ANC attendees may underestimate what is happening in the common populations because women with HIV associated infertility are not captured; and men and non-pregnant women are not included in the sentinel surveillance sample. Furthermore, in quest to obtain a nationally representative HIV prevalence estimate for all adults, sentinel surveillance data should be adjusted based on assumptions about the biases in the clientele who use the selected facilities and part of the population that does not use antenatal clinic services.

The 2004 MDHS can be said to the third survey in Malawi conducted as part of the international DHS program, and the first to anonymously link the HIV results with key behavioral, social and demographic factors. With the addition of HIV testing in the MDHS, for the first time Malawi has a national population-based HIV prevalence estimates for women and men. Population-based surveys are expected to give more accurate national estimates compared with the one based on ANC sentinel surveillance outcomes. However, population-based surveys are expensive and logistically problematic to carry out and are therefore not conducted every year.

Results from population-based surveys can be used to regulate the existing ANC sentinel surveillance data and to point out improvements in the sentinel surveillance system.

According to United Nation (2014), there were about 35 million people living with HIV by the end of 2013, with HIV incidence of 2.1 million HIV infections in 2013 and about 1.5

million deaths cause by HIV around the world. The United Nation distinguished that the new HIV infections continued to exceed the number of AIDS related deaths and as a record number of people have been receiving antiretroviral therapy, keeping them active longer enough. It is also estimated that in 2012 there were 1.6 million new infections with about 1.2 million HIV associated deaths in sub-Saharan Africa. Sub-Saharan Africa carries the greatest burden of the epidemic throughout the world with 71 per cent of PLHIV worldwide. Though there has been a decline in number of HIV related deaths, Sub-Saharan Africa account for 70 per cent of HIV related deaths worldwide. It's also reported that, more than 90 per cent of the children who acquired HIV infection in 2011 live in sub-Saharan Africa (UNAIDS, 2012).

In sub-Saharan Africa, which is home to 92 per cent of pregnant women living with HIV globally, the percentage of pregnant women living with HIV who received antiretroviral therapy or prophylaxis was 59 per cent [53–66 per cent], this is way below the Caribbean where the coverage levels were at 79 per cent [67–97 per cent] in 2011 (UNAIDS, 2013). Like many other African countries Kenya has struggled in the past 30 years to get the best, most effective and approachable programmes, strategies, policies and approaches of tackling the menacing HIV/AIDS pandemic. Many families, institutions and departments have over the past decade lost valuable sons and daughters, wages and their best-trained workers at the prime of their working lives. The disease has not spared any country in the world. It has affected both rich and poor countries. The only difference is in the way each country responds, which much depends on their social-economic and political environment (Ndambuki, 2006).

The HIV/AIDS is increasing ill-health and mortality of large numbers of 'prime age' adults who play a fundamental role in income generation, the defense of assets, and social reproduction. The composition of households is transformed and dependency ratios increase as adults grow sick and die, and as orphans are taken in to be cared for. This places massive pressure on resources. Furthermore, households are more likely to be headed by the elderly or by children,

many of whom are ill-equipped to cope with such situations. Over the long term, the transmission of knowledge concerning livelihood strategies and cultural and family heritage can be harmfully affected (Morton, 2005).

According to, Johnson L (2002) the countries, which have to fight with the concentrated or generalized HIV/AIDS epidemic, are facing enormous socio-economic problems. In 2011, the total number of people living with HIV was 34.2 million, newly infected with HIV was 2.5 million, and AIDS deaths was 1.7 million. The cases have been reported in all regions of the world, but largest part those existing with HIV (97%) reside in low and middle income countries, particularly in sub-Saharan Africa. The majority new infections are transmitted heterosexually, while the risk factors vary. In some countries, men who have sex with men (MSM), injecting drug users (IDUs), and sex workers (SW) are at significant risk. Most people living with HIV or at risk for HIV do not have access to prevention, care, and treatment, and there is still no cure.

HIV/AIDS is a burning public health issue all over the world. The HIV disease is a leading cause of deaths worldwide and the number one cause of death in Africa. Tladi LS (2006) states that, HIV primarily affects those in their most productive years; about half of new infections are among those below the age 25 years. The women, especially younger women, are biologically more susceptible to HIV. As a result, young women are twice more likely to become infected with HIV than that of male globally. Women embodied about half of all people living with HIV globally, and more than half (60%) in sub-Saharan Africa. HIV is the most important cause of deaths among women in their reproductive age (15–49 years). Gender inequalities, differential access to services, and sexual violence increase women's vulnerability to HIV. Young adolescent girls are not only biologically more susceptible to HIV infection; they are more likely to have older sexual and partners who are IDUs, consequently increasing their potential exposure to HIV. An intersection of two infections disorders can have a synergistic effect on mortality and morbidity. In fact, HIV not only affects the health of individuals, it impacts households, communities,

and the development and economic growth of nations.

In overall terms, an estimated 5 million people became newly infected with HIV in 2001. According to UNICEF et al (2002) more than half of these new infections occurred among young people aged 15 to 24 years. Surveys show that sexual activity is frequently initiated early in adolescence and this can result in relatively high prevalence rates of HIV infection. As an example, a Multicentre study in 4 African cities showed prevalence of HIV infection among 15 to 19 year olds of up to 23% in women and 3.7% in men in the general population (Buvé et al., 2001). For many reasons, young adults and children, in particular young women and girls are extremely vulnerable. Adolescence is a period characterized by an urge for experimentation. Misconceptions and limited knowledge concerning HIV infection and prevention methods may lead adolescents to engage in risky sexual behavior.

In addition, adolescence is a time when drug and alcohol abuse starts, and these practices have been shown to increase the risk of HIV infection directly, through insecure sex or needle exchange, or indirectly through involvement in sexual commerce. (Gossop et al., 1995; Mbulaiteye et al., 2000) In most cases, young people lack the basic skills to negotiate safer sex. Financial constraints and emotional dependence on adults makes them defenseless to sexual abuse, exploitation and coercion besides, reproductive health services, including services for the diagnosis and treatment of sexually transmitted diseases, are often poorly accessed by adolescents because of concerns about privacy and unfriendly and judgmental attitudes of care providers.

At the Special Session on AIDS in June 2001, member states of the United Nations General Assembly (UNGASS) committed themselves to attain a number of goals in the fight against HIV/AIDS. Those goals had already been enunciated in the key measures for the further implementation of the Programme of Action of the International Conference on Population and Development (ICPD+5). One of those goals was working towards a reduction in HIV prevalence among young people aged 15 to 24 years in their personal countries. Particularly, governments of

the most affected countries agreed to endeavor a 25% reduction in HIV prevalence in this group by 2005 whereas all other countries would attempt a global decline by 2005 and a 25% reduction by 2010.

Equally important was the commitment of donor countries and agencies to the attainment of this goal. Progress towards accomplishment of these UNGASS goals by each country will be reviewed annually. To facilitate this annual review, the Joint United Nations Programme on HIV/AIDS (UNAIDS) has urbanized a set of indicators of program impact to provide technical guidance on the information required and its interpretation. (UNAIDS, 2002) Standardizing types of data and methods to measure the extent to which program activities have succeeded in achieving the prevalence goal will be essential to increase comparability of the estimates obtained across different countries and over time. HIV incidence, the number of new cases of HIV infection and the distribution of those new infections in the population are the most important data for monitoring purposes reason being that they reflect the current dynamics of the HIV epidemic and the effects of continuing preventive interventions (Wawer et al., 1997). Nevertheless, HIV incidence is difficult to measure. Because HIV incidence rates are relatively low, even when prevalence is high, detecting enough current infections to obtain robust incidence rates requires follow up of large cohorts of people. (Zaba and Slaymaker, 2002) As a result, longitudinal studies are costly, time consuming, logistically complex and have therefore been limited to localised cohort studies. (McFarland et al., 1999; Rutherford et al., 2000; Zaba et al., 2000) (Schwarcz et al., 2001).

In addition, several factors tend to decrease HIV incidence in prospective studies, resulting in the underestimation of true incidence rates in the population of importance. For ethical reasons, cohort participants are mostly offered enhanced medical services, voluntary counseling and testing (VCT) and education on reproductive health matters. Those services may affect the behaviour of participants (Schwarcz et al., 2001) and the resultant, intervention effects will tend to decrease HIV incidence within the cohort and above time. (Batter et al., 1994; Gregson et al.,

1998; McFarland et al., 1999) personal characteristics of persons who enroll and remain in cohort studies usually differ from those of the population of interest. Resultant selection bias from loss to follow-up and / or from time-dependent changes in participation levels may also lead to lower HIV incidence estimates.

Furthermore, in closed cohort studies the number of susceptible people will tend to decline over time, as persons at higher risk become infected with HIV. (Schwarcz et al., 2001) In particular, in cohorts of high-risk groups, susceptible individuals who are “more likely” to acquire HIV infection will get infected soon after the commencement of the follow-up, and the proportion of those “resistant” to HIV infection will steadily increase over time. HIV incidence can as well be measured using the serologic testing algorithm for recent HIV seroconversion (STAHRS) or detuned assay. The mentioned method involves re-testing HIV-positive specimens by using a less sensitive enzyme-linked immunosorbent assay (EIA), which can only detect antibodies after a mean of 129 days’ post-seroconversion. (Janssen et al., 1998).

The main advantage of the STAHRS is that incidence of HIV infection can be estimated by using data from cross-sectional surveys. Although current data suggest that STARHS over-estimates HIV incidence by 10% to 20%, consistent use of this assay over time would allow tracking trends in incidence. (Cleghorn et al., 2002) Low levels of HIV antibody, such as those found in final stages of AIDS or in persons receiving antiretroviral therapy (ART) including a protease inhibitor early after infection, (Schwarcz et al., 2001) may cause misclassification. However, young subjects are likely to have been recently infected and the proportion of people receiving early ART is negligible in developing countries. Blinded quality assurance panels have been field tested in developing countries. (MEASURE, 2000) Unfortunately, although STAHRS is being tested for non-B subtypes of HIV, which are the most commonly found in African population, current assays are limited to type B clades. (MAP, 2002) Once STAHRS for non-B subtypes of HIV are developed and become available they might be

used in research or surveillance to estimate HIV incidence.

