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South Asia Human Development Sector

# Mapping and Situation Assessment of Key Populations at High Risk of HIV in Three Cities of Afghanistan

April 2008



Discussion Paper Series

**Mapping and Situation Assessment of Key Populations at High Risk  
of HIV in Three Cities of Afghanistan**

**SAR AIDS  
Human Development Sector  
South Asia Region  
The World Bank**

**April 2008**

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The views expressed are those of the authors and should not be construed to represent the positions of the University of Manitoba, the United States Departments of the Army, Navy, or Defence, or of the World Bank.

## Abbreviations and Acronyms

AIMS	Afghanistan Information Management Services
HIV	Human Immunodeficiency Virus
CSW	Commercial sex worker
ERB	Ethical Review Board
FSW	Female sex worker
HASP	HIV/AIDS Surveillance Project
HCV	Hepatitis C virus
HBV	Hepatitis B virus
HRA	High risk activities
HRG	High risk group
IDU	Injecting drug use
IOM	International Organization for Migration
STI	Sexually Transmitted Infections
MOPH	Ministry of Public Health
KABP	Knowledge Attitude and Behavioural Practices
KOR	Khatiz Organization for Rehabilitation
MSM	Men who have sex with men
MSW	Male sex worker
NACP	National AIDS Control Program
NAMRU-3	Naval Medical Research Unit No. 3
NGO	Non-government Organization
TB	Tuberculosis
PLWHA	People living with HIV and AIDS
VCT	Voluntary Counselling and Testing
UNODC	United Nations Office on Drugs and Crime
UCSD	University of California San Diego
WRAIR	Walter Reed Army Institute of Research
PCO	Public Call Offices
FOM	Frequency of mention
SM	Social mobilizer
UCSD	University of California San Diego
UM	University of Manitoba

## **Table of Contents**

<b>1.</b>	<b>BACKGROUND AND RATIONALE.....</b>	<b>1</b>
<b>2.</b>	<b>PROJECT OBJECTIVES.....</b>	<b>1</b>
<b>3.</b>	<b>SOCIAL CONTEXT OF HIV/AIDS IN AFGHANISTAN .....</b>	<b>1</b>
A.	CONFLICT, MIGRATION, AND DISPLACED PEOPLE .....	2
B.	RELIGIOUS, CULTURAL AND ETHICAL CONTEXT .....	3
C.	EPIDEMIOLOGICAL AND PROGRAM CONTEXT .....	3
<b>4.</b>	<b>PROJECT IMPLEMENTATION .....</b>	<b>4</b>
A.	SCOPING MISSION.....	4
<b>5.</b>	<b>ETHICAL CONSIDERATIONS.....</b>	<b>7</b>
<b>6.</b>	<b>METHODOLOGY.....</b>	<b>8</b>
A.	SOCIAL MAPPING OF KEY POPULATIONS .....	8
B.	REVIEW OF EXISTING INFORMATION AND STAKEHOLDER INVOLVEMENT.....	9
C.	MAP PREPARATION.....	9
D.	METHODS FOR BEHAVIORAL AND BIOLOGICAL SURVEYS .....	12
<b>7.</b>	<b>MAPPING RESULTS .....</b>	<b>13</b>
A.	FEMALE SEX WORKERS.....	13
B.	INJECTING DRUG USERS .....	16
C.	RAPID SOCIO-DEMOGRAPHIC AND BEHAVIORAL ASSESSMENT.....	18
D.	MEN HAVING SEX WITH MEN (MSM).....	18
<b>8.</b>	<b>BEHAVIOURAL AND BIOLOGICAL SURVEYS .....</b>	<b>18</b>
A.	INJECTING DRUG USERS .....	18
B.	FEMALE SEX WORKERS.....	21
<b>9.</b>	<b>HIV PREVALENCE.....</b>	<b>23</b>
<b>10.</b>	<b>SUMMARY AND DISCUSSION .....</b>	<b>23</b>

## **1. BACKGROUND AND RATIONALE**

As yet, little is known about the HIV epidemic status and potential in Afghanistan. The country seems to be at an early epidemic phase with low HIV prevalence, but there are a number of underlying vulnerability factors that could lead to the conditions for epidemic expansion, including drug trafficking, the post-conflict situation with displacement of populations, a fledgling health care system, and a low level of knowledge and awareness about HIV/AIDS. As in other parts of central and south Asia, the most important proximate determinants of the scale and distribution of an HIV epidemic in Afghanistan will be the size and characteristics of high risk networks involving injecting drug users (IDUs), female sex workers (FSWs) and men who have sex with men (MSM) who are at high risk (i.e., have high numbers of sexual partners). Assessments from elsewhere in central Asia indicate an explosive growth in injecting drug use and commercial sex work throughout the region, concurrent epidemics of sexually transmitted infections (STIs), and economic and political migration. As yet, little information is known about the size, distribution, and characteristics of IDU and sex worker sub-populations in Afghanistan. Therefore, the World Bank (WB) agreed with the Ministry of Public Health (MOPH) to contract with the University of Manitoba (UM) to conduct an assessment of these three key, high risk populations in three cities of Afghanistan: Mazār-i-Sharif, Jalalabad, and Kabul.<sup>1</sup>

## **2. PROJECT OBJECTIVES**

The overall objective of the project was to provide accurate information on the size and characteristics of vulnerable groups at high-risk (HRGs) in three urban areas of Afghanistan that could be used for strategy development and program planning. The HRGs were to include FSWs, IDUs, and MSM. Previous experience suggested that in Afghanistan, IDUs comprise the largest, most important, and most vulnerable of these HRGs, so identification and characterization of IDU populations were to receive the most effort and focus, at least initially. The specific objectives of the project were to:

- (a) Estimate the size and distribution of IDUs, FSWs, and high-risk MSM in three Afghan cities. Provisionally, the cities to be included were Kabul, Herat, and Mazār-i-Sharif, subject to confirmation during the Scoping Mission (see below).
- (b) Describe the operational typology and organization structures of HRGs in each location.
- (c) Describe the socio-cultural characteristics of HRG members in all locations.
- (d) Describe the HIV-related knowledge and relevant risk behaviours of HRG members in all locations.
- (e) Assess HIV prevalence and associated socio-cultural and behavioural correlates of HRG members.

## **3. SOCIAL CONTEXT OF HIV/AIDS IN AFGHANISTAN**

The underlying factors leading to sex work and injection drug use in the Afghan context are similar to those found elsewhere: poverty, social disruption, gender roles and expectations, sexual exploitation, and

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<sup>1</sup> This study was part of a multi-country project supported by the Government of the Netherlands through the World Bank–Netherlands Partnership Program.

inadequate social and health services. Afghanistan is one of the poorest countries in the world, with porous borders, extensive internal and external displacement of people, generally low levels of education and literacy, and a limited health and social infrastructure. These factors contribute not only to Afghanistan's vulnerability to HIV, but also present challenges for an effective response.

#### A. CONFLICT, MIGRATION, AND DISPLACED PEOPLE

Over the past few decades, Afghanistan has endured widespread armed conflict resulting in extensive migration and displacement of people, and social and economic upheaval. Since 2002, 1.8 million refugees have returned to Afghanistan, mostly from neighbouring countries. Among this group, 85% of the total number of returnees, 1.54 million people, returned from Pakistan. Another 252,811 people (14% of all returnees) returned from Iran. Of those returning to Afghanistan from Pakistan, 52% (792,046 people) were from the northwest frontier provinces of Pakistan. Of the total number of refugees returning, 651,732 (37%) returned to Kabul province, most to the city of Kabul itself.<sup>2</sup> Herat is the city most affected by returnees from Iran while cities in Khandahar and Helmand provinces are most affected by returnees from Pakistan. According to an International Organization for Migration (IOM) brief, there are currently an estimated 440,000 people displaced by conflict and natural disasters in camps and cities across Afghanistan.<sup>3</sup> Economic seasonal migration is considerable. Migration, particularly if it involves high-risk populations such as IDUs to and from neighbouring countries, has the potential to initiate HIV epidemics in various locales in Afghanistan. Iran, for example, has the highest rate of heroin addiction per capita in the world: 20% of Iranians aged 15 to 60 are involved in illicit drug use, and 9% to 16% inject drugs (the IDU population is estimated to be between 200,000 and over 300,000).<sup>4</sup> HIV prevalence is also high among HRGs in Iranian prisons, estimated at between 5%–20%.<sup>5</sup> About 25% of registered tuberculosis (TB) patients in prisons are HIV positive.<sup>6</sup> Recent surveys in several cities of Pakistan have confirmed substantial epidemics of HIV among IDUs.<sup>7</sup>

Years of armed conflict and associated societal changes also appear to have profoundly affected commercial sex in Afghanistan. Historically, in the pre-war years, there are estimates of more than 300 hot spots for commercial sex in Kabul and a thriving “red light” district. Following the withdrawal of Russian forces in 1989, Afghanistan fell into a state of civil strife leading to virtual disintegration among warlord fiefdoms with shifting alliances. Large parts of Kabul were destroyed and much of the population displaced. Southern Afghanistan particularly was greatly affected, with tribal structures at war with each other. The resulting social upheaval and family breakdown rendered many youths vulnerable to economic and sexual exploitation. The rise of the Taliban, with its allegiance to a strict Islamic code of conduct, greatly altered the social landscape. Local experience suggests that commercial sex activity was much dispersed under Taliban rule, and many sex workers fled to Pakistan and Iran. More recently, the deployment of thousands of international troops, the resurgence of economic development activities, and

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<sup>2</sup> UNODC. July 2003. “Afghanistan, Community drug profile #5: an assessment of problem drug use in Kabul city.”

