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CAPACITY was a 5-year program funded by the United States Agency for International Development (USAID) and implemented in Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan. The purpose of CAPACITY was to provide technical support and assistance to the countries of Central Asia in their efforts to launch large-scale and urgent responses to the HIV/AIDS epidemic in vulnerable populations.

CAPACITY was implemented by JSI Research & Training Institute, Inc., with partners Abt Associates, Boston University, Howard University, the International HIV/AIDS Alliance, and Population Services International.

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LIST OF ACRONYMS

AFB	acid fast bacilli
AFEW	AIDS Foundation East-West
AIDS	Acquired Immunodeficiency Syndrome
ART	antiretroviral therapy
ASO	AIDS service organization
CAAP	Central Asian AIDS Control Project
CAPACITY	Central Asian Program on AIDS Control and Intervention Targeting Youth and High-risk Groups
CMS	community mobilization strategy
DDRP	drug demand reduction program
DoH	Department of Health
DOTS	directly-observed treatment, short-course (for TB control)
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
HIV	Human Immunodeficiency Virus
IDU	injecting drug user
IEC	information, education, communication
IHMS	Institute of Health and Medical Statistic
IPC	interpersonal communication
IPT	isoniazide preventive treatment
JSI	JSI Research & Training Institute, Inc.
MARP	most-at-risk populations
M&E	monitoring and evaluation
MoH	Ministry of Health
MoJ	Ministry of Justice
NACM	national HIV/AIDS coordinating mechanism
NGO	nongovernmental organization
OAM	opportunity, ability and motivation
PERForM	Performance Framework for Social Marketing
PIU	Principle Implementation Unit (of Global Fund Grant)
PLHIV	people living with HIV
PSI	Population Services International
RAC	Republican AIDS Center
RFM	Republican Fund Mahalla
STI	sexually transmitted infection
SWELL	sites where at-risk youth have sex, work, entertain, live, and learn
TA	technical assistance
TB	tuberculosis
ToT	training-of-trainers
TRaC	Tracking Results Continuous Survey
TWG	technical working group
UIC	unique identifier code
UN	United Nations
UNAIDS	United Nations Program on HIV/AIDS
UNDP	United Nations Development Program
UNGASS	United Nations General Assembly Special Session (on HIV and AIDS)
UNODC	United Nations Office on Drugs and Crime
USAID	US Agency for International Development
VCT	voluntary counseling and testing (for HIV)
WHO	World Health Organization
YC	youth center
YPC	youth power center

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INTRODUCTION

The CAPACITY Project, USAID's premier HIV and AIDS project for Central Asia, was awarded in September 2004 and was implemented for the five year period ending in September 2009. CAPACITY covered the five former Soviet Central Asian Republics – Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan, and included four strategic directions. These were:

1. Improving Stewarship of the National HIV and AIDS Programs in Central Asia
2. Educating and Empowering Vulnerable Populations
3. Improving Quality of HIV and AIDS Services
4. Improving Resource Use through the Integration of HIV and AIDS Services

Improving Stewarship of the National HIV and AIDS Programs in Central Asia

In order for countries to succeed in their response to the HIV epidemics, it is necessary for them to have sufficient capacity, tools, and coordination. Three main areas were identified for strengthening early during the CAPACITY Project. These were monitoring and evaluation, communication, and inclusion of NGOs and civil society into the national decision making and coordinating bodies. CAPACITY's major effort for strengthing stewardship was through the secondment of specialists in these three areas to the national AIDS coordinating mechanisms (NACM). Chapter 1 of this final report describes the process used for seconding staff to the NACMs and the results of doing so.

Educating and Empowering Vulnerable Populations

The HIV epidemics in Central Asia are concentrated primarily among injection drug users (IDU) and sex workers. To some degree, young people who tend to generally be risk takers and may be influenced by their exposure to injection drug use, may also be at risk for HIV. The CAPACITY Project focused its prevention efforts on these three vulnerable populations. Chapter 2 describes the TUMAR Project, which was an HIV prevention project nested within CAPACITY, to provide high coverage with comprehensive HIV prevention services to IDUs and sex workers in seven sites in four countries of Central Asia. This chapter discusses the package of services that were provided by local AIDS service organizations (ASO), and the significant results that they achieved with technical support from CAPACITY. Chapter 3 explains CAPACITY's implementation and support for Youth Power Centers in Kazakhstan, Kyrgyzstan, and Turkmenistan, designed to provide HIV prevention education services for at risk youth.

To improve overall coverage of these vulnerable populations with HIV prevention services, CAPACITY also worked with local governmental and non governmental ASOs to build their organizational, institutional, and techincal capacity. Chapter 4 tells how CAPACITY implemented the community mobilization strategy to engage increasing numbers of organizations in the national responses to HIV. ASOs learned how to plan programs and prepare funding proposals to international grant makers. They also improved skills in various aspects of organizational management and how to provide essential, comprehensive services to the most at risk populations. In Uzbekistan, traditional community organizations called *mahallas* play an important role in community development. Chapter 5 of this final report describes how the CAPACITY Project engaged and built capacity among the leaders of the *mahallas* to provide HIV education to the general population in several oblasts of Uzbekistan.

Improving Quality of HIV and AIDS Services

There are increasing numbers of people in Central Asia who are in need of HIV diagnosis and treatment.

Vertical medical services that exist in Central Asia sometimes make treatment of AIDS, often a complex set of medical problems, difficult to manage effectively. The CAPACITY Project worked closely with counterparts in four Central Asian countries to implement pilot projects for improving the interaction of TB and HIV services for better management of patients with dual HIV and TB infections. Chapter 6 explains how CAPACITY implemented those pilots and the results that were achieved. Chapter 7 describes a pilot project CAPACITY implemented in Kyrgyzstan to improve access to and quality of voluntary counseling and testing (VCT) for HIV diagnosis for most at risk populations.

Improving Resource Use through the Integration of HIV and AIDS Services

As the number of people who need AIDS treatment services increases in some geographic areas of Central Asia, the existing vertical AIDS treatment facilities are becoming overwhelmed. Chapter 8, the final chapter of this report, describes the pilot project CAPACITY implemented in one such location in Kazakhstan, where antiretroviral therapy (ART) was integrated into the primary health clinic.

While there were many other activities implemented over the course of the five year project, the eight chapters in this report represent the most important efforts and the most impressive results of the CAPACITY Project. Much progress was made over the past five years in the region's response to the HIV epidemics. It is hoped that the results of the CAPACITY Project will be scaled up over the next years in order to help slow the rate of HIV transmission within the concentrated most at risk populations, as well as to the general population. Only with coordinated, focused, and targeted efforts by all stakeholders will each country's HIV response be successful.

Photo: Alternative activities at the Ashgabat Youth Center

Photo: TB/HIV training in Uzbekistan

Photo: Outreach work in Osh, Kyrgyzstan

CHAPTER 1: Strengthening Stewardship of National AIDS Programs through Secondment of Specialists

Background

Central Asian countries, including Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan, are experiencing a rapidly expanding HIV epidemic, affecting injecting drug users, commercial sex workers, inmates and seasonal labor migrants. The response to the epidemic involved all sectors of the society and was supported by the international donor community. To ensure effective coordination and leadership of the national HIV and AIDS efforts, the countries adopted internationally recognized Three Ones Principles; one of the key elements of these principles calls for the establishment of a single, multi sectoral, national HIV and AIDS coordinating mechanism (NACM). HIV related interventions had previously been under the purview of the Ministries of Health and the Republican AIDS Centers (RAC). Following a transition period, the coordinating and monitoring functions were shifted from the RAC to the NACM.

The assumption of the stewardship role by NACMs has not been smooth. HIV and AIDS was a relatively new phenomenon for the region, and countries lacked the human resources and expertise required to effectively address the epidemic. The needs assessment conducted at the beginning of CAPACITY revealed that NACMs needed technical assistance in communication, monitoring and evaluation, and collaboration with civil society. To address these needs, CAPACITY agreed to second up to three specialists to the NACMs in each country: a communication specialist, an M&E specialist, and NGO (or community, as in the case of Uzbekistan) liaison specialist.

Program methods

Regulatory framework of the secondment process

Secondment of the specialists was included into the Memorandums of Understanding (MoU) signed between CAPACITY and its national counterparts (MoHs in Kazakhstan, Tajikistan, Turkmenistan, and Uzbekistan and the Vice Prime Minister in Kyrgyzstan). MoUs specified which organization within the NACMs would host the specialists (AIDS Coordination Unit (ACU) in Kyrgyzstan and RACs in other countries).

Based on the MoUs, detailed secondment plans were developed, agreed upon, and signed; the respective hosting organizations described all steps and nuances of the process, including recruitment of specialists, mechanisms of supervision of the seconded staff, job descriptions, performance evaluation procedures, financial contributions, duration of the secondment, and ways to ensure sustainability of the specialists' functions. Further, as implementation of the secondment plans revealed some gaps in the regulatory frameworks, the plans were supplemented by operational agreements between CAPACITY and the hosting organization with detailed description of rights, obligations, and the financial and in kind contributions of each party.

Selection and recruitment of specialists

Job descriptions for the secondment specialists were widely advertised in the national media. It was agreed that current hosting organization staff members would not be considered for the secondment positions, since doing so would not add any value to the hosting organizations' teams. Preliminary screening of the applicants' CVs and cover letters was conducted jointly with NACM representatives. CAPACITY staff tested pre finalists for professional skills, and short listed candidates were interviewed by a joint panel, including representatives of CAPACITY, the NACM, and other stakeholders. Selection of the NGO Liaison Specialist was somewhat different. In order to ensure involvement of the civil society sector in the process, the short list candidates were nominated by representatives of AIDS service NGOs after preliminary and

CAPACITY arranged discussion, a one day roundtable meeting. The selection panel included one representative from the civil society sector who was also nominated during the roundtable meeting.

All selected specialists signed work agreements with CAPACITY and became CAPACITY employees. The Secondment Plans stated that seconded specialists' salaries should not be larger than those of current hosting organization staff in order to mitigate jealousy and to increase the chances of sustainability. However, in some countries it was not possible to attract qualified candidates with the low government level salaries, so this issue was renegotiated with the NACMs.

Management and supervision of the seconded specialists

Since seconded specialists had to report both to the NACM and CAPACITY, the key challenge was to ensure smooth coordination of the specialists' work between the NACM and CAPACITY. Accordingly, the secondment plans and operational agreements set forth the mechanisms of such coordination through a joint selection process, joint approval of the specialists' work plans, and joint appraisal of the specialists' performance by the hosting organization and by CAPACITY. The Secondment Plan emphasized that the specialists would be supervised by a NACM representative (usually RAC Director or Head of ACU), who retained the right to request discontinuation of the specialists' contract in case of unsatisfactory performance.

Specialists' interaction with the NACM and CAPACITY

Enabling effective collaboration between the seconded specialists and NACM staff was an important part of the secondment process, so certain measures were included in the secondment plans and operational agreement.

First of all, the orientation meetings took place with participation of the seconded specialists, NACM, and CAPACITY staff to clarify the purpose of the secondment and improve networking between the participants. The specialists regularly took part in the host organizations' staff meetings, program events, and team building activities; coordinated their work plans with other host organization personnel; integrated their activities into the general host organization work plans; gained access to the internal host organization information; submitted monthly reports to their host organization supervisor; and held regular meetings with the latter to discuss progress of their activities.

At the same time the specialists maintained close connections with CAPACITY. They received daily technical support and operational guidance from the regional and country offices, took part in the country and regional staff meetings, assisted in designing and implementing activities of CAPACITY relevant to their area of expertise, and had access to CAPACITY's internal information management database.

Results

Over nearly four years, the seconded specialists provided significant assistance to NACMs, contributed to successful implementation of the Three Ones Principles, and strengthened the role of the national AIDS stewards in Central Asian countries. The success of the secondment prompted the Central Asian AIDS Project (CAAP) to replicate the model by seconding additional specialists to the NACMs. Specialists' specific accomplishments are described on the next page.

Monitoring and Evaluation

- Assisted in establishing national HIV and AIDS M&E frameworks (including development of manuals and guidelines)
- Built capacity of national and oblast level M&E specialists and working groups
- Facilitated national M&E working groups
- Prepared national M&E reports according to the United Nations General Assembly Special Session (UNGASS) standards
- Maintained national and regional management information systems (CRIS, CARISA) in cooperation with communication specialists
- Conducted M&E of national and sub national HIV and AIDS programs and projects
- Assisted in conducting sentinel surveillance among vulnerable populations
- Developed M&E systems for TB and HIV, antiretroviral therapy, and voluntary counseling and testing services
- Institutionalized the best M&E practices (e.g. unique identifier code) at the national level

Communications

- Linked partner organizations across the sectors in a single communication space under the NACMs auspices
- Developed and maintained NACMs' communications tools (websites, monthly bulletins, events calendars, mailing lists)
- Developed and promoted NACM communications strategies
- Ensured constant information exchange, including mass media, between NACMs and other stakeholders
- Organized special events, such as World AIDS Day and NACM Partner Forums
- Promoted and maintained the CARISA information system
- Built communications capacity of local specialists

Liaison with civil society

- Provided technical assistance to improve civil society representation in NACMs by conducting national forums of AIDS service NGOs and drafting the procedures and developing mechanisms for regulating the election of NGO representatives to the NACMs
- Ensured effective communication and information exchange between the NACMs and AIDS service NGOs
- Involved civil society organizations in discussions about and development of national regulatory and programmatic documents (e.g. National HIV and AIDS Programs, country applications to the Global Fund grants)
- Developed regulatory documents related to civil society's involvement in the HIV response in countries (Law on AIDS of the Kyrgyz Republic; Statute and Regulation for the establishment of the Resource Center for AIDS service NGOs in Kyrgyzstan)
- Promoted regional cooperation among AIDS service NGOs in Central Asia
- Mobilized civil society organizations to scale up the HIV and AIDS response
- Provided technical assistance to AIDS service NGOs through trainings, workshops, and consultations
- Maintained national databases of AIDS service NGOs

Other technical assistance to NACMs
In addition to providing specific assistance within their technical area of expertise, the seconded specialists took an active part in other NACM activities, including establishing oblast level AIDS coordinating bodies, developing country proposals to the Global Fund, drafting national HIV/AIDS strategic plans, developing various manuals and protocols, conducting needs assessment and program evaluation exercises, organizing of NACM events, and many others.

Photo: Training for M&E specialists. Bishkek, Kyrgyzstan

Sustainability
NACM representatives were pleased with the specialists' progress in building capacity of NACM and increasing effectiveness of the National AIDS Programs, so sustainability of the seconded staff's activities and their positions became an important issue. NACMs in all five countries expressed interest in continuing the secondment process. However, the prospects of sustaining the secondment varied by country and by the activity area. Some secondment positions were sustained through transfer to another structure within the NACMs (e.g. NGO Liaison Specialist positions within the GFATM Project Implementation Unit (PIU) in Kazakhstan and Kyrgyzstan). In other cases the seconded positions were expanded; the GFTAM PIU established an entire M&E department in Kazakhstan, a whole department for M&E. For those seconded positions that were discontinued at the end of CAPACITY, various structures within the NACMs and other partnering organizations have assumed the activities and initiatives implemented by the seconded staff.

Lessons learned and recommendations for future

- **Selection of the hosting organization should be agreed upon.** In some countries, the secondment process revealed that selection of the hosting organization may not meet expectations of all stakeholders. For instance, in Tajikistan some international partners argued that it was the newly established Secretariat of the National Coordinating Committee on AIDS, TB and Malaria (NCC),rather than the RAC, that should have hosted the seconded staff. This controversy was addressed through a compromise when the seconded staff provided assistance both to RAC and to the NCC Secretariat.
- **Communication and open discussion is vital.** To be successful, the secondment process required constant communication and open discussion between the NACMs and CAPACITY. Flexibility, transparency of procedures, and openness to the national counterparts' opinions were crucial for addressing the NACMs concerns and for resolving confusion regarding the secondment process.
- **Be clear that specialists are part of NACMs.** It is important that both the seconding and hosting organizations emphasize to partner organizations that the specialists are an integral part of the NACMs, so the partners cooperate with them willingly and in a timely manner, as they would with the NACM direct staff members.
- **Ensuring sustainability of the secondment process requires preparations well in advance of the project end.** As NACMs often lack their own resources to support the seconded positions, fundraising activities should be initiated early, taking into account the major donors' funding cycles.

Conclusion

Secondment of the specialists to NACMs proved to be an effective approach to building capacity of the national AIDS coordinating mechanisms. Close collaboration between CAPACITY, NACMs, and other partners was an important precondition for the success of this initiative. As a result, NACMs received quality assistance in the technical areas where they previously lacked expertise. Secondment allowed NACMs to understand the importance of new approaches and activities initiated by the seconded specialists in implementing effective responses to HIV epidemics. At the same time, sustainability of the seconded positions remained the main challenge in some countries, though many activities are being continued by NACMs and other partners.

CHAPTER 2: Achieving high coverage of injecting drug users and sex workers with a comprehensive package of HIV prevention services

Introduction

Injecting drug users (IDUs) and sex workers are the main drivers of the HIV epidemics in Central Asia. Sentinel surveillance conducted in the region since 2005 have demonstrated a high prevalence of risky behaviors among injecting drug users (sharing of needles and syringes and unprotected sex) and sex workers (unprotected sex).

At the same time, HIV prevention interventions in 2005 covered a limited number of the most at risk populations (MARPs), reaching only 7 15% of the estimated IDU population in Central Asia. The lack of effective coordination between the stakeholders, low capacity and expertise of service providers, and the low priority of HIV prevention among MARPs by policy makers all contributed to the low coverage. Because of this situation, the CAPACITY project developed and implemented a model for achieving high coverage of MARPs with a comprehensive package of essential HIV prevention interventions.

Program methods

Model objectives and expected outcomes

The model pursued the following three objectives:
1. Develop mechanisms of coordination of stakeholders for the provision of prevention services to IDUs and sex workers in selected sites;
2. Ensure increased coverage of IDUs and sex workers with a comprehensive package of essential HIV prevention services; and
3. Prove effectiveness of HIV prevention activities.

The following key outputs and outcomes were expected as a result of the model implementation:

- Increased knowledge about modes of HIV transmission and methods of prevention;
- Decreased HIV related risky behavior among target groups; and
- Decreased incidence of HIV infections.

Preparation stage

The main steps undertaken in preparation for model implementation included:
- Developing the comprehensive package of services;
- Identifying pilot sites and a participatory needs assessment;
- Selecting of implementing partners;
- Signing agreements with site partners; and
- Securing funds for project implementation.

The comprehensive package of services developed by CAPACITY was based on WHO, UNAIDS and other UN agencies and international organizations working on HIV prevention among MARPs. The package consisted of four key elements:
1. **Reduction of stigma and discrimination**. Advocacy activities, such as meetings and trainings, were planned with key community members—including police, mass media and religious leaders— to overcome negative attitudes towards MARPs and PLHIV and to create a favorable political environment for HIV prevention activities.
2. **Provision of HIV education and information.** Through outreach and drop in center based activities, IEC materials were developed and volunteers were trained to provide information and materials about HIV prevention and risk reduction to MARPs.
3. **Provision of individual means of protection against HIV infection*.** Through outreach and/or drop in center based activities, individual means of protection were made available and distributed to MARPs.
4. **Access to medical services related to risk practices**. Referral systems were set up among various medical institutions and medical consultants were contracted to provide free

**'Individual means of protection' refers to condoms and safe injection equipment. No US government funding was used to support any aspect of providing or distributing safe injection equipment to clients.*

medical services—including detoxification treatment, STI diagnosis and treatment, VCT for HIV, prevention of vertical transmission of HIV, and management of surgical complications of drug injecting— to MARPs.

