

**UNDERSTANDING HIV IN AFGHANISTAN:
THE EMERGING EPIDEMIC AND OPPORTUNITY FOR PREVENTION**

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A Desk Review of HIV in Afghanistan

A combined effort of:
The Islamic Republic of Afghanistan's National AIDS Control Program
The Johns Hopkins University
The Indian Institute of Health Management Research

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Preface

The newly established Islamic Republic of Afghanistan faces many challenges: pockets of instability around the country, low literacy levels, high levels of opium production, and a lack of basic infrastructure. But what is known about the Acquired Immunodeficiency Syndrome (AIDS) in Afghanistan? Is Afghanistan at risk of a Human Immunodeficiency Virus (HIV) epidemic, and if so what can be done? The looming potential of an HIV epidemic in Afghanistan has motivated academics, donors, the Government of Afghanistan, and Non-Governmental Organizations (NGOs) to undertake research, create policies, and implement programs for the prevention of HIV spread in Afghanistan. Although HIV has been explored to varying degrees by several agencies, data on HIV in Afghanistan remains sparse and information sharing has been largely ad-hoc and uncoordinated.

Much progress, however, has been made in regional studies of HIV transmission. A growing understanding of AIDS in Asia reveals an epidemic driven by injecting drug use, sex work, and male-to-male sex (1). While this finding does not indicate that HIV will remain isolated among populations engaging in these high-risk behaviors, it does conclude that the spread of the HIV epidemic will not be prevented without actively targeting these high-risk groups with prevention measures. However, injecting drug use, sex work, and male-to-male sexual contact in many countries are stigmatized. This has made some governments hesitant to pursue aggressive prevention policies and programs. In some cases, it has also limited available data on HIV when individuals are reticent to report certain behaviors for fear of discrimination.

This report aims to synthesize available information on the HIV epidemic in Afghanistan. The report explores regional HIV transmission patterns, the prevalence of risk factors for HIV in Afghanistan, and Afghanistan's current programmatic and policy responses for HIV prevention. As a combined effort of the National AIDS Control Program (NACP) of the Government of Afghanistan's Ministry of Public Health (MoPH), the Johns Hopkins University, and the Indian Institute of Health Management Research, this report aims to help inform the NACP's policy and program initiatives of Afghanistan's HIV/AIDS Prevention Program (AHAPP).

Acronyms

AEM	Asia Epidemic Model
AIDS	Acquired Immunodeficiency Syndrome
ANDS	Afghanistan's National Development Strategy
ANSFA	Afghanistan's National Strategy for HIV/AIDS
ART	Antiretroviral Therapy
CBB	Central Blood Bank
DIC	Drop-In Centers
FSW	Female Sex Workers
HACCA	HIV/AIDS Coordination Committee for Afghanistan
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information Systems
IBBS	Integrated Biological and Behavioral Survey
IDU	Injecting Drug Users
KAP	Knowledge, Attitudes, and Practices
MDM	Medicine Du Monde
MoPH	Ministry of Public Health
MSM	Men who have sex with men
MSW	Male Sex Workers
NACP	National AIDS Control Program
NGO	Non-Governmental Organization
ORA	Orphans, Refugees, and Aid
OST	Opium Substitution Therapy
pMTCT	prevention of mother-to-child transmission
SGS	Second Generation Surveillance
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
SW	Sex Workers
TB	Tuberculosis
UNAIDS	Joint UN Programme on HIV/AIDS
UNGASS	UN Generally Assembly Special Session
UNODC	United Nations Office on Drugs and Crime
VCT	Voluntary Counseling and Testing
WB	World Bank
WFP	World Food Programme

HIV Profile at a Glance:

	Injecting Drug Users		Prisoners		Sex Workers		Men who have Sex with Men
	Estimate	Year	Estimate	Year	Estimate	Year	Estimate
HIV Prevalence	3.0% Kabul 3.1% Herat	2007 ¹ 2008 ³	11% of IDUs in Herat prison	2008 ²	0.18% Kabul, Jalalabad, & Mazari-Sharif	2008 ³	No estimates
Risk Behaviors	<i>Ever shared syringes:</i> 50.4% Kabul 42.5% Herat, Jalalabad, Mazar-i-Sharif <i>Ever used condoms with any partner:</i> 23.4% Herat, Jalalabad, Mazar-i-Sharif <i>Ever inject drugs in prison:</i> 17.4% Kabul 17.2% Herat, Jalalabad, Mazar-i-Sharif	2007 ¹ 2008 ³ 2008 ³ 2007 ¹ 2008 ³	Behavioral data unknown		<i>Aware of condoms:</i> 63.0% Kabul, Jalalabad, Mazar-i-Sharif <i>Ever used a condom:</i> 51.5% Kabul, Jalalabad, Mazar-i-Sharif	2008 ³	No estimates
Estimated Size (# of persons in most-at-risk group)	1,251 Kabul 55 Jalalabad 159 Mazar-i-Sharif	2007 ⁴	11,925 total prisoners in Afghanistan	2008 ⁵	898 Kabul 90 Jalalabad 172 Mazar-i-Sharif	2007 ⁴	No estimates

¹ Todd CS, Abed AM, Strathdee SA, Scott PT, Botros BA, Safi N, et al. HIV, hepatitis C, and hepatitis B infections and associated risk behavior in injection drug users, Kabul, Afghanistan. *Emerg. Infect. Dis.* 2007 Sep;13(9):1327-1331.

² The World Bank. Afghanistan HIV/AIDS Prevention Project Implementation Support Mission (June 1-9, 2008) Aide Memoir. 2008.

³ Todd CS. Seroprevalence and behavioral correlates of HIV, Syphilis, and Hepatitis B and C among High Risk Groups in three Afghan Cities. 2008.

⁴ Chase R, Foran J, Rasheed A, O'Neil J, Moses S, Blanchard J. Mapping and Situation Assessment of High Risk Key Populations in Three Cities of Afghanistan. 2007.

⁵ Personal communication, Director of Health Services-Prisons

Executive Summary

Recent studies on HIV transmission in Asian countries characterize an epidemic which centers largely around three behaviors: 1) shared needles and syringes, 2) unprotected sex with sex workers, and 3) unprotected sex between males. While HIV cases are not confined to these three most-at-risk populations (Injecting Drug Users (IDUs), Sex Workers (SWs) and their clients, and men who have sex with men (MSM)), the speed and direction of HIV transmission largely depends on the size, behavior, and access to information of these sub-populations (1).

HIV data for Afghanistan is sparse. Available information, however, indicates that there are multiple links between populations most-at-risk of HIV infection and links to otherwise low-risk populations (e.g. wives and other regular sex partners of those most-at-risk). These transmission dynamics exist within a larger context of the ‘social drivers’ of HIV in Afghanistan including violent conflict, gender inequity, mobile populations, lack of access to HIV and sex information, and policy barriers (1). Furthermore, the high prevalence of tuberculosis (TB) and sexually transmitted infections (STIs) in Afghanistan are patterns commonly associated with increased HIV transmission in other countries (2,3).

As in neighboring countries, the HIV epidemic in Afghanistan began among IDUs (HIV prevalence of 3.0% of IDUs in Kabul and 3.1% of IDUs in Herat (4,5)). Depending on their injecting behaviors and sexual practices, HIV-positive IDUs may spread the infection to other populations (the majority of IDUs are married, with 20% reported having ever had sex with a man or boy, and 70% have ever paid a woman for sex (5)). Currently, the number of injecting drug users is rising in Afghanistan and sharing needles is common (4). According to the United Nations Office on Drugs and Crime (UNODC), in 2005 an estimated 200,000 Afghans used opium or heroin of which 7,500 injected heroin, figures which have likely increased since the estimate was completed (6).

In the absence of targeted prevention programs, HIV may spread from IDUs to SWs and their clients (70% of IDUs reported having paid a woman for sex (5)). A 2007 study found that SWs have low levels of knowledge about HIV, low levels of condom use, and are unlikely to be tested for HIV (7,8). Commercial sex work occurs within major cities of Afghanistan, with a conservative estimate of 1,200 SWs across Kabul, Mazar-i-Sharif, and Jalalabad (9).

Sexual activity between males in Afghanistan likely occurs within mainstream society, but the associated stigma has made it difficult to gather reliable data. In 2006, a study reported

that 7% of South Asian males (Indian, Pakistani, and Bangladeshi men) engage in male-to-male sex (10). In the absence of prevention programming including condom distribution and male sexual health campaigns, HIV epidemics are likely to spread among MSM and their regular sex partners (1). Sexual activity between males has been documented in multiple settings in Afghanistan including military camps, wedding halls and other entertainment settings, as well as among males purchasing sex from Male Sex Workers (MSWs) (5,9,11).

Prisons may function as reservoirs for HIV transmission in Afghanistan, where prisoners often have limited access to services and where injecting drug use, sexual activity between males, and sexual abuse may be common. This year, data collected from the Herat prison found 11% of IDUs in prison to be HIV positive (12).

Truck drivers often participate in multiple risk behaviors including the purchase of sexual services, sexual activity between males, and in some cases drug use (1). Afghanistan, a land-locked country, relies on a few principal road transport routes for international trade over 13 international border crossings (13). A recent study found that 39% of truck drivers surveyed reported that sex work was available where they stayed at night (9).

While multiple HIV-related policies have been developed by particular line ministries, these policies and strategies have not been made national law. In addition, while the NACP has developed prevention programs for HIV with a variety of local and international partners (over USD 40 million has been allocated toward government HIV prevention programs) these activities are just getting under way (14). Meanwhile, sharing of information and coordination between existing NGOs that provide services to those most-at-risk to HIV (many of which function largely independent of the government) remains weak. However, coordinating mechanisms are in place to improve this.

The total number of HIV infections in Afghanistan is likely low, although currently no accurate estimates exist for population infection prevalence. However, the Government of Afghanistan now has a window of opportunity, when targeted prevention programs could contain the spread of HIV in Afghanistan. Drawing on lessons learned from HIV epidemics in the region, the Government of Afghanistan should focus its efforts to target those most at risk to HIV, fight stigma and discrimination, and provide universal access to prevention and treatment services. By establishing HIV as a national priority now, the Government of Afghanistan can blunt the impending HIV epidemic. This is an opportunity to limit the loss of lives and livelihoods of many Afghans and their families who might otherwise be affected by a rapid spread of HIV/AIDS in Afghanistan.

