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# INTERVENTIONS WITH MOST-AT-RISK POPULATIONS IN PEPFAR COUNTRIES: LESSONS LEARNED AND CHALLENGES AHEAD

REPORT ON A TECHNICAL CONSULTATION IN CHENNAI, INDIA, FEBRUARY 18 TO 20, 2009  
CONVENED BY THE PEPFAR PREVENTING HIV IN PERSONS ENGAGED IN HIGH-RISK BEHAVIORS TECHNICAL WORKING GROUP AND AIDSTAR-ONE

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## **AIDS Support and Technical Assistance Resources Project**

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# ACRONYMS

AIDS	Acquired immunodeficiency syndrome
AIDSTAR-One	AIDS Support and Technical Assistance Resources–Task Order 1
APAC	AIDS Prevention and Control
ART	Antiretroviral treatment
CBO	Community-based organization
CDC	Centers for Disease Control and Prevention
DSAPR	Department of Substance Abuse Prevention and Rehabilitation
FHI	Family Health International
GAP	Global AIDS Program (CDC)
HIV	Human immunodeficiency virus
HPV	Human papillomavirus
IBBS	Integrated Biological-Behavioral Surveillance
I-RARE	International rapid assessment response and evaluation
IDU	Injecting drug use/injecting drug user
KHANA	Khmer HIV/AIDS NGO Alliance
MARP	Most-at-risk population
MAT	Medication-assisted treatment
M&E	Monitoring and evaluation
MMT	Methadone maintenance treatment
MPS	Minimum package of services
MSM	Men who have sex with men
NGO	Nongovernmental organization
OGAC	Office of the Global AIDS Coordinator
PEP	Post-exposure prophylaxis
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PLHIV	People living with HIV and AIDS
PMTCT	Prevention of mother-to-child transmission
RDS	Respondent-driven sampling
SOPA	State of Program Area

STI	Sexually transmitted infection
TB	Tuberculosis
TLS	Time-location sampling
TWG	Technical Working Group
UNAIDS	Joint United Nations Programme on HIV and AIDS
USAID	U.S. Agency for International Development
USG	U.S. government
VCT	Voluntary counseling and testing

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**Technical design of the meeting:** The President's Emergency Plan for AIDS Relief (PEPFAR) Technical Working Group (TWG) for Preventing HIV in Persons Engaged in High-Risk Behaviors, whose members include Abu S. Abdul-Quader, Anne Thomas, Arvind Kumar, Benny Kottiri, Billy Pick, Karen A. Kroeger, Karina Rapposelli, Kimberly Coleman, Kristen Ruckstuhl, Linda Wright-DeAguero, Naomi Bock, Nisha Gupta, Shama D. Patel, and other contributors, including Shyami DeSilva and Sharon Stash

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# EXECUTIVE SUMMARY

Current HIV prevention efforts targeting most-at-risk populations (MARPs) reach a fraction of the individuals—injecting drug users (IDUs), men who have sex with men (MSM), and sex workers—at greatest risk of contracting HIV. This is because activities aimed at preventing HIV in MARPs are of insufficient scope, scale, and intensity, leaving many at-risk populations with limited access to prevention services. Stigma, discrimination, punitive laws, and intimidating law enforcement practices make these groups difficult to reach.

To support the expansion of programming for MARPs, PEPFAR Preventing HIV in Persons Engaged in High-Risk Behaviors Technical Working Group (hereafter, the MARPs TWG), in collaboration with AIDSTAR-One, convened a technical consultation from February 18 to 20, 2009. Entitled “Interventions with Most-at-Risk Populations in PEPFAR Countries,” the consultation took place in Chennai, India, where local organizations have demonstrated their capacity to work effectively with MARPs.

Eighty participants from 22 U.S. President's Emergency Plan for AIDS Relief (PEPFAR)-supported countries; members of the TWG from the U.S. Agency for International Development (USAID)/Washington, the Centers for Disease Control (CDC), and the U.S. Department of Defense; and local organizations attended the consultation. They included U.S. Government (USG) representatives who are currently implementing or planning to increase prevention activities for MARPs in Asia, Africa, and the Caribbean, in regions with concentrated, generalized, and mixed epidemics. Representatives of the Office of the U.S. Global AIDS Coordinator's MARP TWG and staff from PEPFAR's India office also participated.

The objectives of the meeting were to:

- Identify and share approaches to prevention for MARPs, including development, implementation, and evaluation of program activities.
- Discuss successes and challenges in developing and implementing interventions targeting MARPs in PEPFAR countries.
- Begin to develop action plans at the country and program level.
- Develop a consensus about research, practices, policies, and guidelines needed to effectively develop, implement, and scale-up prevention interventions targeting MARPs.

Researchers explained the status of MARP activities and reviewed current experience and evidence about prevention activities designed specifically to reach IDUs, MSM, and sex workers.

Representatives of several HIV prevention programs for MARPs described their efforts, successes, and challenges. Participants took part in site visits to local programs with demonstrated success in reaching MARPs. Finally, facilitated breakout sessions generated recommendations for developing action plans. The following is a brief summary of key themes that emerged from the meeting.

**Guidance from PEPFAR continues to call for data-driven programming with sex workers and clients, IDUs, MSM, and other vulnerable populations.**

With experts from around the world, PEPFAR continues to call for evidence-based prevention. This implies the implementation of effective prevention approaches that are supported by the global evidence base, the use of local epidemiologic and programmatic data to support the selection of interventions for a given context, and robust monitoring and evaluation of program outcomes. Public health interventions can provide a package of complementary services for MARPs. For example, programs can impart knowledge through mass media campaigns or peer education; provide preventive services and commodities as well as treatment services for prevention; promote community involvement; and use local advocacy and supportive policies to create enabling environments. A comprehensive package of services includes community-based peer outreach; HIV counseling and testing; HIV treatment and care; risk-reduction messages; interventions to address alcohol use; treatment and control services for sexually transmitted infections (STIs); substance abuse treatment, including medication-assisted therapies; and linkages to health and psychosocial services, including job skills training.

**Most-at-risk populations remain a driving force behind the HIV epidemic, yet too little research is available on them, and too few programs exist to support them.**

Most-at-risk populations exist in all regions of the world and are more likely to have high HIV prevalence compared to the general population. Yet, there are not enough data on MSM and IDUs in sub-Saharan Africa, nor are there enough prevention interventions targeting these vulnerable populations. In the next five years, programs will need to respond strategically to collect data, develop interventions that are appropriate and evidence-based, evaluate interventions for further expansion, and address stigma and discrimination.

**A strategic response for MARPs should include several essential program dimensions.**

All MARPs programs should include the following core components: measurement approaches; an enabling environment; capacity building; a minimum package of prevention services; scale-up of coverage, quality, and intensity of prevention activities; and monitoring and evaluation.

**A variety of measurement approaches exist for studying MARPs, yet there are tradeoffs for all methods, and selection should be matched to the situation.**

Because high-risk behaviors are often stigmatized and sometimes illegal, MARPs are difficult to sample. The gold standard of probability-based sampling is unobtainable in most situations. Instead, sampling methodologies—respondent-driven sampling (RDS) and time-limited sampling (TLS)—can approximate probability sampling. Although size estimation is a critical component for program development, implementation, and monitoring, MARPs remain difficult to enumerate in many countries, often requiring triangulation using different measurement approaches. Surveys—rapid assessments and integrated biobehavioral surveillance surveys—can provide needed information on MARPs; track changes in knowledge, attitudes, and risk behaviors; and measure HIV prevalence. Programs can use routine data to help identify changes in the epidemic and its underlying drivers, monitor program progress, enable midcourse adjustments, and provide information for advocacy and education.

**Community involvement is essential, from initial planning through program implementation and monitoring, as are efforts to build local capacity.**

Community involvement helps extend HIV services to their intended populations, connects programs to the needs of community members, and ensures long-term sustainability. Successful approaches seek to strengthen local nongovernmental organizations (NGOs), balance program goals and community expectations, and build the capacity of local staff. Engaging community members in collecting, understanding, and utilizing data at the local level strengthens community ownership, allows programs to adapt to changes in the epidemic and the response, and builds sustainability.

**Successful prevention strategies for IDUs use a combination of risk-reduction activities while providing linkages to clinical, drug treatment, and social services.**

Coordinating the work of donors and implementing organizations is critical to ensuring that IDUs have access to a full range of services to reduce the risk of HIV and address drug addiction. Some successful approaches include an expanded package of services, such as medically assisted treatment, that are well matched to the local context, as well as strategies to encourage policy change, public and community education, and strengthened human resources. Ways to improve prevention for IDUs include providing increased opportunities for south-to-south exchange, advocating for increased services for MARPs, increasing the use of data and data tools for evidence-based program planning, improving training for peer educators, and increasing opportunities for technical assistance for NGOs working with IDUs.

**Several countries have made significant progress in addressing the prevention needs of MSM, yet gaps remain.**

As new information emerges on the extent and severity of epidemics in developing countries, some programs have successfully demonstrated that it is possible to reach MSM despite discrimination, stigma, and limited surveillance. Some priorities for improving HIV prevention for MSM include conducting biobehavioral surveillance surveys on MARPs as a basis from which to encourage government buy-in as well as size estimation and mapping exercises for MSM groups. Providing technical assistance to develop curricula and to strengthen the capacity of organizations is also important in strategic planning and in the design and use of appropriate measurement tools. Some countries need to address such structural factors as discrimination and the criminalization of homosexual activity, which have serious implications for programs and for human rights.

**Existing HIV prevention interventions for sex workers are effective, but new strategies can improve them further.**

Effective interventions for sex workers combine peer outreach, risk-reduction counseling, condom promotion, and STI services. Involvement of sex workers in program design, leadership and coordination, implementation, and monitoring is essential to reach clients, to make services user-friendly, and to address stigma and discrimination. Successful programs also address other issues specific to sex workers, such as mobility and human rights, to further improve access to services. Prevention programs for sex workers can be improved by increasing opportunities for exchange between programs through documentation, face-to-face interaction, and site visits; expanding the minimum package of services to include positive prevention, family planning services, and efforts that create enabling environments; and facilitating visits from experts, program managers, and policymakers.

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# INTRODUCTION

PEPFAR Preventing HIV in Persons Engaged in High-Risk Behaviors Technical Working Group (TWG) and AIDSTAR-One organized a conference in Chennai, India, from February 18 to 20, 2009. The meeting gathered global U.S. Agency for International Development (USAID)-funded organizations implementing HIV prevention programs among most-at-risk populations (MARPs) to discuss how they accomplished their work. While PEPFAR acknowledges that there are many groups that are considered to be at high risk, this meeting focused on issues pertaining to men who have sex with men (MSM), sex workers, and injecting drug users (IDUs).

The objectives of the meeting were to:

- Identify and share approaches to prevention for MARPs, including development, implementation, and evaluation of program activities.
- Discuss successes and challenges in developing and implementing interventions targeting MARPs in PEPFAR countries.
- Begin to develop action plans at the country and program level.
- Develop a consensus about important research, practices, policies, and guidelines needed to effectively develop, implement, and scale-up prevention interventions targeting MARPs.

