

# **Combating the HIV/AIDS Crisis in Africa: Sustainable and Preventive Models**

**Ifeyinwa E. Umerah-Udezulu & P.Bassey Williams**

The devastating impacts of the HIV/AIDS epidemics in Africa in which millions of people have either died, or infected, or orphaned, has received world-wide attention as policy makers and analysts engage in policy debates to contain the crisis. The drastic decline on life expectancy and quality of life will carry a long-term effect on Africa and short change Africa's capacity to sustain itself in the new millennium. This article argues that attitudes and behavioral changes are crucial agents in controlling the HIV/AIDS crisis. Based on this premise, it contends that the application of community-based preventive strategies and health models among other tools, would effectively address epidemics.

## **Why the AIDS Epidemic in Africa?**

Despite the diligent efforts of various Western governments and international health organizations, progress on African governments' response to AIDS epidemic seems to have stalled in the past decade. Some of these governments have displayed a sense of diminished priority for HIV/AIDS prevention by successive resulting in the escalation of the AIDS epidemic in the region. Compared to other continents of the world, Africa ranks very low in selected health/social indices, mortality and morbidity rates for AIDS and other diseases, health services availability/accessibility percent personnel in medical, and public health fields. Furthermore, it falls far below in the unemployment rate, income per capita, and percent population with high school and college graduates (World Bank Report, 2001; UNAIDS, 2001). Africa decimal ranking in the above categories carry major ramifications for health indices for appraising societal health status and the capacity for the continent to sustain itself in the new Millennium.

The problems of AIDS epidemic in the Africa range from those closely associated with high level of poverty, low-level education attainment, inadequate or lack of public health services, grossly inadequate personnel in medical/public health fields, apathy, myths and misconceptions about HIV/AIDS, incessant armed conflicts societal low-self concept, to those linked with emotional/behavioral and human factors. Moreover, the overall by-products of these are basically preventable, behavioral and pathological conditions with adverse consequences of AIDS and related conditions on the population at risk. In a recent study of African-American population on HIV/AIDS and gender identity, Whitehead (1997) pointed out that "factors related to poverty, low educational attainment, cultural differences, differential access to health care, and distrust of the formal health care system, combined with other factors, are making the challenge of AIDS a difficult

one, particularly with regard to African-Americans and other ethnic groups.” Many of these factors have also been found by Jemmott et al. (2001), Ateka (2001) and other researchers as major obstacles to effectively addressing and reducing HIV/AIDS risk among African-Americans and African communities in the continent. These, according to them, include racism, distrust and suspicion of researchers, homophobia, economic variables and diversity within these communities. For example, strong negative attitude held by many Africans, as well as, African-Americans about homosexuality and perceptions of AIDS as a “gay disease” may have hindered efforts to positively engage African-Americans and their African counterparts in HIV/AIDS prevention (Williams, 2001; Icard, Schilling, El-Bassel & Young, 1992). Moreover, beliefs that illness is a form of punishment by God (Taylor, 1998) and attitudes that AIDS is a consequence of sinful behavior (Butts, 1988; Mays & Cochran, 1987; Williams, 2001) also affect ways in which Africans as well as African-Americans respond to HIV/AIDS prevention efforts. Given such attitudes, perceptions and beliefs, Jemmott et al. (2001) and Campbell and Mzaidume (2002) assert that “future HIV/AIDS prevention programs for African or African-American communities must be innovative, anticipating the myriad social and historical influences that may act as barriers to effective intervention efforts, and must involve the community members and leaders in program development from earliest planning stages.” Consequently, the following may be summarized as contributing factors to the sustained prevalence of and increases in the level HIV infections among many communities in Africa.