Nevertheless, it should be noted that the use of this assay will not remove the need to adjust for selection and coverage biases introduced by using a given data source (Remis et al., 2002; Zaba and Slaymaker, 2002) and large sample sizes will be required as a result of the narrow “window period” in STAHRS (HIV incidence is estimated over a four-month period). In contrast with incidence, prevalence of HIV infection the combination of new and older cases of HIV infection – provides the best measure of the scale of the epidemic, allowing planning for health and social services. Overall prevalence estimates, however, will be less useful to identify those groups in which new infections are currently occurring. (Schwarcz et al., 2001) In a prospective study in rural Uganda it was shown that the decline in HIV prevalence observed in the presence of a stable HIV incidence could be explained by HIV-related differentials in mortality and mobility. (Wawer et al., 1997)

In general, HIV prevalence depends upon the balance between incidence, HIV-associated mortality and migration. A decline in prevalence could be attributed to changes in any of these three factors. (Konde Lule, 1995; Kamali et al., 2000; Fylkesnes et al., 2001) Therefore, it is difficult to relate changes in adult HIV prevalence to changes in infection rates, since differential mortality and migration between HIV positive and negative subgroups may be responsible for those changes in prevalence rates. When sentinel groups especially selected population groups such as ANC attenders are monitored for HIV surveillance purposes, differentials in compliance and/or use of services between HIV infected and uninfected individuals will also affect the measured prevalence estimates and trends. (Zaba and Slaymaker, 2002)

Prevalence estimates restricted to younger age groups are more likely to reflect new infections with HIV and therefore incidence, since start of sexual activity would be recent at those young ages. As discussed in Section 3, prevalence of HIV infection in the younger age groups would

also be less affected by differentials in mortality and fertility between HIV infected and uninfected individuals. These effects are shown to increase with time since infection and will be more evident at older ages. In contrast, migration among the youngest may be an important factor and can lead to bias in the estimated prevalence in the 15-24-year group.

The UNGASS has proposed to monitor trends in HIV prevalence among young people aged 15 to 24 years as an indicator of the ability of national AIDS control programmes to control the HIV epidemic. Every year, new cohorts of young and uninfected subjects join the group of sexually active individuals. As young people represent a high proportion of the population in developing countries, (Zaba et al., 2000) reducing the rate of infection in this group would have an important influence on the overall course of the epidemic. Several factors imply that people aged less than 25 years are the most sensitive group to monitor recent changes in the HIV epidemic. First, their rates of HIV infection are among the highest observed. (Zaba et al., 2000; Laga et al., 2001) An overall low prevalence may still exist in the presence of high incidence among adolescents. This was the case among ANC attenders in Kinshasa where prevalence among women aged fewer than 25 years increased over time despite an overall stable prevalence of HIV infection. (Batter et al., 1994) Second, HIV infections in this group are more likely to have occurred recently and, therefore, prevalence among the young will reflect recent incidence or rates of new infections.

In contrast, HIV prevalence in older women represents the cumulative net effect of infection and attrition over a longer period of time and is, therefore, less able to detect recent changes. (Changalucha et al., 2002) Because adults already have a high prevalence, changes in incidence of infection in older age groups would take longer to be reflected in lower prevalence. (Konde Lule, 1995) Third, young people tend to respond more rapidly and are more sensitive to behavioural interventions, since it is easier to adopt new patterns of behaviour before they are established than to change habits that have been acquired in the past. (Gregson et al., 1998; Kilian et al., 1999; Zaba et al., 2000)

This means that analyzing trends of HIV prevalence in young people may be a sensitive way of monitoring the impact of infection in the population. The focus in the 15-19-year group, as opposed to younger age groups, derives from the assumption that sexual transmission predominates in young people and that sexual infection is uncommon before the age of 15. However, HIV infected in a 15-19-year-old may have been acquired before the age of 15 years through different mechanisms: mother-to-child transmission (MTCT), parenteral transmission (e.g. transfusion of contaminated blood or blood products or unsafe injections) or in the course of early sexual activity. The need for HIV seroprevalence data on young people below 15 years will depend on two main factors: the relative importance of those mechanisms of transmission and the probability that people infected at such young ages are captured by surveillance systems at older ages (e.g. 16-year-old pregnant women infected by 14 years attending ANC clinics).

MTCT of HIV infection in developing countries remains high due to absence of prevention programmes with ART and to the almost universal practice of breastfeeding for periods as long as 18 to 24 months. It has been estimated that 800,000 children were newly infected with HIV in 2001, almost all of them through MTCT. (UNAIDS, 2002) Survival of children infected with vertically acquired HIV infection is marked by two periods of very high mortality: infancy, because of the failure of the immature immune system to protect against HIV, and after age 9, due to opportunistic infections and progression to AIDS. (The UNAIDS Reference Group on Estimates, 2002) Despite the lack of information on long term survival of those infected children, it is assumed that by age 15 all HIV-positive children will have died or will be at an advanced stage of disease. Early in the HIV epidemic it was estimated that, world-wide, between 5% and 10% of all HIV infections were acquired through transfusion of contaminated blood and blood products (UNAIDS, 1997).

Following the widespread introduction of blood screening for HIV this proportion is believed to have decreased substantially.

However, few data are available concerning the relative importance of either transfusion or some nosocomial mechanisms (e.g. medical injections) in the transmission of HIV infection. Although a substantial proportion of individuals under the age of 15 years are virgins, youth in many countries become sexually active at these early ages (e.g. Bangladesh or India). Where sexual activity starts early, the need for HIV seroprevalence data among younger adolescents would be potentially greater. Nevertheless, measuring HIV prevalence in young adolescents involves issues such as obtaining parental consent and ensuring confidentiality that can only be fulfilled in the context of research studies (e.g. randomised controlled trials targeting youth). In addition, behavioural information from individuals in this age group and in both in- and out-of-school youth (because of the substantial differences in health status and behaviour in these two groups) can be collected and analysed, but this information is likely to be very unreliable in such young people.

Prevalence in younger age groups, in particular 15 to 19 years old, reflects incidence more closely than prevalence in older individuals, because recent HIV infection is not so strongly associated with increased mortality as infections acquired in the more distant past. (Kilian et al., 1999; Fylkesnes et al., 2001) The effects of HIV decreasing fertility will also be less important at those young ages, (Zaba et al., 2000; Changalucha et al., 2002) and this is especially important in the context of ANC surveillance in low contraceptive use countries. The effects of HIV infection on fertility and mortality will be discussed in detail in Section 3. A decrease in HIV incidence would result in a temporal shift in the peak prevalence age from younger to older age groups, as the cohort of women who became infected in the past becomes older. (Taha et al., 1998) Since data routinely collected by surveillance systems is unlinked, identifying women attending clinics at subsequent pregnancies is not possible and, therefore, observed trends in prevalence might just reflect such shifts of HIV-infected women from one age group to the next instead of true changes in incidence. (Bunnell et al., 1999) Nevertheless, despite the higher sensitivity of younger age groups in reflecting recent

infections, the appropriate choice of age category to target may vary from country to country. In general, there is a wide variation in the proportion of subjects sexually active across age.

The prevalence of HIV disease levels can vary considerably between different countries and between different populations within a country as well as globally. It is associated with much more variation in socio-demographic and health factors than is admitted in broad statements and projections about pandemics based on crude epidemiological data. Johnson L (2002) stated that differences between cultures and countries in terms of contraceptive use, educational attainment, circumcision practices and access to treatment for sexually transmitted diseases (STDs) can therefore explain much of the observed variation in HIV prevalence levels. These differences may relate to and reflect standards and styles of living, especially in family life, rearing of children, adolescence and occupational preferences. This diversity is usually attributable to a range of socioeconomic, biological, demographic and behavioral factors. The positive relationship between lower socioeconomic status and HIV progression is well documented.

Numerous studies have been conducted globally and especially in sub-Saharan Africa on risk factors of HIV infection. These determinants or risk factors can be grouped into two categories, including sexual behavioral risk factors and influential risk factors. Thus, much has been known about what determines the spread as well as prevention of the HIV/AIDS epidemic. From best of our knowledge a few studies have been undertaken on the associations of socioeconomic and health factors with HIV/AIDS epidemic in the global context. So, it will differ from other studies in several important aspects and it will use a broader range of explanatory variables based on more current and relevant data to offer a more comprehensive view of HIV implication. (Bunnell et al., 1999)

In Nigeria, there exists political instability, ethnic crises, social decadence, urban migration, unemployment, poor and inadequate

infrastructural facilities, widespread poverty and irregular academic sessions in all tiers of the educational system. The above problems contribute deeply to HIV/AIDS vulnerability and prevalence. The available data on HIV/AIDS prevalence revealed an increase from 1.8% in 1992 to 5.0% in 2003. In 1999, there were 2.5 million AIDS infections in Nigeria, which were projected to rise to 3.8 million by 2005. At present, despite various strategies mounted against HIV/AIDS in Nigeria, the projection of 3.8 million infections has been met. In the Yoruba society of Nigeria comprising Oyo, Osun, Ogun, Ondo, Lagos and Ekiti States, there is no State that has less than 4.6% prevalence of HIV/AIDS. On the average, Yoruba society has 4.8% prevalence of HIV/AIDS as at 2005 (Konde Lule, 1995).

While the statistics on HIV/AIDS continues to rise, the effect of the disease on families is increasingly being noticed. Many households have lost their able-bodied men and women to AIDS. That has also led to a serious decrease in community's productivity. A lot of the public spending, which are supposed to have been expended on other development projects are channeled towards the prevention of HIV/AIDS and care. Despite all these severities associated with HIV/AIDS in Nigeria, government actions are still directed at decision formulation level, which are yet to be translated into meaningful actions against the tides of the disease. The above imply that within the first three decades of the emergence of HIV/AIDS, it remains a disaster, affecting the social, political, economic, and biological existence of the ravaged communities (ibid).