<sup>3</sup> IOM. 2004. “Press Briefing notes 9 July 02” Available online at <http://www.reliefweb.int>.

<sup>4</sup> Razzaghi E, Movaghgar A, Green TC, Khoshnood K. 2006. “Profiles of risk: a qualitative study of injecting drug users in Tehran, Iran.” *Harm Reduct J*, Vol. 3, No. 12, doi:10.1186/1477-7517-3-12.

<sup>5</sup> Nassirimanesh B. 2002. “Drug use and related arms since the Islamic revolution.” Proceedings of the 4<sup>th</sup> National Harm Reduction Conference, Seattle, Washington; Rowhani-Rabbar, et al. 2004. “Prevalence of common blood borne infections among imprisoned IDUs in Mashad, Northeast Iran.” *Arch Iran Med*, Vol. 7:190-4; Dolan K., et al. 2007. “IV in prison in low-income and middle-income countries.” *Lancet Inf Dis*, Vol. 7:32-41.

<sup>6</sup> Parviz A, DG Health Office, Iranian Prison Organization. October 20, 2005. Presentation given in Geneva.

<sup>7</sup> National AIDS Control Programme of Pakistan. 2005. “HIV Second Generation Surveillance in Pakistan: National Report – Round 1”.



increasing modernization have likely further changed social and economic structures that influence commercial sex and injecting drug networks.

## **B. RELIGIOUS, CULTURAL AND ETHICAL CONTEXT**

Cultural and religious issues are very complex and important in Afghan society and greatly influence the ways in which commercial sex, IDU, and MSM networks are organized. The strong religious and cultural proscriptions against sexual relations outside of marriage and the use of illicit drugs likely constrains the size of FSW, MSM and IDU sub-populations, but also forces those who engage in these behaviours to remain hidden and to avoid programs and services to reduce their HIV risk. Moreover, persons living with HIV and AIDS (PLWHAs) are inclined to avoid detection by their families, friends, and health care providers.

Arrested FSWs and men accused of homosexual acts are incarcerated, but the number of such incarcerations has been low. Recent information suggests that there are some 126 female prisoners in Kabul prison, of who 60-70 were arrested for sex work.<sup>8</sup>

The level of secrecy among IDUs appears to be lower than for FSWs and MSM. As a result, in a number of locations, non-governmental organizations (NGOs) have had success in reaching IDU networks to provide health and social services.

## **C. EPIDEMIOLOGICAL AND PROGRAM CONTEXT**

Voluntary counselling and testing (VCT) centres with HIV, hepatitis C virus (HCV), hepatitis B virus (HBV), and syphilis testing capabilities are under development in the cities of Kabul, Herat, Mazār-i-Sharif, and Jalalabad. A 2006 study from the Kabul VCT found an HIV prevalence of 3% among 464 male IDUs. Further indications of the existence of high-risk IDU networks include relatively high prevalence levels of HCV (36.6%), HBV (6.5%), and syphilis (2.2%).<sup>9</sup> In this sample, high-risk behaviours were common: 50% had ever shared syringes; 76% had ever paid for sex with a woman; 28% of males had ever had sex with other males; 23% had received “therapeutic injections” in the last 6 months; 5% had ever been paid for donating blood; 57% had ever been in prison; and 17% reported having been injected in prison. Genomic analysis of HIV strains found the same genome sequences previously identified among IDUs in Iran where HIV prevalence is known to be much higher than Afghanistan.<sup>10</sup> The United Nations Office on Drugs and Crime (UNODC) has completed a nationwide survey in Afghanistan of 1,480 key informants and 1,393 drug users from which they estimate that there are 50,000 narcotic addicts in the country, of whom 7,000 inject. They also estimate that a large number of people are injecting over-the-counter pharmaceuticals (e.g., pentazocine), which suggests there may be as many as 19,000 IDUs in Afghanistan at risk for HIV/AIDS. However, no data on HIV-related risk behaviours other than needle sharing was collected in this survey.

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<sup>8</sup> General Abdul Salam Bakhshi, General President of Prisons and Detention. May 2006. Personal Communication. Ministry of Justice, Kabul.

<sup>9</sup> Todd C, Abed AS, Strathdee SA, Botros BA, Safi N, Earhart KC. 2007. “HIV, hepatitis C, and hepatitis B infections and associated risk behaviour in IDUs in Kabul, Afghanistan.” *Emerg Infect Dis*, E-pub ahead of press.

<sup>10</sup> Sanders-Buell E, Saad MD, Abed AM, Bose M, Todd CS, Strathdee SA, Botros BA, Safi N, Earhart KC, Scott PT, Michael N, McCutchan FE. 2007. “A nascent HIV type 1 epidemic among injecting drug users in Kabul, Afghanistan is dominated by complex AD recombinant strain, CRF35\_AD.” *AIDS Res Hum Retrov*, Vol. 23: 834-9.

Funded by Trócaire, ActionAid recently conducted a survey of vulnerable populations in the provinces of Kabul, Kandahar, Herat, and Mazār-i-Sharif. A sample of 2,345 individuals was studied, representing 6 population groups: IDUs, truck drivers, FSWs, returnees, university students, and health professionals. Data are currently being analysed and a report from this study is not yet available.

To the extent that HIV is emerging in Afghanistan, it is likely at an early phase. The prevalence of HIV appears to remain low in the general population. A 2006-2007 survey of 4,452 pregnant women admitted at 3 Kabul hospitals for obstetric indications found no cases of HIV or syphilis. HBV prevalence was 1.5% and HCV prevalence was 0.3%.<sup>11</sup>

Program and research capacity in the field of HIV are developing but very limited in Afghanistan. University research capacity in the social sciences and public health sectors are very limited and NGO research capacity is also limited. The Afghanistan Research and Evaluation Unit (AREU) has substantial experience in operational and social research, but has limited experience in working with vulnerable groups at high risk groups such as FSWs and their clients and IDUs and their partners.

## 4. PROJECT IMPLEMENTATION

In accordance with the objectives described above, the project had three components:

- (a) **Social Mapping** of high-risk networks (FSW, IDU, and MSM) in three cities to estimate their size and describe their geographic distribution and operational characteristics.
- (b) **Field Survey** of high-risk groups to describe their social and behavioural characteristics.
- (c) **Biological Survey** to estimate the prevalence of HIV in these three high-risk groups.

Initially, these components were planned to be implemented in an integrated fashion. However, during the preparation of the project implementation plans it became apparent that the Ministry of Public Health had already agreed to a separate project comprising behavioural and biological surveys with these sub-populations in several cities. Therefore, as described below, the final project implementation plan was drawn up to have these projects complement each other, with the mapping study to be conducted by the University of Manitoba (UM) and its partners. The results of the mapping study would then form the basis for a sampling strategy for the surveys planned by the University of California San Diego (UCSD) and partners. This report presents results from these complementary activities.

### A. SCOPING MISSION

From April 22 to May 6, 2006, the UM research team undertook a scoping mission to Afghanistan to meet and assess capacity in potential partners and to revise methodology and timelines in light of challenges and constraints in the Afghan context. Meetings were held with officials of the MOPH and its offices, international donors and agencies, and NGOs related to HIV/AIDS in Afghanistan, including three group sessions at which the proposed UM research plan was presented for purposes of introducing

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<sup>11</sup> Todd CS, Ahmadzai , Atiqzai F, Siddiqui H, Azfar P, Miller S, Smith JM, Ghazanfar S, Strathdee S. August 7, 2007. "Seroprevalence and correlates of HIV, syphilis, and hepatitis B and C infection among antenatal patients, and testing practices and knowledge among obstetric care providers in Kabul." Presentation to MOPH, Government of Afghanistan.

the methods, and to facilitate discussion, feedback, and suggestions. Visits to NGO offices and relevant health institutions in Kabul were arranged that included brief field visits accompanied by NGO outreach staff to sites of known HIV high-risk group activities.

From April 27 to April 30, the team visited Mazār-i-Sharif, coordinated by the MOPH and the National AIDS Control Program (NACP) focal point officer and the Mazār-i-Sharif office of ActionAid, to scope out the feasibility of HIV social research in a second city according to the proposed project plans.

### City Selection

Based on the availability of time and resources, it was decided that three cities should be mapped. Kabul was selected because it is the capital and largest city. Considering the significant social and cultural differences in different regions, it was decided to select one city from northern Afghanistan (Mazār-i-Sharif), and one from either southern or eastern Afghanistan. Security concerns in southern Afghanistan were a major constraint, so the third city selected was Jalalabad in eastern Afghanistan (see map).