Methods

Literature Review

A thorough review of available literature on HIV in Afghanistan and the region was conducted. Literature included published and unpublished studies and reports from NGOs and research organizations, government strategies, guidelines and policies, and interviews with local HIV experts and stakeholders. The objective was to obtain an understanding of the nature and extent of HIV infection, potential epidemic trajectories, and the government's current response to HIV in terms of policies and program development. Findings from this literature review found a total of 22 studies, 24 national policy, strategy, and guideline papers, and 49 other publications or reports.

Data Issues

Complex political and cultural barriers constrain research efforts, leading to a widespread acknowledgement of underreporting of high-risk behavior. It is difficult to accurately capture characteristics of persons most-at-risk of HIV where these populations are largely hidden and may be discriminated against. Underreporting of most-at-risk groups such as IDUs, SWs, and MSM is widely acknowledged by past surveys on HIV. Because of these difficulties, some surveys had small sample sizes and many used non-probability sampling methods (including snowball sampling, convenience sampling, and purposive sampling), when studying these high-risk groups. The absence of studies using probability-based sampling methods is a serious impediment to fully understanding the nature and the extent of the early HIV epidemic in Afghanistan, and predicting its course.

1. The HIV Epidemic in Asia

HIV transmission in Asia

In 2006, the Joint UN Programme on HIV/AIDS (UNAIDS) conducted a comprehensive 18-month study on AIDS in Asia, using data from 23 countries (1). Although the Commission found that epidemics vary considerably from country to country, common characteristics of all epidemics were the sharing of needles and syringes, unprotected commercial sex, and unprotected sex between males. Epidemics commonly began among IDUs, where HIV is most efficiently transmitted through contaminated needles and syringes. However, men who buy sex are the most powerful driving force for HIV transmission in terms of numbers of infected individuals (1).

In the absence of prevention and treatment programs, wives and other sexual partners of these men who are most-at-risk (those who inject drugs, purchase sex, and have sex with other men) are at increased risk of HIV infection. Once infected, these women may pass the virus to their children, extending the HIV epidemic beyond those populations most-at-risk (1).

Groups most-at-risk to HIV: Injecting drug users, sex workers, and men who have sex with men

Sharing syringes and needles while injecting drugs is the most efficient way for HIV to be transmitted (1). Consequently, a single case of HIV within an IDU network can quickly spark an epidemic within this subpopulation. In Karachi, HIV prevalence among IDUs increased from 0.4% in 2003 to 23% in 2004 (see Figure 1) (15). In Nepal, from 1991-2003, HIV prevalence among IDUs in Katmandu Valley increased from 2% to 68% (15). Within only six years, HIV prevalence among IDUs in Jakarta, Indonesia, increased from less than 1% to 41% in 2000 (1). The efficiency of HIV transmission among IDU networks highlights the importance of proactive prevention and harm reduction programs among this group to limit the spread to other populations at risk. Obtaining political support for harm reduction programs including safe needle exchange and opiate substitution therapy (OST) is critical for stemming HIV transmission in Asia (1).

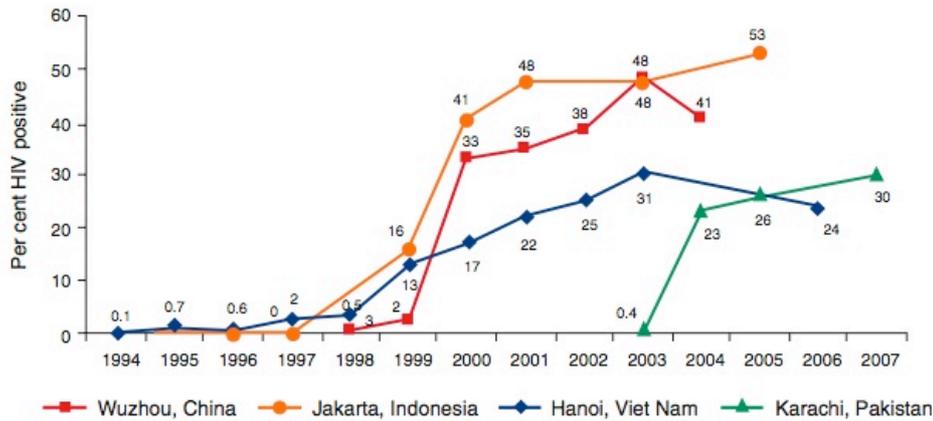


Figure 1: HIV spreads quickly in IDU networks and can rapidly reach high levels

Source: The Report of the Commission on AIDS in Asia, 2008

While HIV epidemics often start among IDU subpopulations, the sale or purchase of sex for money or in exchange for drugs by IDUs can trigger an epidemic among SWs and their clients (1). In Bangladesh, 60% of female IDUs reported selling sex (15).

The total number of men purchasing sex usually far surpasses the number of individuals injecting drugs in Asian countries. Consequently, once HIV is transmitted to SW networks, commercial sex work has a stronger capacity to spread HIV in terms of total infected individuals. (1). Depending on the proportion of men who visit sex workers, client turnover rates, and condom use HIV can rapidly expand among SWs and their clients. An estimated 1 in 5 men in Asia have purchased sex at some point in their life (1). Since most SWs and clients are married or will be married in their lifetime, this puts many people at risk for HIV infection. Providing universal access to condoms and increasing condom use during paid sex could substantially slow the HIV epidemic.

Unprotected sex between males is a strong risk factor for HIV infection. Since male-to-male sexual activity is socially unacceptable in many Asian cultures, monogamous male-male relationships are uncommon and these men often have wives or other female sexual partners (16). The combination of concurrent male sexual partnerships and low condom use have led to epidemics among men who have sexual contact with men in many Asian cities. In 2003, 17% of men who have sex with men in Bangkok were HIV positive; two years later that figure was more than 25% (1). In Karachi, the percent of male sex workers infected with HIV doubled within two years; from 4% in 2003 to 8% in 2005 (1).

Regional HIV transmission dynamics: the case of Iran, Pakistan, and Central Asian Republics (Uzbekistan, Turkmenistan, and Tajikistan)

The Report of the Commission on AIDS in Asia describes the driving characteristics of HIV epidemics in Asia as shared needles, unprotected commercial sex, and sex between males. However, the political, cultural, social, and biological environments unique to each country modify HIV transmission dynamics. Exploring regional data from Iran, Pakistan, and Central Asian countries illustrates the complexities of HIV transmission across different contexts, and helps highlight epidemic patterns that are important when reviewing available data on HIV in Afghanistan.

The influence of drug trafficking on drug use and HIV spread

The drug traffic route of opium from Afghanistan to Eastern, Central, and Western Europe passes through Central Asia and Iran, and to a lesser extent, Pakistan. Globally, studies have found increased drug use in areas along drug trafficking routes, increasing numbers of injecting drugs users, and increased prevalence of hepatitis C and HIV infections. This holds true in Iran, Pakistan, and Central Asia (17,18).

The increasing prevalence of injecting drug use is a complex phenomenon. The reasons for preferring injecting instead of smoking opiates is multifaceted and difficult to target in prevention programming. In Iran, studies indicate that injecting is more cost-effective, requires less bulky equipment, and may be less stigmatized than traditional smoking methods. All of these findings may be factors in this trend (17). In Uzbekistan, unemployment was strongly associated with drug use as well as change from low risk heroin use to injecting (19).

HIV epidemics within all of these countries have first soared among IDUs. In Iran, IDUs constituted 62% of the confirmed HIV cases in 2005 (20) with infection rates ranging from 15-23% of IDUs, depending on study sample selections (21). Pakistan experienced its first HIV outbreak in 2003 within a community of IDUs in the remote desert town of Larkana (22). By 2005, HIV appeared in other areas including Karachi, and by 2007 nearly a quarter of IDUs surveyed there were HIV positive (23). In the Uzbek capital of Tashkent, studies reported infection rates of up to 30% among IDUs (19).

The role of overlapping injecting drug use and sex work in HIV transmission

Following an initial HIV epidemic among IDUs, HIV will subsequently spill over into other populations, including sex workers (23,24). In a study among IDUs in Karachi, about a third

of IDUs reported buying sex from a Female Sex Worker (FSW) in the past year with 17% condom use at last sex. Furthermore, 18% of male IDUs reported buying sex from a male in the past year with similarly low condom use (23). In the Central Asian Republics, the efficiency of the spread of HIV among IDUs and the connections to SWs has created the fastest growing epidemic in the world (23,25). In a study among FSWs in Tashkent, Uzbekistan 10% of FSWs were HIV positive. (26). Of the FSWs who reported injecting drugs in the study, nearly 60% were infected with HIV.

Obtaining valid data on male-to-male sex

Data on male-to-male sex practices in Pakistan, Iran, and Central Asian countries is incomplete and may be unrepresentative. This may stem from the hesitancy of males to report sexual behavior with other males for fear of social isolation or discrimination or the fact that many may not consider their sexual behaviors with males as sex (16). A recent review of male sexually activity with males in south and south-east Asia reported than an estimated 6-8% of all males have had sex with another male at some point in their life (10).

In contrast to the limited research in Iran and Central Asian countries on male sexual behavior, there are a few reports from Pakistan that review the risks of HIV transmission among MSM. In 2006, 7% of confirmed HIV cases in Pakistan were among MSM (27). In Pakistan, studies report a variety of male-to-male sexual encounters. Male sexual activity included truck drivers purchasing sex from MSWs while on the road (28) and *hijras* and other groups who are biologically male but identify with the female gender and have sex with other males (29). In addition, a report from the North Western Frontier Province of Pakistan indicated rich elderly men keeping boys for sexual gratification (30). Despite the diversity of male sexual activity in Pakistan, myths about HIV and sex, including that anal sex cannot spread HIV, were apparent among all groups. While such findings are not all applicable to male-to-male sexual activity in Afghanistan, understanding the HIV risk associated with MSM in Pakistan provides an idea of the HIV transmission risks and challenges in the provision of prevention services to a stigmatized sub-population.

The imperative for harm reduction programming

Evidence from Iran, Pakistan, and Central Asia suggests the critical role of harm reduction programs in reversing the spread of HIV among IDUs. Studies in Iran found significant differences in safe injections between those having participated in harm reduction programs and those who did not utilize such services (21). These programs are crucial both within

prisons and communities (17,21,31). Despite the proven success of harm reduction programming, coverage of these services remains low. In Tajikistan, Turkmenistan, and Uzbekistan only 2-3% of IDUs were covered by needle or syringe exchange programs in 2007 (32).