Local partners— including Ministries of Health, Republican and Oblast AIDS Centers, AIDS service organizations (ASO), oblast health departments and local multisectoral AIDS coordinating bodies— collaborated to identify pilot sites. Decisions were based on the HIV epidemiological situation, prevalence of HIV related risky behaviors, and the existence of ASOs to implement the comprehensive package of services. Together with CAPACITY, local partners conducted a participatory needs assessment involving the model beneficiaries in 7 sites (see Table 1) from February through March 2006 and developed the following recommendations for the model design:

- Expand HIV prevention services package;
- Scale up coverage of IDUs and sex workers with prevention activities;
- Improve access to MARPs for provision of prevention services;
- Decrease stigma and discrimination of drug users and sex workers by law enforcement agencies;
- Increase the involvement of government and non government organizations and health facilities in HIV prevention among MARPs;
- Strengthen capacity and substantially involve NGOs in HIV prevention among IDUs and sex workers;
- Create new and support existing needle and syringes exchange points for IDUs;
- Create a community center for the organization and implementation of prevention activities, counseling, and organization of self and mutual assistance;Improve knowledge and skills of health professionals on HIV prevention among MARPs;
- Improve level of awareness about HIV and STIs among the general population;
- Improve coordination and communication among organizations working on HIV prevention;
- Create unified client tracking and referral systems for all implementers of HIV prevention activities;
- Ensure anonymous and accessible services for STI prevention, diagnosis, and treatment among sex workers;
- Inform IDUs and sex workers about services available for them in government organizations;
- Increase the number of volunteers for HIV prevention outreach to MARPs; and
- Develop monitoring and evaluation (M&E) systems for HIV prevention activities.

Country	Model Site Location	Target Population	Population Size	Main Implementing Partner
Kazakhstan	Almaty City, Rabochi Rosyelok	IDUs	1,600	Almaty City AIDS Center
	Aksu Village, Pavlodar Oblast	IDUs	1,500	NGO Zhardem
Kyrgyzstan	Osh City	Sex workers	2,000	NGO Podruga
	Karasuu City and Kashgar Kishlak, Osh Oblast	IDUs	1,500	NGO Parents Against Drugs
Tajikistan	Khujant City, Chkalovsk Village	Sex workers	950	Sogd Oblast AIDS Center
	Kurgan-Tube City	IDUs	900	NGO Fidokor
Uzbekistan	Urgut City and 4 mahallas from Urgutski Rayon, Samarkand Oblast	IDUs	2,000	Samarkand Oblast AIDS Center

Table 1.

Model sites, target populations, and main implementers.

Each implementing partner signed letters of agreement with other service providing partners—including Republican and Oblast AIDS Centers, STI Dispensaries, Narcology Centers, Surgery and Obstetrics and Gynecology facilities, and AIDS service NGOs— in their the target area. In addition, agreements were made with local AIDS coordinating bodies, city and district authorities, health departments, law enforcement agencies, media outlets, and other partners, to ensure their support and approval of the model activities.

Based on either the existing data from the rapid situation assessments conducted in some sites as part of the sentinel surveillance surveys, or on the mapping and interviews with key informants, the participatory needs assessment also provided data to estimate the size of target populations at each site. Implementing partners for each site were identified based on the assessment results and negotiations with stakeholders (see Table 1 on the previous page).

Finally, CAPACITY supported the local implementing partners to prepare and submit a regional grant application to the World Bank and DFID funded Central Asia AIDS Control Project (CAAP) in order to secure funding for implementation of the HIV prevention models. The application was approved and funds were granted in July 2007, after which implementation started. During the regional start up meeting, the implementing partners named the new model 'TUMAR', the Central Asian word for a traditional talisman worn to prevent evil and to promote good luck, and chose a new logo consisting of the AIDS red ribbon with seven stars signifying the seven model sites (see Figure 1).

Figure 1. Logo of TUMAR

Service provision

Outreach activities and behavior change communication. Outreach workers were recruited and trained to implement interpersonal communication interventions for behavior change and distribute personal means of protection. On average, one outreach worker served 45 50 clients. Outreach workers conducted informational and educational sessions on HIV, STIs, personal risk assessment, HIV testing, condom use, and reduction of risk from drug use. Sessions often also included the distribution of individual means of protection as well as several different types of printed IEC materials. During the outreach activities, workers also informed clients about the drop in centers and their activities and provided referrals to different medical services for clients with medical needs.

Photo: Drop-in Center in Osh, Kyrgyzstan

Drop in centers. Each model site drop in centers provided MARPs with a safe and well managed space, located, in most cases, outside governmental institutions. Various services were provided at the drop in centers, including consultations by professionals such as

psychologists, lawyers, substance abuse specialists, and STI specialists. Clients participated in group discussions on HIV/AIDS/STIs in general, HIV prevention in particular, and risk reduction for drug users. They received individual means of protection and IEC materials, and were referred to detoxification, rehabilitation, STI diagnosis and treatment, PMTCT, and other medical services as needed. In addition, drop in centers provided services to meet everyday needs of clients (shower, laundry, snacks, haircuts, etc.), andconstructive spare time activities (board games, TV, books, music, rabbit raising and wood working) in a supportive social space away from their usual social environment that enabled or encouraged further risky behavior.
An exception to the rule of placing the drop in centers outside of government services was in Urgut Rayon of Samarkand Oblast in Uzbekistan, where six previously existing, government run 'Trust Points' were supported to function in much the same way as the non government drop in centers.

Referral to services. During outreach contacts and visits to the drop in centers, clients were offered referrals for STI diagnosis and treatment, detoxification and drug rehabilitation, medical services for treatment of post injection complications, and VCT. Female IDUs and sex workers were referred to gynecological services, and pregnant, HIV positive IDUs and sex workers were referred to the closest PMTCT service. In order increase the effectiveness of referrals and to help the clients get to services, volunteers escorted some of the referred clients to the service site and helped them enroll. Clients that declined an escort were provided with leaflets that gave directions to clinics and included instructions and guidelines for utilizing various medical services. Former IDU volunteered to help those IDUs who wanted to go enter detoxification and further rehabilitation services, which increased positive treatment results. Clients needing legal assistance were referred to lawyers who were contracted to work with the models. Based on signed agreements, service providers were reimbursed for either medicines, services, or both. To ensure that all services were client friendly, focus group discussions and exit interviews were held with clients.

Advocacy to decrease stigma and discrimination against MARPs and PLHIV. TUMAR staff conducted numerous meetings with local partners, including city administration, law enforcement agencies, and local education and health departments to discuss the progress, results, and future plans of the project. These meetings contributed to a favorable environment for working with MARPs. The project also organized special trainings about HIV prevention and reduction of stigma and discrimination for law enforcement agencies, religious leaders, and journalists.

Photo: Training for law enforcement workers in Kurgan Tube, Tajikistan

In addition, a short video clip aimed at reducing stigma and discrimination was developed and shown at drop in centers, medical clinics, and aired on a few television stations.health departments to discuss the progress, results, and future plans of the project. These meetings contributed to a favorable environment for working with MARPs. The project also organized special trainings about HIV prevention and reduction of stigma and discrimination for law enforcement agencies, religious leaders, and

journalists. In addition, a short video clip aimed at reducing stigma and discrimination was developed and shown at drop in centers, medical clinics, and aired on a few television stations.

Development of IEC materials. Many different types of existing IEC materials developed by other partners in the region were used in the model sites. In topical areas where no or inadequate IEC materials existed, CAPACITY provided technical assistance to develop new materials. Seven printed brochures were developed for distribution during outreach work and at drop in centers. All IEC materials were made available in Russian and in national languages to increase their utility.

Capacity building

A key component of TUMAR was building the capacity of local implementers and medical consultants to provide HIV prevention services to MARPs. Training activities focused on improving knowledge of HIV, STI, and drug demand reduction issues. Eight outreach worker field guidelines were developed in easy to understand language for volunteers to use on various topics relevant to their outreach work. Service providers received on going consultations and onsite coaching by CAPACITY staff and consultants.

Monitoring for quality and coverage

Another key component of TUMAR was proving high coverage of MARPs with HIV prevention services is both possible and an effective means for behavior change. CAPACITY supported the development of a monitoring and evaluation system to track information about clients' contacts with each type of activity at each model site. Data management was implemented through day to day record keeping (contact reports) by outreach workers, medical consultants, and other implementing staff at each site. Data from each site was entered regularly into a single regional database for analysis and comparison across sites. In order to ensure confidentiality and prevent double counting, each client was assigned a unique identification code that was used in place his/her name. The data was used as a continuous management tool, allowing TUMAR project managers to assess client coverage for all provided services and to make decisions about how to improve service provision.

An assessment of intermediate results, coverage, quality and integrity of the implementation, and performance evaluation of staff was conducted to inform decisions on adjustment of the model activities. Monitoring and evaluation activities were contracted to an external agency, the NGO MedSocInform, which completed regular monitoring visits and conducted process evaluations at each site. CAPACITY staff was also involved in periodic evaluation of project progress and implementation status. The evaluation teams, consisting of MedSocInform and CAPACITY staff, visited field sites and conducted small focus group and individual discussions with project staff and key partners to assess the quality and integrity of TUMAR's services. To ensure that beneficiaries were included in the monitoring process, all assessments among providers were followed by quality checks with clients.

End line evaluation of results

The evaluation of TUMAR measured whether or not IDUs and sex workers in the target areas had a reduced risk of HIV transmission. Separate evaluation survey instruments were designed for IDUs and sex workers to measure knowledge about HIV and behavioral risk for HIV transmission. Key behavioral indicators included needle and syringe sharing among IDUs, and condom use among IDUs and sex workers. Key knowledge indicators included knowledge about modes of HIV transmission and methods of prevention. Other indicators, such as STI diagnosis and treatment seeking behavior among sex workers and HIV testing among IDUs and sex workers, were also included.

Table 2.

End-line study sites and respondents

	Sex workers	IDUs
Project sites	• Osh • Khujand	• Aksu • Karasuu • Kurgan-Tyube
Control sites	• Karasuu (Kyrgyzstan) • Gafurov (Tajikistan)	• Ekibastuz (Kazakhstan) • Jalalabad (Kyrgyzstan) • Vakhsh (Tajikistan)
Project site respondents, n	612	898
Control site respondents, n	465	751
Clients (project group), n	491	841
Non-clients (project group), n	121	57
Non-clients (control group), n	586	808

The surveys were implemented in June, 2009, at five of the project sites and at five control sites. Surveys were given to IDUs at three of the project and control sites to sex workers at two project and control sites. Samples in each of the survey sites were selected using respondent driven sampling (RDS) (Heckathorn, 1997). At each site, 12 respondents were selected as 'seeds' to begin sampling. Each seed respondent was asked to invite up to three additional respondents. This was repeated in up to four waves of respondents until the sample size at each survey site reached approximately 300 (the exact project and control sites and the sample sizes from each are detailed in Table 2).

Incentives were provided in the form of food and hygiene packages to all who participated in the survey and to all who successfully referred others to the survey. Each respondent was asked to go through a verification procedure to ensure that s/he fit the requirements for survey participants. Once accepted, individuals were interviewed using a short questionnaire. articipants had a chance to stop the interview at any point in time and skip questions they did not want to answer. All collected data has been kept confidential. Questionnaires were encoded with unique identification codes.

All completed questionnaires were directed to the CAPACITY Regional Office for further analysis. Data were double entered in Excel (Microsoft Corp) and EpiInfo (CDC, Atlanta, GA, USA). After comparison and correction, the data were analyzed using STATA 8.2 (StataCorp LP). Descriptive statistics was used to explain the distribution of the demographic characteristics of the participants. Bivariate and multivariate analyses were performed to detect possible relationships and trends. Comparisons for some outcomes were made between respondents from the project sites and those from the control sites. For other outcomes, non clients from the project sites were compared with those from the control sites. For some outcomes, the comparison was made between project clients and non clients (both those from the project sites and those from the control sites). The Mantel Haenszel chi square test was used and confidence intervals were computed to determine statistical significance. A statistically significant difference was determined at a *p* value of less than 0.05.

** RDS is a chain-referral procedure whereby samples are selected from social networks of the target population (in this case, IDU). RDS relies on the assumption that, given sufficiently long* referral chains (3-6 waves), the sample composition *becomes stable (i.e., reaches "equilibrium") and results in a probability sample of hard-to-reach populations.*

Results

Client coverage

The estimated total number of MARPs in the TUMAR project areas was 10,450. Among injection drug users, the estimated population size ranged from 900 in Kurgan Tube, Tajikistan, to 2,000 in Urgut, Uzbekistan and totaled 6,651. Among sex workers, the estimated number ranged from 950 in Khujand, Tajikistan, to 2,000 in Osh, Kyrgyzstan and totaled 3,142. An additional 176 sex workers were also injection drug users.

During the 18 month implementation, a total of 10,161, or 97% of the estimated total number of MARPs, were ever reached with services provided by TUMAR. 52% of the estimated total number of MARPs was reached five or more times during the life of TUMAR. This group of clients had regular contact and is considered to have been covered by TUMAR. 33% of ever reached IDUs and 37% of ever reached sex workers used the drop in centers, while 74% of ever reached IDUs and 80% of ever reached sex workers were contacted through outreach. This indicates that outreach services were more popular, but drop in centers still attracted a substantial number of MARPs. (Tables 5 and 6 at the end of this chapter show project coverage and volume of service usage).

Knowledge and behavior change among IDUs

Respondents in both the project and control groups were similar in age and length of time involved in injecting drugs. They differed somewhat in their choice of drugs. Project site respondents were most likely to inject heroin (OR=21.2; 95% CI:15.4 29.1), while control site respondents were split between heroin and opium use.

Participation in project activities, gender, and the type of drug used had the most influence on the injecting behavior of IDUs. Thus, only 4% and 5% of respondents from the project site reported using needles and syringes that were previously used by someone else or passing his/her own needle and syringe to someone else during the last month and the last 6 months, respectively, compared to 37% and 39% among controls. Heroin users were more than two and a half times less likely to report sharing needles and syringes during the last month and during the last 6 months (OR=2.6; 95% confidence intervals [CI]:2 3.4). In both groups, women were nearly two and a half times more likely than men (OR=2.5; 95% CI:1.5 4) to report safer injecting behaviors (never shared needles). Controlling for gender and type of drug used, project clients were more than 18 times more likely than non clients to report safe injecting behaviors (OR=18.4; 95% CI:12.3 27.7), when asked about injecting practices over the last month, and more than 13 times more likely (OR=13.6; 95% CI:9.4 19.8) when asked about the last 6 months. Non client respondents from the project groups were almost 5 times more likely to practice safer injecting behaviors during the last month (OR=4.8; 95% CI:1.7 13.2) and almost 3 times more likely during the last 6 months (OR=2.8; 95% CI:=1.3 6.2) than respondents (non clients) from the control groups. When asked about sexual behaviors and knowledge of HIV transmission modes and prevention methods, no difference was found between the two groups of non clients.

Frequent clients of the project (five or more contacts) were almost five times more likely than less frequent clients (1 4 contacts) (OR=4.9; 95% CI:1.5 16.7) to report safer injecting practices over the past 6 months. There was no difference in behaviors between those clients who were contacted once and those who had from 2 4 program contacts.

Among IDUs who were sexually active, 54% from the project sites reported always using condoms during the last 12 months, compared to 28%

from control sites reporting same. Among respondents from the project sites, 60% reported using condoms during last sex, compared to 37% among controls. The odds of reporting regular condom use was almost 11 times greater (OR=10.9; 95% CI:7.1 16.6) among clients of the program who also reported never sharing needles and syringes during the last 6 months, as compared to non clients. Less than 24% of control group respondents reported never sharing needles during the last 6 months and always using condoms during the last 12 months, compared to 52% of project clients.

Nearly all IDUs from the project sites correctly identified either sex (98%), or injections (96%), as modes of HIV transmission, while only 64% from control sites identified sex and only 56% identified injections. 94% of project respondents 56% from control groups identified both injecting and sexual modes of HIV transmission; 89% from project and 52% from control groups could name two main modes of transmission and had no misconceptions about HIV transmission while only 36% of IDUs from project sites and 9% from control sites correctly identified all four main modes of HIV transmission* and had no misconceptions. When analyzed independently, heroin users were more likely than opium users to name both unprotected sex and sharing needles and syringes during injection as modes of HIV transmission (OR=2.5; 95% CI:1.9 3.1). After adjusting for kind of drug used, the odds of clients knowing two modes of HIV transmission (sexual and via injections) increased to more than 18 times than that of non clients (OR=18.4; 95% CI:12.9 26.1). Project clients were slightly better informed about HIV infection (OR=1.9; 95% CI:1.6 2.4), with 72% correctly answering that an HIV–infected person can look healthy, as compared to 57% of the control group.

** Sexual, during injections, blood transfusion and from HIV-infected mother to her child during pregnancy, labor, or breastfeeding.*

Less than 0.5% of project clients reported STI symptoms, while in the control group this figure reached 4%. However, logistical regression analysis showed no statistically significant interaction between being a client and reporting any STI symptoms.

IDUs from project sites were more than twice as likely as controls (OR=2.5; 95% CI:2.1 2.8) to have ever had an HIV test, and more likely to have had recent (in the past 6 months) HIV tests (OR 0.6: 95% CI:0.4 0.8) (58% vs. 44%). (See Table 3 at the end of this chapter for detailed comparisons of behavior and knowledge results among IDUs from the end line survey).

Why IDUs engage in HIV risk behaviors

When IDUs in both project and control sites were asked why they shared needles and syringes, 81% replied that it was because of a lack of money; 10% said they did not have access to clean needles and syringes;, and 12% reported it was because they trust their partner, because everybody does it, or because when they are high they do not really think about it. Asked why they do not always use condoms, IDUs said it was because of lack of money (45%); they do not like condoms (17%); they trust their partner (17%); they have a regular partner (14%); they did not have condoms with them (6%); and because their partner dislikes condoms (2%). Finally, asked why they have not undergone an HIV test, IDUs said they did not want to get tested (34%); they did not think about getting tested (32%); they were afraid (22%); they did not think it was necessary (8%); and the HIV testing location was too far away (3%).

Knowledge and behavior change among sex workers

Respondents at both the project and control sites were similar in age, length of time involved in sex work, number of clients seen in a month,

and the percent who also use injection drugs.

Participation in the project was the only factor that influenced the condom use rates both during the last month and with the last client (OR=2.5; 95% CI:1.9 3.2 and OR=4.8; 95% CI:3.4 6.7). A greater percent of sex workers from the project sites (79%) reported always using condoms with clients during the last month, compared to sex workers from the control sites (60%), and 91% percent of sex workers from the project sites used condoms with their last client, compared to 69% from the control sites. The effect of the project interventions also spread to non clients at the project sites, who were more likely to use condoms with their last partner when compared to respondents from the control sites (OR=1.8; 95% CI:(1.1 2.8). A similar number of respondents from both groups reported having a regular sexual partner. There was no difference between the percentage of sex workers at project and control sites who reported using condoms with their regular partners. There was also no difference between the level of reported pregnancies between the project sites and the control sites.