### Complementary Projects

As mentioned in the previous section, during the scoping mission, the UM team became aware of a project sanctioned by the MOPH and being implemented by a research consortium comprising the Walter Reed Army Institute of Research (WRAIR), Maryland; U. S. Naval Medical Research Unit No. 3 (NAMRU-3), Cairo; and the Division of International Health and Cross-Cultural Medicine, UCSD to conduct “Blood-borne disease surveillance to determine the prevalence of HIV, syphilis, and hepatitis B

and C in the IDU and commercial sex worker (CSW) populations of four provinces (Herāt, Jalalabad, Kabul and Mazār-i-Sharif). The purpose of the WRAIR/NAMRU/UCSD study was to conduct behavioural and biological surveillance for HIV and other blood-borne diseases on FSWs and IDUs in Kabul, Mazār-i-Sharif, Herāt and Jalalabad over a period of 18 months in 2006-2007. Sampling was based primarily on the VCT centres that are under development by the MOPH. At the time of project inception, the only operational VCT centre was in Kabul, but VCT centres opened in Mazār-i-Sharif and Jalalabad in 2007. Sampling was to be supplemented by outreach from NGOs in each city that have established connections with vulnerable communities.

To avoid duplication of efforts and to promote complementary activities, discussions were held between the UM research team and the WRAIR/NAMRU/UCSD group, and subsequently with the MOPH and the WB, to harmonize objectives and research plans. As a result of these discussions, it was agreed by all parties that the UM research would have as the primary objective the social and geographical mapping of high-risk groups in three of the four cities. This would not only provide information on the size and distribution of high-risk groups in those districts, but would also provide a sampling strategy for the behavioural and biological surveys to improve the representativeness of the survey sample.

The WB requested formal collaboration of the two projects so that HIV seroprevalence and behavioural data could be analyzed along with the social mapping data to provide a more comprehensive assessment of the key high-risk populations in these cities. Accordingly, a Memorandum of Understanding was developed to document the process and confirm these agreements (See attached “University of Manitoba/WRAIR Cooperative Research and Development Agreement for Material Transfer” under Appendices).

### ***Government and Civil Society Support***

Strong support for the UM project was expressed at all levels of the MOPH, including the Minister’s office, the Directorate of Policy and Planning (including the Research Ethics Board), and the NACP. Dr. Sajid, Surveillance Office, NACP was assigned responsibility as the focal point for the UM study. Other government ministries and agencies, including those associated with the legal system, were also supportive of the project and volunteered to assist with identifying and accessing high-risk communities.

Identification of CSW networks and network managers requires building collective trust among community leaders such as *wakil-e-guzars* (WG) and mullahs. A WG is a local village or neighbourhood leader who would have detailed knowledge of high-risk activities in his neighbourhood, but may be reluctant to reveal this information because of the shame attached. A social worker from the Kabul-based Afghan NGO KOR reported that when she approached 15 WGs, only two were willing to provide her with information about high-risk activities. However, it was noted that WGs may be willing to share this information more openly in a focus group with their peers because their own neighbourhoods would not be targeted, and some may be willing to function as peer researchers and help to convince other WGs to share information.

Mullahs are also sensitive to revealing information about high-risk activities in the areas around their mosques, but there have been a number of initiatives designed to sensitize mullahs to the risks of HIV/AIDS, and indications are that they will be more cooperative with MOPH-supported projects. Two annual three-day conferences have been held with representatives of religious leaders from the entire country to discuss risk behaviours related to HIV/AIDS. Several mullahs have also participated in

educational workshops convened by ActionAid regarding the public health aspects of HIV/AIDS. The response to these initiatives has been quite positive, and many of the mullahs promised to pass on the information to their communities.<sup>12</sup>

### ***Research Team***

The UM Afghan research team was led by Dr. John Foran, an HIV/AIDS Consultant with ActionAid based in Kabul, and Dr. Abdul Rasheed, with Dr. Seddiq Weera as Project Manager (until December 2006), also based in Kabul. They were supported by Drs. Robert Chase, John O'Neil, James Blanchard, and Stephen Moses of UM. Dr. Faran Emmanuel of the Pakistan-based HIV/AIDS Surveillance Project was a project consultant. A core staff of three male and two female researchers were recruited in Kabul as master trainers. The majority of these had research experience in a 2005 HIV/AIDS Knowledge Attitude and Behavioural Practices (KABP) study. In Kabul, additional staff was recruited through the cooperation of the NGOs ORA International, Nejat, Zendagi Naween, Médecins du Monde, and KOR. These organizations were already working with FSWs and IDUs. In Mazār-i-Sharif and Jalalabad, where no NGOs are working with FSWs or IDUs, additional staff were recruited locally, which included health care workers and teachers experienced in community outreach.

## **5. ETHICAL CONSIDERATIONS**

Ethical review and approval for this project was provided by UM's Health Research Ethics Board and by the MOPH Ethical Review Board (ERB). On September 18, 2006, an ERB meeting was convened for the UM project coordinator to present measures to be taken to avoid or minimize the likelihood of security or ethical risks. ERB approved the research protocol but requested biweekly reports as fieldwork proceeded. Several issues were raised in the ethical review that were taken into account during the research process.

- (a) **Safety of researchers:** A meeting was held with the chief of police in each city before the project started to inform that official of the nature and the purpose of the survey so that any queries from the local police during the project could be addressed.
- (b) **Safety of Key Informants (KI):** Due to the vulnerability of the target groups, no KI information was collected from police or WGs (local business leaders). FSWs were interviewed at private, mutually agreed upon locations (not at locations of high-risk activity).
- (c) **Anonymity and confidentiality:** For all paper and computer records, codes were used to conceal Social Mobilizer (SM), KI, and researcher identity. Information and research materials were kept locked and protected from law enforcement agencies. Use of data for WB, NACP, and MOPH activities will not lead to disclosure of personal identity or identification of specific locations that could lead to security or safety concerns.
- (d) On May 12, 2007, the ERB secretary outlined an approval process for research reports and publications entering the public domain, which calls for stepwise approval by: 1) the ERB; 2) a policy committee under the MOPH General Director of Policy and Planning; and 3) an Executive Committee under the MOPH Minister.

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<sup>12</sup> Dr. John Foran, ActionAid. 2007. Personal communication.

## 6. METHODOLOGY

### A. SOCIAL MAPPING OF KEY POPULATIONS

The study adopted a “geographical approach” in which “risk activities” are defined clearly, and then locations/spots where these activities take place are identified and profiled. The profiling provides estimates and basic operational details of participants. This approach is different from conventional mapping (which counts pre-defined risk groups) since it is able to simultaneously identify all those engaged in high-risk activities (HRA) at a location irrespective of occupational group. Data collection was through interviews with primary, secondary, and tertiary key informants. Primary key informants are those engaged directly in HRA, (e.g., FSWs); secondary key informants are those closely associated with primary informants (e.g., pimps); and tertiary key informants are those who know about HRA and are usually involved with the secondary stakeholders, or working for (or against) the interests of the primary stakeholders (e.g., NGOs, police).

For more detailed information on methodologies for mapping HRA, see: Swasti Health Resource Center. September 2004. “Mapping High-Risk Activities in Karnataka, State Report.” Bangalore, India.

In each city, data collection occurred in two stages. During the first stage (Level 1 or L1), interviews primarily with tertiary and secondary informants identified locales where HRA takes place. Typically, interviews were conducted with a cross-section of stakeholders who were likely to have this information. This information was tabulated, grouped into broad locations (contiguous areas), and spots (specific, identifiable addresses within locations). At the second stage (Level 2, L2), the spots identified in Level 1 interviews were profiled by conducting interviews with primary KIs at those locations. Spot/location profiling included estimating the number of participants at the spot, their typologies, type of risk, network operators, and so forth. Through a process of snowballing and triangulation, all the spots in the city with substantial HRA are identified and profiled. For the purpose of this study, the following were included as HRAs:

- (a) Injecting drugs for non-medical purposes by IDUs;
- (b) Transactional sex (commercial sex) with the receipt of money/goods/services in exchange for sex by FSWs or male sex workers (MSWs); and
- (c) Sexual partnering between men (MSM).

#### ***Mapping Implementation***

Mapping implementation for HIV high-risk groups (HRGs) involved the following steps:

- (a) Pre-mapping exercises;
- (b) Level 1: identifying places (locations and spots) through KIs;
- (c) Collation of Level 1 data, and data analysis;
- (d) Level 2: validating of information through primary KIs (FSWs, IDUs); and

#### **Objectives of Mapping:**

- To identify locations where key populations engaging in HRA operate and can be reached.**
- To gather basic information on the organization of HRA.**
- To generate estimates of the number of participants in HRA.**
- To prepare a list of contacts that can lead to access to participants in HRA.**

- (e) Compilation of results and data analysis.

### ***Pre-mapping***

This step is the “planning phase” of the mapping exercise and involves a number of activities organized and executed before the fieldwork commences.

## **B. REVIEW OF EXISTING INFORMATION AND STAKEHOLDER INVOLVEMENT**

Existing literature and secondary data were collated and analyzed to provide insights into the variables under study. In the three cities, where possible, key knowledgeable persons and local organizations were consulted concerning HRGs in the target areas. The April 2006 scoping mission and subsequent discussions sought consultation and advice of officials in UNODC, MOPH, and the NACP in particular. In Kabul, consultations with NGOs working with FSWs included ORA International; and with IDUs, Nejat, Zendagi Naween, Médecins du Monde, and KOR. There was no NGO presence in Mazār-i-Sharif or Jalalabad directly involved with IDUs and FSWs. Some local orientation was provided by ActionAid (Mazār-i-Sharif) and ORA (Kabul) offices. The key resource person in Mazār-i-Sharif was Dr. Asad Sharifi, Communicable Disease Officer for Balkh Provincial Hospital who had extensive familiarity with FSWs and IDUs through several years of clinical work. In Jalalabad, the provincial Communicable Disease Officer Dr. Laiquillah assisted but the project was limited by the much greater social and security restrictions in the town.