- Lack of proper public health training institutions, programs and facilities as well as low educational attainment by the Africans resulting in inadequate and disproportionate personnel representations in the public health sector with ineffective health education/health promotion programming for communities;
- Lack of or inadequate/inappropriate health education programs for the region and resulting in myths, misconceptions, HIV-related discrimination (stigma), apathy and poor health knowledge/attitude about HIV/AIDS, as well as, high-risk sexual behavior among local populations;

High level of communication gaps between the few professional public health educators/health promoters and a cross-section of the African community, resulting in mistrust, lack of understanding and appreciation of social and cultural impacts (on the part of health providers), on knowledge, attitude, lifestyles and practices of Africans, as these affect AIDS development, transmission, prevention and control;

Poverty and anomie within the sub-region African population engendered by different forms of ethnic armed conflicts and wars, predisposing individuals and community to various forms of health and social problems including risk of sexual violence, rape, prostitution, use and abuse of psychoactive drugs and alcoholic beverages;

Continued health disparities between economic classes, the challenges of substance abuse control and the correlation between substance abuse (more especially alcohol) and the

epidemic of HIV and other sexually transmitted infections (STIs). Presently no African government South of the Sahara has any legislative control over the sell, use and abuse of alcoholic beverages; and

Lack of enabling national governmental policies on, and accurate statistical data from official and semi-official health agencies about AIDS and related infections, resulting in underreporting and under-estimation of the problem (Okware et al.,2001; Williams, 2001)

Presently, HIV and AIDS have been reported virtually among all racial/ethnic, age and socioeconomic groups, in every urban and most rural communities in sub-Saharan Africa (*US Department of Health & Human Services [USDHHS], 2000*). Initially identified as a disease among men who have sex with men (MSM) [*National center for HIV, STD & TB Prevention, 2000*], the current AIDS epidemic now comprises diverse multiple sub-epidemics that vary not only by region and community, but also by populations, risk behavior, geography and HIV serotypes (*USDHHS, 2000*). Estimates of the number of persons currently infected with HIV in the sub-Saharan African region ranges between 70% to 75% of the 36 million persons living with HIV/AIDS world-wide (*UNAIDS/WHO, 2000*), while disparities in the rate of infection as well as prevention and control efforts among certain cultural/racial and ethnic populations remain a regional challenge. Principal determinants of the problem include behaviors (risky-sexual practices -- psychoactive drug use and abuse, and accessing prenatal care) and biomedical status (being infected with other STIs). Hence, unprotected sexual intercourse, whether homosexual or heterosexual with persons infected with human-immunodeficiency virus account for most of the HIV transmission in the sub-region. Furthermore, factors related to cultural differences, lack of effective preventive health services, differential use of the few available health care services and distrust of the formal health care system by the Africans have made HIV/AIDS prevention efforts a difficult task in the sub-region (*World Bank Reports, 2000*).

### **Important Elements**

Nowhere has the impact of HIV/AIDS been more severe than Sub-Saharan Africa. All but unknown a generation ago, today, AIDS poses a foremost threat to development of the region. By any measure, and at all levels, considering these latest statistics, its impact is staggering, (*UNAIDS/WHO, 2001; World Bank Reports, 2001; Time Resource Center Statistics*).

- By the end of the year 2000, it was estimated that 36.1 million people were living with HIV/AIDS worldwide – 75% of this population, nearly 23.3 million men, women and children lived in Africa;
- At the regional level, more than 20 million people have died since of AIDS since the beginning of the epidemic, accounting for 83% of world's AIDS deaths. While Africa contains only about 10% of the world's population, it presently accounts for 70% of the total world's population living with HIV/AIDS;

With 55% of HIV-positive adults in Sub-Saharan Africa being women, they constitute 80% of world's women population with HIV. Average infection rates in teenage African girls are five times higher than those of teenage boys;

At the national level, the 21 countries in the world with the highest prevalence of HIV are in Africa with Namibia, Botswana, and Zimbabwe accounting for the world's highest HIV incidence rates (Time Resource Center Statistics, 2001);

HIV/AIDS has cut life expectancy by more than 10 years in several African countries. In some of the countries, infant mortality has increased 200 percent and deaths among children 1 to 5 have tripled because of AIDS;

The rapid rise in adult deaths from HIV infections is leaving a large number of orphans. Of the 13.2 million orphans worldwide, 12.1 million live in Africa alone, accounting for over 95 % of world's children who have been orphaned because of AIDS;

The World Health Organization (WHO) now projects the number of AIDS orphans to reach 40 million by the end of this decade if appropriate interventions are not carried out.

Thus the disproportionate impact of HIV/AIDS on Africa as a whole, underscores the importance of developing, implementing and sustaining effective intervention strategies for the prevention and control of HIV/AIDS and other sexually transmitted infections (STIs) for all communities within the sub-region.

