

## Halt and Reverse the Spread of HIV/AIDS and other Sexually Transmitted Infections

*Universal access to effective prevention, voluntary counseling and testing, comprehensive care and treatment of HIV/AIDS and other STI are equally essential to sexual health. Programs that assure universal access must be scaled up immediately.\**

### Introduction

The importance of addressing HIV/AIDS as a fundamental and necessary component of the global development process is clearly recognized and accepted by the international community as evidenced by the United Nations Millennium Declaration (UN, 2000) and the eight Millennium Development Goals (MDGs) which include specific reference to the need to halt and reverse the growth of the HIV/AIDS pandemic. The majority of the over 4 million HIV infections that are currently acquired every year are sexually transmitted, primarily through unprotected sexual intercourse. This fact places sexual health promotion, particularly through interventions intended to reducing risk of exposure to the virus without hampering sexual satisfaction and wellbeing, front and center in the broader effort to stem the HIV/AIDS epidemic and achieve the MDGs.

\*This chapter was informed by the WAS Expert Consultation in Oaxaca, Mexico, a thorough review of the literature, and the background paper written by Sarah Hawkes (see Appendix IV and V).

This chapter begins by documenting the extent and impact of sexually transmitted infections (STI) and HIV/AIDS on the global community with particular emphasis on the developing world. Evidence for the behavioral and cost-effectiveness of STI/HIV prevention and control programming will be presented. In particular, the effectiveness of STI/HIV sexual risk reduction interventions is stressed.

Insufficient availability of effective programs along with a lack of access to methods of prevention (e.g. condoms) represent an important obstacle to efforts to contain and reverse the STI/HIV epidemics that are striking the developing world.

The importance of respecting the right to informed decision making and the empowerment of young people, women, and men in all aspects of the funding, implementation, and promotion of STI/HIV prevention is discussed. This chapter concludes with recommendations that emanate from this discussion presented in conjunction with UNAIDS (2007) policy recommendations for HIV prevention.

HIV/AIDS: The Numbers Tell the Story

A comprehensive report on global HIV/AIDS statistics is presented in the UNAIDS 2006 Report on the Global AIDS Epidemic. The numbers clearly indicate the extent to which HIV/AIDS represents a monumental global health challenge and an immense obstacle to development.

According to WHO (2006) and UNAIDS (2006) it is estimated that by the end of 2005, between 33.4 million and 46.0 million people were living with HIV, an estimated 4.1 million adults and children became newly infected with HIV in 2005 and approximately 2.8 million people died of AIDS.

In sub-Saharan Africa, the region with the largest burden of HIV/AIDS, it is estimated that 24.5 million people aged 15-49 years are infected with HIV. While HIV prevalence appears to have declined in several African countries such as Kenya and Zimbabwe, it has levelled off at what UNAIDS calls “exceptionally high levels” in others and in other African countries, most notably South Africa where 18.8% of the adult population is HIV+ the epidemic continues to expand (UNAIDS, 2006). With respect to sub-Saharan Africa, it is important to note that half of all new HIV infections occur among people under the age of 25 (Monasch & Mahy, 2006).

A similar situation is reported in the Caribbean, the second most affected region in the world after sub-Saharan Africa (in terms of prevalence among the adult population) (PAHO, 2007).

According to UNAIDS (2006), at the end of 2005, 8.3 million people in Asia aged 15-49 were living with HIV. Two thirds of them were living in India. About 1.6 million people in Latin America and 1.5 million in Eastern Europe and Central Asia were living with HIV. The prevalence of HIV in the various regions of the world at the end of 2005 was 6.1% in sub-Saharan Africa, 1.6% in the Caribbean, 0.8% in Eastern

Europe and Central Asia, 0.5% in Latin America, 0.5% in North America, Western and Central Europe, 0.4% in Asia, 0.3% in Oceania, and 0.2% in North Africa and the Middle East. Overall, these statistics demonstrate that HIV is a disease that disproportionately affects poor and developing countries.