## **C. MAP PREPARATION**

Cities were divided into geographically smaller data collection units called zones. In the Afghan study, municipal districts were used as study zones: Mazār-i-Sharif (population 300,600) has 10 districts; Jalalabad (population 168,600) has 5 districts; Kabul (population 2,536,300) has 18 districts.<sup>13</sup> Recent government maps were acquired from Afghanistan Information Management Services (AIMS) which were then enhanced by adding location details of the following secondary KIs: taxi stands, women physicians, and beauty parlours. Notable landmarks, government offices, hospitals, schools, mosques, and other reference points were identified to enable interview teams to orient verbal descriptions of identified spots of HRA. In many cases, HRA spots and buildings had no formal or unique address.

### ***Staff Training***

The master trainers attended a three-day workshop in “Training in Mapping Techniques” in Lahore, Pakistan, from August 2-5, 2006, with the UM Project Support Officer Robert Chase. The training workshop was conducted by the HIV/AIDS Surveillance Project (HASP), a second generation surveillance project in Pakistan funded by the Canadian International Development Agency. In each city, nine additional researchers were trained by UM Project Director John Foran and the Afghan master trainers. A 32-page training manual was prepared from materials from the Pakistan HASP training workshop, revised for the Afghanistan mapping project. The five-day training course materials included: HIV/AIDS history; spread and pathology; specific risk factors for Afghanistan; sensitization on religious, cultural, and interpersonal issues; ethics, confidentiality, informed consent; mapping methodology; preparing city maps for recording spots; security and communication; and interview techniques and practical role play for interviewing. Interviewing skills training was particularly emphasized, involving three of the five days.

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<sup>13</sup> Central Statistics Office. 2006. Afghanistan (Web site: [www.cso.gov.af.org](http://www.cso.gov.af.org)).

### ***Definition of Study Key Informants***

The detailed assessment of the location and extent of HRA involves acquiring information by interview from various KIs, classified as:

- (a) **Primary:** members of HRGs directly participating in HRA: e.g., FSWs, IDUs, and MSM;
- (b) **Secondary:** those who are involved in the network of HRA, and intimately acquainted with local knowledge about persons engaged in HRA. Secondary KIs for IDUs included: taxi drivers, barbers, pharmacists, hotel owners, male tailors, property dealers, public call offices (PCOs), shopkeepers, and palmists. For FSWs, secondary KIs included: beauty parlour staff, female doctors, female bath house attendants, beggars, palmists, female tailors, and midwives; and
- (c) **Tertiary:** those who are professionally knowledgeable about HRG and HRA: e.g., government officials, agencies, and NGOs. In particular, the study relied on the cooperation of local provincial MOPH staff in the Department of Infectious Diseases in Mazār-i-Sharif, Jalalabad, and Kabul.

### ***Level 1 Mapping: Identifying Sites of High-Risk Activity (HRA)***

In Level 1 mapping, researchers collect information from tertiary and secondary KIs in each zone to generate a list of spots where HRA could be found, with associated maximum and minimum estimates of the numbers of HRG members at each spot.

Six pairs of interviewers, three male and three female, were formed. Male interviewers interviewed the male KIs regarding FSWs, IDUs, and MSM. The female interviewers interviewed female KIs regarding FSWs. One male and one female team were assigned to a zone for an average of three days to interview identified secondary KI. The Level 1 interviews began as a casual conversation with the secondary KI to build rapport and later to discretely gather information on places where HRA take place. Verbal consent was obtained from the secondary KIs during the interviews and the consent forms were filled in after the interviews.

Secondary KIs included a broad range of individuals. For example, in 18 districts of Kabul, 518 secondary KI interviews occurred with beauty parlour operators (52%); taxi drivers (29%); shopkeepers (5%); phone call operators (4%); female bath house attendants (3%); midwives (3%); palmists (2%); pharmacists (0.6 %); and (less than 1% each) female tailors, barbers, music shop owners, property dealers, and beggars. Where time allowed, snowball sampling methods were followed.

Across the three cities mapped, Level 1 interview teams spent approximately three days in each zone (four days in the second phase of Kabul), collecting secondary KI information. However, by adopting the municipal districts as the mapping zones, the Kabul zones were considerably larger than the other cities' zones (see Table 1):



**Table 1:** Basic Work Schedule of Mapping Field Teams in Three Cities of Afghanistan

City	Estimated Population	Number of Mapping Zones	Average Population Per Zone	Average Days of L1 Interviews Per Zone	Average Population Covered by L1 Interviews Per Day
Mazār-i-Sharif	300,600	10	30,060	3	10,020
Jalalabad	168,600	5	33,720	3	11,240
Kabul	2,536,300	18	140,905	3.5	40,258

Less intensive L1 interviewing could have affected the comparative estimates of the number of spots and the overall relative size of the key populations in these three cities. In addition, the time spent in Kabul was proportionately not as long as time spent in the other cities.

***Collation of Level 1 Data, Analysis, and Identification of HRA Spots***

Level 1 KI interviews produced a list of the names and locations of the hot spots encoded by zone, researcher, and type of KI. Tables generated from the list indicated the estimated maximum, minimum, and mean number of IDUs or FSWs mentioned at each spot, and whether the HRA was street-based (in a public place or mobile) or home-based (indoors at a specific residence) (See Appendices). The team then discussed these results and reached consensus on the identified spot locations and these were marked on a map. At the end of Level 1 data collation, the map of the zone included all data from secondary informants about HRA spots, using different colours for each HRG. Then a master list of all spots was assembled, ranked by “frequency of mention” (FOM) and volume of HRA. This master list usually formed the basis for selection of places to visit for Level 2 interviews (See Appendices). However, in all three Afghan cities, all spots mentioned by KIs were assessed by Level 2 interviews.

***Level 2 Mapping: Validation of HRA Sites and HRG Estimates***

For Level 2 mapping, field research teams were reconfigured to validate the spots listed. Conventionally, validation is through direct interview of a primary KI at the spot. Further information sought included:

- (a) The typology and estimate of participants in HRAs at that spot;
- (b) Activities at the hot spot, such as seeking risk (looking for partners or drugs) or taking risk (place where sexual acts or injecting drugs occurs);
- (c) Number of full-time and part-time sex workers; and
- (d) Information about network operators, STI service providers, health services, and factors that cause fluctuations in the numbers of participants at the hotspot.

To assist Level 2 fieldworkers to contact HRG members, social mobilizers (SM) were engaged. SMs are persons associated with and trusted by IDUs, MSMs, or FSWs, typically those who are currently or formerly members of these key population groups. The FSW SMs were older or former FSWs, some of whom function as network operators to facilitate sex work arrangements. The objectives of the research were explained to each SM, whose consent to participate was obtained. Where the SM’s knowledge was limited to part of the city, they were asked to introduce to the team another SM who could better cover the remaining areas.

Some methodological modifications were necessary to ensure the security of fieldworkers and members of HRGs, and to accommodate cultural barriers that inhibit the direct approach to FSWs at a spot of HRA.

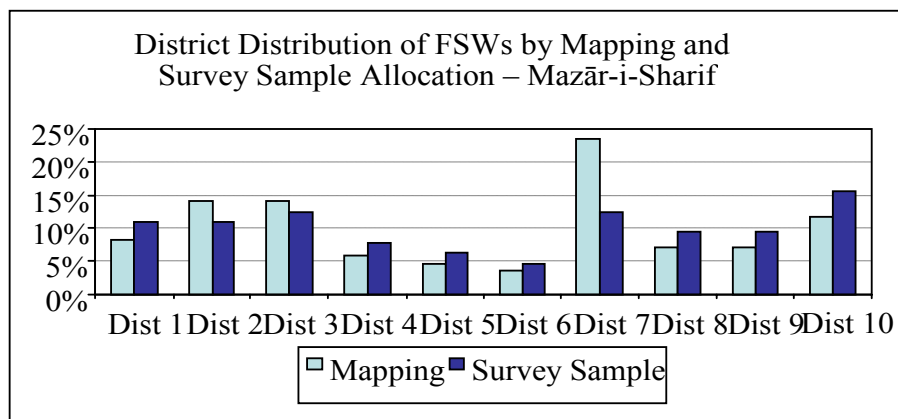
First, where possible, the SMs were asked to generate their own list of HRA spots separately, which were compared to the Level 1 mapping list as a validation exercise. Second, the SMs for either IDUs or FSWs accompanied the male or female researcher pair by car to drive by the Level 1 spots to confirm whether the spot was a site of HRA. The SM provided an independent estimate of the number of HRG individuals and whether activities were home-based or street-based.