Knowledge about the most common STI symptoms was better among respondents from the project sites (54%) than from the control sites (39%) (OR=0.6; 95% CI: 0.8 0.3). However, the percentage of women who reported having any STI symptoms and those who sought professional medical help for STIs in both groups was the same. The odds of sex workers being screened for STIs within the last 6 months was much higher among respondents from the project group than among controls (OR=4.0; 95% CI:3.1 5.2). Thus, 69% of sex workers at project sites sought STI diagnostic services during the previous 6 months, compared to 36% of those at control sites. As many as 35% of respondents from the control sites had never been tested for STIs, compared to 7% of those from project sites.

Sex workers from project sites were more likely than those from control groups to correctly identify sex (94% vs. 70%), injections (68% vs. 32%), and both sex and injections (66% vs. 29%) as modes of HIV transmission. Clients who were in regular contact with the program (5 or more contacts) were almost three times more likely to understand the risk of needle sharing (OR=2.9; 95% CI:1.5 5.6). Almost half of all respondents from the project group (47%) were able to name both sex and injections as modes of HIV transmission and had no misconceptions about HIV transmission, compared to only 20% among controls. Only 23% of respondents from project sites were able to list all four modes of HIV transmission and had no misconceptions, though this was still higher than for controls (7%) (OR=1.3; 95% CI:0.9 1.7). The project group was also better informed that a person infected with HIV can look healthy (OR=2.5; 95% CI:1.9 3.2).

Knowledge about HIV prevention was also better among respondents from the project groups compared to those from the control groups. 77% of the project group and 58% of the controls understood that regular use of condoms can decrease the risk of HIV infection (OR=3.2; 95% CI:2.3 4.5). Likewise, a greater percentage of project clients knew that avoiding needle sharing can decrease the risk of HIV infection (78% vs. 60%) (OR=0.8; 95% CI:0.6 1.1).

Finally, sex workers from the project sites (65%) were more likely to have had a recent HIV test (in the last 6 months) than those from control sites (29%) (OR=3.2; 95% CI:2.5 4.2). In addition, 40% of sex workers at the control sites had never had an HIV test, while this was true of only 15% of sex workers at the project sites. (See Table 4 at the end of this chapter for detailed comparisons of behavior and knowledge results among sex workers from the end line survey).

Why sex workers engage in HIV risk behaviors

When sex workers from both the project and

control sites were asked why they do not always use condoms with clients, 42% responded that their clients object to using condoms; 18% do not like to use condoms themselves; 12% trust their clients; 11% did not have condoms available; 6% said their clients will pay more for sex without condoms; and 3% said they could not control themselves because they were drunk. Surprisingly, among sex workers in the control sites, 12% said they did not know what condoms are, while none of the sex workers in the project sites reported this reason. Among project clients, behavior change did not seem to be influenced by the number of program contacts they had.

Sex workers in both groups who had regular sex partners were asked why they did not use condoms with these partners. 57% said they trust their partners;18% said their partners object to using condoms; 12% said that they themselves do not like using condoms; 5% were trying to get pregnant; and 5% were worried about losing their partner's trust.

Finally, when sex workers at both the project and control sites were asked why they did not go for an HIV test, 45% replied that they did not think about it; 32% said it was not necessary; 6% said they do not want to be tested, and 5% said the location of the test is inconvenient. 16% of the sex workers in the control sites said they were afraid to get tested, while none of the sex workers in the project sites replied with this answer.

Discussion

Model strengths

- **Targeted interventions**. The model provided services to primary drivers (IDUs and sex workers) of HIV epidemics in Central Asia at 7 sites where coverage with prevention services before the project was low but HIV prevalence was notably high.

- **High coverage**. The model aimed to and succeeded in reaching a majority of clients with HIV prevention services.

- **Essential package of HIV prevention services**. The model services package was developed through an analysis of internationally recognized, evidence based approaches and tailored to address the unique aspects of the Central Asian epidemics.

- **Multi-sectoral approach**. Local stakeholders from government structures and civil society at each project site were involved in the model development and implementation process to ensure that the various and diverse needs of the MARPs were met with broad sectoral support and various, locally developed mechanisms.

Photo: Round table meeting with member of the Coordination Committee in Kurgan Tube, Tajikistan

- **Participatory approach**. This project was developed and implemented in close collaboration and consultation with beneficiaries (MARPs) at each site to ensure transparency, participation, and appeal.

- **Monitoring and evaluation**. The model featured a rigorous M&E and reporting component, implemented by an independent expert organization and directly linked to each

country's national M&E program to ensure effective implementation and linkage to national program needs.

The main premise of the TUMAR project was that in order to have a significant impact on the HIV epidemics in Central Asia, it is necessary to provide a high level of coverage for the most at risk populations with quality, comprehensive HIV prevention services. The project succeeded in reaching the vast majority of the estimated target populations at least once (97%). The proportion of MARPs who regularly received prevention services, defined by at least five program contacts, was also high at 52%.

The end line survey results demonstrated that the hard work of project implementers paid off. Compared to IDUs and sex workers in control sites, those who had access to the TUMAR interventions exhibited lower levels of risky needle and syringe sharing and higher levels of consistent condom use. IDUs and sex workers in project sites were also more likely to undergo STI and HIV diagnosis than those in control sites. Accurate knowledge about HIV transmission and prevention was also higher among IDUs and sex workers in project sites than in control sites. Furthermore, the end line survey results showed that clients who had regular and frequent program contacts had greater risk reduction than those who encountered the program seldom or infrequently. Each of these results indicates that with concerted efforts it is possible to reach a high proportion of most at risk populations, and that doing so will reduce HIV risk behaviors and increase HIV knowledge .In addition, the project demonstrated a certain level of herd immunity. 'Herd immunity' is when a threshold proportion of a population receives an intervention and the benefit of that intervention spills over to a proportion of the population that does not receive the intervention.

This most clearly seen with vaccines, where by vaccinating a large majority of the population, the level of pathogen in the population decreases overall, thereby decreasing everyone's, even those who were not vaccinated, chance of infection,.

To determine if there was a herd immunity effect of the TUMAR project, non clients from the project sites were compared with the sample from the control sites, all of whom were non clients. Among IDUs, the non clients from the project site were much more likely to practice safe injecting behaviors but not more likely to use condoms or to know more about HIV than IDUs from the control sites. Among sex workers, non clients from the project site were somewhat more likely to use condoms, but not more likely to go for STI diagnosis or to know more about HIV than sex workers from control sites. These results suggest that there is some amount of herd immunity effect for the most important HIV risk behaviors – needle and syringe sharing, and condom use. Herd immunity effect could be a result of indirect contact with project interventions – clients passing on information, needles and syringes, and condoms to non clients. In the case of IDUs, it could also be the result of fewer opportunities to share injection equipment, since project clients were less likely to do so.

Understanding the barriers to changing behaviors can help program implementers to improve services. When IDUs in both project sites and control sites were asked why they share needles and syringes and why they do not use condoms, the vast majority said it is due to not having enough money. Much less frequently, but the next most common reason cited for both, was a fear that refusing to share needles and syringes with peers, and insisting on condom use would indicate a lack of trust between the injector and his or her injecting and sexual partners. The reasons why most IDUs do not get tested for HIV is because they do not

get tested for HIV is because they do not want to, they do not think about it, or because they are afraid.

These responses suggest that for IDUs, needles and syringes and condoms should be free of charge and easily available. More emphasis needs to be placed on disassociating the practice of safer behaviors from the feeling of distrust of partners. Rather, emphasis should be placed on associating safer behaviors with caring for and the protection of partners. More work also needs to be done to improve familiarity and knowledge about the benefits of HIV testing so more IDUs will think about, remember, and not be afraid to get tested.

Sex workers in both project and controls sites were also asked why they do not use condoms with clients and regular partners, and why they do not get tested for HIV. A large proportion of sex workers said they do not use condoms because their clients refuse, or because their clients pay more for sex without condoms, thus demonstrating that money is the important factor. Most sex workers said they do not use condoms with their regular partners because they trust them or because their partners do not want to use them. Sex workers' reasons for not getting tested for HIV were similar to those given by IDUs.

Sex workers need to be trained to better negotiate condom use with clients. They can also learn techniques for convincing clients to use condoms, such as introducing the condom just before penetration, when clients' resistance may be reduced. As with IDUs, project implementers should work to reduce the association between condom use and distrust of their partners, and emphasize that using condoms shows caring and protects their loved ones. Sex workers also need continued and increased knowledge about HIV tests.

While IDUs and sex workers in project sites definitely benefited from TUMAR's interventions, levels of HIV knowledge and condom use still need to increase, needle and syringe sharing needs to decrease, and STI and HIV diagnosis needs to be accessed more. Thus, it is recommended that TUMAR's interventions be maintained, strengthened, and scaled up.

Nevertheless, it is clear that the TUMAR project interventions have been successful. In addition to maintaining and strengthening interventions in the existing project sites, it is recommended that the interventions should be expanded to other sites with a high prevalence of injecting drug use and sex work. This is especially important since both IDUs and sex workers tend to migrate from one geographic area to another.

Limitations

The TUMAR project was limited by resources, time, and local capacity, and it was not possible to conduct a rigorous project control baseline survey. Although local capacity improved during the project so that a good end line survey was possible, since pre and post project comparison weren't done there remains the possibility, however slight, that project sites already would have had better knowledge and behavior results from the beginning and that the demonstrated differences were not due to the project. Since the end line results were consistent across all project sites, it seems most likely that the project was responsible for the differences.

Also due to time, resources, and local capacity limitations, it was not possible to conduct HIV prevalence surveys. Therefore, even though behavioral and knowledge indicators demonstrate important risk reduction among vulnerable populations, it is not known whether there was any resultant reduction in HIV transmission.

Changes in risky behaviors were recorded based on self reported information and considering the

increased level of knowledge among project clients, it is possible that behavior changes were over reported. Nevertheless, the reported change in needle and syringe sharing and condom use is quite large so over reporting could not account for all of the change.

Conclusion

The TUMAR project was implemented to demonstrate how to provide comprehensive HIV prevention services to the most at risk populations, such as IDUs and sex workers. TUMAR also set out to show that providing these services would result in significant and measurable reductions in HIV risk related behaviors, especially the sharing of needles and syringes and the wearing of condoms. TUMAR was successful on both of these accounts. It is now important for local and national governments and international funding agencies to make resources available to scale up these activities. Achieving high coverage of MARPs is possible and necessary to slow the HIV epidemics in Central Asia.

Photo: Mini-session for sex workers in Osh, Kyrgyzstan

Table 3. End-line survey results for IDUs in project and control groups*

Indicator	Project group	Control group
Sample Size	898	751
Age		
Range	16 – 56	16 – 62
Mean	33 (33-34)	31 (31-32)
Sex (%)		
Female	14 (12-17)	11 (6-13)
Male	86 (83-88)	89 (87-91)
Length of time as IDU		
Range	2 months – 31 years	2 months – 33 years
Mean	6.5 years (6-7 years)	5.5 years (5-6 years)
Type of Drugs used (%)		
Heroin	94 (93-96)	44 (41-48)
Opium/Khanka	14 (11-16)	58 (54-61)
Barbiturates	5 (4-7)	0.8 (0.2-1.4)
Percent who did not share syringes in the last month	**96 (95-98)**	**63 (59-66)**
Percent who never shared syringes in the last 6 months	**95 (94-97)**	**61 (58-65)**
Among those with sexual experience, number of sex partners during last 12 months		
Range	1- 37	1- 100
Mean	3	4 (4-5)
Among those who had sex during last 12 months, percent who always used condoms	**54 (51-58)**	**28 (24-32)**
Among those who had sex during last 12 months, percent who used condom during the last sex	**60 (57-64)**	**37 (33-41)**
Percent who correctly identified modes of HIV transmission		
Injections	**96 (95-97)**	**58 (54-61)**
Sex	**98 (97-99)**	**64 (61-67)**
Both injections and sex	**94 (93-96)**	**54 (50-58)**
Percent who correctly identified methods of HIV prevention		
Condoms	**94 (93-96)**	**61 (58-65)**
Not sharing injecting equipment	**96 (94-97)**	**63 (60-66)**
Percent who know that PLHIV may look healthy	**72 (69-75)**	**57 (54-61)**
Percent who had their last HIV test		
6 months ago or less	**58 (55-61)**	**44 (40-48)**
> 6 months ago	**38 (35-41)**	**23 (20-26)**
Never	**4 (3-6)**	**33 (30-37)**

*All figures are shown with 95% confidence intervals in brackets

Table 4. End-line survey results for sex workers in project and control sites*

Indicator	Project sites	Control sites
Sample size	612	465
Age		
Range	16 – 66	16 – 53
Mean	30 (29-30)	31 (30-31)
Length of time as sex worker		
Range	2 weeks – 30 years	2 weeks – 36 years
Mean	5 years (4.5-5 years)	5.5 years (5 -6 years)
Number of clients per month		
Min-max	1 – 500	1 – 450
Mean	44 (39-49)	64 (55-73)
IDU and sex worker, %	3.3 (1.9-4.7)	3.5 (1.8-5.2)
Percent who used condoms with all clients in the last month	**79 (76-82)**	**60 (55-64)**
Percent who used condoms with the most recent client	**91 (89-93)**	**68 (64-72)**
Percent who had a regular sex partner	57 (53-61)	59 (54-63)
Percent who always used condoms with regular sex partners during the last month	37 (32-42)	33 (27-38)
Percent who had symptoms of STIs during the last 6 months	23 (20-26)	28 (24-32)
Percent who sought qualified medical help for STIs	62 (56-67)	57 (51-63)
Percent whose last diagnostic check for STIs was		
6 months ago	**69 (65-73)**	**35 (31-39)**
> 6 months ago	**25 (21-29)**	**44 (38-50)**
Never	**7 (5-9)**	**35 (31-39)**
Percent who correctly identified modes of HIV transmission		
Injections	**68 (64-72)**	**32 (28-36)**
Sex	**94 (92-96)**	**70 (65-74)**
Injections and sex	**66 (62-70)**	**29 (24-33)**
Percent who correctly identify condoms as a method for HIV prevention	**89 (86-91)**	**71 (67-75)**
Percent who know that PLHIV may look healthy	**77 (74-81)**	**58 (53-62)**
Percent who had their last HIV test		
6 months ago or less	**57 (53-61)**	**29 (25-33)**
> 6 months ago	28 (24-31)	31 (27-35)
Never	**15 (12-18)**	**40 (35-44)**

*All figures are shown with 95% confidence intervals in brackets

Table 5. Selected project coverage indicators by sites*

Indicator	Almaty	Kurgan Tube	Aksu	Karasuu	Urgut	Khujand	Osh	All sites
Estimated population size, n	1 600	900	1 500	1 500	2 000	950	2 000	10 450
Clients ever reached by program, n	1 367	1 022	1 013	2 438	1 332	599	2 390	10 161
IDUs	1 297	848	937	2 329	1 227	13		6 651
Sex worker	12	37	41	87	38	538	2 389	3 142
Sex worker/IDU	48	32	3	18	36	39	0	176
Co dependents	10	105	32	4	31	2	1	185
Sex worker clients						7		7
Clients reached by the program 5 times and more, n	866	562	686	1 222	1 033	466	618	5 453
Clients reached 5 times and more out of estimated target population, %	54%	62%	46%	81%	52%	49%	31%	52%
Clients ever reached by the drop in center, n	318	784	222	401	723	336	791	3 575
IDUs	292	647	208	361	655	7		2 170
Sex worker	2	28	7	27	27	286	791	1 168
Sex worker/IDU	17	26		11	21	35		110
Co dependents	7	83	7	2	20	1		120
Sex worker clients						7		7
Clients ever reached by outreach program, n	1 314	829	937	2 245	1 316	555	1 819	7 701
IDUs	1 255	689	862	2 148	1 213	11		4 923
Sex worker	12	30	41	81	37	503	1 818	2 522
Sex worker/IDU	43	29	3	12	35	37		159
Co dependents	4	81	31	4	31	1	1	153
Sex worker clients						3		3

Table 6. Volume of selected services provided within the project, by site

	Almaty	Kurgan-Tube	Aksu	Karasuu	Urgut	Khujand	Osh	All sites
Number of clients received condoms	1 340	708	963	2 119	1 313	588	2 357	9 388
Number of clients received syringe and needle sets	1 355	782	1 011	2 298	1 331	54	332	7 163
Number of clients received alcohol tissues	918	777	936	2 269	0	40	324	5 264
Number of clients referred to STI treatment	74	435	130	302	224	219	924	2 308
Number of clients referred to overdose treatment	51	321	202	269	46	30	1	920
Number of clients referred to VCT	155	550	95	343	1 014	215	130	2 502
Number of clients referred to prevention of vertical transmission	1	271	0	299	88	11	0	670
Number of clients referred to surgeon	6	85	5	28	161	6	0	291
Number of clients consulted by psychologist	221	573	242	81	264	174	31	1 586
Number of clients consulted by narcologist	91	561	220	502	535	17	3	1 929
Number of clients consulted by STI specialist	91	411	215	323	248	212	155	1 655
Number of clients consulted by gynecologist	97	138	0	20	46	331	910	1 542
Number of clients consulted by social worker	104	548	95	2 261	29	487	285	3 809
Number of clients consulted by lawyer	2	99	0	17	0	44	108	270
Number of condoms distributed	93 860	33 021	241 508	101 548	70 912	162 496	380 380	1 083 725
Number of syringe and needle sets distributed	361 429	119 553	304 633	129 892	103 286	11 556	825	1 031 174
Number of alcohol tissues distributed	206 013	119 212	27 7683	209 243	0	6 973	1494	820 618
Number of all IEC materials distributed	22 942	9 333	32 206	17 180	3 609	9 340	15 188	109 798

* Proportion of population reached by site is calculated for the population primarily targeted at the site

CHAPTER 3: Youth Power Centers: HIV Prevention among At-Risk Youth

Background

In modern, urban communities throughout the world many young people face challenges that can potentially endanger their chances of becoming skilled, productive adults. Some of these challenges are related to the socio cultural contexts and environments in which young people live. For example, young people who grow up in poor neighborhoods with few economic opportunities, schools without adequate learning resources, or a lack of structured extracurricular activities may not have the same options as young people who are raised in more affluent environments. Personal and peer related psycho social influences pose another challenge. Youth feeling "invincible" or responding to social pressure from friends may be inclined to take risks, e.g. by engaging in illegal or unhealthy behaviors that can lead to prison time, accidents, illness, or death.

The countries of the former Soviet Union, and in particular those within the Central Asian Republic, are no exception. Following the break up of the Soviet Union and establishment of independent governments in the individual countries, the economies of these countries began to falter. As the availability of educational, economic, and social resources declined, the number of impoverished communities increased sharply. Simultaneously there was an increase in illegal drug trafficking through Central Asian counties to Russia and Europe.The socioenvironmental factors affecting these communities together with the exposure to illegal drugs has led to increased risk taking among young people, including but not limited to, high levels of illicit drug use and unsafe sexual behaviors.

The spread of HIV in Central Asian countries through sharing injecting equipment and risky sexual practices calls for urgent efforts to promote safer practices among at risk youth (ARY) who are engaging in or are likely to engage in risky behaviors related to HIV and drug abuse. However, the large size of the target group, social taboos on open discussion of sex and drug related issues, and lack of technical expertise and qualified staff posed serious barriers for scaling up evidence based prevention programs able to reach large groups of the youth population in Central Asia.