Therefore, the following questions arise: What is wrong with the conception of health in absolute to HIV/AIDS? Why have the strategies initiated against HIV/AIDS failed? Are there any grounds yet to cover in researches on HIV/AIDS Are the existing research findings capable of being translated into effective and positive actions against HIV/AIDS in the Yoruba community of Nigeria?

Most of the existing information on HIV/AIDS is generalized in the global context. Most of it has ignored the perception of local culture in explaining HIV/AIDS. Another gap is poor harmonization of research findings from different disciplines, which could have generated ideas and knowledge leading to positive and pragmatic intervention alongside HIV/AIDS. This gap suggests that enough multi-disciplinary research on HIV/AIDS has not been conducted. The African conception of health assumes a holistic perception, which asserts that the state of health includes political, social, economic and “religious” well-being of individuals and communities (Konde Lule, 1995).

It suggests that health is a general well-being. HIV/AIDS has impact not only on the biological well-being, but also on the general wellbeing of individuals and that of the community. As declared by Kofi Annan, “AIDS is a threat to economic, social and political stability”. This therefore justifies the desirability of examining the social and cultural factors of HIV/AIDS, with a view to understanding all the variables responsible for its prevalence and spread. Such an understanding would also generate actions for HIV/AIDS prevention and positive care and support for People Living with HIV/AIDS (PLWAs) in Yoruba communities (Bunnell et al., 1999).

The thrust of the argument in this study is the dependency theory, derived from the political economic thesis discussed by Ake. Mufune however, uses the theory to explain the nature of HIV/AIDS, in terms of global economic inequalities and political uncertainties. This perspective was initially discussed by Schoep who argued that the prevalence of HIV is determined by the international political economy, social structures and by the actions of individuals and groups, which are variously contained within the historically constructed system. Hunt, using Dependency and World Systems theory, demonstrated the geographic spread of the infection. He noted that the cities where manufacturing, schooling, and other commercial activities are concentrated have attracted people to seek employment from rural

areas, which are crippled by poverty and are also neglected in development policies (ibid).

Hunt hypothesized that the pattern of HIV/AIDS spread was as a result of migrants moving into towns without wives. Since sexuality is an inherent nature of human beings, sometimes in many human societies sexuality is conducted without regards to sexual regulations in the society. The practice sometimes may breed negative sex behaviors, which may in turn lead to sexually-transmitted diseases. The migrants in the cities are usually vulnerable to such practices due to the inability of many traditional sexual regulatory norms to control illicit sexual behaviors in the cities.

When the city migrants are infected with sexually transmitted diseases, especially HIV/AIDS in Nigeria they often go back to their rural areas where they further spread the disease. This position is in contrast to that of Caldwell et. al. who emphasize the cultural explanation of HIV/AIDS. Cultural perspective looks at the behaviors and attitudes, which generate practices that could lead to infection of HIV/AIDS rather than both the institutions, and behaviors, which the dependency theory examines. Arising from the above is that HIV infections are common in places with concentrations of migrant labor. This also explains why HIV/AIDS prevalence is high in Lesotho, where migrant labour is predominantly practiced. This position was demonstrated in the studies of Philipson and Posner, where it was established that large cities and long-distance transport routes in Africa have higher prevalence of HIV/AIDS when compared with other settings in Europe and North America (Changalucha et al., 2002).

Poverty affects fertility and sexual activity. African women bear the higher brunt of poverty because they have low access to capital. In traditional economy, they do not have access to cattle and land, while in modern economy they are discouraged from higher education and the labour market. They also face unequal opportunities in access to household resources. Consequently, women do not have access to the few available jobs and sufficient income-

earning. Since women have to live, some women depend on marriage and sex to access resources.

Among many young and unmarried women, sex is the instrument with which they get jobs, qualify for higher education and even fulfill their requirements for award of certificate, especially when they migrate to urban communities. Many men on the other hand feel that they have right to demand sex from women in return for providing means of livelihood for women. Thus, the social structure of rural poverty is related to migration and urban problems, which induce sexually transmitted diseases. Unemployment, poverty and underdevelopment of the populated rural areas seem to be one of the factors contributing to the prevalence of HIV/AIDS. Aggravating this situation in Nigeria is the continuous neglect of these rural areas in government policies and the inability of the Nigerian government to avert the crises of poverty and unemployment, thus forcing more sexually active and productive men and women to migrate to cities (ibid).

The 21st century begins as the newest outbreak in world history affects millions in Africa and threatens equal devastation across many of the poorest regions of other continents. This is occurring in a situation where medical knowledge of the disease is extremely sophisticated and where even if there is no vaccine or cure, there are painful measures both to prevent infection and to prolong life. Supporting this, there is a panoply of international, indeed global agencies, whose mandate is public health. There is much talk, much money pledged and indeed spent in the 'war against AIDS'. UNAIDS was formed to co-ordinate policy in 1995 and the Global Fund to combat HIV/AIDS, TB and malaria was launched in 2002. New initiatives seem to be announced almost monthly, usually with considerable fanfare. In quick succession, since then, there have been the World Bank's Multicounty AIDS Program (MAP), President Bush's Emergency Plan for AIDS Relief, and the Clinton initiative.

There remains, however, a burning gap between intention and result, for those measures

that have been advocated in Africa have, in the main, been signally ineffective. And, it is only now, 20 years into the pandemic, that the reasons for such failure can be sought, not in the particular difficulties of Africa or in the apparent confrontation of its population to take on board the safe-sex message. At long last, a few voices are beginning to question the nature of Western intervention and its ideological underpinnings. Alex de Waal in 2003 writes 'the AIDS industry is a prisoner of political circumstance, and as a result, may be trapped in a cycle of ineffectiveness' (de Waal, 2003, p. 255). He argues that there is an un-theorized consensus on what an HIV/AIDS program should look like. This consensus emerged from the contests between different interest groups in the USA in the 1980s.

These, as Epstein (1996) has documented, drew their legitimacy from a lot of sources, most particularly medicine, public health and AIDS activism on the part of gay men. Confidentiality was to be at the fore to protect the infected from the dangers of stigma and discrimination. This created a policy where the stress was to be on voluntary behaviour change and condom use advocated as a general population directive. Reinforcing this was growing international NGO concern with issues of human rights, taking a particular focus here with regard to HIV, with the rights of victims of the disease held dominant. In retrospect, and with particular reference to Africa, this all seems very strange.

Little money for example, was pledged to the development of medical infrastructures in the 1980s or 1990s, despite the fact that in many African countries these had deteriorated under the collision of the structural adjustment policies. Instead, a dangerously infectious disease was combated only by programmes that urged individuals to try and avoid it as best they could in a condition where there was no means of knowing who was infected and who was not and, in the main, no way of finding out. Only now, 20 years into the pandemic, are some looking outside the tunnel vision that this policy consensus has induced. Working from Nairobi,

De Cock et al., in 2000 argue that 'human rights approaches to the HIV/AIDS prevention might have reduced the role of public health and social justice'.

They put further a cogent argument for the acceptance of measures used for other infectious diseases including sexually transmitted ones such as widespread testing, partner notification, and the tracing of contacts. The significance of this move can be illustrated by the fact that even now in Africa only 6% of the population who want voluntary testing have access to it, and only 14% of people in need of STD services can obtain them (Global HIV Prevention Group, 2003). Testing facilities simply do not exist over much of Africa. The response to SARS has in many respects given impetus to this new mood. The SARS epidemic in 2003 demonstrated the ability of global organizations to act rapidly to eradicate the threat of this new disease.

There, the danger to public health was the only issue: there was no talk of the danger of quarantining to human freedom. Heald Of course, there are huge differences in the nature of the diseases in question, in their manner of transmission and in their duration. The one brought evident signs of infection soon after contact; the other operates with a delayed fuse, manifesting symptoms often years after infection and infecting the next generation in the process. Yet, the argument of this paper is that it is not the epidemiology of the disease that is at issue but the specific model of prevention that has been exported by the West and which has dominated programmes in Africa.

In this model, normal public health measures have not been to the fore: routine testing and quarantining have (with a few notable exceptions) not been the instruments of choice. A return will be made to this topic. First, in the time-honoured anthropological way, the argument is pursued through a case study. Through the examination of policies in Botswana, the intention is to illustrate the hold of the agreement and the way it has dictated particularly policy programmes and initiatives. The current paper is based upon research over a two-year period (1997–1999) while lecturing at the University of

Botswana. This was followed by a short return fieldtrip with Alinah Segobye and Tim Allen in July 2003, under the auspices of ACHAP (African Comprehensive HIV/AIDS Partnership). Policymakers in the capital and those involved in running the anti-retroviral therapy (ARV) program were interviewed as well as village leaders in the countryside. The study of the ARV program was further facilitated by the robust evaluations of the main policymakers and managers, and the wide reporting of these in newspapers and web sources. Finally, the work was facilitated by the researcher's long-term involvement in Africa, with ethnographic field research stretching back over 30 years.

Botswana is an unusual African state and, in the era of AIDS, one largely immune from the harms that have perplexed so many other countries of sub-Saharan Africa. Firstly, it is politically stable; there have been no major wars, and the country is impartially proud of its constitutional democracy. Further, its wealth has protected it from the effects of economic liberalization and the structural adjustment policies imposed by the World Bank and IMF elsewhere. In African terms, with an estimated GNP per capita of almost US\$4000 in 1999, it is rich. This wealth is largely due to diamond mining and, with income exceeding expenditure, the government built up substantial reserves throughout the 1980s and 1990s. This was not at the expense of public investment and welfare programmes.