STIs: A Significant but Often Neglected Global Health Problem

Sexually transmitted infections (STI) account for a significant portion of the morbidity and mortality in the developing world because of their damaging effects on reproductive and child health and their role in facilitating HIV transmission (Aral, Over, Manhart & Holmes, 2006). STI are important co-factors in the growth of the HIV epidemic because they increase the susceptibility of STI infected individuals to HIV infection when they are exposed to the virus and also because they augment the infectivity of people living with HIV by causing an increase in the shedding of HIV in genital secretions. An estimated 340 million curable STIs (Gonorrhoea, Chlamydia, Syphilis, Chancroid, Trichomoniasis) are contracted each year and in developing countries, complications from STI's are among the top five reasons that adults seek health care (WHO, 2001). Incidence rates of curable STIs are disproportionately high in the developing world. For example, the curable STI incidence per 1000 rates in 1995 were 254 in sub-Saharan Africa, 160 in South and South East Asia, 145 in Latin American and the Caribbean but only 91 in North America (WHO). Viral STIs (Human papillomavirus [HPV], Herpes simplex virus) are among the most common human infections and also have significant negative health outcomes. The list of negative outcomes resulting from STI is long and includes pelvic inflammatory disease, ectopic pregnancy, chronic pelvic pain in women, miscarriage, premature delivery, neonatal and infant infections, infant blindness, infertility in both women and men, cervical cancer, other genital cancers, liver failure/cancer, and central nervous system disorders (Aral, et al). Complications from STI disproportionately affect women and children, particularly in developing countries where women are relatively disempowered and access to health care is limited. Cervical cancer, caused primarily by HPV, is a leading cause of cancer deaths among women globally and the highest rates of cervical cancer are found in the developing world (Schiffman & Castle, 2005).

## HIV/AIDS and STI Prevention: A Prerequisite for Global Development

STI/HIV and the MDGs

In many developing countries HIV/AIDS has such a profoundly crippling effect on the larger society that it inhibits the ability of key social institutions such as schools, health care facilities, law enforcement, civil and social services to function properly if at all. It has been estimated that in developing countries HIV/STI account for 17% of economic losses caused by ill-health (Mayaud & Mabey, 2004).

The devastating impact of HIV/AIDS on the economic development of Africa is well documented. It is estimated that the HIV/AIDS epidemic has already reduced average economic growth rates by 2-4% a year across Africa (Dixon, McDonald, & Roberts, 2002).

The prevention of STIs is a major public health priority in its own right and can be linked to the MDGs in multiple ways such as, for example, the linkage between access to effective STI prevention and treatment services and a subsequent beneficial impact on maternal and child health. For example, with an estimated two million pregnant women affected by 'active' syphilis infections annually it is estimated that up to 80% of these pregnancies will be adversely affected by the infection (Schmid, 2004).

Reducing STI prevalence also contributes to the MDGs in that it is well established that persons with ulcerative or non-ulcerative STI are by several orders of magnitude at increased risk for infection when exposed to HIV (Fleming and Wasserheit, 1999). Lack of access to STI prevention, diagnosis, and treatment feeds the HIV epidemic in many developing countries. In other words, effective STI prevention and control programming will not only have a beneficial impact in of-itself, it will contribute to curbing HIV/AIDS incidence.

Efforts to achieve MDG 6 to reverse and halt the spread of HIV/AIDS will require the commitment of massive but limited resources. It is therefore crucial that STI/HIV prevention and control programs be efficiently delivered and cost-effective.