In order to assist National AIDS Programs in addressing these gaps, CAPACITY developed and implemented a model intervention on HIV prevention among at risk youth through the establishment of youth centers. Stationary youth centers are a type of intervention that has been successfully implemented in many regions of the world, most recently in Central Asia. Typically, these centers provide a place for young people to gather and obtain new skills, knowledge, and attitudes that can help to mitigate the temptations of risk engagement and can contribute toward overall youth development. By providing a safe place for young people to hang out, take skills based courses and educational classes, and participate in activities, youth centers have maintained their attraction to young people. As an added benefit these centers provide youth with coping mechanisms for the difficult challenges they face and also positive tools youth need to successfully grow and contribute to their communities. CAPACITY's goal was to reduce sexual and drug related risky behaviors, increase access to diagnostic and treatment services for sexually transmitted infections (STI), and increase access to voluntary counseling and testing (VCT) for HIV among youth aged 15 24 living in areas with high prevalence of risky behaviors.

Program methods

Implementation steps

Steps taken to develop and implement the model included:

- Identification of the pilot sites and partner organizations

- Baseline research
- Establishment of the Youth Power Center (YPC)* and staff capacity building
- Coverage of at risk youth (ARY) with a comprehensive package of HIV/STI prevention and drug demand reduction services
- End line research
- Transfer and replication of YPC model

Target population

The model targeted youth most likely to contract HIV, including sexually active youth who practice high risk behaviors (i.e. unprotected sex, multiple partners, and sex with commercial partners) and youth living in high risk zones where drugs are readily available and drug use is prevalent.

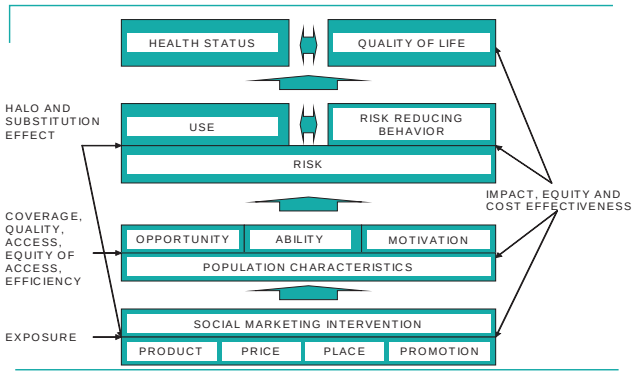
Pilot sites and partners

Youth Centers had already been developed and implemented in Uzbekistan, Tajikistan, and Kyrgyzstan under another USAID funded project, the Drug Demand Reduction Program (DDRP); however, those youth centers were not specifically focused on HIV prevention. Based on the lessons learned from DDRP, the new youth centers within CAPACITY did focus on HIV prevention. Selection of the YPC pilot sites was based on the situational analysis of HIV and AIDS prevalence**, concentration of target groups, qualitative and quantitative assessments of the target population, and an evaluation of the infrastructure to determine feasibility of reaching a majority of the target group. The qualitative assessment of the pilot sites revealed a high concentration of young people with low socioeconomic status, including migrants from rural areas and young people engaged in unskilled labor, often without adequate parental control. Following a series of meetings with local stakeholders, including Republican/National and City AIDS Centers in Almaty and Bishkek, City Health Departments, the National Youth Organization in Turkmenistan, international agencies, and local NGOs working on HIV prevention the pilot sites were selected. The first YPCs were established in Almaty, Kazakhstan and in Bishkek, Kyrgyzstan; later, centers were also established in Ashgabat and Dashaguz, Turkmenistan.

Theoretical framework

The model intervention was based on a four level performance framework for social marketing (PERForM)*** (Figure 2).

Figure 2 : PERForM "PERformance Framework for Social Marketing"



The top level represents the goal: decreased HIV prevalence among and improved health status for at risk youth. The second level of the framework includes the objectives: increased condom use and increased practice of safer sexual behaviors. The third level consists of the determinants of behavior summarized in terms of opportunity, ability, and motivation (OAM). Opportunity refers to community and service factors that promote or inhibit safer behaviour; ability is defined as an individual's skill or proficiency at solving problems, including adopting safer behavior; and motivation describes how a person has or develops self interest in changing his or her behavior. The fourth level delineates the characteristics of the intervention. The intervention was designed to improve OAMs for increasing safer behaviors and, conversely, preventing, reducing, or eliminating risky behaviors, thereby decreasing HIV prevalence and improving health status.

Staffing and incentives
The key YPC personnel included a director; an outreach coordinator to oversee the team of volunteers and maintenance of the database; master trainers to conduct training of trainers for volunteers, monitor the educational activities, and oversee outreach visits; and part time consultants (an STI specialist, a gynecologist, and a psychologist). Peer volunteers trained by the master trainers conducted educational sessions for the target audience, including outreach visits.

To improve the cost effectiveness of the model and ensure its financial sustainability in the future, YPC staff were paid salaries comparable to those paid by the governmental structures. Volunteers received either small incentives for the educational and alternative activities or compensation for transportation costs incurred during outreach visits.

Photo: Youth Power Center in Almaty

Intervention package
The core of the YPC model intervention package consisted of interpersonal behavior change communication (IPC/BCC) on HIV, STI, and drug abuse prevention issues; distribution of IEC materials and high quality condoms* to those who reported being sexually active; consultations by specialists and referral to outside services, including HIV and STI testing and treatment; and activities aimed at structuring the leisure time of youth (referred to as alternative activities) to motivate ARY to

structuring the leisure time of youth (referred to as alternative activities) to motivate ARY to become YPC participants. The key principles of the YPC operations were:

- Providing reliable information in a non judgmental environment
- Tailoring activities based on the risk level of the clients
- Targeting youth at highest risk of contracting HIV
- Relying on a peer to peer model of education

IPC/BCC sessions followed the training manuals approved by the relevant Ministries of Health and Education and the National Youth Organization (in Turkmenistan) and included the following topics:

- Education on the correct and consistent use of latex condoms and guidelines for selecting quality condoms
- Education on HIV and STI transmission and prevention
- Drug use prevention education
- Motivation to delay sexual debut or to reduce sex partners
- Motivational interviewing to encourage risk groups with STI signs to seek appropriate STI testing and treatment services
- Motivational interviewing to encourage risk groups to utilize VCT services

IPC/BCC services were delivered in the following formats:

- **Educational Training Sessions**: Typically 45 minutes long, covering key topics on HIV prevention
- **Educational Mini-Sessions**: Typically 15 minutes long, addressing the key topics in less detail. Outreach workers and peer

**Some activities were modified in Turkmenistan due to the socio-political context particular to that country. For example, condoms were not provided at the youth centers in Turkmenistan.*

educators met with the target groups in places where they worked, entertained, lived, and learned (SWELL sites), such as streets, parks, marketplaces, rental apartments, cafes, and discos

- **Events:** Ranging from one to two hours, this type of intervention conveyed priority messages in a non threatening and entertaining way to target group members reluctant to interact with service providers in a formal setting. The purpose of the events was to gain the target groups' trust, to relate essential HIV prevention messages, to reach new target group members, and to refer them to other HIV prevention services

Photo: Educational session on HIV at the Youth Center in Ashgabat.

All IPC/BCC activities were accompanied by distribution of IEC materials (brochures, leaflets, posters) and high quality condoms.
To address vulnerability factors related to the youth's social environment and to build youth resilience against drug use and other risky behaviors, the YPCs offered a range of activities structuring the young people's free time, providing them with job training, life skills education, and other healthy alternatives to risky behaviors. The alternative activities included sports, dance and music clubs, chess and checkers, computer literacy programs, language courses, and other activities popular among youth.

YPC prevention services were tailored to the risk level of a particular client. The clients were required to fill in the Risk Assessment Cards, and if the results indicated higher risk level for HIV, STIs and/or drug use, services for these clients were adjusted accordingly. In particular, the clients with higher risk for drug use (e.g. those socializing with IDUs or whose family members use drugs) were offered a special educational session on drug related issues.

The clients in need for STI/HIV screening and treatment were referred to the STI specialist/YPC counselor. Some of STI/HIV related services, such as pre test counseling, were provided within the YPC premises; for other services, clients were referred to outside facilities (youth friendly cabinets and clinics) operated by partner organizations using a voucher referral system. Health care facilities collaborating with YPCs provided free and anonymous services for the referred youth and returned vouchers to the YPC outreach staff for monitoring purposes.

Baseline study and recommendations
Baseline surveys were conducted at each site to gain firm understanding of ARY needs in the pilot areas, which would better inform the intervention. The objectives of the baseline survey were:
1) To gain comprehensive and detailed data to inform model interventions with ARY
2) To segment the population according to condom use with any kind of sexual partners, and socialization with IDUs
3) To identify key OAM determinants associated with each behavior
4) To obtain baseline information for monitoring key indicators, behavior change, OAM determinants, and exposure to the model interventions

The baseline study results were used to help design the intervention. They demonstrated high prevalence of risky practices and other vulnerability factors related to HIV and AIDS, such as:

1) High level of sexual activity among the surveyed youth (91% in Almaty, 78% in Bishkek and 36% in Turkmenistan* were sexually active)

2) Relatively low rate of reported condom use at last sex with any kind of partner (40% in Almaty, 33% in Bishkek, and 37% in Turkmenistan)

3) High level of socialization with drug users (26% of ARY in Almaty and 42% in Bishkek personally knew someone who had ever injected drugs and 8% of ARY in Turkmenistan had ever used injection drugs)

Thus, CAPACITY developed the following recommendations for the intervention:

1) Promote consistent condom use with all partners

2) Emphasize the risk of HIV transmission from all partners, even partners ARY know well

3) Challenge the belief that condom use reduces trust between partners and that using condoms demonstrates love and caring for one's sexual partner

4) Promote having condoms on hand at all times among sexually active ARY

5) Support ARY to develop skills to negotiate for condom use and to avoid heroin/opiates use

6) Improve availability of condoms in places where ARY socialize, live, learn, or work

Monitoring and Evaluation

To track the number of activities conducted in the YPC, the number of clients (disaggregated by gender) covered by the services, and referrals made from the YPC to other services, each center maintained a client contact database. The database uses a seven symbol unique identifier code (UIC) in place of personal names in order to ensure confidentiality of the clients. The following monitoring indicators were measured using client contact database on a monthly, quarterly and annual basis:

- Number of clients served
- Number of peer education module sessions conducted
- Number of mini sessions conducted
- Number of youth reached through peer education module sessions
- Number of youth reached through mini sessions
- Number of educational events conducted
- Number of clients referred to outside services
- Number of IEC materials distributed
- Number of condoms distributed

In addition to tracking the volume of services provided, YPC staff monitored the quality of educational sessions through pre and post tests of participants' knowledge, attitudes, and beliefs about HIV and AIDS.

Outcome results in the pilot sites in Almaty and Bishkek were evaluated by comparing the findings from tracking surveys designed to measure HIV related knowledge, attitudes, and practices that were conducted in the pilot areas before and two years after the YPCs were implemented. In Turkmenistan, a baseline and end line evaluation was conducted specifically for evaluating the YPC results.

Results

Model YPCs demonstrated high coverage of ARY with prevention services, with Almaty and Ashgabat YPCs serving a significantly larger number of ARY than was anticipated (Table 7). The coverage figures demonstrate that clients highly demanded all services provided by the centers, including specialist consultations and alternative activities. In total, four CAPACITY YPCs in Kazakhstan, Kyrgyzstan and Turkmenistan served 57,308 clients.

Pre and post test data demonstrated that average scores improved in all cities, with the highest increase in Almaty (25% points).

**Data for Ashgabat and Dashaguz in Turkmenistan have been aggregated.*

The implementation of the YPCs in Almaty and Bishkek resulted in some changes in HIV/STI and drug abuse related indicators and can be seen in table 8 (see next page). The YPCs in Turkmenistan did not have much effect on HIV related risk behaviors among ARY, but did improve HIV related knowledge (see table 9). The results demonstrate a slight decline in accessibility of drugs to ARY*, an increase in the proportion of sexually active ARY reporting intention to use a condom for HIV prevention during next sexual intercourse*, and an increase in sexually active youth's awareness about HIV risk and prevention**.

Discussion

The YPC Centers reached a high number of ARYs in the pilot areas and provided a wide range of services aimed to prevent HIV, STIs, and drug abuse. IPC/BCC activities were effective in increasing clients' knowledge, attitudes and beliefs, as shown by the pre and post test data. Data from the population level studies suggest some reduction in ARYs' risk of involvement in drug use and increased intent to practice safer sexual behavior in Bishkek and Almaty, as well as improved HIV awareness in all sites.
Partners from the governmental structures, NGOs, and internationally funded programs in Kazakhstan, Kyrgyzstan, and Turkmenistan demonstrated interest in the YPCs and provided significant support in sustaining and scaling up the model activities.

Model strengths

- **Evidence-based and comprehensive services**: YPCs employed a package of IPC/BCC interventions that was pre tested within DDRP. Short term effectiveness of the educational sessions on improving HIV related knowledge, attitudes and beliefs was proven by the pre and post test data. The flexible format of the educational activities made possible easy adaptation to local conditions. Interventions were not limited to the provision of information. Rather, YPCs made available a wide range of services, including alternative activities to structure youths' free time and referral to health care providers to address HIV/STI related issues.
- **Outreach**: The target population was proactively recruited by peer outreach workers in the pilot sites. A non judgmental approach and the entertaining character of interventions facilitated the establishment of trust and rapport between the clients and staff of the centers.
- **Targeted and tailored services**: Segmentation of the ARY population during the baseline study allowed for the project to develop interventions targeting the most vulnerable youth. Services provided to the clients were tailored to their individual needs based on the results of the risk self assessment.
- **M&E**. Application of UIC and the client contact database allowed for tracking all activities of YPCs and clients served without breaching clients' anonymity. Monitoring reports provided feedback to YPC staff on the popularity of services and progress towards coverage goals. The baseline studies provided important information on risk factors of the target population and informed adjustment of the interventions.
- **Participatory approach**. Stakeholders representing governmental structures, civil society and the international community were actively involved in the development and implementation of the model. Cooperation with partners ensured sustainability of the YPCs.

** Almaty and Bishkek*
*** All sites*

Table 7. Selected coverage and result indicators of CAPACITY Youth Power Centers

Indicator	Almaty (Nov 05 Jul 07)	Bishkek (Feb 06 Jan 07)	Ashgabat (Mar 08 Jul 09)	Dashoguz (Feb 09 Jul 09)
Coverage goal, n	3 640	22 190	12 000	
Total ARY covered, n	7 385	20 248	18 517	11 158
Trainings, n	307	5 629	829	340
Training participants, n	1 770	11 795	5 551	2 561
Mini sessions, n	2 256	774	722	303
Mini sessions participants, n	4 718	12 426	12 416	4 691
Specialists' consultations, n	1069	14 677	1 842	
Alternative Activity participants, n	2 856	1 918	4 900	6 875
Average pre test score, %	64	76	78	73
Average post test score, %	89	95	90	88

Table 8. Selected results of YPC interventions in Almaty and Bishkek

Indicators	Almaty, Kazakhstan			Bishkek, Kyrgyzstan		
	2005 n=200	2007 n=508	Statistical Significance	2005 n=300	2007 n=227	Statistical Significance
Condom use at last sexual intercourse, %	45	45	ns	40	46	ns
Average age of sexual debut, years	17	17	ns	18	18	ns
If decided to buy heroin or opium, knows where to get it, %	7	6	**	4	3	**
Sexually active youth informed about methods of protection from HIV, %	65	77	*	58	65	**
Sexually active youth who intended to use a condom for HIV/AIDS prevention the next time they have sex, %	32	68	*	47	55	**

* $p < 0.1$; ** $p < 0.05$; ns = not significant

Table 9. Selected results of YPC interventions in Turkmenistan

Indicators	Ashgabat and Dashaguz		
	Baseline	End-line	Statistical Significance
Having sex without condom increases the risk of HIV infection, n (%)	117 (82)	129 (98)	****
Injection drug use can lead to HIV infection, n (%)	121 (84)	127 (96)	***
HIV can be transmitted from mother to child during pregnancy, child delivery and breastfeeding, n (%)	117 (81)	127 (95)	***
The risk of HIV infection can be decreased by having sexual contact with only one faithful uninfected sexual partner, n (%)	103 (72)	132 (99)	****
A healthy looking person can be HIV positive, n (%)	115 (80)	129 (96)	****

*** $p<0.001$; **** $p<0.0001$

Replication and sustainability of the models

To ensure sustainability of the centers upon the completion of the pilots, CAPACITY identified local partners to house the YPCs. In Almaty,

- The original YPC was transferred to the City Student Clinic with support of the City Department of Health and UNICEF.
- A new YPC has been established and replicated by NGO Zabota, with support of the Central Asian AIDS Control Project (CAAP).
- Five new YPCs will be established and replicated with the support of the Global Fund round 7 grant.

In Bishkek,

- The original YPC has been continued by the NGO, Intergelpo, with support from the Big Brothers, Big Sisters program of the US Embassy and the Bishkek city government, which provided free premises for the center.
- A new YPC has been established and replicated by the NGO, Partners Net, a member of Kyrgyzstan's National Harm Reduction Network.
- Four new YPCs are being established and replicated with support from the Kyrgyzstan State Committee of Youth Affairs.

In Ashgabat and Dashaguz,

- The YPCs have been continued and sustained by the National Youth Organization.
- Under a new cooperative agreement from USAID and with co funding from Chevron, two new YPCs are being established and replicated by John Snow Research and Training Institute, Inc (JSI) with the National Youth Organization in Ashgabat and Mary.

Limitations

Evaluation of the intervention provided information on only a limited range of indicators of ARY risky practices. In Almaty and Bishkek, the surveys were conducted solely within the pilot areas, and therefore, the possibility of contributions from other HIV prevention programs to the results cannot be completely excluded. The socio political context in Turkmenistan prevented the full implementation of some HIV prevention activities (for example, wide distribution of condoms), which may be the reason changes in HIV related risk behaviors was not demonstrated in those sites.

Recommendations for future

- Conduct rigorous evaluation of the impact of the YPC intervention on ARYs' HIV related risk behaviors.
- Consider the possibility of implementing this model into other settings where ARY may be concentrated (e.g. vocational schools, correctional facilities for minors).

Conclusion

The Youth Power Center model demonstrated the possibility of reaching large numbers of at risk youth with a wide range of prevention services in a relatively short time. Model interventions were targeted to at risk youth and tailored to meet their individual needs. The model featured a sophisticated monitoring system using a client database and unique identifier code. Sustainability and scaling up of the model was made possible with the contribution of governmental agencies, NGOs, and international donors. Behavior change communication was effective in improving clients' knowledge, attitudes and beliefs related to HIV, STIs, and drug use. However, data on the impact of the model on HIV related behaviors is limited, so rigorous evaluation of YPC model is still needed.

CHAPTER 4: Targeted Capacity Building of AIDS-Service Organizations and Community Mobilization for Increased Coverage of MARPs

Background

Since the early 2000s HIV has spread rapidly across Central Asia, targeting the most at risk populations (MARP), intravenous drug users (IDUs) and sex workers. Unless prevention efforts are effectively scaled up to slow the HIV infection rate in these groups, the epidemic will likely spread to the general population within the next decade. Most Central Asian governments and civil society have recently started following WHO and UNAIDS recommendations in order to provide universal access to quality HIV prevention, diagnostics, treatment, care and support. However, their capacity to achieve this objective is limited. In 2005, only a minority of IDUs had been reached with preventive interventions—the most successful interventions reached 23%—and even then, service provision was rarely comprehensive.

A situation analysis conducted by CAPACITY in 2005 revealed that regionally, one of the primary barriers to achieving appropriate levels of service coverage was insufficient provider experience and inadequate NGO and civil society participation in the provision of prevention, care, and support services to the MARPs. Very few AIDS service organizations (ASO), either governmental or non governmental, worked with the MARPs. In 2005, only 69 ASOs targeting IDUs existed in Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan; together these ASOs reached approximately 53,000 out of the estimated 300,000 IDUs.