Political support for HIV prevention policies

Political support for targeted HIV policies varies widely within Iran, Pakistan, and Central Asia. While the escalating rates of HIV in Iran prompted high-level political and religious support for harm reduction services (17), other regional governments have taken a far less aggressive approach. The government of Turkmenistan has largely refused to recognize the HIV epidemic and has reported what is estimated to be only a small fraction of HIV cases (33). Despite data indicating HIV epidemics both among IDUs and persons involved in male-to-male sexual activity in Pakistan, carrying a condom is still a legal offense in the country (34). The political environment in which HIV policy is shaped can greatly affect the spread of HIV. The importance of these factors in Afghanistan must also be considered.

Difficulty in assessing women's HIV burden

It is probable that current data underestimate the true burden of HIV among women in Iran (35). This underestimation and limited access to prevention services may be similar in Afghanistan, where mobility of women is limited and sex outside of marriage is considered both a legal and moral crime (35). In Iran, a variety of circumstances increase HIV risk for many women: wives and sexual partners of injecting drug users, women entering “temporary marriages” for financial purposes (*sighe*), women selling sexual services, and women with multiple sex partners. These women, however, are hidden populations and difficult to interview (35).

Second Generation Surveillance

New HIV surveillance approaches have moved away from seroprevalence surveys in antenatal clinics, in favor of targeted surveillance among those most-at-risk of HIV transmission (including IDUs, SWs, and MSM) (36). This more proactive approach to providing HIV estimates, called Second Generation Surveillance (SGS), aims to assess the epidemic in subpopulations before it reaches a generalized level. SGS tracks the locations, sizes, behaviors, and HIV prevalence of risk groups over time in order to capture the trajectory of the HIV epidemic among those most-at-risk and predict how the epidemic may

bridge to seemingly low-risk populations. Consequently, SGS can be used to provide an early warning system for countries at early epidemic states (36).

This approach is well suited for examining the HIV epidemic in Asia in greater detail, where epidemics are largely concentrated among those most-at-risk of HIV transmission. In addition, the information collected through SGS (location, size, risk behaviors, and HIV prevalence of risk groups) can more readily be used to inform HIV prevention and treatment programs than seroprevalence data alone (37). This approach has been successfully used in many countries including Thailand, Bangladesh, Cambodia, India, Indonesia, Nepal, the Philippines, Vietnam, Senegal, and Uganda (1,37). Its use in Afghanistan could help inform HIV prevention programs where HIV transmission is likely to resemble the Asian model.

Following Second Generation Surveillance guidelines, six key questions are to be addressed to properly initiate surveillance efforts within concentrated epidemics:

1. Is there risk behavior that might lead to an HIV epidemic?
2. In which sub-populations is that behavior concentrated?
3. What is the size of those sub-populations?
4. What is the HIV prevalence in those sub-populations?
5. Which behaviors expose people to HIV in those sub-populations?
6. What are the links between sub-populations at risk and the general population?

(Source: Guidelines for Second Generation HIV surveillance, UNAIDS/WHO, 2000.)

The remainder of this report utilizes existing published and unpublished literature relevant to Afghanistan along with information from interviews with NGO personnel, civil servants, and research groups to attempt to understand how best to seek the answers to these questions.

2. The Afghanistan Context

‘Social drivers’ of HIV transmission

Characterizing behaviors that put people and countries most-at risk for HIV transmission is only effective through the lens of the social, economic, and cultural factors that generate HIV vulnerability and influence provision and use of HIV services (See Figure 2). Afghanistan contains many of the ‘social drivers’ of HIV epidemics: violent conflict, gender inequities, migration and repatriation, complicated dynamics between boys and older men, lack of knowledge and information (especially about sex and HIV), legal and policy barriers, and popular beliefs which may influence HIV-related policies as well as access to services (1).

Afghanistan ranks among the lowest in gender development, according to the UNDP Human Development Report (38). In countries where women have a lower socioeconomic status than men, women tend to experience difficulty in maintaining control over their sexual choices and negotiating for safe sex. HIV awareness and knowledge are low in Afghanistan, with more than a quarter of the population having never heard of AIDS and 40% having never heard of HIV (39). Over 75% of Afghanistan’s population is illiterate, which compounds the task of raising awareness (40).

Conflict and displacement

Over the last three decades of conflict, approximately eight million Afghans have been displaced in neighboring countries creating what was at one time the largest refugee population in the world (41). Since 2002, over five million refugees have returned, predominately from Pakistan (3.2 million) and Iran (1.8 million) (41). During conflict and displacement, social networks and services are often disrupted, which may alter sexual behaviors and access to services. Furthermore, HIV risk is increased in countries, like Afghanistan, that have a relatively large percentage of young men in the in the police force and/or military, who are frequently away from home for extended periods.

People on the move: how migration may fuel the HIV epidemic

Economic migration can increase the demand for commercial sex when men spend large amounts of time away from home (1). Migrant workers often lack access to social and health services and face social stigma and discrimination in their country of work. South Asia supplies the majority of migrant workers to Gulf countries that in many cases routinely test migrant workers for HIV and deport those found positive (42). Migrant workers, however,

are rarely counseled to know their HIV status and consequently often return home without knowledge of their HIV status and associated risk behaviors. (42). In the North Western Frontier Province of Pakistan 70% of HIV positive individuals were Pakistanis who had been deported from migrant work in the Middle East (43). Afghanistan's economic out-migration is increasing. In 2005, 380,000 Afghans migrated either permanently or seasonally to Iran, Pakistan, or the Persian Gulf Peninsula (41).

Tuberculosis, Sexually Transmitted Infections, and HIV transmission

Afghanistan is one of the highest TB-burdened countries in the world with a majority of new cases being among women, which is not the usual pattern for TB (2). A major outbreak of HIV in Afghanistan could be expected to greatly increase new cases of tuberculosis, further burdening a health system that is presently struggling to control TB.

Evidence for hepatitis B, hepatitis C, and syphilis infections have been found in blood donations and antenatal clinics in Kabul, as well as samples from IDUs and FSWs (3). The serological presence of these infections, which are commonly spread by sexual transmission, indicates the potential for rapid transmission of HIV among these same populations. The presence of syphilis and other sexually transmitted diseases in a population can facilitate infection with HIV. This is a further warning sign of the potential for rapid HIV spread in Afghanistan.

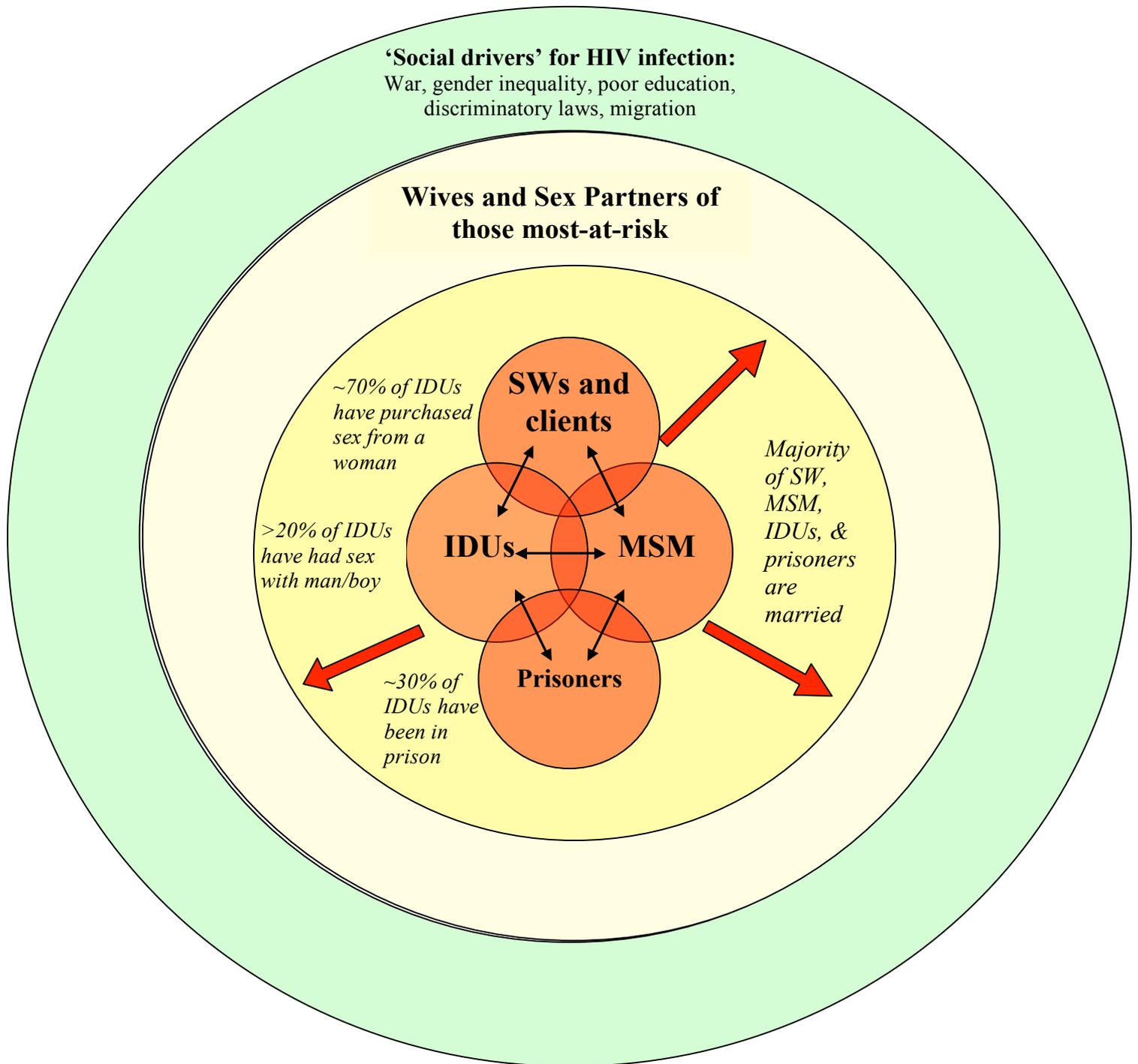


Figure 2. Overlapping risk behaviors and links to the general population in an environment of multiple 'social drivers' of HIV transmission

