

# 20 Years of HIV in Bangladesh: Experiences and Way Forward



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## Acronyms

AIDS	Acquired immune deficiency syndrome
BAP	Bangladesh AIDS Program
BAPCP	Bangladesh AIDS Prevention and Control Program
BCC	Behavior change communication
BMET	Bureau of Manpower, Employment, and Training
BPC	Bangladesh Penal Code
BSS	Behavioral surveillance survey
CCM	Country Coordination Mechanism
CBO	Community based organizations
CRFs	Circulating recombinant forms
Ctg	Chittagong
DGHS	Directorate General of Health Services
DIC	Drop in center
FHI	Family Health International
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GoB	Government of Bangladesh
HAIF	HIV/AIDS Intervention Fund
HAPP	HIV/AIDS Prevention Project
HATI	HIV/AIDS Targeted Intervention
HCV	Hepatitis C
HIV	Human immunodeficiency virus
HNPSP	Health and Nutrition Strategic Program
HSV2	Herpes simplex virus 2
IDA	International Development Association
IDU	Injecting drug users
LSE	Life skills education
MARP	Most at risk population
MOHFW	Ministry of Health and Family Welfare
MSM	Male who have sex with male
MSW	Male sex workers
NAC	National AIDS Committee
NASP	National AIDS/STD Program
NCA	Narcotics Control Act
NGO	Non-governmental organization
NSP	Needle/syringe program
OST	Opioid substitution therapy
PLHIV	People living with HIV
PSUs	Primary sampling units
RDS	Respondent Driven Sampling
RSRA	Rapid Situation and Response Assessment
STD	Sexually transmitted disease
STI	Sexually transmitted infection
TC-NAC	Technical Committee of the National AIDS Committee
TLS	Time Location Sampling
VCT	Voluntary testing and counseling



## Foreword

We take great pride in disseminating this joint report of the World Bank and UNAIDS consolidating the experiences of HIV/AIDS programming in Bangladesh over the past two decades. The report describes the scope and the coverage of interventions delivered, and the institutions involved in the response to HIV/AIDS in Bangladesh; it also presents analyses of the trend of the epidemic and impact of the prevention programs.

This work concludes that despite Bangladesh's vulnerability to HIV, one of the reasons for low prevalence in Bangladesh is the early and sustained implementation of HIV programs targeted to the most at risk populations – informed by data from regular surveillance and behavioral surveys. A state-of-the-art surveillance system has been in place since 1998. Eight serological and five behavioral surveillance surveys have provided critical guidance to better target the populations at risk and make the interventions more effective.

We believe that the report will provide critical insights into the HIV/AIDS situation in Bangladesh, and hope that it will thus assist policy-makers and experts to address gaps, and ultimately strengthen the national response. Under the capable leadership of the Government of Bangladesh, we remain committed to the fight against HIV/AIDS.

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## Executive Summary

This report synthesizes data from surveillance, behavioral surveys and published and unpublished research to better understand emerging patterns and trends in the HIV epidemic in Bangladesh. Taking stock of 20 years of experience with HIV in Bangladesh, this report summarizes what is known about the coverage and impact of HIV prevention services, including knowledge on risk and protective behaviors.

The report is divided into nine chapters. Chapter I provides a brief introduction and an overview of the methodology used for this exercise. Chapter II discusses the risks and vulnerabilities of the high risk groups including female sex workers, injecting drug users, male who have sex with male, *hijra* and overlapping populations, while Chapter III discusses the trend of the infection amongst partners of high risk groups. Bangladesh continues to report low condom use, which is analyzed and discussed in Chapter IV. Structural factors including macro level and intermediate level factors that affect HIV interventions in Bangladesh are addressed in Chapter V. The national HIV response is discussed in Chapter VI. The report concludes with a discussion of the main findings, with recommendations for the future in Chapter VII, and Chapter VIII and IX are annexes and references.

### Overview

Early and continued implementation of HIV prevention programs among most at risk populations, guided by data from regular surveillance and behavioral surveys have helped Bangladesh largely keep HIV at bay.

HIV prevalence in Bangladesh remains low – less than 0.1% in the general population; below 1% amongst female and male sex workers (FSWs and MSWs), male who have sex with male (MSM) and transgendered people (*Hijra*); and just above 1% amongst Injecting Drug Users (IDUs) except for one neighborhood in Dhaka.

In Bangladesh, as in other countries in the region, HIV risk arises mainly from unprotected paid sex, sharing of used needles and syringes by injecting drug users, and unprotected sex between MSM. Recent data suggest that there are two key areas for HIV in the country:

- Injecting Drug users: HIV prevalence has started to increase amongst IDUs in Dhaka, rising to 7% in 2007/08 in one neighborhood. This epidemic “hot spot” is clearly a priority.
- International returned migrant workers: This group accounts for the majority of passively reported cases of HIV in the country and may be a potential source of HIV transmission.

An epidemic may also be emerging among FSWs in towns bordering India. The numbers are small but this area needs careful attention. Genetic analysis found that the HIV strains were different in each of these groups as of 2005. There is some overlap amongst SWs, as some inject drugs and some

engage with migrant workers. A rising epidemic in one of these groups, therefore, could lead to a spread in others.

## **The Epidemic Situation: Most-at-Risk Populations**

### ***Injecting Drug Users (IDUs)***

The most recent surveillance, in 2007, tested 6,508 drug users from 28 different cities. Overall HIV prevalence was 1.2%, with low rates found in drug users from five cities. However, a rate of 7% was reported in one neighborhood of Dhaka, where the largest concentration of IDUs is found (7,400 of the estimated 20,000–40,000 IDUs in Bangladesh).

A four-year cohort study in Dhaka found a constant rate of new HIV infections (incidence) and falling incidence of hepatitis C (HCV), which suggests adoption of safer injection behaviors. There is concern for the high rates of HCV amongst IDUs in most cities, and the low levels of sound knowledge regarding HIV transmission and prevention. This area needs particular focus given that a recent rapid assessment carried out in 55 districts suggests that the number of IDUs is increasing nationally.

Sharing of needles has declined in Dhaka, but remained high in Chandpur, and increased in Rajshahi and Chapainawabganj where law enforcement action had made it more difficult for intervention programs to locate IDUs. Homeless IDUs were more than five times as likely to be HIV positive as IDUs living at a fixed address; special efforts are needed to prevent injection sharing and promote condom use among HIV positive IDUs. Half to two thirds of IDUs bought sex from female sex workers, and consistent condom use ranged from 14% to 42% (depending on city). Female drug users are very vulnerable; most sold sex to support their addiction, and depended on their male partners to buy their drugs and then shared injections with them.

### ***Female sex workers (FSWs)***

The estimated number of FSWs in Bangladesh of 90,000 needs to be updated. The number of part time or so-called “casual” sex workers is even more difficult to estimate. The sex trade has been shifting away from brothels to venues where there is less regulation including hotels, streets, and private homes. There is considerable movement of sex workers among venues and cities in response to client flow and law enforcement.

The 8<sup>th</sup> round of surveillance of nearly 4,800 FSWs in 15 cities found low overall HIV prevalence (0.3%). HIV prevalence was below 1% at all sex worker sites except in a small border town in northwest Bangladesh, where 4 of 150 (2.7%) sex workers were HIV positive, and all of whom had crossed the border into India to sell sex.

In behavioral surveys, FSWs in many sites report increased condom use and declines in active syphilis rates. Hotel based sex workers are most likely to report more than 20 clients a week and very low condom use even with new partners; their very high rates of STI symptoms confirm their high vulnerability.

### ***Male who have sex with male (MSM)***

MSM are a heterogeneous group of men in their sexual behaviors, and many do not self-identify or fit neatly into any of the categories used by *kothi* (feminized males). Many MSM hide their sexual



activities with other men, reject the term MSM, and simply identify themselves as “male”. The estimated number of MSM (including men who sell sex to other men – MSW) in Bangladesh is between 40,000–150,000. This figure is widely considered to be a gross underestimate.

Surveillance rounds and a 2006 study in Dhaka that used social networks to recruit the sample all found very low HIV in MSM, along with low rates of active syphilis. Large proportions of MSM and MSW, however, report STI symptoms (MSW more than MSM), as well as multiple sex partners (including women), group sex (often associated with violence) and very low condom use with all partners. MSM are highly networked, so if HIV were to emerge, it could spread very rapidly in this population.

### ***Hijra***

*Hijra* are highly marginalized and stigmatized, and suffer social exclusion starting in early childhood. Abuse – physical, verbal and sexual, is common even within their community.

Social and cultural changes are making it more difficult for *hijra* to earn an income through traditional ways, and about one third report having no option but to sell sex, an act which is not condoned within the *hijra* community.

*Hijra* reported high client turnover and almost none reported to use condoms consistently. Group sex was common and often forced. HIV prevalence is less than 1%. Active syphilis rates are high, declined for some years, but have risen since 2004–05. Considerable proportions of *hijra* reported having STI symptoms.

### ***Overlapping risk groups***

The main overlapping area across MARPs is amongst female drug users. Two thirds of female drug users reported to sell sex and very low condom use. Another reported area of overlap amongst MARPs is amongst MSWs, with 5% of MSW from Chittagong reporting to have injected drugs in the last year.

Genetic analysis of HIV strains confirms that spread of HIV occurs within networks of IDUs through sharing of injection equipment, with almost no evidence of transmission of HIV between MARPs. HIV subtypes from migrants are genetically diverse and differ from locally circulating strains in IDUs and female sex workers. These data suggest that Bangladesh probably has two different streams of the epidemic – one circulating internally primarily within IDUs and the other imported from abroad which does not appear to be circulating in-country yet.

### **Other potential risk factors**

Migration may be a factor in HIV transmission in Bangladesh. People whose work separated them from their spouse were much more likely to report non-marital sex, with very low condom use.

International migration and its relation to HIV transmission need to be better understood. Also of concern is the rising HIV prevalence rate in the states of India bordering Bangladesh (National Institute of Health and Family Welfare & National AIDS Control Organization, 2007) coupled with cross border mobility alongside practice of risky sex.

Migrants, both international and cross border, have generally not been targeted by HIV prevention efforts in the past and there is little understanding as to how such targeted intervention could be implemented. Data suggest that HIV transmission from international migrant workers who have returned and are HIV positive has been mostly restricted to their spouses, although the extent of spousal transmission and couples in which one person is HIV positive and putting the other at high risk has not been assessed systematically in Bangladesh.

A recently completed anthropological study reports on socio-cultural practices and the socio-economic context that would make *indigenous women* vulnerable to HIV. In the study sexual relations were noted to play a crucial role in obtaining and retaining employment as wage laborers. In fear of losing their work, the role of stigma contributes directly to their vulnerability.

Children of sex workers, boys who appear more feminized and become labeled as *hijra* and street children are very vulnerable to violence and sexual abuse. MARPs are much more likely to report first sex at a very young age than the general population.

Approximately 10% of men in Bangladesh report to having ever *bought sex* from female sex workers. Amongst sex workers, client turnover is high, with 80% of the surveyed men reporting to have visited one or more new sex worker in the past month.

In the national survey of youth, almost 20% of unmarried males reported having premarital sex, and for 28% of them the last sex was with a sex worker. The reporting of consistent condom use amongst this group with FSWs, however, has risen from 14% (2005) to 48% (2008).

About one in three (28%) young people who have ever had sex reported one or more symptoms of an STI in the past 12 months, but only a quarter sought care from a trained provider.

## **Bangladesh's Response to HIV and Evidence of Impact**

### **Organizational Structure**

The Government of Bangladesh (GoB) acted early in responding to the HIV epidemic, forming the National AIDS Committee (NAC) in 1985. This high-profile advisory body has the President as Chief Patron and is chaired by the Minister of Health and Family Welfare. The NAC is responsible for formulating major policies and strategies, supervising program implementation, and mobilizing resources. A NAC Technical Committee (TC-NAC) of experts provides technical advice to the NAC and National AIDS/STD Program (NASP).

The NASP, within the Directorate General of Health Services of the Ministry of Health and Family Welfare (MOHFW), is the main government body responsible for overseeing and coordinating prevention and control of HIV/AIDS, and ensuring that the National HIV/AIDS Strategy and national policies are implemented. Other ministries carry out HIV prevention and control activities through their core structures, with focal points appointed in key ministries and departments to collaborate and rationalize roles and responsibilities.

### **Main response elements**

Bangladesh responded early to HIV – before the first case was reported in the country. A series of national plans (beginning in 1988) has guided the response in Bangladesh. State-of-the-art surveillance and use of the epidemic data to make strategic and program decisions are strong points.

Consistent with the pattern of the epidemic in Bangladesh, much of the response focus has been on preventing HIV in groups whose drug injecting and/or unprotected sex with multiple partners put them at most risk for HIV and other STIs. Over the 20 years, a fairly comprehensive set of policies, guidelines and strategic frameworks and a comprehensive panel of services for both targeted MARPs and the general population have been put in place. Some interventions have been recognized internationally as best practice.

Total HIV expenditures since 2000 is just more than US\$127 million, the main funders being GFATM, World Bank funded project as well as the Health Sector Program, DFID funded project, USAID and the ADB. Most programs are implemented by the nongovernmental organizations (NGOs).

**Health system response.** Activities to prevent transmission in health care settings have focused on: training health care providers on Universal Precautions to prevent HIV in health care settings, and more recently, on provision of HIV-related clinical services, including voluntary counseling and testing (VCT) since 2002, management of STIs, antiretroviral therapy (ARV) and treatment for opportunistic infections. Steps have also been taken to improve the safety of Bangladesh's blood supply, with good progress made in shifting to voluntary blood donations.

**General population.** HIV awareness and prevention information have been provided through radio and television programs, workshops, concerts and print media, micro-credit groups, youth organizations and clubs; secondary schools, and communications and advocacy with opinion leaders, including working with imams to talk about AIDS in mosques. **Condom promotion and distribution** is done by NGOs, some government facilities, and through creative social marketing to the general population as well as to specific groups. Condoms are widely advertised and sold at 300,000 sales outlets across the country and through 'peer agents'.

**Care and support for People with HIV.** VCT has been offered since 2002, although access is still very limited and the quality and range of services and waiting time for test results vary. Post counseling for people who test positive includes referral to PLHIV support groups, which now have well over 500 members. They provide counseling, home visits, referrals and some health care free treatment for opportunistic infections, advice and information on positive living, and communications to the broader public to try and reduce stigma and discrimination. Only a few health facilities in Bangladesh (mostly in Dhaka) are able to treat HIV-related infections, or provide ART. In mid-2009, there were around 200 people on ART, estimated at only 3 percent of those who need treatment (the 1,495 confirmed HIV cases as of the end of 2008 were 12.5% of the estimated 12,000 people with HIV in Bangladesh.)

#### **Targeted interventions for most at risk populations**

Targeted interventions were begun by NGOs in 1995. Later, strong partnerships among Government, NGOs, and civil society and donors evolved. The main groups targeted are IDUs, female sex workers, males having sex with males, *hijras*, and armed forces serving in other countries, and to some extent, male clients of FSWs, especially people whose work takes them away from home frequently or for long periods, notably transport workers.

Depending on the target group, intervention packages include condom promotion and distribution, STI management, needle/syringe programs (NSP), health education and peer education. There is also some drug dependence treatment, counseling and testing, and support for self help groups, and

efforts to influence and orient local officials and others influential people who can facilitate or inhibit access to the target populations, and at higher levels to work with different government departments towards favorable policy changes. Programs work with the police, prisons, Department of Narcotics Control, and local communities.

**There is evidence that prevention efforts are having some impact:** Decreases in hepatitis C (HCV) and in active syphilis in IDU and FSW in many sites indicate use of safer injecting practices (except in one Dhaka neighborhood) and are consistent with reports of increased condom use by some sex workers and by their clients. MSM report more benefits from HIV prevention programs than other MARPs, although only a small proportion of MSM are reached by the prevention programs. Many heroin smokers report accessing needle/syringe programs (NSP), suggesting that the NSP reach regular and intermittent injectors. A substantial proportion of female sex partners of male IDUs are being approached by HIV prevention programs and they are open to receiving services including being tested for HIV. Partner notification for STI treatment is difficult, but pilot efforts show it is possible with appropriate counseling services. While prevention programs in Bangladesh appear to be helping to contain HIV, **the data also point to gaps in services and opportunities for improving the reach and effectiveness of services**, which the country cannot afford to ignore.

Surveys that ask about risky behaviors indicate improvements in some cities and populations, but deteriorations in others. Some of these deteriorations correlate with changes in service delivery, including interruptions in service provision due to gaps between projects, irregular funding, or irregular supply of materials including condoms, sterile needles/syringes, and STI drugs. Service expansions also may be a factor – quality may have been compromised by the ‘one size fits all’ approach adopted in scaling up programs. Effective programs are based on an understanding of how MARPs live and are organized, and take account of their needs. Many structural barriers which are beyond individual control obstruct the adoption of safer behaviors by MARPs and need to be better understood before they can be addressed; such barriers are well recognized impediments to behavior change (Gupta et al., 2008). A greater involvement of MARPs themselves in programming could help resolve some of these issues. This is taking place to some extent with female sex workers (Hoque, 2008) and to a lesser extent with *hijra* and MSM (Bandhu Social Welfare Society, 2008) but it is almost non-existent with IDUs. Overall, self help groups and community-based organizations (CBOs) are weak but their input and involvement is essential for more effective uptake of programs. Using IDU’s social networks – and especially working with HIV positive IDUs to reach out to their injecting networks and sexual partners – could make programs more effective. Approaching sex partners of MARPs has been difficult and more effort needs to be made towards achieving this.

**Reasons for low condoms use.** Bangladesh has consistently documented low condom use by sex workers, although 2006-07 surveys of FSW and clients report increases. Inadequate knowledge about HIV transmission and services was associated with lower condom use among IDUs, FSWs, MSW, *hijra* and MSM, as was forced sex for FSWs and MSM. In most cases, MARPs who accessed prevention services were more likely to use condoms, and although clients and FSWs provided practical reasons (hurried sex acts, not enough condoms) as well as personal preferences and misconceptions about condoms and semen to explain not using them, when FSWs felt empowered to ask clients, there was increased likelihood of condom use.

### **Building on strengths and addressing service gaps**

On the whole, the evidence indicates that HIV prevention programs for MARPs are working and need to be continued. The analysis also points to ways that existing services could be improved.

***Understanding and adapting to local contexts and client needs:*** Drug taking or selling sex behaviors are practiced by MARPs within particular structures and situations, to which services may need to be adapted. Situations vary and can change with time, making local knowledge and flexibility essential. Involvement of local groups -- especially MARPs themselves -- in the design and implementation of programs can greatly enhance success. For programs to succeed, they must also recognize that clients attend to their immediate and urgent concerns (shelter, food, drugs, violence) before paying attention to the more distant and abstract fear of HIV. Also, many MARPs face multiple HIV risks, which need to be addressed in a more integrated way. For IDUs, safe injections are critical -- but safe sex needs more emphasis -- especially for HIV positive people. Better linkages between harm reduction services for IDUs and drug treatment and rehabilitation facilities are needed.

***Regular evaluation of ongoing HIV prevention programs:*** HIV intervention programs for IDUs and female sex workers have been expanded considerably to cover more than half of Bangladesh. Interventions appear to be working better in some areas than others. It is very important to have independent evaluations of ongoing programs at regular intervals (not just at the end of the funding support period), and to use the information from the evaluation to modify and improve services. Bangladesh has good HIV surveillance, but could do more to monitor program progress and use operational research studies to understand what is working and what isn't and how to make programs even more effective. There are major gaps in information in some key areas (such as international and cross border migrants), and updated estimates are needed of the numbers of MARPs. Studies piloting innovative prevention designs through operations research are needed, also frequent triangulation of data to be alert to changes in the HIV scenario in Bangladesh that should trigger changes in program emphasis. Novel methods need to be tried to access the more hidden populations such as residence based female sex workers and MSM. Using networks of MARPs is a promising method.

***Mobility:*** More information is needed about cross border mobility including what occurs during cross border movements, the extent of HIV risk, and what might be done. Again, involvement of the target population in designing and implementing any intervention would be advisable.

***Coordination and planning:*** Inadequate resources (personnel, funding, infrastructure, etc.) for the NASP have been a constraint on the effective planning and coordination of the national response to HIV in Bangladesh. This has been evident in interruptions in service delivery at the field level as well as inadequate, inappropriate and irregular supplies of materials (condoms, lubricants, sterile injection equipment, and STI drugs). Smooth coordination among the many funders, hundreds of implementers, and multiple ministries whose engagement is needed to ensure that law enforcement and other key services are in place, is a difficult challenge, and has sometimes hindered service provision. In addition, some of the needs of MARPs are beyond the scope of HIV prevention services, such as legal support, and may be better served by others -- but linkages to other service providers are often lacking. Appropriate resources need to be provided to enhance the capacity of NASP to carry out strategic planning and coordination and engage the sectors that are important to the success of interventions, and to providing environments that enable MARPs to practice safe behaviors, and service providers to provide services effectively.