### **Specific Initiatives – Prevention Strategies for Africa**

Education that promotes attitudinal and behavioral change has been repeatedly recommended as an effective strategy for community prevention and control of HIV-related infections. Therefore, the strategic approach to successfully implement HIV/AIDS intervention programs for communities in the African region must involve different approaches (including education) aimed at changing individual and community knowledge, attitude, lifestyles and high-risk behavior toward sexuality. There are also other problem areas that should be addressed including --- poverty, ethnic conflict/wars, AIDS-related discrimination, heavy use of alcohol and other psychoactive substances. Historically, the social relationships between the poor and affluent Africans in the region have left broad gaps in levels of trust, communication and understanding among different ethnic and cultural groups. Cultural differences, inadequate preventive health care and lack of access to the few available health services, discrimination and misconceptions are some of the barriers to effective HIV/AIDS education and health promotion services to various communities in sub-Saharan African nations. Sensitivity to some of these issues, in part, depends on the understanding and appreciation of some basic sociocultural characteristics that influence health practices and lifestyles of many Africans.

In the past, health education/health promotion had attempted to bridge the gap among scientific discoveries in health, medicine and behavioral sciences through community and individual

application of health practices. However, what has been naively neglected amidst the current AIDS epidemic are health practitioners who are being sent into various African countries to actualize behavioral change amid their own and client's homophobia, distrust, suspicion, and misconception with little or no preparation in family life and sex education. These people lack understanding and appreciation of sensitive and cultural impact of the AIDS epidemics on the lives and aspirations of the Africans. Reagan et..al. (1987), assert that disseminating information about behavioral change, the traditional forte of health education, will be ineffective if barriers, misunderstanding, and fear exist between health professionals and clients. They maintain that, "even if well-informed specialist successfully transfer information, (to the individuals at risk) a positive behavioral change may not result...because other variables, also motivate behavior." In this context, the chasm between health awareness and change in individual behavior must be bridged by working in the affective domain in formulating values and decisions, integrating change and compliance with test models and theories of health behavior. Ethnography, within the "target community," according to Spradley (1979), is a complex world of ever changing meanings, behaviors and things that people make and shape from natural resources. Hence, effective prevention strategies aimed at modifying behavior must take into consideration ethnic/cultural and behavioral patterns, socio-economics factors, social norms and the ethnographic infrastructure of majority of Africans in the affected areas.

### **Theoretical Paradigms**

The application of different health intervention models and behavioral theories is fundamental to successful HIV/AIDS prevention education and health promotion programs. The working premise is as follows:

If higher HIV at-risk communities of Africa can be moved further along the continuum of improved HIV/AIDS awareness, attitude, health behavioral and lifestyle changes relative to sexuality and drug-related problems, the entire citizens of the region will benefit from such endeavors.

Similarly, if all citizens in the region can agree on the benefits of safe sexual practices, early voluntary screening and treatment of sexually transmitted infections (STIs), particularly seropositive HIV/syphilis testing, future HIV/AIDS prevention and control beneficiaries will soon understand, accept and participate in behavioral, and educational intervention programs, studies/researches as public health norms of the areas toward HIV/AIDS epidemic intervention.

Applications of health behavior models and theories such as, the PRECEDE-PROCEED Model--- to assess the community health needs of the Africa region, access resources, implement HIV/AIDS/STIs interventions and evaluate effectiveness or Stages of Change Model--- the Transtheoretical Model of behavioral change (TTM) to assess individual and community behavior and lifestyle changes can be of immense benefits to HIV/AIDS control efforts for the sub-region. The PRECEDE - PROCEED Model is a widely used planning model that has guided the design of programs and interventions for numerous community health problems, including AIDS (Bertera 1993; Rimer, 1995;

Windsor and others, 1993; Gielen, 1992). Other programs that have demonstrated significant improvements in community health indicators include intervention for high blood pressure control (Morisky et al., 1983), breast cancer screening (Rimer, 1995), breast self-examination (Worden and others, 1993), and smoking cessation (Windsor and others, 1990).

The Transtheoretical Model (TTM) describes when, how and why individuals change behavior over time. Longitudinal studies of change process in TTM have found that individuals pass through five stages:

- pre-contemplation (no intention to change behavior in the next 6 months),
- contemplation (seriously considering change in the next 6 months),
- preparation (taking steps to change unhealthy behavior in the next 6 months),
- action (actively involve in meaningful change 0 – 6 months) and
- maintenance (maintaining meaningful change 6 months or more after beginning the process).