The meeting was organized around the *Core Components of a Strategic Response for MARPs* (Figure 1), developed by the MARPs TWG.

**Figure 1. Core components of a strategic response for MARPs**



The three-day meeting benefited from the active participation of U.S. Government (USG) headquarters and field prevention staff, as well as representatives from implementing organizations in Asia, Africa, and the Caribbean. Eighty participants from 22 PEPFAR-supported countries, PEPFAR MARPs TWG members, and staff from the PEPFAR/India office attended the meeting. The Meeting Agenda can be found in Appendix A. The Participant List can be found in Appendix B.

# OVERVIEW OF THE MOST-AT-RISK POPULATIONS TECHNICAL WORKING GROUP

*Anne Thomas from the U.S. Department of Defense gave the introductory remarks on behalf of TWG Co-Chairs Linda Wright-DeAguero, Benny Kottiri, and Karina Rapposelli. The presentation provided a headquarters perspective on the support provided to field efforts by the MARPs TWG.*

In virtually all regions outside sub-Saharan Africa, HIV disproportionately affects IDUs, MSM, and sex workers. In addition to being hard-to-reach, these groups are less likely to have access to and use services due to stigma and criminalization of these behaviors. Although this conference focused on sex workers, IDUs, and MSM, participants were asked to consider other high-risk groups in their plans, such as clients of sex workers, the military and other uniformed services, mobile populations, street youth, incarcerated persons, men and women engaging in transactional sex, and persons who engage in alcohol-associated HIV sexual risk behaviors.

To increase collaboration among USG partners, the PEPFAR Preventing HIV in Persons Engaged in High-Risk Behaviors TWG sits on a prevention steering committee comprising members of various prevention-related TWGs. This year, under the Headquarters' Operational Plan, USG-funded prevention efforts will pursue these goals: 1) expand the implementation of a minimum package of services; 2) strengthen the design, implementation, and evaluation of new prevention strategies; and 3) expand the portfolio of effective interventions.

For the first time this year, the interagency TWGs will also develop their State of Program Area (SOPA), which outlines future technical and programmatic needs. Technical Working Groups have been asked to submit SOPAs to the Office of the Global AIDS Coordinator (OGAC) for its consideration and further dissemination to USG field-based staff. Some of the emerging action points surfacing from this process include:

- Expand the reach of prevention programs through strategies that promote adequate coverage, intensity, and scale of activities.
- Use data to identify populations at risk and better target interventions.
- Conduct comprehensive programming, including a minimum package of services.
- Include approaches for enabling environments.
- Ensure the quality of prevention programs.
- Develop capacity to support prevention efforts.
- Develop a shared framework for prevention programs.

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# HIV AMONG MOST-AT-RISK POPULATIONS

*Abu Abdul-Quader provided a detailed look at existing evidence of HIV prevalence among different MARPs, exploring differences by region.*

Most-at-risk populations remain a driving force behind the HIV epidemic. Most-at-risk populations exist in all regions of the world, and MARPs are more likely to have high prevalence of HIV compared to the general population. Most-at-risk populations are a major driver of the epidemic in some regions, such as Eastern Europe and Central Asia, where the HIV epidemic is dominated by IDUs. Although sex work is the main mode of HIV transmission in Asia, the data suggest that there have been recent shifts in affected populations, with increased rates of HIV observed among MSM. In sub-Saharan Africa, though, there is a lack of data on MSM and IDUs as well as prevention interventions targeting MARPs, especially MSM and IDUs.

In the next five years, programs will need to respond strategically in terms of collecting data, developing interventions that are appropriate and evidence-based, evaluating interventions for further expansion, and addressing issues related to stigma and discrimination.

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# WHAT CONSTITUTES A STRATEGIC RESPONSE TO MOST-AT-RISK POPULATIONS?

*To increase prevention for MARPs, Swarup Sarkar encouraged programs to implement effective prevention interventions, to think strategically, and to work at full scale. The essential elements of a strategic response to MARPs include a standard package of services, standardized methods and indicators for monitoring program outcomes, and concerted efforts to increase the scale and intensity of program activities.*

Most-at-risk population interventions will decide the future of the AIDS epidemic outside sub-Saharan Africa. In Asia, HIV prevention programs have been hampered by insufficient focus on high-risk groups, despite dramatic increases in resources between 1986 and 2007. In countries where MARPs have been targeted, poor quality and limited coverage have limited the effectiveness of interventions. Programs must focus on coverage, since it is generally assumed that 60 to 80 percent coverage is necessary for substantial declines in HIV incidence among MARPs.

Current interventions do not have the desired results, for a number of reasons. Funding is often diverted to ineffective interventions. In many cases, interventions are only partially implemented. Awareness-raising programs must also provide tools and services to be effective. For example, a program that distributes leaflets to IDUs may increase risk perception, yet not reduce needle sharing if it does not include or link to other prevention activities. Additionally, many interventions do not provide sufficient quality, dosage, and frequency of administration (i.e., number of contracts with outreach workers per month or needles per week). Finally, programs must avoid counterproductive activities that may even result in increased transmission of HIV, such as criminalization of male-to-male sex.

Public health interventions should provide a package of complementary services for MARPs. For example, programs can impart knowledge through mass media campaigns or peer education, provide preventive services and commodities as well as treatment services for prevention, promote community involvement, and use local advocacy and supportive policies to create enabling environments.

Core programmatic components for scaling-up MARPs interventions include:

- Size estimation
- Planning services by geographic and administrative units
- Implementing a differential package of services that address the needs of different MARPs
- Establishing basic infrastructure and services
- Instituting a common set of indicators for monitoring programs
- Increasing the quality and intensity of prevention intervention delivery.

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# BEST PRACTICES AND ISSUES IN MEASUREMENT APPROACHES

## OVERVIEW OF PRINCIPLES AND BEST PRACTICES IN MEASUREMENT APPROACHES

*Keeping ahead of the curve is difficult when it comes to measurement approaches for MARP epidemics. Willi McFarland discussed commonly used sampling approaches, population size estimation techniques, and key biomedical and behavioral indicators for MARPs. The presentation weighed the results from respondent-driven sampling and time-location sampling.*

Because high-risk behaviors are often stigmatized and sometimes illegal, MARPs are difficult to sample. Probability-based sampling, the gold standard, is unobtainable in most situations. Program decisions must often be made with imperfect data generated using non-probability, convenience, or snowball sampling. More recently, methods that approximate probability-based sampling but have the efficiency and convenience of snowball sampling have come into practice. Best practices in MARPs sampling now include respondent-driven sampling (RDS) and time-location sampling (TLS), each with its own strengths and limitations. Because of these tradeoffs, public health practitioners need to select their sampling methods depending on the situation.

- **Respondent-driven sampling:** In RDS, initial members of the target population recruit additional members to increase the number of participants until a hypothetical point of equilibrium is reached. At that point, the population composition stabilizes and it becomes possible to statistically adjust the sample for biases in recruitment. There have been many successful applications of RDS around the world, and some notable failures.<sup>1</sup>
- **Time-location sampling:** In TLS, the researcher begins with a rigorous physical and ethnographic mapping of the population. This becomes the basis from which to randomly select venues, days, and times for recruiting respondents. Time-location sampling has been successfully applied in many settings. Some limitations of TLS include dependence on the quality of formative research studies, uncertain probabilities of inclusion, complicated fieldwork logistics, lengthy time requirements, and potential ethical considerations.

As we enter the era of scale-up for antiretroviral therapy (ART) programming, many challenges remain. The rapid scale-up of services and increased funding levels create an increased demand for

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<sup>1</sup> For example, serial cross-sectional surveys of MSM in Beijing employed two waves of RDS in 2004 and 2006. The results of the surveys indicated an increase in prevalence from less than 1 percent to greater than 5 percent. Yet, on closer observation, the characteristics of the samples of respondents also differed between the two surveys, with major differences in levels of education, proportion of internal migrants, and proportion of people expressing a gay identity. In short, a low level of agreement was observed in the characteristics of the sampled populations across the two waves of the survey, indicating that the results were not necessarily comparable.

data. As more people receive ART, we can expect changes in HIV prevalence, due to both ongoing changes in the transmission of HIV, as some populations become more or less vulnerable than they were before, and the longer-term survival of people on treatment. As a result, there is a demand for better biological measures, such as estimates of new infections. Surveillance efforts will shift needed attention toward finding previously unknown infections, gauging unmet need for care and treatment, and tracking antiretroviral resistance. At the same time, tracking of core behavioral and programmatic indicators—such as HIV-related knowledge and behaviors—will need to be maintained to chart progress over time. Finally, new measures are needed to explore emerging hypotheses; for example, better measures of sexual networks will help researchers explore the hypothesized relationship between concurrency and HIV transmission.

## **RAPID ASSESSMENT AMONG DRUG-USING POPULATIONS: LESSONS LEARNED FROM SOUTH AFRICA**

*Rapid assessment methods are anthropological in their ability to reach and describe people in their natural settings and to capture their words. Karen Kroeger discussed the core principles of rapid assessment and provided examples of how various rapid assessment techniques have been applied in South Africa to understand MARPs.*

Rapid assessments offer program planners and managers insight into a situation or issue and provide a basic understanding of how things work within the local context. Typically, rapid assessments have a limited scope of investigation and utilize a short period of observation. Rapid assessments almost always collect information from small samples, and their results are not usually generalizable to a population. They employ primarily anthropological methods, but tend to utilize other complementary sources of data to permit triangulation and confirm major observations. Researchers generally prefer team-based approaches, involving both insiders and outside experts in collecting and interpreting data. Many study designs seek to balance participation, with representation from affected populations (e.g., drug users or sex workers), gatekeepers (e.g., bartenders or brothel managers), providers, and policymakers.

The international rapid assessment response and evaluation (I-RARE) approach provides a useful framework for carrying out rapid assessments. The approach engages high-risk populations, community members, and other stakeholders in planning program activities, and encourages their subsequent participation in program implementation.

In South Africa, researchers used I-RARE among users of injecting and non-injecting drugs in Pretoria, Durban, and Cape Town, and among drug-using populations of sex workers and MSM. The objectives of the study were to learn about the context of HIV risk behaviors and about barriers to prevention services. Following two weeks of training for field teams, researchers collected data using a variety of methodologies that included participant observation, mapping, key informant interviews, focus groups, and a short demographic survey. Adding a biomedical component—voluntary counseling and testing using rapid tests—was determined to be both feasible and useful.<sup>2</sup>

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<sup>2</sup> Optional rapid testing was offered to all key informants; 70 percent of 131 key informants agreed to be tested for HIV using rapid tests, and 28 percent tested positive for HIV.

Findings indicated a high level of general knowledge of HIV prevention strategies among all groups despite the presence of high-risk behaviors. Overlapping drug use (injecting and non-injecting) and sexual risk behaviors were documented. Respondents' experiences with HIV prevention services were generally perceived to be negative due to stigma, poorly delivered pre- and post-test counseling, and a lack of well-targeted messages. Following dissemination of the results in September 2006, a consortium of community-based organizations (CBOs) working with MSM, vulnerable women, and drug treatment providers was formed to discuss the direction of interventions, including the integration of HIV services into drug treatment services.