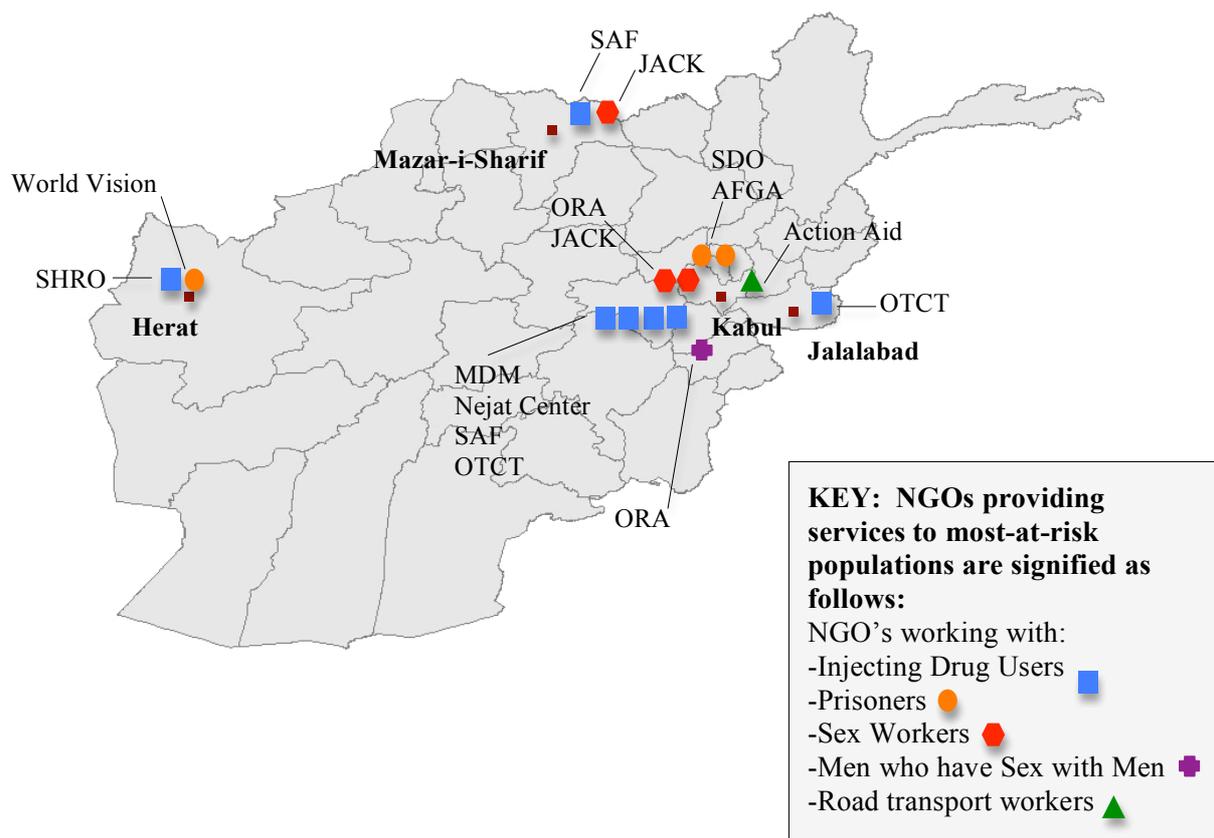
Data source from 4 urban cities: Todd, 2007, 2008 (4,5)

HIV policy and program response

The MoPH and NACP have developed multiple policies and designed programs for HIV prevention in recent years. Government strategies, guidelines, and policies now cover harm reduction, communication and advocacy, STI treatment, Voluntary Counseling and Testing (VCT) centers, blood safety control, ethics, TB and HIV, and drug control among other HIV related issues (See Appendix B). In 2006, the government communicated their overall strategy to HIV prevention through two guiding documents: the Afghanistan National AIDS Strategic Framework for 2006-2010 and the Program Operational Plan for the Afghanistan National AIDS Strategic Framework (14,44). These documents outline a multi-sectoral approach to mobilize donors, research institutions, government agencies, and civil society to harness the required financial, technical, and human resources for a comprehensive HIV prevention program in Afghanistan (14).

Nearly USD 40 million has been pledged for NACP's HIV prevention initiatives, with support from the World Bank (USD 10 million), French cooperation (USD 6.8 million), Global Fund (USD 11 million), and the Asia Development Bank (USD 1.5 million) (14). In addition to government led initiatives, various NGOs have independently secured resources to provide services for most-at risk groups throughout the country (See Figure 3). The HIV/AIDS Coordinating Committee for Afghanistan (HACCA) was established to coordinate HIV activities and facilitate information sharing between agencies working in HIV, though in many cases these NGO programs may not be well coordinated with NACP efforts.

While the MoPH and the Ministry of Counter Narcotics (MoCN) have developed multiple guidelines, strategies, and policies these have not been adopted as national law, which may prevent them from being widely followed. Furthermore, many of the government's programs are in their early stages and consequently have low coverage over their target populations. In addition, currently both antiretroviral therapy for HIV infected individuals and services for the prevention of mother-to-child transmission (pMTCT) are unavailable in Afghanistan (14,45).



- Action Aid** --
- AFGA** Afghan Family Guidance Association
- JACK** Just for Afghan Capacity and Knowledge
- MDM** Medicine Du Monde
- Nejat Center** --
- ORA** Orphans, Refugees, and Aid
- OTCD** Organization for Training and Cooperative Development
- SAF** Solidarity for Afghan Families
- SDO** Sanayee Development Organization
- SHRO** Society for Health Research Organizations
- World Vision** --

Figure 3. NGOs providing services to most-at-risk populations in Afghanistan

Note: Map includes NGOs that currently provide services and are projected to provide services under Afghanistan's HIV and AIDS Prevention Program

3. Injecting Drug Use

Who uses drugs in Afghanistan?

Afghanistan produces over 90% of the world's opium supply (56), but how does this affect opiate drug use in Afghanistan and the related risk of HIV transmission? HIV epidemics among IDUs are expanding in Iran, Pakistan, Tajikistan, and Uzbekistan; all of which hosted Afghan refugees during years of conflict (4). As refugees have returned to Afghanistan, many have brought their behavior habits, including drug routines with them. In 2005, the UNODC reported that 50% of heroin users in Afghanistan stated first using heroin as refugees, particularly in Iran (46).

While non-injection drug use is traditional in Afghanistan, the practice of injecting is slowly rising, arguably influenced by the large influx of returnees (particularly to major cities such as Kabul and Herat), the reduced cost of injecting versus smoking, and low HIV knowledge and awareness among IDUs (4,6). The motivating factor stated for switching to injecting drugs noted in a 2005 UNODC study was that smoking did not relieve pain or produce pharmacological results quickly enough (6).

Though UNODC estimates that about 80% of drug users are male, it is possible that female drug-users are underreported due to a stigma placed on women who use drugs illicitly (6). It may be that less visible, or more private and home-based locations for drug use are chosen by women. Though no survey data measure injecting drug use among women, drug treatment center staff working with IDU populations report that injecting drug use among females does exist (personal communication, Medicine Du Monde (MDM) and Sang-e-Amaj staff). The use of male community/key informants for drug use surveys in Afghanistan probably biases results by underreporting female drug use, as non-familial interactions between women and men are extremely limited.

Potential size of injecting behaviors

Of the 920,000 illicit drug users estimated to be in Afghanistan in 2005 by the UNODC (3.8% of total population), 50,000 of those use heroin, of which 15% inject (7,500) (6). The University of Manitoba undertook a mapping study in 2006 to produce size estimates of groups most-at-risk to HIV infection, including IDUs (9). Their study had social mobilizers who were typically current or former drug users go to communities and produce minimum and maximum numbers of IDUs living in a given community. This method identified certain

clusters where IDUs lived within Afghanistan's three major cities: Kabul, Mazar-i-Sharif, and Jalalabad. The largest number of IDUs reported was in Kabul (1,251) followed by Mazar-i-Sharif (159) and Jalalabad (55) (9). It is likely this substantially underestimates the true number of IDUs as those who primarily live and inject at home were unlikely to have been captured in the estimates generated by social mobilizers.

Manitoba's mapping study estimated that 0.2% of urban adult males in three urban cities, Kabul, Jalalabad, and Mazari-i-Sharif, injected drugs (9). This study also indicates that injecting drug use is primarily street-based in Kabul and Mazar-i-Sharif (97%), while mostly home-based in Jalalabad. Mapping exercises for all three cities provide evidence that injection drug use is clustered within particular city districts. Kabul city has over half of the 177 IDU clusters which contained 5 or more IDUs in the four cities (9).

Although the existence of injecting drug use in rural areas is acknowledged by NGOs and UN agencies, numbers for these populations have not yet been estimated.

INJECTING DRUG USERS PROFILE

Indicator	<i>Kabul</i>	<i>Herat</i>	<i>Mazar-i-Sharif</i>	<i>Jalalabad</i>
HIV Prevalence	3.0% (N=464); 2007*	3.1% (N=340); 2008*	No cases of HIV detected (N=187); 2008*	No cases of HIV detected (N=96); 2008*
Syringe Sharing: % of IDUs having ever shared needles or syringes	35% (N=464); 2007*	62.6% (N=340); 2008*	50.8% (N=187); 2008*	52.1% (N=96); 2008*
Sex with FSWs: % of IDUs having paid a woman for sex	76% (N=464); 2007*	73.8% (N=623); 2008*		
Sex with men/boys: % of IDUs having had sex with men/boys	27% (N=464); 2007*	23.2% (N=623); 2008*		
Knowledge: % of IDUs having heard of HIV	43%; 2006 ⁺		Data not available	
Estimated Size: # of IDUs	1,251; 2007 ^o	Data not available	159; 2007 ^o	55; 2007 ^o

Table 1. Injecting Drug Users Profile: Key descriptive indicators of injecting drug use in Afghanistan by four urban centers: Kabul, Herat, Mazar-i-Sharif, and Jalalabad.