#### STI/HIV Prevention Interventions are Cost-Effective

Several highly sophisticated cost-effectiveness analyses of the implementation an array of HIV/AIDS strategies in Africa have been performed (Creese, Floyd, Alban, & Guinness, 2002; Hogan, Baltussen, Hayashi, et al., 2005; Stover, et al., 2006). Hogan et al, assessed the cost-effectiveness of HIV prevention interventions in sub-Saharan Africa and South East Asia such as mass media campaigns, Voluntary Testing and Counseling (VTC), peer education and STI treatment for sex workers, STI treatment for the general population, school-based STI/HIV education, prevention of mother to child transmission, antiretroviral therapy and found that to varying degrees, and depending on the setting, these interventions can be cost effective. In their analysis of the impact and costs of different HIV prevention strategies in Africa, Saloman, Hogan, Stover et al., (2005) concluded that a comprehensive approach that combines prevention and treatment will be most effective in terms of infections prevented and efficient use of resources. From their research on the global impact of scaling up HIV/AIDS prevention programs in the developing world, Stover et al., conclude that,

Our analyses suggest that both national governments and donor countries would be well advised to ensure that prevention programs are scaled up as soon as possible, because early investment in prevention will

both prevent a greater proportion of future infections and reduce future costs for treatment and care by more than the cost of prevention programs (p. 1476).

Evaluated interventions focusing on STI treatment in Africa have been effective in reducing STI and one such intervention conducted in Tanzania reduced HIV prevalence in the adult population by 38% (Auerbach, Hayes, & Kandathil, 2006). Broader cost-effectiveness analysis suggests that management of STIs can substantially reduce the health burden of HIV/AIDS (Hogan, Baltussen, Hayashi, et al., 2005). Both STI and HIV are transmitted primarily through sexual contact and therefore prevention education interventions for HIV and STI are targeting the same behaviors. As a result it is both possible and necessary for HIV and STI efforts to be coordinated (UNAIDS, 2001).

## Evidence-based Interventions for HIV/STI Prevention

### Multiple Prevention Strategies are Required

From their overview of the evidence to date concerning the effectiveness of HIV prevention efforts, Auerbach, Hayes, & Kandathil (2006) state that “There is a large quantity of evidence from experimental and observational research as well as from practical real-world experience in both developed and developing countries. This evidence supports the implementation and scale-up of a number of interventions and strategies” (p. 43). There is widespread recognition that reducing the burden of STI/HIV on developing countries will require the implementation of a variety of prevention, testing, and treatment strategies (Global HIV Prevention Working Group, 2003). Among the strategies that potentially contribute to this goal include STI/HIV prevention behavioral interventions, VTC, anti-retroviral therapy, injection drug use treatment and safe injection programs, integration of HIV prevention into family planning programs to reduce mother to child transmission, male circumcision, consistent and correct use of condoms, and effective treatment for STIs, testing of the blood supply (Auerbach, Hayes, & Kandathil, 2006; Bunnell, Mermin, De Cock, 2006, UNAIDS, 2006). To be effective these specific STI/HIV focused strategies must be implemented in conjunction with broader programs to address social, economic, and gender inequalities that underpin the HIV epidemic in the developing world. As observers of the HIV/AIDS epidemic in Africa and Asia have repeatedly pointed out, with respect to prevention efforts in particular, many women and girls are not in position to act on prevention messages related to abstinence or condom use because these are not under their control (e.g., Murphy, Greene, Mihailovic, & Olupot-Olupot, 2006). Other methods for STI/HIV prevention currently under investigation may improve girls and women’s ability to protect themselves from infection. These include improved diaphragms and female condoms; microbicides, drugs for pre-exposure

prophylaxis, and eventually effective vaccines (Global HIV Prevention Working Group, 2006).

#### Sexual Risk Reduction Interventions are at the Core of STI/HIV Prevention

Valdiserri, Ogden, and McCray (2003) summarize HIV prevention as consisting of behavior change interventions, HIV counselling and testing, community level interventions aimed at changing social norms (e.g., mass media campaigns, social marketing within a target group), structural level interventions (e.g., changes in social policies and laws related to HIV risk behavior) in addition to STI diagnosis and treatment. There is evidence to support all of these avenues of intervention: however it is HIV prevention education focused on equipping individuals with the information and skills to avoid acquiring HIV through sexual transmission that is, and must be, at the core of broader HIV prevention objective. Research has consistently shown that well developed and implemented interventions are effective in reducing STI/HIV sexual risk behavior. In other words, "...HIV prevention works" (UNAIDS, 2006). UNAIDS points to successful prevention efforts in Brazil, Thailand, Uganda, Cambodia, Zimbabwe, Haiti, Kenya, and the United Republic of Tanzania.