## **NEPAL: MAPPING/SIZE ESTIMATION OF MOST-AT-RISK POPULATIONS**

As a basis for MARPs program development and monitoring, programs must estimate the size of hidden and stigmatized populations. Drawing on recent experiences in Nepal, Shanta Gurung reviewed the experience of employing different size estimation techniques, including census (mapping and population enumeration), capture-recapture, and multiplication methods.

Size estimation is a critical component for program development, implementation, and monitoring. Yet MARPs remain difficult to enumerate in many countries. In Nepal, a modified census method was used to estimate the size of MARPs, including IDUs, sex workers, and MSM. A combination of methods was used to map locations where members of these groups tended to congregate, including key informant interviews, observation, tracking of target populations, and observation of gathering spots. At each site, enumerators counted members of most-at-risk groups, and the estimates were confirmed on the basis of interviews with key informants.

The following factors were critical to size estimation of MARPs in Nepal using a modified census approach:

- A high level of coordination with local nongovernmental organizations (NGOs) and other stakeholders
- Locally hired motivators and enumerators
- Intensive site observation and “research walks” to identify gathering spots
- Geographical mapping of target populations
- Counts of target populations in specific locales
- Triangulation of size estimates with information collected from key informants
- Sharing counts with local NGOs and other stakeholders before finalizing the estimated size of the target population.

Additionally, in 2004, researchers used three different methods to estimate the size of the MSM population in Kathmandu, including census, multiplier, and capture-recapture methods. The methodologies produced different estimates, but together provided the basis for a range (minimum, maximum) that is currently being used to represent the size of the MSM population in Kathmandu, as follows:

- The census method produced an estimate of 6,000 to 8,000 MSM.
- The multiplier method produced an estimate of 20,000 MSM.
- The capture-recapture method produced an estimate of 500 to 700. (This was the first-ever application of this methodology in Nepal, and it was determined that this method was inappropriate for the local cultural context.)
- The size of the MSM population in Kathmandu was estimated at a minimum of 7,000 and a maximum of 20,000 men (or 1.2 to 3.5 percent of the adult male population), reflecting the level of uncertainty inherent in the methodologies.

## INTEGRATED BIOLOGICAL-BEHAVIORAL SURVEILLANCE IN INDONESIA

*In Indonesia, there are two epidemics: a concentrated epidemic among MARPs and a generalized epidemic occurring on the island of Tana Papua. To study both, researchers conducted two different Integrated Biological-Behavioral Surveillance (IBBS) surveys. This methodology collects both behavioral survey data and data resulting from biological specimens (e.g., HIV status). Lisa Baldwin described these surveys in detail, from study design to analysis and dissemination.*

An IBBS in Tana Papua, a region of Indonesia that is experiencing a generalized epidemic, sampled 6,216 respondents aged 15 to 49 years in 10 of 29 districts. Behavioral survey data and blood samples were obtained from 96 percent of sample respondents. HIV testing took place on site using double rapid tests, and dried blood spot samples were sent to the National Reference Lab for quality control and for resolution of discrepant findings. The total cost of the survey was approximately U.S.\$1 million, with an additional U.S.\$100,000 in technical assistance.

The process began with a planning workshop in Jayapura and Jakarta involving a full array of stakeholders. Three organizations collaborated on the survey: the Statistics Board coordinated fieldwork and conducted behavioral surveys; the Ministry of Health collected blood samples and transported them to the National Reference Lab; and Family Health International (FHI) provided oversight for financial management and for operational and technical issues. All three organizations participated in training and field supervision, which was critical to ensure adequate quality control. Although the Statistics Board was originally responsible for analysis and dissemination, a lack of experience with HIV and AIDS data resulted in the need for technical assistance from FHI and the World Bank to analyze the data. Dissemination events shared the initial results of the survey. Survey results show HIV prevalence among men to be 2.9 percent and 1.9 percent in women. Among ethnic Papuans, HIV prevalence is 3.5 percent.

Other regions of Indonesia are known to be experiencing concentrated HIV epidemics among most-at-risk groups. In 2007, an IBBS was conducted among MARPs in 16 cities in 8 provinces. The survey focused on female sex workers, MSM, transgender (Waria) groups, IDUs, and high-risk men (including truck drivers, seafarers, dock workers, taxi drivers, and civil servants). Samples were selected using time-location cluster sampling and RDS, and behavioral data and biological specimens were obtained from more than 90 percent of all sampled respondents. The total cost of the survey was about U.S.\$1 million, with an additional U.S.\$200,000 for technical assistance.

Although the development of a final report is in progress, an initial stakeholder dissemination event was held in November 2008. Initial survey results show:

- Younger female sex workers have higher HIV prevalence than their older peers. Sex workers selling sex for less than six months have the highest prevalence.
- Among MSM, 10 to 20 percent have never used a condom, and most have never bought condoms.
- Most MSM had unprotected insertive and receptive anal sex in the past month.
- HIV prevalence is highest among the transgender or Waria population (5 percent), as is the prevalence of rectal sexually transmitted infections (STIs).

Several challenges remain, among them matching the programmatic response to the rapidly evolving epidemic, tackling stigma and discrimination, and liaising with donors for continued funding. Yet a few major recommendations emerge from the experiences of these two IBBSs:

- Engage government early, often, and throughout the process.
- Share funding with the government to promote ownership from the beginning.
- Promote the understanding that because MARPs epidemics can evolve quickly, it is important to track changes in the epidemic and stay responsive programmatically.

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# MONITORING AND EVALUATION FRAMEWORK OF PEPFAR II INDICATORS FOR MOST-AT-RISK POPULATIONS

## OVERVIEW OF PREVENTION FRAMEWORK AND INDICATORS FOR MOST-AT-RISK POPULATIONS

*PEPFAR II has been developing a framework and indicators for monitoring and evaluating HIV and AIDS activities, including programs for MARPs. Roger Myrick described the development process and outlined the key OGAC-level, program-level, and priority-outcome indicators for MARPs.*

The goal of the PEPFAR II Prevention Indicator process was to develop a unified framework linking program goals and activities with output and outcome indicators that could be used for either monitoring or evaluation purposes. The indicator development process included reviewing program and indicator priorities, reviewing current program activities and output indicators from field and implementing partners, developing a framework for program activities and output indicators, developing program- and PEPFAR-level indicators, developing outcome indicators, and submitting these to OGAC for review (currently in process).

The process identified the following priority areas for programs and indicators:

- Coverage: Are we reaching a critical mass of affected populations?
- Targeting: Are we targeting the right populations?
- Quality: Are we doing the right things (e.g., training, supervision systems) to ensure high quality of services?
- Intensity: Are interventions sufficiently intense (e.g., from single-session interventions to those offered twice-weekly for several months) to make a difference?

A framework was designed to accommodate observation of program activities intended for different populations (general population adults, youth, people living with HIV and AIDS [PLHIV], and MARPs). For each population, the framework organizes program interventions according to the level, type, and delivery mode. The framework links the various interventions to indicators using a logic model, recommending:

- Program-level output indicators for USG country teams to use in monitoring program activities at the partner level

- PEPFAR-level output indicators that harmonize with the Joint United Nations Programme on HIV and AIDS (UNAIDS) and the U.N. General Assembly Special Session indicators for reporting by USG country teams to OGAC.

For example, the following OGAC-level indicators are proposed for MARPs:

- Number of individuals reached with intended number of sessions for individual and small group interventions, using an evidence-based program or required minimum standards
- IDUs receiving drug substitution therapy
- Number of facilitators trained
- Number of targeted condom service outlets.

Proposed program-level indicators for MARPs (recommended but not required) include:

- Number of members of MARPs (by population type) reached with individual-level interventions that are evidence-based and/or meet the minimum standards required
- Number reached with small group-level intervention
- Number of members of MARPs referred to other services (such as treatment for STIs, counseling and testing, ART) divided by the total number of individuals receiving intervention
- Total number of referrals divided by the total number of referred
- Number of products distributed (e.g., condoms and lubrication)
- Number of targeted condom service outlets, disaggregated by new and continuing sites.

## MONITORING AND EVALUATION OF MOST-AT-RISK POPULATIONS HIV INTERVENTIONS IN THAILAND

*Despite national success in slowing the spread of HIV in the 1990s, HIV rates among MARPs in Thailand have been increasing. Kimberley Fox described how data from program monitoring, periodic surveys using respondent-driven sampling, and national surveillance are being used to describe HIV risk among IDUs, sex workers, and MSM, and to better understand the impact of program efforts.*

A successful response to the HIV epidemic in Thailand initially focused on female sex workers and their clients and included a 100 percent condom policy in brothels. Currently, Thailand is experiencing an exploding HIV epidemic among MSM in Bangkok, and sex work is becoming increasingly non-venue and street-based. Within this context, the USG in Thailand provides technical assistance to build capacity, ensure sustainability, and facilitate the integration of activities into routine government systems and services. Technical assistance increases the capacity of monitoring and evaluation in several areas, as described below.

- **Monitoring trends in program outputs and outcomes:** An IDU peer network is implementing an IDU outreach program in Bangkok that is managed by the Bangkok city government. Existing program monitoring systems provided data on behavior change and referrals/access to methadone treatment, voluntary counseling and testing (VCT), and health

services. These data were limited by potential social desirability bias (peer outreach workers collected the data), no information on non-participants, and no information on program coverage. To address these limitations, technical assistance was provided to conduct periodic surveys using RDS to reach hidden populations of IDUs. Survey interviewers—who were not peer outreach workers—had no previous relationship with participants. Size estimation was conducted to provide a denominator from which to estimate program coverage.

- **Improving monitoring and evaluation (M&E) in sensitive contexts:** Two Thai prisons participated in a peer education project for HIV prevention. The project collected monitoring data from outreach records and referral cards. These data were limited because they included only a small set of variables and were not collected anonymously. In response, a survey using handheld computers allowed people to report behaviors anonymously. NGO staff were employed as recruiters and interviewers. Multiple ethical reviews and informed consent procedures protected the rights of prisoners.
- **Monitoring and evaluation during scale-up of service for MSM:** With support from the Global Fund, Thailand is scaling up HIV interventions for MSM. The USG is providing technical assistance to harmonize reporting systems across government and NGO providers in 14 provinces. Exit interviews at service points for MSM provide better information on MSM. National sentinel surveillance data will be used to evaluate the overall impact of interventions.
- **Monitoring and evaluation of a national prevention program for female sex workers:** Despite Thailand’s accomplishments in preventing HIV among female sex workers, existing M&E data were limited. A survey using RDS sampling measured the current status of HIV prevention among female sex workers to understand changes in the context of commercial sex and to see how well routine surveillance reaches sex workers, including those at highest risk of HIV.