# **Chapter I: Introduction and Methodology**

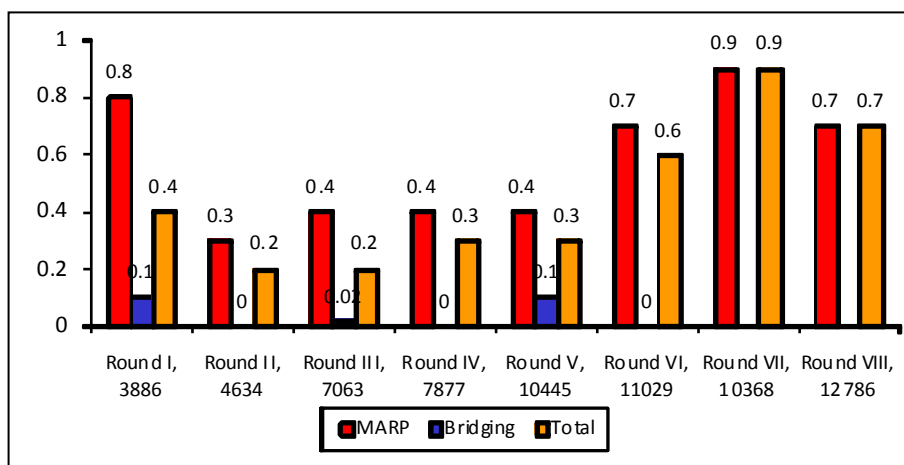




## Introduction

The first case of HIV in Bangladesh was detected in 1989. By the end of 2008, the Ministry of Health and Family Welfare (MOHFW) had confirmed 1495 HIV cases, 476 of which had developed Acquired Immune Deficiency Syndrome (AIDS) and 165 had died. However, most cases go unreported because of stigma and very limited capacity for HIV testing. UNAIDS/WHO estimate that 12,000 people in Bangladesh were living with HIV in 2007 (estimate range: 7,700 to 19,000) (UNAIDS/WHO/UNICEF, 2008). Although HIV prevalence remains very low (<0.1%) in the general population and low (<1%) in most at risk populations (MARPs) -- female and male sex workers (FSWs and MSWs), men who have sex with men (MSM) and transgendered individuals (Hijras), it is significantly higher among Injecting Drug Users (IDUs) (over 10% in one part of Dhaka) and shows worrying increases in recent surveillance rounds (Figure 1).

**Figure 1: Overall HIV Prevalence rates over rounds I- VIII**



Even prior to the first HIV case, the Government of Bangladesh (GoB) had taken action, and formed the National AIDS Committee (NAC) in 1985 in anticipation of an epidemic. The NAC is a high-profile body with the President as Chief Patron and the Minister of Health and Family Welfare as the Chairperson. Many programs for HIV prevention have been created and expanded, executed by hundreds of nongovernmental organizations (NGOs). Second generation surveillance (UNAIDS/WHO, 2000) was installed to monitor the epidemic, and several research studies and surveys have been carried out among most at risk populations (MARPs) and the general population to better

understand and respond to HIV in Bangladesh. Efforts have also been made to model the future course of the epidemic. The responsibility for coordinating all these activities lies with the National AIDS/STD Program (NASP) which is under the Directorate General of Health Services (DGHS).

Given that so much has been undertaken and studied over the last twenty years, it is time to assess the cumulative effect of responding to HIV in the country and what needs to be carried forward. This report reviews the experience of twenty years of HIV in Bangladesh, looking at the current status of the HIV epidemic, risk and vulnerability factors especially among MARPs, existing HIV prevention services, as well as barriers and facilitators for adopting protective behaviors.

More specifically, the goals of this report are:

- To provide an in-depth review of the present status of the HIV epidemic
- To review and analyze existing data to better understand the effectiveness of HIV prevention services
- To review existing data to understand barriers to and facilitators for adopting safe behaviors to protect against HIV infection
- To provide directions and recommendations on the way forward based on available evidence.

The report focuses on MARPs. As noted in the recent report of the Commission on AIDS in Asia (Commission on AIDS in Asia, 2008), epidemics in the region are “centered around unprotected paid sex, the sharing of contaminated needles and syringes by injecting drug users, and unprotected sex between men.” The evidence suggests that this is also the case in Bangladesh. This makes understanding these groups and their vulnerabilities crucial for averting an increase in the epidemic. However, because evidence suggests that youth tend to engage in risk behaviors and because young people aged 15-25 comprise 20% of the population of Bangladesh and account for a disproportionate share of new infections in many countries, data on this segment of the general population are also included.

## **Methodology**

The methodology used for this report was a desk review of existing data, published and unpublished. Data sources included serological and behavioral surveillance surveys (BSS), research studies, and rapid situation response assessments (RSRA). Secondary analyses of data from the most recently conducted round of BSS and of some surveys were also conducted.

A major source of data for this review was the second generation surveillance system. Surveillance in Bangladesh is described in more detail in Annex 1. A brief description of the methodologies used for research studies from which data have been used is provided in the relevant chapters. Where data have been quoted from published articles, references are provided. Together the data provide a picture of the epidemiology, and a comprehensive look at the vulnerability and risk behaviors of specific groups. They show the many factors that link these groups and highlight programmatic issues that must be addressed to limit the spread of HIV in Bangladesh. It is to be noted that no analysis is presented on reported cases of HIV. A recent assessment of existing information available from close to 900 people living with HIV (PLHIV) (NASP, Save the Children USA, & ICDDR, 2009c (forthcoming)) covers that aspect of the HIV scenario, for which reason a further analysis is not presented here.

# **Chapter II: Risks and Vulnerabilities for HIV in Bangladesh**



# Risks and Vulnerabilities for HIV in Bangladesh

## Introduction

Understanding which populations are most at risk of HIV is crucial to efforts to address HIV, be they prevention, treatment or care and support. Fortunately, in Bangladesh, surveillance has been in place since 1998 and multiple studies have been conducted that allow for the identification of MARPs and their specific vulnerabilities to HIV. The data are consistent with the three main MARPs common to the Asian model of the epidemic: drug users, female sex workers and males who have sex with males (MSM). At the same time, ongoing assessments raise the specter of new groups that may have particular vulnerability. This chapter summarizes what is known about the three main MARPs in Bangladesh, providing data on the nature of these groups, the prevalence and incidence of HIV and STIs among them, their risk behaviors, and other key relevant issues. The level of detail provided for a particular group reflects the evidence available. The chapter also summarizes available data on other groups potentially at risk of HIV and STIs, particularly international and cross border migrants, indigenous people, children and general population youth.

## Drug Users (Opiate and Opioid Users)

### Definitions of drug users

In Bangladesh, the discourse on HIV related to drug misuse is restricted to smoking or inhaling and injecting of opiate and opioid drugs. Various definitions have been used to distinguish smokers from injectors and even the definitions used in serological and behavioral surveillance vary as shown below:

Serological surveillance	Behavioral surveillance survey
<b>Injecting drug users:</b> Those who were primarily injectors and had injected in the previous year	<b>Injecting drug users:</b> Those who injected drugs within last two months and were accessible through public injecting spots
<b>Heroin smokers:</b> Those who were primarily heroin smokers and had injected no more than twice in the previous six months	<b>Heroin smokers:</b> Those who were primarily heroin smokers and had not injected more than six times in the previous six months

In both definitions, some drug users fall into neither category so a third category of drug users was created who primarily smoked but also injected frequently enough to be considered as injecting drug users (IDUs); these drug users are classified as “a combined group of smokers and IDUs”. Together all three categories are referred to as drug users in this report.

Drugs used for injection in Bangladesh are most commonly ‘cocktails’ of different pharmaceuticals, primarily buprenorphine with anti-histamines and sometimes diazepam; heroin is typically inhaled, not injected (Azim, Chowdhury et al., 2008; Panda et al., 2002). Buprenorphine is not an approved drug for use in Bangladesh and is smuggled across the border from neighboring countries (Hossain, 2005).

### Estimates of drug users in Bangladesh

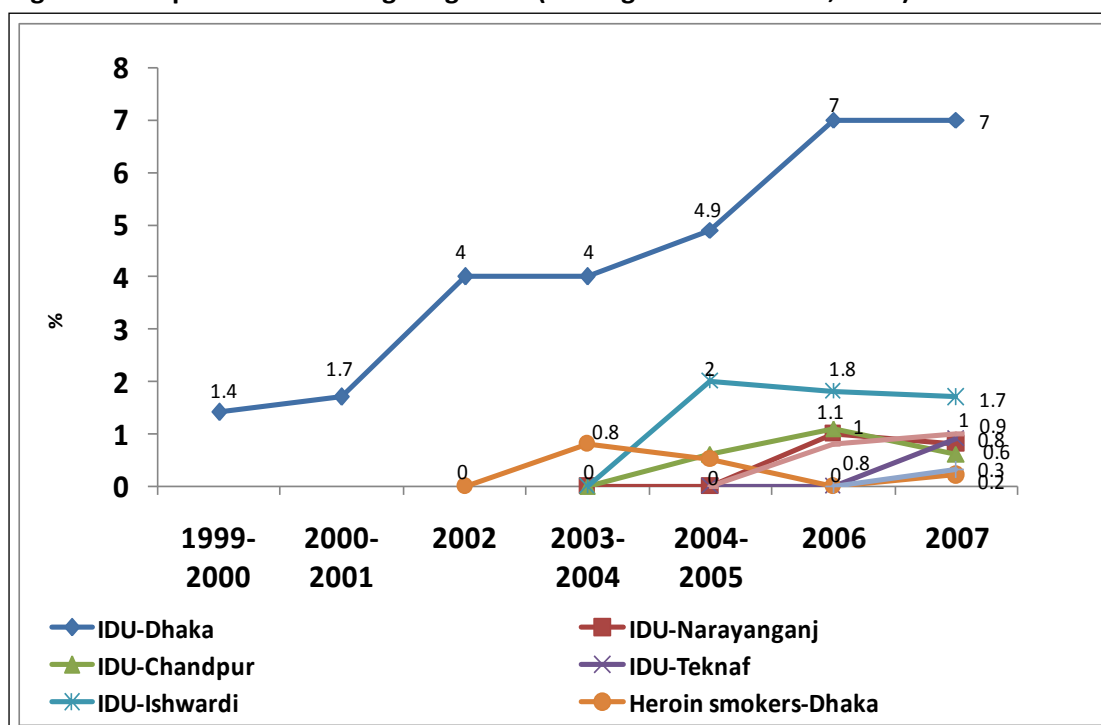
There are an estimated 20,000-40,000 IDUs in Bangladesh (Mathers et al., 2008; National AIDS Committee, 2006; Reddy, Hoque, & Kelly, 2008) with the largest concentration estimated to be in Dhaka city (approximately 7,400). However, a recent rapid assessment (RSRA) in 55 districts conducted for GFATM, round 6, found IDU populations in cities where IDUs did not previously exist, suggesting an increasing number of IDUs nationally. An up to date size estimation exercise is required. The number of heroin smokers is not known.

### HIV infection in drug users

Serological surveillance for HIV, hepatitis C (HCV) and syphilis has been conducted regularly among drug users, especially among IDUs, since 1998.

During the 8<sup>th</sup> round of serological surveillance conducted in 2007, 6,508 drug users were sampled from 28 different cities; overall prevalence of HIV was 1.2%. HIV was detected in drug users from six cities (Figure 2); HIV prevalence was very low in all cities other than in Dhaka where the rate has gradually increased among male IDUs over the years. This group, which has been sampled through the needle/syringe program (NSP) since 1999-2000, has consistently had the highest HIV rates among any population group in Bangladesh. Prevalence first exceeded 5% (the proxy threshold between a low level and a concentrated epidemic) in this group in 2006, reaching 7%.

Figure 2: HIV prevalence among drug users (serological surveillance, 2007)



Incidence of infection (i.e. new infections) provides more pertinent information regarding the epidemic than prevalence data. Measurement of incidence is complicated in surveillance designs. Cohort studies in which the same individuals are followed over time are most suited to determine HIV incidence rates. HIV incidence data are therefore available from the male IDU cohort study conducted in Dhaka (see Box 1) and show no changes in cumulative incidence rates over the four years that the studies were conducted (Figure 3). The relatively low incidence rate suggests that there are protective factors at play which need to be better understood. Some of this protection may be due to the early implementation of the NSP, as demonstrated by a mathematical modeling exercise that predicted that NSP may have reduced HIV incidence among IDU by 90% in the 1990s (Foss et al., 2007). Similar analysis is required to assess whether the continuing low incidence is attributable to the NSP.

**Box 1: Cohort Studies among IDUs**

Four cohorts of IDUs were established in Bangladesh –male IDUs in two areas of Dhaka city (Azim, Chowdhury et al., 2008), female IDUs in Dhaka, Tongi and Narayanganj (Azim et al., 2006), IDUs in Chandpur and HIV positive IDUs in Dhaka.

The male IDU cohort in Dhaka was initiated in August 2002 when 561 IDUs were enrolled from two areas of Dhaka city who were  $\geq 15$  years of age, who had not changed their address in the last six months and who were attending the NSP of CARE, Bangladesh. The first phase ended in August 2004. It was continued as a second phase from April 2005 to October 2007 when the cohort was opened to include injection sharing partners of HIV positive IDUs. The objectives of the second phase were: to continue monitoring the infection rate for HIV, HCV and syphilis and risk behavior in the existing IDU cohort; to expand the cohort to include the injection sharing partners of the HIV positive IDUs in an effort to characterize IDU social networks and determine individual and network-level risk factors for HIV and HCV infection; and to provide voluntary counseling and testing (VCT) services to sex partners of the cohort IDU who were willing to bring them to the services and to continue to provide feedback to the intervention program for more appropriate programming and enhancing advocacy.

The female IDU cohort study was conducted between December 2004 and May 2007, and included women age 15 years and older with a history of injecting drugs at least once in the last six months. Enrolment of female IDU was non-random and included those who were accessed with the help of outreach workers from the NSP of CARE, Bangladesh, and by snowball sampling through the networks of female and male IDUs, female heroin smokers and female sex workers. A total of 135 female IDUs were enrolled at baseline. The objectives of the study were: to encourage female IDUs to actively access the intervention programs of CARE, Bangladesh and evaluate the interventions that they are accessing in relation to their needs; to assess the vulnerability of female IDUs in Dhaka city to HIV and HCV infections using qualitative and quantitative methodologies and to determine the incidence of HIV, HCV, hepatitis B and syphilis.

The Chandpur IDU cohort study was conducted between September 2004 and December 2006 and 178 IDUs were enrolled. IDUs were enrolled if they were currently injecting drugs and had been doing so for two months or more, used injecting as their prime route of taking drugs and were 15-50 years of age. The objectives were: to determine the incidence of HIV and HCV, to determine the behavioral risk factors for an HIV epidemic and to feed back data to the intervention program in order to enhance intervention efforts.

The HIV positive IDU cohort was designed to enroll HIV positive IDU identified from the above three IDU cohort studies, from ICDDR,B's VCT unit and through other sources. HIV positive IDUs were enrolled as and when they were identified and were willing to join the cohort. 91 HIV positive IDUs were enrolled from November 2004 to June 2007. The objectives of the study were: to assess the risk behavior of HIV positive IDU who are being provided some elements of a support system including being a member of an HIV positive support group and having access to regular counseling services and clinical services; to follow the disease progression of HIV positive IDU; and to provide a framework for planning for opioid substitution therapy (OST) and antiretroviral therapy in HIV positive IDU. In all four cohort studies, IDUs were followed biannually with risk behavior questionnaires and blood was collected for measuring antibodies to HIV, HCV and active syphilis (except in the HIV positive IDU cohort where HIV was not re-tested). Clinical services were provided during blood collection and test results were provided through counseling.

Figure 3: Incidence of HIV among IDUs in Dhaka (male IDU cohort study data)

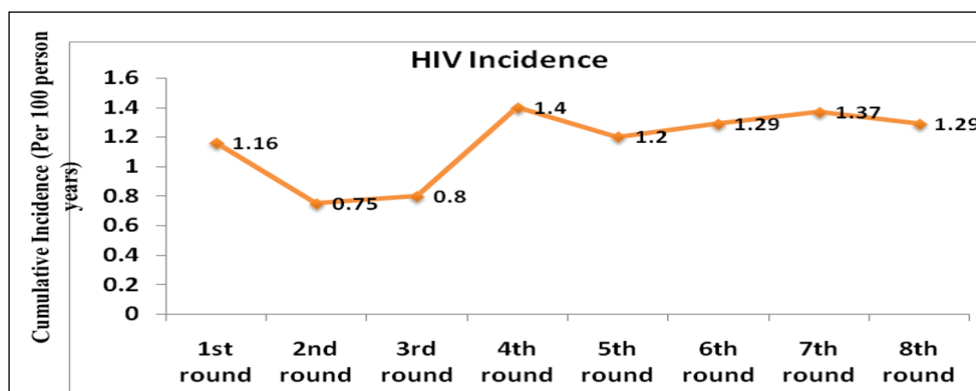
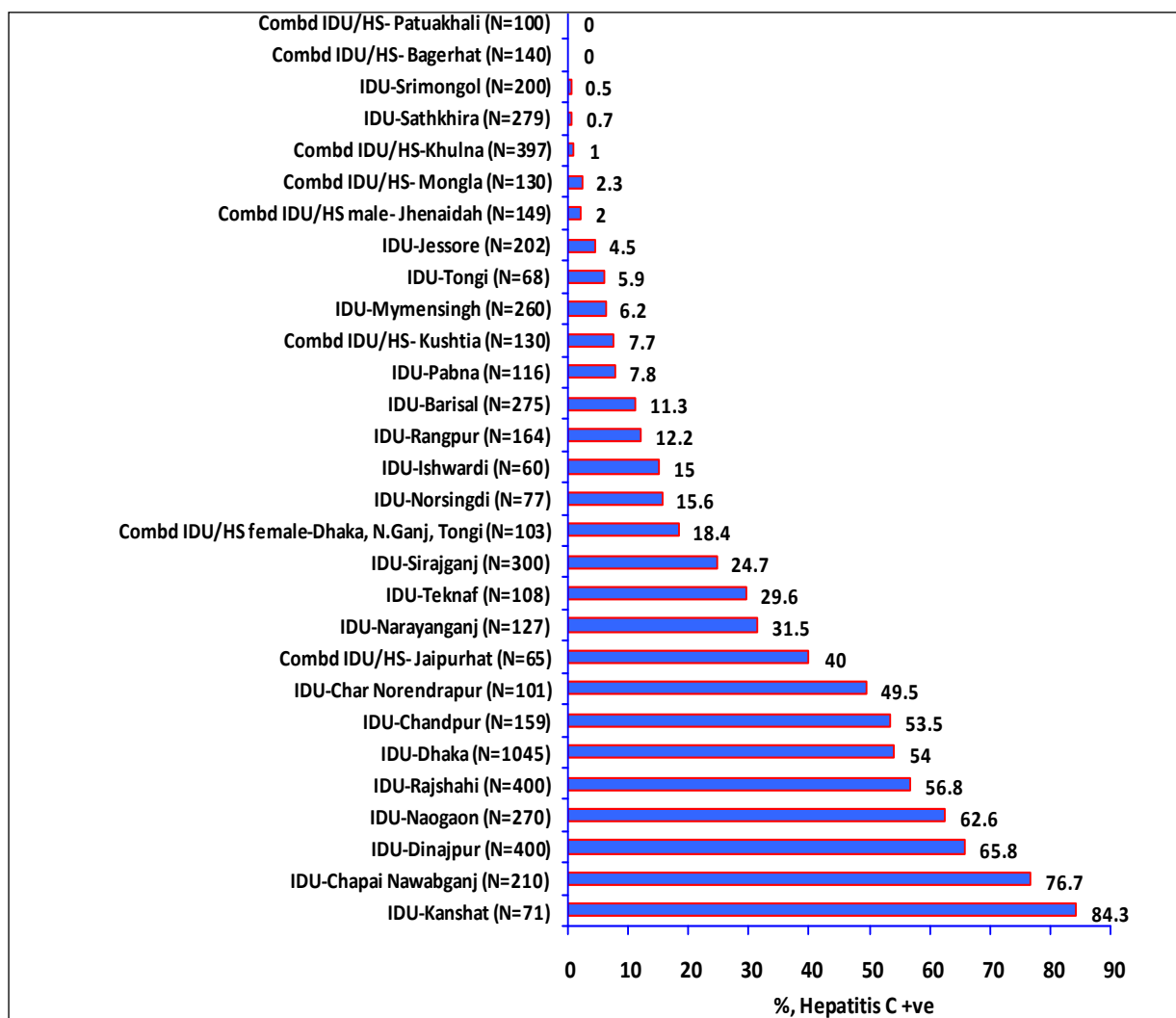


Figure 4: HCV prevalence among IDU and combined IDU and heroin smokers (serological surveillance, 2007)



Note: Combd IDU/HS refers to the combined group of IDU and heroin smokers. Numbers in brackets refer to the total numbers of drug users sampled in each city

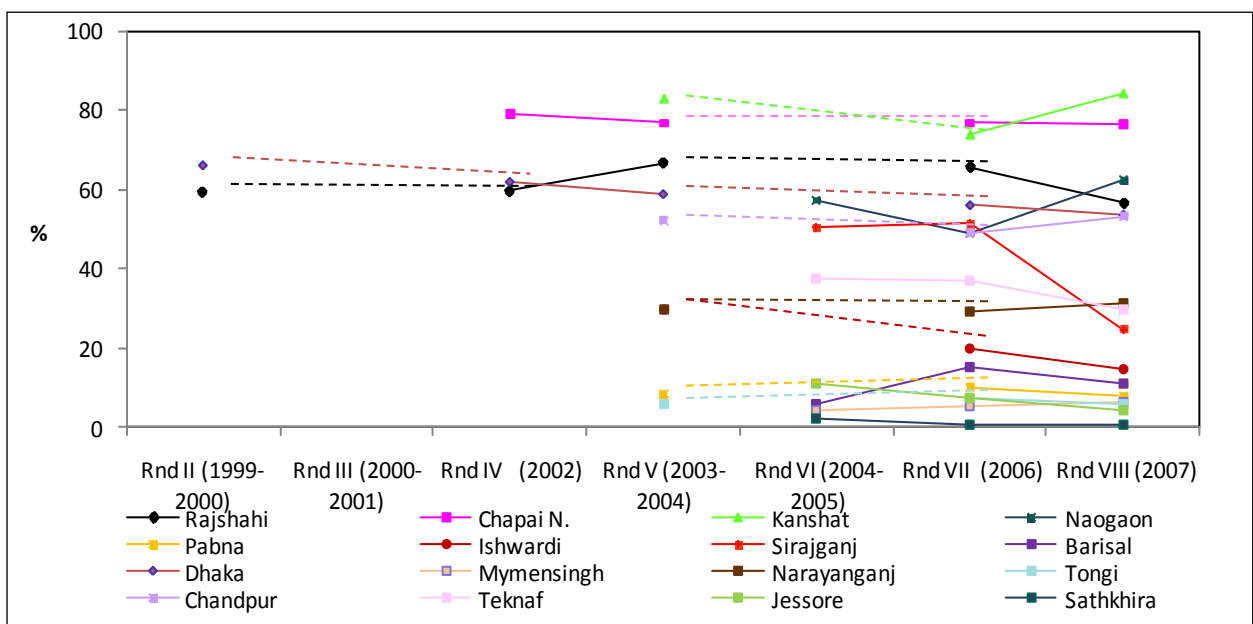


### HCV infection in drug users

Drug users, other than the group consisting of only heroin smokers, were also tested for antibodies to HCV (Figure 4) which is a surrogate marker for risky injection practices. Generally the prevalence of HCV was high and in seven cities (among the 28 cities sampled) more than 50% of drug users were HCV positive. In two cities, Bagerhat and Patuakhali, none tested positive; this suggests that drug taking practices in these two cities may be different. Overall, in 10 cities HCV rates were below 10%. Unfortunately, behavioral or other studies which could have provided insights into protective behaviors that could be promoted in harm reduction programs have not been conducted in city.