*Data from *Todd, C & Scott P. UCSF/WRAIR/NAMRU Project, 2007*

⁺ Data from *Action Aid KAP Study, 2006*

^o Data from *University of Manitoba Mapping Study, 2007*

HIV prevalence

Emerging epidemics have been reported among IDUs in Kabul with 3.0% of 464 IDUs tested being HIV positive (4) and in Herat, with 3.1% of 340 IDUs tested being HIV positive (5). None of the 96 IDUs tested in Jalalabad or Mazar-i-Sharif were found HIV positive (5).

HIV knowledge, attitudes, and practices

Risks for acquiring HIV infection among IDUs increases with the greater the cumulative number of injections and the use of shared needles and equipment (47). While injecting is a relatively new phenomenon in Afghanistan (the average duration of injection among IDUs surveyed in three urban centers was two years (8)), the number of injectors in Afghanistan is increasing and the use of shared needles is common (4).

Recent data reveal that IDUs in Afghanistan inject at least once per day on average. In a 2006 study, 72% of IDUs in Kabul and Herat injected at least once a day (48) and 84.5% of IDUs in a 2007 study in Herat, Jalalabad, and Mazar-i-Sharif injected at least once a day (8). Sharing of syringes was reported by 35% of IDUs in Kabul (4), 62.6% in Herat, 52.1% in Jalalabad, and 50.8% in Mazar-i-Sharif (8). Without focused efforts to reduce the frequency of sharing used needles and syringes, HIV infection among IDUs in Afghanistan is likely to expand rapidly.

Disseminating knowledge to IDUs about HIV, the risks of injecting, safe injecting practices, and availability of harm reduction services is crucial to prevent HIV infections among IDUs. Overall HIV knowledge among IDUs in Afghanistan remains low. A 2005 Knowledge, Attitudes, and Practices (KAP) survey found that only 43% of IDUs in Kabul and Herat had heard of HIV/AIDS (48). In 2007 only 21% of IDUs in Mazar-i-Sharif and Jalalabad knew where to go for an HIV test and 40% did not know that sharing needles transmitted HIV (8).

The lack of knowledge about HIV transmission combined with increasing injection use among heroin users poses a great threat of HIV transmission not only for IDUs, but for other populations as well. The Report of the Commission on AIDS in Asia emphasizes that HIV epidemics among IDUs often lead to infections among SWs and male-to-male sexual networks (1).

Potential for rapid spread of HIV to other populations

With the highest HIV prevalence in Afghanistan, the IDU subpopulation is now poised to transmit HIV into other populations. In Afghanistan over 70% of IDUs in Kabul, Herat,

Jalalabad, and Mazar-i-Sharif have paid women for sex and over 23% have ever had sex with men/boys (4,8). In the absence of universal access to condoms and protective knowledge, IDUs in Afghanistan may be the most likely conduit of infection into other populations including SWs, MSM, and their other sex partners.

A 2006 study indicated that 83% of IDUs surveyed in Kabul and Herat are willing to use condoms to avoid contracting disease (48). However, encouraging the use of HIV prevention services may be difficult in the current environment of marginalization and lack of tolerance. Though uncommon, IDUs in Kabul have reported that police may raid locations where IDUs stay, demanding money and raping or sexually abusing younger IDU boys (personal communication, MDM staff).

4. Sex Work

Who sells or buys sex in Afghanistan?

Although IDUs have the largest potential to spark an HIV epidemic, SWs and their clients will likely have the largest impact on the extent of the spread of HIV in Afghanistan (1). As the Manitoba mapping study states, “Even with 15 clients per month, 200 Female Sex Workers (FSWs) will have 3000 sexual encounters per month, and more than 35,000 per year (9).”

Sex work by FSWs and MSWs are both available and reportedly common in parts of Afghanistan, particularly in urban areas. While anecdotal evidence indicates that male sex work is substantially more common than female sex work, data are largely available for FSWs. FSWs appear to be much more formally networked than MSWs who in many cases provide services at lower prices than FSWs and who solicit clients at places like truck and bus stops (personal communication, *ORA* staff).

Sex worker clientele in Afghanistan are difficult to identify. A recent KAP study, however, found that the majority of sex worker clients in Kabul were primarily military (33.5%) and civil servants (31%) followed by police and truck drivers, both at 13% of total sex worker clientele (48). The study, however, was limited to FSWs in Kabul, and consequently the results may not be representative of sex worker clientele nationally.

Social norms and practices influence the proportion of SWs with regular sex partners. In a 2003 survey of FSWs in Kabul, 78% were married (7).

How are client-contacts made and where do they occur?

Sex Worker clients are procured through a variety of sources in Afghanistan. In Mazar-i-Sharif, a higher proportion of SWs obtained their clients through pimps and madams, whereas open solicitation in Jalalabad largely occurred in taxi/truck stops and bazaars (9). Self-identifying and family liaisons appear to be a major source of client identification in Kabul, where 53% found clients on their own and 39% of SWs surveyed in 2005 in Kabul found clients through a family member (7).

Commercial sex work in Afghanistan appears to be concentrated in urban centers, truck stops, border crossings, and police stations (9,7). Commercial sex activity occurs within all districts/zones of three major urban centers (Kabul, Mazar-i-Sharif, and Jalalabad), though

FEMALE SEX WORKERS PROFILE

Indicator		Kabul	Mazar-I-Sharif	Jalalabad
HIV Prevalence		0.18% (N=543); 2007*		
Condom Use	% of FSWs having ever used condoms	51.5% (N=543); 2007*		
	% of FSWs with client condom use "all the time"	22.7% (N=543); 2007*		
Client Frequency: # of Clients/day		84% 1-2 clients per day; 2006 ⁺	data not available	Data not available
Knowledge: % of FSWs having heard of HIV		<1%; 2005 [*]	61%; 2006 ⁺	
Estimated Size: # of FSWs		898; 2007 [°]	172; 2007 [°]	90; 2007 [°]

Table 2. Female Sex Workers profile: Key descriptive indicators of female sex work in Afghanistan by three urban centers: Kabul, Mazar-i-Sharif, and Jalalabad.

*Data from *Todd, C & Scott P. UCSD/WRAIR/NAMRU Project, 2007*

⁺ Data from *Action Aid KAP Study, 2006*

^{*}Data from *ORA Survey, 2005*

[°]Data from *University of Manitoba Mapping Study, 2007*

the *ORA* study highlights four districts within Kabul where commercial sex work was particularly concentrated (7).

Potential size of sex worker networks

Though the true extent of commercial sex work in Afghanistan is largely unknown, recent mapping done by the University of Manitoba identified 1,160 FSWs across three major urban centers in Afghanistan (Kabul, Mazar-i-Sharif, and Jalalabad) (9). This estimate, averaging 1.9 FSWs per 1000 women ages 15-49 (0.19%) in those cities compares to regional FSW prevalence estimates of 5 to 15 FSWs per 1000 adult female population (9). The same study identified only 12-21 MSWs within Kabul and approximately 100 within Mazar-i-Sharif. The research team claimed, however, that this reflects significant underreporting considering extreme stigmatization of male-to-male sexual contact (9).

In pre-Soviet invasion years, Kabul's Old City districts were particularly notorious for large clusters of SWs, dancers, and brothels (7,9). With the arrival of the Taliban, this once visible and concentrated networks have been dispersed and moved underground as sex work and sex outside of marriage was criminalized and suppressed (7). Commercial sex work is now estimated to be 91% home-based in Kabul, Jalalabad, and Mazar-i-Sharif (9). These estimates

may not be entirely accurate as it is difficult to identify and survey fragmented sex worker networks which have formed to avoid imprisonment and social exposure (7,9).

HIV prevalence

A convenience-based sample of 543 FSWs in Kabul, Jalalabad, and Mazar-i-Sharif, found an HIV prevalence of 0.18% in a 2007 study (5). An additional study using probability-based sampling methods will be undertaken in Kabul within the upcoming year by the NACP and Johns Hopkins University.

HIV knowledge, attitudes, and practices

The rate of HIV transmission among FSWs and their clients in Afghanistan is primarily driven by three factors: the proportion of men who have sex with FSWs, client turnover, and condom use (1). In Afghanistan, only minimal information is now available to assess any of these factors.

Among the 23 countries studied in the Commission on AIDS in Asia, an estimated 1 in 5 males purchased sex at some point in their lives and there are an estimated 10 male clients for every sex worker (1). Data available in Afghanistan do not provide parallel figures, but do indicate frequent contact between sex workers and their clientele and long lifetime durations of sex work. Two NGOs in Afghanistan, *ORA* and Action Aid, have estimated the number of clients per day for SWs in Kabul. The 2005 the *ORA* study estimated an average of 2.4 clients per day (7), which is consistent with Action Aid's finding in 2006 that a majority (84%) of FSWs have two or less clients per day and a minority (14%) have three clients per day (48). What the data do not make clear, however, are the total number of different clients purchasing sex and the number of different clients visiting a single SW. A recent KAP Study among university students in Afghanistan, however, found that 5.2% of all male respondents and 10% of married male respondents had visited a brothel in the past one year (49). While these figures are not representative of the entire male population in Afghanistan, it does indicate that purchasing sex may be fairly common. Gaps in required data highlight the need for further exploration of these issues.

