



A PEPFAR-supported Zambian Defense Force drama troupe performs a skit on HIV prevention.

“On World AIDS Day and throughout the year, we stand with our friends and partners around the world in the urgent struggle to fight this virus, comfort those who are affected, and save lives.”

**President George W. Bush
World AIDS Day
December 1, 2006**

Chapter 1

Critical Intervention in the Focus Countries: Prevention

Introduction

The challenges facing the developing world in seeking long-term solutions to prevent the transmission of HIV are daunting. The latest Joint United Nations Programme on HIV/AIDS (UNAIDS) report estimates that there are 39.5 million people infected with HIV/AIDS worldwide, including approximately 4.3 million new infections in 2006. Approximately 50 percent of the world’s HIV-infected people live in the 15 focus nations of the President’s Emergency Plan for AIDS Relief (Emergency Plan/PEPFAR). Many nations face rapidly growing epidemics of HIV/AIDS that are drastically diminishing populations and shortening average life spans.

These stark realities underscore the fact that preventing new infections represents the only long-term, sustainable way to turn the tide against HIV/AIDS. Treatment and care are necessary, vital, life-extending services that greatly mitigate the impact of HIV infection and AIDS. But unless the world can reduce the number of new infections, we will continue to face an expanding need for treatment and care, running a race we can neither sustain nor win.

Nevertheless, despite the alarming facts of the pandemic, there is also a growing basis for hope. Recent evidence from Africa, the Caribbean and other regions indicates that peo-

Prevention Summary

Five-Year Goal in the 15 Focus Countries

Support prevention of 7 million infections by 2010.

Progress Achieved Through September 30, 2006

- Supported community outreach activities to nearly 61.5 million people to prevent sexual transmission.
- Supported prevention of mother-to-child HIV transmission services for women during more than 6 million pregnancies (cumulative for fiscal years 2004 through 2006).
- Supported antiretroviral prophylaxis for HIV-positive women during 533,700 pregnancies, averting an estimated 101,500 infant HIV infections (cumulative for fiscal years 2004 through 2006).
- Supported training or retraining of nearly 520,000 people in provision of prevention services.
- Supported approximately 4,863 service outlets for prevention of mother-to-child HIV transmission.
- Supported approximately 3,848 service outlets for blood safety.

Allocation of Resources in Fiscal Year 2006

\$396 million to support prevention in focus countries (22.6 percent of total focus country resources for prevention, treatment, and care).

ple have begun to change their behavior in ways that significantly reduce their risk of contracting the disease.

Successful strategies for fostering sustainable change require comprehensive, multi-sectoral, evidence-based, complex prevention activities that address prevailing norms that are associated with the spread of HIV, while still meeting the needs of people who face elevated risks. While expanding access to prevention services is a vital condition for success, improved access is not enough. A strategic approach must include targeting prevention initiatives to address the specific behaviors that contribute to new HIV infections in a manner that addresses the diversity and depth of local needs.

Effective prevention also must be sustainable, community-owned, inclusive of people living with HIV/AIDS (PLWHA), gender-sensitive, responsive to local culture, and tailored to local circumstances. These activities should link to programs that offer HIV treatment and care, as well as to other parts of the health care system, such as clinics that diagnose and treat tuberculosis (TB) and sites that provide voluntary family planning. No opportunity to provide access to high-quality prevention services for all those at risk of infection or those who are living with HIV/AIDS should be overlooked.

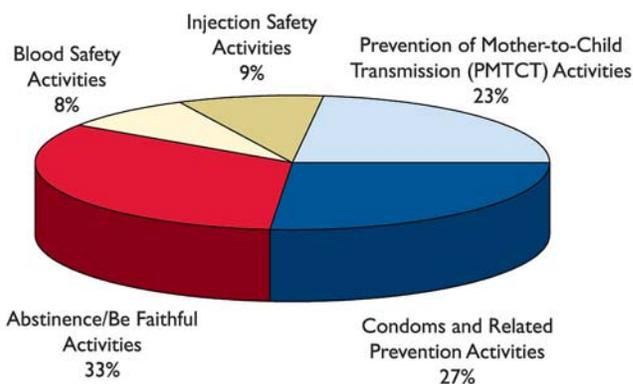
Efforts to prevent sexual transmission of HIV are crucial. More than 80 percent of infections worldwide are believed to be sexually transmitted. Primary prevention interventions are critical; even in the countries hardest-hit by HIV, the majority of youth and adults are uninfected, making support for the uptake and maintenance of prevention behaviors a critical priority. PEPFAR supports programs that work directly with people who are HIV-positive and their families to help reduce transmission and improve access to life-saving treatment and care services.

PEPFAR also focuses on prevention activities that address non-sexual modes of transmission. UNAIDS estimates that 12 percent of new infections globally in 2006 (530,000 infections) occurred among children, and that more than 90 percent of these were due to mother-to-child transmission. Scale-up of programs that effectively prevent mother-to-child HIV transmission (PMTCT) thus remains a particular priority. Quality and sustainability are the guiding principles in all PMTCT programs, as well as in all programs to ensure safe blood and medical injections.

Reflecting the Emergency Plan goal of ongoing program refinement, prevention activities are continually generating information on best practices. This information is rapidly put to use, guiding future programming decisions in order to ensure that PEPFAR-supported interventions are of high quality and are sustainable.

This chapter describes the prevention efforts of the Emergency Plan in the focus nations, where PEPFAR is working within national strategies to identify and scale up interventions that meet the challenges of quality and sustainability. Substantial progress was made during 2006, including new efforts to explore the application of biomedical prevention technologies.

**Figure 1.1: Prevention: All Focus Countries
The President's Emergency Plan
for AIDS Relief
FY2006 Funding for HIV Prevention Activities as a
Percentage of
Total HIV Prevention Funding***



* As of August 2006. Numbers may be adjusted as attribution criteria and reporting systems are refined.

Prevention of Sexual Transmission of HIV

Most PEPFAR focus countries have epidemics that are not heavily concentrated within traditionally recognized risk groups. While some subgroups have higher HIV prevalence than others, these nations' epidemics are generalized, affecting broad cross-sections of society, and the predominant mode of transmission is sexual activity. In other focus countries, such as Vietnam, Guyana and (according to recently emerging data) Ethiopia, more concentrated epidemics mean that focusing on specific risk groups is the most effective means of preventing new infections.



Tsha Tsha is a Nguni-language drama set in the Eastern Cape in South Africa. The program focuses on the lives of several young people exploring love and relationships in a world affected by the AIDS pandemic.

Most new infections in high-prevalence, generalized HIV epidemics result from chains of overlapping, concurrent sexual partnerships among adults in the general population. Many of these individuals do not consider themselves to be at risk. Therefore, in generalized epidemics, efforts to promote safer sexual behaviors among the general population, as well as among the more clearly identified high-risk groups, are crucial.

Generalized epidemics often are accompanied by increasing awareness of HIV, its effects, and its modes of transmission. Unfortunately, awareness of HIV by itself does not lead to changed behavior; HIV awareness in many of the hardest-hit nations has grown dramatically in recent years, yet infection rates have not necessarily fallen accordingly. Therefore, the Emergency Plan places a high priority upon ensuring that prevention programs not only provide information about how to prevent infection, but also encourage people to make positive and lasting changes in behavior.

Many countries have embarked upon this challenging new stage of the fight against HIV. They are moving to balance campaigns that promote HIV awareness with a broader public health approach that provides a comprehensive package of information, care, and support. Well-designed prevention programs aim to create an enabling environment that supports individuals in making safer choices and sustaining healthy behaviors. Empowering people with knowledge and skills to protect themselves is not merely good public health practice – it can help promote democratic values of personal responsibility and respect for human rights.

Long before PEPFAR was initiated, many nations had already developed their own national HIV prevention strategies that included the “ABC” approach to behavior change (Abstain, Be faithful, correct and consistent use of Condoms where appropriate). It was developed and successfully implemented in Uganda, and gained acceptance in a number of countries before PEPFAR’s launch.

In addition to earlier dramatic declines in HIV infection in Uganda, there is growing evidence of similar trends in other nations, including Botswana, Ethiopia, Haiti, Kenya, Tanzania, Zambia, and Zimbabwe. While the causes for decline of HIV prevalence are undoubtedly complex, these countries have demonstrated broad reductions in sexual risk behavior, suggesting that behavior change can play a key role in reversing the course of HIV/AIDS epidemics.

For example, UNAIDS reports that in Kenya recent HIV prevalence is 6.1 percent, which is a decline from earlier data demonstrating a peak of about 10 percent in adults in the mid-1990s. While there are significant geographical and sex disparities in prevalence rates, in general Kenya has demonstrated a downward trajectory in the epidemic that mirrors similar positive changes in sexual behavior. It is noteworthy that in Kenya between 1998 and 2003, the data indicate that:

- The percentage of 20-24 year old men with more than one sexual partner dropped from 35 percent to 18 percent.
- The median age of first sex among women increased from 16.7 to 17.8.
- High levels of previously sexually active people had been abstinent for at least one year at the time of the survey.
- Condom use increased among women who engaged in risky behavior.

In Zimbabwe, evidence from antenatal surveillance and other studies demonstrates that declines in HIV prevalence between 1997 and 2004 were associated with behavior change. The data in Zimbabwe indicate:

- Declines in the proportion of youth who had initiated sexual activity;

- Declines in the proportion of previously sexually active youth who had been sexually active in the preceding year;
- Declines in the proportion of individuals who report non-regular sexual partners; and
- Modest increases in reported condom use with casual partners.

Analysis of recent demographic and health surveys with linked HIV testing across several countries also found that HIV prevalence was considerably lower among both women and men who reported fewer sexual partners.

Behavior Change: Learning from Mathematical Models

Mathematical models can help reveal how reported behavioral changes may affect the spread of HIV in a population. The epidemic in a country may reach a level of prevalence at which HIV infection is “saturated” in groups at highest risk of infection. At that point, whether HIV prevalence in the country stabilizes or declines will depend in large part on the risk behaviors of the broader population.

Since young people make up a substantial part of the population of most countries, the age of sexual debut and subsequent sexual behaviors of young people entering the sexually active population are important determinants of whether HIV prevalence stabilizes or declines. Interventions promoting abstinence (including secondary abstinence) may thus target these risk factors. Another important determinant of individual risk and national prevalence is the number of sexual partners. Evidence suggests that there is a higher risk of transmission in partnerships where the infectious partner has a high viral load. An increase in the number of partners increases the possibility that at least one partner has a high viral load, so the number of sexual partners is a more important determinant of risk of HIV transmission than the number of sexual acts. According to the models, rates of sexual partner change and overlap between partnerships are also crucial measures of risk. Data show that prostitution and non-cohabiting sexual partnerships are associated with high numbers of sex partners, so “be faithful” interventions can be tailored to reduce these behaviors. Additionally, models suggest that correct and consistent condom use is much more effective in preventing HIV transmission than occasional condom use. This highlights the importance of support for correct and consistent use of condoms for reducing individual risk and national prevalence.

PEPFAR supports an evidence-based public health approach that provides information, so people can decide how to protect themselves. While abstinence is the only 100 percent effective way of preventing sexual HIV transmission, being faithful to a single, HIV-negative partner and correct and consistent condom usage (80-90 percent prevention efficacy), especially among sexual partners when HIV sero-status is unknown, can also significantly reduce the risk of HIV transmission.

The Emergency Plan continues to support nations in developing and refining prevention approaches that are appropriate to the local epidemic. Different approaches are required for different types of epidemics, and various responses exist within the focus nations. For example, in Vietnam the epidemic is concentrated in urban populations and among people engaging in higher-risk activities, including injecting drug users, so prevention programs are appropriately targeted. In other focus nations with higher HIV prevalence, interventions must be targeted to both clearly defined high-risk populations and the general population. In both concentrated and generalized epidemics, behavior change is a key component to all prevention interventions.