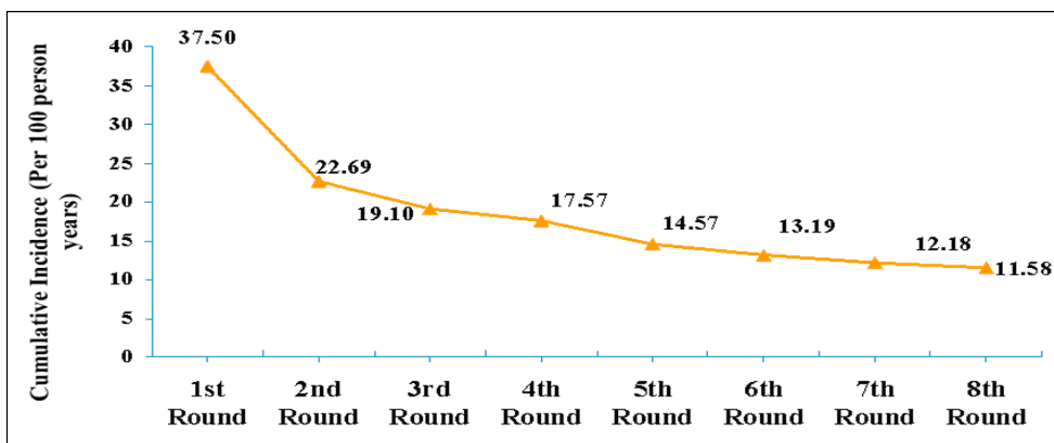
Analysis of trends shows that in many cities including Dhaka, HCV rates declined (Figure 5). Rising trends have not been observed in any city. The cohort study conducted among male IDUs in Dhaka showed that the incidence of HCV was also declining (Figure 6). These are encouraging findings.

**Figure 5: HCV prevalence rates over the rounds of serological surveillance (where data from three or more rounds were available)**



Note: Dashed lines connect data points when data are not available for intervening rounds

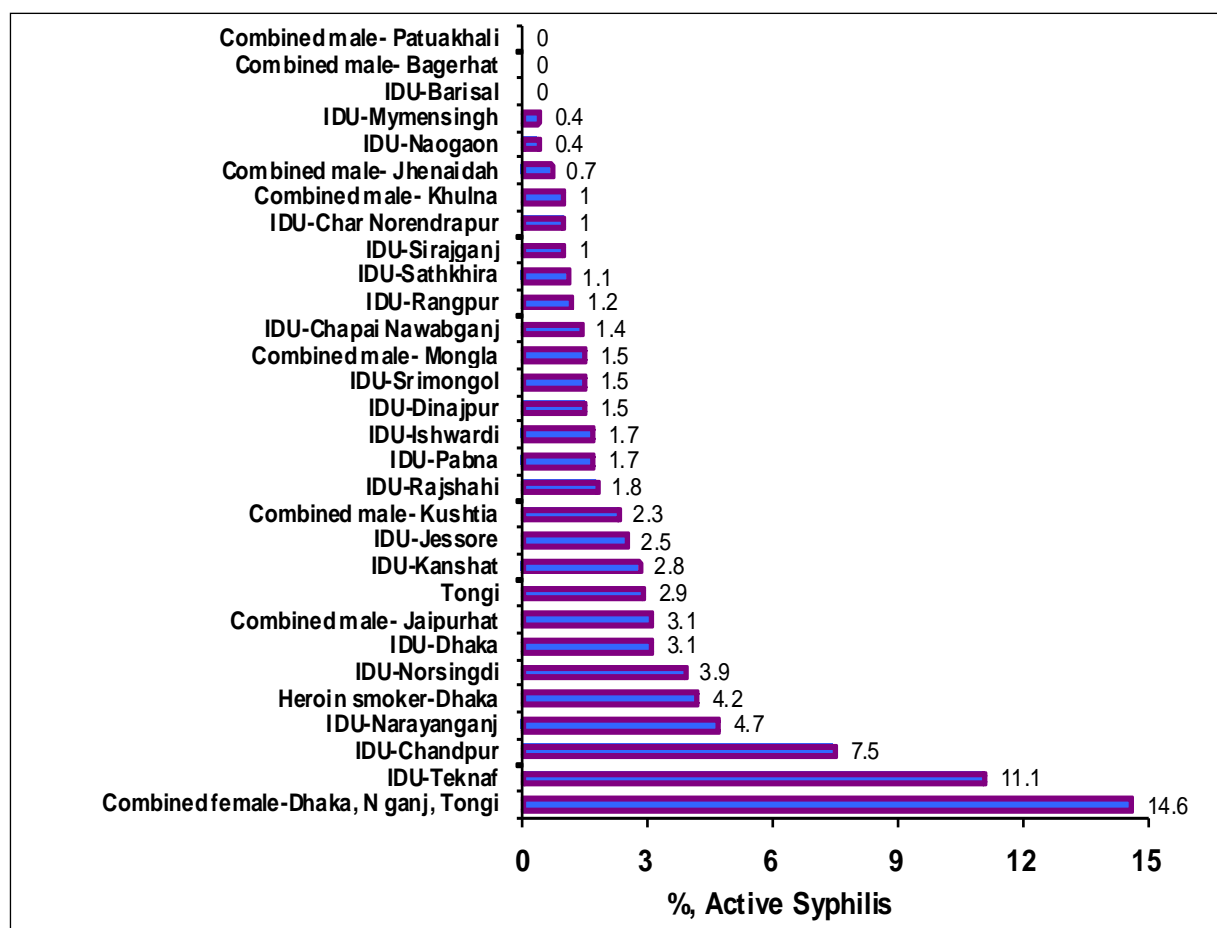
**Figure 6: HCV incidence in Dhaka male IDU (cohort data, p<0.05))**



### Syphilis infection in drug users

Syphilis is the only sexually transmitted infection (STI) for which laboratory diagnosis has been done for drug users; antibodies to syphilis were measured in surveillance and in the IDU cohort studies. Prevalence rates of active syphilis during the 8<sup>th</sup> round of serological surveillance among drug users varied considerably across the 28 cities (Figure 7). Female drug users had the highest rates followed by male IDUs in Teknaf and Chandpur. Active syphilis rates in Dhaka in male IDUs were not very high and the rates have changed little since the 2<sup>nd</sup> round conducted in 1999-2000 (data not shown). The cumulative incidence in male IDUs, as calculated from the data obtained from the cohort study, was also very low, at 0.28 infections per 100 person years at the end of the four year study period.

**Figure 7: Active syphilis among IDU and combined IDU and heroin smokers (serological surveillance, 2007)**



Using surveillance data to compare active syphilis rates in younger ( $\leq 24$  years) versus older IDUs ( $> 24$  years) showed significant differences only in Srimongol where younger IDUs are more likely to have syphilis (OR 15.1,  $p < 0.01$ ). Unfortunately behavioral data from IDUs in Srimongol are not available. The proportions of IDUs reporting any STI symptoms in the last year ranged from 21.3 to 37.6% (see the section on “Sexual risk”, Figure 10) (2006-07 BSS). As syphilis was the only STI laboratory diagnosis available in IDUs, it is likely that these symptoms are due to other STIs. The relationship of STIs and risk behaviors are further discussed in the section on “Sexual risk”.

## Risk behaviors

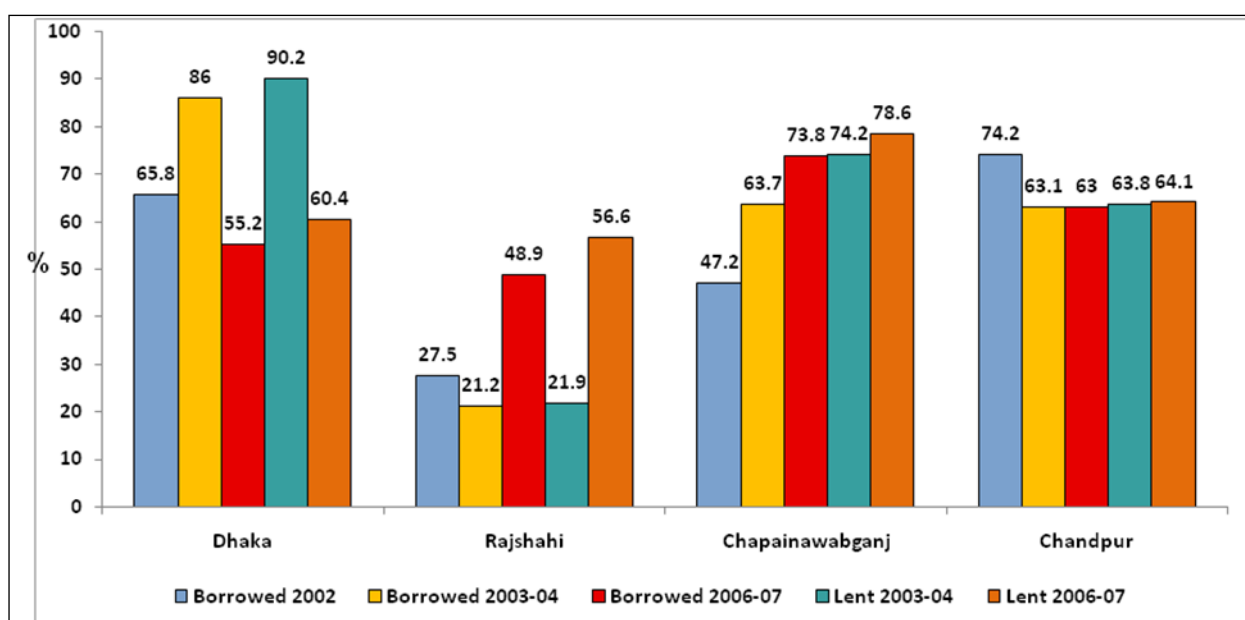
### *Injection risk behaviors*

Several sources of data are available that assess injection practices among IDUs – research studies (see Box 1 for cohort studies), BSS and RSRAs. All sources show that IDUs share needles/syringes and other injection paraphernalia (Azim, Chowdhury et al., 2008; Govt. of Bangladesh, 2009; NASP, Save the Children USA, & ICDDR, 2009g (forthcoming); Panda et al., 2002).

The most recent BSS conducted in 2006-07 showed that sharing of needles/syringes (borrowing or lending in the last week) decreased in Dhaka but increased in Rajshahi and borrowing increased significantly in Chapainawabganj (Figure 8). Although it is encouraging that sharing has declined in Dhaka, it is worrying that while enhancing efforts in Dhaka, other cities may be being neglected. Moreover, the cities where sharing increased are in the northwest bordering India, and data from Darjeeling in West Bengal, India show that 11.8% of IDUs are HIV positive (Sarkar et al., 2006). Some IDUs in the northwest did travel abroad last year (mainly to India) and 1.7-4.6% injected drugs while abroad (Govt. of Bangladesh, 2009).

The varied impact of NSP is also reflected in data from Chandpur where the harm reduction program was initiated in 2004. BSS was conducted twice prior to program initiation and the data show no change in injection sharing practices since the initiation of NSP.

**Figure 8: Borrowing and lending of needles/syringes in the last week (BSS 2006-07)**



Heroin smokers were sampled in Dhaka; of the 339 sampled, 5.6% had injected in the past six months of whom 54.4% lent or borrowed used needles or syringes. There is no reliable estimate of numbers of heroin smokers in Bangladesh but the many RSRAs conducted over the years show that heroin use is common throughout the country. However, harm reduction services have been largely geared to IDUs despite the knowledge that transition to injection does happen and intermittent injection with sharing is not uncommon among non-injectors. Although HIV prevalence remains low in this group, genetic analysis of the few HIV strains isolated from heroin smokers were identical to

those from IDUs (see the section on “HIV Subtyping”), confirming that they are part of the same injection sharing network.

To better understand the underlying factors that may influence risky injection behaviors, using 2006-07 BSS data on IDUs available from the four cities, multiple logistic regression analyses were conducted to assess the factors associated with needle/syringe lending and/or borrowing during the last injection in the last two months – results are summarized in Table 1. Chandpur is not included in Table 1 because no factors were associated with needle/syringe lending or borrowing there.

**Table 1: Factors associated with lending/borrowing last time in last two months: Multivariate analysis (BSS 2006-07)**

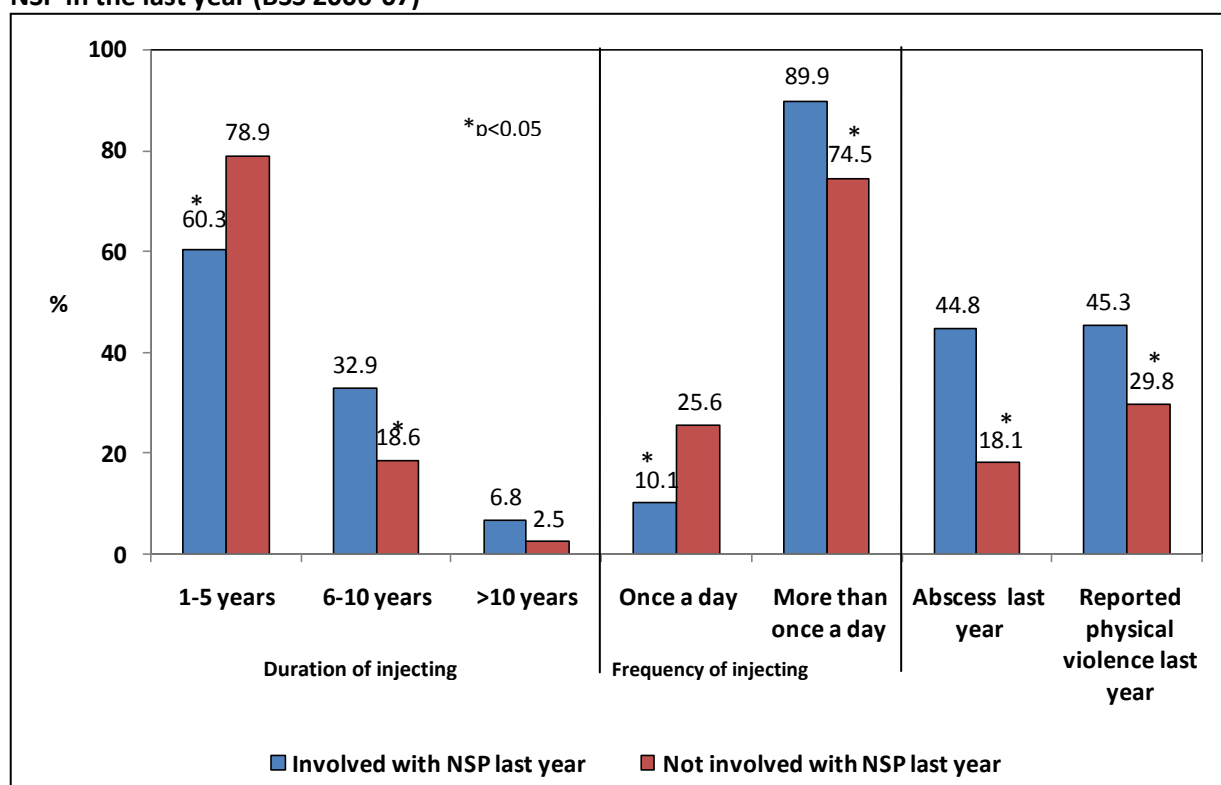
Groups	Dhaka	Rajshahi	Chapainawabganj
	<b>Adjusted Odds ratio (95% CI)</b>		
Age (in years)			
15-24			--
25-49			6.2 (1.6-25.0)*
>49 (Ref)			1.0
Income in the last month (Taka)			
≤3500	3.6 (1.5-8.6)**		
>3500 (Ref)	1.0		
Marital status			
Married (Ref)			1.0
Unmarried <sup>§</sup>			6.4 (1.3-32.7)*
Duration of taking drugs (in years)			
1-5			--
6-10			5.7 (1.1-28.6)*
>10 (Ref)			1.0
Frequency of injecting in a day in the last month			
Once a day (Ref)		1.0	
More than once a day		2.7 (1.5-4.7)**	
Knowledge of confidential HIV testing			
Yes (Ref)		1.0	
No		3.8 (1.7-8.4)**	
Able to assess own risk of HIV			
Yes (Ref)	1.0	1.0	1.0
No	6.2 (3.2-12.0)***	2.0 (1.1-3.4)*	6.4 (1.9-20.9)**
NSP involvement			
Yes	2.4 (1.1-5.0)*		
No (Ref)	1.0		
N	405	396	194

Significance level: \*p<0.05; \*\*p<0.01; \*\*\*p<0.001 <sup>§</sup> Includes unmarried, divorced, separated, widowed  
Note: Ref refers to reference category and empty cells reflect lack of statistical significance

The most common factor (in three of four cities) associated with needle/syringe sharing was “not being able to assess own risk of HIV infection” which reflects not just knowledge of HIV but internalization of that knowledge. However, even correct knowledge was low among IDUs. Only 12.7-40.8% of IDUs in the 2006-07 BSS had sound knowledge (as calculated by correct answers to five questions: can people reduce their risk of HIV by using a condom correctly and consistently in any type of sex, can people reduce their risk of HIV by avoiding sex with multiple partners, can a person get HIV through mosquito bites, can a person get HIV by sharing a meal with someone who is HIV infected and can you tell by looking at someone whether s/he is infected with HIV); the lowest proportion of correct knowledge was reported in Chapainawabganj and the highest in Chandpur.

Other factors varied from city to city but having low income, being single, and frequent injections were notable. Most disturbing was that attending NSP made no significant difference to sharing except in Dhaka where IDUs attending NSP were more than twice as likely to share needles/syringes. The most likely explanation is that NSP attracts IDUs who are at greater risk as has been shown in other countries (Hahn, Vranizan, & Moss, 1997; Strathdee et al., 1997). BSS data confirm this hypothesis -- a comparison of IDUs accessing NSP services versus those who were not showed that the former were at higher risk in that they had been injecting for longer, were injecting more frequently, were more likely to have abscesses and were more likely to have been subjected to physical abuse in the last year (Figure 9).

**Figure 9: Some selected parameters comparing Dhaka IDUs participating and not participating in NSP in the last year (BSS 2006-07)**



Understanding the association between blood borne infections (HIV and HCV) and risk behaviors is only possible when serological and behavioral parameters are integrated. The only source of data on IDUs in Bangladesh where such integration has been done is the IDU cohort studies (see Box 1). At the baseline of the cohort study, HIV was detected only in male IDUs from two neighborhoods of Dhaka (5.9%) where HCV prevalence was 66.8% (Azim, Chowdhury et al., 2008).

In multivariate analysis, the only factor that was associated with being HIV positive was homelessness. Homeless IDUs were more than five times as likely to be HIV positive as IDUs living at a fixed address.