Political leadership in the country was committed to the rapid modernization and development of its admittedly small population, estimated in 2004 as 1.7 million. Educational provision was extended, with universal primary and secondary education and the development of a tertiary sector. Importantly, too, hospitals and clinics were developed and there was approximately one health facility per 2500 persons in 1995 (USAID, 1996). Botswana also realized the problem of AIDS early in southern African terms, a good ten years before its neighbour, South Africa. At that time, it brought in the international agencies for advice and in 1987 set up a one-year emergency plan that 4 S. Heald has been followed by a series of other five-

year strategic plans. Programmes were developed aimed both at surveillance and intervention.

These were all phrased in terms of the accepted formulations of the international organizations as multisectoral, integrated and so on. Reading the plans one cannot but be impressed. The reality has been different. Initially, one might have supposed that if Western AIDS policies were capable of working anywhere in Africa they should have worked here; that is, in a country with an effective government, small population and modern sector health provision. However, the numbers infected doubled in the five years after 1992, when the first sentinel survey was conducted. In 1997 Botswana became known as the AIDS capital of the world. Nor do more recent figures give grounds for much optimism. The nationwide medians of women tested anonymously at antenatal clinics express the situation well. They show an escalating rate in the early 1990s, then a possible levelling off of prevalence, with percentages rising only from 32.4% to 38.5% in the six years from 1995 to 2000 for 15–45-year-old women (Clarion, 2002, p. 4). However, since such a levelling might be due to the toll of death and infertility among women of that age group due to HIV infection, it gives little cause for optimism.

The median prevalence among 15–19-year-olds tends to a more pessimistic interpretation, with 26.7% infected in the 2000 survey. Though estimates vary, life expectancy is projected to fall from 67 years to as low as 33 years before bottoming out. The first phase of HIV/AIDS policy was to provide surveillance and education. A mass education campaign was launched in 1988 with the condom the central plank in this message. What this encountered initially was widespread disbelief (Ingstad, 1990; Ubomba-Jaswa, 1993). For the population at large, at this point, there was simply no evidence in the form of morbidity or mortality to support the information on the impending epidemic. Botswana expressed this by calling AIDS the ‘radio disease’ as the radio had been the prime and, for many, the only knowledge they had of this new threat (Ingstad, 1990). By 1995/6, the situation had changed in that many now had

direct experience of it in the deaths of family and friends.

Characteristics and behavior of PLHIV’s Influence on Program’s Performance

Characteristics are the distinguishing trait or qualities that uniquely identifies a group or a person while a behavior is an array of every physical action and observable emotion associated with individuals, as well as the human race as a whole. While specific traits of one’s personality and temperament may be more consistent, other behaviors will change as one moves from birth through adulthood. In addition to being dictated by age and genetics, behavior, driven in part by thoughts and feelings, is an insight into individual psyche, revealing among other things attitudes and value (Fishbein and Ajzen, 1999).

Adherence to long term HIV/AIDS treatment

The first step towards management of HIV is getting to know one’s HIV status. This is because people are much less likely to engage in risky sexual behavior if they become aware that they are HIV positive. Unfortunately, in the United States 18.1 percent of people living with HIV/AIDS are undiagnosed. This “HIV-unaware” population is responsible for about half of all transmissions of the virus. New evidence indicates that routine HIV testing is cost-effective because it enables early treatment, which simultaneously extends the lives of people living with HIV/AIDS and reduces HIV transmission. For these reasons, providing HIV testing and counseling services to the HIV-unaware population is a central piece of the National HIV/AIDS Strategy. Patients found to be HIV positive are supposed to start care and treatment immediately before their health deteriorates (Wagner, Wu, and Sood, 2014).

Adherence to Antiretroviral Therapy (ART) is one of the major determinants of viral suppression and treatment success. It is expected that patients with good adherence who have been on treatment for more than six months should have full viral suppression to undetectable levels. Daily use of co-trimoxazole prevents certain

bacterial and parasitic infections that cause pneumonia, diarrhea, and malaria and prolongs the lives of adults, adolescents and children who have HIV. The Kenya Ministry of Health recommends that all adults and adolescents infected with HIV, regardless of CD4 count, take cotrimoxazole daily to reduce the risk of illnesses associated with HIV/AIDS. Once HIV infection is diagnosed, providing ART effectively requires the establishment of patient eligibility for treatment and provision of a reliable supply of drugs. Currently in Kenya, ART is recommended for persons with $CD4 \leq 500$ cells/ μ L and persons with active tuberculosis or persons with WHO clinical stage III or IV conditions irrespective of CD4 cell count and HIV-infected women who are pregnant or breastfeeding and HIV-infected persons in zero-discordant relationships, regardless of CD4 cell count (NASCO, 2014).

The success of HIV/AIDS care is viral load suppressing which is critical for both slowing the progression of disease and limiting the risk of transmission to others. It is achieved only when HIV-positive people are able to initiate and adhere to appropriate ART. However, the HIV/AIDS treatment cycle illustrates the multiple points at which people are at risk of dropping out of care, and therefore at which intervention could be most effective in improving HIV/AIDS outcomes. These points for intervention include HIV diagnosis, linkage to and retention in care, the initiation of treatment, and achieving viral load suppression (Ryan, Bloom, Lowsky, Linthicum, Juday, Rosenblatt and Sayles, 2014).

The most commonly used adherence-monitoring strategy is interviewing patients about recent missed doses. Although there are many different approaches to asking patients about the frequency of missed doses, most are imprecise and have relatively poor specificity for detecting levels of adherence that put patients at risk for viral rebound. These interviews address behavior just prior to the clinical encounter. This period is too short to provide a full profile of adherence between clinical encounter. The complexity of addressing adherence poses a great

challenge to HIV/AIDS program outcomes. Where many patients are transitioning to high and complex regimen the cost has escalated, this is often seen as deteriorating quality of care of the program (Bangsberg, 2008).

For individuals infected with HIV, antiretroviral medications have been demonstrated to change this illness from one that is lethal to one that is chronic and manageable. A significant association has been established between a decrease in plasma viral load and improvements in clinical outcomes. However, greater than 95% adherence to the combined antiretroviral medication regimens must be maintained in order for them to be effective. The HIV-related stigma has been found to have an impact on medication adherence and a barrier to care. To reduce stigma and promote favorable outcomes intervention such as Positive Health, Dignity, and Prevention (PHDP) are promoted. Positive Health, Dignity, and Prevention is a HIV prevention intervention with people living with HIV.

Positive Health, Dignity, and Prevention also called prevention with positives activities focus on achieving four main goals: keeping PLHIV physically healthy; keeping PLHIV mentally and psychologically healthy; preventing transmission of HIV; and involving PLHIV in HIV prevention activities, program design, implementation and monitoring, leadership, and advocacy (Martinez, Harper, Carleton, Hosek, Bojan and Glum, 2012). Clinicians' attention to psychological barriers early in treatment may improve medication adherence and ultimately affect the course of illness. When patients fail to adhere to treatment, HIV has an opportunity to create more variations of itself, which could be including strains that are resistant to antiretroviral drugs. (Sirey, Bruce, Alexopoulos, Perlick, Friedman and Meyers, 2001).

Economic status of PLHIV
Condom availability and use
Condom Use

Correct and consistent condom use is highly effective at preventing HIV and other STIs, but condoms are not the most effective contraceptive method. HIV prevention programs among female sex workers (FSWs) have achieved major progress both in increasing condom use in sex work and in reducing associated HIV infections. Despite this progress, consistent condom use among FSWs remains low in most settings, with the proportion reporting 100% condom use reported at 26.8% in Kenya and 18.9% in Uganda (Matovu J, Ssebadduka B.2013). Studies conducted by Matovu J, Ssebadduka B. (2013) show that poverty, male partner refusal to use a condom, alcohol use before sex, and beliefs that condom use kills the mood for sex remain key barriers to consistent condom use among FSW's. Poverty is manifested as 'lack of money' to "look after my family" or meet one's basic needs, including food. Poverty was cited as a driving force for FSWs to engage in unprotected sex for money even in situations where they knew that they would acquire HIV or other STIs in the process

Condom use in Nevada

Nevada is the only US state in which commercial sex is legal thus the existence of licensed brothels and sex workers undergo weekly state-mandated medical examinations. As a result, there is an absence of HIV and other sexually transmitted diseases which may be explained by the fact that clients are required to use condoms during every sexual act. In January 1987, the brothel industry voluntarily adopted a compulsory condom policy in response to a 30% to 40% decline in business following reports that HIV could be spread through heterosexual contact. This policy was ratified by the state as a mandatory condom law in March 1988. While condoms can substantially reduce the risk of transmission of HIV and other sexually transmitted diseases when used consistently and correctly, condoms may still break or slip off and thereby expose users to potential infection and risk of pregnancy. As a result, the sex workers have adequate access to HIV prevention services thus take necessary measures to protect themselves during such risks.

2.5.2 Condom use in Ethiopia

Studies done by Alea, E. et al (1995) identified a significant relationship between inconsistent condom use with regular, non-paying partners and higher income. Evidence suggests female sex workers may receive more money from regular, non-paying partners than clients, and that they may be willing to sacrifice condom use to ensure the stability of this income. This is because of familiarity between the clients and the sex workers such that negotiations for higher pay are possible. It's also evident that sex workers who engage in anal and oral sex don't consistently use condoms due to the belief that HIV cannot be transmitted through those types of sex. However, local organizations in Ethiopia are championing the use of condoms during all sexual acts in order to empower the sex workers with information to protect them from HIV infection.