The aim here being to accelerate the process of individual and community behavior change from pre-contemplation stage to action and maintenance stage while enhancing value expectancy, as well as, self-efficacy among clients. The process can also, strengthen positive cues and role models, as well as, increase the region's community avenues for alternative positive activities and self-confidence that reinforces health protective and promoting activities toward HIV/AIDS.

The TTM's core constructs apply equally well to condom use, and risky sexual behaviors change across many different populations (Bowen and Trotter, 1995; Freeman, Cohn, Corby and Wood, 1991; Grimley, DiClemente, Prochaska and Prochaska, 1995). This descriptive and predictive model has already improved interventionists understanding of how individuals change from risky to healthful /safe sexual behaviors in HIV/AIDS intervention programs. For example, from many cross-sectional applications of the pros and cons of safer sex and condom use, it has been seen that increasing the pros of condom use is much more important and feasible than decreasing the cons (Glans, Lewis & Rimer, 1997). However, the progression through the stages of change from precontemplation to maintenance stage is rarely linear, as some people sometimes become stuck at one stage, while others relapse and recycle back to a previous stage several times before changing their behaviors.

### **Applying Community Empowerment Model**

The recommended HIV/AIDS prevention and control programs for Africa represents interactions among factors assumed to affect outcomes associated with empowerment process. Fawcett and Associates (1995) present an empowerment model as possessing three fundamental dimensions — (a) person or group factors, (b) environmental factors, and (c) empowerment capacity and outcome factors. This model is based on theories of prevention which assume the capacity to make change. The capacity for change and related outcome of community partnerships results from reciprocal

influences (social supports, informal network, policies and laws) between factors associated with the person or group (beliefs, cultural values, experiences, knowledge, personal skills and abilities) and the broader environment (communication media, or ability to influence involvement and persuasion). The challenge here is to reach a cross-section of Africa's rural and urban dwellers who are at higher risk of contracting HIV infections for prevention, detection and appropriate biomedical interventions when available. With an emphasis on inclusion, rather than exclusion, the need for prevention research on a wider scale using diverse methods to raise HIV/AIDS awareness and HIV testing consciousness, supports three distinct aspects of the empowerment approach, namely; social support for change, cultural impact of informal networks, and inclusion of multiple tactics and communication prevention messages based on social marketing strategies for social/behavioral change as opposed to reliance on a single intervention method or change for effective communication.

### **Use of HIV Cultural Communication and Prevention Intervention Sustainance**

This approach focuses on marketing culturally responsive prevention strategies to individuals and groups identified-- HIV higher risk groups, communities and populations (Walsh et al 1993). It involves working with Community Advisory Boards (CAB) and community-based HIV coalitions in developing health-promoting messages that are carefully planned, using theoretical models and available literature. Emphases are geared toward providing accurate HIV/AIDS information, early identification of high-risk groups and assessing their behaviors. Qualitative research (focus groups) and survey research are implemented to identify and evaluate concepts, as well as pretest messages developed within the collaborative efforts of HIV community-based coalitions. These concepts and messages jointly developed by the representatives of the targeted audiences utilize media and interpersonal channels, including formal and informal networks: radio/television, public service announcements, lectures and seminars by HIV seropositive persons/AIDS patients from the community. The goal here is to support and expand the HIV prevention strategies and empowerment services to the grass-root, community neighborhoods, service groups, business enterprises and HIV coalitions within communities in the sub-region. Further, program implementers should assure active involvement of community representatives in the planning, design and evaluation of all prevention strategies that are intended to promote and maintain continuous behavioral change among citizens of various countries in Africa. Other methods may involve employing consistent educational and technical skills to improve knowledge (via workshops, public lectures and informal forums, health fairs, seminars, and small group discussions etc.) that will produce sustainable preventive actions, societal norms, cultural values and acceptable sexual behaviors in population-based settings (Chavis & Wandersman 1990). Applied behavioral interventions implemented in selected population and communities should be periodically assessed to determine the following:

- The effectiveness and efficacy in process and outcome evaluations toward increasing community HIV/AIDS epidemic awareness;
- Acceptance of continuous use of condoms in all sexual activities;
- Avoidance of promiscuous sexual and risky behavior and lifestyles; and
- Constant but voluntary HIV seropositive screening and counseling as potential prevention strategies against HIV/AIDS among the high risk populations in Africa.