## USING STRATEGIC INFORMATION TO IDENTIFY AND OVERCOME THREATS TO CAMBODIA’S REMARKABLE RESPONSE TO HIV/AIDS

*As the HIV epidemic evolves, so must programs. The Khmer HIV/AIDS NGO Alliance (KHLANA) in Phnom Penh, Cambodia, demonstrates how a program employed epidemiologic data to shift from its initial focus on sex workers to a broader array of prevention efforts focused on MSM, IDUs, and other groups, while also improving access to drug treatment and HIV care and treatment.*

In Cambodia, HIV prevalence among adults declined from 2 percent in 1998 to 0.9 percent in 2006, in conjunction with multi-sectorial efforts to address the HIV risks associated with sex work. Notably, the proportion of brothel-based female sex workers reporting consistent condom use rose from 51 percent to 90 percent between 1998 and 2002. However, in recent years there has been a growth in the number of non-brothel-based sex workers, while demand for commercial sex (as indicated by the reported number of clients for brothel-based female sex workers) has remained consistent. In February 2008, a new law on “suppression of human trafficking and sexual exploitation” resulted in the closure of brothels by police, human rights violations, and increasing loss to follow-up among sex workers living with HIV who had been receiving treatment. And, although the data on MSM and IDU populations are more limited, surveys suggest that HIV prevalence is about 9 percent among MSM and 25 percent among IDUs.

As the HIV epidemic evolves, so must programs. Khmer HIV/AIDS NGO Alliance employed epidemiologic and routine program data to shift from its initial focus on sex workers to prevention efforts for MSM, IDUs, and other groups. These data also provided evidence on how well programs have improved access to drug treatment and to HIV care and treatment, enabled programmatic adjustments, identified issues requiring further investigation, and provided information for advocacy and education as well as early warning of potential problems.

Moving forward, priorities for targeted assessments include:

- Understanding the evolving sexual networks and the continuum of risk in transactional sex
- Understanding the diversity of risks in the MSM population
- Better targeting of prospective male clients of sex workers
- Exploring opportunities to integrate addiction services for IDUs into existing programs
- Assessing the impact of current enforcement-oriented approaches to trafficking on access of MARPs to information, commodities, and health services
- Assessing the impact of vertical programming on the health system.

## **MOST-AT-RISK POPULATIONS IN UGANDA: WHAT DO WE KNOW AND WHAT IS BEING DONE?**

*Uganda is experiencing a generalized mature epidemic, with an adult HIV prevalence of 6.4 percent. After surveying a range of available data sources and current program activities, Wolfgang Hladik concluded that not enough is known about the epidemics occurring among MARPs and, as a result, not enough is being done.*

Uganda is experiencing an HIV epidemic in the general population, with HIV prevalence among adults estimated at 6.4 percent. The HIV epidemic among MARPs in Uganda is poorly understood, and the programmatic response has been insufficient. Data on MARPs are mostly non-representative, outdated, soft, or imported from neighboring countries. In addition, almost all funding is directed to non-commercial heterosexual HIV prevention and prevention of mother-to-child transmission (PMTCT). With limited government involvement, MARPs programming remains poor in terms of coverage, and its quality and effectiveness are unknown.

A few high-risk groups have been identified in Uganda:

- **Residents of fishing communities:** Although the first AIDS cases were reported from these communities in 1983, only a few studies have been conducted. One study estimated HIV prevalence at 20 percent among adults in one fishing community on Lake Victoria. Prevailing risk factors include high mobility, long periods away from home, daily cash income, alcohol consumption, and the lack of social support networks.
- **Men who have sex with men:** Same-sex behavior is highly stigmatized and criminalized in Uganda (life imprisonment is the maximum penalty). A groundbreaking survey found that most MSM in Kampala are Ugandan (92 percent), many are bisexual (39 percent), many practice unprotected receptive sex (37 percent), and 27 percent are involved in sex work.

- **Sex workers:** Commercial sex is highly stigmatized and illegal. Two recent studies conducted among sex workers in Kampala revealed HIV prevalence of 23 and 47 percent.
- **Other MARPs:** Little or no data are available on other MARPs groups in Uganda: IDUs, migrant workers, slum dwellers, internally displaced people, prisoners, people with disabilities, partners of clients of sex workers, street youth, and the homeless.

Additionally, most services for MARPs in Uganda are provided without direct government involvement through a patchwork of programs and organizations with poor coverage, poor coordination, limited funds, and little or no evaluation of effectiveness. The challenges these programs face include stockouts, staff shortages, minimal funding, inadequate health infrastructure, legal issues (e.g., illegality of male-to-male sex), and low uptake. According to the National Strategic Plan, in 2008–2009 the Ugandan government spent \$347 million on HIV and AIDS programs. Of that amount, approximately \$200,000 was allocated to programs for sex workers and clients, and none for IDU and MSM programs.

Moving forward, Uganda should place greater priority on programming for MARPs by:

- Collecting more and better data
- Matching prevention efforts to affected populations to reflect the distribution of new infections
- Increasing government engagement
- Increasing funding.

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# **BUILDING THE CAPACITY OF NONGOVERNMENTAL ORGANIZATIONS, GOVERNMENT, AND CIVIL SOCIETY TO IMPLEMENT PROGRAMS**

## **INVOLVING COMMUNITIES: WHY AND HOW**

*Community involvement helps extend HIV services to their intended populations, connects programs to the needs of community members, and ensures long-term sustainability. Swarup Sarkar discussed the need for community involvement, from initial planning through program implementation, and the importance of building local capacity.*

Involving and empowering HIV-affected communities is critical for creating enabling environments to help reduce the number of new infections. While NGOs and community organizations are often credited with developing innovative approaches, they need capacity-building to strengthen service delivery and to meet quality standards. Thus far, capacity-building efforts, while successful on a small scale, have not translated into improved service delivery on a larger scale.

Communities should be involved at all stages of the programming process, from planning through implementation. Building capacity involves the following key elements:

- Defining roles
- Defining elements and standards
- Conducting a needs assessment
- Dividing labor
- Training
- Ongoing support.

# **BUILDING THE CAPACITY OF NONGOVERNMENTAL ORGANIZATIONS AND CIVIL SOCIETY TO IMPLEMENT MOST-AT-RISK POPULATION PROGRAMS**

*Investments in civil society and local capacity can build a sustainable response to the HIV epidemic. John Howson presented the International HIV/AIDS Alliance's "Linking Organization Model," an approach that seeks to strengthen local NGOs through combined investments in organizational development and in programmatic and institutional sustainability, while ensuring quality through an accreditation process.*

The International HIV/AIDS Alliance and its partner organizations are implementing an approach—the Linking Organization Model—to strengthen the response of NGOs to HIV and AIDS. To be selected as a Linking Organization, an organization must first have a recognized commitment to human rights programming and demonstrate an ability to fully engage MARPs. Many of the Linking Organizations have not previously worked in HIV but were chosen for their willingness and potential to do so. Technical support is provided primarily through regional technical support hubs, south-to-south exchanges, or from one Linking Organization to another. Linking Organizations increasingly access funding through in-country mechanisms, rather than through the Secretariat of the International HIV/AIDS Alliance.

One Linking Organization, KHANA in Cambodia, implements a range of prevention activities among sex workers, MSM, IDUs, PLHIV, and transgender groups. With a \$4.5 million budget, it supports large-scale programs that provide community-based care for PLHIV and for orphans and vulnerable children. The Khmer HIV/AIDS NGO Alliance also works to strengthen networks of MSM and PLHIV, and its policy activities have influenced decision making at a national level. Since about 2006, KHANA has become a direct recipient of funding from both USAID and the Global Fund. The Khmer HIV/AIDS NGO Alliance's need for external technical assistance has decreased rapidly over time, with many of its remaining technical assistance needs now provided from within the region. Findings from a recent USAID evaluation found strong organizational capacity and management systems as well as a zero tolerance approach to corruption. The success of the program has been attributed to strong leadership, appropriate funding during start-up, sympathetic donors, willingness to learn from mistakes, ongoing collaboration with the government, and getting the right technical assistance from the right source.

Ukraine has one of the fastest growing epidemics in the world, with concentrated epidemics occurring among IDUs, sex workers, and MSM. Operating within this context, the HIV/AIDS Alliance Ukraine recently became an independent Linking Organization with its own governance structure and Board of Trustees. With funding from USAID and the Global Fund, the HIV/AIDS Alliance Ukraine implements a comprehensive HIV and AIDS program. Its program portfolio consists of prevention for IDUs, MSM, sex workers, PLHIV, and prisoners; medication-assisted therapy (MAT) for IDUs; and rapid scale-up of ART for both adults and children. Some of the factors leading to the success of the HIV/AIDS Alliance Ukraine include strong local leadership and technical expertise, implementation of a participatory approach, sufficient funding, access to high-quality technical assistance, policy engagement, and cooperation and support from the government of Ukraine.

# AIDS PREVENTION AND CONTROL PROJECT

*A multifaceted capacity building program has enabled the AIDS Prevention and Control (APAC) Project to contribute to recent declines in HIV prevalence in Tamil Nadu, India. Bimal Charles described APAC's approach to capacity-building, with activities aimed at increasing the capacity of NGOs and CBOs, service providers, government institutions, and HIV and AIDS experts.*

AIDS Prevention and Control implements an HIV and AIDS program in Tamil Nadu, a region of India that is experiencing concentrated HIV epidemics among MSM, IDUs, and female sex workers and their clients. Core prevention activities implemented by the project include behavior change communication, condom promotion, and advocacy. AIDS Prevention and Control has built its program strategies on the basis of good baseline research, close collaboration with the government, and transparent operating systems.

AIDS Prevention and Control has funded and built the capacity of more than 100 NGOs in the state of Tamil Nadu. A wide range of activities have increased the capacity of local providers, community members, government officials, and experts; NGO staff at all levels have received training. The project has focused on strengthening the capacity of individual service providers whom MARPs trust, such as physicians, registered indigenous medical practitioners, auxiliary nurses and midwives, community health workers, druggists and pharmacists, and condom retailers.

Community capacity-building activities aim to strengthen the capacities of peer educators, association leaders, community associations, and PLHIV networks. AIDS Prevention and Control recognized the importance of sensitizing political leaders and policymakers to the realities of marginalized groups. Experts have been engaged to strengthen governance and management systems in administration and finance, project management, and M&E. Local NGOs have received technical assistance in core HIV program planning and implementation skills, including basic knowledge of HIV, how to conduct baseline surveys, interpersonal communications, and community mobilization.

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# **BEST PRACTICES AND KEY ISSUES RELATED TO ENABLING ENVIRONMENTS: POLICIES, STIGMA, AND DISCRIMINATION**

## **PEPFAR GUIDANCE UPDATE FOR PREVENTION AMONG MOST-AT-RISK POPULATIONS**

*PEPFAR guidance continues to call for data-driven programming with persons engaged in sex work, clients of sex workers, IDUs, and MSM, as well as additional populations, when justified by epidemiologic data. Karina Rapposelli described PEPFAR's comprehensive package of services for MARPs.*

A minimum package of services for MARPs includes community-based peer outreach; HIV counseling and testing; HIV treatment and care; risk-reduction messages; interventions to address alcohol use; STI treatment and control services; substance use treatment, including medication-assisted therapies; and linkages to job skills training and other health services, including psychosocial services. With its focus on evidence-based approaches, some changes can be anticipated in the elements of the recommended package of services under the new administration. Participants were reminded to tap into existing resources given expected limitations in funding that can be anticipated over the next few years. Examples of additional funding sources include the Bureau of International Narcotics and Enforcement Affairs, the U.N. Office on Drugs and Crime, UNAIDS, and the Clinton Foundation. *Technical Considerations* and the *AB and IDU Guidance* are useful resources available at [www.pepfar.net](http://www.pepfar.net).