In general, sexual risk reduction behavior change interventions seek to help individuals delay the onset of sexual intercourse, reduce the number of sexual partners, and/or increase condom use or other methods of safer sex. For a number of reasons, evaluating the impact of behavioral interventions on human behavior, particularly sexual behavior, with precision is difficult. Nevertheless, over the course of the HIV/AIDS epidemic, thousands of evaluations of behavior change interventions have been conducted. While these studies have varied in their methodological rigor, meta-analytic and systematic reviews of the HIV/AIDS sexual risk reduction evaluation literature provide strong scientific support for the behavioral effectiveness of these interventions. These reviews establish that HIV/AIDS sexual risk reduction interventions have been successful with people living in developing countries (Merson, Dayton, & O'Reilly, 2000), school youth in developing countries (Kirby, Obasi, & Laris, 2006), people living with HIV (Crepaz, Lyles, Wolitski, et al., 2006), men who have sex with men (Herbst, Sherba, Crepaz, et al., 2005), adolescents (Johnson, Carey, Marsh, et al., 2003), drug users (Semaan, De Jarlais, Sogolow, et al., 2002), adults (Neumann, Johnson, Semaan, et al, 2002), and women (Mize, Robinson, Bockting, & Scheltema, 2002).

Despite substantive progress in our knowledge to design and implement effective STI/HIV prevention interventions, we are far from where we need to be in terms of providing access to prevention programming to those who need it most. As noted by UNAIDS (2006)

The steady growth of the AIDS epidemic stems not from the deficiencies of available prevention strategies but rather from the world's failure to use the highly effective tools at its disposal to slow the spread of HIV. Some 25 years after the epidemic was first recognized, most people at high risk of HIV infection have yet to be reached by HIV prevention, as many policy-makers refrain from implementing approaches that have been shown to work (p. 124).

## The Need for Effective HIV/STI Prevention Interventions and Programs in the Developing World

According to UNAIDS (2007) HIV/STI prevention interventions must treat people with respect and dignity. The voluntary engagement and participation of individuals and communities will empower them to act constructively and on their own behalf.

### A) The Need to Ensure Wide Access to Effective Interventions

Despite gradual progress, STI/HIV prevention interventions with strong evidence of effectiveness still only reach a minority of those who need them.

In their most recent annual report on the global AIDS epidemic, UNAIDS (2006) indicates that some progress has gradually been made in scaling-up HIV prevention interventions but notes that "...while some countries have significantly increased prevention coverage, prevention programs still only reach a small minority of those in need" (p. 11). In a report titled *Access to HIV Prevention: Closing the Gap*, the Global HIV Prevention Working Group (2003), using data provided from UNAIDS, indicated that globally, among people at risk for HIV, only 5% had access to interventions targeting mother-to-child HIV transmission, 12% had access to VTC, 24% had access to AIDS education, and only 42% had access to condoms. More specifically, in sub-Saharan Africa, 8% of out-of-school youth and a little over one third of in-school youth had access to prevention programs; 6% had access to VTC and only 14% had access to STI services. In East Asia and the Pacific region, HIV prevention behavior change programs reach only 5% of sex workers, 3% of out-of-school youth and 10% of men who have sex with men (MSM). In Eastern Europe and Central Asia, 40% of in-school youth and 3% of out-of-school youth are reached by behavior change programs; such programs reach only 4% of sex workers and 9% of MSM. UNAIDS has characterized the situation in sub-Saharan Africa more optimistically, noting that every year increasing numbers of people are exposed to HIV

prevention programming but UNAIDS also cautions that “...prevention programmes still reach only a small minority of those in need” (p. 11).