### **Applying Social Support Network**

AIDS is not only a terminal disease that carries long-term physical suffering, its victims, also in the Africa are often stigmatized and discriminated against. Although the physical and emotional suffering due to the disease is immense, very little has been done in the sub-region to reduce this suffering, and the existing social safety network is simply not capable of dealing with these needs at the required level. Through the encouragement of interpersonal peer-to-peer tactics for promoting change, community empowerment can stimulate social support and promote change (Shumaker et al, 1991; Cline, 1990). In this connection, House, et al (1988) defined Social Support as “integrally communicative” – verbal and nonverbal communication between program recipients and providers that reduces uncertainty about a situation, the self, the other, or the relation, and functions to enhance a perception of personal control in one’s life. Training of new counselors and retraining of the few existing ones as well as income-generation activities to support those infected and affected by HIV/AIDS is one of the interventions that this is being suggested for the region. Governmental and local NGOs’ Initiatives, in partnership with international donors, and health organizations can provide the much of the support needed. Significant others such as, family, friends, and religious associates should be considered as social support networks to be identified and utilized as avenues for reaching the hard-to-reach groups who are at higher risk of HIV/AIDS in the community. Other networks that should be used include– formal and informal leaders, frequented locations within and outside target communities, educational institutions, social clubs, bars, pool halls, game/sport parties, churches, and mosques. “Social Support Network,” according to Israel and Schurman, (1990), is a powerful health-care tool and disease prevention agent. Prospective epidemiologic studies, most often using measures of social integration, have consistently found a relationship between a lack of social relationship and all-cause mortality (Beckman, 1984; House, Umberson, and Landis, 1988; Israel and Rounds, 1987). Evidence for buffering effects is less conclusive, but studies suggest that “social support” mobilized to help a person cope with a stressor does reduce the negative effects of the stressor on health (Cohen and Wills, 1985). Furthermore, the formation of community coalitions to identify the medical and psycho-social needs of persons with HIV/AIDS will strengthen program implementer’s to actively pursue funding opportunities for the provision of comprehensive ambulatory health care for persons with HIV/AIDS-related infections. Presently, the



needs of the HIV/AIDS population in Africa generally, and specifically south of the Sahara, remain grossly unmet.

### **Behavior-Change Communication**

Effective communication is adjunct to community health and the HIV/AIDS behavioral intervention outcome goal. Emphasis on culture as communicated through language has a significant influence on health knowledge, attitude and health practices of individuals. The use of multiple media channels to reach those at highest risk of HIV infections, as well as, the general public can help to identify and change risky behaviors. This communications strategy involves mass media such as radio, television, and news papers, including small-scale/personal outlets like local drama, age grades networks, brochures, posters, counseling, religious group meetings, school curricula, peer education and workplace programs, all conducted in **local dialects/languages** of respective areas. Local interventions currently in place will be intensified beyond raising awareness and increasing knowledge and focus on changing behavior. These will go beyond raising individual/community HIV/AIDS epidemic awareness and increasing knowledge, to focusing on changing individual and community health behavior, plus the infusion of communication/training modules into school curricula, peer education activities and other currently existing HIV/AIDS/STI prevention programs within the African sub-region.

### **Applying Voluntary Counseling and Testing Services**

Studies have shown that voluntary HIV testing with counseling is highly effective in changing people's behavior to reduce their risk, both of being infected and of infecting others. In Sub-Saharan Africa, as in other parts of the continent, counseling and testing services are either non-existent or highly inadequate. The challenge here is to strengthen the regional governments' capacities for counseling and testing centers, create demand for these services, and provide them on a sustainable basis, making the services available to all who need them. Lessons from many countries including those in Southern Africa indicate that people are afraid of being tested. They do not want to know their test results and are concerned about the issues of confidentiality, which results in low demand for these services (World Bank Report, 1999). In this respect, strong government policies are advocated and encouraged to protect the rights of people regarding privacy and test results. This will also, assist in prevention and control of HIV/AIDS-related stigmatization and discrimination against HIV seropositive persons and AIDS patients. There is also, the need to develop some form of partnership with foreign institutions of higher learning and Non-governmental Organizations (NGOs) to train more counselors and expand the services and HIV testing sites currently in place (if any) in the continent.