## **CONTROLLING THE HIV EPIDEMIC AMONG INJECTING DRUG USERS IN CHINA**

*The Centers for Disease Control and Prevention have implemented a multipronged approach to help the government of China reduce HIV transmission among IDUs. Marc Bulterys described how public health strategies—risk-reduction education, expansion of a methadone maintenance treatment (MMT) program, and needle exchange programs—were augmented by strategies to encourage policy change, public and community education, and strengthened human resources.*

In China, 740,000 people are currently infected with HIV, and it is estimated that by 2020 the number of infections will be between 1.5 and 2 million. While China has existing service delivery

capacity and tremendous human and financial resources, the quality of HIV and AIDS services is inconsistent. The Global AIDS Program (GAP) works to strengthen integration of HIV and AIDS activities within the national and provincial programs and to build the evidence base for programs. The program second staff, provides technical assistance at different levels, organizes technical exchange visits, and maintains flexibility in a fast-changing environment.

Injecting drug use is one of the main drivers of the HIV epidemic in China and accounts for 44 percent of all infections. China's primary measure for IDU control has been compulsory detoxification and risk-reduction education; the country currently operates approximately 649 detoxification centers and a number of labor camps that together accommodate approximately 340,000 to 400,000 drug users. Methadone maintenance treatment programs started in 2004 with 8 clinics and have expanded to more than 600 in 23 provinces in 2009. In 2006, GAP supported the first mobile clinic, which showed that it was possible to go to the community and have users access the services provided. The model has since been replicated by the government in nine provinces, with 21 mobile MMT clinics. The number of patients on MMT increased rapidly over the last four years, rising to 179,000 patients in 2009. Although not directly support by the GAP, more than 900 needle exchange sites in 17 provinces provide more than 38,000 clients with more than a million needles every month.

As is the case in other parts of the world, stigma, discrimination, and marginalization remain difficult issues. Other challenges include:

- Complexity of multisector collaboration
- Police harassment
- Insufficient coverage
- Low enrollment and high drop-out rates in some clinics
- Poorly trained staff
- Too few and/or incompletely implemented comprehensive interventions
- Low methadone dosage (45 to 55 mg/day compared 60 to 120 mg/day in other countries)
- Lack of effective linkages between MMT and needle exchange programs, especially for people coming out of detoxification centers.

Several strategies have been enacted to address these challenges. Senior policymakers are aware of harm reduction efforts implemented in other countries. A new law on narcotics control, signed in 2008, is more supportive of drug replacement therapy. Other strategies include public and community education, strengthening links between public health and public security, training MMT staff to provide optimal services, and public health evaluation (e.g., to investigate the effectiveness of increasing the methadone dosage and other enhancements to IDU interventions).

Several obstacles remain to successful implementation of the program, including:

- A large population with multiple HIV "hot spots" and subepidemics
- Insufficient human capacity development, especially at the local levels in the poorest regions
- Matching national and local resources to strategic HIV priorities

- Limited civil society and NGO involvement
- Poverty and inequitable financing of health care, despite rapid economic growth.

## **ENABLING ENVIRONMENTS FOR MOST-AT-RISK POPULATIONS: THE INDIAN EXPERIENCE**

*Laws that criminalize sex work, IDU, and male-to-male sex push these behaviors underground, making it more difficult for programs to reach MARPs with effective prevention activities. Tripti Tandon provided an update of the legal environment affecting MARPs in India and presented an argument for legal reform to create an enabling environment for prevention programs.*

Adverse laws are catalysts for empowerment, providing opportunities for marginalized communities to challenge disenfranchisement and claim legal rights. The Lawyer's Collective works through litigation and advocacy to involve communities in influencing politics and policy in three main areas:

1. Public health and the law, including standards of health care and issues of consent, confidentiality, and antidiscrimination
2. Access to treatment and intellectual property law, including countering drug manufacturers' efforts to patent their drugs, which makes them less affordable
3. Criminalization of populations and the law, including decriminalizing sex work, male-to-male sex, and IDU.

Men who have sex with men, IDUs, and sex workers fall under criminal sanction. While sex work in itself is not a crime, activities related to sex work, such as soliciting, are illegal. Law enforcement largely targets sex workers as opposed to such third parties as traffickers, which puts peer workers in HIV interventions at risk. Drug consumption and possession are illegal; although the law recommends treatment in lieu of incarceration, there is limited follow-through. Finally, Indian law penalizes "unnatural" sex between males and between men and women, irrespective of age or consent. The law is rarely used to prosecute adults, but harassment and extortion by police and other local groups is common. In addition to limiting access to services, criminalization undermines trust and pushes activities underground.

The government is reviewing laws that criminalize sex work and sex between men. There are no current initiatives by the government or community groups to review the narcotics law.

## **PEPFAR/VIETNAM: DEVELOPING PROGRAMS TO REDUCE INJECTING DRUG USER-RELATED RISK**

*Injecting drug use remains a primary driver of Vietnam's HIV epidemic. John Eyres described technical assistance provided to Vietnam's national program, which includes primary prevention activities with the Ministry of Education and Training, community drop-in centers with addiction counseling and outreach, rehabilitation centers, and methadone replacement therapy.*

Although data from Vietnam suggest that about a quarter of IDUs are living with HIV, this figure does not accurately represent the gravity of the epidemic in "hot spots," where prevalence ranges from 33 to 66 percent. More than 60 percent of new infections are related to drug injection, which intersects with other high-risk behaviors, such as sex work, to increase the risk of HIV infection.

As such, IDU interventions play a central role in the PEPFAR program in Vietnam. Examples of current strategies that incorporate primary prevention of drug use, community-based efforts for active users, and MMT for recovering drug users are below:

- The Ministry of Education and Training implements a primary prevention curriculum on sexual health, HIV, and drug abuse. Program partners work with high-risk street youth and youth in vocational training schools. A pilot currently being tested trains active IDUs to avoid drug use in the presence of non-injectors and to refuse to give first injections to new users.
- Government and international partners implement community-based efforts through drop-in centers and community outreach. With a primary focus on behavior change communication, users receive HIV information and commodities and are encouraged to use counseling and testing services. Through the PEPFAR program, IDUs have access to some of the country's first professional addiction counseling.
- After years of advocacy, MMT is finally available in Vietnam. As one of the most effective medicines to treat addiction, methadone is a cornerstone of the strategy to reduce injections, slow the rate of new infections, and improve ART outcomes.

Since the program started in 2005, there has been tremendous progress. Key partners are working with at-risk youth and youth in vocational schools to prevent initiation of drug use, as well as supporting outreach for IDUs in more than 30 provinces. To enhance program effectiveness, a logistical network provides more than 12 million condoms annually. To ensure sustainability after PEPFAR, the Ministry of Labor and Social Affairs has provided training for the country's first hundred professional addiction counselors. In the spring of 2008, six pilot clinics opened; currently there are more than 800 drug users on MAT.

PEPFAR also works with a provincial AIDS committee to pilot a comprehensive approach to HIV and substance abuse prevention, care, and treatment for the country's 84 drug rehabilitation centers. Case managers work inside the centers counseling the users about their addiction and develop plans for release. Peer educators selected from among the center residents have been trained to promote counseling and testing.

# PROGRAMMATIC RESPONSES TO REACH MEN WHO HAVE SEX WITH MEN

## OVERVIEW: THE FORGOTTEN EPIDEMIC: HIV AND VULNERABILITIES AMONG MEN WHO HAVE SEX WITH MEN

*Set within the context of emerging information on the extent and severity of MSM epidemics in developing countries, this overview represents the current status of MSM programming. This presentation, prepared by the Office of HIV/AIDS, USAID, and presented by Tim Mab, described what is currently known about the epidemiology and prevention needs of MSM and delineated the core components of a minimum package of services for MSM.*

Despite the huge gaps worldwide in information about MSM, there are new data on the extent and severity of the MSM epidemic in developing countries and a growing understanding about the role of social exclusion in limiting access to prevention and care. The following risk factors have been identified in studies of MSM from around the world:

- Unprotected anal intercourse (higher for receptive partners)
- High frequency of male partners (more than three sexual contacts/week)
- High number of lifetime male partners (more than 10)
- Untreated STI (syphilis, herpes simplex virus 2)
- Injecting drug use
- Methamphetamine use.

Best programmatic practices include the following:

- Participation of MSM in the development, implementation, and monitoring of prevention programs
- Promoting consistent and proper use of condoms to achieve more than 90 percent use

- Increased availability of male and female condoms and lubricants
- Comprehensive health care services, including counseling and testing, STI treatment, and provision of or linkages to HIV treatment and care.

Core components of a minimum package of prevention services for MSM include:

- Risk-reduction activities, including targeted communications campaigns, outreach at hot spots, and online and peer education
- HIV counseling and testing
- Sexually transmitted infection treatment services
- Targeted condom and lubrication promotion and distribution.

Structural factors such as the criminalization of homosexual activity and discrimination have serious implications, particularly in the human rights context. Sex between consenting adults of the same sex is criminalized in 85 U.N. member states (more than half of all African countries), with 9 countries instituting the death penalty. Vulnerability to HIV infection increases dramatically wherever sex between men is criminalized. Furthermore, criminalization and homophobia limit access for MSM to HIV prevention, information, commodities, treatment, and care. Faced with legal or social sanctions, MSM are excluded or exclude themselves from sexual health and welfare services.

As efforts move forward, improved surveillance and M&E are critical. Epidemiological and social research is needed to better understand subpopulations and overlapping risks. Many countries also need accurate estimates of the size of MSM populations, which is critical information for targeting interventions. Improved access to adequate prevention and comprehensive care for HIV and to other health care services is essential. At the structural level, advocacy efforts should focus on repealing sodomy laws and protecting human rights.

## **HIV AND AIDS PROGRAMMING FOR MEN WHO HAVE SEX WITH MEN IN THE GREATER MEKONG REGION**

*Nithya Mani describes a technical assistance-based approach taken by the USG in the Greater Mekong Region that focuses on building local capacity and ensuring the sustainability of prevention activities through integration with routine systems.*

The USG implements a regional program for MSM in the Greater Mekong Region (Burma, China, Lao, Thailand, Papua New Guinea). USAID's approach relies on targeted technical assistance consisting of four key components:

- Developing replicable models for prevention and care
- Improving the quality of prevention and programs
- Increasing collection and use of strategic information
- Sharing successful models and providing technical assistance to other PEPFAR programs.