2.5.3 Condom use in South Asia

One hundred percent condom use programs seek to address structural barriers that reduce the efficacy with which sex workers ensure condom use by their clients. The decision to use a condom is often outside the direct control of a sex worker. Introducing 100% condom use programs support prevention by changing the context within which condoms use is negotiated and makes condom use a shared responsibility of brothel managers, clients and sex workers. In 1998, Thailand initiated the first nationwide 100% Condom Use Programme, resulting in a highly significant reduction in HIV prevalence rates among SWs and their clients. Sex work was (and remains) illegal in Thailand. Rather than trying to suppress sex work, which would not curtail demand but rather drive the industry underground and make prevention efforts more difficult, officials opted to take a harm-reduction approach by encouraging safer sex through condom use. The 100% Condom Use Programme in Thailand was implemented as a result of extensive collaboration among different governmental sectors and those who influence the sex industry: police, brothel owners, sex workers and clients. An important component of the program involved placing responsibility for compliance with the condom use program on brothel owners

and clients, rather than on sex workers only, who are not always successful in convincing clients to use condoms. Compliance was monitored regularly through STI incidence among sex workers and clients, HIV rates among SWs, and condom distribution. Sex workers were provided with free or reduced price STI checkups and treatment. Men attending STI clinics were routinely asked which brothels they had visited; these brothels then were visited by public health staff to reinforce the program and provide any needed information. Brothels found to be the source of repeated STIs could be fined or closed by the police although it appears that these sanctions were rarely applied (USAID 2007)

2.5.4 Condom use in Kenya

Police treatment of condoms as contraband forces sex workers to make a choice between safeguarding their health and staying safe from police harassment or detention. While some sex workers report that they have stopped carrying condoms or sometimes opt not to carry condoms out of fear of getting in trouble with police, many sex workers continue to carry condoms in an effort to protect their health and the health of their sexual partners despite the risk of police harassment. In Kenya, female sex workers termed regular partners to be paying for sexual acts one-half to three-quarters of the times they had sex, and paid significantly more than clients, and provided indirect financial and material support.

Sex worker-led outreach have been seen to promote consistent condom use directly through enhanced condom coverage in hotspots and indirectly through peer education around condom negotiation with clients and shifting sex industry norms on condom use. Sex worker-led interventions have been seen as a key component of community empowerment, as shown in several low-income and middle-income countries. In Mombasa, peer or sex worker-led outreach implemented between 2000 and 2005 was associated with a more than three-fold increase in consistent condom use (Shanon, K.2014). It is important to also note that the Kenyan government through Nascop has established

national guidelines that seek to promote the correct and consistent use of condoms to Kenyan sex workers by allowing the access of information and condoms from in order to reduce incidences of HIV among female sex workers.

Zambia's provision of free condoms in health facilities was intensified in 2014 with the number of free condoms available more than doubling from 7.8 million in 2013 to 19.6 million in 2014. Zambians are most likely to use condoms with non-regular partners. However, condom use is still relatively low as only 50% of adults used a condom the last time they had high-risk sex. Condom use is higher among men engaging in high-risk sex (at 55%), compared to women (at 41%). Further work is needed to educate and persuade people to use condoms with all sexual partners, especially if they are in multiple concurrent relationships, or change partners regularly. Condom use is thought to be even lower among young people. A study published in 2017 among young people in four urban areas of Zambia found that 59% did not use a condom the last time they had sex. Young people living in poorer areas were more likely to report non-use. Existing policies around the age of consent are thought to contribute to those under 16 being unable to access and use condoms even if they are sexually active (ZDHS, 2018). Public sector condoms are mainly distributed through health facilities which leads to limited access by the general population. Also, logistical challenges and inadequate funding results in an inconsistent and inadequate supply of condoms in government-run programmes.

HIV awareness, education and approach to sex education

There are still many misconceptions about HIV and AIDS in Zambia. Latest data suggests that just 39% of people have comprehensive knowledge of HIV, despite 90% having heard of the virus. Knowledge is slightly better among young people (aged 15-24) with around 42% of young women and 47% of young men having comprehensive knowledge of HIV. If behaviour is to be changed, young people must be a priority target as around 46% of all Zambians are between

0 and 14 years old. Working towards this, by 2016, comprehensive sexuality education (CSE) was being introduced into school curriculums and strategies was being implemented to reach out to adolescents who were not in school. Through CSE classes students can learn about HIV, condom use, inter-generational sex and gender relations. However, the effects of unbalanced gender relations in society continue to prevent young girls attending school where they could learn about these topics, contributing to their disproportionate vulnerability to HIV. Zambia also runs a number of behaviour change campaigns to improve health-seeking behaviour. For example, Zambia's Condomize! campaign aims to increase access to knowledge and information for young people on the benefits of both male and female condoms (Ibid).

Prevention of mother-to-child transmission (PMTCT)

Zambia's elimination of mother-to-child transmission (eMTCT) program is one of the most successful prongs of the country's prevention. Since 2013, Zambia has been implementing Option B+ (where all pregnant women living with HIV receive treatment for life). In 2017, 92% of pregnant women living with HIV received antiretroviral treatment (ART) (65,680 of a total of 71,000 women). Coverage dipped in 2015, when 87% of pregnant women living with HIV received effective ART, but this latest figure indicates that the country is back on track to reach coverage similar to 2012, 2013 and 2014 levels when it stood at 93%, 96% and 91% respectively. The impressive scale-up of eMTCT services has seen HIV transmission from mother-to-child halve between 2009 (24%) and 2012 (12%), and a huge reduction in infant deaths. In 2014, it was estimated that around 9% of child infections were the result of mother-to-child transmission (ZDHS, 2018).

Knowledge around eMTCT is also high. The Zambia Demographic and Health Service 2013-14 found that around 89% of women and 82% of men knew that HIV can be transmitted through breastfeeding. Around 82% of women and 66% of men were aware the risk of mother-to-child

transmission can be reduced by taking certain drugs during pregnancy.

Pre-exposure prophylaxis (PrEP)

Zambia's National HIV and AIDS Strategic Framework 2017-2021 recognises the need for pre-exposure prophylaxis (PrEP) to be provided to at-risk populations, in particular sero-different couples and sex workers. However, it does not provide guidance on how PrEP should be implemented and put into practice for these target populations. National guidelines on PrEP exist but implementation is linked to an enabling environment for certain key populations, which is currently lacking. Zambia is in the process of scaling up PrEP, applying the lessons from an ongoing pilot program.

Although some targets exist they are not based on realistic population-size estimates for key populations. In 2017, PrEP was being provided through three public health facilities, the mobilisation of those in need mainly being done by NGOs (ibid).

Programmes for young women

A number of HIV prevention programmes targeted at adolescent girls and young women exist in Zambia. For example, Zambia is 1 of 10 countries involved in the DREAMS (Determined, Resilient, Empowered, AIDS-free, Mentored and Safe) Initiative to reduce new infections among adolescent girls and young women. DREAMS has taken tremendous strides to integrate services and approaches, and to test innovative ways to address the social drivers of HIV, including gender-based violence and gender norms.

DREAMS Zambia works in Lusaka, Ndola and Chingola and targets 10- to 14-year-olds who are behind in school or identified as vulnerable to HIV, as well as adolescent girls and young women (aged 15-24) involved in, or vulnerable to, high-risk sex, and their male partners. The program offers a diverse package of interventions, including condom promotion and provision, HIV testing and counselling, post-

violence care, cash-transfer schemes, educational subsidies, school-based HIV and violence prevention initiatives, and parent/care-giver initiatives to change gender norms.

Another example is the Population Council's GirlsRead! which combines safe space groups for girls, e-readers designed for rural Africa, and community engagement to improve school attendance, literacy skills, progression to secondary school, gender attitudes, reproductive health knowledge and self-efficacy. It also works to reduce the likelihood of school-based gender violence.

Voluntary medical male circumcision (VMMC)

Voluntary medical male circumcision (VMMC) has been a key pillar of Zambia's HIV prevention strategy since 2007. Zambia's VMMC package also includes HIV testing and counselling, risk reduction, wound care and partner testing. Under the previous VMMC strategy, which ended in 2015, 1 million men out of a target of 1.8 million were circumcised. Between 2016 and 2020, Zambia is aiming to provide VMMC to an additional 1.9 million males aged 10-49, and will particularly focus on circumcising young men (aged 15-29). In 2016, the country achieved 75% of its annual VMMC target. As a result of these efforts, in 2017, around 22% of all adult men in Zambia were circumcised (ZDHS, 2018)

Antiretroviral treatment (ART) availability in Zambia

At the end of 2017, 75% of people in need of antiretroviral treatment (ART) were receiving it. This equates to 80% of women, 70% of men, and 64% of children living with HIV receiving ART. Zambia has adopted 2013 WHO treatment guidelines that recommends anyone who tests positive for HIV should be started on treatment, regardless of their CD4 count, which indicates the level of virus in someone's body. This is particularly important as early treatment can increase the likelihood of someone achieving viral suppression, when levels of HIV are so low the virus is effectively suppressed and cannot be

transmitted. Considering the huge increase in the number of people eligible for treatment under these new guidelines, Zambia has shown commitment to increasing ART coverage. In 2017, 80% of people on treatment were still in care after 12 months. Efforts need to be stepped up to ensure people who start treatment continue to take it as interrupted or stopped treatment causes illness, drug resistance and further transmission (ibid).

Some of the contributing factors that lead people to drop out of treatment include HIV-related stigma, denial of HIV status, excessive alcohol consumption, inadequate counselling, high poverty levels, and migration to other areas. In some rural areas, geographical barriers such as long distances to ART clinics and poor or dangerous roads also lead people to default on treatment. In 2016, 83% of people living with HIV who were aware of their status and on treatment were virally suppressed. This equates to 60% of all people living with HIV in Zambia. Viral suppression rates are much lower for younger people. PEPFAR found that around 34% of 15- to 24-year-olds living with HIV who were on treatment were virally suppressed in 2016. Specific issues relating to children, adolescents and young people accessing and adhering to treatment include a lack of youth-friendly treatment services and high levels of depression. A study among 190 HIV-positive adolescents in Zambia found that one in four (25%) were depressed. In the study, 94% of participants were taking ART, but 28% were non-adherent. Factors associated with non-adherence to ART were loss of a mother, lack of basic knowledge about HIV, management of medication, physical reactions to medicine, and psychosocial distress.