To the extent that any controversy remains regarding the ABC approach to HIV prevention, it stems from a misunderstanding of the strategy. ABC is not a narrow, one-size-fits-all recipe. It encompasses a wide variety of approaches to the myriad factors that lead to sexual transmission. The interventions that support people in choosing to either reduce the risk of HIV infection or avoid it may vary, depending upon personal and societal circumstances.

For example, the Emergency Plan recognizes the critical need to address the inequalities between women and men that influence sexual behavior and put women at higher risk of infection. For this reason, many HIV prevention programs also address issues related to gender (for further information, see the chapter on Gender). While gender equity does not directly reduce HIV transmission, the ABC approach is particularly important for the protection of women and girls. PEPFAR-supported ABC programs address gender issues, including violence against women, cross-generational sex and transactional sex. Such approaches are not in conflict with ABC – they are integral to it.

Some of the most striking data presented at the 2006 HIV/AIDS Implementers’ Meeting in Durban, South

Africa (discussed further in the chapter on Implementation and Management) concerned behavior change by men in regard to the “B,” or “being faithful” element of the ABC strategy. In a number of countries, men have begun to reduce their number of sexual partners, and the populations doing so include even some of the men at highest risk, such as long-distance truck drivers. As we seek to empower women for HIV prevention, reaching men with effective interventions is one of the most important things we can do, and this, too, is part of the ABC strategy.

ABC programs also address the issue of “prevention for positives” – helping PLWHA to choose whether to abstain from further sexual activity, or to be faithful to a single partner whose status is known and use a condom with every sexual encounter. ABC programs link people to HIV counseling and testing, which is a critical element of any prevention campaign. Studies have shown that people who know their HIV status are more likely to protect themselves and others from infection.

The Emergency Plan is also ready to adapt new prevention technologies once clinical trials are complete and guidance

from a normative agency, such as the World Health Organization (WHO) or UNAIDS, is available. When new prevention strategies, such as microbicides, are identified by normative agencies as effective prevention interventions, they will be supported as part of a comprehensive prevention strategy.

In December 2006, the National Institute of Allergy and Infectious Diseases (NIAID) announced an early end to two clinical trials of adult male circumcision. This decision was due to an interim review of trial data that revealed medically performed circumcision significantly reduces a man’s risk of acquiring HIV through heterosexual intercourse. PEPFAR is awaiting normative guidance from international organizations or other normative bodies, and thereafter will support implementation of safe medical male circumcision for HIV/AIDS prevention, based on requests from host governments and in keeping with their national policies and guidelines. (See text box on male circumcision.)

Male Circumcision

Two recent National Institute of Allergy and Infectious Diseases (NIAID) clinical trials in Kenya and Uganda provided encouraging evidence that safe medical circumcision of adult males can reduce the risk of HIV transmission. These data support the earlier findings of a clinical trial held in South Africa. On December 12, 2006, the NIAID Data and Safety Monitoring Board reviewed an interim data analysis of the trials and determined the following:

- Adult male circumcision performed by trained medical personnel, and with appropriate post-surgical follow-up to ensure management of any infections or other problems with wound healing, was shown to be safe.
- Among men in these trials, adult male circumcision reduced the risk of acquiring HIV infection by 48 percent in the Ugandan study and by 53 percent in the Kenyan study.
- Given these results, both trials will offer men in the control group circumcision. In order to understand the long-term impact of adult male circumcision, the studies will continue to measure HIV infection rates and to study the risk-taking behavior and attitudes of participants.

In anticipation of the potential role of safe male circumcision, the Emergency Plan has been a member of an international male circumcision steering committee led by UNAIDS and WHO, and has been funding formative and preparatory work within several countries, including assessments of clinical and community preparedness in partnership with host governments.

PEPFAR is awaiting normative guidance from international organizations or other normative bodies, and thereafter will support implementation of safe medical male circumcision for HIV/AIDS prevention, based on requests from host governments and in keeping with their national policies and guidelines. It is important that male circumcision be safely provided and that it be integrated into, and not substituted for, a comprehensive HIV/AIDS prevention program. Given the possible misperception that circumcision eliminates HIV transmission risk, PEPFAR-supported prevention efforts must reinforce the ABC approach – Abstain, Be faithful, and correct and consistent use of Condoms and must be linked to voluntary, confidential counseling and testing, and to screening and treatment of sexually transmitted infections.

The ABC Guidance

In 2005, the Emergency Plan issued formal guidance to country teams and partners on implementation of ABC activities. The PEPFAR-supported ABC approach employs population-specific interventions that emphasize abstinence for youth and other unmarried persons, including delay of sexual debut; mutual faithfulness and partner reduction for sexually active adults; and correct and consistent use of condoms by those whose behavior places them at risk for transmitting or becoming infected with HIV. PEPFAR-supported programs may include all three of the ABC messages, or a subset of them, as appropriate.

The ABC approach is distinctive in its targeting of specific populations, the circumstances they face, and behaviors within those populations for change. This targeted approach results in a comprehensive and effective prevention strategy that helps individuals personalize risk and develop tools to avoid risky behaviors under their control.

The following material is drawn from PEPFAR's ABC Guidance. The guidance may be found online in its entirety at <http://www.PEPFAR.gov/guidance/>.

Defining the ABC Approach

Abstinence programs encourage unmarried individuals to abstain from sexual activity as the best and only certain way to protect themselves from exposure to HIV and other sexually transmitted infections (STIs). Abstinence until marriage programs are particularly important for young people, as approximately half of all new infections occur in the 15- to 24-year-old age group. Delaying first sexual encounter can have a significant impact on the health and well-being of adolescents and on the progress of the epidemic in communities. In many of the countries hardest-hit by HIV/AIDS, sexual activity begins early and prior to marriage. Surveys show that, on average, slightly more than 40 percent of women in sub-Saharan Africa have had premarital sex before age 20; among young men, sex before marriage is even more common. A significant minority of youth experience first sex before age 15. Internationally, a number of programs have proven successful in increasing abstinence until marriage, delaying first sex, and achieving "secondary abstinence" – returning to abstinence – among sexually experienced youth.

These programs promote the following:

- Abstaining from sexual activity as the most effective and only certain way to avoid HIV infection;
- The development of skills for practicing abstinence;
- The importance of abstinence in eliminating the risk of HIV transmission among unmarried individuals;
- The decision of unmarried individuals to delay sexual debut until marriage; and
- The adoption of social and community norms that support delaying sex until marriage and that denounce cross-generational sex; transactional sex; and rape, incest, and other forced sexual activity.

Be faithful programs encourage individuals to practice fidelity in marriage and other sexual relationships as a critical way to reduce risk of exposure to HIV. Once a person begins to have sex, the fewer lifetime sexual partners he or she has, the lower the risk of contracting or spreading HIV or other STIs. Some of the most significant gains in Uganda's fight against HIV are a result of specific emphasis on, and funding of, programs to promote changes in behavior related to fidelity in marriage, monogamous relationships, and reducing the number of sexual partners among sexually active unmarried persons. Uganda's President Museveni, along with local religious groups and other non-governmental organizations (NGOs), promoted a consistent message of partner reduction and fidelity, which contributed to a significant decline in the number of sexual partners among both men and women in Uganda.

Be faithful programs promote the following:

- The elimination of casual sexual partnerships;
- The development of skills for sustaining marital fidelity;
- The importance of mutual faithfulness with an uninfected partner in reducing the transmission of HIV among individuals in long-term sexual partnerships;
- HIV counseling and testing with their partner for those couples that do not know their HIV status;

- The endorsement of social and community norms supportive of refraining from sex outside of marriage, partner reduction, and marital fidelity, by using strategies that respect and respond to local cultural customs and norms; and
- The adoption of social and community norms that denounce cross-generational sex; transactional sex; and rape, incest, and other forced sexual activity.

Correct and consistent Condom use programs support the provision of full and accurate information about correct and consistent condom use reducing, but not eliminating, the risk of HIV infection and support access to condoms for those most at risk for transmitting or becoming infected with HIV. Behaviors that increase risk for HIV transmission include engaging in casual sexual encounters, engaging in sex in exchange for money or favors, having sex with an HIV-positive partner or one whose status is unknown, using drugs or abusing alcohol in the context of sexual interactions, and using intravenous drugs.

Women, even if faithful themselves, can still be at risk of becoming infected by their spouse, regular male partner, or someone using force against them. Other high-risk persons or groups include men who have sex with men (MSM) and workers who are employed away from home. Existing research demonstrates that the correct and consistent use of condoms significantly reduces, but does not eliminate, risk of HIV infection. Studies of sexually active couples, for example, in which one partner is infected with HIV and the other partner is not, demonstrate that latex condoms provide approximately 80-90 percent protection, when used consistently. To achieve the protective effect of condoms, people must use them correctly and consistently at every sexual encounter. Failure to do so diminishes the protective effect and increases the risk of acquiring a sexually transmitted infection (STI) because transmission can occur with even a single sexual encounter. Latex condoms, when used consistently and correctly, are highly effective in preventing transmission of HIV. In addition, correct and consistent use of latex condoms can reduce the risk of other STIs, including gonorrhea, chlamydia, and genital ulcer diseases. While the effect of condoms in preventing human papillomavirus (HPV) infection is unknown, condom use has been associated with a lower rate of cervical cancer. Persistent infection with “high-risk” types of HPV is the main risk factor for cervical cancer.

Condom use programs promote the following:

- The understanding that abstaining from sexual activity is the most effective and only certain way to avoid HIV infection;
- The understanding of how different behaviors increase risk of HIV infections;
- The importance of risk reduction and a consistent risk-reduction strategy when risk elimination is not practiced;
- The importance of correctly and consistently using condoms during every sexual encounter with partners known to be HIV-positive (discordant couples), or partners whose status is unknown;
- The critical role of HIV counseling and testing as a risk-reduction strategy;
- The development of skills for obtaining and correctly and consistently using condoms, including skills for vulnerable persons; and
- The knowledge that condoms do not protect against all STIs.

Implementing the ABC Approach

Overarching Considerations

Effective implementation of the ABC approach requires careful evaluation of risk behaviors that fuel local epidemics. Although prevention interventions are most successful when locally driven and responsive to local cultural values, epidemiological evidence can identify risky behaviors within populations and guide specific behavioral messages. For example, in some communities, as many as 20 percent of girls aged 15 to 19 are infected, compared to five percent of boys the same age. Coupled with high prevalence among older men, such data can point to transmission that is fueled by cross-generational sex. Prevention approaches must then address the risks of cross-generational and transactional sex through abstinence programs for youth and be faithful programs for men that foster collective social norms that emphasize avoiding risky sexual behavior.

Every country’s prevention program must include all three elements of the “ABCs,” promoted strategically to appropriate populations and drivers of disease. Thus, the optimal balance of ABC activities will vary across countries according to the patterns of disease transmission, the identification of core transmitters (i.e., those at highest risk of transmitting HIV), cultural and social norms, and other contextual factors. In addition, prevention messages are most effective when they are accurate and consistent, and all

implementing partners must harmonize them at the community level. The A, B, and C components must not undermine or compete with each other, and therefore program partners must not disseminate incorrect information about any health intervention or device. Implementing partners must not promote condoms in a way that implies that it is acceptable to engage in risky sex. Whenever condoms are discussed, information about them must be accurate and not misleading, and must include both the public health benefits and failure rates of condoms as they apply to preventing HIV and other diseases. Likewise, abstinence and faithfulness programs and messages must be medically sound and based on best practices that indicate effectiveness.