For HCV, the associated risk factors identified in a multivariate analysis were a mix of individual risk behaviors and social factors:

- IDUs living in the epidemic neighborhood
- those who had borrowed needles/syringes in the last week

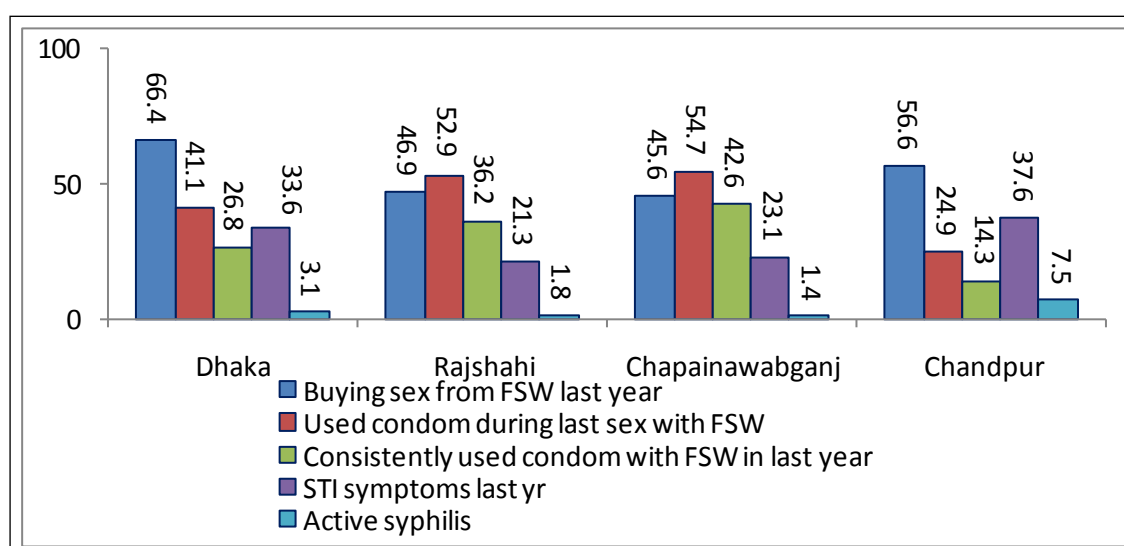
- those who had been taking drugs for 11-20 years
- injecting for more than five years and having started injecting between 16-19 years of age

These data suggest that in addition to the need to address individual risk behaviors, structural factors to address issues like homelessness, arrest, and low education also need to be considered (see V. STRUCTURAL FACTORS AFFECTING HIV INTERVENTIONS IN BANGLADESH, page 83). However, social and structural changes, especially homelessness, are very difficult issues to tackle particularly in a country where poverty and homelessness are major issues in themselves.

### **Sexual risk behaviors**

Buying sex from female sex workers, having regular female sex partners and not using condoms during commercial and non-commercial sex was not uncommon among the IDUs sampled in BSS. This has also been reported from the RSRAs conducted among drug users at different times in different cities (NASP et al., 2009g (forthcoming); Panda et al., 2002). In the last BSS round, 45.6-66.4% of IDUs said they had bought sex from female sex workers in the last year and condom use was lowest in Chandpur followed by Dhaka (Figure 10). The high rates of active syphilis in Chandpur (Figure 7) confirm the behavioral data. The rates in IDUs were similar to those in casual female sex workers in Chandpur (see the section on “STIs in female sex workers”) which indicates that the drug user and sex worker populations of Chandpur are closely linked. Surprisingly, in Teknaf, active syphilis rates in female sex workers were lower than in the IDUs. This raises the question of the source of infection in IDUs which is difficult to understand especially as no behavioral data are available from MARPs in Teknaf. Behavioral surveillance and research studies are needed to better understand the factors behind these data.

**Figure 10: IDUs buying sex from female sex workers, using condoms, reporting STI symptoms and the prevalence of active syphilis (BSS, 2006-07 and serological surveillance, 2007)**

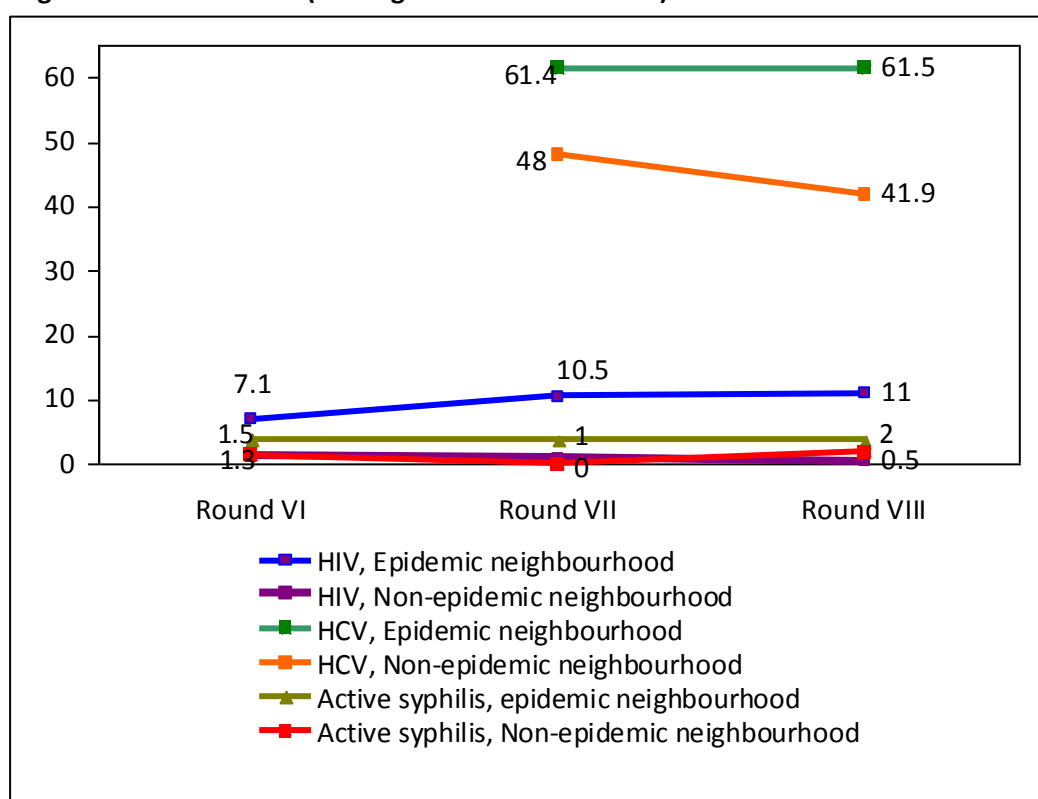


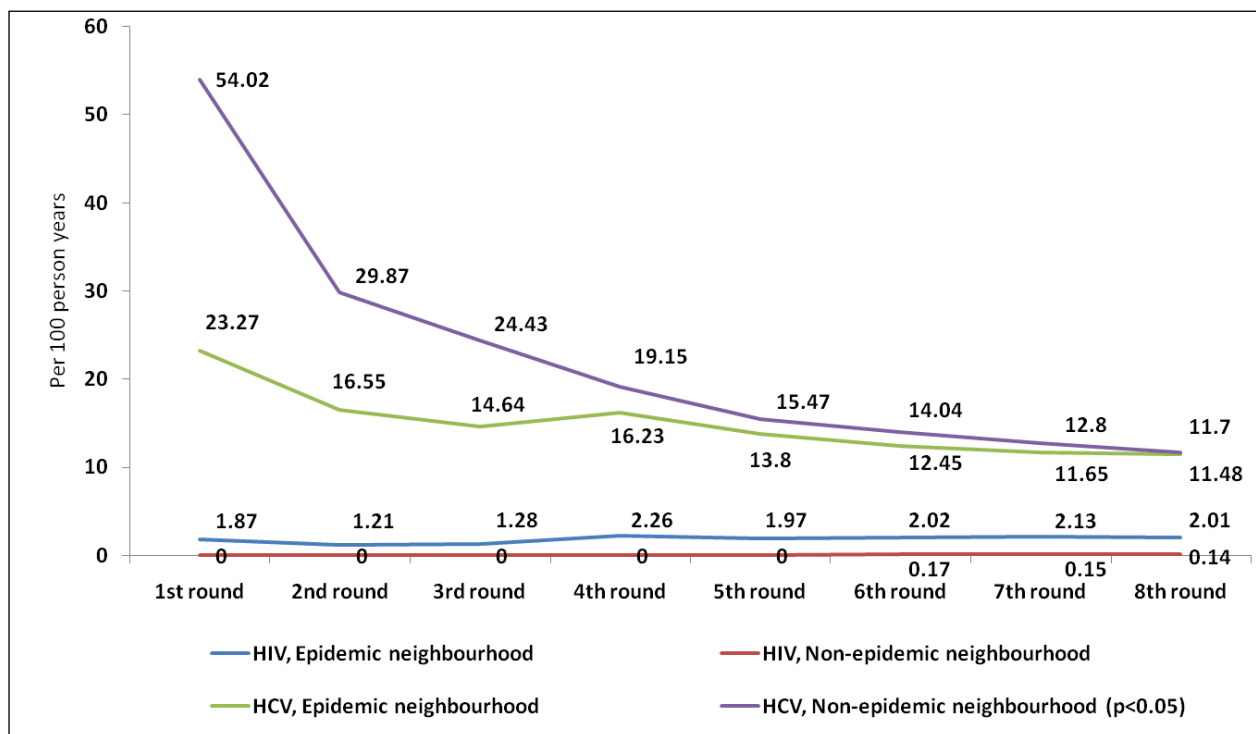
### **Localization of the HIV epidemic to one neighborhood in Dhaka city**

The localization of the HIV epidemic to one neighborhood in Dhaka was first determined through the cohort study among male IDUs in Dhaka in 2003 and was subsequently confirmed in surveillance. In this epidemic neighborhood, IDUs had higher HIV prevalence and incidence rates ( $p < 0.001$  and

<0.05, respectively), higher HCV prevalence rates ( $p < 0.001$ ) but similar HCV incidence rates, and active syphilis rates (both prevalence and incidence) that were similar to the non-epidemic neighborhoods of Dhaka (Figures 11 and 12). In terms of HCV incidence rates, the non-epidemic neighborhood had higher HCV levels to start with but those declined over the years of the cohort study (Figure 12). This is not the case in the epidemic neighborhood where lower rates were recorded at the start of the study with no changes occurring over time; the incidence rates in both neighborhoods were similar at the end of the study period. The reason for the initial high incidence rate in that particular neighborhood is not clear but it is encouraging that the rates declined and this may be attributable to adoption of safer injection practices as reported in the cohort of IDUs (data not shown). It is to be noted however, that in the epidemic neighborhood, despite lower incidence rates, prevalence was higher than in the non-epidemic neighborhood (Figure 11).

**Figure 11: Comparison of the prevalence of infections in IDUs in epidemic and non-epidemic neighborhoods of Dhaka (serological surveillance data)**



**Figure 12: HIV, HCV incidence in epidemic and non-epidemic neighborhoods of Dhaka (cohort data)**

The localization of the epidemic to one neighborhood is not unique to Dhaka – it has been documented in Chennai, India (Panda et al., 2005). However, the reason for such localization is not understood. As the cohort study was limited to only two neighborhoods of Dhaka city, BSS data of 2003-04 were used for further analysis as they provide a random sample of IDUs from all of Dhaka city and could be used to assess differences in the characteristics of the IDUs living in the epidemic neighborhood versus the rest of Dhaka city. These analyses showed that IDUs from the epidemic neighborhood in comparison to those from the rest of the city were:

- less educated ( $p < 0.001$ )
- fewer were currently married ( $p < 0.001$ )
- more had a lower monthly average income ( $p = 0.001$ )
- more commonly lived on the street ( $p < 0.001$ )

No difference was observed in the proportion reporting needle/syringe sharing in the epidemic neighborhood. However, IDUs from the epidemic neighborhood took more injections on average in the last day and in the last week ( $p < 0.001$  for both). Moreover, in the epidemic neighborhood, more IDUs had a low risk perception than in the rest of the city ( $p = 0.005$ ).

These findings corroborate secondary analyses using cohort study data (see section on “Injection risk”) which also show enhanced vulnerability to infection in IDUs due to social factors – in particular living on the streets. In addition, it highlights more subtle individual risk behaviors that can be addressed through ongoing programs but will require intensification of those programs, e.g. frequent injections, large sharing networks and identifying strategies that will enhance perception of risk.



### Geographic variation in profiles of IDUs

As is apparent from the above section, IDUs are not the same everywhere; there are differences in their demographics, injection taking patterns, where they gather, etc. These differences influence their behaviors which shape their vulnerabilities and risks; their risk of HIV is no doubt predominantly from sharing needles/syringes but such sharing is not an isolated phenomenon and understanding their backgrounds is essential to reduce the risk. Table 2 highlights differences in demographics in the four cities in which IDUs were sampled for the 2006-07 BSS. It is apparent from the data that one-third of IDUs in Dhaka were uneducated and homeless. In Chandpur, on the other hand, IDUs were more educated and living with relatives or friends. Again, in the northwest cities, many were married and living with their families. These differences suggest that a single mode of intervention will not work. The design of services for homeless IDUs cannot be the same as those for IDUs living with families and the same is true for those with higher versus lower education.

**Table 2: Socio-demographic characteristics of IDU (BSS 2006-07)**

Characteristics	Dhaka	Rajshahi	Chapainawabganj	Chandpur
	Percent (95% CI)			
Mean age (in years)	32.2 (31.5-32.9)	34.6 (33.9-35.3)	36.3 (35.3-37.3)	28.1 (27.3-28.9)
Percent who had no schooling	30.3 (24.8-36.4)	45.3 (40.8-49.8)	52.7 (45.3-60.1)	0.5 (0.1-3.6)
Current living status (%)				
Homeless	33.8 (27.7-40.4)	8.9 (6.3-12.5)	1.2 (0.3-4.3)	0.8 (0.1-5.6)
With relatives/friends	66.2 (59.6-72.3)	91.1 (87.5-93.7)	98.8 (95.7-99.7)	99.2 (94.4-99.9)
Average income in the last month (Taka)	5973.6 (5570.6-6376.5)	4232.7 (4018.6-4446.7)	4794.8 (4457.4-5132.2)	4806.1 (4356.3-5255.9)
Main source of income in last 6 months (%)	Business (28.4) Tokai (30.8)	Business (32.0) Rickshaw puller (26.6)	Business (30.3) Rickshaw puller (54.3)	Business (34.2) Service (20.2) Rickshaw puller (20.5)
Currently married (%)	36.1 (29.7-43.1)	54.3 (48.8-59.8)	77.1 (69.8-83.1)	62.8 (54.9-70.1)
Currently living with wife/ regular sex partner (%)	43.0 (35.4-51.04)	56.6 (50.9-62.1)	78.6 (71.8-84.1)	62.9 (54.9-70.2)

The locations of taking injections also varied in the different cities. In the northwest cities, in addition to public venues, injectors often gathered in groups in one house within a locality -- such a gathering was called an "adda". NSP in these cities had been organized to treat the *addas* as safe injection sites (Kerr et al., 2006) so that needles/syringes were provided to *adda* owners and they would then give those to the injectors when they came for their drugs. More recently there has been a drive by law enforcement agencies to destroy the *addas*. Field notes from a supervisory visit to Chapainawabganj during the 2006-07 BSS revealed the threat that *addas* were in. An *adda* owner reported that the owners were being targeted by the police and one owner had already been arrested. Because of this, the *addas* had become irregular and the IDUs were scattered, making it difficult for the outreach workers to locate them. A similar situation occurred in Rajshahi and this may be the cause for the significant rise in sharing of needles/syringes there (see section "Injection risk", Figure 8). Understanding and addressing the different characteristics and practices is essential in providing effective services and this is discussed further in the section on "Interventions for Drug Users".

### Injection sharing networks

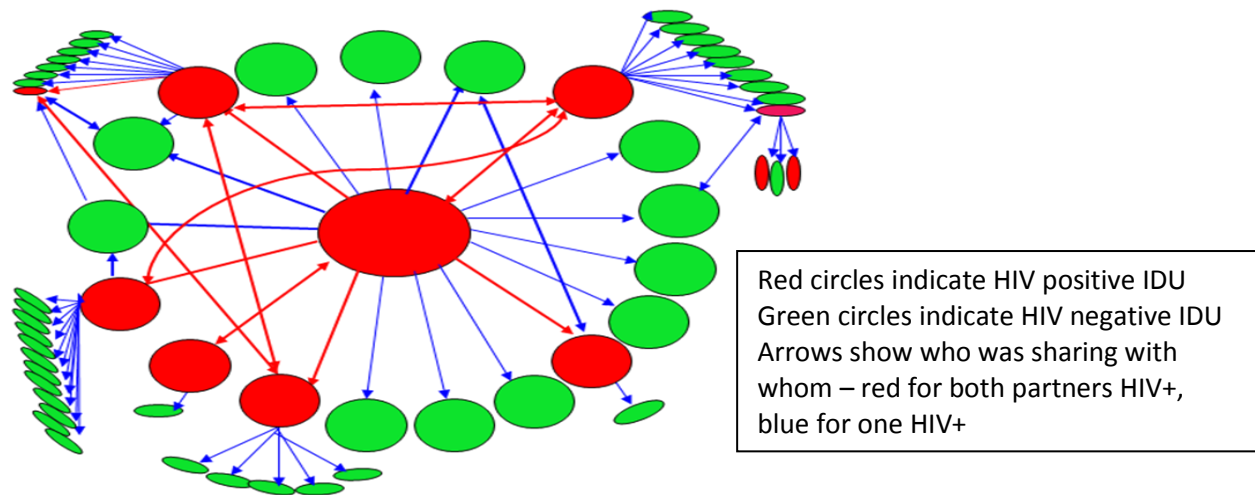
Characteristics of groups of IDUs who share needles/syringes are relevant to the HIV epidemic because more partners within a sharing group and higher frequency of changing sharing groups hasten the spread of HIV. Understanding dynamics of sharing behaviors – who IDUs share with, why they share – is key to promoting safer behaviors. Available data on sharing networks are limited. The data show (Table 3) that IDUs in Chapainawabganj had the largest sharing group, the most IDUs who changed needle/syringe sharing partners, and the largest sharing group among those who changed groups. Taken together with data on sharing of needles/syringes, where again the highest proportions were recorded in Chapainawabganj (Figure 8), lowest proportion having sound knowledge on HIV (see section on “Injection risk”) and coverage by NSP, which declined in this group of IDUs (see Services), there is clear evidence that IDUs in this city are very vulnerable.

**Table 3: Characteristics of sharing networks**

	Size of sharing group (Mean)	Proportion who shared with same people consistently (among those who shared in the last week)	If sharing partners changed, size of sharing group among those who change (Mean among those who shared in the last week with different persons)	Who they usually share with (among those who shared in the last 6 months)
Dhaka BSS (2006-07) <sup>§</sup>	3.4	40.8	5.2	NA*
Dhaka cohort (June-Oct 2007)†	2.1	58.6	3.2	Acquaintance, friends, stranger
Chandpur BSS (2006-07) <sup>§</sup>	2.0	61.3	4.2	NA
Chandpur cohort (July-Sept 2006) †	2.0	83.3	2.0	Friends, acquaintance
Chapainawabganj BSS (2006-07) <sup>§</sup>	4.0	19.8	9.1	NA
Rajshahi BSS (2006-2007)†	2.9	45.3	4.9	NA
Female IDU cohort (Jan-May 2007) †	2.1	76.5	3.0	Husband/lover, acquaintance, friends

\*NA, not asked <sup>§</sup> last time in last two months †last time in last six months

IDUs with HIV have been identified in Dhaka through the cohort studies (see Box 1) and the VCT unit of ICDDR,B. The average size of the sharing network among those who shared was two. A rough assessment of the sharing networks of HIV positive IDUs was made by asking each IDU to identify their sharing partners by providing name, age, any identification mark, location, occupation and also name of NSP outreach worker who could help identify that IDU. Following this, the research team checked the information in the field by identifying that IDU and asking him the same questions as a cross check. Using this methodology, from 36 HIV positive IDUs, 96 sharing partners new to the cohort were identified. Figure 13 illustrates the sharing network of one IDU who had a very large sharing network; it should be noted that most IDU had much smaller networks, with an average of two direct sharing partners. It is being recognized that prevention of injection sharing among HIV positive IDUs requires special effort including peer focused interventions, primary health care and mental health services (Latkin et al., 2008).

**Figure 13: Injection sharing network of one HIV positive IDU (Dhaka male IDU cohort data)**

HIV prevalence among the sharing partners recruited into the cohort in the second phase (see Box 1) was higher than in those who were already members of the cohort for some years (2.6% vs. 11.2%,  $p < 0.001$ ). These new recruits had several characteristics that were different from those who were already enrolled in the cohort. They were:

- Younger and newer injectors
- More likely to be living alone and to be homeless
- Injecting drugs more frequently
- More likely to front/back load injections
- More likely to share needles/syringes and other injection paraphernalia
- Less likely to clean injection equipment before borrowing
- More likely to buy sex but less likely to have non-commercial sex
- Newer to the NSP
- Attending the drop in center (DIC) more frequently
- More likely to access rest and recreational facilities rather than clinical services at the DIC

Two important points emerge from these findings:

- i) Insights into characteristics of more vulnerable IDUs
- ii) An alternative method for reaching the most vulnerable IDUs may be through networks of HIV positive IDUs who can be targeted for more intense services. Use of social networks in intervention programs has been suggested as a more effective and sustainable approach (Latkin & Knowlton, 2005).

A remarkable finding from the injection sharing network of HIV positive IDUs is that a large proportion of the sharing partners were still HIV negative. The reasons for this are not immediately understood but could be multiple:

- The information gathered was on ever sharing, and not for recent sharing. Therefore, it is possible that many of these IDUs shared before HIV seroconversion had taken place.
- Sharing may occur infrequently, which would lower risk – in almost all cases IDUs who said they had shared their needles/syringes said they shared some of the time and not all the time.

- There may be biological factors that protect against infection – this is not possible to gauge with existing data. One biological factor that is known to reduce susceptibility to infection and delay progression of illness is a specific 32 base pair deletion of the chemokine receptor, CCR5 gene, which is used by the virus to adhere to its target cell (Piacentini, Biasin, Fenizia, & Clerici, 2009). Genetic analysis was carried out on 101 HIV negative IDUs from Bangladesh but this deletion was not identified in any case (Azim et al., 2002). However this is a rare condition described in 1 in 100 normal individuals and none in 180 chronically HIV-1-infected North Indians (Husain, Goila, Shahi, & Banerja, 1998; Kaur et al., 2007), so a sample of 101 is not large enough. Future studies designed to look at multiple biological factors will be required to address this question.