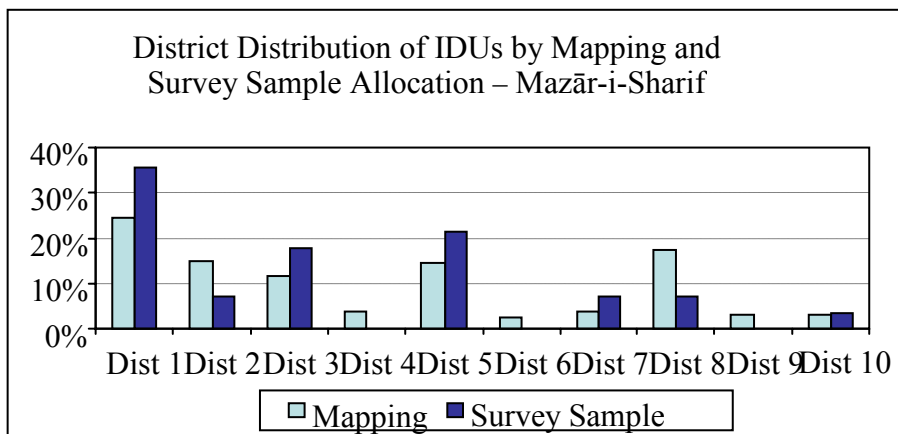
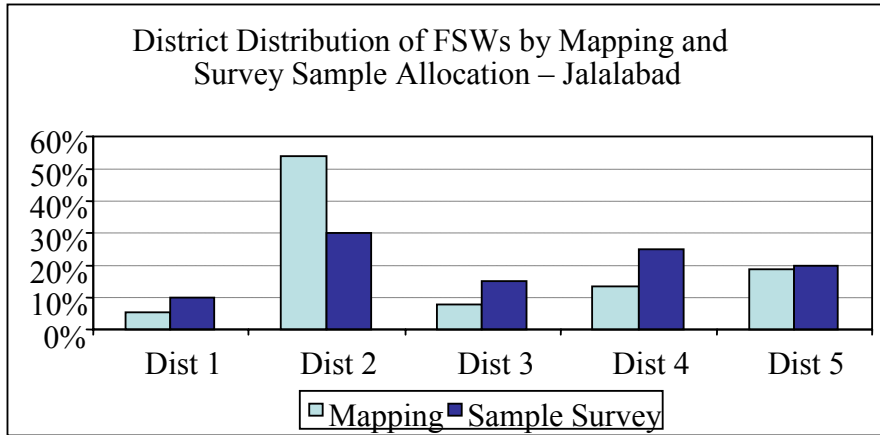
The Level 2 validation of IDU spots of HRA was comparable to those used in other international mapping projects (i.e., UM projects in Pakistan and India), whereby the IDU SM accompanied researchers directly to the spots for interviews with a primary KI. However, for FSWs, no direct interviews occurred except in Mazār-i-Sharif, where discrete and confidential interviews with FSWs were convened at the provincial hospital’s communicable disease clinic. This change in methodology was required to ensure the safety of FSWs.

Data from Level 2 KI interviews were entered on Excel spreadsheets listing identified validated spots in each city, with associated estimates of HRG individuals (maximum, minimum, and average), and whether home- or street-based. The average estimate from Level 2 interviews was taken as the best estimate of the population size at each spot, and these were summed to provide estimates for each district and city.

#### D. METHODS FOR BEHAVIORAL AND BIOLOGICAL SURVEYS

As described above, the behavioural and biological surveys of the high-risk key populations were conducted by a joint research team led by the University of California San Diego (UCSD). These surveys had been previously carried out in Kabul, so this study included only samples from Mazār-i-Sharif and Jalalabad. The surveys involved face-to-face interviews to collect information on socio-demographic characteristics and behaviours. Blood samples were drawn for testing for HIV, HCV, HBV, and syphilis. All interviews and blood sample collection were conducted at VCT centres, after informed consent was obtained from participants. To achieve a relatively representative sample of each high-risk key population (i.e., IDU, FSW), the district-wide distribution of each of these groups based on the mapping study was provided to the outreach teams for the behavioural and biological surveys. Using these distributions as a guide, the outreach teams mobilized participants from the cities’ districts with the objective of achieving a sample that had a similar geographic distribution as the mapping results. The following figures show the proportionate geographic distribution of FSWs and IDUs based on the mapping and the behavioural and biological surveys in Mazār-i-Sharif and Jalalabad. These figures illustrate that the sampling strategy generally followed the geographic distribution suggested by the mapping.





## 7. MAPPING RESULTS

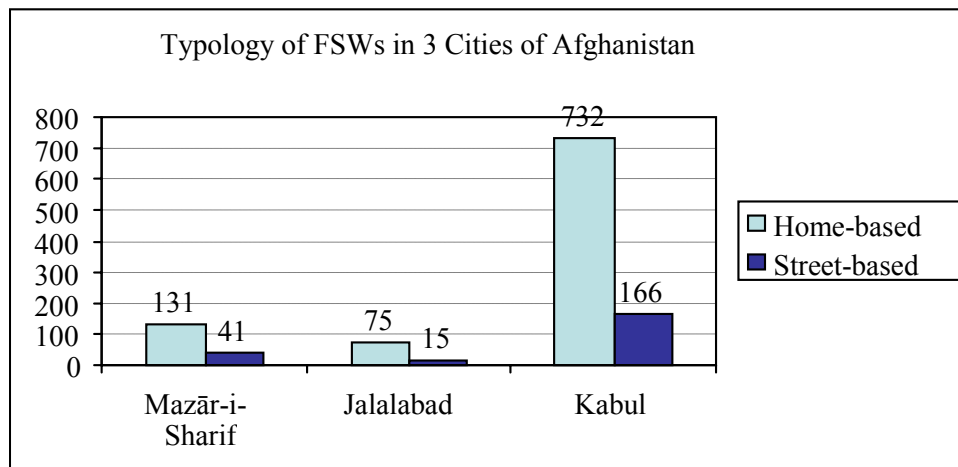
### A. FEMALE SEX WORKERS

Overall, there were an estimated 1,160 FSWs across the three cities, with the largest absolute number (898) being in Kabul (see Table 2). However, the highest numbers of FSWs per capita were in Mazār-i-Sharif with approximately 2.8 FSWs per 1,000 adult women (aged 15-49). Overall, there were an estimated 1.9 FSWs per 1,000 women across all three cities. This per capita FSW population size is at the low end of regional estimates, which generally range from 5 to 15 FSWs per 1,000 adult women.

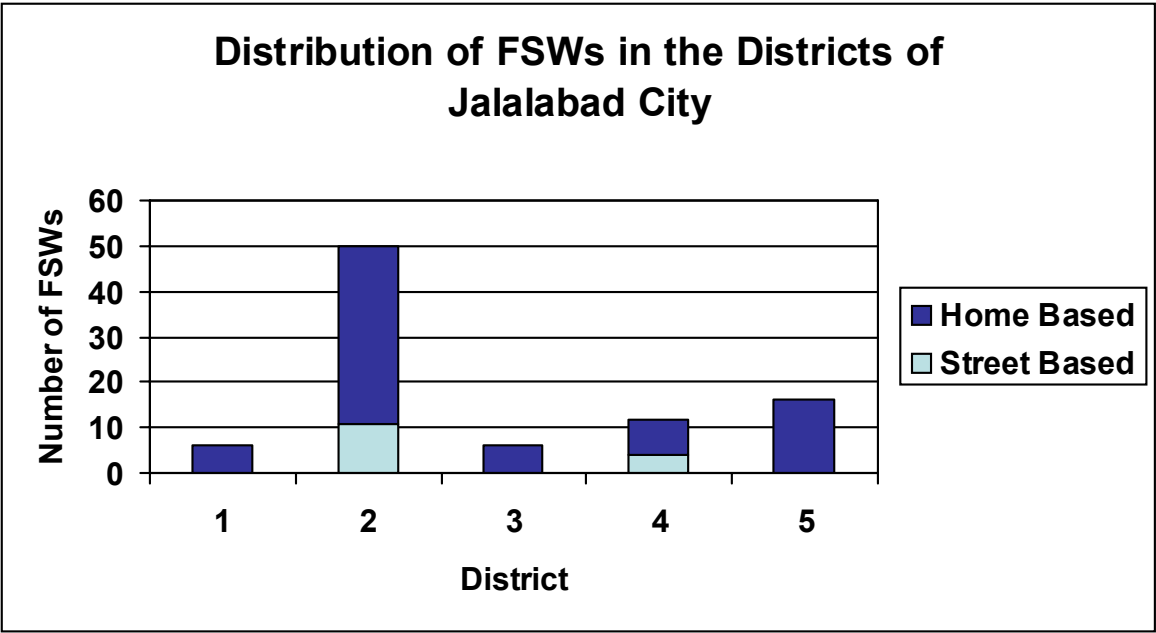
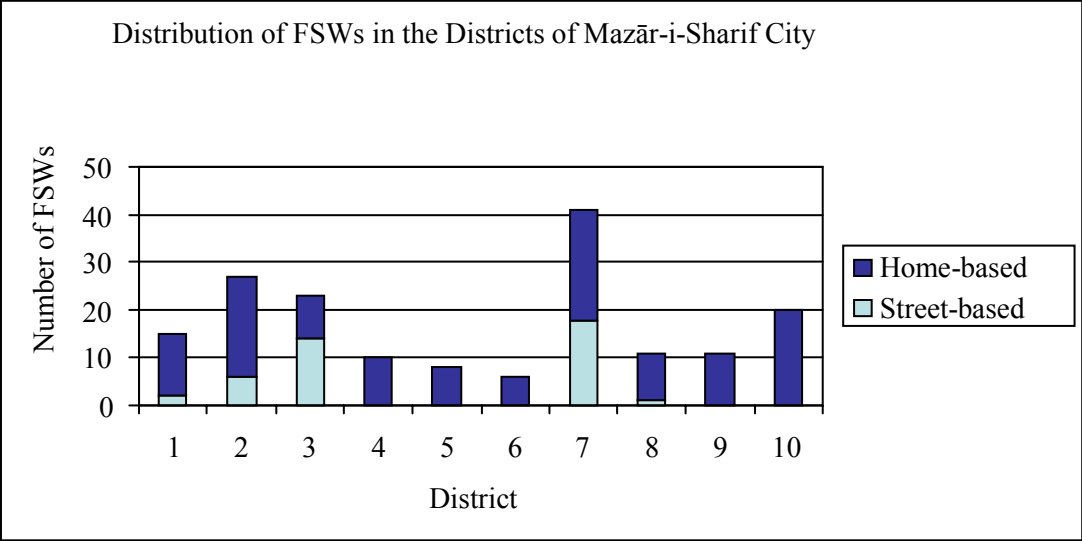
**Table 2.** Estimated Population Size of FSWs in 3 cities of Afghanistan, 2006-2007