Emergency Plan funds may be used for abstinence and/or be faithful programs that are implemented on a stand-alone basis. For programs that include a "C" component, information about the correct and consistent use of condoms must be coupled with information about abstinence as the only 100 percent effective method of eliminating risk of HIV infection; and the importance of HIV counseling and testing, partner reduction, and mutual faithfulness as methods of risk reduction. As stated above, ABC must be balanced at the portfolio level, i.e., all three components must be represented in the country's prevention strategy, but individual programs must be appropriately designed to meet the needs of the target audience.

Priority Interventions: Abstinence and Behavior Change for Youth

Young people are the most important asset to any community or nation. Protecting them from contracting HIV is unquestionably one of the most important missions of the Emergency Plan. Young people who have not had their sexual debut must be encouraged to practice abstinence until they have established a lifetime monogamous relationship. For those youth who have initiated sexual activity, returning to abstinence must be a primary message of prevention programs. Implementing partners must take great care not to give a conflicting message with regard to abstinence by confusing abstinence messages with condom marketing campaigns that appear to encourage sexual activity or appear to present abstinence and condom use as equally viable, alternative choices. Thus, marketing campaigns that target youth and encourage condom use as the primary intervention are not appropriate for youth, and the Emergency Plan will not fund them. (For this same reason, Emergency Plan funds may not be used to actively promote or provide condoms in school settings, but may be used in schools to support programs that deliver age-appropriate "ABC" information for youth.) This means the following:

1. For 10-to-14-year-olds, the Emergency Plan will fund age-appropriate and culturally appropriate "AB" programs that include promoting 1) dignity and self-worth; 2) the importance of abstinence in reducing the transmission of HIV; 3) the importance of delaying sexual debut until marriage; and 4) the development of skills for practicing abstinence.
2. For older youth (above age 14) the Emergency Plan will fund ABC programs that promote 1) dignity and self worth; 2) the importance of abstinence in reducing the transmission of HIV; 3) the importance of delaying sexual activity until marriage; 4) the development of skills for practicing abstinence and, where appropriate, secondary abstinence; 5) the elimination of casual sexual partnerships; 6) the importance of marriage and mutual faithfulness in reducing the transmission of HIV among individuals in long-term relationships; 7) the importance of HIV counseling and testing; and 8) provide full and accurate information about correct and consistent condom use as a way to significantly reduce, but not eliminate, the risk of HIV infection for those who engage in risky sexual behaviors.

It must be recognized that certain young people will, either by choice or coercion, engage in sexual activity. In these cases an integrated "ABC" approach is necessary. When individual students are identified as engaging in or at high risk for engaging in risky sexual behaviors, they should be appropriately referred to integrated "ABC" programs. Such programs should have the following characteristics: 1) be located in communities where youth engaging in high-risk behaviors congregate; 2) be coordinated with school-based abstinence programs so that high risk in-school youth can be easily referred; and 3) be targeted to specific high-risk individuals or groups (i.e., not involve the marketing of condoms to broad audiences of young people). Again, for programs that include a "C" component, information about correct and consistent use of condoms must be coupled with information about abstinence as the only 100 percent effective method of eliminating risk of HIV infection; and the importance of HIV counseling and testing, partner reduction, and mutual faithfulness as methods of risk reduction. In summary:

1. Emergency Plan funds may be used in schools to support programs that deliver age-appropriate "AB" information to young people age 10-14.
2. Emergency Plan funds may be used in schools to support programs that deliver age-appropriate "ABC" information for young people above age 14.

3. Emergency Plan funds may be used to support integrated ABC programs that include condom provision in out-of-school programs for youth identified as engaging in or at high risk for engaging in risky sexual behaviors.
4. Emergency Plan funds may not be used to physically distribute or provide condoms in school settings.
5. Emergency Plan funds may not be used in schools for marketing efforts to promote condoms to youth.
6. Emergency Plan funds may not be used in any setting for marketing campaigns that target youth and encourage condom use as the primary intervention for HIV prevention.

Priority Interventions: Promoting Healthy Norms and Behaviors

Communities must mobilize to address the norms, attitudes, values, and behaviors that increase vulnerability to HIV, including the acceptance or tolerance of multiple casual sex partnerships, cross-generational and transactional sex, forced sex, the unequal status of women, and the sexual coercion and exploitation of young people. To stimulate such mobilization, there is an urgent need to help communities identify the ways in which they contribute to establishing and reinforcing norms that contribute to risk, vulnerability, and stigma, and to help communities identify interventions that can change norms, attitudes, values, and behaviors that increase vulnerability to HIV. In addition, mobilization and change are most likely when messages are reinforced through a variety of fora: social and cultural networks; religious and other leaders; and personal relationships, including parents, grandparents, and peers.

Emergency Plan funds can be used to support activities that will generate public discussion and problem-solving about harmful social and sexual behaviors through a variety of means at both the community and national levels. Suggested activities include the following:

1. Educating parents to improve parent-child communication on HIV, sexuality, and broader issues such as limit-setting through parent-teacher groups, local associations, and faith-based groups;
2. Training local religious and other traditional leaders in HIV concerns and supporting them in publicizing the risks of early sexual activity, sex outside of marriage, multiple partners, and cross-generational sex;
3. Supporting youth-led community programs to help youth, their parents, and the broader community personalize the risk associated with early sexual activity, sex outside of marriage, multiple partnerships, and cross-generational sex;
4. Supporting media campaigns that reinforce and make abstinence, fidelity, partner reduction, HIV counseling and testing, and other safer behaviors legitimate options and standards of behavior for both youth and adults;
5. Developing and training mentors for youth who lack sufficient parental or other adult supervision, including training in messages for HIV prevention;
6. Organizing campaigns and events to educate local communities about sexual violence against youth and strengthen community sanctions against such behaviors;
7. Implementing workplace programs for older men to stress male sexual and familial responsibility, and school-based programs for younger males to provide education about preventing sexual violence;
8. Promoting the use of counseling and testing services, including developing innovative strategies to encourage and increase HIV testing, such as routine testing where appropriate;
9. Training health care providers, teachers, and peer educators to identify, counsel, and refer young victims of rape, incest, or other sexual abuse for other health care; and
10. Coordinating with governments and NGOs to eliminate gender inequalities in the civil and criminal code and enforce existing sanctions against sexual abuse and sexual violence.

Priority Interventions: Prevention of HIV Infection in the Most At-Risk Populations

Following the ABC model, and recognizing that correct and consistent condom use is an essential means of reducing, but not eliminating, the risk of HIV infection for populations who engage in risky behavior, the Emergency Plan will fund those activities that target at-risk populations with specific outreach, services, comprehensive prevention messages, and condom information

and provision. As defined above, these populations include persons in prostitution and their clients, sexually active discordant couples or couples with unknown HIV status, substance abusers, mobile male populations, MSM, PLWHA, and those who have sex with an HIV-positive partner or one whose status is unknown.

Some of the populations most affected by HIV/AIDS are also the most difficult to reach through conventional health care programs. Persons in prostitution and their clients, MSM, and injecting drug users have the least access to basic health care. These populations are generally at higher risk of infection and in greatest need of prevention services. The experiences of Cambodia, the Dominican Republic, Senegal, Thailand, and other countries illustrate that targeted efforts to promote correct and consistent condom use with specific high-risk groups can prevent concentrated epidemics from maturing into generalized epidemics. In generalized epidemics, such targeted approaches remain crucial but must be augmented by balanced ABC approaches that can reach broader audiences in order to provide information to those who may be having sex with a partner whose status is unknown. First and foremost, the Emergency Plan will support approaches directed at ending risky behavior. In addition, the Emergency Plan supports effective new approaches to serve groups at high risk through a combination of the following:

1. Interpersonal approaches to behavior change, such as counseling, mentoring, and peer outreach;
2. Community and workplace interventions to eliminate or reduce risky behaviors;
3. Initiatives to promote the use of counseling and testing services, including developing innovative strategies to encourage and increase HIV testing, such as routine testing where appropriate;
4. Promoting and supporting substance abuse prevention and treatment targeting HIV-infected individuals;
5. Promoting a comprehensive package for people in prostitution and other high-risk groups, including HIV counseling and testing, STI screening and treatment, targeted condom promotion and distribution, and other risk reduction education;
6. Promoting correct and consistent condom use during high-risk sexual activity; and
7. Media interventions with specially tailored messages appropriately targeted to specific populations.

Botswana: Teaching Students Life Skills

With support from PEPFAR, a new life skills manual was designed by the Botswana Ministry of Education and the BOTUSA Project, a collaboration between the governments of the U.S. and Botswana. The Skills for Life: Botswana's Window of Hope curriculum materials help teachers discuss life issues important to Botswana youth.

Five sets of teacher guides and student workbooks were developed to deliver age-appropriate messages for students ranging from primary to secondary school. Teachers use stories, role-playing, poems, and class discussions to impart knowledge and build skills for healthy decision-making. Topics include self-awareness, goal setting, managing stress, social responsibility, healthy living, relationships, sexuality, risk reduction, and facts and myths about HIV/AIDS. The materials discuss HIV prevention, promoting abstinence and emphasizing delaying sexual debut. For students ages 15 and older, the program also addresses intergenerational sex and transactional sex, and also discusses and provides referrals for condoms and other prevention interventions.

Released at a special launch in July 2006, the materials are being distributed throughout Botswana by the Ministry of Education. "The survival of learners depends on them acquiring these skills," Susan Makgothi, Director of Curriculum Development and Evaluation in the Botswana Ministry of Education, said.



Ambassador Mark Dybul and Professor Sheila Tlou visit a Form 5 classroom at Mater Spei where the PEPFAR-supported Life Skills Materials Curriculum is being taught. The class discusses the "Self Understanding" chapter.

Addressing the Vulnerabilities of Women and Girls

As discussed in detail in the chapter on Gender, women and girls face special vulnerability to HIV/AIDS. This is due both to biology and to harmful gender-based societal norms and practices that restrict women's access to HIV/AIDS information and services, severely limit girls' and women's control over their sexual lives, and deprive them of the economic resources and legal rights necessary for them to protect themselves from HIV/AIDS. Further information also is available in the Emergency Plan's November 2006 report to Congress on Gender-Based Violence and HIV/AIDS, located at <http://www.PEPFAR.gov/progress/>.

These same factors make prevention activities for women particularly challenging – and particularly essential. These factors contribute to such prevention challenges as:

- Stigma, making women vulnerable to infection and preventing them from accessing services;
- Sexual violence and coercion;
- Transactional sex – often as a survival mechanism;
- Child marriage;
- Male norms that accept unfaithfulness, casual sex, and cross-generational sex;
- Patterns of coercion, violence, and rape;
- Sex trafficking, abuse, and exploitation;
- Women's lack of access to income; and
- Laws that may afford women insufficient protections.

The Emergency Plan supports girls and women specifically and explicitly in its HIV/AIDS prevention programs, which include activities to:

- Reduce stigma;
- Increase the gender equity of HIV/AIDS programs and services;
- Address male norms and behaviors;
- Prevent violence and coercion and respond to survivors of such abuse;
- Increase girls' and women's access to income and productive resources;
- Increase women's legal protection; and
- Increase women's ability to negotiate safer practices.



The NamibiAlive! compilation targets at-risk groups with HIV prevention information.

Namibia: Taking AIDS Prevention on the Road

December 1, 2006, marked the launch of NamibiAlive!, a compilation of popular Namibian music featuring HIV/AIDS prevention messages. The CDs will be distributed free of charge to bus and truck drivers operating in Namibia. Truck and bus drivers are at risk for HIV infection, due to their mobility and expendable income.

Developed with support from PEPFAR, NamibiAlive! offers an innovative approach to HIV prevention – bringing the message to this at-risk group by taking AIDS prevention on the road. The CD provides information on HIV prevention using the ABC approach – Abstain, Be faithful, and correct and consistent use of Condoms. The ABC approach, developed in Africa, is an evidence-based, public health approach that provides information to people, so they can decide how to best protect themselves. The musical compilation also provides information on accessing confidential HIV counseling and testing services, and promotes gender equity in relationships.