### **Female drug users**

Female drug users are particularly vulnerable and at risk of HIV because they have multiple risk factors.

The cohort study conducted among female drug users in Dhaka, Tongi and Narayanganj (see Box 1) showed very low levels of HIV; compared to male IDUs the levels of HCV were also low; but active syphilis rates were very high. These rates are comparable to female sex workers on the streets of Dhaka which is not surprising given that close to two thirds of the female drug users were sex workers (Azim et al., 2006). Female drug users were found to be more vulnerable than their male counterparts as they were more likely to share injection equipment (Azim, Khan et al., 2008). Moreover, 33.3% of female IDUs who were not sex workers reported they had shared their needles/syringes with their male sex partners in the last six months and this is worrying especially in Dhaka where 7% of male IDU are HIV infected.

A qualitative study of female drug users in Dhaka provided in-depth understanding of the gender dimension of drug use behaviors and their impact on the vulnerability of female drug users, including providing explanations for why women share injection equipment (unpublished data). These data were collected from a purposive sample that included two women who had never shared, six women who shared within the same network during the last six months, thirteen women who shared within a different network during the last six months, and six who share with their sex partner.

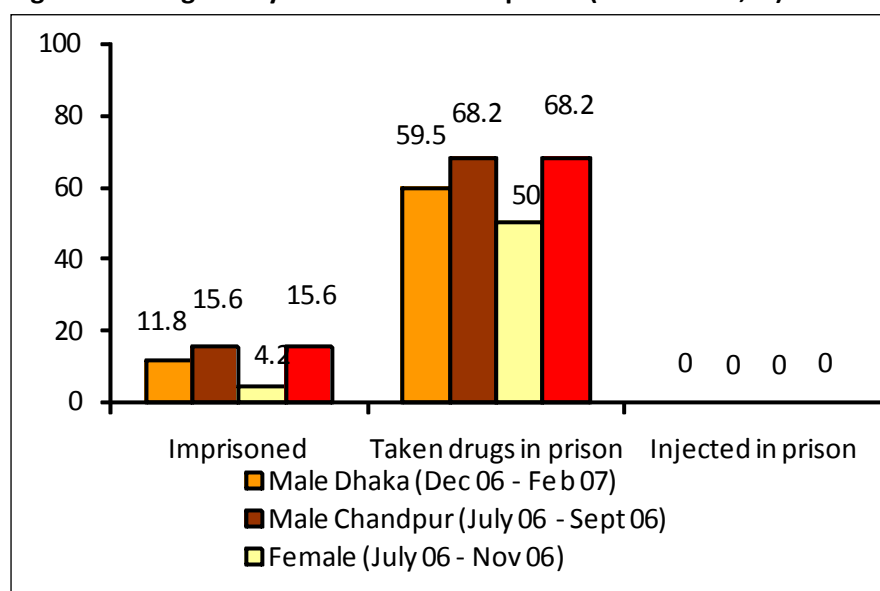
As in the cohort data, where 12% report sharing because sharing with their husband is safe (see section on “Interventions for Drug Users”), some female drug users reported that they find it safer to rely on their male partners. Women reported that drug sellers demand higher prices from females and in many instances sell adulterated drugs to females assuming that they will not recognize the impurity of the drugs and that even if they do, they will be helpless to do anything about it. As a result, female drug users rely on men to obtain drugs for them. However, they reported that they had to share drugs with these male IDUs, which suggests that safety may be defined not from the perspective of HIV, but more broadly. Also, women said they preferred to take drugs privately because of the negative consequences for women if their behavior becomes public (see section on “Effect of gender norms on the vulnerability of female IDUs”). For some women, this led them to avoid obtaining drugs from known networks.

Again, as in the cohort data where 8% of women reported that they could not inject themselves, some female IDUs are afraid to push injections into their own bodies and so depend on male IDUs for their injections. The explanation for this reluctance appears to be a fear of needle pricks and abscesses. This was particularly true for women who were primarily smokers and injected intermittently.

### Prison and drugs

IDUs often complain that they are arrested for being drug users, for carrying needles/syringes, and for being caught while stealing. However, many IDUs and their families said that they went to prison voluntarily or were sent to prison by their families as a way of recovering from their addiction. In several countries HIV has spread rapidly among prison inmates who are IDUs through sharing used needles/syringes (Jurgens, Ball, & Verster, 2009). In Bangladesh, this does not appear to be the case given that when IDUs participating in all the cohort studies were asked whether they had injected when last in prison, almost all said they had not; among all rounds of the cohort studies conducted among males and females in Dhaka and Chandpur, only two males in Dhaka, two in Chandpur and one female in Dhaka said they had injected drugs when last in prison. Drugs were usually smoked in prison (Figure 14). However, the fact that half or more of the drug users continued to use drugs in prison needs to be addressed by providing appropriate services. However, appropriate services cannot be provided without a better understanding of the situation of drug users and drugs in prisons which is lacking in Bangladesh.

**Figure 14: Drug use by IDUs when last in prison (cohort data, %)**



### Summary of key findings

- The data clearly show that there is an HIV epidemic among IDUs in Dhaka which is concentrated in one neighborhood. The prevalence has been increasing gradually and the incidence rate is relatively low suggesting that there are protective factors at play which need to be better understood.
- HCV rates were high in IDUs in most cities but declining rates were observed in Dhaka. Incidence also declined which suggests adoption of protective injection behaviors. There are

however, several cities where HCV rates were very low and more information is required to understand why this is the case.

- The most common factor associated with sharing of used needles/syringes was not being able to assess own risk of HIV. The level of sound knowledge on HIV transmission and prevention was low for IDUs.
- Some HIV positive IDUs continued to share their needles/syringes suggesting that ongoing prevention efforts are not adequate.
- Information from injection sharing networks provides pointers to characteristics of the most vulnerable IDUs and also alternative approaches to reaching the most vulnerable. Social and injection sharing networks of IDUs need to be better understood and utilized in programming.
- Research is needed to investigate whether biological factors are playing a role in preventing transmission of HIV among direct injection sharing partners of HIV positive IDUs.
- Buying sex from female sex workers, having regular female sex partners and not using condoms during commercial and non-commercial sex was not uncommon among the IDUs.
- Female drug users are very vulnerable; most sold sex, they were dependent on their male partners for drugs and injections with whom they then shared. Their social context is different from male IDUs which enhances their vulnerability.
- Injecting drugs in prison was not common although drugs were taken through other routes. Better data is required to assess the situation in the prisons of Bangladesh.
- Although sharing of needles/syringes declined in Dhaka, it increased in Rajshahi and Chapainawabganj. In both Rajshahi and Chapainawabganj, the NSP was provided through *addas* which were gradually being dismantled by law enforcement agencies resulting in the dispersing of IDUs so that intervention programs found it difficult to locate IDUs.
- Chapainawabganj IDUs are very vulnerable and need attention as sharing needles/syringes had increased and was high, they had low knowledge on HIV, and their injection sharing network size was the largest.
- In Dhaka, IDUs who were participating in the NSP were more at risk than IDUs who were not members of the NSP and data suggest that the NSP reaches the most vulnerable IDUs.
- Chandpur IDUs continued to practice risky behaviors (injection sharing and unsafe sex) even after initiation of NSP and despite having relatively good knowledge about HIV. They had very high rates of active syphilis.
- Teknaf IDUs had very high rates of active syphilis but information is required on risk behaviors from IDUs in this city.
- Findings suggest that a continued focus on individual risk behaviors will prevent some infections but a more comprehensive strategy is needed that also addresses structural factors related to homelessness, arrest, low education, etc.

## Female Sex Workers

### Definitions of female sex workers

Generally, female sex workers are categorized based on the venues where they contact their clients and where they sell sex. Definitions used in surveillance are shown below:

Serological surveillance	Behavioral surveillance survey
<b>Brothel based sex workers:</b> Those who were selling sex in a brothel during the previous month	<b>Brothel based sex workers:</b> Those who were contacted by clients in a brothel setting, with the sex act generally taking place in brothels
<b>Street based sex workers:</b> Those who were selling sex on the street during the previous month	<b>Street based sex workers:</b> Those who were contacted by clients on the street, with the sex act taking place in public spaces or other venues
<b>Hotel based sex workers:</b> Those who were selling sex in hotels during the previous month	<b>Hotel based sex workers:</b> Those who were contacted by clients in a hotel setting, with the sex act taking place there
<b>Casual sex workers:</b> Those who were selling sex either in the street, residence or hotel during the previous month and had either one or more (other) main sources of income	

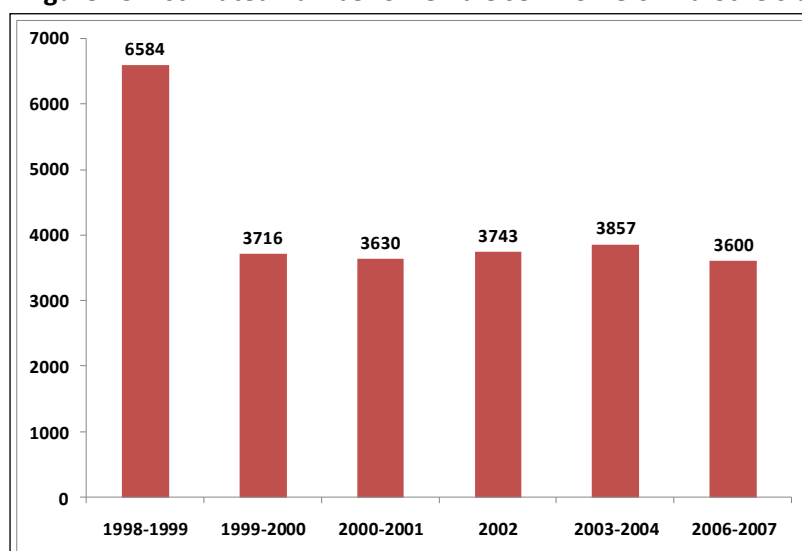
However, these categories do not always reflect the realities of the lives of the sex workers or the differences in experiences of women who are categorized within the same group. For example, street based sex workers are usually contacted in open public venues which can also be the venue for the sex act. This general pattern is applicable for big cities, however, in smaller towns, a sex worker who sells sex in the streets can also be contacted in her home and may sell sex in any suitable venue (street, hotel, residence). Likewise, while the majority of hotel based sex workers are contacted at hotels, others are on call. Sometimes, when the clients are known to hotel management, sex workers may be taken out of hotels to other sites for sex. Residence based sex work is popular as it can be anonymous and allows more freedom for the sex workers – it is less structured compared to hotels (NASP, Save the Children USA, & ICDDR, 2008b). However, in some cases, the residence based sex trade is operated through *sarder/sarderni* (males/females who run the sex trade through acquisition of females in various ways) and *dalal* (pimps who supply the women). These *sarder/sarderni* and *dalal* host, maintain and govern the sex workers and collect money for each transaction. Other residence based sex workers operate autonomously, with clients contacting them directly or through other sex workers and the residence where sex is sold is sometimes shared with other sex workers. Many residence based sex workers also have links with and sell sex from hotels. Although categories based on contact and/or sex selling venue fail to capture the diversity and fluidity of sex work, there are significant demographic and structural differences among brothel, street and hotel based sex workers that make these categories useful (see section on “Geographic variation in profiles of female sex workers”) but service providers and others working with sex workers need to be aware of the many dimensions of the sex trade.

### Estimates of female sex workers in Bangladesh

Data from 2004 suggest that there are up to 90,000 female sex workers in Bangladesh (National AIDS Committee, 2006). However, this estimation needs to be updated using new information that has

become available since 2004. It is well known that many sex workers do not operate full time and the number of part time sex workers (often referred to as casual sex workers) is difficult to estimate.

**Figure 15: Estimated number of female sex workers in brothels over the BSS rounds**



The number of female sex workers in brothels is relatively small - the last BSS of 2006-07 estimated 3600 nationwide in 14 brothels. These numbers declined after the 1<sup>st</sup> round of BSS in 1998-99 when 6584 sex workers were mapped and has since remained steady at around 3600 (Figure 15). The number of brothels declined from 18 in 1998 to 14 in 2007. A selective shift of the sex trade away from brothels to venues

where there is less regulation has been reported (C. Jenkins & Rahman, 2002; NASP, Save the Children USA, & ICDDR, 2008a).

There is considerable movement of sex workers among venues and cities, driven by multiple factors: clients' flow, role of law enforcement agency and local people, economic viability and strong networks among the sex workers. During a recent survey of sex workers conducted for GFATM, round 6 (NASP et al., 2008a), two major mobility patterns were identified: street to street, hotel to hotel and residence to residence in the same city, or in different cities, and street to residence, street to hotel, hotel to residence and residence to hotel in the same city or in different cities. Mobility was also observed in BSS and found to be lowest for brothel based sex workers and highest in hotel based sex workers from Sylhet where 45% said that they had sold sex in another city in the last year.

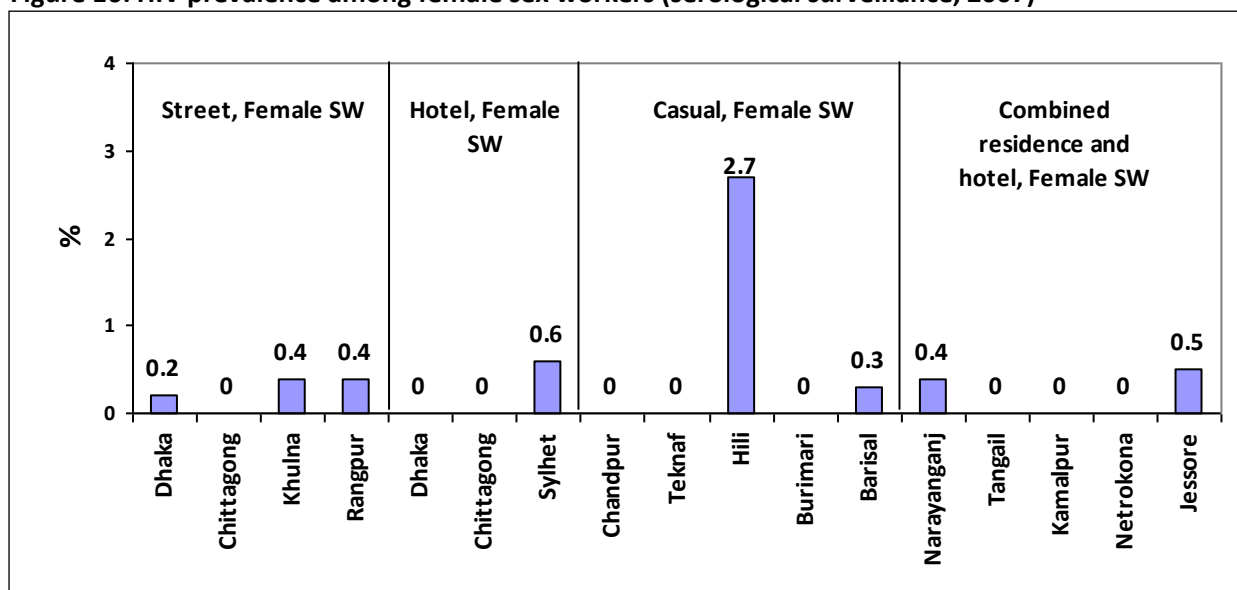
### HIV in female sex workers

The main source of information on HIV infection in female sex workers is serological surveillance. In the 8<sup>th</sup> round, conducted in 2007, a total of 4797 female sex workers were sampled from 15 cities from different venues (streets, hotels and a combination of residences and hotels), and 12 (0.3%) were found to be HIV positive. Of the 12 HIV positive female sex workers, eight were 24 – 38 years of age. It is to be noted that sex workers from brothels were not sampled in the 8<sup>th</sup> round but in the previous round (2006) where 2200 were sampled from all brothels, 4 (0.2%) were found to be HIV positive (Govt. of Bangladesh, 2007). During the 8<sup>th</sup> round, HIV prevalence at each female sex worker site was <1% except in Hili, a small town in northwest Bangladesh on the border with West Bengal, India, where four of 150 (2.7%) sex workers were HIV positive (Figure 16). This is the highest rate documented for any sex worker population in all surveillance rounds conducted thus far. A large proportion of female sex workers from Hili said that they had crossed the border to India where they sold sex and all four who were HIV positive said they had done so. Anecdotal data from female sex workers in Balurghat of West Bengal, India, which is adjacent to Hili, shows rising levels of HIV in female sex workers (NACO, oral communication). Mobility and migration are known to enhance



vulnerability to HIV and women are particularly vulnerable (T. Blanchet, Biswas, Zaman, Dabu, & Lucky, 2003). However, little is known about the sex workers operating in Hili and the BSS does not sample sex workers from Hili (Govt. of Bangladesh, 2007). While sampling for serological surveillance in Hili it was apparent that most sex workers were part time and scattered.

**Figure 16: HIV prevalence among female sex workers (serological surveillance, 2007)**



Note: SW refers to sex workers

### STIs in female sex workers

High levels of various STIs have been reported in female sex workers in different studies (Azim, Khan et al., 2008). Surveillance monitors active syphilis rates only, and among those sampled in the 8<sup>th</sup> round, there were five sites where rates were more than 5% (Figure 17); street sex workers from Chittagong and Rangpur had particularly high rates.

From sites where trend analysis was possible, active syphilis rates either declined or remained the same – there was no site where the rate increased. In Dhaka, rates had been declining significantly ( $p < 0.001$ ) in street based female sex workers but since the 4<sup>th</sup> round there has been a plateau with rates hovering at approximately 7% (Figure 18). The current rates are still high and more needs to be done to prevent and treat STIs.

Figure 17: Active syphilis rates in female sex workers (serological surveillance, 2007)

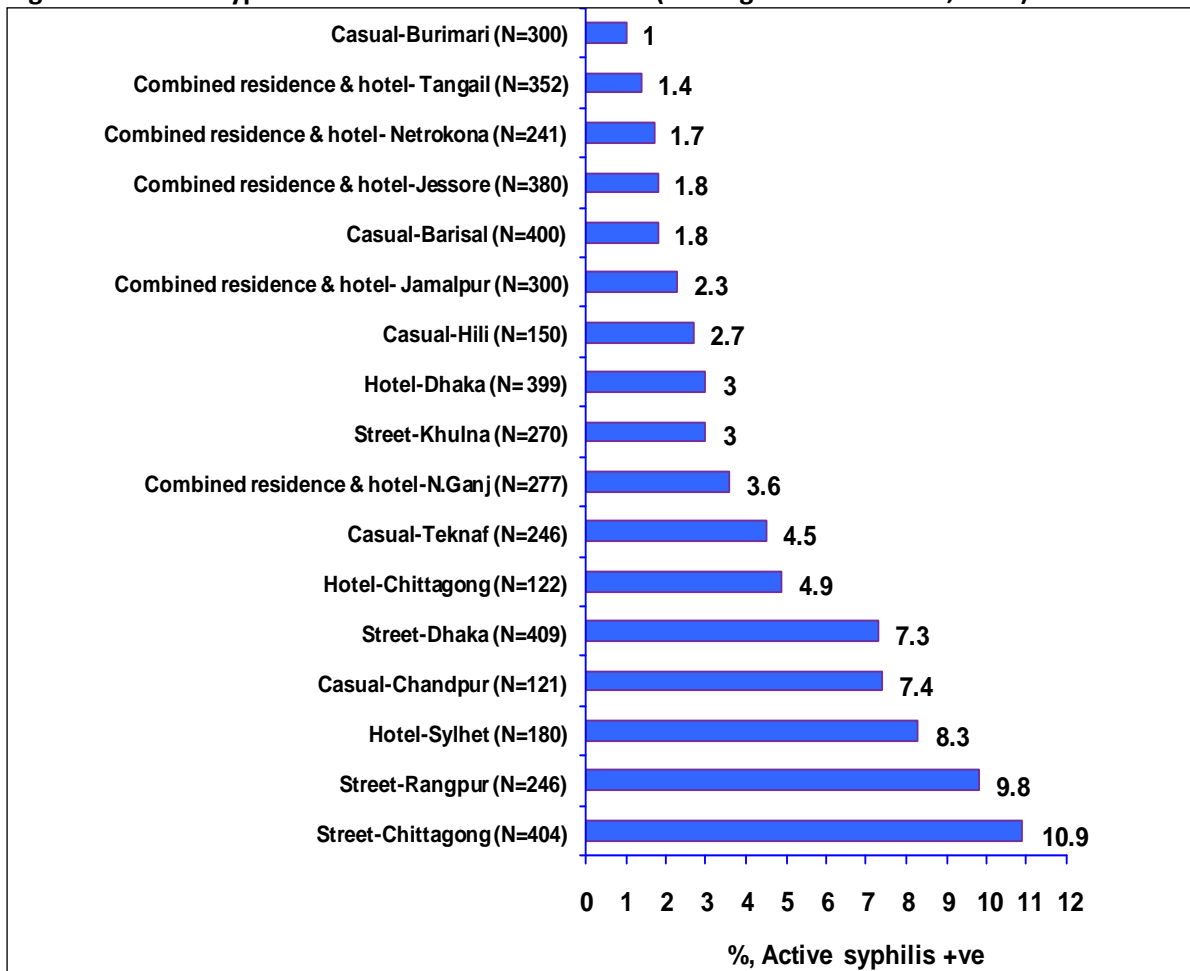
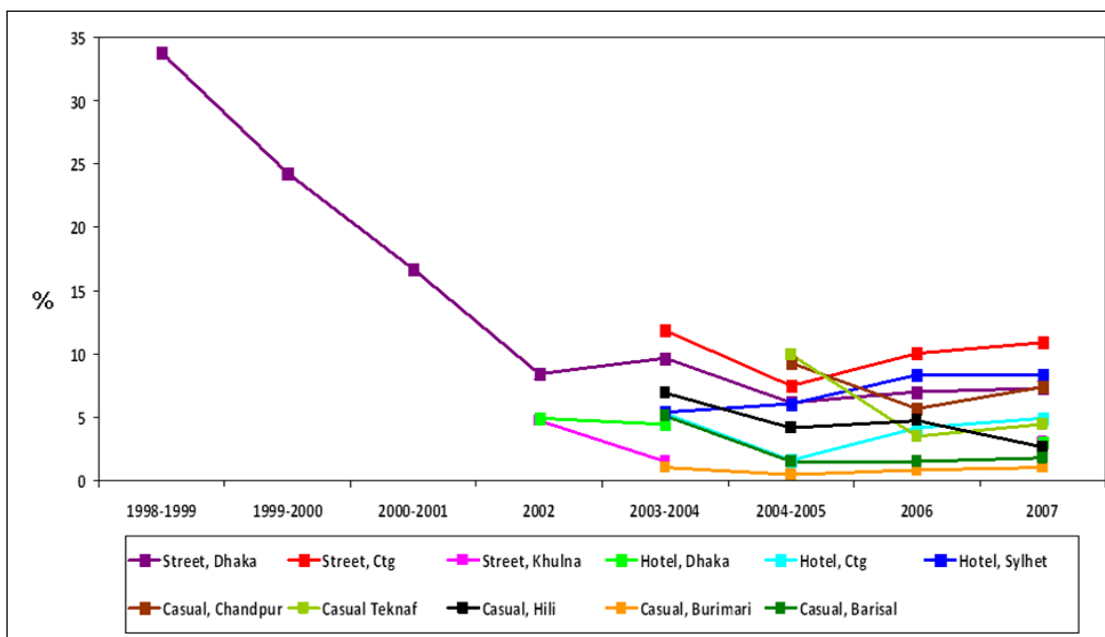