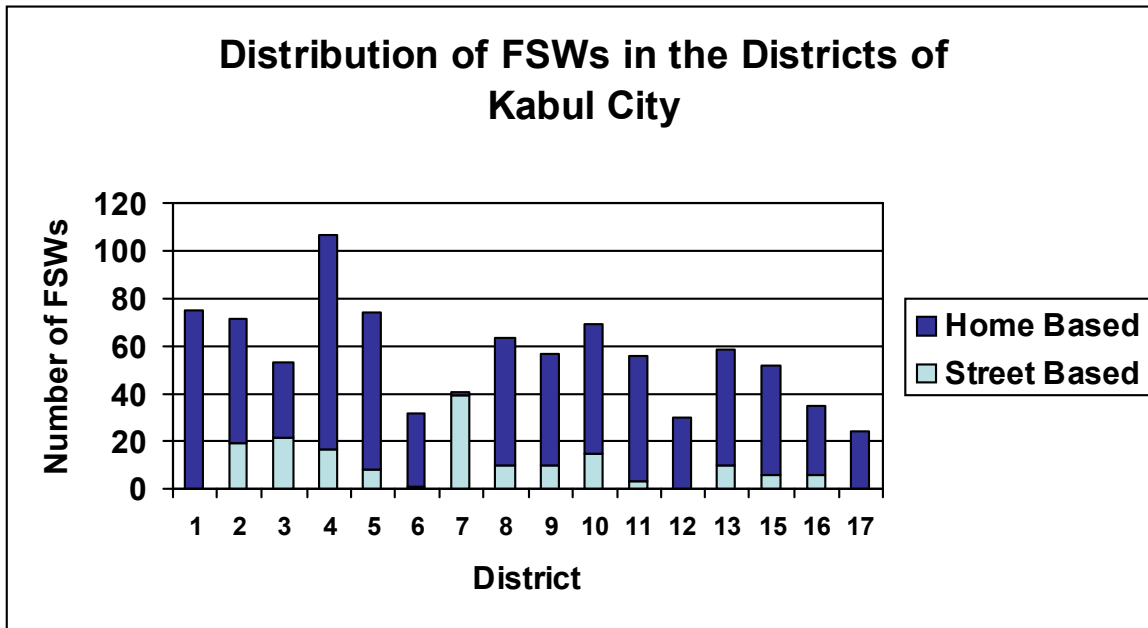
City	Estimated number of FSWs	FSWs per 1,000 adult women
Mazār-i-Sharif	172	2.76
Jalalabad	90	2.57
Kabul	898	1.71
Total	1,160	1.86

The large majority of FSWs in all three cities were home-based, comprising approximately 91% of the mapped FSWs overall (see figure below).



In all of the cities, FSWs were present in all zones or districts. However, home-based sex work was more widely distributed than street-based sex work, particularly in Mazār-i-Sharif and Jalalabad where street-based sex workers were only found in 4 of 10 and 2 of 5 districts, respectively. Street-based sex workers were more geographically widespread in Kabul.





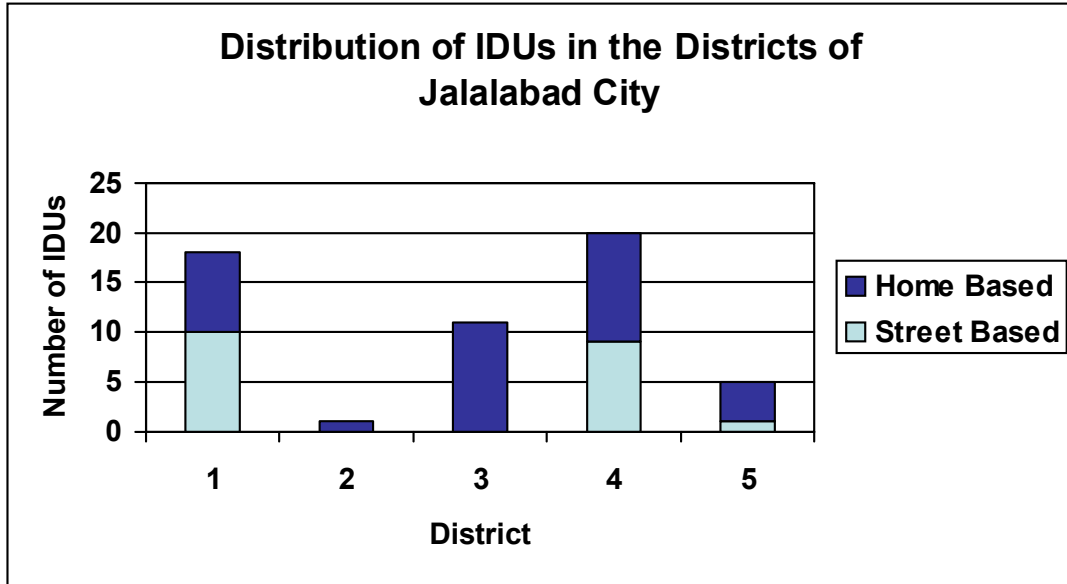
### B. INJECTING DRUG USERS

Overall, a total of 1,350 active IDUs were mapped in the three cities, with the large majority of those (1,136) being from Kabul (See Table 3). The estimated number of IDUs per capita ranged from approximately 1.5 IDUs per 1,000 adult men (aged 15-49) in Jalalabad to 2.4 per 1,000 in Mazār-i-Sharif, with the estimate for Kabul falling between the other two cities. Overall, the mapping estimated that approximately 2 out of every 1,000 urban adult men were identifiable IDUs.

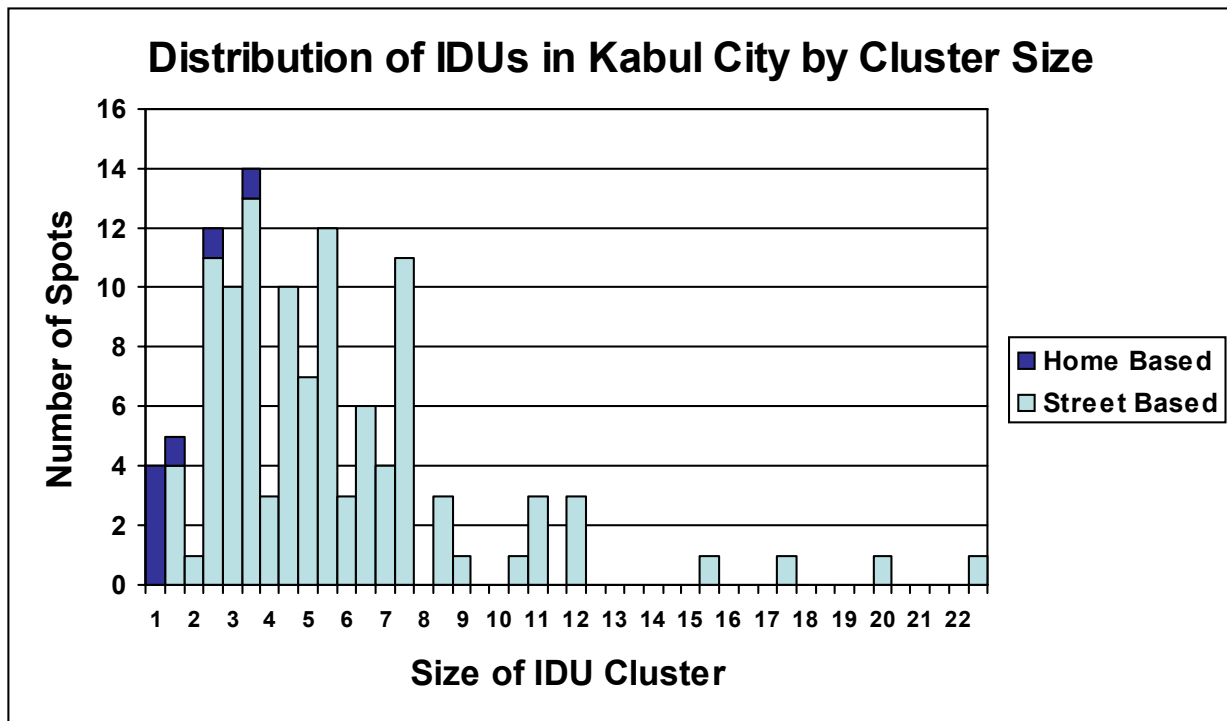
**Table 3.** Estimated Population Size of IDUs in 3 Cities of Afghanistan, 2006-2007

City	Estimated number of IDUs	IDUs per 1,000 adult men
Mazār-i-Sharif	159	2.43
Jalalabad	55	1.50
Kabul	1,251	2.27
<b>Total</b>	<b>1,465</b>	<b>2.24</b>

The following figures show the geographic distribution of IDUs within the three cities. Like the FSW populations, the IDUs were clustered in certain city zones or districts. However, unlike the FSWs, a very high proportion of IDUs (approximately 97%) were street-based, except in Jalalabad.