NamibiAlive! was the brainchild of two Peace Corps Education Volunteers working in northern Namibia who persuaded 14 of the country's most popular musicians to donate songs and messages for the compilation.

Namibia's Ministry of Works, Transport, and Communication has pledged to distribute the CDs through its HIV/AIDS workplace programs, as well as at border crossings and checkpoints. A PEPFAR partner organization helped to promote the album by designing and distributing NamibiAlive! posters and stickers. The partner will also use its outreach network to distribute the CDs to the more remote regions of the country.

Results: Rapid Scale-Up

In fiscal year 2006, the Emergency Plan continued to expand its support for host nations' efforts to prevent sexual transmission of HIV – the leading source of new infections worldwide and in the focus countries.

Fiscal year 2006 funding for activities to prevent the sexual transmission of HIV in the focus countries totaled approximately \$236 million, of which approximately \$131 million (approximately 56 percent) was for abstinence and faithful-

ness (AB) activities. When all prevention resources are considered (including those for activities focused on non-sexual modes of transmission), 33 percent of total prevention funding in the focus countries supported AB programs.

Emergency Plan-supported community outreach activities that promoted abstinence and faithfulness reached more than 40 million individuals. As a subset of these activities, nearly 11 million individuals – primarily youth – were

Table 1.1: Prevention: FY2006 Prevention of Sexual Transmission Results

Country	Number of individuals reached with community outreach HIV/AIDS prevention activities that promote abstinence and/or being faithful ¹	Number of individuals reached with community outreach HIV/AIDS prevention activities that promote condoms and related services ²	Total
Botswana ³	102,100	55,900	158,000
Côte d'Ivoire	111,400	84,200	195,600
Ethiopia	12,397,400	1,035,000	13,432,400
Guyana ⁴	33,900	25,000	58,900
Haiti	481,200	467,200	948,400
Kenya	3,565,100	3,775,400	7,340,500
Mozambique	1,349,500	460,000	1,809,500
Namibia	233,000	218,700	451,700
Nigeria	3,421,100	279,500	3,700,600
Rwanda ⁵	361,200	120,500	481,700
South Africa	6,513,200	4,353,400	10,866,600
Tanzania	4,356,500	8,099,100	12,455,600
Uganda	5,654,800	1,651,300	7,306,100
Vietnam	247,300	267,100	514,400
Zambia ⁶	1,419,800	311,000	1,730,800
Total	40,247,500	21,203,300	61,450,800

Notes:

Numbers may be adjusted as attribution criteria and reporting systems are refined.

Numbers above 100 are rounded to nearest 100.

Footnotes:

¹ AB programs promote as their primary behavioral objectives that: (1) unmarried individuals abstain from sexual activity as the best and only certain way to protect themselves from exposure to HIV and other sexually transmitted infections, and (2) individuals practice fidelity in marriage and other sexual relationships as a critical way to reduce risk of exposure to HIV. Programs may focus on individual behavior change or may address relevant social and community norms. Abstinence programs promote as their primary behavioral objective that unmarried individuals abstain from sexual activity as the best and only certain way to protect themselves from exposure to HIV and other sexually transmitted infections. Programs may focus on individual behavior change or may address relevant social and community norms. Abstinence programs are counted as a subset of AB programs.

² Correct and consistent use of condoms and related HIV/AIDS prevention includes behavior change activities outside of those promoting abstinence and being faithful, that are aimed at preventing HIV transmission. Examples include mass media and community outreach programs to promote avoidance of or reduction of HIV risk behavior, community mobilization for HIV testing, and the social marketing or promotion of condoms, including work with high-risk groups such as injecting drug users, men who have sex with men, people in prostitution and their clients, and people living with HIV or AIDS.

³ Botswana results are attributed to the National HIV Program. Beginning FY2006, USG downstream contributions in Botswana are embedded in the upstream numbers, following a consensus reached between the USG and the Government of Botswana to report single upstream figures for each relevant indicator.

⁴ The number of people reached through community outreach AB programs declined in Guyana. This was due to the implementation of data quality control measures, which found these numbers were being over-reported due to incomplete data collection systems.

⁵ Rwanda's results in FY2006 are lower than FY2005 due to de-emphasis on mass media targets and increased emphasis on interpersonal communications and repeat contacts in order to have a greater effect on behavior change.

⁶ Zambia's results in FY2006 are lower than FY2005. An error was reported in the FY2005 2nd Annual Report to Congress. The correct number of individuals reached with condoms and other prevention activities in FY2005 should have been 512,778. In addition, a major implementing partner was not active for 7 months of the reporting period due to a late signing.

reached by activities that promoted abstinence as their primary behavioral objective.

While PEPFAR continues to support targeted mass media activities, country teams no longer provide estimates of numbers of persons reached by these activities. The Emergency Plan has concluded that such estimates are too inaccurate to be useful and is focusing on obtaining and analyzing behavior change impact data rather than program output data.

Emergency Plan funding in fiscal year 2006 for condoms and related prevention strategies directed at people who

engage in high-risk activity in the focus countries totaled approximately \$105 million, reaching more than 21 million people with community outreach activities. This funding represented approximately 44 percent of funding for activities focused on sexual transmission. When all prevention resources are considered (including those for activities focused on non-sexual modes of transmission), approximately 27 percent of total prevention funding in the focus countries was for condoms and related prevention activities.

Most United States Government (USG)-supported condoms were purchased and shipped through the mechanism of the United States Agency for International

Table 1.2: Prevention: FY2006 Prevention of Sexual Transmission Capacity-Building Results

Country	Number of individuals trained or retrained to provide HIV/AIDS prevention activities that promote abstinence and/or being faithful ^{1,2}	Number of individuals trained or retrained to provide condoms and related services ³	Total
Botswana ⁴	400	600	1,000
Côte d'Ivoire	3,300	1,700	5,000
Ethiopia	41,200	7,100	48,300
Guyana	800	500	1,300
Haiti	10,500	4,100	14,600
Kenya	25,100	4,900	30,000
Mozambique	31,500	900	32,400
Namibia	3,100	4,500	7,600
Nigeria	39,900	1,700	41,600
Rwanda	10,100	1,200	11,300
South Africa	49,500	73,400	122,900
Tanzania	22,700	2,900	25,600
Uganda	32,900	5,200	38,100
Vietnam	1,100	16,500	17,600
Zambia	27,200	4,100	31,300
Total	299,300	129,300	428,600

Notes:

Numbers may be adjusted as attribution criteria and reporting systems are refined.

Numbers above 100 are rounded to nearest 100.

Footnotes:

¹ AB programs promote as their primary behavioral objectives that: (1) unmarried individuals abstain from sexual activity as the best and only certain way to protect themselves from exposure to HIV and other sexually transmitted infections, and (2) individuals practice fidelity in marriage and other sexual relationships as a critical way to reduce risk of exposure to HIV. Programs may focus on individual behavior change or may address relevant social and community norms.

² Abstinence programs promote as their primary behavioral objective that unmarried individuals abstain from sexual activity as the best and only certain way to protect themselves from exposure to HIV and other sexually transmitted infections. Programs may focus on individual behavior change or may address relevant social and community norms. Abstinence programs are counted as a subset of AB programs.

³ Correct and consistent use of condoms and related HIV/AIDS prevention includes behavior change activities outside of those promoting abstinence and being faithful, that are aimed at preventing HIV transmission. Examples include mass media and community outreach programs to promote avoidance of or reduction of HIV risk behavior, community mobilization for HIV testing, and the social marketing or promotion of condoms, including work with high-risk groups such as injecting drug users, men who have sex with men, people in prostitution and their clients, and people living with HIV or AIDS.

⁴ Botswana results are attributed to the National HIV Program. Beginning FY2006, USG downstream contributions in Botswana are embedded in the upstream numbers, following a consensus reached between the USG and the Government of Botswana to report single upstream figures for each relevant indicator.

Prevention for Positives: Best Practices

Recent efforts to prevent new infections have expanded to target not just HIV-negative individuals, but also those who are HIV-positive. Designed for people living with HIV/AIDS, “prevention for positives” is an essential part of the Emergency Plan’s comprehensive prevention strategy.

Priorities in this area for PEPFAR implementers include:

1. Discussing strategies for disclosure of HIV status to sex partners with all HIV-positive persons. To support those who do not feel comfortable disclosing on their own, provider- and/or counselor-mediated disclosure are options.
2. Offering confidential HIV counseling and testing to the sex partners of and children born to all HIV-positive persons, as they are at high risk for HIV infection and may need treatment and care. Counseling supports couples in taking steps to prevent mother-to-child transmission (PMTCT) and transmission to an HIV-negative partner.
3. Encouraging and counseling all HIV-positive persons to prevent transmission of HIV. In order to limit the number of people exposed to HIV, behavioral interventions that encourage and offer skill development for practicing sexual abstinence, reducing the number of sexual partners, and correct and consistent use of male or female condoms should be part of every medical and/or counseling visit.
4. Giving HIV-positive individuals information about protecting their own health through sexual abstinence, fidelity, and correct and consistent use of male or female condoms. These interventions protect infected individuals from acquiring sexually-transmitted infections (STIs), other strains of HIV that may be difficult to treat, and unplanned pregnancies.
5. Providing condoms to all sexually-active HIV-positive individuals and promoting their correct and consistent use. Correct and consistent condom use is an essential component of prevention strategies with HIV-positive people in order to prevent transmission to HIV-negative sex partners, reduce the risk of acquiring other STIs, support voluntary family planning, and prevent transmission of HIV from mothers to their babies.
6. Providing diagnosis and treatment of STIs as a part of routine HIV care, with particular care to syndromic management, diagnosis, and treatment of genital herpes and other STIs in HIV-positive persons and their partners.
7. Providing all women and young people age-appropriate counseling on voluntary family planning and HIV, and referring those who do not desire to become pregnant for contraceptive planning. For HIV-positive women and couples who desire children, it is important to discuss strategies to reduce the likelihood of transmission to sex partners and infants. Women who become pregnant should receive referrals to PMTCT clinics as early as possible. PEPFAR funds may only purchase condoms and promote their correct and consistent use; other contraceptives must come from wrap-around programs.
8. Integrating prevention interventions as a part of all HIV treatment and care programs. These programs are strategic points for reaching large numbers of HIV-positive individuals with prevention interventions.
9. Developing strategies to increase adherence to PMTCT and therapeutic treatment regimens. Adherence facilitates maximum viral suppression and thus reduces HIV transmission risk. Interventions such as adherence counseling, use of pill boxes, and medication companions can be provided in clinical, community, or home settings.
10. Incorporating prevention interventions with HIV-positive individuals in community-based settings and home-based care programs. Prevention messages and strategies can be included in counseling, support groups or peer-led interventions, or through home-based care providers. These settings may also be used for efforts to address the important role of alcohol in HIV transmission. Drawing upon the leadership of people living with HIV/AIDS strengthens such interventions and provides further support for HIV-positive individuals. Also, interventions that include such components as income-generation activities or empowerment of women and girls increase the likelihood that individuals will have the means to avoid or change high-risk behaviors.