Comprehensive prevention for MSM, IDUs, and sex workers involves implementing a minimum package of services (MPS). The MPS includes behavior change communication, condom distribution, STI screening, HIV counseling and testing, substitution therapy and safer injecting practices, and linkages to care and treatment. These prevention approaches are strengthened by supportive activities, including capacity building, strategic information, community mobilization, policy and advocacy, stigma and discrimination, and income generation.

The MPS implemented for MSM started with mapping at-risk populations. In addition, key informants helped identify hot spots, and formative research was conducted to understand populations and tailor messages to them. Behavior change communication efforts use peer outreach and internet and entertainment vehicles. Drop-in centers house skills development and, in some cases, on-site VCT services. Targeted social marketing ensures access to condoms and lubricants either through the programs themselves or through condom outlets. Community mobilization and ownership remain critical to the success of the program. Peer leaders are selected and incentives instituted to encourage continuity. Services are also provided through mobile clinics and at community events. When VCT and STI services are not available on site, individuals are referred to government sites and private clinics. Finally, supportive interventions facilitate the implementation of the MPS, including strategic information initiatives and capacity building of NGOs, government, and networks at the country and regional levels.

To further create an enabling environment, the Purple Sky Network, a regional network, was the product of U.N.- and USG-focused attention on MSM. The network has contributed to the inclusion of MSM in the national plans of governments in the region as well as the establishment of working groups with a Regional Technical Board and Coordination Secretariat.

The goal of the Purple Sky Network is to enhance and strengthen the capacity of regional and in-country MSM working groups to develop and advocate for appropriate and effective programs, services, and policies for reducing HIV and STI transmission. This network approach is replicable at the provincial and national level and across countries. Among its achievements is the inclusion of an MSM HIV prevention component in every national and some provincial AIDS plans in the region, and the establishment in all countries of working groups comprising government organizations, CBOs, and NGOs. Other achievements include:

- Training on advocacy and behavior change communication
- Development and monitoring of a two-year strategy
- A regional network capacity-building plan (in progress)
- A network newsletter and website (in progress).

Challenges encountered in the creation of the Purple Sky Network included lack of epidemiological data and other factors inherent in working across multiple country borders, such as diverse political structures, varying government commitment, and language differences. Civil society also presented challenges with respect to levels of engagement and human resource capacity.

# REACHING MEN WHO HAVE SEX WITH MEN IN GHANA WITH HIV AND AIDS INTERVENTIONS

*Few NGOs in Ghana have experience in HIV and AIDS interventions focusing on MARPs, but Lydia Clemmons described a few pioneering efforts that demonstrate that it is possible to reach MSM, even where data limitations and stigma exist.*

Using the findings from behavioral surveillance surveys and from network and qualitative studies, the USAID-funded Strengthening HIV and AIDS Response Partnerships project in Ghana identified eight key behaviors that were used to develop a behavior change communication strategy. These behaviors include:

- Use condoms correctly during every sexual encounter.
- Use condoms with water-based lubricants during each act of anal sex.
- Get tested and know your HIV and STI status and encourage partners to get tested.
- Promptly seek appropriate treatment, care, and support for HIV and STIs.
- Disclose your HIV or STI status to partners.
- Adhere to treatment by taking ART, tuberculosis (TB), and STI medications and therapies on a continuous basis, as prescribed by a trained provider.
- Reduce partners; be faithful to one partner.
- Get involved in designing, implementing, and monitoring HIV and AIDS services and policies for MSM.

Men who have sex with men face a hostile environment in Ghana, which makes community involvement, particularly a peer education component, critical for reaching the population and meeting project objectives. The existing peer education program evolved into Peer Education Plus, an evidence-based approach to promoting key behaviors through peer education, referrals, and condom and lubricant sales. The program has improved the consistency of messages and information, strengthened peer educators' knowledge and skills, and increased the quality of outreach interventions and adoption of key behaviors.

The MSM Helpline uses interactive and automatic SMS text messaging that links MSM with counselors, provides information and referrals, and strengthens key messages. The helpline has been received extremely well, despite very low-key promotion. In the first month, five counselors counseled 439 MSM. Evidence shows that the helpline reached 88 MSM per counselor per month, compared to the 50 MSM reached per peer educator or health worker in facilities and communities.

# PROGRAMMATIC RESPONSES TO REACH SEX WORKERS

## OVERVIEW: CORE COMPONENT OF A MINIMUM PACKAGE OF SERVICES FOR HIV PREVENTION WITH SEX WORKERS

*This overview discussed the current status of prevention programming for sex workers. Karen Kroeger presented the core components of a minimum package of services for HIV prevention with sex workers.*

Most female sex workers are young and highly mobile; at any time, one-half to one-third contract STIs, making them more susceptible to HIV. Alcohol and drug use, mental health issues, and gender-based violence also affect sex workers. Although sex workers are mostly female, the number of male and transsexual sex workers is increasing.

Although there is no single perfect programming model, programs must offer a minimum package of services that is standardized and links to HIV and STI prevention and care. Services should be user-friendly and implemented in a humane and non-judgmental manner.

Core components of a minimum package of services for sex workers include:

- Peer education and outreach
- Condoms and lubricants
- Sexually transmitted infection screening and treatment
- HIV counseling and testing
- HIV care and treatment
- Access to other health and social services as feasible, including reproductive health, family planning, PMTCT, post-exposure prophylaxis (PEP), substance abuse, and legal and psychosocial support.

Peer education and outreach are very effective when combined with STI screening and treatment, condom and lubricant promotion, and risk-reduction counseling. While strong evidence exists that STI programs reduce infections in sex workers and clients, mixed evidence exists for the effectiveness of STI programs in reducing HIV incidence.

Studies of other high-risk populations show that PLHIV who know their status will reduce their risk behaviors to protect their partners, a finding that is likely applicable to sex workers. Integrating VCT programs with STI and family planning programs is recommended for giving sex workers better access to HIV counseling and testing, as is provider-initiated counseling and testing. Innovative

models of VCT such as rapid testing, satellite, night, and mobile clinics may be especially helpful in reaching sex workers.

Evidence also indicates that it is feasible to improve access to HIV care and treatment for sex workers. Linking with other core services such as STI treatment, family planning, and primary health care services is critical, as is using innovative strategies to increase access. Creating a supportive environment for sex workers living with HIV is important to increase adherence and reduce participation in sex work; community mobilization and government policy initiatives are key to achieving this goal.

Effective interventions that combine peer outreach, risk-reduction counseling, condom promotion, and STI services can reduce risk behaviors and STI prevalence among sex workers. Interventions should also be based on, among other things, local sex work patterns, local STI prevalence, and policy environments. Successful programs involve sex workers in helping to make services user-friendly; they also avoid stigmatization and criminalization of sex work.

## **KENYA SEX WORKER PROGRAM**

*Kenya currently maintains a diverse set of prevention activities for sex workers, yet challenges remain. These include addressing continued high-risk behaviors, maintaining a continuum of services, limiting stigma and discrimination, and improving advocacy efforts. Mercy Muthui shared the CDC's approach to strengthening prevention activities for sex workers as part of the Kenya National AIDS Strategic Plan.*

Kenya's program for sex workers dates back to the mid-1980s, when research initiatives combined with social and advocacy programs first linked sex workers to HIV prevention, care and treatment, and other services. While there was a notable increase in the demand for services, access was limited. Furthermore, prevention and treatment services were inadequate, despite the wide range of interventions being implemented. Among the challenges were affordability of services, poor health-seeking behavior, high-risk behavior, and stigma.

The program designed to address these gaps was the result of a collaborative process led by the Ministry of Public Health's National AIDS/STD Control Programme, which developed guidelines for sex worker programming. PEPFAR supports this initiative through collaboration with the universities of Manitoba and Nairobi and other partners. A TWG includes a wide range of key players, including technical experts, sex workers, police, the government of Kenya, NGOs, and development partners.

To support rapid scale-up, a model clinic that provides the minimum package of services was established to serve as a training and orientation center and to provide health services to about 60 to 80 sex workers daily. Services were extended to strengthen public and private sector institutions through a system of accreditation and continuous quality improvement. In other instances, collaborative partnerships and effective referral systems provided access to such clinical components as PEP and cervical cancer screening as well as psychosocial and legal services.

Challenges to scaling up interventions remain, including:

- Reviewing initiation guidance for ART for sex workers, since only 21 percent of sex workers living with HIV have a CD4 count below 250
- Addressing the increased demand for PEP, given the amount of sexual violence cases reported by sex workers

- Determining the frequency of retesting
- Addressing prevention needs of partners, particularly regular partners
- Considering the addition of human papillomavirus (HPV) screening, since prevention of and screening for HPV is cheaper than treatment
- Targeting young women entering sex work through peer networks
- Addressing alcohol and drug-related risk behavior.

## **INTERVENTIONS FOR SEX WORKERS: HIV PREVENTION AND CARE SERVICES FOR SEX WORKERS IN CÔTE D'IVOIRE**

*Côte d'Ivoire is the country most affected by HIV and AIDS in West Africa. Sex workers are four times more likely to be infected by HIV than the general population. Konan Eboussou described the CDC's experiences in providing support for a national minimum package of services and described coordination, technical assistance, capacity building, and service delivery activities.*

HIV prevalence in both rural and urban areas in Côte d'Ivoire is highest among women, with 14.9 percent among women ages 30 to 34 years, compared to 7 percent among men ages 40 to 44 years. Women tend to have more sexual partners than men, one of the factors that increase their vulnerability to HIV. Recent political, social, and economic instability contribute to poverty and the high mobility of sex workers, making them four times more likely to be infected than the general population.

Key findings shaping sex worker programming in Côte d'Ivoire are:

- More precise estimation of sex workers is possible using a capture-recapture approach.
- A decrease in STIs, including HIV prevalence, among sex workers seems to be associated with increased condom use and has the potential to slow down the HIV epidemic within the general population.
- Targeted services are among the most cost-effective interventions to prevent HIV infections among sex workers.
- Most-at-risk populations need expanded essential HIV prevention services.

In 2006, an MPS for sex workers was designed to be implemented in both the clinics and communities. The package includes STI screening and treatment, HIV counseling and testing, care and support, access to ART, primary health care, behavior change messages, and condom promotion. Program implementation involves PEPFAR partners FHI, the International HIV/AIDS Alliance, Population Services International, and CARE, as well as a number of executive partners across the country.

While the program has been successful, it did not come without its share of challenges. Addressing the issue of mobility and human rights as well as improving access to services were critical to effectively reach sex workers and provide needed services. Emerging issues include poverty and age

of sex work debut, cost-effectiveness of mobile clinics, criminalization of sex work and its repercussions, availability of drugs, funding, and gender-based violence. Recommendations include:

- Invest in size estimate activities that strengthen resource allocation planning and contribute to understanding changes in mobility and social protection.
- Create a national TWG to share information and propose coordinated responses to any change in trends.
- Involve sex workers in all aspects of any program targeting them.
- Plan practical steps to ensure accessibility and confidentiality of services.
- Establish communication links within sex worker communities to motivate sex workers to participate in advocacy, program leadership, and peer education work.
- Support establishment of new networks for sex workers while strengthening existing networks.
- Direct funding after building capacity to manage activities (e.g., establishing a system of accountability through supervision and appropriate M&E).
- Consider prevention, care, and treatment activities as an integrated continuum of services, with coordination of training, tools, and M&E efforts.
- Create necessary conditions to promote sustainability of activities.