In response, CAPACITY developed a community mobilization strategy (CMS) aiming to build organizational, institutional, and technical capacity among ASOs, in order to mobilize a broad geographic scale up of successful models of prevention services.

Program methods

Main steps

The ASO capacity building strategy was developed using the following nine steps, key components of which are described further:

1. Assess the capacity of ASOs in order to select and motivate appropriate organizations in four countries of Central Asia to participate in the strategy
2. Create an umbrella of organizations to support existing ASOs (NGOs and AIDS Centers), to help create new Initiative Groups to implement HIV prevention, and to scale up these interventions and activities
3. Develop scale up strategy jointly with selected NGOs to achieve broad geographic coverage of IDUs and sex workers with an essential comprehensive package of HIV/STI prevention services
4. Build capacity of ASOs, including people living with HIV (PLHIV) networks
5. Train selected ASO representatives on developing project proposal and work plans
6. Fund raise among donors to support scale up activities by ASOs
7. Create country level working groups to support and monitor this strategy
8. Monitor and evaluate capacity building and scale up activities
9. Scale up HIV prevention interventions by the ASOs

Assessment and selection of program participants

The first step was to identify organizations willing and able to develop and implement HIV prevention projects specifically for the MARPs. Twenty six pilot oblasts in four Central Asian countries were selected based on several indicators, including HIV prevalence, estimated target population size, and a lack of existing HIV prevention efforts. Implementation of the CMS strategy started with oblast level orientation meetings. Since many pilot oblasts had few ASOs targeting IDUs and sex workers, CAPACITY staff

invited a large group of participants representing civil society and governmental structures, including:

- Organizations working on risk reduction for IDUs, especially those that use a peer to peer approach
- Organizations working with sex workers on HIV/STI prevention
- Organizations working on primary HIV/AIDS prevention
- Organizations implementing activities to improve welfare, education, health, or other social factors, especially those with demonstrated experience doing outreach work with their target populations
- Organizations representing vulnerable populations, such as IDUs and sex workers
- Organizations working with PLHIV, especially those comprised of PLHIV

During the orientation meetings, CAPACITY assessed the ASOs' capacity and motivated them to be involved in the CMS strategy. Candidates for the regional and oblast level capacity building trainings were also selected.

Photo: The first regional eight-day workshop in Issyk-Kul.

Umbrella model

To mobilize and build the capacity of many ASOs, the CMS strategy developed the Umbrella model, under which the most capable and experienced organizations in each of the 26 pilot oblasts would provide assistance and support to other ASOs. Selected organizations met most (but not necessary all) of the following criteria:

- Experience (not less than 2 years) in the provision of HIV prevention and/or care and support related services to representatives of vulnerable populations, in particular, to IDUs, PLHIV, and sex workers
- Experience in the provision and/or coordination of training programs and other technical support to NGOs and public organizations
- Capability and interest or willingness to play the role of umbrella organization – i.e. to develop skills necessary to provide technical assistance to other NGOs and public organizations
- Experience working on population based programs in other social sectors
- Interest in experience exchange and promotion of successful models at the regional level
- Possibility and/or willingness to implement prevention interventions

Capacity building of ASOs and development of scale up strategies

The CMS strategic approach for building capacity among ASOs was to conduct a series of trainings to address issues and fill in gaps revealed during the ASO assessment. Capacity building activities included two regional workshops for representatives of umbrella organizations followed by oblast level trainings for local ASOs. All capacity building activities were co funded by CAPACITY and the Central Asian AIDS Control Project (CAAP).

The first regional eight day workshop focused on developing project proposals and work plans to ensure high coverage within the MARPs of HIV prevention messages. Forty five representatives from umbrella organizations from pilot oblasts in Kazakhstan, Kyrgyzstan, and Tajikistan attended the training, which was held in June 2005 in Kyrgyzstan.

Four additional participants from Uzbekistan attended as observers*. The main objectives of the event were:

- To build participants' skills in developing project proposals aimed to achieve high coverage of HIV prevention in vulnerable populations
- To prepare specific project proposals, using real formats required by donors, in upcoming bids for grants in the Central Asian region
- To provide community organizations with training on key aspects of financial management

Each pilot oblast took home draft project proposals on HIV prevention for IDUs, sex workers, and other at risk populations. These draft proposals were discussed, finalized and adjusted according to the major donor requirements during follow up oblast level workshops in all 28 pilot oblasts. Finalized proposals were submitted for funding to grant delivering programs such as CAAP, Central Asian Regional HIV/AIDS Program (CARHAP), AIDS Foundation East West (AFEW), country projects of the Global Fund, and others.

The second round of ASO capacity building started with the five day regional training of trainers (ToT) in December 2007; the ToT focused on organizational and institutional development, including overall management, financial management, human resources, monitoring and evaluation, and other essential areas to improve organizational function. Twenty one trainers, representing NGOs, governmental ASOs, and internationally funded projects, attended. The goals of the training were to continue strengthening the capacity of local ASOs, but to also create a team of consultants in each country who would be available for continuous and sustainable technical assistance to ASOs in the region. Similar to the first round, the regional training was followed by oblast level trainings for ASOs to help them to improve coverage of MARPs with a comprehensive package of preventive services.

In addition to the first and second rounds of trainings planned within the CMS strategy, CAPACITY supported a number of other regional and national trainings for ASOs which covered various aspects of HIV prevention for the MARPs. One such training focused on improving the ASOs' technical capacity to provide comprehensive services or HIV care and support to PLHIV. This training was attended by 18 ASO representatives working with PLHIV in Central Asian countries, including two participants from Turkmenistan, a country that at the time this writing, reports only having ever had two PLHIV. .Additional activities were conducted in collaboration with other donors such as CAAP, CARHAP, the United Nations Office on Drugs (UNODC), the Global Fund Fight on AIDS, Tuberculosis, and Malaria (GFATM), International Organization on Migration, and others.

Photo: Civil society mobilization training in Urgench, Uzbekistan

**A separate training covering the same objectives was held in Uzbekistan in September 2005 for representatives of health facilities servicing MARPs (AIDS Centers, Narcology centers, STI treatment services), oblast health authorities, NGOs and Mahallas (community self-government bodies) from seven pilot oblasts. For simplification, when reference is made in this paper to the first round regional training for ASO capacity building, this Uzbekistan training is also included since the objectives and results of both were the same, and only the timing was different.*

In addition to trainings, staff* and locally hired consultants, working through CAPACITY country offices, provided regular and on going consultations with and technical support to ASOs. Also, CAPACITY offices assisted in improving the communication and information exchange between ASOs, donors, and national AIDS coordinating mechanisms by disseminating information about grant programs, assisting in arranging national NGO forums, and disseminating information about the results of ASO activities on national AIDS bulletins and web sites.

Focusing resource mobilization

CAPACITY worked with other international and local stakeholders to advocate for the inclusion of high coverage targets (60% or higher) for all HIV prevention interventions with the MARPs and within National AIDS Programs in Central Asia. In addition, it advocated that HIV prevention for the MARPs needed to take the form of a comprehensive package of services in order to ensure success in reducing HIV transmission. Meeting this goal was contingent on increased funding for HIV, so CAPACITY worked with other stakeholders to develop national applications to GFATM and other donors. Scaling up preventive interventions to increase coverage of IDUs and sex workers has been promoted along with the existing internationally funded HIV prevention projects.

Coordination to achieve scale up of high coverage

CAPACITY worked with oblast level umbrella ASOs and other stakeholders to support oblast and national level multi sectoral technical working groups (TWGs). These TWGs were tasked with ensuring cooperation between the ASOs, local authorities, law enforcement, health care facilities, religious figures, and community leaders for better prevention services coverage for the MARPs. In oblasts where no such coordinating mechanisms existed, new TWGs were established; in oblasts where mechanisms were already in place, TWGs were motivated to focus on HIV prevention with the MARPs. TWG members in each oblast actively participated in the finalization of project proposals and contributed to smooth implementation of the approved projects.

Results

Outcomes of capacity building and civil society mobilization

Activities directed at capacity building of ASOs and mobilization of civil society resulted in the following accomplishments in Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan:

- 318 ASOs from 28 oblasts initiated the capacity building and civil society mobilization process
- Developed 61 individual and 50 joint project proposals on HIV prevention in vulnerable populations
- Proposed projects to cover more than 28,000 IDUs, 6,600 sex workers, 1,100 PLHIV, 22,500 at risk youth and 28,000 representatives of other vulnerable groups
- Total budgets for the developed projects amounted to more than $4.3 million
- Donors approved 39 projects targeting more than 33,000 IDUs, 9,900 sex workers, and 3,200 PLHIV and allocated more than $1.8 million in grant funds (Table 10).
- Motivated and trained 48 umbrella organizations to become centers of excellence for ASOs
- Established and/or activated 8 oblast level TWGs
- Established national teams of trainers specializing in various aspects of HIV prevention and organizational and institutional development of ASOs established

**CAPACITY maintained a staff position that was seconded to the national AIDS coordinating mechanisms. This person was responsible for facilitating liaisons between NGOs and community organizations in Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan throughout most of the project. In three countries, this position was the NGO liaison specialist, and in Uzbekistan it was the community liaison specialist.*

- Within CMS strategy, provided ongoing technical assistance to ASOs with support of other donors
- Included high coverage targets (60% and higher) in the National HIV/AIDS programs of Central Asian countries, as well as in national applications to GFATM

Table 10. Coverage of MARPs and budget of the projects supported by donors

Country	Projects supported	Coverage of target populations			Approved budget
		PLHIV	IDU	SWs	
Kazakhstan	21	2,365	20,339	7,840	$698,000
Kyrgyzstan	3		7,000		$600,000
Tajikistan	5		2,383	800	$236,949
Uzbekistan	10	879	3,279	1,267	$307,833
Total	**39**	**3,244**	**33,001**	**9,907**	**$1,842,782**

Discussion

The CMS strategy succeeded in mobilizing various sectors of the communities to address issues of HIV prevention with the MARPs. As a result, the number of ASOs trained to work with the MARPs has increased, national teams of trainers have been built, and donors granted more than $1.8 million for 39 projects serving MARPs. Additionally, multisectoral TWGs in pilot provinces facilitated coordination and interaction between the stakeholders, umbrella organizations assisted ASOs in developing and implementing project proposals, and countries prioritized high coverage of the MARPs with prevention services. These accomplishments were possible due to intensive advocacy efforts, inclusion of local stakeholders in all steps of the strategy implementation, involvement of motivated organizations—including some without prior experience in providing HIV prevention to the MARPs—heavy emphasis on building local capacity, and flexibility in adjusting the model to the local situation.

Sustainability

Upon completion of the active phase of the CMS strategy, national teams of trainers and trained umbrella organizations continued to provide technical assistance to ASOs through trainings and on going consultations with the support of CAPACITY and other donors.

Limitations

- **More input needed to increase coverage of MARPs**: Several ASOs had HIV projects funded following their involvement with the CMS. Though these ASOs projected high MARP coverage in their project areas, most aimed to reach only about 11% of the total estimated 300,000 IDUs in the four countries. More funding and projects are needed in order to have a meaningful impact on the HIV epidemic in the region
- **Limited funds hinder reach of projects**: The CMS strategy actively promoted a comprehensive package of HIV prevention services for the MARPs; however, most of the donor supported projects only included some components of the comprehensive package. Most of the donors expected higher coverage of MARPs, yet funds were not sufficient to both increase overall coverage and provide the full range of services advocated for by CAPACITY
- **Lack of data directly impacted the evaluation of the CMS**: Individual projects had few resources to conduct rigorous evaluations of their interventions' impact. Thus the behavioral or epidemiological impact of the newly funded projects can not be accurately determined
- **Varied donor requirements complicated the grant application process for ASOs**: Many donors, such as GFATM, CAAP, CARHAP, and AFEW, had grant programs for ASOs working on HIV prevention in the MARPs, Each donor had its own application formats, financial management requirements, grant cycles, and even technical requirements that posed additional barriers to ASOs in securing sufficient funds. CAPACITY worked with

other organizations to try to harmonize the grant making process in the region with some success; however not all of the donors were willing to modify their requirements.

- **Stigma and discrimination**: In some cases, negative attitudes towards the MARPs among local stakeholders (including some civil society organizations) hindered community mobilization efforts

Lessons learned and recommendations

- **TWGs were instrumental in ensuring cooperation between the representatives of all stakeholders**
- **HIV sensitization should be extended to all stakeholders**: Stigma and discrimination towards the MARPs negatively influenced civil society mobilization efforts
- **Approaches to civil society mobilization must be flexible to account for the variability in the political and social contexts of each country and oblast in the Central Asia Region**
- **Tailor the level and volume of technical assistance to the capacity building needs of individual ASOs**
- **Capacity building is an on-going process**: ASOs require regular and continuous support to maintain high levels of capacity and quality of HIV prevention activities
- **Trainings cannot stand alone**: Follow up regional and oblast level trainings with on going technical support and consultations
- **ASO motivation is largely impacted by availability of funds**: ASOs are more likely to be motivated to participate in scale up of preventive interventions if there is immediate available funding from the donor organizations
- **Transparent grant process**: Greater leadership and ownership by the national AIDS coordinating mechanisms are needed to improve coordination of donor efforts, including simplifying granting mechanisms through the use of unified grant formats and requirements, coordinated grant cycles, and cooperation, rather than hidden competition between the donors. Such improvements would increase access to resources for local ASOs and thereby increase coverage of MARPs with HIV prevention services.

Conclusion

The capacity building and civil society mobilization approach undertaken by CAPACITY, in cooperation with international and local stakeholders, was effective in increasing the number of organizations willing and able to work with MARPs; improving capacity of ASOs; increasing the level of prioritization of HIV prevention for MARPs among national AIDS programs, oblast level coordinating mechanisms, and donor organizations; establishing a national workforce of trainers; ensuring cooperation among the ASOs, local authorities and civil society; and securing significant resources for funding developed proposals. However, it was difficult to tailor interventions to the varied needs of individual organizations and to the specific contexts of each country. Numerous challenges exist, including lack of coordination between the donors, stigma and discrimination towards the MARPs, and unfavorable political environments in some countries. Capacity building of ASOs should not be considered completed. More effort, resources, and assistance are needed to ensure sustainable and universal access to HIV prevention services.

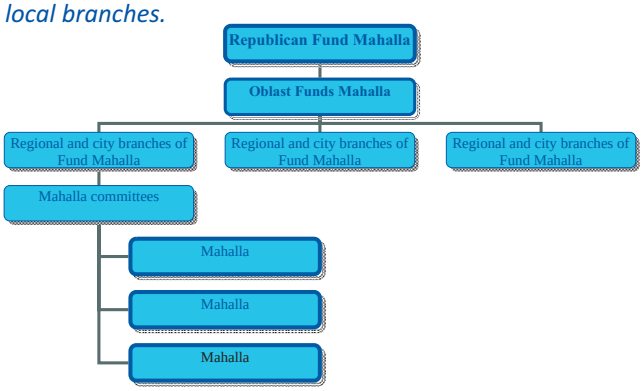
CHAPTER 5: Engaging communities in HIV prevention activities in Uzbekistan

Background

Although the HIV epidemic in Uzbekistan is at present, limited to certain sub populations there is an urgent need to undertake active efforts among the general population to decrease stigma and discrimination toward most at risk populations (MARP) IDUs and sex workers. The negative attitude of the general population toward these vulnerable groups combined with poor HIV awareness thwarts prevention efforts. An efficient way to reduce stigma and discrimination while increasing awareness of HIV prevention in communities is by collaborating with the approximately 10,000 Mahallas, or traditional community authorities, across Uzbekistan..

Mahalla (which can be literally translated as a neighborhood) is the lowest administrative and territorial unit of Uzbekistan. Every household belongs to a certain Mahalla, the boundaries of which are either historically defined by old settlements, or more recently designated during the planning process of new urban and rural areas. Mahalla members elect Mahalla committees, which have considerable influence on community members. These committees maintain close cooperation with the local authorities and arbitrate everyday life. The Mahalla network in Uzbekistan is institutionalized through the Republican Fund Mahalla (RFM) whose province, city, and district branches reach every community in the country (Figure 3).

Figure 3. Structure of the Republican Fund Mahalla and local branches.



The participation of civil society (communities, NGOs, religious organizations) in HIV prevention activities is a basic principle of the Strategic Program on Response to HIV infection Prevalence in Uzbekistan for 2007 2011. The network of AIDS service NGOs in Uzbekistan is rudimentary, and Mahallas proved to be efficient and local resources to disseminate information about HIV prevention to their communities. In support of the SP, and in partnership with Republican and Oblast AIDS Centers, Institute of Health and their branches on oblast level, and the World Bank's Health 2 Project, CAPACITY Uzbekistan developed a civil society mobilization model to increase awareness about HIV prevention and to reduce stigma and discrimination against PLHIV and populations that are vulnerable to HIV. Mahallas play a key role in the implementation of this model.

Program methods

Model development started in 2006 with a series of meetings with RFM representatives and Mahalla leaders. Mahalla leaders expressed their commitment to the initiative and asked CAPACITY for technical guidance and educational tools. A team of CAPACITY supported national experts designed a training module for Mahalla leaders on HIV prevention and reducing HIV related stigma and discrimination. The module was approved by the RFM and the Republican AIDS Center (RAC) of the Ministry of Health (MoH) and was translated into Uzbek. The module was designed not only to convey factual information on HIV transmission and prevention; it was also designed to change negative attitudes towards the most at risk populations, including PLHIV.

The next step took place during the first half of 2008 and involved advocacy and planning meetings with national and international stakeholders. The resulting joint plan of action was signed by the RFM, RAC, Institute of Health and Medical Statistic (IHMS) of MoH, the Health 2 Project, and CAPACITY. According to the plan,

the model was to be piloted in 5 provinces of Uzbekistan (Samarkand, Bukhara, Termez, Tashkent, and Tashkent oblast), which were selected in consultation with the MoH and based on the epidemiological situation in each. During an orientation meeting in May 2008, the partner organizations developed detailed province level implementation plans and an evaluation methodology.

The capacity of Mahalla leaders as community educators was built from August to December, 2008, through a series of two day training of trainers (ToT). More than 200 participants learned basic information on HIV, discussed issues related to HIV prevention, the reduction of stigma and discrimination, and improved their training skills in accordance with the national training module. At the end of the trainings, Mahalla leaders developed individual activity plans for community education. IHMS representatives, who also participated in the ToT events, finalized their monitoring schedules according to the Mahalla leaders' activity plans.

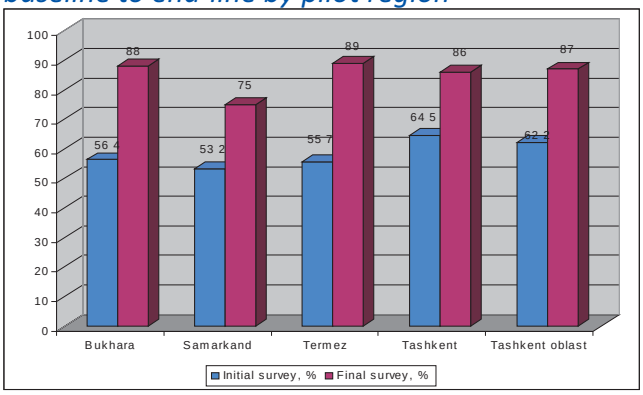
Between September and December 2008, Mahalla leaders conducted community HIV education sessions for 10,237 participants in the pilot sites. These sessions required no additional funds because Mahalla leaders conducted them according to their pre existing terms of reference. For the convenience of target audiences, educational activities were conducted during various Mahalla events, including informal gatherings, traditional celebrations, and routine Mahalla meetings. Informational materials such as brochures and leaflets on HIV related topics were distributed to participants to supplement the face to face workshops.