According to the most recent report of the Global HIV Prevention Working Group (2007) *Bringing HIV Prevention to Scale: An Urgent Global Priority*, the full potential of existing prevention strategies is not utilized. Some compelling examples are provided, such as the fact that:

Only 9% of risky sex acts worldwide are undertaken while using a condom and the global supply of condoms is millions short of what is needed: fewer than 20% of people with a sexually transmitted infection are able to obtain treatment, and prevention services only reach 9% of men who have sex with men, 8% of drug users, and 20% of sex workers (p. 2)

Ultimately, reducing the crippling burden of HIV on developing countries will rely on wide-spread access by young people to effective STI/HIV prevention education. In areas of the world with generalized HIV epidemics, such as sub-Saharan Africa and the Caribbean, the primary mode of HIV transmission is through heterosexual sex particularly among young people (Monasch & Roeland, 2006). In sub-Saharan Africa, nearly half of all new HIV infections occur among young people aged 15 – 24 and women in this age group represent a majority of those infected (UNAIDS, 2006). Although there has been gradual progress in implementing STI/HIV prevention education in the developing world, most youth in these countries do not have adequate access to these programs. In particular, school-based HIV prevention education is lacking. As summarized by Monasch and Roeland, among 30 countries with generalized HIV epidemics in Sub-Saharan Africa participating in a global HIV/AIDS survey, 11 reported that AIDS education was not part of their primary school curriculum and in 6 of the countries, AIDS education was not part of the secondary curriculum. Monasch and Roeland also note that much of the AIDS education being delivered to youth is likely ineffective due to a lack of teacher training and teacher discomfort with teaching about HIV/AIDS and sexuality.

#### B) The Need to Increase Access to Condoms

The findings of the STI/HIV prevention intervention literature clearly indicate that increasing condom use is among the most likely and substantive positive outcomes of sexual risk reduction interventions. Therefore, the success of STI/HIV behavior change interventions in the developing world will inevitably be dependant on the extent to which condoms are made readily accessible to individuals receiving the interventions. UNAIDS (2006) notes that “Correct and consistent condom use reduces the risk of sexual transmission of HIV by 80-90% - an efficacy rate that exceeds those reported for many of the worlds vaccines” (p. 127). An analysis of the HIV/AIDS prevention literature clearly indicates that the promotion of condom use is



an important element of behavior change interventions to reduce HIV infection risk. A meta-analysis of over 350 evaluation studies assessing condom promotion interventions found that programs that contained educational information as well as attitudinal and behavioral skills elements were effective in increasing condom use (Albarracin, Gillette, Earl, et al. 2005). There is also an unequivocal body of research evidence demonstrating that STI/HIV prevention education that includes the promotion of condoms does not result in more frequent sexual activity or an increase in sexual partners (Smoak, Scott-Sheldon, Johnson, & Carey, 2006). Furthermore, a cost-effectiveness analysis of interventions to reduce the incidence of HIV in Africa concluded that, along with blood screening, prevention of mother to child transmission, and provision of STI treatment, targeted condom distribution should be a priority area for funding of HIV/AIDS prevention in Africa (Creese et al, 2002). However, according to UN agencies, the global supply of condoms is below 50% and what is needed and that funding for condom procurement and distribution must increase at least threefold if the HIV/AIDS epidemic is to be halted (UNICEF, WHO, UNAIDS, 2007).

C) The Need for Adequate Funding for STI/HIV Prevention Programming that Respects the Right to Informed Decision Making

Even if political commitment to face HIV has grown stronger and financing for country programs has increased, the effort to prevent the occurrence of new infections has not been completely successful. The almost exclusive focus on treatment access, while it has helped to save many lives, it has obscured a worrisome fact. According to UNAIDS (2006) for every patient who initiated antiretroviral therapy, six other individuals became infected with HIV. This is an unacceptable situation considering the availability of effective means to prevent every mode of transmission, particularly sexual transmission.