# PROGRAMMATIC RESPONSES TO REACH INJECTING DRUG USERS

## OVERVIEW: EVIDENCE AND BEST PRACTICES FOR HIV PREVENTION FOR INJECTING DRUG USERS

*Linda Wright-DeAgüero described the core components of a comprehensive HIV prevention program with IDUs. Effective programs combine risk reduction, condom promotion, access to sterile syringes and safe disposal methods, drug treatment, and clinical and social services.*

According to a study published in 2008, there are an estimated 16 million IDUs worldwide. About 3 million of them are living with HIV, with the highest prevalence in Southeast Asia, Eastern Europe, and Latin America. Despite the dearth of knowledge about IDUs in sub-Saharan Africa, IDU is known to be occurring in Kenya, Mauritius, Nigeria, South Africa, and Tanzania. Data collection is extremely challenging among these populations because drug use is criminalized in almost all countries.

As a group, IDUs are at increased risk for adverse health outcomes from a variety of sources: HIV and AIDS, STIs, drug addiction, TB, hepatitis B and C, abuse of other substances (e.g., alcohol), psychosocial issues, and physical and sexual violence and abuse. As with other MARPs, IDUs often experience intersecting risk factors for HIV from drug use, sexual behavior, and overlapping risk networks:

- Drug-related HIV risk most commonly involves injection of heroin but may include opium, cocaine, methamphetamine, or other stimulants. Sharing of contaminated drug injection equipment poses high risks, since injection-related (blood-borne) HIV transmission is efficient and also increases the risk of hepatitis B and C transmission.
- Sex-related HIV risk involves increased high-risk sexual behavior, multiple partners, unprotected sex, and exchange of sex for money or drugs.
- Overlapping risk networks involve the intersection of sexual and drug-using networks. Although we know that these networks commonly overlap, we do not know to what extent this heightens the probability of transmission.

To address the complexity of issues experienced by IDUs, comprehensive approaches are recommended. Several approaches have been proven effective in programs for IDUs, as follows:

- **Community-based outreach and education:** It is important to deliver information and teach skills to reduce HIV risks to drug users in their communities.
- **Sterile syringe access and disposal:** Removing contaminated syringes and needles from circulation reduces the probability of transmission. Evidence also suggests that syringe exchange programs do not promote the initiation of drug use, more frequent injection among established users, the expansion of networks of high-risk users, or an increase in the number of discarded syringes in the community.
- **Condom use:** Drug users engage in sexual activity at rates comparable to non-drug users. Successful interventions need to include the provision of condoms, the establishment of distribution outlets that are convenient and available to drug users, training in the correct and consistent use of condoms, and training in condom negotiating skills.
- **Sexually transmitted infection screening and treatment:** Screening and treatment for STIs and HIV counseling and testing are critically important. Screening for hepatitis B and C, diseases also common among drug-using populations, and vaccination for hepatitis C should also be explored.
- **Drug treatment:** Programs should aim to either reduce or stop drug use and to minimize psychological, physical, social, and behavioral harm associated with drug use. Several modalities are incorporated in drug treatment programs, including pharmacotherapy, behavioral interventions, and abstinence-based therapy. There is documented evidence that these programs decrease HIV risk behaviors and improve HIV and TB treatment adherence.
- **HIV care and treatment:** For IDUs, this should include addressing drug abuse and underlying medical conditions, as well as HIV and AIDS. Care and treatment need to be addressed systematically by conducting an initial medical, psychosocial, and drug use history; providing appropriate diagnosis of the drug use disorder; evaluating the HIV situation, including a physical examination, CD4 count, assessment for co-infections (e.g., hepatitis B and C, STIs), and screening for opportunistic infections; and providing a treatment plan for drug abuse, HIV infection, and other medical conditions.

It is important to incorporate IDUs themselves and their communities in planning, implementation, and evaluation. Programs should include policies and procedures that address stigma and discrimination. Finally, interventions for IDUs should focus not only on individual behaviors but should also incorporate structural aspects (physical, political, and social) and ways in which these facilitate or constrain individual HIV prevention behavior.

## PREVENTION AND BIOMEDICAL PREVENTION PROGRAMS: INJECTING DRUG USERS

*Ukraine is experiencing a fast-growing HIV epidemic, and IDU remains the dominant mode of transmission. Leslie Perry presented a USG pilot project to develop, implement, and assess models of integrated medical care for IDUs that include MAT, medical referrals, social reintegration, and psychosocial and legal support.*

Drug use remains a major driver of the HIV epidemic in the Ukraine, and over 70 percent of PLHIV in Ukraine have a history of drug use. Moreover, drug use and sexual networks overlap, contributing to the sexual spread of HIV. In 2005 and 2006, the government of the Ukraine came

together with donors from the USG, the Global Fund, and U.N. agencies to develop a framework, or “Road Map,” toward universal access that aims to:

- Provide 60 percent of IDUs with a minimum package of services
- Undertake population size estimation for IDUs and their partners
- Provide universal access to a minimum package of high-quality services that meet national standards and offer comprehensive coverage, including harm reduction (syringes, disinfectants, condoms, lubricants, information/education); HIV treatment and care, including ART; MAT; screening and treatment of STIs; rapid HIV testing; and referral for opportunistic infections
- Address constraints to universal access through activities to promote improved policy, strategic information, financing, human resources, service standards and systems, infrastructure, and partnerships.

Several agencies and organizations contribute to the implementation of HIV prevention services. Ukraine has a very specialized system of health service delivery that leads to medicalization of many interventions. For example, only physicians in government-run AIDS centers provide VCT. The HIV/AIDS Alliance in Ukraine, the principal recipient of Global Fund money, has developed a very innovative approach in which physicians from AIDS centers come to NGOs to provide good-quality pre- and post-test counseling as well as testing on site. The government of Ukraine has approved rapid testing in some pilot areas, which are beginning to demonstrate good results. The USG-funded program “SUNRISE,” also implemented by the HIV/AIDS Alliance Ukraine, is responsible for scaling-up information and services to prevent drug-related and sexual transmission among IDUs using a core package of interventions. The program is targeting 60 percent of IDUs. To reach IDUs with syringe exchange programs, a network of pharmacy sites that provide syringe exchange has been established using Global Fund funding. Pharmacies have an extended role in delivering information and services, as well as in providing referrals to testing, counseling, and other services. The USG provided assistance in developing, implementing, and assessing models of integrated medical care and support at 10 sites for 300 IDUs living with HIV.

Ukraine has also made major steps in biomedical prevention through the provision of opiate replacement therapies, or MAT. Currently there are 2,202 patients on MAT (864 buprenorphine and 1,338 methadone) in 38 facilities, 30 percent of whom are women. Initiated in 2003, Ukraine’s MAT program has many accomplishments to its credit. In 2007, a presidential decree called for the elimination of barriers to scaling-up MAT. Ukraine now has political support for MAT, an enabling environment, regulations in place, working groups, a MAT monitoring center at the Ministry of Health to oversee implementation, and a very engaged and active civil society.

However, many challenges to the full implementation of prevention services remain, including:

- Adapting outreach approaches to a changing clientele (younger IDUs, street children) and to changing drug behaviors.
- Addressing legal, regulatory, policy, and logistical barriers to scale-up, such as mandatory testing in shelters, parental consent requirements, and the relatively high cost of methadone.
- Increasing NGO engagement in service delivery.
- Expanding the number of MAT providers.

- Stigma and discrimination.
- Inconsistent political will and financial support from the government of Ukraine.
- Resistance to MAT and a disconnect between scientific evidence and perceptions among key constituencies (policymakers, law enforcement authorities, the medical community, the media, and community stakeholders).
- Continuous collection of data to inform policy and scale-up of MAT.
- Better estimations of populations to inform scale-up.
- More information on bridge populations and quality of services.

Recommendations to address these challenges included:

- Know your country and its systems and policies.
- Select treatment regimens appropriate to the country and setting.
- Consider policy and legislative issues in designing programs.
- Build infrastructure and capacity.
- Obtain sufficient resources.

## **INJECTING DRUG USER STUDIES AND ACTIVITIES IN ZANZIBAR, TANZANIA**

*In Tanzania, biological-behavioral surveillance surveys were conducted to assess HIV and STI prevalence and associated risk behaviors among IDUs, female sex workers, and MSM. Irene Benech presented how results from studies have been used to develop programs for substance abuse, peer education, outreach, rehabilitation, and detoxification.*

In 2007, PEPFAR supported a series of studies in Zanzibar with the objective of assessing HIV and STI prevalence and associated risk behaviors among IDUs, female sex workers, and MSM. As part of the study, interviews and testing for HIV, hepatitis B and C, and syphilis were conducted. The study produced important information on the HIV-related behaviors of IDUs, female sex workers, and MSM. In addition, MARPs studies have built capacity and confidence among governmental staff and partners to utilize RDS as a study and research method, to approach and work with MARPs, and to use data for program design and decision making.

Subsequent to these surveys, a revised program of activities was initiated in August and September of 2008, so limited data are available on their results. A few organizations played pivotal roles:

- The Zanzibar AIDS Control Program provides committed leadership for surveillance and studies, advocates within the government for the approval and implementation of activities, and has established a community service center for IDUs and other MARPs on Zanzibar that provides VCT, STI testing and treatment, HIV care and treatment services, and detoxification and rehabilitation services.

- The Ministry of Health’s Department of Substance Abuse Prevention and Rehabilitation (DSAPR) conducted a stakeholder meeting for organizations either interested in or already working in substance abuse, coordinates government and civil society efforts, and monitors and evaluates activities.
- Columbia University provides subgrants and training to NGOs, CBOs, and DSAPR staff on substance abuse, peer education, outreach, rehabilitation, and detoxification.
- The American International Health Alliance and Columbia University facilitated training exchange opportunities for DSAPR staff with the Great Lakes Addiction Transfer and Technology Center, and arranged an exchange visit to the Detroit Recovery Service.
- South-to-south collaboration with IDU programs in Nairobi and Mombasa, Kenya, provided excellent information and resources.

Challenges for implementing IDU programs on Zanzibar include:

- Overcoming the limitations of legal, cultural, and religious barriers to the ability of programs to work openly with and provide services for MARPs
- Providing capacity building for local partners
- Managing the government’s enhanced role in coordination, with less responsibility for implementation
- Implementing different surveillance methods in different settings and with different populations.

## **AVAHAN-INDIA AIDS INITIATIVE: SCALING-UP MOST-AT-RISK POPULATIONS INTERVENTIONS**

*Padma Chandrasekaran presented an overview of the Avahan-India AIDS Initiative, a 10-year project focusing on HIV prevention among sex workers, MSM, and IDUs in six states.*

India is experiencing a concentrated epidemic, located in four southern and two northeastern states. The epidemic is concentrated among female sex workers, high-risk MSM, and IDUs. Before implementation of the Avahan-India AIDS Initiative, the Indian government had a stated focus on targeted interventions for high-risk group prevention. However, less than one-third of interventions actually focused on the highest-risk people.