Results

The evaluation model included baseline and end line, cross sectional surveys that focused on levels of knowledge about HIV transmission and prevention, as well as attitudes towards PLHIV. The surveys were conducted among two independent random samples of 1,000 respondents each. The respondents were Mahalla members from the cities of Bukhara, Samarkand, Tashkent, Termez, Angren, and Almalik. Additionally, IHMS representatives regularly monitored educational sessions and evaluated the application of interactive methods of education, accuracy, and completeness of the presented information, and the target audience's comprehension of that information. The interval between the baseline and end line surveys was 7 months.

Results from these surveys revealed a significant increase in awareness in all pilot sites. The average HIV knowledge score of the respondents at baseline was 58%. At end line, average HIV knowledge score had increased to 85%. A breakdown of the results by pilot site is presented in Graph 1.

Graph 1. Change in HIV knowledge scores from baseline to end line by pilot region



Furthermore, negative attitudes toward PLHIV among the general population in the pilot sites were reduced. At the outset, 58% of the respondents thought that PLHIV should be isolated from the rest of society. Following the community education intervention, only 10% of respondents felt this way. Changes in misconceptions related to the most at risk populations were documented as well. For example, before the model, 66% of respondents

answered that only drug users and sex workers could contract HIV. After the model was implemented, 35% of the respondents held this belief.

Monitoring of the educational sessions conducted by IHMS representatives demonstrated that all activities were conducted according to the plans and the training module. The performance of 81% of the Mahalla leaders as trainers was rated 'excellent' or 'good'. The remaining 19% of trainers whose performance had been assessed as 'satisfactory' received additional guidance from the Institute of Health specialists to improve their knowledge educational skills. The monitoring and evaluation results of the community educational sessions were presented at a roundtable meeting in December 2008, where its success was recognized. Representatives of Fund Mahalla who attended the event confirmed their commitment to continue activities based on the module developed with CAPACITY assistance in their communities. Participants acknowledged the need to scale up Mahalla involvement in HIV prevention activities in their communities.
In an effort to promote the work of the Mahalla leaders, CAPACITY solicited national and local mass media coverage. In addition, the Samarkand Fund Mahalla and the IHMS broadcasted a special TV program on HIV prevention, featuring the CAPACITY model of HIV prevention and stigma and discrimination reduction intervention.

Discussion

Sustainability
Because HIV education was incorporated into the objectives and work plans of RFM and collaborating Mahalla committees and because RFM was one of the implementers of Uzbekistan's Strategic Plan on HIV, the model interventions in the five pilot provinces were able to continue after the pilot stage and without donor funding.

Efforts to scale up model
In order to scale up this model, RFM asked CAPACITY and the Health 2 project to sponsor ToTs for Mahalla leaders in other regions of Uzbekistan. However, a lack of resources prevented this.

CAPACITY developed a guide for working with Mahalla leaders on TB prevention. Project HOPE/TB will implement the Mahalla model in Samarqand province, pending the approval of the guide by the MoH.

Photo: Training module on HIV for Mahalla leaders.

Accomplishments

- **Strengthened local capacity**. The model resulted in establishment of a new skilled workforce of more than 200 Mahalla trainers and development of the field tested manual on community HIV education.
- **Positive changes in HIV-related knowledge and attitudes**. The results of the model evaluation demonstrated that HIV awareness levels increased by 27%; unfavorable attitudes towards PLHIV were reduced by 48%; and the level of misconception that only drug users and sex workers are at risk for HIV decreased by 31%.

Strengths

- **Reliance on existing structures**. Because the Mahalla network and RFM existed prior to the model, no investments were needed to establish network of community based organizations.
- **Involvement of all stakeholders**. Governmental structures, communities and donors were engaged from the beginning of the model and contributed to its design, development, implementation, monitoring and evaluation.
- **Concurrence between the model and RFM's objectives**. HIV prevention was one of the objectives of RFM activities, which made the latter an ideal partner for the model implementation and ensured its commitment to continue and scale up the model activities.
- **Applicability to other health issues**. The model can be used to address other health issues for which community mobilization is important, such as TB, malaria, family planning and reproductive health.
- **Relative cost-effectiveness**. The model did not require investment of significant donor resources other than technical assistance and training of trainers.
- **Monitoring and evaluation**. Monitoring of the activities by an external agency — IHMS— reduced the use of biased data in decisions of when and how the model was adjusted; evaluation of the model documented changes in target populations' knowledge and attitudes on HIV, thus demonstrating effectiveness of the model.

Limitations

- **Lack of data on attitudes towards MARPs**. The model evaluation did not include questions related to target populations' attitudes to IDUs and sex workers.
- **Lack of data on behavioral change**. Shortage of time and resources did not allow for documenting changes in target population's sexual behavior and other practices influencing risk of HIV (injecting drugs, seeking treatment for STIs etc.).
- **Applicability to MARPs**. Although the model demonstrated its effectiveness in increasing HIV awareness among the general population, it is unlikely that Mahalla leaders will work directly with hard to reach MARPs; as a rule comprehensive service packages are more effectively delivered to these groups by peer driven programs. This should not, however, prevent Mahalla leaders from cooperating with programs working with IDUs and sex workers.

Photo: ToT for mahalla leaders in Tashkent, Uzbekistan

Recommendations for future

- **Scale-up in other regions**. Additional resources should be found to implement this model in other regions of Uzbekistan
- **Expanding model to address other health issues**. TB prevention and other health interventions involving Mahalla leaders should be piloted and results documented. One further step could integrate several health topics into a comprehensive community based health education model, which could have a synergetic effect on health outcomes. Another option might be collaboration between Mahalla leaders

and other HIV prevention programs (in particular those targeting MARPs) to create favorable environment for preventive interventions and to reduce stigma and discrimination.

Photo: Round table with Mahalla leaders and RFM in Tashkent, Uzbekistan.

Conclusion

Currently in Uzbekistan, Mahallas are one of the few available ways for civil society to promote HIV prevention messages. However, this is not the only reason to work with Mahallas. Involving Mahallas in community based HIV education is also cost effective. Implementation of this model resulted in an increase in HIV awareness among the adult general population, and a reduction in HIV related stigma and discrimination among PLHIV. It also created a well trained and highly motivated workforce of more than 200 community trainers in a relatively short time period. Commitment and readiness of national partners, especially the Republican Fund Mahalla and the Ministry of Health (RAC and IHMS) to implement the model were crucial for ensuring success of the intervention. Rigorous monitoring and evaluation of the model by an external agency (IHMS) allowed for documenting the outcomes and establishing feedback between the field workers and the model designers. The evaluation demonstrated that scaling up the model to other regions of Uzbekistan will likely result in further increases

In addition to HIV prevention, it is likely possible for Mahallas to be used for community education on other health related issues, such as TB prevention and STI prevention. However it must be mentioned that while Mahallas are an effective channel for reaching the general population, they cannot replace programs directly targeting most at risk populations that remain the main drivers of the HIV epidemics in Uzbekistan; instead, cooperation between Mahallas and programs targeting MARPs should be fostered.

CHAPTER 6: Improving the Management of Patients with Dual HIV and TB Infections in Central Asia

Background

Tuberculosis (TB) is the most prevalent opportunistic infection and the leading cause of death[4] for people living with HIV (PLHIV) in many parts of the world[1]. Approximately one third of PLHIV worldwide are also infected with TB; this rate increases to 50 70% in some developing countries[2, 3]. Progress made in slowing the spread of TB has been hampered by the HIV epidemic[2, 5].

TB is a leading cause of morbidity in Central Asia. More than 50,000 new TB cases are detected annually, and the mortality rate exceeds 20 per 100,000.[6] All Central Asian countries are implementing directly observed treatment, short course for TB control (DOTS), though some have been more successful than others[6]. As such, the implementation of DOTS alone may not be sufficient to prevent or reverse the rising incidence of TB during an HIV epidemic[5], although it remains the most consistent method for reducing TB mortality[7].

While grappling with a surging TB infection rate, Central Asian countries are also facing a rapidly developing, concentrated HIV epidemic. Approximately 75% of new HIV infections are transmitted through unsafe injection practices among intravenous drug users (IDUs); unprotected sex, especially in commercial sex work, is believed to account for most of the remaining 25% of HIV infections[8].

The Central Asian Republics have maintained a health care system that includes specialized vertical services for specific groups of diseases. TB and HIV are two such diseases that are managed by separate, specialized institutional networks within the Ministry of Health (MoH). Without systems in place to connect HIV and TB care institutions and without medical providers trained to co manage care for both diseases, patients co infected with HIV and TB rarely receive the optimal care and treatment they need[6].

The USAID funded CAPACITY Project worked on HIV and AIDS issues in the Central Asian Republic. One of these issues was providing technical assistance to build linkages between HIV and TB specialized services. Between March and May 2005, CAPACITY conducted program assessments, which confirmed that appropriate management of co infected patients in Central Asian countries was practically non existent, despite the increasing rates of TB co infection among PLHIV. This paper describes CAPACITY's approach to fill this gap in Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan.

Program methods

The goal of the intervention was to improve collaboration between TB and HIV related services and to enable health care providers to contribute to the following long term results:

1. Decrease spread of TB among PLHIV
2. Decrease spread of HIV among TB patients
3. Decrease burden of dual infections

Photo: Round table on TB/HIV in Dushanbe, Tajikistan

Beginning with the program assessments, CAPACITY developed a multi step process for linking TB and AIDS services to better manage co infected patients. The steps are delineated in the table 11 on the next page.

Table 11. TB/HIV model implementation steps

Steps toward development and implementation	Time frame for each step
Assessment of clinical management for co-infected patients	Months 1 – 3
One-day orientation on TB/HIV situation for key stakeholders; formation of technical working group (TWG)	Month 3
TWG develops protocols	Months 4-5
Initial trainings for clinical trainers team, health managers, and monitoring & evaluation (M&E) team	Months 6-8
Expand trainings for clinical specialists in model sites	Months 9-12
Implement model	Months 3-12
Monitoring model implementation	Quarterly
Evaluate model implementation	At beginning and end of model implementation
TWGs supervise and manage model implementation	Ongoing throughout model implementation
Advocate for scale-up	Ongoing during all steps and continuing after model implementation is complete
TWGs supervise and manage scale-up	Ongoing through scale-up

Results

Assessment results

The participatory assessment shed light on the current medical management of patients with both TB and HIV infections. In fact, the assessment showed that very little had been done in the Central Asian Region to link TB and AIDS services. More specifically, the assessment found that TB medical specialists had not had basic training on co infection of TB and HIV. Specifically, these specialists lacked training in such issues as detection, diagnosing, differential diagnosing, and prevention of TB in HIV infected people, as well as in the specifics of organizing and delivering anti tuberculosis therapy combination with antiretroviral therapy (ART) for PLHIV. At general health facilities, physicians who were directly involved with TB detection lacked sufficient understanding about the specifics of clinical development, the course of TB in PLHIV, or the various methods for verifying TB infection given pre existing HIV infection. This lack in knowledge may have caused mistakes in diagnosis and possibly TB related deaths in patients with concomitant HIV infection. Physicians of the penitentiary system, where TB and HIV prevalence was quite high[6], were also unaware of co infection management.

Health facilities did not have a qualified team of trainers to provide trainings and to consult co infected patients on site. The Central Asian countries either lacked guidelines and protocols for cooperation between TB and AIDS services or had made little effort to put guidelines into practice if they did exist. Countries also did not have programs and materials in place to provide thematic trainings on TB and HIV co infections for TB specialists, AIDS specialists, general health

facilities networks, and penitentiary system specialists. Additionally, health facilities did not have any visual information materials, such as posters and booklets, to hand out to patients with concomitant TB and HIV infection.

However, the assessment did reveal that medical officials in Central Asian countries recognized that there was a need to better manage co infected patients. Government stakeholders had already acknowledged the threat of TB and HIV epidemics; sufficient HIV and TB detection and treatment services—such as DOTS and ART—were already available; and a widespread infrastructure of community health centers, specialized TB clinics, and AIDS centers were already established. Thus, the foundation was in place for CAPACITY to begin to develop and implement models for interaction between HIV and TB medical services in four countries.

Intersectoral cooperation and health authorities' support

Through the assessment, then the orientation meeting, the TWG activity, and ultimately the model implementation, CAPACITY promoted cooperation among all stakeholders, local and international, and between TB and AIDS services in all four countries.

Model implementation in each of the countries was only possible because of active participation of the ministries and departments of health (MoH and DoH, respectively) that each fostered cooperation between the independent TB and AIDS services. By promoting the ministries of health in Kyrgyzstan, Tajikistan and Uzbekistan and the Almaty City Department of Health in Kazakhstan to chair the TWGs, which was responsible for supervising and monitoring the models, CAPACITY laid the groundwork for effective cooperation between important stakeholders. National and local health authorities validated TWG deliverables (see below) and facilitated their practical implementation, which effectively ensured direct collaboration between TB and HIV. In all four countries, MoHs and DoHs are very committed to the continuation of these activities and are looking forward to scaling up the model throughout the countries. In addition, TB/HIV has been included in and is considered an important component of the national AIDS and TB programs.

Photo: TB/HIV round-table in Bishkek, Kyrgyzstan

Technical Working Groups

Established TWGs were inter sectoral and included representatives from the MoH to represent health services, the MoJ to represent the penitentiary system, international agencies, and local NGOs serving vulnerable populations. At the beginning of project implementation TWGs developed and submitted the following set of documents describing the model implementation to ministries of health for approval:

1. Joint plans for collaboration of TB and AIDS services (including patient flow, calculation of needs in medicines, and materials, budgeting)
2. Clinical guidelines on detection, registration, treatment, and prevention of TB in PLHIV and provision of ART to co infected individuals (based on WHO protocols (1, 12, 13, 14))
3. M&E plan of TB and HIV services collaboration, including set of performance,

effectiveness and result indicators
4. List of national trainers and M&E specialists for TB and HIV
5. Patients' registration, examination and treatment prescription forms to track patient referrals between service diagnoses or treatment facilities
6. Program, curriculum, and methodology of trainings on TB/HIV services interaction for health managers, M&E specialists, and service providers in pilot areas
7. Selection of pilot site for implementation of TB/HIV interaction model

TWGs met regularly, establishing a new communication norm among various sectors, which previously had no system for horizontal communication. TWG members also participated as managers in the M&E process, conducting regular monitoring trips to pilot areas, analyzing the information, and making recommendations for improving TB/HIV activities.

The TWG's success was determined not only by support from the MoH, but also by the TWG chairs and CAPACITY team's engaging and open style of work and communication. All documents and proposals were thoroughly and openly discussed at TWGs before submission to MoH for approval, and the opinions of all TWG members were taken into account before decisions were made.

Building capacity

Following the MoH's and the TWG's recommendations in each of the four countries, national teams of expert trainers on TB/HIV were developed through a ToT approach. Each team consisted of four to six trainers, who each participated in expansion training at the model sites. Once these teams had been established, they conducted a series of three day trainings on appropriate medical treatment of co infected patients, ultimately reaching 450 medical specialists. Additionally, 191 health managers and monitoring and evaluation specialists participated in one day trainings to coordinate health services and to monitor and evaluate the progress and impact of the model implementation.

Model implementation and short term results

By implementing models linking TB and HIV services in four Central Asian countries, CAPACITY introduced new types of services and referral systems to ensure better management of co infected patients (some of the indicators are presented in Table 12 on the next page). New patient registration forms and an electronic surveillance database were used to monitor patient flow and outcomes.

In order to detect TB early and thereby increase the chance of a complete cure, all individuals newly diagnosed with HIV were immediately referred for chest X ray screening for TB, with instructions to repeat screening once each year. All countries achieved relatively high coverage with this practice. Patients who were discharging sputum were also tested for Acid Fast Bacilli (AFB). PLHIV who revealed that members of their household had TB were also screened, if their last chest x ray examination had been performed four or more months prior. HIV positive individuals who had been diagnosed with active TB were registered and treated in TB facilities, along with non HIV infected TB patients, according to national DOTS protocols.

All TB patients received special consultations on HIV prevention measures. TB patients were referred for HIV screening based on special clinical and social indications, such as behavioral risk factors, and underwent HIV testing on a voluntary basis following pre test counseling. TB patients who tested positive for HIV were examined within one week by an AIDS specialist (coverage rate ranged from 50% (end line) in Tajikistan to 100% in the last quarter for Kazakhstan, Uzbekistan and inmates in Kyrgyzstan). Decisions regarding

Table 12. Some TB/HIV interaction indicators, by country

Indicator	Kg (general)		Kg (peniten-tiary)		Kz		Tj		Uz	
	B	E	B	E	B	E	B	E	B	E
% of HIV positive people attending HIV services (testing and counseling or HIV treatment and care services) who had a chest X-Ray done in the last 12 months	60	75	71	75	n/a	n/a	36	90	42	62-92
% of patients with dual infection who were prescribed preventive treatment using cotrimoxazole	nd	100	11	68	40	100	nd	50	0	96
% of HIV-positive people who do not have TB and who were prescribed isoniazid	n/a	n/a	n/a	n/a	0	50	n/a	n/a	0	100
% of registered TB patients with newly diagnosed HIV infection referred to HIV care and support services (consultation by AIDS specialist) during TB treatment	100*	nd	0*	100†	100*	100†	0	50	95*	100†
% of HIV-positive registered TB patients who started ART or continued previously initiated ART, during or at the end of TB treatment	nd	50	0	32	0	100	nd	50	0	3
Total number of patients served	> 1 000				> 1 000		> 500		> 5 000	

B – baseline assessment; E – end-line assessment; nd – no data available; n/a – indicator is not applicable for a particular country;.* - data for the first quarter; † - data for the last quarter (for some indicators baseline and/or end-line data is not available).

starting or delaying ART were made jointly by AIDS and TB specialists, based on WHO approaches, and taking into account potential interactions between ART and TB treatments. If ART was prescribed, its distribution was managed in TB hospitals for those inpatient, in ambulatory TB facilities during the continuation phase of TB treatment, in AIDS centers, or in polyclinics, depending on which location was most convenient for the patient. According to the end line data, ART coverage for co infected individuals ranged from 3% in Uzbekistan, to 32% among inmates in Kyrgyzstan, to 50% in Tajikistan and the general population in Kyrgyzstan, to 100% of clients eligible for ART in Kazakhstan.

Following the WHO approach, in order to prevent other opportunistic infections, all TB and HIV co infected patients were prescribed cotrimoxazole preventive treatment. End line data indicated that in Tajikistan 50% of patients received cotrimoxazole preventive treatment. End line data indicated that in Tajikistan 50% of patients received cotrimoxazole preventive treatment, in Kyrgyzstan 68% in penitentiary system and 100% among the general population received treatment, and in Uzbekistan 96% of eligible clients received treatment. During the intensive and continuation phases, cotrimoxazole treatment was managed by TB facilities. Upon completion of TB treatment, AIDS specialists made the decision of whether or not to continue cotrimoxazole preventive therapy.

Individuals newly diagnosed with HIV, for whom active TB had been excluded by clinical, laboratory, and X ray examinations, were prescribed isoniazid prophylactic (IPT) treatment for six months duration in order to prevent the development of active TB. IPT was ordered without previous Mantoux testing, since HIV infection decreases tuberculin sensitivity.[9, 10] IPT was also prescribed for HIV infected individuals without active TB, among those who had

revealed that members of their household had TB; in Uzbekistan IPT was provided to 100% of eligible patients. TB specialists were the ones who prescribed IPT, and AIDS centers, primary care facilities, or TB facilities managed the care of patients receiving IPT.