Development’s (USAID) Commodity Fund, which achieves economies of scale and obtains low prices that allow funds to go farther. USG condom procurement levels to host countries depend upon a variety of factors, including whether the host government procures condoms directly or asks international partners such as the USG to do so. Total USG-supported procurement of male and

female condoms to focus countries was estimated by USAID as of January 4, 2007, to have been approximately 112 million in calendar year 2006, and in calendar years 2004-2006, a cumulative total of approximately 406,860,000. Since the inception of the Emergency Plan, worldwide USG-supported condom procurement for calendar years 2004-2006 was estimated to have been approxi-

mately 1,298,322,000. It should be noted that projections of planned condom procurement for the current year and future years may fluctuate as countries change their orders, and that projections may also differ from numbers that are ultimately shipped. Factors that may lead to such variability include changes in condom inventories in-country (e.g., overstocks that lead countries to request delay of further shipments), changes in the capacity of condom manufacturers, and host government regulatory issues that may delay condom shipments.

Sustainability: Building Capacity

In support of the array of approaches described above, PEPFAR focuses on building capacity for behavior change interventions at the community level, where activities can best be tailored to local circumstances. Emergency Plan activities support peer educators in reaching youth, parents, faith communities, and other leaders, and in managing their activities and maintaining accountability and quality. In Haiti, for example, dedicated and responsible young people are getting involved in a variety of HIV prevention activities that promote abstinence and faithfulness, while also creating a supportive family and community environment for discussing HIV/AIDS. In addition to learning more about HIV prevention, youth involved in program development gain experience and confidence that will be of great value in the future. In the 15 focus countries, more than 299,300 people were trained or retrained in promoting abstinence and/or faithfulness.

Outreach to at-risk populations is most credibly conducted by local organizations close to those they serve. For example, in Zambia, PEPFAR supports two Defense Force drama troops that travel to military units with HIV prevention messages for soldiers and their families. Drama troops use behavior change communication strategies to reach audiences with culturally appropriate HIV prevention messages. The Emergency Plan is supporting local organizations with training and capacity-building in order to help them reach out with effective, evidence-based strategies. In fiscal year 2006, PEPFAR helped to lay a foundation for sustainability by supporting training or retraining for more than 129,300 people in the provision of condoms and related prevention services.

Key Challenges and Future Directions

Ensuring consistent quality across a wide range of locally-tailored prevention activities is crucial. The Emergency

Plan thus supports efforts to develop indicators that measure the quality of processes, in addition to outcome indicators. Both are yielding information essential for program management. For further information, see the chapter on Improving Accountability and Programming.

Strengthening the knowledge base of effective behavior change interventions is a challenge, due in part to a limited understanding of the factors that influence sexual behavior. PEPFAR monitoring and evaluation of activities and results is helping to expand the knowledge base and allow for adjustment of programming decisions.

Girls and young women remain disproportionately vulnerable to HIV transmission, and PEPFAR programs are addressing this vulnerability. Sexual coercion, exploitation, and violence remain major issues, and a growing number of PEPFAR activities focus on men and boys in order to break this cycle. The Emergency Plan also reaches out to faith communities, supporting them in addressing this issue. For further information, please see the chapter on Gender.

Schools offer unique venues for reaching large numbers of youth with prevention messages, and PEPFAR is increasing its investment in school-based prevention activities. These include activities that involve parents, strengthening the impact while supporting families.

Partner reduction and mutual fidelity hold great promise for reducing rates of infection, and the Emergency Plan is working with a broad range of local and international organizations to support the “Be faithful” component of ABC activities. These organizations challenge gender inequities, including male behaviors that often place female partners at risk. For example, in Mozambique the JOMA Project aims to reduce the spread of HIV/AIDS by teaching young men to think critically about gender roles and healthy behavior. For additional information on programs that address gender roles, see the chapter on Gender.

Ensuring full participation of PLWHA in prevention is a key and continuing challenge, and the Emergency Plan is supporting activities to help these communities receive the full benefit of outreach through PLWHA networks.

Reaching HIV-discordant couples with prevention strategies they can apply to their relationships is a key priority.

The scale-up of couples counseling represents a key opportunity to identify HIV-discordant couples and support them with condoms and other prevention services (see the “Prevention for Positives” text box).

Since shortages of well-trained prevention workers are a major barrier to outreach in the developing world, PEPFAR supports training activities as well as linkages to existing networks. For more information, see the chapter on Building Capacity: Partnerships for Sustainability.

Alcohol is gaining growing recognition as a factor in HIV transmission, and Emergency Plan programs have begun to address it directly. In addition, stigma, discrimination, and marginalization of groups that face especially high risks remain serious obstacles to effective prevention, and PEPFAR activities seek to combat these persistent problems.

In order for the Emergency Plan to be successful in meeting its prevention goals, validated new technologies and research findings must be rapidly incorporated. PEPFAR works with USG implementing agencies to monitor such emerging prevention areas as male circumcision and female-controlled prevention technologies. The Emergency

Plan contributed approximately \$116 million for microbicide research efforts in fiscal year 2006.

Prevention of Mother-to-Child Transmission (PMTCT)

Results: Rapid Scale-Up

In the focus countries, the Emergency Plan provided approximately \$92 million in fiscal year 2006 funding for comprehensive programs to provide HIV testing for pregnant women, prevention services for those who test HIV-negative, and antiretroviral (ARV) drug prophylaxis to HIV-positive women and their newborn children in order to prevent transmission, as well as linkages to treatment and care.

PMTCT program support encompasses a wide range of critical interventions, including:

- Scaling up PMTCT programs by rapidly mobilizing resources.
- Providing technical assistance and expanded training for health care providers on: appropriate antenatal care; safe labor and delivery practices; infant-feeding counseling and nutrition support; and malaria prevention.

Rwanda: Men Are the “Secret Ingredient” in PMTCT Program

PEPFAR supports an impressive prevention of mother-to-child HIV transmission (PMTCT) program in Rwanda, which targets male involvement in PMTCT services.

In Rwanda, couples are a population at risk for HIV infection. Thus, male involvement in PMTCT programs is essential for reducing the risk of HIV infection, both for couples and their unborn children. Couples who come for PMTCT services are tested for HIV and counseled on HIV prevention, general health matters, and voluntary family planning. Women who test HIV-positive are advised about how to prevent transmission of HIV to their babies.

Twenty-six-year-old Jean Claude Mutabazi and his wife, Olive Nyirabagirayabo, are veterans of the PMTCT program. Prior to the birth of their first child, Jean Claude twice accompanied Olive for antenatal visits at Kinihira Health Center in Rulindo District. In October 2006, the couple returned for the first antenatal visit for their second child, due in April 2007.

Jean Claude noted: “It’s very important, very useful to accompany your wife. You have to know your status, so you know how to act. If it happens that you’re positive and your wife is negative, you need to know what to do.” Jean Claude and Olive said that couples counseling and HIV testing helped their relationship. Now, they’re able to make decisions together about their baby and their sexual behavior.



Counseling and HIV testing have helped Jean Claude and Olive make informed, positive decisions about their own health and the health of their children.

Table 1.3: Prevention: Estimated Coverage of Prevention of Mother-to-Child Transmission¹ with USG support in FY2004 and FY2006

Country	Pregnant women receiving PMTCT services		HIV+ pregnant women receiving ARV prophylaxis	
	Percent Coverage		Percent Coverage	
	FY2004	FY2006	FY2004	FY2006
Botswana ²	66%	95%	13%	91%
Côte d'Ivoire	4%	9%	3%	7%
Ethiopia	0%	2%	0%	2%
Guyana	36%	69%	17%	25%
Haiti	11%	30%	6%	11%
Kenya	25%	42%	18%	36%
Mozambique	5%	17%	2%	9%
Namibia	14%	57%	12%	55%
Nigeria	0%	2%	0%	6%
Rwanda	14%	61%	21%	59%
South Africa	45%	52%	22%	41%
Tanzania	3%	26%	1%	11%
Uganda	9%	21%	8%	17%
Vietnam	0%	28%	0%	8%
Zambia	4%	9%	14%	24%
Total	7%	16%	9%	21%

Notes:

Numbers may be adjusted as attribution criteria and reporting systems are refined.

Coverage based on upstream and downstream results from the first and third years of the Emergency Plan. In FY2004 only, it was assumed that 80% of women receiving PMTCT services were counseled and tested.

Percents were calculated by dividing PEPFAR program (upstream and downstream) results by the estimated population eligible for the service. Eligible populations include pregnant women and pregnant HIV+ women and were estimated using multiple sources, including UNAIDS, country surveillance, national surveys, DHS, etc. The same denominators were used for both 2004 and 2006 calculations.

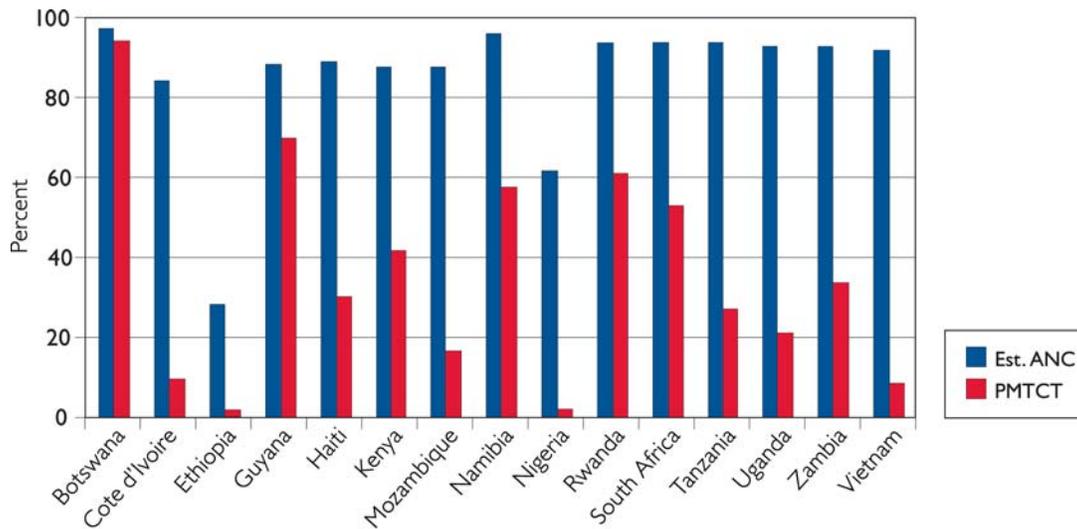
Footnotes:

¹ PMTCT includes activities aimed at providing the minimum package of services for preventing mother-to-child transmission including: HIV counseling and testing for pregnant women, ARV prophylaxis to prevent MTCT, and counseling and support for safe infant feeding practices.

² Botswana results are attributed to the National HIV Program. Beginning FY2006, USG downstream contributions in Botswana are embedded in the upstream numbers, following a consensus reached between the USG and the Government of Botswana to report single upstream figures for each relevant indicator.

- Strengthening referral links to family-centered anti-retroviral treatment (ART) and care programs, so that eligible HIV-infected mothers, children, and fathers can access life-saving therapy together.
- Networking with nutrition, child survival, and family-planning programs to improve overall HIV-free survival among children born to HIV-positive mothers.
- Ensuring effective supply chain management of the range of PMTCT-related products and equipment.
- Expanding access to short-course preventive ARVs while also assisting countries in developing plans to scale up the implementation of more effective combination prophylaxis regimens.
- Providing technical assistance to countries in strengthening national PMTCT monitoring systems and revising national PMTCT guidelines to reflect best practices.
- Strengthening systems to improve the postnatal follow-up for HIV-exposed infants, including piloting of polymerase chain reaction (PCR) testing using dried blood spots, which enables the identification of HIV-infected infants who are in need of treatment and care.
- Strengthening referrals for HIV testing for partners of HIV-positive women identified in antenatal clinics.
- Implementing routine (opt-out) testing and counseling in antenatal, delivery, and postpartum settings.

Figure 1.2: Prevention: Estimated Number of Pregnant Women Attending at Least One ANC Visit¹ and Number of Women Receiving USG-Supported PMTCT Services² as Proportions of Estimated Annual Births in the 15 Focus Countries, FY2006



Footnotes:

¹ Estimates were calculated using multiple sources, including UNAIDS, country surveillance, national surveys, DHS, etc.