The past quarter century of HIV prevention behavioral intervention research has provided substantial advances in the science of preventing HIV infection (Valdiserri, Ogden, & McCray, 2003). We know a great deal about how to create effective HIV/STI prevention interventions. However, as Ferguson, Dick, and Ross (2006) point out, a projected US \$10 billion may well be spent on HIV/AIDS prevention, treatment, and care in the developing world in 2007; “Unfortunately, much of this spending has not been allocated according to the evidence of effectiveness” (p. 318). Given the accumulated evidence concerning the relative effectiveness of sexual abstinence and condom-based sexual risk reduction interventions in general, it is disturbing that some donor countries, such as the United States through its PEPFAR program (Office of the U.S. Global AIDS Coordinator, 2006), disproportionately direct funds towards sexual abstinence interventions for which there is relatively little empirical support and which may deny program recipients, particularly youth, potentially life-saving information and access to condoms. Given the magnitude and consequences of the HIV/AIDS epidemic, it is nothing less than a moral imperative that government and non-governmental funding of HIV prevention efforts in the

developing world be directed towards programs that are evidence-based. At the same time, these programs must respect the right of informed sexual health decision-making.

The A (abstinence), B (be faithful), C (use condoms) condoms approach to HIV/AIDS prevention, encouraged and funded by PEPFAR, that has been the basis for Uganda's successful campaign to reduce HIV prevalence in that country has been the subject of considerable debate with respect to the degree to which each of the ABC components contributed to the decline (e.g., Green, Halperin, Nantulya, & Hogle, 2006; Murphy, Greene, Mihailovic, & Olupot-Olupot, 2006; Okware, Kinsman, Onyango, et al., 2006). Although settling such questions definitively is unlikely, it appears that all three components played a role and as Green et al., suggest "...it makes epidemiological sense to address all three ABC behaviors rather than to promote only one or two components of 'ABC'" (p. 342). Indeed, sexual health promotion programming should, on principle, be aligned with a comprehensive approach to sexuality education that is adapted to local community needs. The comprehensive sexuality education approach suggests that people should receive broadly-based information and skills building opportunities that allow them to make informed choices about their sexual health. Such an approach necessarily includes information on the sexual risk reducing strategies of delaying first intercourse (A), reducing number of sexual partners (B), and adopting safer sex practices (C). It is however also vitally important that the funding and implementation of ABC-based programs reflect the principle of informed decision-making and are therefore balanced in their presentation.

While PEPFAR funding has been crucial to the success of HIV/AIDS programming in Africa, there is a legitimate concern regarding the extent to which what appear to be the ideologically motivated funding requirements of PEPFAR preclude a balanced implementation of programming that is consistent with the comprehensive sexuality education approach. In other words, do PEPFAR funding requirements violate the principle of informed choice in sexual health decision-making that is quite rightly viewed as a human right? According to Murphy et al., (2006),

PEPFAR's ABC guidance contains rules for country teams to follow in developing and implementing their sexual prevention strategies, including parameters on the prevention messages that may be delivered to youths. Specifically, although funds may be used to deliver age-appropriate AB information to in-school youths, ages 10-14 years, the funds may not be used to provide information on condoms to these youths or distribute condoms in any school setting, let alone to youth out of school. And yet as many as 16% of all women in Uganda have sex before the age of 15 years (p. 1446).

It has been suggested that PEPFAR's funding requirements pertaining to the promotion of abstinence and the exclusion of information on condoms and the curtailing of their availability is a reflection of a particular sexual ideology rather than of sound evidence-based public health practice. It is here that PEPFAR's requirements are likely at odds with a comprehensive sexuality education approach based on the right to informed decision making and a balanced presentation of risk reduction strategies. The ideological tension between these two approaches is well expressed by Blum (2004) who writes that,

For a number of advocates of abstinence there is a fundamental opposition to any sexual contact outside of heterosexual, mutually monogamous marriage, as well as opposition to condoms and a moral/religious opposition to contraception. For many who challenge abstinence-only education it is not the abstinence but the only that is most problematic. At its core are reproductive rights and freedoms vs. the morality of nonmarital sex and the role contraception may play in encouraging it (p. 431).