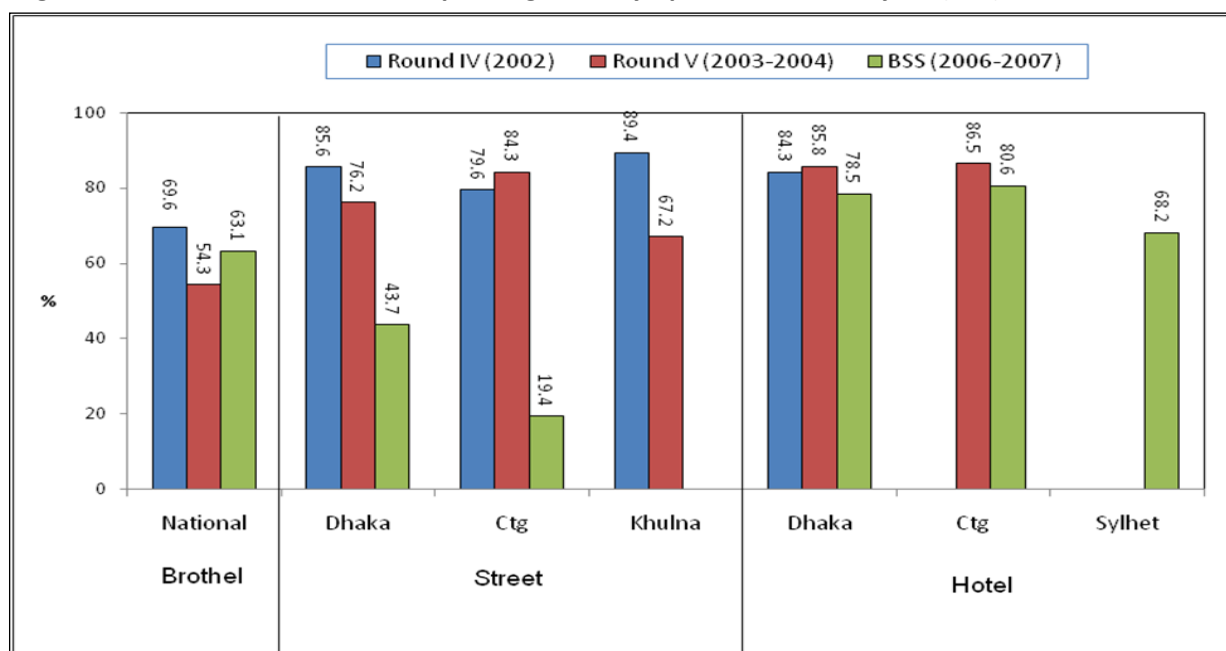
Figure 18: Trends in active syphilis in female sex workers (serological surveillance)



Note: Ctg refers to Chittagong

The proportions of female sex workers complaining of any STIs in the last year (Figure 19) were high in brothels, Khulna streets and hotels in Dhaka and Chittagong. In Chittagong, contrary to the high active syphilis rates in street sex workers, reported STI symptoms in the last year were low and this is discussed further in the section on section on “Risk behaviors in female sex workers”).

**Figure 19: Female sex workers complaining of STI symptoms in the last year (BSS)**

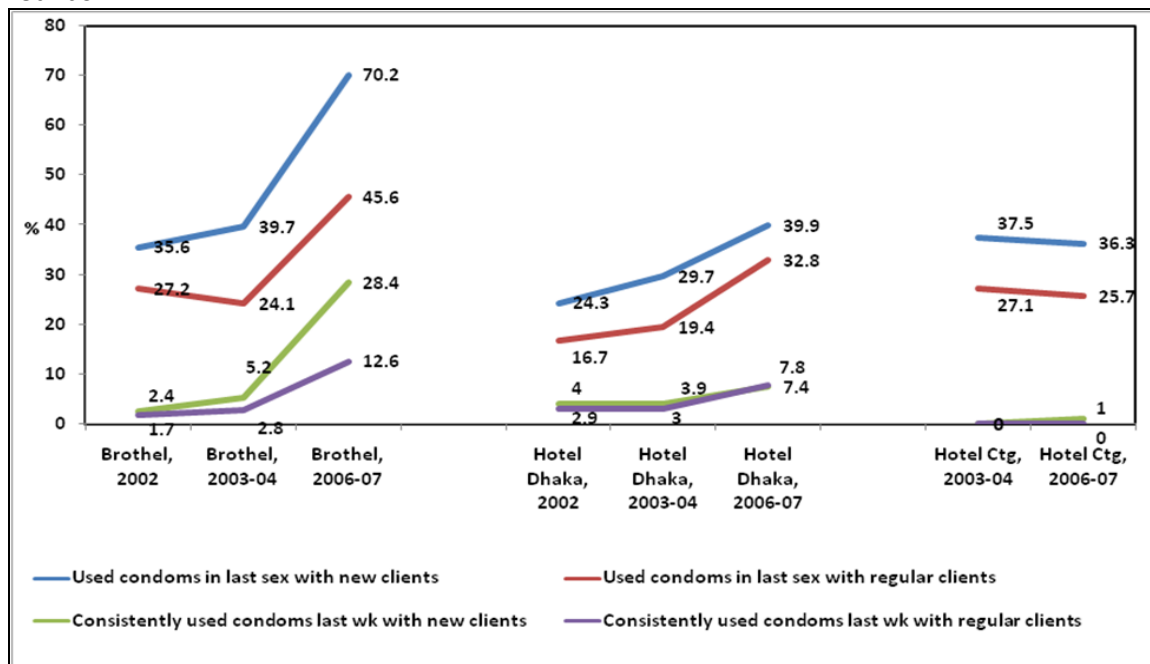


Note: Ctg refers to Chittagong

### Risk behaviors in female sex workers

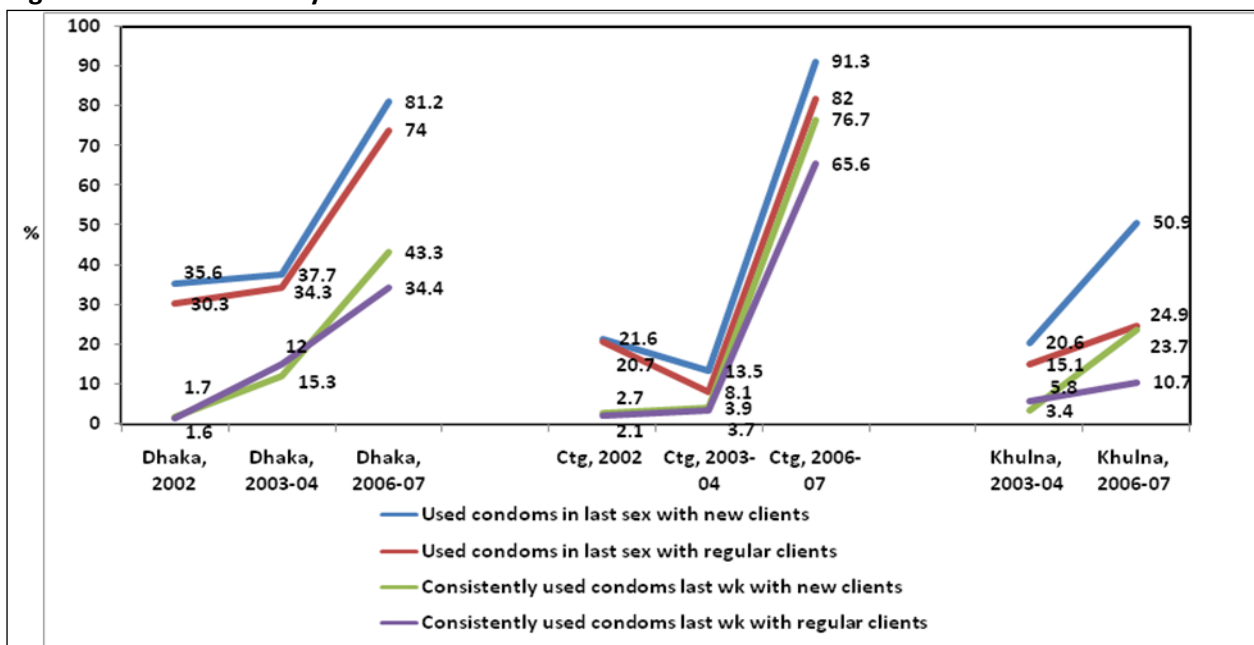
Data available from BSS, from RSRA and from research studies all show that condom use is not practiced consistently by female sex workers and that the numbers of partners are high (Hosain & Chatterjee, 2005; S. I. Khan, Hasan, Bhuiya, Hudson-Rodd, & Sagers, 2003; NASP et al., 2008a, 2008b). However, remarkable increases in condom use were recorded in the last round of BSS compared with earlier rounds (Figures 20 and 21), especially among brothel and street based sex workers particularly in Chittagong. One exception to this increase was among hotel based sex workers in Chittagong, where the lowest proportions reported condom use in the last BSS. In Chittagong, interventions in hotels suffered from funding constraints and there was a period during which funds stopped completely. With the new cycle of funding a new set of implementers was recruited who had not worked in the city before. Considering local differences in the structure and organization of the sex trade (see section on “Power structures in the sex trade”), it is essential that an understanding of the local situation informs the design of the service package irrespective of the service organization; replication of a service package from one setting to another may not be effective.

**Figure 20: Condom use by brothel and hotel based female sex workers over the rounds of BSS rounds**



Note: Ctg refers to Chittagong

**Figure 21: Condom use by street based female sex workers over the BSS rounds**



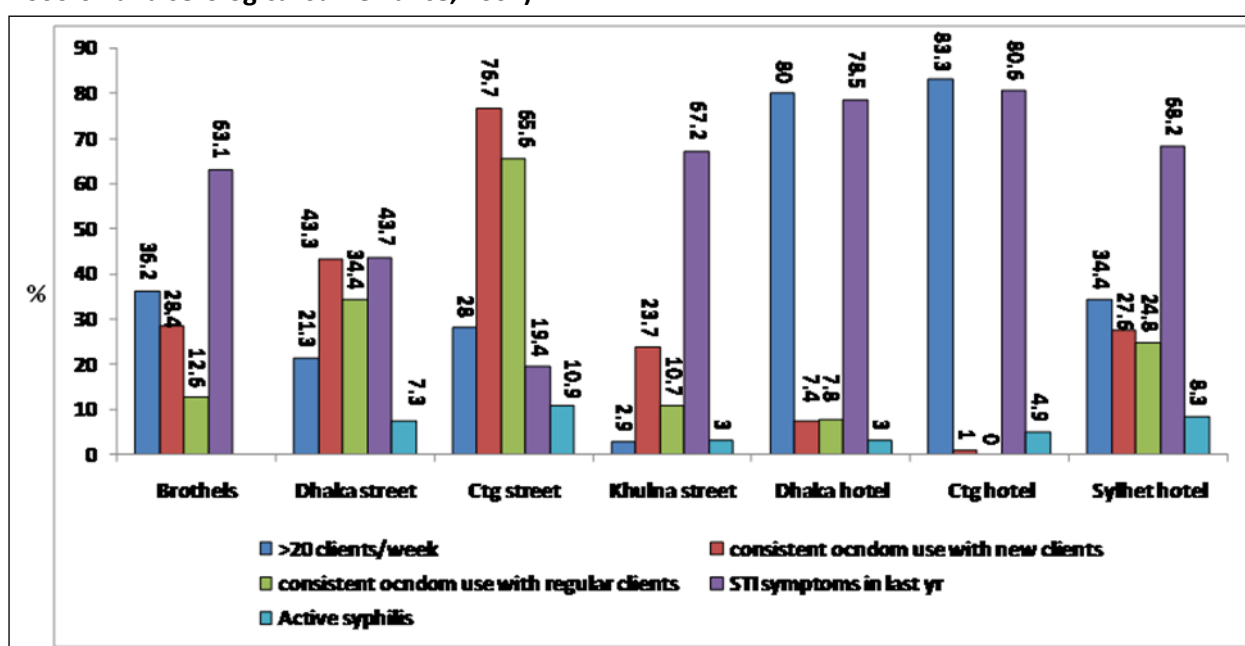
Note: Ctg refers to Chittagong

Comparisons of behavioral data with active syphilis rates and STI symptoms in sites where both serological and behavioral surveillance were conducted (Figure 22) highlight some discrepancies between the findings:

- large numbers of clients, low condom use, high proportions complaining of STIs in the last year but low rates of active syphilis (in streets of Khulna and hotels of Dhaka and Chittagong)
- high condom use, with relatively low proportions complaining of STIs but with high rates of active syphilis (in streets of Dhaka and Chittagong).

The former situation is possible because the complaints of STIs were likely due to STIs from causes other than syphilis; previous surveys on hotel sex workers has shown that syphilis rates were low in this group but other STIs including gonorrhoea and Chlamydia were high (Nessa et al., 2005; Nessa et al., 2004). However it is more difficult to explain the latter situation where syphilis rates were high, STI complaints were low and reported risk behaviors were low. A possibility is that STIs in women are often asymptomatic (Bogaerts et al., 1999). However, the high rates of reported condom use by these groups of sex workers raise questions about the validity of behavioral data. It is well known that when populations who are receiving interventions are interviewed they are prone to give socially desirable responses so behavioral surveys on their own often cannot provide the real picture. A more accurate picture requires more in-depth studies and laboratory based measurements of STIs.

**Figure 22: High client numbers, condom use, STI complaints and active syphilis in sex workers (BSS, 2006-07 and serological surveillance, 2007)**



Note: Ctg refers to Chittagong

Figure 22 clearly shows that sex workers working through hotels, especially in Dhaka and Chittagong are very vulnerable and also that there are differences in risks and vulnerabilities between street and hotel based sex workers in the same cities. Comparison of demographic features between the venues (using BSS data) showed that in both cities, hotel based sex workers were significantly younger than those in streets (Figure 23). Differences were also observed in the type of clients in the two venues (see section on “Clients of female sex workers”) so that sex workers operating through hotels earned more on average in a month compared to those operating from the streets (data not shown). These data reinforce that there are some key differences between these two groups of sex workers that need to be considered in intervention design.

### Geographic variation in profiles of female sex workers

As with IDU (see section on “Geographic variations in profiles of IDUs”) the socio-economic characteristics of female sex workers vary by city and venue where they sell sex (Table 4). While almost 60% of brothel-based sex workers had no education, rates in other groups ranged from

10.8% (street based sex workers in Chittagong) to 38.2% (street based sex workers in Khulna). Monthly income also varied, with hotel-based sex workers reporting higher income relative to the other groups and sex workers in Chittagong making more than those in other cities.

**Table 4: Socio-economic characteristics of female sex workers, by location and venue (BSS, 2006-07)**

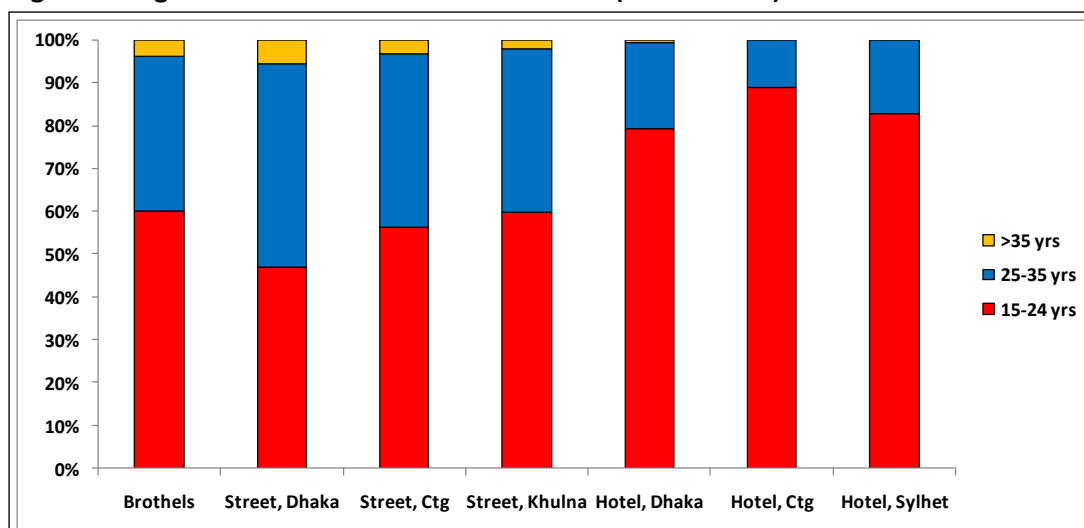
Indicators % (95% CI)	Brothel	Street			Hotel		
	National (N=683)	Dhaka (N=438)	Chittagong (N=314)	Khulna (N=314)	Dhaka (N=337)	Chittagong (N=108)	Sylhet (N=151)
Percent who had no schooling	59.7 (55.9-63.3)	17.9 (13.3-23.7)	10.8 (6.4-17.7)	38.2 (32.0-44.8)	22.1 (17.5-27.4)	33.6 (26.8-41.2)	19.2 (13.7-26.3)
Average income in the last month (Taka)	9051.2 (8698.8-9403.5) M=8000	5349.5 (4849.2-5849.8) M=5000	6658.4 (6024.9-7292.0) M=7000	3310.7 (3017.7-3603.6) M=3000	14879.4 (13330.2-16428.6) M=14000	15774.1 (14106.1-17442.1) M=15000	7352.9 (6600.5-8105.5) M=7000
Non-sex work income sources last month	7.8 (6.0-10.0)	9.4 (5.9-14.6)	0.3 (0.04-2.3)	25.8 (20.7-31.7)	2.6 (1.2-5.6)	1.9 (0.5-6.8)	21.9 (14.9-30.9)

M=median

### Age and vulnerability of sex workers

Most sex workers sampled in BSS were young (Figure 23). Older sex workers (>35 years) were few in number, but available data suggest that they may be more vulnerable. Older street based sex workers (>24 years) were almost twice as likely to have syphilis (OR 1.8,  $p < 0.01$ ) as younger ones ( $\leq 24$  years). Qualitative data show that with increasing age, as physical attractiveness declines, demand also declines. Therefore, older sex workers often cannot negotiate condom use.

**Figure 23: Age distribution of female sex workers (BSS 2006-07)**



Note: Ctg refers to Chittagong

## Summary of key findings

Key messages from the data on female sex workers are summarized here.

- Female sex workers do not always fit into neat categories based on the venues of client contact and selling sex – there can be considerable overlap, especially between hotel and residence based sex workers. However, in most cases, brothel based and street based sex workers in large cities are distinct categories.
- HIV prevalence is low: <1% in all sites and venues except among casual sex workers in Hili, a town bordering India, where 2.7% were found to be HIV positive during the 8<sup>th</sup> round of serological surveillance conducted in 2007.
- BSS data of 2006-07 shows increasing trends in condom use especially among Chittagong street based female sex workers. At the same time, the highest rate of active syphilis was found in this population of sex workers. This suggests that street based sex workers in Chittagong may be providing socially desirable responses to BSS administered questionnaires. More in-depth studies would better reflect the true situation among this population of sex workers.
- Active syphilis rates have declined in many sites. In Dhaka street based sex workers, the rates declined dramatically till the 4<sup>th</sup> round conducted in 2002 and plateau thereafter.
- Risk behaviors of hotel and street based sex workers in the same city show that sex workers working in hotels are the most vulnerable with highest proportions reporting more than 20 clients a week, lowest condom use rates and high proportions with STI symptoms. In a separate STI survey, high rates of STIs other than syphilis were recorded.
- Older sex workers although fewer in number, may be more vulnerable to HIV/STIs.