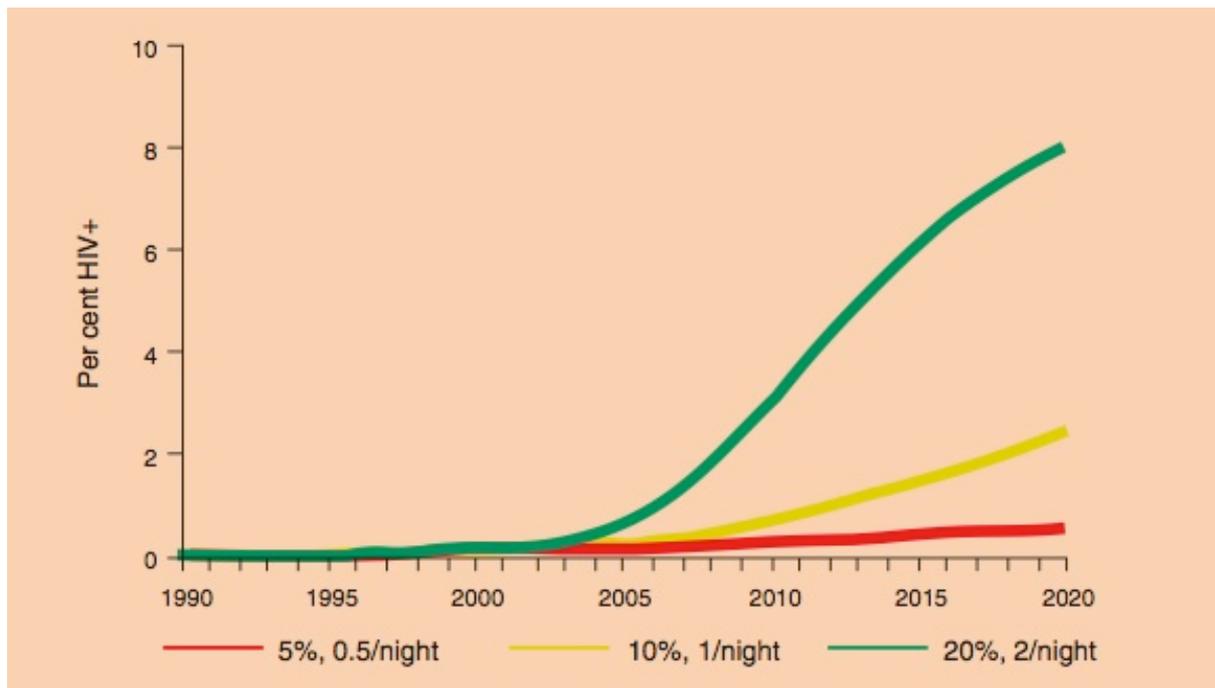


Figure 4. The total number of males purchasing sex and the frequency of client contact greatly impact HIV transmission.

Source: Modeling for generic Asian country using the Asian Epidemic Model from *The Report of the Commission on AIDS in Asia*, 2008

Note: Horizontal axis: percentage denotes male clients of female sex workers as a percentage of adult male population; number per night denotes average number of clients per sex worker per night.

The length of time FSWs had engaged in sex work varied from less than one month to 40 years in the 2005 *ORA* study, while Action Aid’s assessment reported that the majority (82%) of SWs had been providing commercial sex for more than two years⁶ (48). Though differences in study design make comparability of the *ORA* and Action Aid results difficult, both studies reveal a high-risk for HIV infection due length of time in commercial sex work, stigmatization, and lack of knowledge about HIV.

In Afghanistan, condom use among during sex work is very low. Frequency of condom use by SWs across three urban centers (Kabul, Mazar-i-Sharif, and Jalalabad) was assessed by *ORA* as well as UCSD/WRAIR/NAMRU and was reported as low in both surveys. While less than 1% of SWs in Kabul had used condoms and none had been tested for HIV, according to *ORA*’s 2005 study (7), over half of FSWs in urban centers had ever used a condom and 9% had ever been tested for HIV in 2007 (8). In comparison, more than 85% of sex workers report frequently using condoms in Cambodia, Thailand, Vietnam and Indian state of Tamil Nadu, which is thought to be a result of targeted prevention programming (50).

⁶ The study did not indicate an upper bound beyond “more than 2 years.”

Along with these risk factors for HIV transmission among SWs there is very low knowledge about HIV. Less than 1% of SWs in Kabul reported awareness of HIV in 2005 (7), whereas 61% of SWs in urban centers had heard of HIV in 2007 (8). The reasons for these differences are not clear, and may include sampling and methodology issues. Regardless, communication campaigns and targeted educational programs have been shown to improve knowledge levels among SWs about risk in sex work and the importance of condom use (1).

Links with poverty

Poverty may be a driving force for commercial sex work both on the individual and family level. In *ORA*'s study, 90% of SWs interviewed cited poverty as their reason for involvement in commercial sex work (7). In addition, *ORA* reported a pattern of impoverished street children turning to commercial sex work due to a lack of educational and economic opportunities. The following anecdote from a young Kabul boy illustrates the impact of poverty on inception of commercial sex work:

[His] father died and mother remarried when he was 4/5...Asghari went to live with his grandmother who asked him to begin collecting wood to sell to pay for his upkeep. Asghari found the job very difficult: "Some people were giving me money and started to sexually use me. I was happy with that because it was the easiest way to have money for my grandmother. Now it is my business, even if it is shameful. If there is another alternative, I will stop it." (7)

In extreme cases, poverty has forced families to agree to marriages where second and third wives are wed with the intention of forcing them into prostitution to increase household income (7). *ORA* recounts an interview with a woman in prison who was allegedly incarcerated after fleeing a marriage where she was forced into commercial sex work (7). The extent of this practice within Afghanistan remains unknown, and may be quite rare.

5. Male-to-Male Sexual Activity

MSM from a transmission standpoint

It has been estimated that by 2010 the annual number of new HIV infections acquired through male-to-male transmission in Asia will surpass those transmitted through IDUs and SWs and their clients (51). The extent to which male-to-male sexual behavior feeds into the HIV epidemic in Afghanistan will likely depend on three factors: 1) the total number of males with male sexual partners, 2) the frequency of partner turnover, and 3) rates of condom use. For all risk components, information available on male-to-male sexual contact is minimal.

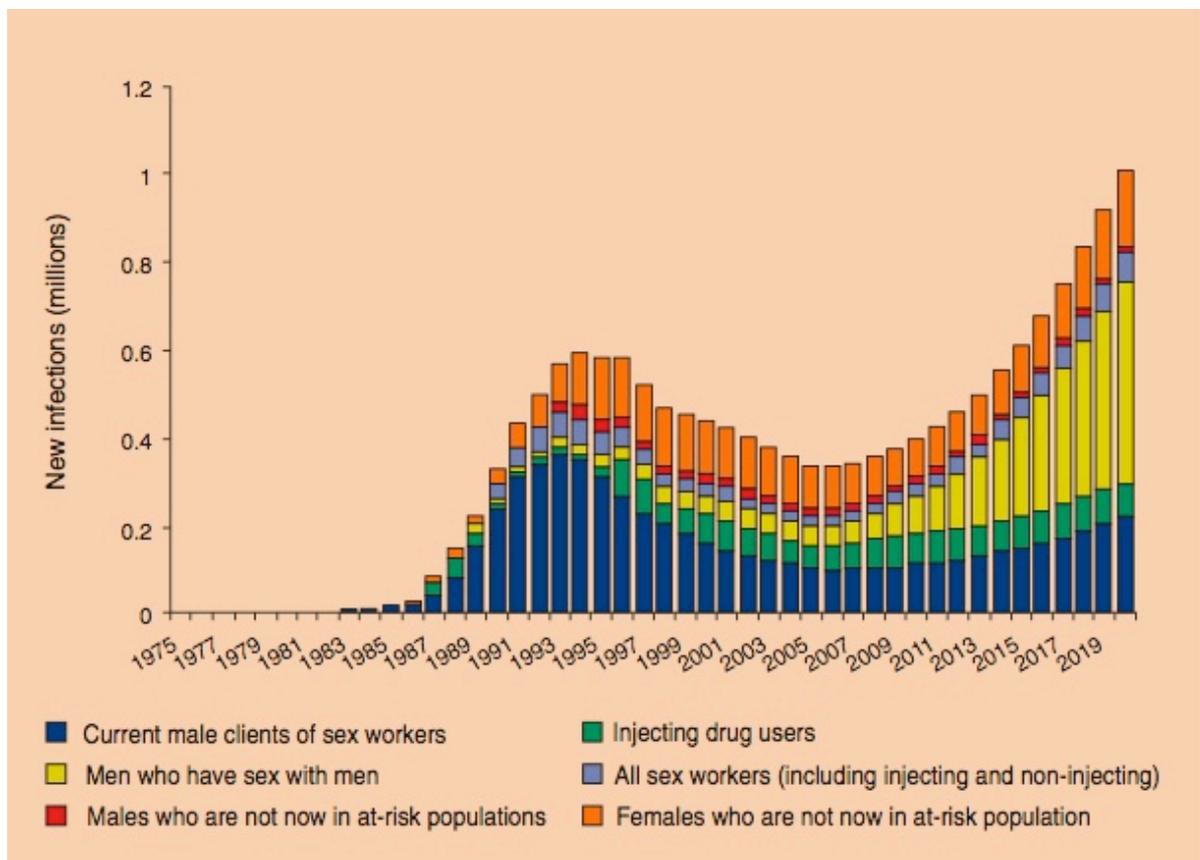


Figure 5. The increase of new infections attributable to men who have sex with men will increase in Asia over time

Source: Asian Epidemic Model estimates for the Asia region from *The Report of the Commission on AIDS in Asia*, 2008

Who engages in male-to-male sexual activity in Afghanistan and is it common?

While little information is available on the extent and practices of male-to-male sexual activity in Afghanistan, in the absence of prevention programs, sexual contact between males will likely play a large role in HIV transmission in Afghanistan. A recent study which

provided population and risk behavior estimates of sexual activity between males in South Asia (Pakistan, India, and Bangladesh) estimated that 6-8% of South Asian males have ever had sex with another male, 7% of males had a male sexual contact within the past year, and condom rates were low during male-to-male sexual contact (10).

Various sources reveal a substantial number of men participating in male-to-male sexual contact in Afghanistan. In a recent report from Mazar-i-Sharif, MSMs interviewed reported 12-60 male partners per month from a total male-to-male sexual network of 100-200 persons. This could total from 86,000 to 144,000 sex contacts a year for this network (52). Over 20% of IDUs in major cities in Afghanistan have had sex with male or boys at some point in their life (5). Furthermore, MSWs are available in Afghanistan's major cities (9). Other reports indicate sexual relationships between a younger *Bacha Bereesh* (Dari saying which translates "boys without beards") and older soldiers, warlords, or powerful male figures, and boys dressing as females to provide services to men at weddings and other entertainment settings (11). Sexual contact between men likely occurs in many more settings than those described above, including within prisons. Furthermore, in Afghanistan male-to-male sexual behavior has only been corroborated by a quantitative study among IDU communities. These gaps highlight the need for further exploration of male-to-male sexual behavior in Afghanistan.

Unprotected sexual contact between men can lead to rapidly expanding epidemics among the men who engage in it and their sex partners. Rates of HIV transmission through male-to-male sexual contact can substantially increase when individuals also engage in injection drug use. The co-occurrence of the two behaviors still needs to be assessed in Afghanistan, as it could be an important factor in the future spread of HIV (53).