Secondary–TB preventive treatment in HIV positive individuals has been found to be effective for reducing the risk of TB recurrence by 55%.[11] In the TB/HIV models, secondary TB preventive treatment, with a combination of isoniazid and rifampicin, was prescribed for HIV infected individuals for three months within the first year of observation, after completion of TB treatment.

During the model implementation, HIV/TB services were provided to more than 7,500 clients.

Discussion

Sustainability and scaling up of the model

In all four countries, interaction between HIV and TB services in the pilot sites continues with the support of TWGs, MoHs, DoHs and in some sites, international donors. The national teams of trainers and training modules are instrumental in ensuring the model's sustainability, as they are continuously training health care providers on HIV. With CAPACITY assistance in developing the modules and training of the faculty, TB/HIV education was successfully introduced into the medical training institutions' curricula.

In Kazakhstan, the government health budget fully funds the model's activities. The MoH, National TB Center, and Republican AIDS Center (RAC) are preparing a MoH order on scaling up the model to all provinces of the country.
In Kyrgyzstan WHO, AFEW and the National TB Center, together with CAPACITY, continued model activities by conducting series of trainings on TB/HIV for the representatives of RAC, TB Centers, and MoJ Department of Corrections. Scaling up the TB/HIV component was included in the National Application to Round 9 of the Global Fund to Fight AIDS, Tuberculosis & Malaria grant.

In Tajikistan, continuation of the model was funded within Round 6 of the GFATM Grant, with technical assistance from CAPACITY. Additionally, Project HOPE co funded adaptation and printing of informational materials on HIV/TB co infection for patients and health care providers. Scale up of the model is called for within the National HIV/TB Strategy, which is supported by the United Nations Development Program/GFATM Principle Implementation Unit (PIU). Management of concomitant HIV/TB infection is also among the priorities of the National HIV Program for 2007 – 2010.

Photo: TB/HIV training in Dushanbe, Tajikistan.

In Uzbekistan, a TB/HIV curriculum was introduced in all of the country's medical training institutions. Data on TB/HIV was

included in the national statistical reporting. A M&E form on HIV/TB was developed, tested, and submitted for approval to the MoH. The TB/HIV model was expanded to Samarqand province with GFATM PIU support and with technical assistance from CAPACITY. A set of activities on nation wide scale up developed by CAPACITY is part of the approved National Proposal for Round 8 of GFATM.

Photo: TB/HIV training in Tashkent, Uzbekistan.

Key accomplishments

- **Improved quality and availability of TB/HIV-related services**: The model succeeded in introducing new services into the vertical systems (e.g. VCT in TB services) and contributed to improving the quality of services to meet WHO standards (e.g. adjusted ART schemes for co infected patients). Patients' access to services improved, as many services were provided in the same locations. Services that did not require significant additional expenditures reported a significant increase in coverage; these services included primary and secondary prevention of TB in PLHIV; referral of TB patients newly diagnosed with HIV to HIV care and support services; and provision of DOTS and ART to co infected clients.
- **Made notable progress in ensuring sustainability and scale-up of the model**: In all countries, the model continues to function. Local partners adopted the model, local capacity for service providers' training was strengthened, and concrete steps were undertaken to scale up the model in other provinces.

Model strengths

- **TWGs facilitated multi-sectoral cooperation**: The model fostered horizontal interaction between otherwise vertical services and facilitated cooperation within the MoH departments and services, between the MoH and MoJ (e.g. Kyrgyzstan's model in penitentiary system), and between the governmental structures and civil society.
- **Involved civil society organizations**: Participation of NGOs providing HIV services facilitated access to the hard to reach populations, who were most in need for TB/HIV services.
- **Built upon existing resources and programs**: For most services the model did not require additional resources and funds. Detection of TB and HIV, DOTS and ART, and counseling services were available with support of other programs and grants and were provided through existing health care facilities
- **Applied international best practices**: The clinical aspects of the model were based on WHO protocols and recommendations
- **Created a flexible model**: The TB/HIV interaction model was created such that local stakeholders could easily adapt it to the local conditions of each country and each pilot site, taking availability of resources and technical capacity into account
- **Used a participatory approach**: All stakeholders were involved in all steps of model development, implementation, and evaluation. This created a sense of ownership among high level officials, policy makers, and local public health

authorities, which resulted in political support of the model

- **Built local capacity**: Establishment of national team of trainers enabled many local service providers to be trained in a relatively short time. This trained workforce of service providers, health managers and M&E specialists formed an infrastructure, where one did not exist before
- **Utilized a rigorous M&E component**: Comprehensive M&E plans were developed and implemented with full participation of local stakeholders. Results of M&E informed decisions on adjusting the model during the implementation period

Limitations

Due to budget and time constraints, the model implementers were not able to document the impact of the intervention on decreasing the burden of HIV and TB on target population. Countrywide and quarterly variations on the short term results can be explained by the following factors:

- **Shortage of TB and HIV supplies at health facilities**: Although TWGs had calculated the quantity of free medicines, X Ray films, and other supplies needed for the model implementation, lack of resources—especially at the health care facilities—small budgets, and gaps in health policy regulations (e.g. in some countries, free VCT was not considered a part of TB services) effectively prevented high coverage with HIV/TB services at some sites.
- **Low adherence to preventive medication regimens**: Patients' lack of awareness about TB/HIV issues prevented them from closely following their treatment schedules. To address this problem, TWGs decided to print relevant IEC materials.
- **Weak referral system from other health services**: The initial focus of the model was on fostering interaction and encouraging referrals between HIV and TB services. This meant that priority was not given to encouraging interaction with other health services, such as narcology and dermatovenerology, that have access to populations that might benefit from conjoined TB/HIV services (e.g. IDUs). Consequently, a referral system between TB/HIV services and these other health services was not established. Problems with transporting patients and laboratory samples: As facilities lacked capacity to provide all diagnostics in one location, blood samples had to be sent from TB service sites to AIDS centers for HIV confirmation tests. The limited budgets of these facilities did not allow for organization of regular transportation of the samples. Similarly patients from remote districts had difficulties paying for transportation to HIV and TB facilities located in the cities.
- **Limited introduction of HIV VCT into TB services**: Due to limited resources, not all TB service providers were trained in HIV volunteer counseling and testing and in discussing HIV tests with patients at TB facilities, which delayed the test results.
- **Confidentiality of information flow between services**: Although measures were taken to prevent disclosure of patients' HIV status during the referral process (e.g. HIV status was not indicated in the referral papers), there are still concerns that confidentiality was breached.
- **Seasonal migration leads to interruptions in care**: The pilot stage of the model did not predict the possibility of interrupted services for clients who migrate either within a country or abroad for seasonal work. However, migration rate is high in most Central Asian countries, and migrants are at risk for co infection with TB and HIV.

Recommendations for future

To address the aforementioned limitations and to improve the model's effectiveness the implementers proposed the following recommendations:

- **Allocate resources to increase patient access to services**: Sufficient funds should be secured to ensure patient access to free services, including: transportation when applicable, medicines, and prescribed supplies as established in the the approved standards of care
- **Conduct monitoring and evaluation on a regular basis during the model implementation, not only before and after.**
- **Involve the civil society sector to expand services within the TB/HIV model to better meet patients' needs.**
- **Coordinate TB/HIV model implementation with relevant behavior change communication campaigns for most at-risk populations and the community at large.**
- **Run a comprehensive TB/HIV training and awareness program for a wider range of health providers**: Primary care physicians, Narcologists, Dermatovenerologists, and nurses should also receive a comprehensive TB/HIV training program, placing special emphasis on reducing stigma against PLHIV
- **Adjust the referral and document-sharing system to better account for patient protection**: TWGs should adjust the patients' referral and documentation flow system to involve other vertical services, to better track patients, and to ensure confidentiality and protection of patients' HIV status.
- **Maintain & strengthen horizontal linkage and communication between the services**
- **Improve strategic planning to harmonize scale-up of TB/HIV activities**: TWGs can harmonize the scale up process, particularly when multiple stakeholders are involved, by increasing strategic planning and developing joint annual work plans and budgets.
- **Establish local (province and district-level) TWGs and M&E teams to effectively scale-up the model.**
- **In countries where pilot sites did not include prisons, implementation of the model in penitentiary system should be a top priority**.
- **Scale-up should take into account provision of services for seasonal migrants**: To provide a continuum of care for seasonal migrants, the models should be scaled up to all provinces of the country; interaction between the services and referral networks in the Central Asian countries and migrants' destination countries (e.g. Russia) should also be established.

Conclusion

With guidance from CAPACITY, officials in Central Asian countries realized the necessity of linking TB and HIV services, which led to the development of multisectoral TWGs. Working and communicating together for the first time, multiple sectors of the government—including officials from TB services and HIV services, international organizations, and local NGOs—designed protocols and guidelines for linking TB and HIV services for better management of co infected patients. TWGs drafted government orders, selected model sites, and developed models, making it possible for co infected patients to receive appropriate treatment. TB/HIV models in Uzbekistan, Tajikistan, Kyrgyzstan and Kazakhstan were implemented with rigorous evaluation plans to determine lessons learned and successes. Allowances for corrections and refinements along the way were built into the process. The emphasis on participation from all stakeholders, especially high level government officials, was key to the success of the program. Countries took specific steps to scale up the model and ensure its sustainability after completion of the piloting stage.

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CHAPTER 7: Development of the model of voluntary counseling and testing for HIV in the Kyrgyz Republic

Background

In Kyrgyzstan, standards for voluntary counseling and testing (VCT) for HIV have been endorsed through several state adopted documents, such as the *State Program on Prevention of the HIV Epidemic and its Social and Economical Consequences in Kyrgyz Republic (2006 – 2010)*: HIV and AIDS Law Mandating Pre and Post test Counseling and the Ministry of Health (MoH) order On Introduction of VCT of HIV/AIDS in Medical Facilities of the Republic. Each health care facility has a specialist responsible for HIV and AIDS related services, including VCT. Despite these measures, the country still lacked a well functioning VCT system. A situational assessment conducted by CAPACITY in Osh and Karasuu towns of Kyrgyzstan revealed the following problems:

- Low public awareness about HIV and AIDS in general and about VCT in particular
- Long waiting period (3 5 days) for the test results
- Lack of separate and appropriately equipped rooms for VCT in health care facilities
- Inaccessibility of VCT after hours
- Lack of motivation for service providers to provide VCT
- Lack of quality control for VCT
- Absence of mechanisms of interaction between services involved in VCT at the local level
- Health care providers' have minimal access to individuals with a higher risk of HIV exposure, such as injecting drug users (IDU) and sex workers
- Lack of a confidential referral mechanism between the AIDS Centers and primary health care facilities for people living with HIV (PLHIV)
- Service providers have limited knowledge of and skills for AIDS related services, including VCT
- Absence of a monitoring and evaluation (M&E) system for VCT

To address these gaps and to improve the coverage and quality of VCT, CAPACITY—in cooperation with the Osh Oblast health authorities and local NGOs—developed and implemented a model project on VCT in Osh and Karasuu towns of Osh Province.

Program Methods

Preparation stage: Development of the model
The CAPACITY team completed the following steps in the preparation stage.

- Completed situational assessment and developed recommendations
- Established VCT thematic working group (TWG) in Osh and Karasuu
- Selected pilot health care facilities
- Developed and received approval for VCT model documentation package

The situational assessment included an evaluation of facilities providing VCT, an analysis of the regulatory framework on VCT, a review of international best practices, and interviews with local stakeholders from public and non governmental sectors of Osh Oblast. The assessment findings and recommendations were published in a report posted on the CAPACITY website and were disseminated among key national stakeholders in Kyrgyzstan.

To ensure effective and timely coordination of activities, TWGs–consisting of representatives of VCT providing facilities were established in Osh and Karasuu. Based on the TWGs' recommendations, the following organizations were selected as pilot facilities:

- “Too Demi” Family Medicine Center (FMC)
- Osh Oblast AIDS Center
- Osh Oblast Dermatovenerological Dispensary
- Osh Oblast Narcological Dispensary
- Osh Oblast TB Center
- Osh City Perinatal Care Center
- Karasuu FMC
- Karasuu Territorial Hospital
- NGO Podruga
- NGO Roditeli Protiv Narkotikov (Parents Against Drugs)

NGO Podruga reaches sex workers through its friendly clinic in Osh town, and NGO Parents Against Drugs (PAD) runs an IDU drop in center staffed with physicians, including a narcologist, a dermatovenerologist, and an HIV counselor, in Karasuu town.

With technical assistance from CAPACITY, the TWGs developed a package of documents for the model, including an implementation work plan, an M&E plan, and algorithms for VCT for various population groups adopted by the joint Prikaz of Osh Oblast United Clinical Hospital and Central City Family Medicine Center.

Model implementation stage

Prior to initiating the work with the population, each of the above facilities nominated two to three staff members responsible for the provision of VCT within the pilot model. The selected staff then attended a three day training on VCT in August 2008. Trained specialists from the government run facilities received an additional $20 per month as reimbursement for providing VCT. This amount was equal to the reimbursement specified in the Global Fund Round 7 grant.

Photo: One of the VCT model facilities in Osh, Kyrgyzstan

Implementation started with a formative study to identify the level of HIV awareness and the preferred sources of information on HIV and VCT services among the Osh and Karasuu populations.

Based on the study findings, the TWGs developed an information, education, and communication (IEC) campaign. IEC materials, including a poster and leaflet on HIV and VCT services in Russian and Kyrgyz languages were developed and printed. Posters were placed in clinics, NGOs, and other HIV and VCT service sites and leaflets were distributed to sex workers and IDUs. In addition, there were public service announcements on VCT that were regularly disseminated through local newspapers and the Karasuu market radio; advertisements on decreasing stigma and discrimination towards PLHIV; and TV broadcasts on the availability of VCT.

Clients could either request counseling and testing services, or counselors could recommend these services to clients who met the need for these services, as stated in the approved protocols and algorithms (e.g. TB patients, STI patients, pregnant women, IDUs, and sex workers). All clients were informed of their right to refuse services at any point.

During implementation of the model, VCT counselors and other specialists of pilot facilities completed a two day refresher training, which emphasized the challenges revealed during the assessment, including: M&E, post test counseling, and group pre test counseling. In addition, M&E specialists and coordinators provided constant on site mentoring for the counselors.

Monitoring and evaluation of the model

M&E Specialists were selected from governmental and non governmental organizations and were trained to coordinate, monitor, and evaluate the model implementation. The IEC campaign, training of VCT specialists, and provision of VCT services provided the metrics for monitoring the model implementation.

For each of these components, the M&E plan listed activities to be monitored, indicators, means of verification, frequency of data

collection, and responsible persons. Key indicators of the IEC campaign included level of the population's knowledge of HIV and VCT issues, percentage of people planning to undergo VCT, and percentage of respondents who underwent VCT and know the results. Data on these indicators were collected in a population survey before and after the IEC campaign. The results of trainings were assessed based on the results of pre and post tests, specifically, the number of trainees who answered at least 75% of post test questions correctly—the threshold for successful completion of the training program. The M&E Plan also called for follow up testing of the trainees' knowledge once each quarter.

Key indicators for providing VCT services included the number of people who received pre test counseling, HIV testing, and post test counseling. Each month, counselors recorded and compiled data using the following tools:

- Informed consent form (adopted by the MoH Prikaz)
- Unique identification code (for anonymous provision of services)
- Registration logbook
- Summary report

Results

During the seven months of the model implementation, a total of 1,302 clients received pre test counseling, 97% of whom underwent the HIV test, but only 47% of those tested learned their results and received post test counseling (Table 13). Women were more than 2 times more likely than men to receive post test counseling.

As seen in Table 13, coverage by post test counseling (percentage of clients tested for HIV who received their results and entered post test counseling) varied significantly by facilities, ranging from 21% (NGO PAD) to 94% ("Too Demi" FMC).

Table 13. Number of people receiving VCT services (pre-test counseling, HIV testing, and post-test counseling) and post-test counseling coverage by facility

Facility	Pre-test counseling, n	HIV testing, n	Post-test counseling, n	Coverage by post-test counseling, %
NGO PAD	259	247	51	201
TB Center	181	182	77	42
NGO Podruga	157	157	95	61
Osh Narcological Dispensary	135	135	33	24
Osh Dermatovenerological Dispensary	128	113	44	39
AIDS Center	122	122	76	62
Osh Perinatal Center	102	102	86	84
Karasuu Hospital	102	102	43	42.
"Too Demi" FMC	60	52	49	94
Karasuu FMC	56	56	37	66
Total	**1302**	**1268**	**591**	**47**

Table 14. Number and percentage of clients who received pre-test counseling by population group and facility

	NGO PAD	TB Center	NGO Podruga	Narcology	Dermato venerology	AIDS Center	Osh Perinatal Center	Karasuu Hospital	"Too Demi" FMC	Karasuu FMC	Total	%
Tested on clinical indications (code 113)	0	181	0	0	24	1	79	33	6	18	**342**	26.7
IDUs (code 102)	177	0	0	135	0	5	0	10	0	4	**331**	25.8
Persons with high risk sexual practices, sex workers (code 105)	0	0	137	0	3	7	0	2	0	0	**149**	11.6
STI patients (code104)	3	0	1	0	68	4	0	15	4	22	**117**	9.1
Pregnant women including abortion patients (code 109)	0	0	0	0	2	1	23	35	41	5	**107**	8.3
Anonymous testing (code 114)	20	0	19	0	5	17	0	4	2	0	**67**	5.2
Persons leaving the country (code 106)	0	0	0	0	21	39	0	0	0	0	**60**	4.7
Possibility of nosocomial infection (code 101.4)	45	0	0	0	0	4	0	0	3	0	**52**	4.1
Health care providers (code 118)	0	0	0	0	0	14	0	0	1	4	**19**	1.5
Military (code 111)	0	0	0	0	0	7	0	0	0	0	**7**	0.5
Tested on epidemiological indications (code 115)	0	0	0	0	1	4	0	0	0	0	**5**	0.4
Sexual contact with PLHIV (code 101.1)	0	0	0	0	0	1	0	0	0	2	**3**	0.2
Foreigners (code 200)	0	0	0	0	0	2	0	0	0	0	**2**	0.2
Children tested on clinical indications (code 117)	0	0	0	0	0	0	0	0	0	1	**1**	0.1
Others (code 120)	0	0	0	0	2	16	0	3	0	0	**21**	1.6
Total*	**245**	**181**	**157**	**135**	**126**	**122**	**102**	**102**	**57**	**56**	**1 283**	100.0
%	19.1	14.1	12.2	10.5	9.8	9 5	8.0	8.0	4.4	4.4	100.0	

*Total 1,302 clients received pre test counseling, but data on 19 of them is missing

VCT covered a wide range of population groups (Table 14) with persons who had clinical indications for testing (26%), IDUs (25%), and sex workers (11%) comprising the majority of tested clients. The groups with a higher risk for HIV infection were mostly reached by NGOs (IDUs and sex workers), narcologists (IDUs), and dermatovenerologists (sex workers and STI clients). Some IDUs were served at general health care facilities, such as Karasuu Hospital and Karasuu FMC. Anonymous testing was popular at NGOs and at the AIDS Center. However, compared to the estimated number of sex workers or IDUs in country, the VCT coverage was not high. For example, NGO PAD reached 12% (n=177) of the estimated

1,500 IDUs in Karasuu town and Kashgar village, where PAD works. Similarly, NGO Podruga covered 7% (n=137) out of an estimated 2,000 sex workers in Osh City*.