## Males who have sex with males

### Definitions of males who have sex with males (MSMs)

MSM comprise at least two populations that differ in behaviors and risks, namely male sex workers (MSW), and MSM who do not sell sex. MSM who sell sex have greater HIV risk and vulnerability. HIV transmission risk is higher for the receptive partner than the insertive partner. The definitions used for MSM and MSW in the national surveillance are shown below:

Serological surveillance	Behavioral surveillance survey
<b>Male sex workers:</b> Males who were selling sex to other males during the previous month	<b>Male sex workers:</b> Males who were selling sex to other males at the time of the survey
<b>Non-sex workers:</b> Males who had male sex partners but did not sell sex	<b>Non-sex workers:</b> Males who had male sex partners but did not sell sex

The MSM construct is complex and fraught with difficulties. In South Asia, *Kothi*, (who are feminized males – see below) use separate terms to categorize other MSM based on their behaviors (Dowsett, Grierson, & McNally, 2006; S. Khan, Khan, & Hollerbach, 2005; S. I. Khan, Hudson-Rodd, Saggars, & Bhuiya, 2005).

These categories are:

- *'Kothi'* – feminized males who prefer to be receptive partners and often play the part of 'female' in their emotional, physical and social interactions with other males-some cross dress or use feminine make up
- *'Panthi'*—usually insertive “manly” partners and most often the sex partners of *kothi*
- *'Parik'* –the male lovers of *kothi*; all *parik* are *panthi*, but not all *panthi* are *parik*
- *'Do-parata'* –they can act both as insertive and receptive partners based on the demand of their partners, irrespective of their own preference
- *'Gays'*—similar to westernized homosexuals, engaging in emotional and sexual relationships with other men, but do not like to be categorized as MSM (Rouf, 2007)
- *'Bisexual'* – have sex with both men and women. In Bangladesh, as in many other countries, the majority of MSM do not call themselves “gay” and their male to male sexual behavior is hidden especially from their families and close friends. Like gays, bisexual men also object to the term “MSM” (Rouf, 2007).

These categories are not mutually exclusive both because individuals may slide from one category to another and because few people can be strictly compartmentalized into any one category. Many MSM do not categorize themselves in any of these groups and prefer to say that they are like any other male - such MSM are referred to simply as “male” for study purposes where categories have been used, e.g. in assessing social networks (see section on “Social networks of MSM”). By and large, *Kothi* practice receptive sex which is likely to place them at greater risk of contracting HIV.

In this section we report an analysis of data from various sources including serological surveillance, BSS, a pilot on Respondent Driven Sampling (RDS) (see Box 2) and various research studies.

#### **Box 2: Piloting Respondent Driven Sampling in MSM in Dhaka, 2006**

Respondent Driven Sampling (RDS), an enhancement of chain referral sampling, is part of a new class of sampling methods called “linked-tracing/adaptive sampling designs” that are designed to operate in settings where traditional probability sampling designs are not feasible (Heckathorn, 1997). An underlying principle of RDS is that individuals within a population group are socially networked and can more efficiently identify their own group members than can field workers.

In RDS, the investigators identify initial recruits, called seeds, who are members of a socially networked target population. Seeds are selected on the basis of certain criteria. Each seed is provided with a fixed number of coupons that are used to recruit other members of their social network. Each of these recruits then recruits a fixed number of another set of new recruits and this recruitment process continues in waves until the required sample size is reached. The characteristics and behaviors of initial seeds and those of the participants become independent of each other when enough waves of recruitment are completed (Heckathorn, 1997). At some point the sample composition becomes stable or reaches “equilibrium” at which point the population sampled reflects the true composition of the population as a whole.

In Dhaka, RDS was piloted as a sampling methodology for MSM for an integrated serological/ behavioral survey in 2006 in which a risk behavior questionnaire was administered and blood was collected to measure antibodies to HIV and syphilis (Johnston et al., 2008). Clinicians provided treatment for active syphilis and referrals for VCT. Eight seeds were identified from diverse backgrounds - MSM behavioral categories, NGO involvement, socioeconomic and education backgrounds. From eight seeds, 531 MSM were enrolled over 11 weeks at which time equilibrium was reached for eight variables – age, educational status, occupation, income, MSM behavioral category (gay, kothi, parik, bisexual, etc), NGO participation in the last year, condom use during last anal sex with commercial and non-commercial partners and active syphilis status.



### Estimates of MSM

The estimated number of MSM and MSW in Bangladesh is 40,000 - 150,000 (National AIDS Committee, 2006). This number is considered by many to be a gross underestimate. The difficulties in estimating numbers of MSM are due to the hidden nature of this population group. However, a capture recapture methodology was successfully tested in Chittagong (S. I. Khan, Bhuiya, & Uddin, 2004) and that experience may be used to improve the estimate in the future.

### HIV prevalence among MSM

HIV prevalence has remained very low in MSM and MSW over the rounds of surveillance (Table 5). Moreover, an RDS study (Box 2) also showed very low HIV prevalence (only one of 531 MSM sampled was HIV positive).

### STIs and sexual risk behaviors of MSM

The only laboratory measure for STI in MSM and MSW is active syphilis through surveillance. Low levels of active syphilis were recorded in all rounds among MSM and there were no changes in the rates over the rounds in MSM from Dhaka and combined MSM/MSW from Chittagong (Figure 24). In MSW from Dhaka the rate declined significantly ( $p=0.04$ ).

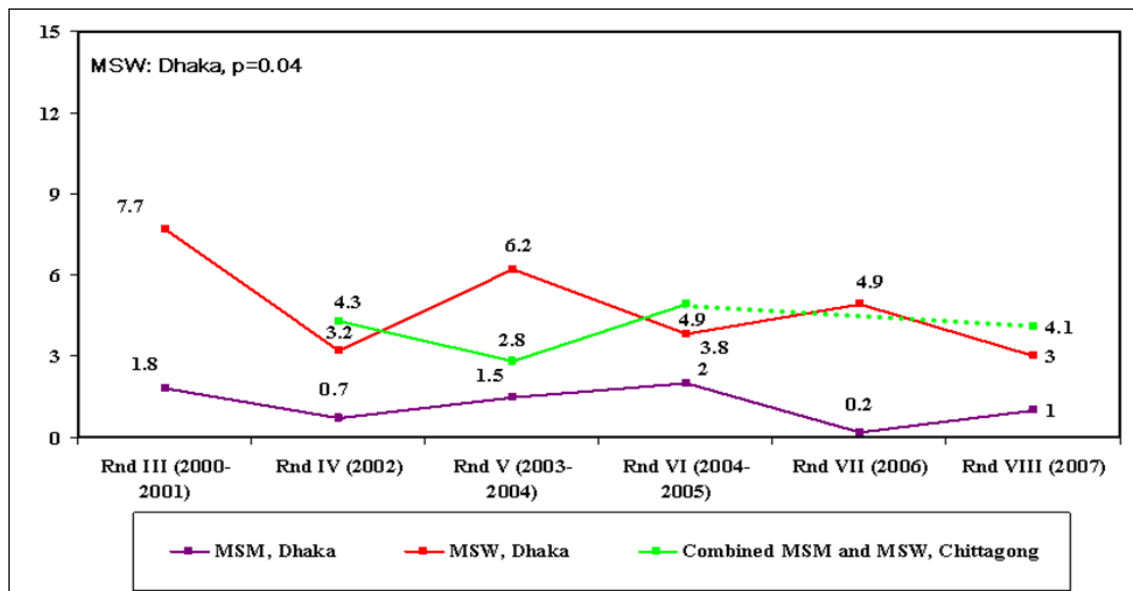
**Table 5: HIV prevalence over the rounds of serological surveillance**

Study Populations: Geographical Location	HIV % positive (Number tested)							
	1998- 1999 Round I	1999- 2000 Round II	2000- 2001 Round III	2002 Round IV	2003- 2004 Round V	2004- 2005 Round VI	2006 Round VII	2007 Round VIII
MSW: Dhaka	ND*	ND	0 (310)	0 (401)	0 (274)	0 (235)	0.7 (284)	0.3 (400)
MSM: Dhaka	ND	ND	0 (399)	0.2 (406)	0 (399)	0 (405)	0.2 (401)	0 (399)
MSM and MSW combined <sup>§</sup> :								
Dhaka	0.2 (401)	0 (388)	ND	ND	ND	ND	ND	ND
Mymensingh	ND	ND	ND	0 (400)	0 (400)	ND	ND	ND
Chittagong	ND	ND	ND	0 (397)	0.3 (398)	0.4 (283)	ND	0.3 (290)
Sylhet	ND	ND	ND	0 (402)	0.3 (400)	0.4 (231)	ND	ND

\*ND = not done

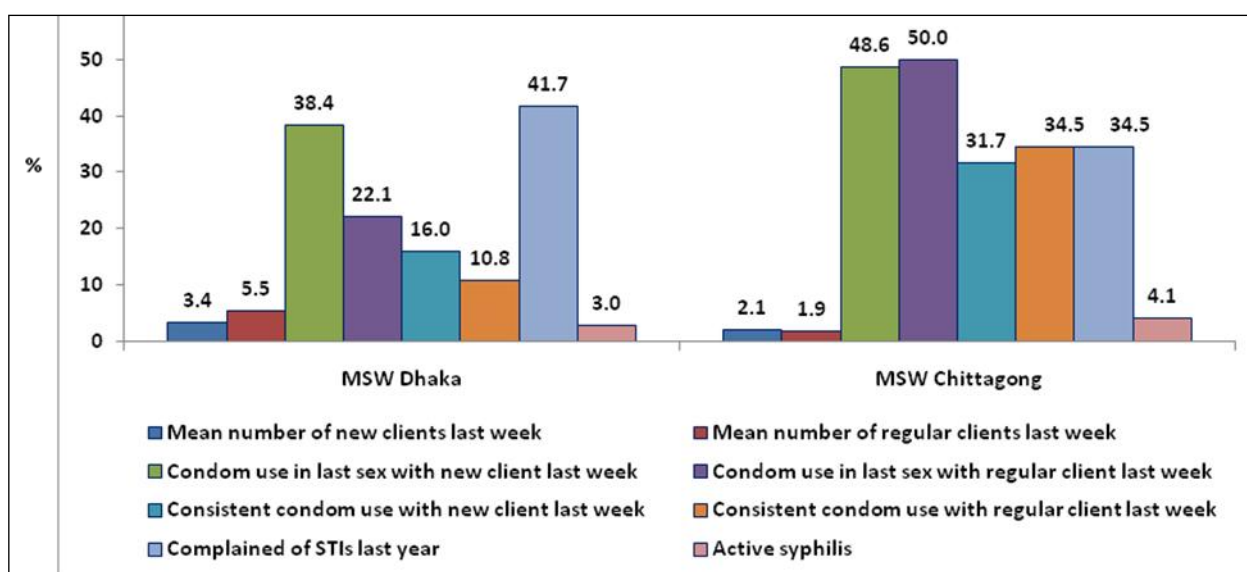
<sup>§</sup> In some sites MSW and non-sex worker MSM could not be differentiated and they were sampled as a single group

**Figure 24: Active syphilis rates in MSM and MSW (serological surveillance, 2007)**



Sexual risk behaviors have been measured over the years through BSS among these population groups with interviews for the BSS conducted by the target communities (*Kothi* interviewed MSM and MSW). MSW in Dhaka appear to be at greater than MSW in Chittagong (Figure 25), because they have more clients, report much lower condom use, and much more likely to have had STI symptoms. Although active syphilis rates are relatively low, the high proportions of MSW in both cities who report STI symptoms suggest that they have STIs that require attention.

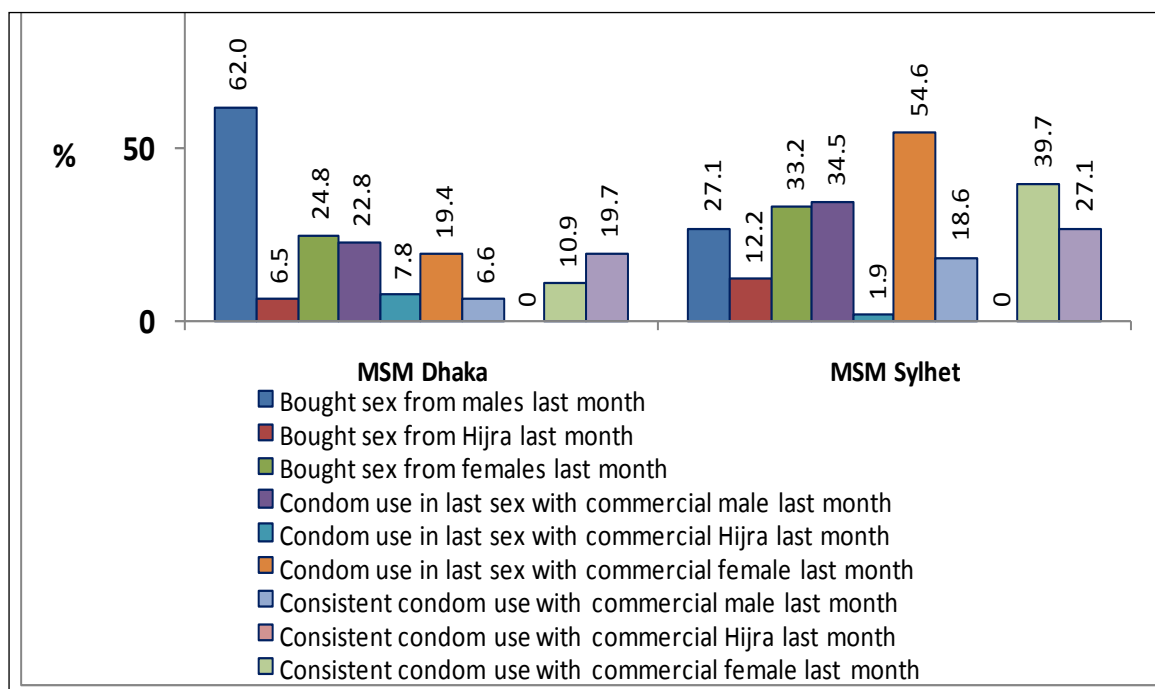
**Figure 25: Sexual risk behavior, complaints of STI and prevalence of active syphilis in MSW (BSS and serological surveillance)**



In contrast, and not surprisingly, fewer MSM practiced risky behavior but nonetheless they were highly sexually active and in addition to male sex partners, in the last year 60.2% reported female sex partners and 15.1% had *hijra* partners. Buying sex from all genders was common and consistent

condom use was very low, and zero with *hijra* partners (Figure 26). Sex between MSM and females (discussed later in the report) is a major concern is the threat of bridging infections to the general population which is not adequately addressed by current interventions.

**Figure 26: Sexual risk behavior and complaints of STI in MSM (BSS, 2006-07)**

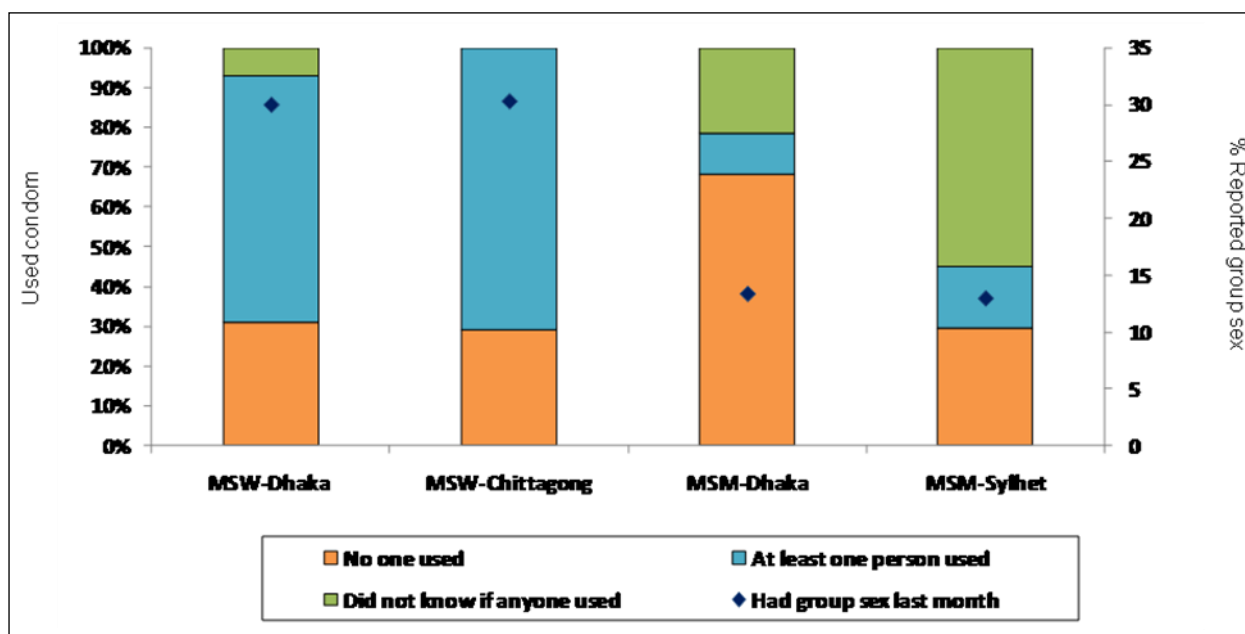


Group sex – i.e. several men have sex with the same individual, one after another – was reported by about a third of MSW and nearly 15% of other MSM (Figure 27 right axis). Condom use in group sex was low, especially among MSM in Dhaka where 68.1% said no one in the group had used condoms in the last group sex act. Similar data were obtained through the RDS pilot where 13.5% MSM had group sex in the last month with a mean partner number of 3.2 (maximum eight other partners in addition to respondent) at last group sex. Qualitative studies also highlight that group sex is often unprotected and may be associated with violence. Group sex with MSW and *hijra* sex workers was generally associated with physical and verbal threat and violence. One MSW stated that:

“I was taken by a client to have sex with him and stay with him for whole night. He wanted to pay me 200 taka. When I reached his residence I saw five of his friends were waiting. I wanted to leave the place. But I could not, they beat me and forced me to have sex with all of them without any condoms. Even there were no lubricants. I felt terrible anal pain and bled as well. What can I do? Now I try to avoid going to client’s home out of fear of group sex.”

Even when group sex is not rape, MSW are not in a position to negotiate condoms; condoms are either unavailable or inadequate in number (S. I. Khan, 2008). Group sex is particularly worrying as it allows transmission of infections from one person to several people at the same time.

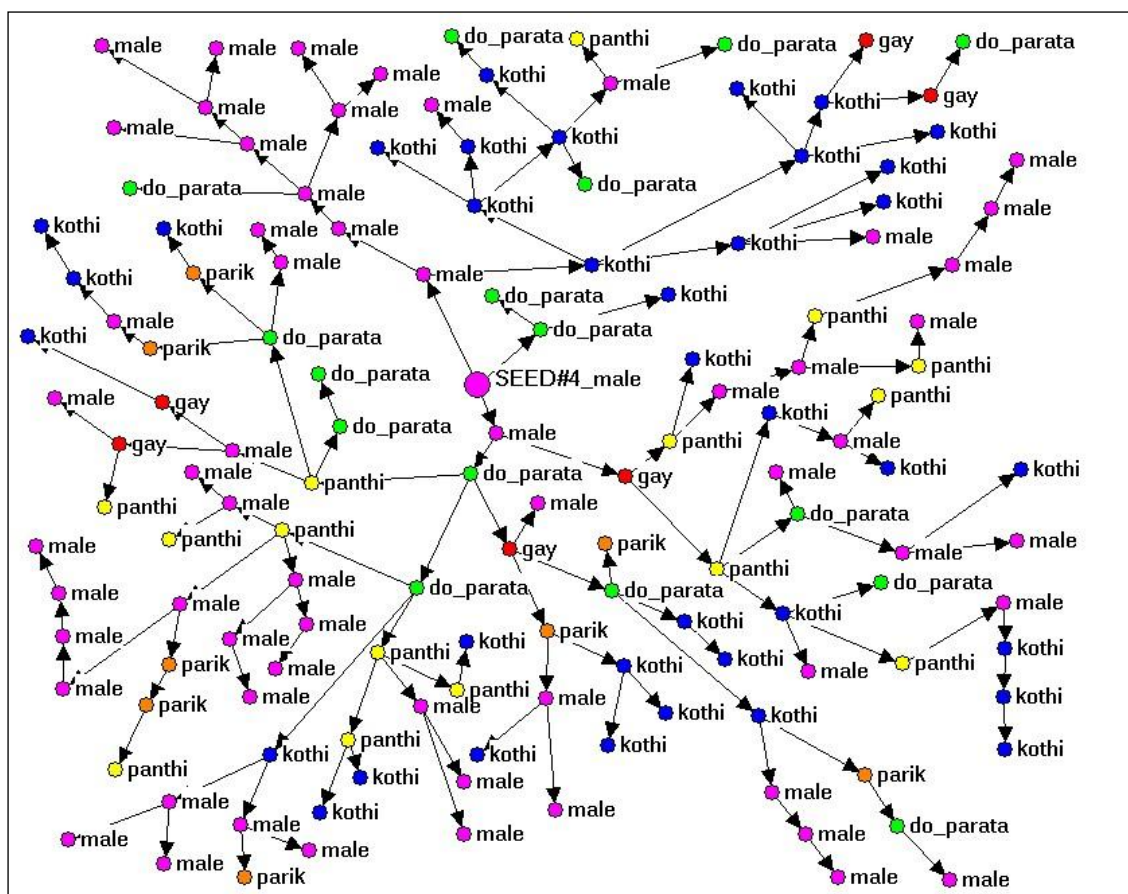
Figure 27: Group sex in the last month and condom use during the last group sex (BSS 2006-07)



### Social networks of MSM

Understanding network dynamics of any population group is helpful in the provision of services for those groups, as was discussed for the injection sharing network of IDUs (see section on “Injection sharing networks”). MSM are a hidden population and one of the ways of reaching them is to use their social networks. When social and sexual networks overlap, network analysis can also provide insights into the dynamics of an HIV epidemic. RDS (see Box 2) is a sampling methodology that uses networks to provide a random sample of a hidden and marginalized population group. When RDS was piloted in Bangladesh, one of the criteria for MSM seed selection was their self identification in the MSM categories (see section on “Definitions of males who have sex with males”). Previously it was thought that certain categories of MSM in Bangladesh are highly isolated such as the gay and bisexual populations, who are at present not being reached by NGO interventions. However, RDS showed that all categories of MSM are linked through their social networks, although the numbers of gay and bisexual men were small (Johnston et al., 2008). Figure 28 illustrates this – through one MSM who categorized himself as a “male”, 141 MSM of all categories were reached. Social networks can be used effectively to reach the more hidden and isolated individuals within an already hidden and marginalized population for services as well as research.