6. Prison Populations

Reservoirs for HIV transmission

Globally, prison populations are at high-risk for HIV infection. Narcotic use is illegal in most Asian countries and drug users are frequently jailed (1). Drug users in prisons often lack access to clean needles, and consequently the sharing of needles and syringes is common among this group (1). As a result, most drug injectors who have been imprisoned are substantially more likely to be infected with HIV (1).

This holds true in Afghanistan as well. In a recent survey of IDUs in Kabul, 17% reported having injected drugs in prison (4). The same study reported that IDUs who injected in prison were five times more likely to be HIV infected than those who had never injected in jail (4). Drug trafficking is thought to occur in Afghan prisons. Prisoners can purchase heroin at cheap rates, and once addicted, drug prices are raised. The relative high cost of heroin encourages injecting, the method which gives a greater “high” with a smaller dose of heroin.

The risks to HIV infection for prisoners do not end with injecting drug use. Unprotected sex with other inmates, sexual abuse by prison guards, and the cramped and unclean quarters of many prisons further increase risks to HIV and other opportunistic infections including STIs and TB (54). The extent of access to services including basic hygiene, condoms, and medical treatment among prisons in Afghanistan is largely unknown, though anecdotal evidence suggests it is low. Information on sexual activity within prisons is currently unavailable in Afghanistan and needs to be addressed. The combination of injecting drug use, unprotected sex between males, and low access to services, however, will substantially increase risks of HIV transmission in Afghan prison populations.

Wives, sexual partners, and communities of ex-inmates also face increased risk of HIV transmission when the prisoners return home following incarceration, particularly in the absence of prevention and education services (21). A proactive approach to HIV in Afghanistan requires tackling both the risk of HIV transmission among prisoners and the risk of transmission from prisoners to their wives, sexual partners, and communities following release.

Size of prison population

The prison population in Afghanistan is growing. Over the past five years, 2,000 more inmates have been added to the penitentiary system that covers Afghanistan's 34 provinces, reaching nearly 12,000 in the summer of 2008 (personal communication, Director of Health Services-Prisons).

HIV prevalence

In a 2008 survey of 127 IDUs in the Herat prison (total prison population, 1,411) (personal communication, Director of Health Services-Prisons) found 11% to be HIV positive (12).

7. Road Transport Workers

In Afghanistan, truck drivers exhibit multiple risk behaviors and are consequently considered separately as a risk group for HIV infection. Characteristics of road transport workers can include frequent movement, extended absence from home, high exposure sources of commercial sex work, and potential sexual interactions with their younger “*kiliner*” (Dari-ized word indicating a younger road transport assistant). These factors place road transport workers at elevated risk for HIV infection, as well as common sexually transmitted diseases.

The road transport industry in Afghanistan

The reintegration of Afghanistan into regional trading routes following the fall of the Taliban in 2001 has been a boon to the Afghan road transport industry. International transport routes now connect Afghanistan to its five neighboring countries (Pakistan, Iran, Turkmenistan, Tajikistan, Uzbekistan, and China) over 13 international borders (13). Torkham, one of Afghanistan’s busiest borders connecting Kabul to Peshawar, Pakistan, averages 1,100 trucks crossing into Afghanistan every day (13).

On average, truck drivers in Afghanistan are away from their primary home for one to two weeks at a time, which can increase the demand for sex services (1), (personal communication, Torkham Customs House employee). Mobility of truck drivers increases their vulnerability to HIV transmission due to limited services on the road and easy access to sex work, which is often readily available at truck stops and international borders.

International borders and truck stops create favorable circumstances for HIV transmission. The spread of HIV as well as common STIs through truck stops that contain networks of commercial sex work has been globally documented. This phenomenon was confirmed within Afghanistan by Action Aid’s 2006 study where 39% of truck drivers reported that commercial sex work was available where they sleep at night (48). In addition, anecdotal evidence from *ORA*’s 2003 study reports schoolboys soliciting road transport compounds in Kabul for money in exchange for sexual services (7).

HIV prevalence

To date, no serological HIV data exist for truck drivers in Afghanistan. Regional examples of HIV transmission within truck driver populations, however, illustrate the potential for rapidly spreading HIV epidemics within this risk group. In India’s southern state of Madras, HIV seroprevalence doubled among truck drivers from 4% in 1995 to 8% in 1996 (48).

HIV knowledge, attitudes, and practices

Low knowledge of HIV combined with reported risk behaviors place truck drivers in danger of HIV transmission. In a survey of truck drivers on the Uzbekistan border and within trucking routes in Kandahar, approximately one third had heard of HIV/AIDS and 7% had paid for sex in the previous year, for which only one quarter had used condoms (9). In an older Kabul-based survey, no truck drivers reported using a condom during sex with SWs (7). In contrast, a study in neighboring Pakistan found that 82% of truck drivers had heard of HIV/AIDS, 56% admitted to multiple sex partners (including sex with a SW), and only 6.5% had ever used condoms (48).

8. Will the HIV Epidemic Extend Beyond those Most-at-Risk?

Wives and sexual partners of those most-at-risk to HIV transmission

While HIV epidemics in Asia appear to be centered around sharing of contaminated needles, unprotected commercial sex, and unprotected sex between men, in the absence of widespread access to prevention education and services the HIV epidemic will not stop with these groups. Wives and other sexual partners of those most-at-risk are increasingly sharing the burden of HIV in Asia. Without targeted prevention programs, unsuspecting wives participating in relatively low-risk behavior (sex with their husbands) will begin to share the burden of HIV as well. Furthermore, in the absence of pMTCT mothers may pass the virus onto their newborn children. As stated in the Report of the Commission on AIDS in Asia, “the best way to protect women [from HIV] in Asia is to prevent their husbands from becoming infected (1).”

The impact of medical services on HIV transmission

Medical service providers and users of health services are typically only at substantial risk for HIV transmission once HIV reaches a generalized level (unlikely in the Asian epidemic context); however, they play a critical role in the spread of other blood borne infections and in reducing stigma and discrimination.

Testing results from blood donations over the past 10 years show high rates of hepatitis B (3.29%) in addition to presence of hepatitis C and syphilis, and to a lesser extent, HIV (3). Furthermore, evidence from a recent Kabul survey indicates IDUs (with an HIV prevalence of 3.0% in Kabul) having been paid for donating blood (4).

Medical service providers can have an influential role in either encouraging acceptance of HIV testing and access to information and treatment or perpetuating stigma. In order to achieve universal access to HIV treatment and prevention services, the knowledge and attitudes among health workers regarding HIV, marginalized populations, and the right to health information must be improved. In a recent study of health professionals in urban centers of Afghanistan, respondents reported inadequate precautionary measures to protect against HIV infection: 57% cited wearing gloves, 35% reported hand-washing and only 17% identified storing blood safely (48).

9. Discussion

Reviewing available data in Afghanistan reveals a nascent HIV epidemic with the majority of cases concentrated among IDU populations who in turn have multiple linkages with other high and low-risk populations. This finding does not indicate the absence of a public health risk; conversely, it indicates to policy makers and donors that there is a small window of time to combat the HIV epidemic before it matures and expands. If aggressive prevention efforts are made now, the direction and speed of HIV transmission can be changed.

Prevention efforts, however, will not be effective without addressing and targeting high-risk behaviors such as sharing injecting needles, unprotected commercial sex, and unprotected sex between men. HIV will not be confined only to persons participating in these most-at-risk behaviors. However, it is certain that HIV transmission cannot be curbed without tackling these issues and addressing the marginalization and the stigma that prevent access to critical information and services of those most-at-risk.

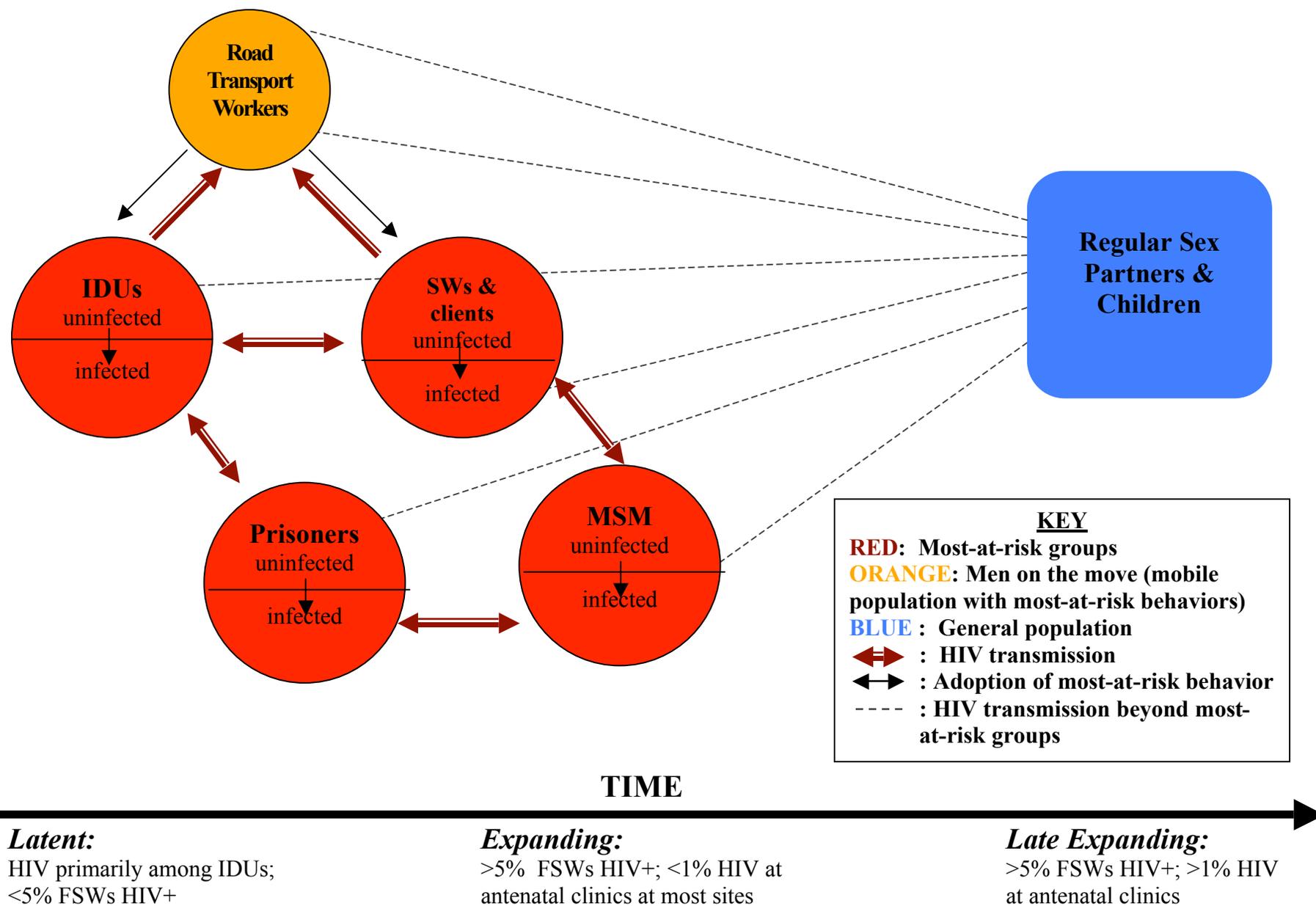
Importance of early commencement of targeted prevention programs

Figure 6 demonstrates how interactions between most-at-risk groups and their sex partners eventually leads to HIV transmission into low risk populations. This transition occurs in stages, through which an epidemic is characterized as *latent*, *expanding*, or *late expanding* (1). Understanding behaviors and interactions between most-at-risk groups and their sexual partners in Afghanistan helps predict an HIV epidemic trajectory, which emphasizes the need for targeted HIV prevention programming.