*Management of Sexually Transmitted Infections ( STIs),  
Condoms Supply & Logistics*

Management of sexually transmission infections (STIs) constitute essential mechanism to control the spread of HIV due to the following reasons:

- The presence of other STIs facilitates the trans- mission of HIV;
- Early diagnosis and treatment of STIs patients provides an opportunity to counsel them about their high-risk sexual behavior, and
- Provide them with condoms, as well as, basic knowledge about the importance of condoms in the prevention of HIV.

A comprehensive STI management program includes the use of culturally sensitive communications to teach people how to recognize STI symptoms, where to seek treatment, and how to reduce the risk of contacting HIV. This will provide timely and accurate diagnosis and appropriate treatment for the patient, his/her contacts, and provide them with condoms. Once people have learned the important role condoms play in HIV prevention, and how to use them, it is critical to make them affordable and accessible to all. Such projects should be mounted in the sub-region will provide and encourage area-wide free distributions of condoms through NGOs' projects and government programs. Respective governments should also explore the integration of STI treatment and counseling into family planning/maternal and child health services. This integration will permit sexually active women to be reached with critical messages and treatment which is particularly important given the limitations of the syndromic approach for women in STI prevention.

### **Reducing Mother-to-Child Transmission of HIV**

Because heterosexual transmission is basically the only major route of HIV infections in Sub-Saharan Africa, a vast majority of seropositive children in the sub-region acquire the virus as a result of mother-to-child transmission (MTCT), which normally occurs during pregnancy, delivery and breast feeding. In the absence of preventive measures, the risk of a baby acquiring the virus from an infected mother ranges from 25% to 35% in developing countries, including African states (World Bank Report, 1999). However, recent research advances have led to the development of a relatively inexpensive and logistically feasible antiretroviral (ARV) drug regimen for developing nations that reduces the risk of MTCT by 37% (UNAIDS, 1999b). This protocol involves having HIV-positive women begin an ARV regimen at the time of delivery in addition to a one-week postpartum regimen for both the woman and her newborn. The intervention is dependent upon access to HIV voluntary counseling and testing (VCT) and adequate infrastructure to procure and administer ARV drugs. Governments in the region should be encouraged to aggressively pursue this prevention intervention strategy to reduce HIV mother-to-child transmission. Maternal and Child Health (MCH) services of the various nations' Health Ministries should collaborate with international health organizations and seek funding to provide similar services to their respective communities.

### *Use of Entertainment-Education Media*

Entertainment-education media are proven HIV/AIDS prevention strategy for reaching large audiences at low cost while simultaneously fostering behavior change. This can be successfully applied to the sub-Saharan African situation on the basis of the community's interest in entertainment industry. One approach of this strategy which has been highly successful in recent times involves the use of long-running serialized dramas on radios and television. Developed by Miguel Sabido of Mexico (CDC, 2000) the program utilizes Bandura's Model of behavioral change (1995) – creating positive, negative and transitional characters for the behaviors and values promoted, showing consequences of various choices. A combination of this model with interpersonal/community mobilization activities may be the most effective way to reduce HIV risk behaviors among many Africans. Giving full support and appreciation to these basic factors will further assist communities of the region become more aware of their health learning potentials and personal coping mechanisms, and to advance the health of individuals, families and the community.

In conclusion, one can never overstate the overwhelming nature of the HIV/AIDS crisis in Africa. If cohesive actions are not taken, Africa faces a total depletion of its human resources which will negatively affect its capacity to effectively compete in the global economy. On the other hand, these problems are surmountable if the remedies discussed in this paper are adopted. Fundamental to these recommendations are behavioral and attitudinal changes, implementation of various health education and preventive models. They include the following: placing emphasis on increased communication and support networks across cultures, providing counseling and testing services, making an effective use of the education media, providing access to necessary discounted drugs, and reducing mother-to-child transmission. African states should seek active domestic and external support to combat this problem. It is hoped that the adoption of these mechanisms will contribute in alleviating human suffering and untimely death of Africa's precious human resources.

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