Another important finding of the IDU mapping was the relatively large number of spots in Kabul that had substantial clusters of IDUs. Overall, there were 117 IDU spots in Kabul, and more than 50% of these had clusters of at least 5 IDUs (see figure below). In contrast, in Mazār-i-Sharif there were a total of 57 IDU spots, and none had a cluster of 5 or more IDUs. Similarly, only one of the 42 clusters in Jalalabad had 5 IDUs.



### **C. RAPID SOCIO-DEMOGRAPHIC AND BEHAVIORAL ASSESSMENT**

As part of the mapping exercise in Mazār-i-Sharif only, 38 brief interviews were held with FSWs (31 home-based and 7 street-based) to characterize the FSW population. Among them, only 5 reported more than 4 clients per day, with the majority reporting that they usually had between 0 and 3 clients a day. On average, FSWs had been engaged in sex work for approximately 2 years.

IDUs were interviewed in Mazār-i-Sharif (58 spots: 9 home, 49 street); Jalalabad (42 spots: 30 home, 12 street), and Kabul (120 spots: 7 home, 113 street). On average, IDUs in Mazār-i-Sharif had been injecting for about 3.5 years, compared to approximately 4.5 years among Jalalabad IDUs. In contrast, approximately 50% of the 120 IDUs interviewed in Kabul had injected for less than 1 year, and the average duration of injection history was approximately 2 years.

### **D. MEN HAVING SEX WITH MEN (MSM)**

MSM activity was rarely identified in Level 1 data gathering. In Mazār-i-Sharif, Level 1 KIs identified 1-2 men active in commercial sex in District 5. In Kabul, Level 1 KIs identified 12-21 men active in commercial sex in three districts. However, since this activity is highly stigmatized in contemporary Afghan society, this likely reflects significant underreporting. In Mazār-i-Sharif, nine MSM primary KIs were interviewed accessed through SM contacts. These informants confirmed that MSM activities are kept secretive amongst small networks. They indicated that risk-seeking behaviour occurred mostly in the homes of clients with a frequency of about 3 clients per day. The primary KIs also reported that 100 or more MSM were selling sex in Mazār-i-Sharif, but the location and size of these networks was not confirmed.

## **8. BEHAVIOURAL AND BIOLOGICAL SURVEYS**

As described above, behavioural and biological surveys of IDUs and FSWs were conducted in two of the mapped cities: Mazār-i-Sharif and Jalalabad. Kabul did not have a separate survey conducted at this time since one was recently conducted there.

### **A. INJECTING DRUG USERS**

A total of 76 IDUs were surveyed in the cities of Mazār-i-Sharif (n=45) and Jalalabad (n=31). The socio-demographic characteristics of the surveyed populations are shown in Table 1. Overall, the Jalalabad IDU sample was younger than that in Mazār-i-Sharif, with an average age of 27.3 versus 29.8, respectively. In the survey, 14% of the Jalalabad IDUs were aged less than 20 compared to 2% of those in Mazār-i-Sharif. Most IDUs in Mazār-i-Sharif were unmarried, whereas most in Jalalabad were married. IDUs in Jalalabad were less educated with 70% reporting no formal education. IDUs in both cities were highly mobile, with almost 80% reporting that they had changed residence at least once. Much of the mobility appears to be related to various conflicts in the recent past. Almost 70% of Mazār-i-Sharif IDUs and 80% of those in Jalalabad had lived outside Afghanistan. Those in Jalalabad were most likely to have lived in Pakistan whereas a high percentage of the Mazār-i-Sharif IDUs had lived in Iran and/or Pakistan. Overall, IDUs had relatively low-income levels, averaging less than 4,500 Afs. (approximately USD \$90 per month).



**Table 1.** Selected Socio-demographic Characteristics of IDUs in Mazār-i-Sharif, and Jalalabad, Afghanistan

	<b>Mazār-i-Sharif (n=45)</b>	<b>Jalalabad (n=31)</b>	<b>Total (n=76)</b>
<b>Current age</b>			
<20 years	2%	14%	7%
20-24 years	36%	32%	34%
25-29 years	20%	13%	17%
30-39 years	29%	36%	32%
40+ years	13%	7%	11%
Mean Age	29.8	27.3	28.8
<b>Marital status</b>			
Unmarried	57%	36%	48%
Married	36%	61%	47%
Separated/divorced	2%	3%	3%
Widowed	2%	0%	3%
<b>Education / Literacy</b>			
No formal education	38%	70%	51%
1-5 years	27%	17%	23%
6-8 years	16%	10%	14%
9-12 years	16%	3%	11%
College graduate	2%	0%	1%
<b>Moved residence</b>			
Never	11%	36%	21%
During Russian invasion	24%	32%	28%
During Najibullah and mujahedin	40%	10%	28%
During Taliban	40%	10%	28%
During U.S. war	2%	0%	1%
<b>Lived or worked outside Afghanistan in the past 10 years</b>	<b>69%</b>	<b>80%</b>	<b>73%</b>
Pakistan	11%	65%	33%
Iran	42%	7%	28%
Pakistan and Iran	16%	7%	12%
Any other countries	6%	0%	4%
<b>Average monthly income (Afs.)</b>	<b>3,603 (\$72)</b>	<b>5,554 (\$110)</b>	<b>4,418 (\$88)</b>

Most of the surveyed IDUs had injected within the previous 6 months, with a high percentage (77%) of the Mazār-i-Sharif IDUs reporting daily injection (see Table 2). In contrast, only 29% of the Jalalabad IDUs reported daily injecting behaviour. The average number of injecting episodes was higher in Mazār-i-Sharif than in Jalalabad. Most Jalalabad IDUs injected in open spaces, whereas those in Mazār-i-Sharif are more likely to inject at home or in other venues. Most IDUs in both cities injected heroin, but the use of other drugs was less common in Mazār-i-Sharif than Jalalabad.

Overall, 75% of IDUs reported ever having sex with a female, and almost 50% had paid a female for sex (see Table 2). Approximately 21% of IDUs reported ever having had sex with another male. However, paying for sex with a female or sex with another man within the past 6 months was reported uncommonly. Condom use appears to be low, with over 80% of IDUs who had paid for sex reporting never using a condom in paid sex.

**Table 2, Selected Drug Using and Sexual Behaviours of IDUs in Mazār-i-Sharif and Jalalabad, Afghanistan**

	<b>Mazār-i-Sharif</b>	<b>Jalalabad</b>	<b>All IDUs</b>
<b>Injected drugs within the past 6 months</b>	<b>79%</b>	<b>93%</b>	<b>85%</b>
<b>Frequency of injection, last 6 months</b>			
Once a month or less	6%	7%	7%
2-3 days per month	12%	11%	11%
Once a week	3%	4%	3%
2-3 days a week	3%	14%	8%
4-6 days a week	0%	36%	16%
Daily	77%	29%	55%
<b>Average injections per day, last 6 months</b>	<b>3.1</b>	<b>1.8</b>	<b>2.6</b>
<b>Usual location of injecting drugs</b>			
Park/street/open spaces	20%	52%	39%
Home	29%	31%	30%
Other	51%	17%	31%
<b>Types of drugs ever injected</b>			
Heroin	87%	71%	80%
Buprenorphine, Temgesic, Senor, Sosegan	13%	70%	36%
Other narcotics (codeine, morphine, etc.)	16%	10%	13%
Antihistamines (e.g., Avil, Phenergan)	2%	7%	4%
Antiemetics (e.g., Marzine, Maxolon, Gravanate)	0%	3%	1%
Anxiolytics (e.g., Lexotanil, Xanax)	9%	3%	7%
<b>Drugs and combinations injected most frequently in the past 6 months</b>			
Heroin/opiates	30%	53%	39%
Heroin/Avil	34%	3%	22%
Synthetic opiates (morphine, Sosegan)	7%	30%	16%
Charas	7%	10%	8%
Heroin, Avil, Restoril	5%	3%	4%
Other	17%	1%	9%
<b>Sex practices and behaviours</b>			
Ever had sex with a female	67%	83%	75%
Ever paid a female for sex	45%	52%	48%
Paid a female for sex in past 6 months	4%	0%	0.5%
Never used condom in paid sex	77%	92%	83%
Ever had sex with a male	22%	21%	21%
Had sex with a male in past 6 months	7%	0%	3%

IDUs in both cities reported high-risk injecting behaviours (see Table 3). Overall, only 53% of IDUs reported that they never lent used injection equipment (needles and syringes) to other IDUs. Lending used syringes was particularly common in Jalalabad. Similarly, a relatively high proportion of IDUs (46%) reported using injection equipment that had been used by someone before them. Again, the Jalalabad IDUs reported this much more frequently than those in Mazār-i-Sharif, showing a generally higher-risk injecting pattern in that city. Most IDUs obtained clean (new) needles and syringes in pharmacies, particularly in Mazār-i-Sharif. A relatively high proportion of IDUs in both cities reported that they sometimes received injections from “professional” injectors or “street doctors”.