At the present time the majority of HIV infections in Afghanistan are among IDUs, both within prisons and communities. As IDUs continue to purchase sex and have unprotected sex with women and other men/boys, HIV will likely spread into these networks as well. As HIV spreads among IDUs, SWs, and MSM, their wives and regular sex partners are at increased risk of HIV infection. In the absence of adequate HIV education and pMTCT treatment, HIV will transfer from regular sex partners to their children. The extent of truck driver involvement within SW and IDU networks can spread an HIV epidemic along trucking routes and stops within rural, urban and semi-urban Afghanistan.

Figure 6. Interplay and roles of most-at-risk groups and their sexual partners in an HIV epidemic transition from latent, to expanding, to late expanding.

*Note: IDUs (injecting drug users), SWs (sex workers), MSM (men having sex with men)



This scenario of a rapidly expanding HIV epidemic can be altered if targeted prevention programs including harm reduction interventions, needle and syringe exchange programs, opiate substitution therapy, and condom distribution are quickly established. Figure 7 uses data from several Asian countries to model the impact of targeted programming on HIV spread.

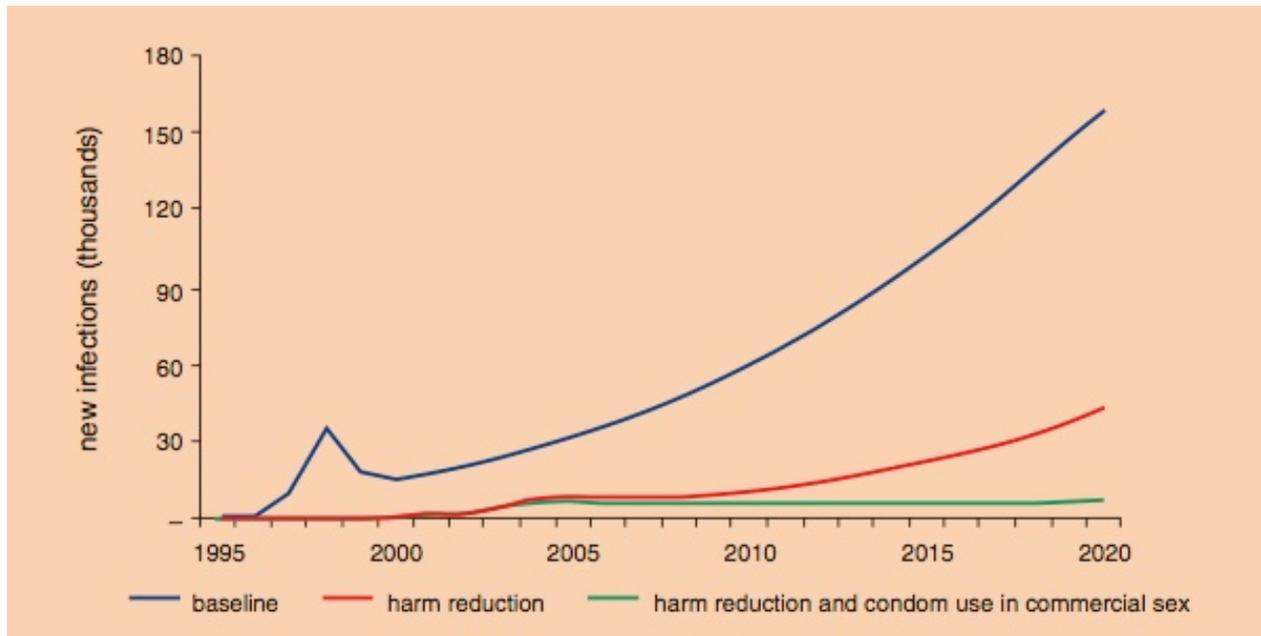


Figure 7. Early and effective prevention can avert a large-scale epidemic in latent epidemic scenario countries, like Afghanistan

Source: The Report of the Commission on AIDS in Asia’s estimates for hypothetical Asian population in latent phase, based on Asian Epidemic Model using regional averages

Other prevention programs specific to returning migrant workers and returning refugee populations must also be established. Introduction of HIV into poor and rural households, most often affected by economic out-migration in Afghanistan, has the potential to spark small sub-centers of HIV transmission throughout the country where HIV education, curative, and preventive services are most likely lacking, and where establishing these is not a priority.

The cost-effectiveness of a national response to HIV

Establishing prevention programs early on is imperative in Afghanistan where a large-scale epidemic would exacerbate health vulnerabilities and financial constraints faced by both donors and the government. The economic toll of an HIV epidemic would be substantial both nationally and at the household level. Decreased productivity from HIV infection

among the economically most active along with increased health expenditures would place an economic burden on individuals, families, and households (55). An increasing number of children having lost one or both parents would have educational impact on these orphans as well as economic consequences for households taking in the surviving orphans. Focusing efforts on HIV prevention not only responds to an epidemiological understanding of disease transmission but also provides a cost-effect approach to managing limited financial resources. In light of the Millennium Development Goals for Afghanistan, which include halting and reversing the spread of HIV infection by 2020 it is critical to allocate resources now to surveillance and targeted prevention, in order to avoid large scale health and economic impacts in the future (55).

10. Recommendations

While Afghanistan contains both risk behaviors and ‘social drivers’ of an HIV epidemic, a window of opportunity for prevention currently exists. The road toward prevention requires government bodies, civil society, research institutions, and leadership in the public and private sectors among others to tackle marginalization and deeply rooted stigma. These bodies must promote information sharing and access to prevention services by those most-at-risk. Though this challenge is great, with proactive political support and engagement of civil society and those most-at-risk, it is possible to prevent the spread of HIV and curb the epidemic in Afghanistan. This report proposes the following recommendations:

- 1. Increase communication and information sharing between agencies working in HIV.***
All data and information collected by NGOs and other organizations working on HIV should be shared, and such organizations should coordinate their activities through the NACP. Agencies working in HIV must improve the routine sharing of data and information to improve coordination and monitoring of programs through the government’s existing coordinating mechanisms, like HACCA.
- 2. Establish a Second Generation Surveillance System that can track HIV indicators over time and use this data to inform program and policy decision.*** Implementation of SGS in Afghanistan is critical to gathering the appropriate information for effective and targeted HIV programs (population size, risk behaviors, and HIV prevalence of those most-at-risk). Surveillance data should directly feed into programmatic improvements and adjustments to policies as new information becomes available.
- 3. Produce HIV epidemic modeling using seroprevalence and HIV risk behavior patterns.*** Applying information from SGS to produce an epidemic model of HIV in Afghanistan will guide national HIV programming and strategies. The model should project the rate of HIV infection within sub-populations and the general population and be used to guide efforts by policy makers, donors, and implementing organizations to reduce the spread of HIV in Afghanistan.
- 4. Establish HIV as a national priority, develop national HIV laws, and ensure policy implementation.*** While numerous policies and strategies exist for HIV prevention in Afghanistan, these policies remain within the Ministry of Public Health and/or the Ministry of Counter Narcotics. Policies must be incorporated into national law to

ensure universal access to services by those most-at-risk. Furthermore, existing HIV strategies and policies under the NACP/MoPH should incorporate gender-based objectives and focused targets for condom distribution, both of which are currently missing from these policies.

- 5. *Establish targeted intervention programs for those most-at-risk and reach high coverage rates.*** Preventing HIV in Afghanistan is contingent upon access to HIV knowledge and prevention services for those most-at-risk. Lessons learned from countries in the region indicate that uptake of services (peer education, condom distribution, and needle exchange) is high among these populations. While the NACP has established contracts with NGOs for harm reduction and services for FSWs and prisoners, it is critical that these programs be able to achieve high coverage rates as rapidly as possible. The Commission on AIDS in Asia report suggests a goal of 80% coverage of targeted populations in prevention programs (1). Currently, approximately 600 of the 1,200 mapped IDUs in Kabul have access to services from one of Kabul's NGOs providing services in harm reduction and figures are likely lower for other targeted prevention programs (Personal communication, MDM staff and NACP Harm Reduction staff).
- 6. *Adopt an integrated HIV service approach.*** HIV prevention programs should be integrated with other services including detection and treatment for TB and STIs and services for drug users. Establishing HIV programs should be strategically used to improve access to other critical services.
- 7. *Fight stigma, discrimination, and marginalization of at most-at-risk populations especially injecting drug users, sex workers, and men who have sex with men.*** Reducing stigma and discrimination requires creative thinking and committed responses by all stakeholders. Including community members during this process (IDUs, SWs, and MSM) will help programs and policies to be guided toward universal access to preventive services and lessening discrimination. Policy makers and thought leaders can be encouraged to reduce discriminatory measures that prevent access to crucial services by those most-at-risk.

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Appendix A: List of previously conducted HIV studies in Afghanistan

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Appendix B: List of National HIV Policies, Strategies, and Guidelines

Ministry Policies:

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