As Green et al., (2006) note, the debate over the ABC approach "...appears more related to the culture wars in the USA than to African social reality" (p. 335) and as Blum (2004) suggests "The next tragedy for Africa, however, would be if it were to be the battleground for American reproductive politics" (p. 431).

With regard to the moral perspectives towards human sexual behavior that are transmitted in, or reflected by, STI/HIV prevention education programs, a critical distinction must be made between the prerogatives of external governments and bodies that fund interventions and the prerogatives of the communities that will implement them. Funding sources, whether they are national governments, non-governmental organizations, or individuals, are exercising a legitimate prerogative if they insist that donated funds contribute to programs that respect basic sexual and reproductive health rights, UN declarations and agreements. However, funding sources are not exercising a legitimate prerogative if they insist that programs reflect the funding sources sexual ideology including norms for preferred or acceptable sexual behaviors such as sexual abstinence outside of heterosexual marriage. In turn, communities that accept and implement STI/HIV prevention programs funded by external donors should respect the sexual and reproductive health rights of program recipients.

D) The Need to Reduce and Eliminate Social Inequality Related to Sexual Orientation and Gender

Many cultures exhibit profoundly destructive prejudices, norms, and laws toward sexual minorities. These discriminatory acts are a major contributing factor to increased sexual risk behavior. For example, due to the intense homophobia, hatred,

stigmatization, and violence directed at sexual minorities, particularly gays, lesbians, bisexuals and transgendered people, individuals are forced to conceal their true selves and to live their lives in a state of alienation and fear. Not only is such an environment disempowering with respect to lowering STI/HIV risk but it also makes reaching sexual minorities with effective prevention education and services extremely difficult. Furthermore, people who live in fear because of their sexual orientation are much less likely to access the health care system which further increases risk. Often, reluctance to access health care is perpetuated by health and medical personal who react to sexual minorities with scorn and rejection. Clearly, this must change.

There is a clear and direct linkage between the empowerment of women in the developing world and reducing the burden of HIV/AIDS on these societies and in achieving all of the MDGs. On multiple levels, gender inequality contributes to the spread of STI/HIV. For example, forced or coerced sex directed against sex workers, trafficked girls and women, and girls and women in intimate relationships plays a significant role in STI/HIV transmission and the global epidemic (WHO, 2000). Several studies from sub-Saharan Africa have clearly shown that gender power imbalances (Langen, 2005) and gender-based violence (Dunkle et al., 2004) increase women's risk for HIV infection. Women who are economically dependant on and/or fear violence from their male partners, and who often play a subservient role in sexual activity are in a poor position to ask for or demand condom use.

While much of the empowerment of women must come in the specific realm of sexuality and sexual health decision making, change must ultimately begin and end at a larger systemic level. As Langen (2005) concluded from her study of women in South Africa and Botswana "Across all levels of society, there is a need to see a social paradigm shift that transforms relationships between women and men, from one of inequality and dominance as is the case in patriarchal societies, to equality, respect and consideration for one another" (p. 188). For example, a stronger commitment to universal and equal access to education for girls will not only allow women to advance economically and share in community social and political leadership, it also linked in numerous ways to reduced STI/HIV. As noted by UNAIDS (2006), "Higher education levels for girls are associated with a higher age of marriage, reduced fertility, improved health seeking behavior, lower vulnerability to genital mutilation, and reduced risk of HIV and other sexually transmitted infection" (p. 136).

In Uganda, one sub-Saharan African country where multiple prevention strategies and structural change has coincided with a significant decline in HIV/AIDS, the linkage between advances toward gender equality and a decline in HIV incidence is apparent. In the words of the Ugandan President, Yoweri Museveni,

Permit me to tell you the obvious. In the fight against HIV/AIDS, women must be brought on board. In sub-Saharan Africa, most women

have not yet been empowered and men dominate sexual relations. To fight this epidemic, the women must be empowered to take decisions about their sexual lives, and women in Uganda have been empowered to participate at all levels of governance. This has made them more assertive of their lives than ever before. To fight AIDS effectively, we must empower women (cited in Murphy et al., 2006, p. 1444).