**Table 3.** Selected Injecting Behaviours Among IDUs in Mazār-i-Sharif and Jalalabad, Afghanistan.

	<b>Mazār-i-Sharif</b>	<b>Jalalabad</b>	<b>All IDUs</b>
<b>Frequency of lending a used syringe to other IDUs</b>			
Never	66%	33%	53%
Sometimes	27%	50%	37%
Often/always	7%	16%	11%
<b>Frequency of sharing (borrowing) a used syringe from other IDU(s)</b>			
Never	66%	37%	54%
Sometimes	30%	40%	34%
Often/always	5%	23%	12%
<b>Frequency of using a new, sterile syringe/needle for injection</b>			
Never/sometimes	5%	40%	19%
Often	43%	27%	37%
Always	52%	33%	45%
<b>Locations where clean syringes and needles are obtained</b>			
Pharmacy only	91%	58%	78%
Pharmacy and/or friends	2%	26%	12%
Pharmacy and other locations	7%	9%	8%
<b>Injected by a “street doctor” / “expert in the past 6 months</b>	<b>28%</b>	<b>56%</b>	<b>40%</b>

## **B. FEMALE SEX WORKERS**

A total of 132 FSWs were surveyed in Mazār-i-Sharif (n=87) and Jalalabad (n=45). FSWs in Jalalabad tended to be substantially younger than those in Mazār-i-Sharif (see Table 4). Given the young age of Jalalabad FSWs, it is not surprising that a high proportion of them were unmarried, in contrast to the Mazār-i-Sharif FSWs, most of whom were married. FSWs in Mazār-i-Sharif tended to be less educated than those in Jalalabad. Most FSWs in both cities had no other occupation. A sizable proportion of the FSWs in both cities had worked as a sex worker in another city.

**Table 4.** Selected Socio-demographic Characteristics of FSWs in Mazār-i-Sharif and Jalalabad, Afghanistan

	<b>Mazār-i-Sharif (n=87)</b>	<b>Jalalabad (n=45)</b>	<b>Total (n=132)</b>
<b>Current age</b>			
<20 years	15%	51%	27%
20-24 years	25%	18%	23%
25-29 years	13%	2%	9%
30+ years	32%	7%	24%
Mean Age	27.8	20.1	25.6
<b>Marital status</b>			
Unmarried	24%	73%	41%
Married	45%	27%	39%
Separated/divorced	15%	0%	5%
Widowed	16%	0%	15%
<b>Education / Literacy</b>			
No formal education	46%	18%	36%
1-2 years	3%	7%	4%
Finished primary school	22%	21%	22%
Some secondary school	11%	39%	21%
Finished secondary school	18%	16%	18%
<b>Any other occupation?</b>	<b>31%</b>	<b>33%</b>	<b>32%</b>
<b>Ever sex work in another city?</b>	<b>22%</b>	<b>38%</b>	<b>27%</b>
<b>Average client charge (Afs.)</b>	<b>732 (\$15)</b>	<b>227 (\$4.50)</b>	<b>564 (\$11)</b>
<b>Average monthly income (Afs.)</b>	<b>3,633 (\$72)</b>	<b>2,593 (\$52)</b>	<b>3,276 (\$65)</b>

Sex work operations differed in the two cities (see Table 5). In Mazār-i-Sharif, a higher proportion of FSWs encountered clients through pimps and madams, and a very high proportion (69%) reported that they used the telephone to interact with clients. In contrast, the telephone was seldom used in Jalalabad, and a relatively high proportion of solicitations occurred in taxis, truck stops, and bazaars. Jalalabad FSWs tended to have a higher client volume. The majority of FSWs in both cities reported knowing about condoms, but less than 50% in both cities had ever used a condom. Most FSWs had heard of HIV and AIDS and knew that it could be transmitted through sex, but very few had ever been tested for HIV.

**Table 5.** Selected Sex Work Practices and Behaviours Among FSWs in Mazār-i-Sharif and Jalalabad, Afghanistan

	<b>Mazār-i-Sharif (n=87)</b>	<b>Jalalabad (n=45)</b>	<b>Total (n=132)</b>
<b>Age of initiating sex work (mean)</b>	<b>22.5</b>	<b>15.4</b>	<b>20.0</b>
<b>Method for meeting/soliciting clients (not mutually exclusive)</b>			
Pimp/madam	39%	13%	30%
In the bazaar	52%	31%	46%
Tea houses	16%	7%	14%
By telephone	69%	9%	50%
In a brothel	0%	0%	0%
Taxi/truck stops	1%	20%	8%
<b>Average number of clients per month</b>	<b>10.2</b>	<b>18.9</b>	<b>13.1</b>
<b>Condom knowledge and use</b>			
Know what a condom is?	54%	80%	41%
Ever used a condom?	40%	29%	36%
Use condoms most of the time (>50%)	32%	16%	26%
<b>Ever heard of HIV/AIDS?</b>	<b>54%</b>	<b>75%</b>	<b>61%</b>
Know how HIV is spread?	36%	52%	41%
Can acquire HIV through sex?	72%	59%	66%
Condoms can prevent HIV?	32%	47%	37%
Ever tested for HIV?	12%	4%	9%

## 9. HIV PREVALENCE

HIV serological testing was performed on all of the surveyed IDUs and FSWs, with none of them testing HIV seropositive.

## 10. SUMMARY AND DISCUSSION

The results of this project provide some key insights into the epidemic potential and likely future transmission dynamics of HIV in Afghanistan. Although there are many underlying vulnerability factors, it appears that Afghanistan remains at an early epidemic phase. However, the social mapping studies highlighted the existence of high-risk networks of IDUs and FSWs in each of three cities in different regions of Afghanistan. Experience elsewhere in the region suggests that the presence of IDU networks will be an important entry point for initiation of localized HIV epidemics in Afghanistan. The evidence that a high proportion of IDUs are mobile across international borders to Iran and Pakistan suggests that linkages to emerging HIV epidemics in IDU populations in those countries could hasten the initiation of epidemics in Afghanistan.

Female sex work in Afghanistan is diverse, highly secretive, and risky. Our study makes it clear that it is difficult to fully comprehend the extent and organizational dimensions of sex work without a longer engagement and trust-building with sex workers. Therefore, we have almost certainly underestimated the full extent of commercial sex in these cities. However, results of this project make it clear that basic awareness and knowledge about HIV is low, and condom use is infrequent. It is hard to predict how quickly and to what extent HIV transmission will emerge in sex work networks. For example, as yet, there is little evidence of substantial epidemics among urban FSWs in Pakistan, despite relatively large

epidemics in IDUs and high-risk MSM in some cities. It is likely that the high rates of male circumcision and the relatively dispersed structure of sex worker networks will slow the growth of such epidemics. However, implementing focused prevention programs for FSWs and their clients must be a high strategic priority for two reasons. First, FSWs in Afghanistan are highly vulnerable, and without focused programs of outreach and service delivery they will remain without the resources to protect themselves and their partners. Second, FSWs generally have much larger sexual networks than IDUs and MSMs due to their high rates of partner change. For example, even with 15 clients per month, 200 FSWs will have 3,000 sexual encounters per month, and more than 35,000 per year. So the ultimate size of concentrated epidemics in Afghanistan will be largely determined by the extent to which transmission occurs in sex work networks. However, male IDUs report having both commercial sex and sex with other men, with low levels of condom use. If HIV were to penetrate into IDU networks, this could represent a problematic link between IDU and sex work networks.

Without a deeper engagement with these communities, it is difficult to offer extensive programmatic guidance. However, the difficult field conditions and high levels of fear and secrecy lead us to conclude that embarking on extensive pre-program mapping exercises might be inappropriate in the context of Afghanistan. Instead, since we anticipate that high-risk networks of FSWs and IDUs will exist in most, if not all, large urban areas, we recommend a more proactive approach to implementing programs and services for these populations. One option would be to establish initial “vanguard” projects in urban areas that begin to work with FSWs and IDUs, establishing trust through provision of services and establishing relationships with local stakeholders. Early on in this process, social mapping and situation assessments could be completed, after which a fuller set of programs and services could be planned based on the results.

It is important to reiterate that there is still much left to learn about high-risk MSM networks in Afghanistan. Our fieldwork has persuaded us that high-risk networks of MSMs do exist in these cities, but different approaches will be required to work with these groups and to better understand their program and service needs. Chiefly, a high level of engagement of the MSM community will be required in the assessment process. This should be seen as an urgent need in the Afghan context.

Finally, it is important to acknowledge the important and courageous work that many civil society organizations are doing to serve these populations. To fully respond to the needs of these populations and to curtail the epidemic during this important window of opportunity, civil society organizations will require extensive support and capacity building. This process should begin early, to ensure that a scaled-up response is not delayed due to lack of implementation capacity.