Ultimately, the model reflected an increase in the number of clients served. During the model's first month, only 135 clients received pre test counseling, only 130 were tested, and only 79 received post test counseling services; in the model's final month the number of clients served reached 214 (159% increase), 206 (158% increase), and 100 (127% increase), respectively.

During the model period, five clients tested positive for HIV, two of whom identified themselves as sex workers, two who were a married couple, and one who was tested anonymously.

Capacity building was an important component of the model. A total of 28 specialists were trained to provide VCT. The average VCT knowledge level of trained specialists increased from 64% (pre test) to 92% (post test). However, follow up assessment of the trainees' knowledge several months later revealed a decrease to 76%. As a result, a refresher training was conducted.

Discussion

The main results reflect a significant increase in the number of clients served and imply that access to VCT grew by building a local workforce of VCT counselors. Additionally, results indicate that interactions between the facilities are improving, and referral networks for VCT clients are being established.

VCT providers were able to reach a relatively high proportion of individuals at risk for HIV infection due to the involvement of NGOs and health care facilities, namely narcology and dermatovenerology, serving these populations.

At the same time, many clients did not receive the results of their HIV tests, nor did they receive post test counseling services. Post test counseling coverage rates varied significantly by facility. A possible explanation is that the facility's target population IDUs, may be less likely to come for HIV test results than the community would. The low rate of post test counseling across the board (47%) can be attributed to delays in reporting HIV test results (3 5 days).

Although VCT services are instrumental in informing people of their HIV status and serve as an important entry point to ART programs, the cost effectiveness of providing universal access to VCT in isolated, resource limited settings where there is a concentrated HIV epidemic, is still unclear. In this regard, universal access to VCT should not be guaranteed at the expense of other interventions. Rather, VCT should be an integral part of a comprehensive package of HIV prevention and treatment services universally accessible to individuals at risk for HIV infection.

**Population estimates were made during CAPACITY assessment conducted in 2006 for the TUMAR Project*

Sustainability and scaling up

The model continues to be implemented in the pilot area without additional funding from donors. Financial incentives are paid only in some facilities where management was able to secure funds (e.g. in Narcology Dispensary). However the MoH is considering introducing additional reimbursements for VCT.

No specific steps were undertaken to scale up the model. Many stakeholders emphasized the need to agree upon common principles of VCT provision in the country prior to scaling up any models.

Photo: VCT training in Osh, Kyrgyzstan

Limitations

- **Scope of M&E activities**: Every effort has been made to monitor and evaluate the model; however, due to the scarcity of time and resources, some important aspects of the model's effectiveness were beyond the scope of M&E. Therefore, information on the percentage of the target populations reached within the model is limited.
- **End-line assessment and client evaluation**: The end line assessment of the IEC campaign's impact on the community's awareness about HIV and on their attitudes towards PLHIV has not been conducted. Evaluation of the clients' satisfaction level, which could provide additional insight into the reasons for the low post test counseling coverage, was also not conducted.

Lessons learned and recommendations for future

- **Providers can deliver VCT effectively to most-at-risk populations (MARP)**: NGOs and health services (Narcology, Dermatovenerology) working with the most at risk populations demonstrated a high capacity for providing VCT services and should be actively involved in scaling up the model
- **Model scale-up should involve prisons** to ensure that high quality VCT services are provided thereThe VCT algorithm allowed individuals with positive results to receive post test counseling in the Oblast AIDS center. However, some **clients preferred to receive HIV-test results and post-test counseling from the same specialists who provided pre-test counseling**
- **Post-test counseling coverage was low, mostly due to delays in receiving HIV-test results**. Timely submission of the blood samples to the AIDS Center Laboratory was not always possible due to lack of funds for transportation. Sometimes samples were brought to the laboratory by the clients themselves, which compromised confidentiality of the services. To address these problems, resources to cover specimen transportation costs should be set aside. Samples should be transported only by trained medical personnel equipped with cold chain containers. Furthermore, rapid HIV tests should be widely used in VCT, especially for reaching IDUs and sex workers, as well as for emergency cases in in patient clinics
- **Adequate materials are critical**: Additional resources need to be secured to provide VCT counselors with a sufficient quantity of IEC materials, copies of clinical protocols, registration forms, informed consent forms, and referral forms
- **Most of the facilities lacked separate rooms for VCT services to ensure confidentiality of the counseling**. However, some experts argued that separate VCT rooms may result in singling

out and stigmatizing the clients who are seen entering these rooms, so VCT services should be provided by all health care providers

- **Financial incentives must be applied consistently**: Although selected specialists received monthly reimbursement to provide VCT, other health care personnel did not have financial incentives. Consequently, some health care facilities' management staff were not enthusiastic about implementing VCT services. To avoid tensions related to reimbursement of VCT services, policy makers should be careful when allocating additional financial incentives. Alternatively, the model could follow the experience of other countries, where VCT services are not reimbursed separatelymanagement staff were not enthusiastic about implementing VCT services. To avoid tensions related to reimbursement of VCT services, policy makers should be careful when allocating additional financial incentives. Alternatively, the model could follow the experience of other countries, where VCT services are not reimbursed separately
- **VCT trainings should involve more specialists in health care facilities to ensure constant availability of services**. On the job trainings, given by trained specialists, may help establish a sufficient VCT workforce in the facilities
- **HIV sensitization should include all influencers**: Some mass media managers were reluctant to broadcast programs on HIV issues, due to social taboos and stigma, so advocacy activities should target this audience as well
- **Establishing TWGs and introducing a VCT M&E system are essential steps in the model implementation**
- **The VCT model scale-up should not affect funding of the prevention programs**

Conclusions

The model succeeded in establishing a well functioning system of VCT, which enabled state health care facilities, NGOs, and specialists to provide quality services to clients and to ensure more effective referrals between the facilities. As a result, the number of clients receiving VCT services has significantly increased. The model successfully involved NGOs working to provide VCT to hard to reach populations. A qualified workforce of trained counselors was developed. Monitoring and evaluation of the model demonstrated its effectiveness; consequently, stakeholders recommended the model for scaling up. However, before making decisions about scaling up the model, issues of cost effectiveness and availability of funds should be taken into consideration.

CHAPTER 8: Integration of anti-retroviral therapy and HIV prevention within the primary health care system

Background

A legacy of the former Soviet Union in Central Asia is a vertical health care system where integrated services are generally unavailable. HIV/AIDS services, too, are managed by and conducted at republican , province , and city level AIDS centers.

The primary health care (PHC) system historically played an insignificant role in the provision of HIV prevention and treatment services. CAPACITY conducted an assessment of the HIV/AIDS and related health delivery systems in Karaganda province of Kazakhstan in 2007, which revealed that, other than referral to AIDS centers and some nominal consultation and counseling, no substantial services on HIV/AIDS were available at the PHC clinics. It also found that provincial AIDS centers were the provider of choice for HIV/AIDS patients since they were perceived to be the only facilities to offer confidential and quality services. Stigma and discrimination of people living with HIV (PLHIV) by providers, a low level of provider knowledge and skills on HIV/AIDS prevention and treatment, as well as the lack of confidentiality, effectively prevented clients from seeking HIV/AIDS related services at PHC clinics.

At the same time, an increase of HIV incidence amongst the most at risk and hard to reach populations (including injecting drug users and sex workers) is expected to pose an enormous burden on AIDS centers. The integration of HIV/AIDS related services into the PHC system would improve clients' access to services, increase patients' adherence to antiretroviral therapy (ART) treatment and ensure financial sustainability of HIV/AIDS clinical services.
In order to address this problem CAPACITY initiated a number of activities to help integrate HIV/AIDS services into the PHC system of Central Asia. This included a model introducing ART into PHC in Temirtau City of Karaganda province in Kazakhstan and building capacity of PHC through institutionalizing providers' training on HIV/AIDS in Uzbekistan and Tajikistan.

Program methods

Model development started in July 2008 at an orientation meeting in Astana. Attendees included representatives from the Ministry of Health (MoH), Karaganda Province Health Department, Republican and Karaganda Province AIDS Centers, Association of Family Doctors of Kazakhstan, and the Union of People Living with HIV/AIDS. Participants adopted a resolution calling for the implementation of a model to integrate ART into PHC in Karaganda province, the development of a package of documents for the model, the adoption of the model by order of the Karaganda Province Health Department (KPHD), and the establishment of a technical working group (TWG) to facilitate interactions between service providers. Temirtau city in Karaganda province was selected as a pilot site because of the high prevalence of HIV infection (1000 cases were cumulatively registered in the city at the beginning of the model, 650 of which were current and under observation).

In September 2008, KPHD issued On Implementation of the Pilot Project on Provision of ART for HIV/AIDS patients at PHC Level, an order establishing a TWG comprised of representatives of KPHD, Karaganda Province AIDS Center, the Temirtau City AIDS Center, Shapagat, and NGO which works with PLHIV, and Temirtau Policlinic # 2 (selected as the pilot PHC facility).The order approved the work plan of the model implementation, composition of the multidisciplinary teams providing ART services in Policlinic #2, Temirtau TB Dispensary, Temirtau Infectious Disease Hospital, and Temirtau City AIDS Center. The head of the Temirtau branch of KPHD was assigned to oversee the model implementation, coordination of interaction between the service providers, and the development of an M&E plan for ART services. The heads of the province and city AIDS centers were to conduct trainings of health care providers and solve logistical issues related to ART medicines supply through the Policlinic #2.

The purpose of the model was to decrease barriers to services and improve adherence to ART by offering lab tests, screenings, specialists, and delivery of ARV drugs under the same roof. To this end, the AIDS centers' ART providing responsibilities — in particular delivery of ARV drugs to patients who demonstrated adherence— were transferred to PHC facilities. AIDS centers continued rendering overall technical support including deciding when to initiate ART and their initial administration to patients. Also patients were to be provided with additional services such as psychosocial support and, for IDUs, referral to methadone substitution treatment.

The patient serving capacity of the Policlinic # 2 was enhanced by the addition of a psychologist, nurse, and infectious diseases specialist (with salaries paid from the Policlinic and KPHD budgets). Multidisciplinary teams consisting of a physician, nurse, and psychologist from the Policlinic #2 and the City AIDS Center and a peer counselor from Shapagat attended a three day training on ART protocols, the new role of PHC in delivering ART, and interaction between service providers. Policlinic specialists attended additional trainings on ART and voluntary counseling and testing (VCT). Service providers received continuous technical support from CAPACITY, the ZdravPlus Project and the Republican AIDS Center.

In Uzbekistan and Tajikistan, CAPACITY, in cooperation with Ministries of Health (MoH) implemented a series of activities to build the PHC system's ability to provide HIV/AIDS related services. This included training and educating PHC providers on clinical aspects of HIV/AIDS, HIV prevention, and overcoming stigma and discrimination against PLHIV.

In Uzbekistan, CAPACITY collaborated with the MoH, the Tashkent Institute of Advanced Medical Education (TIAME), the Tashkent Medical Academy (TMA), the General Practitioners' Training Centers (GPTC), and the Health 2 Project implemented the following steps:

- Established a working group of national consultants approved by the MoH order;
- Developed and approved the Prevention of HIV, Reduction of Stigma and Discrimination Toward Vulnerable Populations training module;
  Incorporated the training module into the curricula of medical education institutions that train general practitioners (GP);
- Trained national master trainers selected from professors of GPTCs and infectious disease departments of medical schools;
- National master trainers trained a group of local level trainers selected from pool of local healthcare center chief infection specialists;
- Local trainers educated GPs at PHC institutions as part of the continuing professional education program approved by the MoH, and;
- Developed a clinical manual for GPs based on the training module.

CAPACITY in Tajikistan underwent a program based on the Uzbekistan model. In cooperation with the MoH, Tajik State Medical University (TSMU), Tajik Institute of Medical Postgraduate Training (TIMPT) and Republican Family Medicine Training Center (FMTC), CAPACITY Tajikistan implemented the following activities:

- Established a technical working group approved by MoH order;
- Adapted the master version of the HIV/AIDS Infection –Clinical Aspects, Epidemiology, Diagnostics, Prevention and Treatment training manual, for subsequent approval by the MoH;
- Trained trainers from medical education institutions, and;
- Trained family doctors (FD).

The contents of the training modules in Uzbekistan and Tajikistan included:

- Modes of transmission and stages of infection, clinical aspects, diagnostics, treatment, and prevention of HIV infection;
- Special HIV infection issues (e.g. HIV infection in children, preventing vertical transmission, opportunistic infections);
- Skills in counseling on HIV infection issues;
- Examining and monitoring HIV infected patients;
- Postexposure prophylaxis;
- The role of PHC in HIV prevention and treatment; and
- Preventing HIV and reducing stigma and discrimination towards vulnerable groups.

Trainees who attended and participated in all training sessions and scored at least 80% correct on tests received certification.

Results

Integrating ART into PHC in Karaganda
During the 8 months of model implementation, 278 PLHIV (42.7% of all local HIV cases under observation) were transferred for medical follow up to the policlinic. Of those:

- 72 patients (including 3 children) received ART (45.3% of all ART patients in the Temirtau City AIDS Center);
- 8 clients with dual HIV/TB infection were provided with ART;
- 20 new patients enrolled for ART at the policlinic;
- 6 patients resumed ART, and;
- 3 patients began methadone substitution therapy.

The policlinic care providers quickly became directly involved with HIV patient care:

- Total number of visits to the ART room was 630, 175 of which were first time visits
- Psychologist conducted 650 sessions
- Medical specialists (oncologist, ophthalmologist, ENT (ear, nose, throat), gynecologist, surgeon, therapist, TB specialist) saw 80 patients
- Nurses made 630 visits to patients' homes
- 127 screenings and 153 lab tests were performed

The introduction of the model did not significantly increase the workload of policlinic staff. Five patients stopped receiving ARV drugs during the 8 months of the model (the same number of clients discontinued ART during the 8 months prior to the model). The average number of PLHIV per district physician was 16 (4 of whom were on ART), compared to approximately 2,000 – 3,000 patients per physician.

Institutionalizing training on HIV/AIDS service delivery for PHC providers
In Uzbekistan, the training module was incorporated into the curriculum of all GPTC and the manual was introduced in the curriculum of TMA. In Tajikistan, the Manual was included in the curriculum of TSMU, TIMPT and the republican and province level FMTCs. Training manuals were copied and distributed to respective PHC training institutions (1,200 copies in Uzbekistan and 175 copies in Tajikistan).

National teams of trainers (43 master trainers and 295 local trainers in Uzbekistan; 14 trainers in Tajikistan) have been established. Trainers educated 4,000 PHC providers in Uzbekistan and 40 in Tajikistan.

The effectiveness of the selected approach was confirmed by the results of PHC providers training. In Tajikistan the average level of trainees' knowledge increased from 29% at the beginning of the training to 85% at the end, and in Uzbekistan from 43% to 85%, respectively. All participants rated the quality of the trainings as either 'excellent' or 'very good'. Follow up tests of trainees' knowledge were conducted in Uzbekistan by the Health 2 Project as part of the M&E process but the results are not available yet.

Discussion

Sustainability

Although piloting of the ART model in Karaganda is finished, Policlinic # 2 continues to provide ART and other services to patients with support and funding from KPHD. There has been no decrease in volume or range of services since the pilot.

In Uzbekistan and Tajikistan education of PHC providers on HIV/AIDS service delivery was integrated into the curricula of medical training institutions, thus ensuring sustainability of the model.

Photo: Training for general practitioners in Tashkent, Uzbekistan

Scaling up

In general, the Karaganda stakeholders praised the ART model and recommended it for scale up. However, according to Karaganda and Temirtau health authorities, because the pilot phase was quite short (8 months), the long term (1 to 2 year) results of the model implementation should be assessed before making decisions about scale up. At the same time Karaganda health authorities decided to send the package of documents on the model implementation and its results to MoH to be considered for implementation in other provinces of Kazakhstan as well as for consideration in the Kazakhstan National HIV/AIDS Program for 2011 – 2015.

Scale up opportunities for PHC providers' education on HIV/AIDS service delivery may include the development of HIV/AIDS curricula for institutions that train PHC nurses in Tajikistan and Uzbekistan.

Accomplishments

The integration of ART into the PHC system improved access for PLHIV to clinical services, increased utilization of HIV/AIDS related services, and relieved AIDS center staff from excessive workloads. The short term results of the model implementation demonstrated PHC ability to manage PLHIV and provide them with ART and other services, including distribution of ARV drugs. The high utilization of services is evidence of reduced stigmatization and discrimination of PLHIV by PHC providers. This model helped to target services to the needs of vulnerable populations, and emphasized the central role of AIDS centers in rendering technical support to PHC. The model success would have been impossible without a multidisciplinary approach involving various health care providers (medical specialists, general practitioners, nurses, social workers, and peer counselors), and an NGO that works with PLHIV (Shapagat) to provide community based support.

The models in Tajikistan and Uzbekistan resulted in institutionalization of the PHC providers' education on provision of HIV/AIDS services. Developed modules and manuals were approved by MoH and medical training institutions. National teams of trainers were established. A significant number of PHC providers were trained in a relatively short time. Results of pre and post tests and participant evaluations indicated high quality of the training activities.

Limitations

The short duration of the ART model (8 months) did not allow for observation of any long term results related to changes in health status or quality of life in PLHIV. This also pertains to ARV

adherence. Although there were no changes in the number of clients who discontinued ART before or during the model, any clients who may have discontinued ART after the model were not captured. Data that might have been collected during the model implementation, such as assessment of clients' and service providers' satisfaction level, is not available either.

Another limitation is that introduction of the ART integration model would be cost effective only in settings were PHC facilities have sufficient resources, including personnel, premises, equipment, and enough government funding to expand services to PLHIV. Replication of the model in resource limited settings would require significant additional funding. Furthermore, scale up of the model would be less cost effective in areas with relatively low prevalence of HIV because an economy of scale could not be achieved where PHC providers see few to zero HIV patients.

Photo: ToT on HIV for PHC specialists in Dushanbe, Tajikistan.

Lessons learned and recommendations

- Integration of ART and other HIV/AIDS related services to PHC should involve NGOs working with PLHIV and other hard to reach populations, such as IDUs and sex workers.
- Scale up of the ART integration model requires a high level of commitment and support from public health authorities and managers at all levels, but may only be useful where prevalence of HIV is high.
- Logistics of ART drugs supply to PHC facilities and distribution to clients requires thorough consideration and adjustment to local conditions.
- Service providers that are new for PHC, such as ART specialists, psychologists and peer counselors are an essential part of the integration model. Introduction of the model should involve provisions for recruiting such personnel.
- Long term results of all integration models need to be monitored and documented to inform decisions on adjusting and scale up need to be monitored and documented to inform decisions on adjusting and scale up.

Conclusions

The integration of ART in PHC and the institutionalization of education on HIV prevention and treatment to PHC providers are important steps toward creating a system of quality HIV/AIDS services that are accessible to vulnerable populations. The Karaganda model demonstrated the possibility of improving PLHIV's access to and utilization of a wide range of health care services including ART. The model proved sustainable and stakeholders are taking steps to scale up. However, program planners need to be aware of costs related to the replication of the model.

The Uzbekistan and Tajikistan models strengthened capacity of medical training institutions, developed state of the art educational tools and established a qualified workforce of trainers and faculty essential for sustainability. A large number of providers were trained to provide HIV/AIDS related services in PHC facilities. However, long term results of the models implementation have yet to be observed.

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