HIV drug resistance

Between 2014 and 2016, Zambia conducted a survey on the presence of HIV drug resistance (HIVDR), which is when strains of HIV are resistant to certain types of anti-retroviral. Results indicated that 4.3% of adults on ART after 12 to 24 months had some form of HIVDR. This figure rose to 47.3% among adults on treatment who were not virally suppressed. In

2017, researchers investigating HIVDR among infants in Zambia, found that those exposed to ART before birth through eMTCT programmes had a higher prevalence and strength of HIVDR than those with no exposure to eMTCT programmes. However, 20% of HIV-positive infants not exposed to any form of eMTCT treatment were also drug resistant, suggesting HIVDR to be circulating more widely than previously estimated (ZHDS, 2018).

Civil society's role and HIV in Zambia

Zambia has an extensive civil society, which includes a strong presence of church groups and trade unions as well civil society organisations (CSOs) focused on development and human rights. Zambia's civil society response to HIV is one of the most vibrant in the region, with CSOs pioneering innovative approaches to home-based care and peer support for people living with HIV. However, in recent years the sector has been acutely affected by reduced resources, largely resulting from the scaling down of direct HIV funding from key international development partners, combined with challenges related to reprogramming and delayed disbursement of Global Fund grants.

Reduced funding, combined with organisational capacity challenges, have forced some CSOs to close, and others to downsize their staff and programmes. Some groups, notably those focused on LGBTI rights, struggle to work effectively due to the country's punitive legal environment. Tuberculosis (TB) continues to be a major public health concern in Zambia. An estimated 361 people per 100,000 were newly infected with TB in 2017, 210 of whom were living with HIV. In the same year, 82.5% of people living with HIV newly enrolled in care had active TB. Zambia is listed by the World Health Organisation as being one of 30 high-burden TB countries. The country's TB program faces a number of challenges including declining TB notification rates, poor documentation of TB screening for people living with HIV, inadequate infection control measures, and a lack of integrated HIV and TB services (ibid).

Barriers to the HIV response in Zambia

Legal, cultural and socio-economic barriers

Multiple concurrent partnerships are commonplace in Zambia, heightening the risk of HIV to all involved. The patriarchal society remains a barrier to reducing the disproportionate burden of HIV on women and girls. Three of the most dominant church bodies: The Christian Council of Churches, the Evangelical Fellowship of Zambia and the Zambia Episcopal Fellowship, have issued public statements against LGBTI human rights, informing not only public discourse and opinion, but also the Zambian constitution's position on sexual orientation and gender identity.

Structural and resource barriers

HIV testing remains complex and dysfunctional, especially where access is limited by limited opening times at testing facilities, and a lack of testing equipment. A lack of drug resources has also led to rationing, stock-outs, and inadequate ART regimes for people living with HIV, particularly children. Not only does this pose serious health issues for people living with HIV, but also increases the likelihood of onwards HIV transmission to others. Human resources remain a serious impediment to addressing HIV in Zambia. Health staff shortages, a lack of highly-trained medical staff, and capacity issues mean that even when physical resources are available, there is often not the healthcare personnel to administer them. However, community mobilisation (when individual members of a community help others access information and services) is being accelerated. Although the government has allowed HIV prevention programmes for key populations to be implemented, programmes are never on the scale needed to make a significant impact on the HIV epidemic. In addition, only NGOs and other international partners provide these programmes, which raises the issue of sustainability. In certain cases, implementers are struggling to bring lubricants and other essential prevention tools for key populations into the country due to restrictive national policies.

Stigma and discrimination

Although the Zambian government has created an environment in which NGOs and other international partners can discuss, design and implement programmes for key populations, the country's restrictive policy and legal environment means key populations cannot access HIV services without stigma and discrimination. Key populations also experience negative attitudes from others in authority such as police workers and from the general public itself. HIV-related stigma is also an issue, as it is in all countries in the world, although this is reducing. In 2007, 30% of adults in Zambia displayed discriminatory attitudes towards people living with HIV, in 2014 this had halved to 14% (ZDHS, 2018).

Data issues

Zambia continues to have data challenges, particularly variations in HIV data due to it originating from multiple sources. Lack of data on key populations is a major issue, making it impossible to determine the size, vulnerability and solutions to prevent HIV for these groups.

Funding for HIV in Zambia

Whilst Zambia's domestic spending on HIV and AIDS has risen dramatically in recent years, it still remains at just 4% of the overall budget. Around 90% of these funds is spent on ART. PEPFAR funds the majority of the Zambian HIV response, at US \$313 million in 2015. Discussions are ongoing as to the possibility of integrating HIV into a National Health Fund via a Social Health Insurance Scheme, which would expand funding and therefore access to HIV services for Zambia's population. As of 2017, although the National Social Protection Bill now exists, which includes a provision for social health insurance, it has yet to be passed into law (ibid).

The future of HIV in Zambia

Zambia needs to fully integrate behaviour change communication into all aspects of its HIV response. Providing ART, testing facilities and eMTCT services will not yield results if people

are not counselled, informed and educated about the need to adhere to treatment, or get tested regularly. The success of eMTCT in the country is encouraging although some recent gains now appear to be reversing. A major focus must remain the creation of an enabling legal and policy environment for adolescent girls, young people and key populations to exercise their sexual and reproductive health and rights, and access welcoming, quality, integrated SRH and HIV services. More data on key affected populations is also needed to enable better understanding and targeting of future efforts to curb the Zambian HIV epidemic. Without this knowledge it will be impossible to develop robust HIV prevention programmes (ZHDS, 2018).

1) CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter presents the methodology that was used in the study. It begins with a description of the research design, study population, study sample, sampling procedure, and research instruments for data collection. It proceeds to describe problems encountered during data collection and how information collected will be analyzed in order to answer the research questions. The last part of the chapter presents an ethical consideration of the research.

3.1 Research design

According to Cooper and Schindler (2014), the research design refers to the general strategy that the researcher will use to integrate the different components of the study in a coherent and logical way, while ensuring the research problem is effectively addressed. The study used a descriptive research design. This design was chosen because it helped to have an in-depth understanding of an impact of social media on academic performance of pupils. In addition, because the study relied more on qualitative than quantitative research methods, the descriptive design was ideal.

3.2 Target population

The study population consisted of 300 medical personnel's at Kasama general Hospital.

3.3 Sampling size and sampling procedure

3.3.1 Sample size

The sample consisted of 50 respondents as follows: Fifty (50) medical personnel's at Kasama general Hospital.

3.3.2 Sampling procedure

Simple random sampling technique was used to select Fifty (50) medical personnel's. This procedure was chosen because it provides each element in the population an equal chance to be selected as a study sample.

3.4 Data collection methods and procedure

3.4.1 Data collection instruments

Questionnaires were used to collect data from the respondents. A questionnaire is an instrument that contains questions aimed at obtaining specific information on a variety of topics. A questionnaire was chosen because it could be presented to each respondent in exactly the same way to minimize the role and influence of the interviewer. In addition, results obtained by a questionnaire were easily be objectively compared

3.4.2 Data Collection procedure

The selected respondents were given questionnaires to complete. The questionnaires were self-administered since all the respondents in the sample are literate. A total number of fifty (50) questionnaires were distributed to the respondents.

3.5 Data analysis

Data analysis is the procedure of systematically searching, organizing, and breaking data into manageable units then synthesizing the data to search for patterns. Data collected from the respondents was first checked for completeness and comprehensiveness. It was then coded to classify the answer to a question into significant categories so as to bring out their essential pattern. The data was analyzed using both quantitative and qualitative techniques which involved creating description of the statistics i.e. percentages, frequencies, Correlation and deterioration analysis. Data was presented in graphs and tables where necessary. Summary responses were weighed against the research objectives and some meaning derived. The researcher used statistical software, for data analysis. The analysis helped the researcher in making valid inferences about the topic under study. The quantitative data was analyzed using excel in order to obtain frequencies, graphs and

percentages in an accurate, precise, easier and fast way. Qualitative data was be grouped into emerging themes and thematic analysis was used. Descriptions of each theme were done.

B. 4.1 Presentation of Findings

C. 4.2 Background characteristics of the sample

1) Table 1.1: Gender Distribution for the respondents

	Frequency	Percentage
Male	18	36%
Female	32	64%
Total	50	100%

Table 1 shows the composition of respondents by sex, 32 percent were females and 18 percent were males.

2) Table 1.2: Age distribution of the Sample

Age	Frequency	Percentage
25-30	24	48
31-35	18	36
36-30	8	16

Age of the respondents plays a key role in this study as it influences the decisions the respondents make, their perception, attitudes and how they respond and deal with issues. In this study, age influences respondent's perception towards the influencing factors of HIV/AIDS prevalence.

CHAPTER FOUR: FINDINGS/RESULTS

4.0 Introduction

This chapter is made up of a presentation of research findings. The chapter begins with the background characteristics of the sample.

4.1 Presentation of Findings

4.2 Background characteristics of the sample

Table 1.1: Gender Distribution for the respondents

	Frequency	Percentage
Male	18	36%
Female	32	64%
Total	50	100%

Table 1 shows the composition of respondents by sex, 32 percent were females and 18 percent were males.