² PMTCT includes activities aimed at providing the minimum package of services for preventing mother-to-child transmission including: HIV counseling and testing for pregnant women, ARV prophylaxis to prevent MTCT, and counseling and support for safe infant feeding practices.

As noted, PMTCT programs provide a key opportunity to provide HIV counseling and testing to pregnant women. The PMTCT services indicator for fiscal year 2005 and beyond was clarified to ensure that a woman was only counted as receiving PMTCT services if she was counseled and tested and received her test result. PMTCT services are thus crucial to the Emergency Plan’s efforts to increase the numbers of women provided with counseling and testing and who know their HIV status.

Ensuring that all women who visit antenatal clinics (ANCs) receive the option of an HIV test through pre-test counselling is a key goal. By promoting the routine, voluntary offer of HIV testing, so that women receive testing unless they elect not to receive it, the Emergency Plan has helped to increase the rate of uptake among pregnant women from low levels to around 90 percent at many sites. A major focus in the past year was to support countries to scale up the “opt-out” approach at as many sites as possible, to reach many more women while improving the performance and efficiency of health workers.

Access to vital ANC services varies across the focus countries (see figure 1.2). For example, in Botswana nearly 100

percent of pregnant women have at least one clinic visit, whereas in Ethiopia less than 30 percent visit a clinic. As a key element of its comprehensive programs, the Emergency Plan supports host governments and other partners’ efforts to provide PMTCT services, such as counseling and testing for all women who attend ANC clinics. In some countries, such as Botswana, Guyana, Namibia, and South Africa, significant progress has been made in reaching pregnant women with PMTCT services. In others, the progress has been slower, and the Emergency Plan is redoubling efforts to close the gap. When comparing results from the first year of the Emergency Plan in fiscal year 2004 to fiscal year 2006, all countries have scaled up, and most have dramatically improved availability of PMTCT services to pregnant women.

Many of the women attending ANCs and receiving HIV counseling and testing receive the good news that they are not infected with HIV, and prevention information can help them to better understand the threat of HIV and how to avoid becoming infected. However, others test positive and need prevention, care, and support services. PEPFAR and its partners are working to ensure that these women receive life-saving ART involving triple therapy; or, if they

Table 1.4: Prevention: FY2006 Prevention of Mother-to-Child Transmission¹ Results

Country	Number of pregnant women receiving PMTCT services ²			Number of HIV+ pregnant women receiving ARV prophylaxis			Total estimated infant infections averted ⁵
	Number receiving upstream systems-strengthening support ³	Number receiving downstream site-specific support ⁴	Total	Number receiving upstream systems-strengthening support ³	Number receiving downstream site-specific support ⁴	Total	
Botswana ⁶	43,800	0	43,800	14,200	0	14,200	2700
Côte d'Ivoire	12,900	47,700	60,600	600	3,400	4,000	800
Ethiopia	0	47,600	47,600	0	2,300	2,300	400
Guyana	0	11,000	11,000	0	100	100	19
Haiti	0	75,200	75,200	0	900	900	200
Kenya	0	549,500	549,500	0	33,300	33,300	6,300
Mozambique ⁷	0	132,100	132,100	0	10,800	10,800	2,100
Namibia	0	31,900	31,900	0	6,100	6,100	1,200
Nigeria	14,000	111,800	125,800	6,900	5,300	12,200	2,300
Rwanda	133,300	88,700	222,000	3,600	4,100	7,700	1,500
South Africa	464,500	98,800	563,300	114,900	29,500	144,400	27,400
Tanzania	79,900	286,600	366,500	3,100	10,400	13,500	2,600
Uganda	36,600	263,400	300,000	1,800	12,900	14,700	2,800
Vietnam	0	130,600	130,600	0	500	500	95
Zambia	0	154,800	154,800	0	20,900	20,900	4,000
Total	785,000	2,029,700	2,814,700	145,100	140,500	285,600	54,400

Notes:

Numbers may be adjusted as attribution criteria and reporting systems are refined.

Upstream and downstream numbers above 100 are rounded to the nearest 100 and then added to get totals.

Footnotes:

¹ PMTCT includes activities aimed at providing the minimum package of services for preventing mother-to-child transmission including: HIV and counseling and testing for pregnant women, ARV prophylaxis to prevent MTCT, and counseling and support for safe infant feeding practices.

² The number of pregnant women receiving PMTCT services includes only women who have been counseled and tested, and received their test result.

³ Number of individuals reached through upstream systems-strengthening includes those supported through contributions to national, regional and local activities such as training, laboratory support, monitoring and evaluation, logistics and distribution systems, protocol and curriculum development.

⁴ Number of individuals reached through downstream site-specific support includes those receiving services at U.S. Government-funded service delivery sites.

⁵ The number of infant infections averted was calculated by multiplying the total number of HIV+ pregnant women who received ARV prophylaxis (upstream and downstream) by 19%, reflecting a consensus estimate that current interventions (which vary by country and site) are reducing transmission, on average, from a background of 35% to 16%. Countries with more effective interventions (e.g. Botswana) are likely averting more infant infections than shown here.

⁶ Botswana results are attributed to the National HIV Program. Beginning FY2006, USG downstream contributions in Botswana are embedded in the upstream numbers, following a consensus reached between the USG and the Government of Botswana to report single upstream figures for each relevant indicator.

⁷ In Mozambique, counseling and testing through PMTCT and other settings use the same reporting system. An analysis of the data show that some sites have incorrectly reported PMTCT. Data from these misclassified sites have been excluded from the FY2006 results.

Table 1.5: Prevention: Cumulative Prevention of Mother-to-Child Transmission¹ Results, FY2004-FY2006

Country	Number of pregnant women receiving PMTCT services ^{1,2}				Number of HIV+ pregnant women receiving ARV prophylaxis ²				Total estimated infant infections averted ³			
	FY2004	FY2005	FY2006	Total	FY2004 ³	FY2005	FY2006	Total	FY2004	FY2005	FY2006	Total
Botswana ⁴	30,500	37,500	43,800	111,800	2,000	7,800	14,200	24,000	400	1,500	2,700	4,600
Côte d'Ivoire	24,900	22,800	60,600	108,300	1,900	1,900	4,000	7,800	400	400	800	1,600
Ethiopia	6,600	23,600	47,600	77,800	200	1,000	2,300	3,500	38	200	400	638
Guyana	5,700	6,900	11,000	23,600	67	95	100	262	13	18	19	50
Haiti	28,000	59,800	75,200	163,000	500	700	900	2,100	95	100	200	35
Kenya	333,700	343,000	549,500	1,226,200	16,600	21,000	33,300	70,900	3,200	4,000	6,300	13,500
Mozambique ⁵	36,100	88,000	132,100	256,200	2,300	6,000	10,800	19,100	400	1,100	2,100	3,600
Namibia	7,800	12,100	31,900	51,800	1,300	2,500	6,100	9,900	200	500	1,200	1,900
Nigeria	22,900	75,200	125,800	223,900	600	1,400	12,200	14,200	100	300	2,300	2,700
Rwanda	49,300	132,900	222,000	404,200	2,800	7,200	7,700	17,700	500	1,400	1,500	3,400
South Africa ⁶	487,300	533,600	563,300	1,584,200	76,000	31,000	144,400	251,400	14,400	5,900	27,400	47,700
Tanzania	42,800	174,400	366,500	583,700	1,800	6,800	13,500	22,100	300	1,300	2,600	4,200
Uganda	131,200	250,000	300,000	681,200	6,600	11,300	14,700	32,600	1,300	2,100	2,800	6,200
Vietnam	1,200	70,700	130,600	202,500	0	200	500	700	0	38	95	133
Zambia ⁷	63,300	127,400	154,800	345,500	12,800	23,700	20,900	57,400	2,400	4,500	4,000	10,900
Total	1,271,300	1,957,900	2,814,700	6,043,900	125,500	122,600	285,600	533,700	23,700	23,400	54,400	101,500

Notes:

Numbers may be adjusted as attribution criteria and reporting systems are refined. Upstream and downstream numbers above 100 are rounded to the nearest 100 and then added to get totals.

Footnotes:

- ¹ PMTCT includes activities aimed at providing the minimum package of services for preventing mother-to-child transmission including: HIV counseling and testing for pregnant women, ARV prophylaxis to prevent MTCT, and counseling and support for safe infant feeding practices. The number of pregnant women receiving PMTCT services includes only women who have been counseled and tested, and received their test result. In FY2004 only, it was assumed that 80% of women receiving PMTCT services were counseled and tested.
- ² Total number receiving PMTCT services includes individuals reached through upstream contributions to national, regional and local activities such as training, laboratory support, monitoring and evaluation, logistics and distribution systems, protocol and curriculum development and those receiving downstream services at U.S. Government-funded service delivery sites.
- ³ The number of infant infections averted was calculated by multiplying the total number of HIV+ pregnant women who received ARV prophylaxis (upstream and downstream) by 19%, reflecting a consensus estimate that current interventions (which vary by country and site) are reducing transmission, on average, from a background of 35% to 16%. Countries with more effective interventions (e.g. Botswana) are likely averting more infant infections than shown here.
- ⁴ Botswana results are attributed to the National HIV Program. Beginning FY2006, USG downstream contributions in Botswana are embedded in the upstream numbers, following a consensus reached between the USG and the Government of Botswana to report single upstream figures for each relevant indicator.
- ⁵ In Mozambique, counseling and testing through PMTCT and other settings use the same reporting system. An analysis of the data show that some sites have incorrectly reported PMTCT. Data from these misclassified sites have been excluded from the FY2006 results.
- ⁶ In South Africa, the drop in the number of women receiving ARV prophylaxis in 2005 was primarily due to the introduction of a new data source, which improved data quality. In addition, international publicity over the controversy of nevirapine caused reduced uptake of services.
- ⁷ In Zambia, the decline in women receiving ARV prophylaxis is due to increased compliance among partners with Government of the Republic of Zambia protocols, which call for ARV prophylaxis at 32 weeks. Given this, only women returning at 32 weeks are receiving prophylaxis.

are not yet eligible for triple therapy, ARV prophylaxis to prevent transmission to their children. In some program settings, ARV prophylaxis has reduced the rate of HIV transmission to children to approximately 5-10 percent. This represents a dramatic decrease that spares thousands of children from HIV infection. Countries such as Botswana, South Africa, and Tanzania are making considerable progress, and the Emergency Plan is devoting considerable resources and efforts to supporting this objective.

The Emergency Plan also has made progress through expanding the use of rapid tests, thereby allowing many more women who receive antenatal, maternity and postpartum care to receive their test results. Finger-prick (whole blood) and oral rapid testing allow health care workers to test women in a variety of settings and provide results at the time of testing. Rapid testing is now being offered at many PEPFAR-supported PMTCT sites, and plans are to continue to scale up this best practice in the coming year. In addition, PMTCT sites in many focus countries offer partner

Table 1.6: Prevention: FY2006 Prevention of Mother-to-Child Transmission¹ Capacity Building Results

Country	Number of USG-supported service outlets providing the minimum package of PMTCT services	Number of health workers trained or retrained in the provision of PMTCT services
Botswana ²	634	400
Côte d'Ivoire	69	400
Ethiopia	204	2,700
Guyana	45	50
Haiti	73	800
Kenya	1,674	4,800
Mozambique	81	1,500
Namibia	179	1,300
Nigeria	80	1,600
Rwanda	103	1,000
South Africa	570	11,100
Tanzania	488	2,000
Uganda	362	3,900
Vietnam	17	500
Zambia	284	500
Total	4,863	32,600

Notes:
Numbers may be adjusted as attribution criteria and reporting systems are refined.
Among individuals trained, numbers above 100 are rounded to nearest 100. Number of sites are not rounded.