The Bill & Melinda Gates Foundation-funded Avahan program began in 2003 with the aim of saturating prevention coverage of MARPs in four southern and two northeastern states, in conjunction with the government of India. The program has operated on the assumption that to curtail transmission from core to bridge groups, a saturated coverage of 80 percent or more is necessary.

Avahan’s 10-year goals are to impact the HIV epidemic and response over the long-term by:

- Implementing an HIV prevention program at full scale for high-risk groups
- Transferring programs to the government and other implementers in India
- Actively fostering and disseminating lessons learned from program activities.

The MARPs prevention package involves a combination approach involving:

- Outreach by peer educators with dynamic behavior change communication messages
- Provision of condoms, lubricants, and needles
- Saturation of clinical services for STIs and counseling at local centers
- Local advocacy by peer groups, involving police sensitization, crisis response, and community advisory committees
- A case-managed approach to referral for TB, HIV testing, and ART.

Prevention services are delivered through nine state lead partners, 134 local NGOs and CBOs, and about 280,000 peer educators and outreach workers. About 5 million individuals receive MARPs prevention services through Avahan.

Avahan sought to move its prevention program to scale-up quickly. It focused on districts and subdistricts where mapping exercises showed concentrations of MARPs, but avoided overlapping with existing government services. To manage the extensive field program, systems were created for peer educators to monitor their contacts on a weekly basis, with data flowing upward through the network to program managers. Extensive flexibility at all levels was built in to take advantage of local conditions.

After nearly six years of operation, evidence of Avahan's impact is accumulating. Condom use has increased with all partners among female sex workers and MSM. Sexually transmitted infection rates have fallen by half or more in many of the districts covered by Avahan. HIV antenatal clinic prevalence has declined in intervention-intensive districts by about one-third more than in other districts.

# DEVELOPING A RESEARCH AGENDA FOR MOST-AT-RISK POPULATIONS: THE WAY FORWARD

Program monitoring involves collection and analysis of routine program data to determine how well programs are carried out. Operations research is conducted to judge, compare, and improve policies and programs with rapid dissemination of results. Impact evaluation conducts systematic analysis to study population-based outcomes attributable to program interventions.

The goal of operations research is to optimize the quality, coverage, and effectiveness of program activities for MARPs and to ensure that programs achieve maximum impact at the lowest possible cost. More specifically, operations research identifies timely research issues, tests new and innovative program approaches, refines existing program models, provides evidence to enable program scale-up, and determines population-level impact. Findings from research can be used to help solve problems, such as low coverage among MARPs, quality concerns, and cost considerations.

Meeting participants suggested the following possible research priorities for the next five years:

- Measurement issues
- Programmatic limitations
- Tailoring programs to the epidemic
- Programming in generalized epidemic settings
- Innovative program models
- Program quality and scale-up
- Population-level impact.

Possible research topics were also discussed by participants. For example, research could focus on improving the validity and reliability of behavior change self-reports, measuring social and risk networks, determining HIV incidence, and refining output, outcome, and impact measures. With regard to creating an enabling environment for MARPs programs, research topics might include stigma reduction within the general population, stigma reduction among health workers, and involving corrections and law enforcement in HIV programs for MARPs. Operations research can also examine elements of the MPS, such as the role of counseling and testing in reducing HIV incidence. Additionally, research could be conducted on issues related to scale-up, including tradeoffs between program quality, intensity, and coverage, and program cost forecasting.

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# RECOMMENDATIONS AND CONCLUSION

During the last afternoon of the meeting, participants separated into three groups to develop action plans. The three groups presented their recommendations during the closing session on opportunities for improving prevention for IDUs, MSM, and sex workers.

## **Improving prevention for IDUs:**

- Provide opportunities for south-to-south exchange.
- Advocate for increased services for MARPs that focus on their health needs rather than drug use.
- Increase the use of data and data tools for evidence-based program planning.
- Improve training for peer educators.
- Provide technical assistance for NGOs working with IDUs.

## **Improving prevention for MSM:**

- Conduct biological-behavioral surveillance surveys on MARPs as a basis from which to encourage government buy-in.
- Conduct size estimation and mapping of MSM groups.
- Provide capacity-building assistance in a number of areas, including strategic planning, design and use of appropriate measurement tools, and curriculum development.

## **Improving prevention for sex workers:**

- Develop improved mechanisms for sharing experiences and documentation, and provide opportunities for face-to-face interaction and site visits.
- Expand the minimum package of services to include positive prevention, family planning services, and efforts to create enabling environments.
- Facilitate expert visits from technical experts, program managers, and policymakers, among others.

In an evaluation of the meeting, the participants similarly produced the following list of technical assistance needs:

- Methods for size estimation
- Advocacy for continued and increased funding from OGAC

- Guidance on how to include programs for MARPs in Country Operating Plans
- Input and guidance on commodity procurement
- Guidance on service provision
- A standard package of tools (data kit) to measure MARPs
- Programming for female condoms
- Assignment of a MARP TWG member for each country for one-to-one communication
- Documentation on size estimation and partners' programs
- More opportunities for south-to-south collaboration, with funding allocated for materials and travel.
- A research training program
- A broader focus on drug use rather than IDU.

# APPENDIX A: AGENDA

## DAY 1: WEDNESDAY, FEBRUARY 18, 2009

- 8:00–9:00 Registration
- 9:00–9:15 Welcome and Opening Remarks—Dr. Vijaya Kumar, Project Director, Tamil Nadu State AIDS Control Society, India
- 9:15–9:30 Welcome—Andrew T. Simkin, U.S. Consul General in Chennai, India
- 9:30–10:00 Overview of the MARPs TWG—Anne Thomas, Department of Defense, USA, Linda Wright-DeAgüero, CDC, USA, Benny Kottiri, USAID, USA, Karina Rapposelli, OGAC, USA
- 10:00–10:10 Purpose and Expected Outcomes of the Meeting—Abu S. Abdul-Quader, CDC, USA
- 10:10–10:30 Context: HIV among MARPs—Chair: Anne Thomas, Department of Defense, USA; Presenter: Abu S. Abdul-Quader, CDC, USA
- 10:30–10:45 Tea/coffee break
- 10:45–11:15 What Constitutes a Strategic Response for MARPs?—Chair: Anne Thomas, Department of Defense, USA; Presenter: Swarup Sarkar, GFATM, Switzerland
- 11:15–12:45 Best Practices and Key Issues Related to Measurement Approaches for Characterizing MARPs Epidemics and Populations—Chair: Willi McFarland, University of California at San Francisco, USA; Overview of Principles and Best Practices—Willi McFarland; Country Presentations: South Africa: Rapid Assessment—Karen Kroeger, CDC, USA; Nepal: Mapping/Size Estimation of MARPs—Shanta Gurung, USAID, Nepal; Indonesia: IBBS—Lisa Baldwin, USAID, Indonesia; Questions and discussion

12:45–1:45	Lunch
1:45–3:00	Building NGO/Government/Civil Society Capacity to Implement Programs—Chair: Sanjay Kapur, USAID, India; Overview—Swarup Sarkar, GFATM, Switzerland; Country Presentations: Ukraine and Cambodia—John Howson, International HIV/AIDS Alliance, United Kingdom; India—Bimal Charles, APAC, India; Questions and discussion
3:00–3:20	Tea/coffee break
3:20–5:00	Best Practices and Key Issues Related to Enabling Environments for Characterizing MARP Epidemics and Populations: Issues Related to Policies, Stigma, and Discrimination—Chair: Karina Rapposelli; PEPFAR Update—Karina Rapposelli, OGAC, USA; Country Presentations: China: MAT/NSP/detention centers—Marc Bulterys, CDC, China; India: Legal issues/stakeholder building (MSM/sex workers)—Tripti Tandon, Lawyer’s Collective, India; Vietnam: Development of harm reduction program—John Eyres, USAID, Vietnam; Questions and discussion
7:00–8:30	Cultural evening: Sponsored by APAC

## **DAY 2: THURSDAY, FEBRUARY 19, 2009**

8:30–12:30	Programmatic Responses: International Best Practices and Country Approaches to MARP Interventions—MSM: Overview—Tim Mah, USAID, USA; Country Presentations: Thailand and the Southeast Asia Region—Nithya Mani, USAID, Thailand; Ghana—Lydia Clemmons, Academy for Educational Development, Ghana; CSW: Overview: Karen Kroeger, CDC, USA; Country Presentations: Kenya—Mercy Muthui, CDC, Kenya; Côte d’Ivoire—Konan Ehossou, CDC, Côte d’Ivoire
10:20–10:45	Tea/coffee break—IDUs: Overview—Linda Wright-DeAgüero, CDC, USA; Country Presentations: Ukraine—Leslie Perry, USAID, USA; Tanzania—Irene Benech, CDC, Tanzania; Questions and discussion
12:30–1:30	Lunch
1:30–3:00	Monitoring and Evaluation of MARPs Interventions—Chair: Emma Mwamburi, USAID, Kenya; Overview of PEPFAR II Prevention Framework and Indicators for MARPs—Roger Myrick, CDC, USA; Country Presentations: Thailand—Kimberley Fox, USAID, Thailand; Cambodia—

Michael Cassell, USAID, Cambodia;Uganda—Wolfgang Hladik, CDC, Uganda; Questions and discussion

3:00 Field visits

## **DAY 3: FRIDAY, FEBRUARY 20, 2009**

8:30–9:00 Scaling-up Interventions—Chair: Naomi Bock, CDC, USA; Presenter: Padma Chandrasekaran, Bill & Melinda Gates Foundation, India

9:00–10:00 Developing a Research Agenda for MARPs: The Way Forward—Presenter: Benny Kottiri, USAID, USA, with facilitated group discussion

10:00–10:30 Tea/coffee break

10:30–12:00 Lessons Learned From the Field Visits and Highlights of Operational Issues Related to Intervention Implementation—Chair: Nisha Gupta, CDC, India; Facilitated discussions focusing on specific issues related to intervention implementation and administration, monitoring, and data collection

12:00–1:00 Lunch

1:00–3:00 Development of Action Plans for Immediate Next Steps: Breakout Sessions: MSM, IDU, female sex workers—Facilitator: Roger Myrick, CDC, USA

3:00–3:15 Tea/coffee break

3:15–4:30 Presentations from the Breakout Sessions on Action Plans—Chair: Roger Myrick, CDC, USA; Presenters: Representatives from breakout groups

4:30–5:00 Feedback and Conclusions—Facilitators: Anne Thomas, Department of Defense, USA, and Abu S. Abdul-Quader, CDC, USA

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# APPENDIX B: PARTICIPANT LIST

## Name

**Abu S. Abdul-Quader**, CDC, USA  
**Dawit Abraham**, USAID, Ethiopia  
**Jenny Albertini**, USAID, Swaziland  
**Ivanne Amon**, CDC, Côte d'Ivoire  
**Lisa Baldwin**, USAID, Indonesia  
**Irene Benech**, CDC, Tanzania  
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