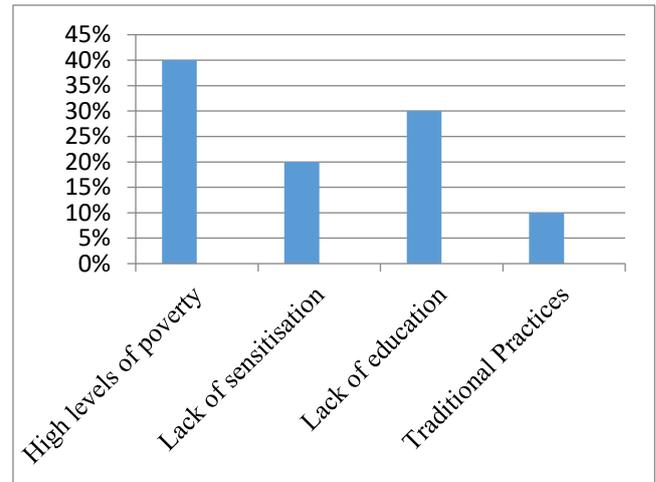
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Age	Frequency	Percentage
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31-35	18	36
36-30	8	16

Age of the respondents plays a key role in this study as it influences the decisions the respondents make, their perception, attitudes and how they respond and deal with issues. In this study, age influences respondent's perception towards the influencing factors of HIV/AIDS prevalence.

4.3 Factors influencing the prevalence of HIV/AIDS

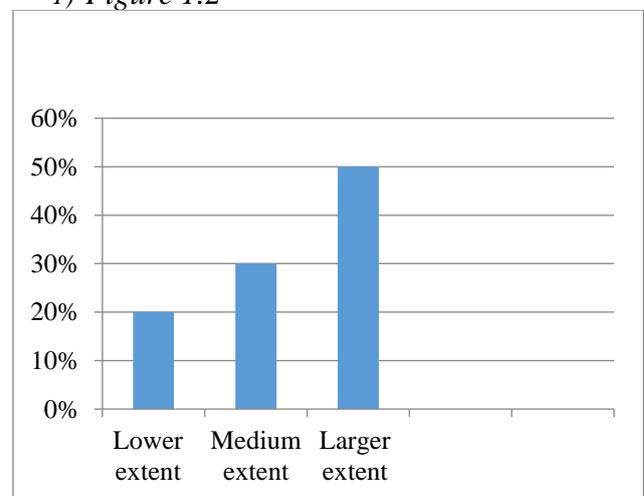
Figure 1.1



It can be observed from the above table that most of the respondents indicated that high levels of poverty are the most influencing factor of HIV/AIDS prevalence. Some respondents went further to state that lack of education is another influencing factor. Few responded indicated that lack of education and traditional practices have an influence of the prevalence of HIV/AIDS.

D. 4.4 The extent of HIV/AIDS prevalence

1) Figure 1.2

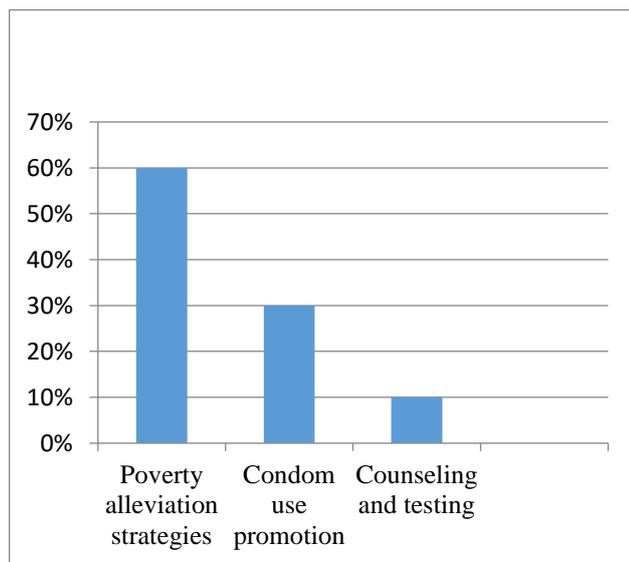


It can be seen from the above graph that the prevalence of HIV/AIDS is to a large extent

mainly caused by high levels of poverty especially among young girls. 30% of the respondents indicated that the extent of HIV/AIDS prevalence is to a smaller extent. 20% of the respondents indicated that the extent of HIV/AIDS prevalence is to a lower extent.

4.4 Interventions needed to eradicate HIV/AIDS Pandemic

Figure 1.3



As it can be seen in the figure above 60% of the respondents indicated that interventions that are needed in order to reduce the HIV/AIDS pandemic are poverty alleviation strategies. 30% indicated that condom use promotion is a strategy needed whereas 10% indicated counseling and testing is the strategy through which the HIV/AIDS pandemic can be handled.

VIII. CHAPTER FIVE

A. 5.1 Discussion of findings

1) 5.1.1 Factors influencing the prevalence of HIV/AIDS

According to the findings, 40% of the respondents indicated that high level of poverty is the most influencing factor of HIV/AIDS prevalence. Some respondents went further to state that lack of education is another influencing factor. Few responded indicated that lack of education and traditional practices have an influence of the prevalence of HIV/AIDS.

However, the characteristics of the poor are well known as also are some of the causal factors which contribute to a culture of poverty the fact that the children of the poor often become the poor of succeeding generations. Poverty is coupled with weak endowments of human and financial resources, such as low levels of education with associated low levels of literacy and few marketable skills, generally poor health status and low labor productivity as a result. An aspect of the poor health status of the poor is the existence amongst many Africans of undiagnosed and untreated STDs which is now recognized as a very important co-factor in the transmission of HIV. Poor households typically have few if any financial or other assets and are often politically and socially marginalized.

These conditions of social elimination increase the problems of reaching these populations through programmes aimed at changing sexual and other behaviors. It is not at all surprising in these circumstances that the poor adopt behaviors which picture them to HIV infection. It is not simply that IEC activities are unlikely to reach the poor (which is too often the case) but that such messages are often irrelevant and inoperable given the reality of their lives. Even if the poor understood what they are being urged to do it is rarely the case that they have either the incentive or the resources to adopt the suggested behaviors. Indeed, to take the long-view in sexual or other behaviors is antithetical to the condition of being poor. For the poor it is the here and now that matters, and policies and programmes that recommend deferral of enjoyment will, and do, fall on deaf ears. Even more elemental to the condition of poverty is

social and political exclusion. So HIV-specific programmes are neglectful of the interests of the poor and are rarely if ever related to their needs, and also unfortunately are other non-HIV related programme activities such as those relating to agriculture and credit. More generally it is the absence of effective programmes aimed at sustainable livelihoods which limit the possibilities of changing the socio-economic conditions of the poor. Unless the reality of the lives of the poor are changed they will persist with behaviours which expose them to HIV infection (and all the consequences of this for themselves and their families). Two examples of this state of affairs will perhaps suffice to point out how poverty leads to outcomes which expose the poor to HIV. Firstly, poverty especially rural poverty, and the absence of access to sustainable livelihoods are factors in labour mobility which itself contributes to the conditions in which HIV transmission occurs. Movable populations, which often consist of large numbers of young men and women, are isolated from traditional cultural and social networks and in the new conditions they will frequently engage in risky sexual behaviors, with obvious consequences in terms of HIV infection.

Secondly, many of the poorest are women who often head the poorest of households in Africa. Unavoidably such women will often engage in commercial sexual transactions, sometimes as CSW but more often on an occasional basis, as survival strategies for themselves and their dependents. The effects of these behaviors on HIV infection in women are only too evident, and in part account for the much higher infection rates in young women who are increasingly unable to sustain themselves by other work in either the formal or informal sectors.

Though the infectious cause may be the same, the risks and consequences of contracting HIV can differ dramatically for girls and boys, and young women and men. As the epidemic grips developing countries, the gender differences play out in startling numbers and stories, and command a gender-sensitive response. At a minimum, the privilege of good quality basic education as well as skills-based HIV/AIDS education must be extended equally to boys and

girls. Differences between the epidemiology of AIDS cases in Africa and that in Western societies have prompted speculation regarding risk factors that may be unique to Africa. Because of the age and sex distribution of AIDS cases in Africa, emphasis has been placed on sexual transmission of human immunodeficiency virus (HIV).

Factors thought to influence sexual transmission of HIV include promiscuity, with a high prevalence of sexually transmitted disease; sexual practices that have been associated with increased risk of transmission of AIDS virus (homosexuality and anal intercourse); and cultural practices that are possibly connected with increased virus transmission. Other nonsexual cultural practices that do not fit the age distribution pattern of AIDS but may expose individuals to HIV include practices resulting in exposure to blood (medicinal bloodletting, rituals establishing "blood brotherhood," and possibly ritual and medicinal enemas); practices involving the use of shared instruments (injection of medicines, ritual scarification, group circumcision, genital tattooing, and shaving of body hair); and contact with nonhuman primates. At the current time promiscuity seems to be the most important cultural factor contributing to the transmission of HIV in Africa.

The recent spread of AIDS throughout Africa raises the question of whether the mode of transmission of human immunodeficiency virus (HIV) in Africa is different from that in the United States and other Western countries. In West Africa the absence of risk factors of intravenous drug abuse and homosexuality points to patterns of transmission that are different from those in Western society. The difference is especially apparent because the male-to-female ratio of affected individuals is 1:1 in Africa vs. 19:1 in the United States and Europe. This report briefly examines cultural practices that may contribute to the spread of AIDS in Africa and highlights areas that require further research.

Any hypothesis that attempts to account for the equal sex distribution of AIDS cases in Africa must take into account the apparent age distribution of the disease. Cases are found in infants (who presumably acquire the disease from their mothers) and in sexually active adults.

Although data for young children are still incomplete, AIDS cases have been reported only infrequently among those age groups, except in cases of blood transfusions. (Earlier reports of HIV seropositivity in children may have been the result of nonspecific reactions. Hence emphasis has been placed on sexual transmission of HIV. Factors thought to influence sexual transmission in Africa include sexual promiscuity, with a high prevalence of sexually transmitted disease (STD); sexual practices that have been associated with a high degree of transmission of HIV (homosexuality and anal intercourse); and cultural practices that are possibly connected with increased virus transmission. Other nonsexual cultural practices that do not fit the age distribution of AIDS but may expose individuals to HIV include practices resulting in exposure to blood (medicinal bloodletting, rituals establishing "blood brotherhood," and possibly ritual and medicinal enemas); practices involving the use of shared instruments (injection of medicines, ritual scarification, group circumcision, genital tattooing, and shaving of body hair); and contact with nonhuman primates.