Footnotes:
¹ PMTCT includes activities aimed at providing the minimum package of services for preventing mother-to-child transmission including: HIV counseling and testing for pregnant women, ARV prophylaxis to prevent MTCT, and counseling and support for safe infant feeding practices.
² Botswana results are attributed to the National HIV Program. Beginning FY2006, USG downstream contributions in Botswana are embedded in the upstream numbers, following a consensus reached between the USG and the Government of Botswana to report single upstream figures for each relevant indicator.

testing. These approaches have successfully identified many patients in need of PMTCT, treatment, and care services.

Expanding the ability to effectively treat HIV-exposed infants, including increasing the availability of polymerase chain reaction (PCR) diagnostic testing, will continue to be a priority as successful pilot approaches are scaled up in the coming year. Many countries have utilized PEPFAR funds to improve public health laboratory networks by providing training, purchasing PCR equipment, and improving supervision, all of which have facilitated earlier diagnosis of infant HIV infection. For additional information on early infant diagnosis programs, please see the chapter on Children.

A number of PEPFAR programs have achieved excellent results through a comprehensive approach to maternal and child health. In Durban, South Africa, McCord Hospital's antenatal clinic works to stop HIV/AIDS, starting at birth.

McCord offers counseling and testing to all pregnant women who come to the clinic. Those found to be HIV-positive are offered drugs that reduce the risk to their babies; they also can access treatment for themselves. Without intervention, an HIV-positive mother faces over a 30 percent risk of passing the infection to her newborn. With Emergency Plan support, McCord has reduced the mother-to-child transmission rate of patients to less than one percent.

The Emergency Plan has provided support for PMTCT interventions for women during approximately six million pregnancies to date, including more than 2.8 million in fiscal year 2006. Of these, PEPFAR supported antiretroviral prophylaxis for HIV-positive women during 533,700 pregnancies (including more than 285,600 in fiscal year 2006), averting an estimated 101,500 infant HIV infections to date, including an estimated 54,400 infections in fiscal year 2006. For additional information on PMTCT programs, see the chapters on Children and Care.

Sustainability: Building Capacity

In addition to supporting host governments in building the capacity to scale up PMTCT programs, the Emergency Plan supported training or re-training of more than 32,500 people in the provision of PMTCT services and supported approximately 4,863 service outlets that provide the minimum package of PMTCT services.

Key Challenges and Future Directions

PEPFAR activities reach women with antenatal care services, including home-based services, through community outreach. Even in resource-poor settings, including rural areas, interventions reach women with comprehensive information, rapid HIV testing, and access to ARVs that reduce the risk of mother-to-child transmission. For example, in Mozambique, health workers provide PMTCT outreach to clients who opt to deliver at home. Home births are a common occurrence in many countries, and outreach ensures that mothers and newborns have access to PMTCT services and are linked to the appropriate follow-up care and support services.

New state-of-the-art, short-course ARV combination regimens that can reduce mother-to-child transmission rates from more than 30 percent to approximately two percent are now scientifically validated. A focus of the Emergency Plan in the coming year will be to assist countries in scaling

Supporting Compassionate Care for Injecting Drug Users

Substance abuse, including the use of injection drugs, is a major means of spreading HIV in many parts of the world. Injecting drug users (IDUs) everywhere are at great risk for infection with HIV, including risk associated with contracting hepatitis and sexually transmitted infections (STIs). Section 104A of the Foreign Assistance Act, as amended by the U.S. Leadership Against HIV/AIDS, Tuberculosis and Malaria Act of 2003 (P.L. 108-25), authorizes HIV/AIDS prevention through activities “to help avoid substance abuse and intravenous drug use that can lead to HIV infection.” Consistent with that authorization, the Emergency Plan issued policy guidance in 2006 on HIV prevention programs aimed at substance abusers and users of injection drugs, such as heroin. Emergency Plan policy guidance on injection drug use may be found at <http://www.PEPFAR.gov/>.

Comprehensive HIV/AIDS prevention programs can help substance abusers stop using drugs, change their risk behaviors, and reduce their risk for acquiring or transmitting HIV infection. In order to respond to the HIV risks associated with injection drug use, the Emergency Plan’s policy guidance articulates three clear approaches, namely: 1) tailoring HIV prevention programs to substance abusers; 2) supporting, with approval from the Office of the U.S. Global AIDS Coordinator (OGAC), substance abuse therapy programs for HIV-infected individuals as an HIV prevention measure; and 3) offering HIV-infected drug users comprehensive HIV/AIDS treatment programs to reduce the risk of transmission.

Emergency Plan funds can be used to support a range of specific activities that can significantly assist in addressing the HIV needs and risks of injection drug-using populations. For example, Emergency Plan funds can support:

- Policy activities that encourage countries to remove barriers to medication-assisted treatment for heroin users;
- Confidential, routine HIV counseling and testing in substance abuse programs;
- Prevention education on the risks of injecting drugs and sharing syringes and how to reduce or stop use of injection drugs;
- Education of health professionals and policymakers regarding best practices for HIV prevention strategies for substance users; and
- HIV treatment or referral to treatment for the HIV-infected IDU in the context of a comprehensive prevention program.

Importantly, Emergency Plan funds also can support substance abuse treatment programs for HIV-infected individuals, including medication-assisted treatment with methadone, buprenorphine, and naltrexone.

Vietnam: PEPFAR supports exciting changes in care for injecting drug users

PEPFAR has supported Vietnam’s recent steps to address stigma and discrimination and to broaden interventions for injecting drug users (IDUs). Since 2004, PEPFAR’s Vietnam team supported advocacy and technical assistance to provide Vietnamese leadership with critical information needed to authorize medication-assisted substitution therapy in the new HIV/AIDS Prevention Control Law. Three study tours to observe methadone therapy in the United States, Mainland China, and Hong Kong helped lay the groundwork, expanding Vietnamese authorities’ acceptance of methadone programs in the face of local skepticism.

In April 2005, with technical assistance from PEPFAR, the Hai Phong Department of Health submitted a proposal to implement methadone therapy for drug users who repeatedly failed conventional therapy. To prepare for the anticipated program, 15 local substance abuse counselors were trained; in March 2006, they were among the first Vietnamese to receive international certification in addiction counseling and work with patients on methadone therapy.

On November 15, 2005, PEPFAR and the Government of Vietnam’s Central Committee on Science and Education convened a national conference on “Substitution Therapies in Preventing HIV/AIDS,” where U.S. Ambassador Michael Marine gave opening remarks. In the following months PEPFAR advocacy included: furnishing publications on medication-assisted therapy to the Ministry of Health (MoH) and other government agencies; promoting acceptance of methadone in meetings with the MoH and provincial HIV/AIDS authorities; providing the Minister of Health a requested methadone fact sheet; and reaching out to numerous officials and clinical personnel.

In June 2006, the Vietnam National Assembly passed its first law to protect the rights of people living with HIV/AIDS (PLWHA). This groundbreaking law promotes access for PLWHA to HIV/AIDS prevention, treatment, and care services, supports the right to be free from stigma and discrimination, and promotes medication-assisted substitution therapy for drug users wishing to quit.

In a variety of ways, the Emergency Plan strongly supports Vietnam’s effort to help HIV-positive people achieve freedom from drugs and a better quality of life. PEPFAR resources support both government programs and programs of faith- and community-based organizations that care for over 40,000 PLWHA in Vietnam. With support from the Emergency Plan, Vietnam’s first comprehensive rehabilitation program for IDUs, including medication-assisted therapy, is expected to open in 2007. This will be the first time the USG has supported medication-assisted therapy outside the United States. It is hoped that this program will serve as a model for compassionate care of IDUs throughout East Asia.

up these highly effective regimens to many more PMTCT sites, thereby averting many more infant infections.

Linking HIV-positive pregnant women and their family members to a continuum of treatment and care services continues to be a high priority for PEPFAR-supported programs. The Emergency Plan focuses on developing and implementing adaptable and replicable models of HIV primary care for women and families; linking PMTCT to voluntary family planning programs is another important objective.

Emergency Plan activities also seek to strengthen postnatal follow-up and care for HIV-exposed infants, focusing on improving infant-feeding practices among HIV-positive mothers. These efforts promote exclusive infant feeding practices and seek to enable the cessation of breastfeeding as soon as replacement feeding can be provided in a feasible and safe manner. Linking PMTCT with maternal health programs is an essential aspect of ensuring a comprehensive approach to improving the health of mothers and their families.

PEPFAR is working to improve monitoring of referrals of PMTCT clients to HIV treatment and care, as well as follow-up of mothers and HIV-exposed children. PEPFAR also seeks to address the need to monitor infant feeding and family planning at national levels.

Personnel and health systems issues remain serious, and PEPFAR supports efforts to train providers and systematize procurement of testing supplies and ARVs. For more information on procurement systems, please see the Building Capacity: Partnerships for Sustainability chapter.

Prevention of Medical Transmission of HIV

Results: Rapid Scale-Up

Blood transfusions and unsafe medical injections continue to account for some HIV infections in the focus countries, and addressing these issues requires major health system changes and advancements. While all host nations are responding, their responses are at different stages, and PEPFAR is lending support tailored to the unique needs of each country. Total Emergency Plan funding for medical transmission activities in the focus countries in fiscal year 2006 was approximately \$68 million.

To reduce the risks of blood transfusions, the Emergency Plan supports national programs to improve the quality of blood supplies through improved policies, infrastructure, commodity procurement, and management. In fiscal year 2006, the Emergency Plan supported approximately 3,846 blood safety service outlets or programs in the focus nations.

Addressing the challenges of medical injection safety, PEPFAR supports efforts to reduce the number of injections

Kenya: Public-Private Partnerships Help Ensure a Safe Blood Supply

With PEPFAR support, the Kenyan National Blood Transfusion Service and blood donor mobilizing organizations target low-risk, volunteer blood donors, including adults in workplaces, high school and college students, and members of community- and faith-based organizations. All blood is screened for HIV, syphilis, hepatitis B, and hepatitis C. These efforts have contributed to a decline in HIV prevalence among donors – from approximately six percent in 2000 to less than two percent in 2006. There also has been a significant increase in safe blood units collected – from approximately 43,000 units in 2004 to 113,000 units in 2006. Safe blood collection efforts help to fulfill an estimated need for approximately 250,000 units.

Public-private partnerships to identify low-risk, regular blood donors in the workplace have bolstered safe blood collection efforts. In 2006, more than 60 businesses actively mobilized their employees to donate blood regularly. For example, in 2006, the Kenyan National Blood Transfusion Service and the Bloodlink Foundation partnered with Safaricom, a leading cell phone company in Kenya, in the year-long, national “Safaricom Blood for Life Drive.” Safaricom provides logistical support, as well as advertising through a series of five-day campaigns on five major radio stations and in print media. During the launch of the Safaricom Blood for Life Campaign in Nairobi on Valentine’s Day 2006, the Kenya Flower Council donated long-stemmed red roses, which were given to donors. These public-private partnerships are contributing to the sustainability of the Kenyan volunteer blood donation program and are helping to save lives.



Men and women donate blood as part of the Safaricom Blood for Life Campaign.

Table 1.7: Prevention: FY2006 Medical Transmission¹ Capacity-Building Results

Country	Number of service outlets carrying out blood safety activities	Number of individuals trained or retrained in blood safety	Number of individuals trained or retrained in injection safety
Botswana ²	30	400	3,100
Côte d'Ivoire	7	200	3,100
Ethiopia	12	100	3,400
Guyana ³	5	35	500
Haiti	26	600	1,800
Kenya	294	1,100	3,100
Mozambique	111	91	1,700
Namibia	37	400	200
Nigeria	66	800	17,700
Rwanda	43	0	6,800
South Africa	2,921	1,800	400
Tanzania	5	100	5,100
Uganda	177	700	4,300
Vietnam	2	0	500
Zambia	112	300	400
Total	3,848	6,600	52,100

Notes:

Numbers may be adjusted as attribution criteria and reporting systems are refined.