## Conclusions

Success in halting and eventually reversing the impact of STI/HIV on the global community, and in particular on the developing world, will require a cooperative effort at the international, national, and community levels. For areas hit hardest by HIV/AIDS and who are invariably struggling with widespread poverty, the international community must build upon and add to its considerable, but still unfortunately insufficient allocation of funding and resources to halt and reverse the spread of STI/HIV. The experience of Uganda teaches us that effective national leadership is indispensable in an effective HIV/AIDS strategy.

Implementing a strong national HIV prevention programme involves more than the selection of an appropriate mix of programmatic actions. It also requires a strong national policy framework that encourages safe behaviors, reduces vulnerability, maximizes the accessibility and effectiveness of HIV prevention services, promotes gender equality and women's empowerment, and reduces stigma and discrimination (UNAIDS, 2006, p. 145).

Efforts to reduce the impact of STI/HIV will be largely futile unless communities take active roles in supporting and leading programs to address STI/HIV. In short, communities must not simply accept programs; they must take ownership of them. In particular, community opinion leaders ranging from religious and civic authorities to cultural and sports figures must band together in leading their communities in the necessary social and behavioral change that is required to halt and reverse the impact of STI/HIV on communities.

UNAIDS (2005; 2006) has issued wide-ranging and comprehensive recommendations to underpin national HIV prevention plans including 12 essential policy actions for HIV prevention which are as follows:

- Ensure that human rights are promoted, protected and respected and that measures are taken to eliminate stigma and discrimination.
- Build and maintain leadership from all sections of society, including governments, affected communities, nongovernmental

organizations, faith-based organizations, the education sector, media, the private sector and trade unions.

- Involve people living with HIV in the design, implementation and evaluation of prevention strategies, addressing their distinct prevention needs.
- Address cultural norms and beliefs, recognizing both the key role they play in supporting prevention efforts and the potential they have to fuel HIV transmission.
- Promote gender equality and address gender norms and relations to reduce the vulnerability of women and girls to HIV infection, involving men and boys in this effort.
- Promote widespread knowledge and awareness of how HIV is transmitted and how infection can be averted.
- Promote the links between HIV prevention and sexual and reproductive health.
- Support the mobilization of community-based responses throughout the continuum of prevention, care and treatment.
- Promote programs targeted at HIV prevention needs of key affected groups and populations.
- Mobilize and strengthen financial, human and institutional capacity across all sectors, particularly in health and education.
- Review and reform legal frameworks to remove barriers to effective, evidence-based HIV prevention, eliminate stigma and discrimination, and protect the rights of people living with HIV or vulnerable to or at risk of HIV infection.
- Ensure that sufficient investments are made in the research and development of, and advocacy for, new prevention technologies.

## Necessary Actions

6.1 Current funding and resources for STI/HIV prevention in the developing world are significant but insufficient for achievement of the MDGs. Therefore, funding for STI/HIV prevention must be increased.

6.2 Despite considerable distribution efforts, many people in the developing world do not have consistent access to condoms. Therefore, condom distribution programs must be increased from current levels.

6.3 Efforts must be increased to ensure that STI/HIV prevention programs are developed and implemented according to up-to-date knowledge and research on program effectiveness.

6.4 Funding and programming decisions for STI/HIV prevention must be based on principles of human rights, not on the ideological viewpoints of funders or program developers. This includes the right of individuals to make fully informed decisions about their sexual health.

6.5 To be effective, STI/HIV prevention programming must address social inequalities related to sexual orientation and gender. It is clear that halting and reversing the STI/HIV epidemic in the developing world cannot occur without significantly increasing the ability of women to equally participate in economic and political life and to directly exercise control over their sexual and reproductive health.

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