2) 5.1.2 Extent of HIV/AIDS prevalence

Majority of the respondents indicated that HIV/AIDS is to a larger extent. 30% of the respondents indicated that the extent of HIV/AIDS prevalence is to a smaller extent. 20% of the respondents indicated that the extent of HIV/AIDS prevalence is to a lower extent. This is in line with an epidemiological model developed by WHO utilizing data from the SSS which anticipated that in the year 2000 the total number of HIV infected adults in the whole country is between 600,000 and 700,000, i.e., between 14.4% and 16.5% of the adult population as stated by Fylkenes et al (1997).

3) 5.1.3 Measures put in place to eradicate the HIV/AIDS Pandemic

60% of the respondents indicated that interventions that are needed in order to reduce the HIV/AIDS pandemic are poverty alleviation strategies. 30% indicated that condom use promotion is a strategy needed whereas 10% indicated counseling and testing is the strategy

through which the HIV/AIDS pandemic can be handled.

As stated by Kapungwe et al (2009) the government of Zambia created an AIDS surveillance committee as early as 1986 and shaped an emergency plan to control the spread by 1987. As per the plan, all blood transfusion should be screened for HIV. By 2002, the government created an operation to make antiretroviral therapy available for every individual. By 2005, the government made antiretroviral therapy free for every individual. With about one million Zambians living with HIV/AIDS and 200,000 of these people requiring ART, the Government of the Republic of Zambia has prioritized making ART available to all Zambians in need. A 2006 rapid assessment of the Zambian ART program identified several important constraints including inadequate human resources for counseling, testing, and treatment-related care, gaps in supply of drugs in the public sector increase in value of the Zambian Kwacha, lack of adequate logistic/supply chain systems stigma that hinders people from seeking treatment and care; lack of information on the accessibility of treatment services; a high level of misinformation about ART need for a continuous funding stream as an accumulation of patients on ART results in a growing need for support; high cost of ART to patients, despite subsidies from the public sector; lack of referral between counseling and testing services and ART; and lack of referral between home-based care services, testing and ART.

B. 5.2 Conclusion

Despite the glaring deficits in AIDS research, the degree and seriousness of the global pandemic calls for action in the absence of definitive data. The appropriate combination and distribution of prevention and treatment interventions depends on the stage of the epidemic in a given country and the context in which it occurs. In the absence of firm data to guide program objectives, national strategies may not accurately reflect the priorities dictated by the particular epidemic profile, resulting in highly inefficient investments in HIV/AIDS prevention and care. This waste undoubtedly exacerbates funding shortfalls and results in unnecessary HIV infections and untimely deaths. The lack of good

data and thus the ability to tailor responses to epidemics may be somewhat understandable when the burden of disease is minimal and the resources dedicated to it are similarly small. Neither is the case for HIV/AIDS.

C. 5.3 Recommendations

States should develop and implement national plans to progressively realize universal access to comprehensive treatment, care and support for all persons living with HIV, as well as universal access to a full range of goods, services and information for HIV prevention. National plans should be developed in consultation with non-governmental organizations to ensure the active participation of people living with HIV and vulnerable groups.

Universal access to HIV prevention, treatment, care and support is necessary to respect, protect and fulfill human rights related to health, including the right to enjoy the highest attainable standard of health. Universal access will be achieved progressively over time. However, States have an immediate obligation to take steps, and to move as quickly and effectively as possible, towards realizing access for all to HIV prevention, treatment, care and support at both the domestic and global levels. This requires, among other things, setting benchmarks and targets for measuring progress.

Access to HIV-related information, goods and services is affected by a range of social, economic, cultural, political and legal factors. States should review and, where necessary, amend or adopt laws, policies, programmes and plans to realize universal and equal access to medicines, diagnostics and related technologies, taking these factors into account. As one example, duties, customs laws and value-added taxes may hinder access to medicines, diagnostics and related technologies at affordable prices. Such laws should be revised so as to maximize access. States should ensure that national laws, policies, programmes and plans affecting access to HIV-related goods, services or information are consistent with international human rights norms, principles and standards. States should consider the experience and expertise of other States, and consult with people living with HIV, non-governmental

organizations, and domestic and international health organizations with relevant expertise.

States should also ensure that their laws, policies, programmes and practices do not exclude, stigmatize or discriminate against people living with HIV or their families, either on the basis of their HIV status or on other grounds contrary to international or domestic human rights norms, with respect to their entitlement or access to health-care goods, services and information.²⁰ States' legislation, policies, programmes, plans and practices should include positive measures to address factors that hinder the equal access of vulnerable individuals and populations to prevention, treatment, care and support, such as poverty, migration, rural location or discrimination of various kinds.²¹ These factors may have a cumulative effect. For example, children (particularly girls) and women may be the last to receive access even if treatment is otherwise available in their communities.

States should recognize, affirm and strengthen the involvement of communities as part of comprehensive HIV prevention, treatment, care and support, while also complying with their own obligations to take steps in the public sector to respect, protect and fulfil human rights related to health. Mechanisms should be developed to enable affected communities to access resources to assist families who have lost income earners to AIDS. Particular attention must be paid to gender inequalities, with respect to access to care in the community for women and girls, as well as the burdens that delivering care at the community level may impose on them.

To assist caregivers and, where relevant, employers and insurers, States should ensure the availability, use and implementation of sound, scientifically up-to-date guidelines for prevention, treatment, care and support to people living with HIV in respect of available health-care goods, services and information. States should develop mechanisms to monitor and improve, as necessary, the availability, use and implementation of these guidelines. Legislation, policies and programmes should take into account the fact that persons living with HIV may recurrently and progressively experience ill-health and greater health-care needs, which should be accommodated accordingly within

benefit schemes in both the public and private sectors. States should work with employers, and employers' and workers' organizations, to adopt or adapt benefit schemes, where necessary, to ensure universal and equal access to benefits for workers living with HIV. Particular attention must also be paid to ensuring access to health care for individuals outside the formal employment sector, who lack work-related health-care benefits.²²

States should ensure that domestic legislation provides for prompt and effective remedies in cases in which a person living with HIV is denied or not provided access to treatment, care and support. States should also ensure due process of law so that the merits of such complaints can be independently and impartially assessed. At the international level, States should strengthen existing mechanisms, and develop new mechanisms where they do not currently exist, enabling persons living with HIV/AIDS to seek prompt, effective redress for breaches of States' international legal obligations to respect, protect and fulfil rights related to health.

States should ensure the quality assurance and control of HIV-related products. States should ensure, through legislative and other measures (e.g. functional systems for pre-marketing approval and post-marketing surveillance), that medicines, diagnostics and related technologies are safe and effective. States should take legislative and other measures to ensure that medicines are supplied in adequate quantities and in a timely fashion, and with accurate, current and accessible information regarding their use. For example, consumer protection laws or other relevant legislation should be enacted or strengthened to prevent fraudulent claims regarding the safety and efficacy of drugs, vaccines and medical devices, including those relating to HIV.

Laws and/or regulations should be enacted to ensure the quality and availability of HIV tests and counselling. If home tests and/or rapid HIV test kits are permitted on the market, they should be strictly regulated to ensure quality and accuracy. The consequences of loss of epidemiological information, the lack of accompanying counselling and the risk of unauthorized use, such as for employment or

immigration, should also be addressed. Legal and social support services should be established to protect individuals from any abuses arising from HIV testing. States should also ensure supervision of the quality of delivery of voluntary counselling and testing (VCT) services.

Legal quality control of condoms should be enforced, and compliance with the International Condom Standard should be monitored in practice. Restrictions on the availability of preventive measures, such as condoms, bleach, clean needles and syringes, should be repealed. Widespread provision of these preventive measures through various means, including vending machines in appropriate locations, should be considered, in light of the greater effectiveness provided by the increased accessibility and anonymity afforded by this method of distribution. Condom promotion initiatives should be coupled with HIV information campaigns for optimal impact.

Laws and/or regulations should be enacted to enable widespread provision of information about HIV through the mass media. This information should be aimed at the general public, as well as at various vulnerable groups that may have difficulty in accessing information. HIV information should be effective for its designated audience and not be inappropriately subject to censorship or other broadcasting standards, particularly as this will have the effect of damaging access to information vital to life, health and human dignity. In order to improve prevention and therapeutic options related to HIV, States should increase funds allocated to the public sector for researching, developing and promoting therapies and technologies for the prevention, treatment, care and support of HIV and AIDS and related infections and conditions. The private sector should also be encouraged to undertake such research and development and to make the resulting options widely and promptly available at prices affordable to those who need them.

States and the private sector should pay special attention to supporting research and development that address the health needs of developing countries. In recognition of the human right to share in scientific advancement and its benefits, States should adopt laws and

policies, at the domestic and international levels, ensuring that the outcomes of research and development are of national and global benefit, with particular attention to the needs of people in developing countries and people who are poor or otherwise marginalized. States should integrate HIV prevention, treatment, care and support into all aspects of their planning for development, including in poverty eradication strategies, national budget allocations and sectoral development plans. In so doing, States should have particular regard, at a minimum, for internationally agreed targets in addressing HIV.

States should increase their national budget allocations for measures promoting secure and sustainable access to affordable HIV prevention, treatment, care and support, at both the domestic and international levels. States should, among other steps, make contributions, in proportion to their resources, to mechanisms such as the Global Fund to Fight AIDS, Tuberculosis and Malaria. Developed countries should make concrete commitments of increased official development.

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ACRONYMS

HIV Human Immunodeficiency Virus

AIDS Acquired Immune Deficiency Syndrome

STI Sexual transmitted Infection

NASF National Aids Strategy framework

SE Sexuality Education

ART Antiretroviral Treatment

MSM Men who have Sex with Men

IDUs Injection Drug Users

SW Sex Workers

SSS Sentinel Surveillance System

WHO World Health Organization

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