Among individuals trained, numbers above 100 are rounded to nearest 100. Number of sites are not rounded.

Footnotes:

¹ Medical Transmission includes programs in blood safety (supporting a national coordinated blood program that includes policies, infrastructure, equipment, and supplies; donor recruitment activities; blood collection, distribution/supply chain/logistics, testing, screening, and transfusion; waste management; training; and management to ensure a safe and adequate blood supply) and programs in injection safety (policies, training, waste management systems, advocacy and other activities to promote medical injection safety, including distribution/supply chain/logistics, cost and appropriate disposal of injection equipment, and other related equipment and supplies).

² Botswana results are attributed to the National HIV Program. Beginning FY2006, USG downstream contributions in Botswana are embedded in the upstream numbers, following a consensus reached between the USG and the Government of Botswana to report single upstream figures for each relevant indicator.

³ In Guyana the number of service outlets carrying out blood safety activities is reduced to from 10 to 5 in FY2006. The reason for this is the adoption of a centralized blood safety model.

and to make injections safer. This is accomplished through programs to improve provider practices, reduce community demand for injections, strengthen supply of appropriate injection commodities, and facilitate safe disposal of injection equipment and supplies, especially sharps. The Emergency Plan supported procurement of more than 97 million syringes for injection safety in the focus countries in fiscal year 2006.

The Emergency Plan also supports training of health workers, including training in universal medical precautions to reduce their risk of blood-borne infections. In the focus nations in fiscal year 2006, PEPFAR supported training or retraining for approximately 6,600 people in blood safety and 52,100 in medical injection safety.

Many health workers who become exposed to HIV benefit from Emergency Plan post-exposure prophylaxis (PEP) treatment interventions to prevent exposure from progressing to infection, helping to maintain the fragile health workforce of the developing world. For further information please see PEPFAR's 2006 Congressional Report on Blood Safety and HIV/AIDS located at <http://www.PEPFAR.gov/progress/>.

Sustainability: Building Capacity

The Emergency Plan goal of promoting sustainability through support for locally-owned responses is reflected in the Emergency Plan's approach to blood and injection safety. Support is channeled largely to national governmental initiatives to implement and manage distribution and logistics systems.

As noted above, the Emergency Plan also made significant investments in training of health care workers and managers of blood safety and medical injection safety activities.

The Emergency Plan also supports public-private partnerships that fight HIV/AIDS, by combining public- and private-sector resources. For example, public-private partnerships have contributed to a significant increase in blood units collected by Kenya's blood safety program (see accompanying story). For further discussion of public-private partnerships, see the chapter on Building Capacity: Partnerships for Sustainability.

Key Challenges and Future Directions

The new Supply Chain Management System, discussed in the chapter on Building Capacity: Partnerships for

Sustainability, will help to address the significant commodity procurement challenges in the medical transmission area by strengthening supply chains, allowing for bulk purchasing, and improved forecasting.

Shortages of personnel trained in blood safety and medical injection safety remain a major concern, and PEPFAR supports national efforts to expand training in safe injection techniques, as well as universal medical precautions and infection control.

Accountability: Reporting on the Components of Prevention

Where partnership limitations or technical, material, or financial constraints require it, the Emergency Plan, or another international partner, may support every aspect of the complete package of prevention, treatment, or care services at a specific public or private delivery site, in coordination with host country national strategies.

Attribution Challenges Due to Country-Level Collaboration. The Emergency Plan supports national HIV/AIDS treatment strategies, leveraging resources in coordination with host country multi-sectoral organizations and other international partners to ensure a comprehensive response. Host nations must lead a multi-sectoral national strategy for HIV/AIDS for an effective and sustainable response. International partners must ensure that interventions are conducted in concert with host government national strategies, are responsive to host country needs, and are coordi-

nated with both host governments and other partners. Stand-alone service sites that are managed by individual international partners are neither desirable nor sustainable. In such an environment, attribution is complex, including both upstream and downstream activities, often with multiple partners supporting the same sites to maximize comparative advantages. PEPFAR is conducting audits of its current reporting system to refine methodologies for the future and continues to assess attribution and reporting methodologies in collaboration with other international partners.

Prevention Reporting Conventions. To account for Emergency Plan prevention programming, in-country partners total all of the programs, services, and activities aimed at preventing HIV transmission. This includes community outreach programs to promote ABC and other behavior change to support avoidance or reduction of HIV risk behaviors; community mobilization for HIV testing; and PMTCT and medical transmission (blood safety and injection safety). These indicator data are drawn from country program reports that are collected in-country from partners, with guidance from the Office of the U.S. Global AIDS Coordinator. Condom shipments are tracked by a central database within the USG. It should be noted, however, that estimates of persons reached by mass media programs are no longer reported, since such estimates are not sufficiently reliable to be useful.

To account for programs addressing medically transmitted HIV, in-country partners identify programs that support a

Downstream and Upstream Support

Downstream support

In many areas, the Emergency Plan will coordinate with other partners to leverage resources at a specific site, providing those essential aspects of quality services that others cannot provide due to limited technical and/or financial circumstances. For example, in some settings components of services are provided to specific sites through the host country government or other international partners such as the Global Fund to Fight AIDS, Tuberculosis and Malaria, while the Emergency Plan may contribute other essential services, training, commodities, and infrastructure. "Downstream" site-specific support refers to these instances where the Emergency Plan is providing all or part of the necessary components for quality services at the point at which services are delivered.

Upstream support

Beyond the site-oriented downstream components of services, support is required to provide other critical elements, which may include the training of physicians, nurses, laboratory technicians, other health care providers, and counselors or outreach workers; laboratory systems; strategic information systems, including surveillance and monitoring and evaluation systems; logistics and distribution systems; and other support that is essential to the effective roll-out of quality services. This coordination and leveraging of resources optimizes results while limiting duplication of effort among partners, with roles determined within the context of each national strategy. Such support, however, often cannot easily be attributed to specific sites because it is national or regional in nature, and, in fact, many sites benefit from these strategic and comprehensive improvements. Therefore, this support is referred to as "upstream" support and is essential to developing network systems for prevention, treatment, and care.

national blood program to ensure a safe and adequate blood supply, including policy development, infrastructure, equipment, and supplies; donor recruitment activities; blood collection, distribution, and supply chain logistics, testing, screening, and transfusion; waste management; training; and management. In addition, they identify programs that support policy development, training, waste management systems, advocacy, and other activities that promote medical injection safety, including activities to reduce inappropriate injections, improve distribution and supply of appropriate injection equipment, and promote appropriate disposal of injection equipment and related supplies.

Country teams monitor activities aimed at providing the minimum package of PMTCT services, including counseling and testing for pregnant women; preventive ARV prophylaxis; counseling and support for safe infant feeding practices; and voluntary family planning referral. These data are drawn from program reports and health management information systems.

The Emergency Plan has funded the MEASURE Evaluation Project, discussed in the chapter on Improving Accountability and Programming. This collaboration will result in:

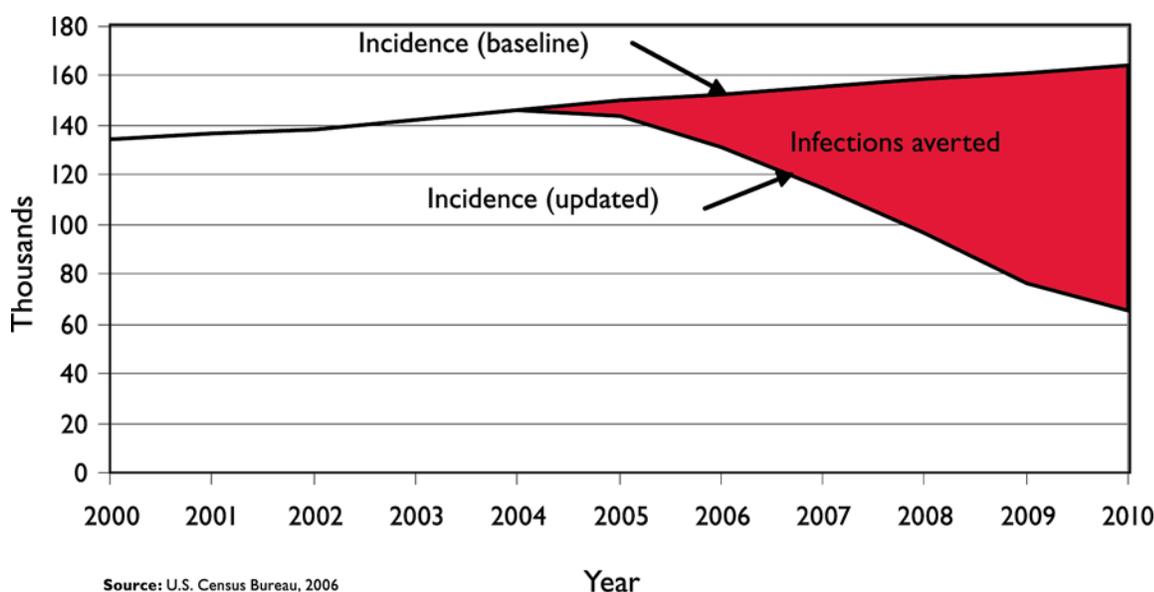
- Data quality audit guidance for program-level indicators;
- Best practices for program-level reporting; and
- Implementation of data standards guidance in select countries.

These products will help PEPFAR develop systems and processes that contribute to long-term, sustainable, high-quality HIV/AIDS monitoring and evaluation capacity in host nations.

Estimating Infections Averted. The estimation of infections averted, toward the Emergency Plan goal of 7 million infections averted, was one of the first quantifiable demands placed upon PEPFAR’s interagency strategic information team. The number of infections averted over the lifetime of the Emergency Plan has to be estimated through modeling, because it cannot be measured directly – since it is, by definition, a non-event.

In fiscal year 2006, the U.S. Census Bureau completed development of all 15 of the focus country baseline estimates of HIV incidence for the years 2005 through 2010. The measurement of impact is understood to be restricted to the estimated number of infections averted in a country,

Figure 1.3: Prevention: Estimating Infections Averted: 2000-2010 Hypothetical Example



starting in 2005; this is because few, if any, new prevention activities associated with the Emergency Plan had been implemented by the end of 2004. The baseline projections of HIV incidence were supplied to the 15 U.S. country teams for review, along with a concept document describing the methodology to be used for estimation of infections averted. Twelve of the 15 focus country teams reviewed the baseline figures and provided feedback to the Census Bureau on improving the baseline estimates or answering concerns that the country teams had regarding the baseline estimates.

New estimates of HIV incidence for the few countries where data for 2005 are available are currently under review.

Figure 1.3 is a hypothetical example illustrating how the number of cases averted will be calculated. The incidence baseline currently is being finalized. The incidence updates will be based upon new prevalence data as it becomes available. The space between the two curves will represent the number of averted infections.

Trends in HIV prevalence can be used to estimate trends in HIV incidence and the number of infections averted. Since it takes several years to detect changes in prevalence trends, this can only be done on a periodic basis. In this approach, prevalence trends will be established for each country using data through 2003. These prevalence trends will be re-estimated for those countries with additional surveillance data available for 2004 and 2005, and estimates of new HIV infections will be made. The difference between the trends in new HIV infections (baseline versus new data) will represent the net impact of all program changes since Emergency Plan programs began being implemented.

The Census Bureau is continuing to work with the models that underlie these projections, particularly to address the inclusion of individuals on ART who are included within the prevalence estimates.