Figure 28: Social network of a “male” MSM (Johnston et al, 2008)



### Summary of key messages

Key messages from the data on MSM and MSW are summarized here.

- MSM are a heterogeneous group of men and based on their male to male sexual behavior, *kothi* (feminized males) categorize other MSM in several ways. But there is considerable fluidity between the categories as individuals are not always fixed in their behavioral patterns. The categories of “gay” and “bisexual” are considered more westernized and men who identify themselves as such reject the term MSM.
- The estimated numbers of MSM and MSW are not widely accepted and lack of adequate data has been a key obstacle to obtaining more reliable estimates.
- HIV is low in this population group.
- Large proportions complained of STIs (MSW more than MSM) but active syphilis rates are low. Laboratory diagnosis for other STIs is not available.
- Although MSW practice riskier behaviors than other MSM, MSM also have multiple sex partners of all genders and consistent condom use is very low with all partners. Non-commercial female partners are commonly reported by MSM.
- MSM are highly networked and the more hidden categories of gay and bisexual men are also identified as part of their social network.
- Group sex is very common and condom use in group sex is low. Group sex is often associated with violence.

## Transgendered People (*Hijra*)

### Definition of *Hijra*

Transgendered people in Bangladesh are traditionally known as *hijra*. They are mostly biologically male, but their gender and sexual orientation are feminine and do not match their biological sex. They therefore consider themselves as a separate gender category.

Although it is generally believed that *hijra* are born inter-sexed (neither males, nor females) with abnormal or undifferentiated genitals, in the second round of BSS, almost all *hijra* stated that this was not the case (Govt. of Bangladesh, 2000), most were born males, and then became socialized to become a *hijra*. Twenty three percent reported being castrated and many had plans for future sex change operations. Most *hijra* regularly take female hormones to modify their physical appearance.

Considerable understanding of *hijra*, their lives and community, has now been obtained through several studies and more recently an ethnographic study which revealed the complex life of a *hijra* and the structure of the *hijra* community (summarized in Box 3) (S. I. Khan, Parveen, Hussain, Bhuiyan, & Gourab, 2007). *Hijra* encounter a series of harassments throughout life, which begin early -- at home, and then extend to all spheres of life. A young 'feminine' boy is often forced to leave school because of humiliation by his peers and even teachers. Research found that 28% of *hijra* had no formal education, 30% completed primary and 36% secondary school, and only 4% completed college education (S. I. Khan, Parveen et al., 2007). Lack of qualifications along with their feminine appearance disqualifies *hijra* from entering the formal job sector. Those who are engaged in various non-formal jobs reported workplace abuse and eventual ousting from jobs (S. I. Khan, Hussain, Parveen, Bhuiyan, & Gourab, forthcoming).

After facing repeated abuse from early childhood, many run away from their families and join the *hijra* community. This segregates them from mainstream society but living in the *hijra* community is also difficult and not free from abuse. Within the *hijra* community they are compelled to stay under the care of a *hijra* guru and gradually participate in *hijra giri* (traditional activities performed by the *hijra*). These activities include collecting money from market places (*bazaar tola*) and blessing newborn babies (*badhai*). However many *hijra* also sell sex; findings from a research study (S. I. Khan, Parveen et al., 2007), showed that 30% of *hijra* were exclusively involved in the sex trade, 36% exclusively involved in *hijra giri*, and 34% both sold sex and earned income through traditional *hijra giri* (S. I. Khan, Parveen et al., 2007). But the *hijra* community do not respect *hijra* who sell sex so many try to keep their sex work secret. *Hijra* sell sex because it has gradually become difficult to earn money through traditional *hijra giri* due to changing social, cultural, political and economic contexts of both urban and rural Bangladesh.

The social exclusion of *hijra* as a community and the ridicule and humiliation that a *hijra* is constantly exposed to has a very negative impact on their psyche which affects all aspects of their lives. The quote below illustrates the desperation of a middle aged *hijra*:

“When we are abused and harassed, when we are arrested and sent to prison, the NGO staff keeps running with condoms and lubricants after us, ignoring our legal and social support. We are human beings, not only the owners of commercial genitals; they must protect our life first, then the genitals.”

Although *hijra* identity might be expected to be clear, in reality this is not the case. Similar to other population groups there is considerable fluidity in what constitutes a *hijra* versus an MSM, particularly *kothi* (see section on “Definition of males who have sex with males”). Nowadays, some *hijra* dress like men, especially those working in NGOs/community based organizations (CBOs). According to the definition used in surveillance, anyone who self-identifies as belonging to the *hijra* community is a *hijra*. This is not accepted by the *badhai hijra* who believe that a *hijra* has to follow the norms of their community – in dress, in work, and in rituals.

*Hijra* are often considered under the same category as MSM but the information summarized above clearly shows that *hijra* are a distinct MARP with a special place in society in Bangladesh. This isolates them from mainstream society and gives them little or no access to services available to other people (see section on “Interventions for MSM, MSW and *hijra*”).

**Box 3: Understanding *hijra* culture with central attention to sexual culture and sexuality construction: an ethnographic study, 2007**

ICDDR,B together with the *hijra* self help group, *Badhan Hijra Shangha*, and a media/behavior change communication (BCC) expert organization (TREE Foundation Limited, Bangladesh) undertook this study, using a research team of *hijra* and non-*hijra* members. Ethnographic research perspectives along with improvising theatre methods were applied to answer the research questions and to translate findings into context specific BCC materials. Multiple data collection tools were integrated to obtain insights into *hijra* sexuality and their sexual-socialization process. The BCC materials were developed through a participatory process with extensive consultations with the *hijra* leaders (*guru*) and all other members at the *hijra* community. Also, a community-based theatre group named *Rongberong* was formed with the objective of organizing the *hijra* community, assisting them in analyzing various problems and finding solutions. Using the improvisational theatre approach, they prepared the script of the drama focusing on problems and solutions.

**Estimates of numbers of *hijra***

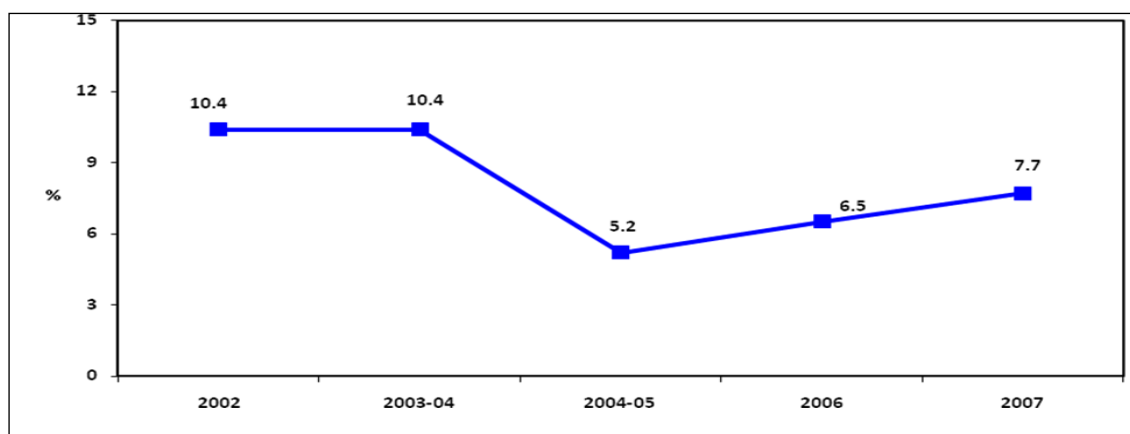
The estimated number of *hijra* in Bangladesh is 10,000–15,000 (National AIDS Committee, 2006).

**HIV prevalence among *hijra***

*Hijra* have been included in serological surveillance since the 4<sup>th</sup> round (2002). The prevalence during the last round conducted in 2007 was low, ranging from 0.2–0.8%.

**STIs and sexual risk behaviors of *hijra***

Active syphilis rates (as measured in serological surveillance) declined in *hijra* from Dhaka and Manikganj ( $p=0.032$ ) as shown in Figure 29. However, since the 5<sup>th</sup> round there appears to be a rising trend in infection. A possible explanation for this could be that support for HIV prevention programs in *hijra* declined over the years (S. I. Khan, Parveen et al., 2007).

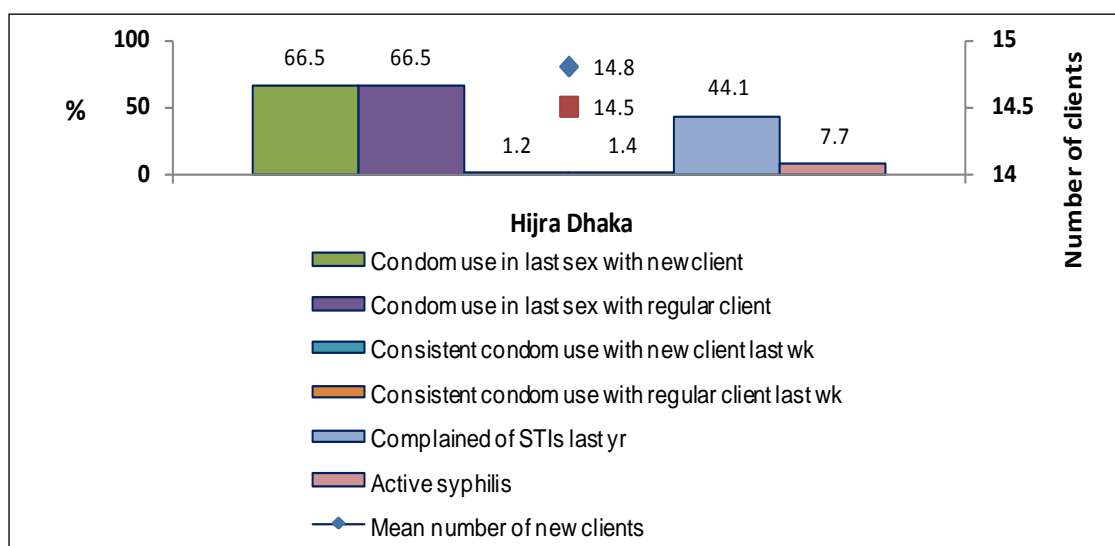
**Figure 29: Active syphilis rates in hijra in serological surveillance 2002 to 2007**

BSS data showed that *hijra* had high client numbers with more than 14 new or regular clients a week. Consistent condom use with both client types was abysmally low and high proportions complained of STIs and had active syphilis (Figure 30). The ethnographic study confirmed frequent unprotected sex. The study also shed light on factors that make *hijra* more vulnerable such as their social exclusion, low self esteem, and frequent exposure to abuse (physical, mental and sexual) (S. I. Khan, Hussain, Parveen, Bhuiyan, & Gourab, In press). As an example, many *hijra* are ashamed to buy condoms from shops because they are identified as eunuchs or being asexual. Those who received condoms from the NGOs related problems such as:

- the time schedule (6 p.m. to 10 p.m.) for condom distribution does not suit them as this is the peak hour for getting customers. Therefore, in most of the cases, they are distracted and inattentive to the information on STI/HIV/AIDS given by the outreach workers.
- in bad weather, mainly in the rainy season they cannot go to many of the spots where outreach workers usually distribute condoms.



**Figure 30: Sexual risk behavior, complaints of STI and prevalence of active syphilis in (BSS and serological surveillance)**



The ethnographic study on *hijra* also showed that in addition to commercial and non-commercial sex partners, *hijra* sometimes have sexual relationships with each other but such relationships are very secret and those involved are considered inferior in the *hijra* community. If such a relationship is disclosed in the community, a trial is conducted by the guru of the accused and all efforts are made to prevent the information from spreading into the wider *hijra* community.

Group sex was reported by 28.4% of *hijra* in the last year and condom use in group sex was low, similar to MSM and MSW (see section on “STIs and sexual risk behaviors of MSM”). As with MSW, group sex was often forced.

### Summary of key findings

Key messages from the data on *hijra* are summarized here.

- *Hijra* are a highly marginalized and stigmatized population group whose social exclusion begins in early childhood
- Abuse – physical, verbal, sexual, is common in all spheres of their lives, even within their own community
- Traditionally *hijra* did not sell sex but with the changing social and cultural context, the majority sell sex, lacking alternative income sources. Selling sex is not condoned by the *hijra* community.
- HIV is less than 1%. Active syphilis rates were high and although they started to decline, since 2004-05 they have started to rise again. Considerable proportions complained of STI symptoms but as for MSM, laboratory diagnosis for STIs other than syphilis is not available.
- *Hijra* reported high client turnover and almost none used condoms consistently.
- Group sex was common and often forced.

## Overlapping Risks (Commercial sex and injecting drugs)

In addition to the ambiguities within groups noted above, the main MARPs – IDU, female sex workers, MSM and MSW and *hijra* – are not mutually exclusive. Injection drug use has been documented among both female and male sex workers (discussed below). Genetic characterization of HIV subtypes helps analyze overlapping risks-- the extent of similarity in the HIV strains found in different populations points to overlap among those groups.

### Female sex workers and drugs

A total of 2,345 female sex workers were sampled from different venues and cities during the 2006-07 BSS. Among, these only 13 said they had injected drugs in the last year and all were from Dhaka; 12 from the streets and one from hotels.

However, when female drug users were interviewed, approximately two thirds said they had sold sex in the last year (see section on “Female drug users”) (Azim et al., 2006). A qualitative study shed light on the reasons why female drug users sell sex (unpublished). Female drug users reported that they began selling sex in order to ensure a sustainable supply of drugs. Some said that while working as sex workers, they were first introduced to alcohol offered by their clients and gradually moved on to hard drugs including injections. They explained that their addiction to heroin and injections made them more dependent on the sex trade to ensure money for drugs thus setting up a vicious cycle. Also, female drug users who sell sex do not prioritize using condoms because their main aim is to be able to earn enough to buy drugs, and are unlikely to refuse clients who do not want to use condoms. One female stated:

“Before my addiction to drugs, when I sold sex, I would convince my clients to use a condom and quite often I could say no to clients who did not want to use condoms. But after I began using drugs, my daily expenditure increased, and in order to ensure I had enough money to buy my drugs, I sold sex more frequently. Now I do not bother about condoms. I do not refuse any customer. “

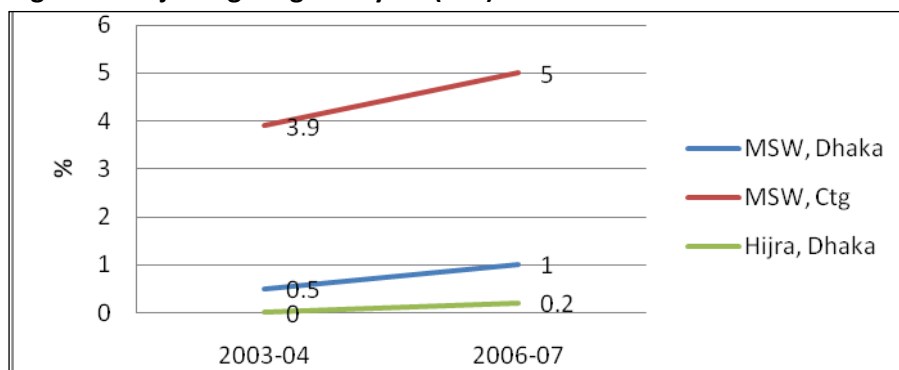
Another female drug user explained why she did not use condoms regularly:

“After I began taking drugs, I lost weight and my looks as well. I was better looking before and now customers are not attracted to me anymore and I have much fewer clients. Therefore, I have to sell sex every day and to any client I can get, and in order to please my clients, I have sex without condoms. “

## MSM and IDUs

Injecting drug use was reported by 5% of MSW in Chittagong during the BSS of 2006-07; in the earlier round of BSS it was also in Chittagong that the highest rates of such overlapping risks were detected (Figure 31). In the RDS data, 13.6% of MSM in Dhaka reported taking any illicit drugs in the last year but none injected drugs. In other cities and groups, injecting drug use was not common.

**Figure 31: Injecting drugs last year (BSS)**



Note: Ctg refers to Chittagong

## HIV Subtyping

HIV subtypes can provide further insight into HIV epidemiology in a country. Recently the subtypes of 198 HIV-1 strains collected between 1999 and 2005 through serological surveillance, from clients of the VCT Unit at ICDDR,B and a survey of HIV in patients with tuberculosis were characterized (Sarker et al., 2008). Subtype C (41.4%) was the most common strain identified. Genetic characterization showed that most strains from IDUs clustered together and were similar to Indian strains obtained from heroin smokers. Of the 23 HIV-1 strains obtained from female sex workers participating in surveillance, 18 were circulating recombinant forms (CRFs), 1 was subtype A1 and 4 were subtype C. Among seven strains investigated, only one had a close genetic identity with the strains from IDUs; another was identical to a strain from a Bangladeshi STI patient sampled from an STI clinic. The strains from MSM, MSW and *hijra* did not cluster with the IDU strains nor with each other. The VCT strains were very heterogeneous and clustered with strains from India, Myanmar, Ethiopia and Zimbabwe. None of these strains showed close genetic relationship with the locally circulating strains obtained from IDUs or sex workers. The vast majority of VCT strains were from international migrant workers mainly from the Middle East (Zaidi et al., 2004). The data suggest that at present Bangladesh probably has two different streams of the epidemic – one circulating internally primarily within IDUs and the other imported from abroad which does not appear to be circulating in-country yet.

## Summary of key findings

Key messages from the data on the extent to which commercial sex and use of injection drugs overlap:

- Most female drug users (two thirds) also sell sex.
- Five percent of MSW from Chittagong reported injecting drugs in the last year.

- Genetic analysis of HIV strains shows that the IDU and heroin smoker strains are almost identical confirming that spread is occurring within networks of IDUs through sharing of injection equipment.
- The HIV strains obtained from IDUs are distinct from those obtained from other population groups suggesting that transmission of HIV is still restricted within specific MARPs.
- HIV subtypes from migrants are genetically diverse and have little or no identity with locally circulating strains in IDUs and female sex workers.

## **Other Potential Population Groups at Risks of HIV/STIs**

Other than the MARPs already discussed, some groups are potentially more at risk of HIV/STIs than the general population. These groups are difficult to define, and evidence to support their greater risk is tenuous, being largely based on anecdotes. However, for some groups there is evidence of their vulnerability in other settings (see section on “Mobility”). The limited evidence available is presented here.

### **International and cross border migrants**

#### ***Definitions of Migrants***

The terms and definitions used to classify migrants in this report are as follows:

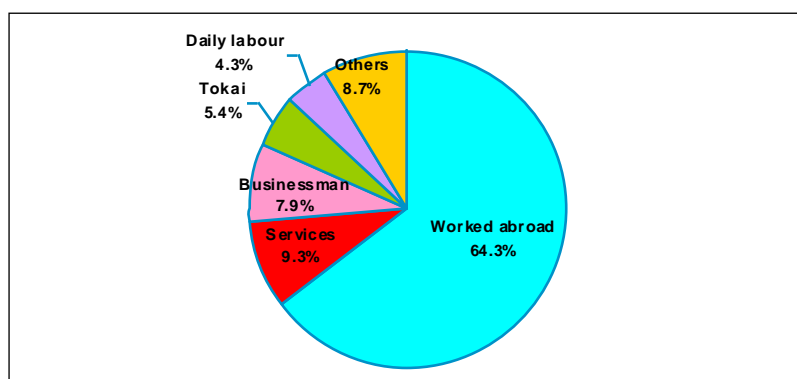
- International migrants -persons who change their country of usual residence for a year or more.
- International migrant workers - semi- or limited skilled workers who work abroad; includes registered and unregistered workers.
- Potential migrant workers - those who have never worked abroad as migrant workers but have started the process of migration (applied for a visa/ received a visa/ received a passport) and will be leaving Bangladesh within the next one year
- Cross border migrants –many people cross the border to neighboring countries for brief periods of time. Such cross border mobility is usually informal— not through official channels.

#### ***Estimated number of international migrant workers***

According to the Bureau of Manpower, Employment, and Training (BMET) of the Ministry of Expatriates’ Welfare and Overseas Employment, around 900,000 Bangladeshis left the country through official channels in 2007. Among them, 8% were females. A nationwide survey to estimate both regular and irregular (unofficial) female migrants concluded that about 13.6 % of all migrants currently working abroad are female (T Blanchet, Razzaque, & Biswas, 2005).

#### ***HIV infection in international migrant workers***

There are no data on HIV prevalence in international migrant workers. However, the majority of passively reported HIV positive cases have been among returned international migrant workers and their families. A recent analysis of existing data on PLHIV showed that of 645 adult PLHIV who had been employed, 64.3% had previously worked abroad (Figure 32) (NASP et al., 2009c (forthcoming)).

**Figure 32: Previous employment of PLHIV (NASP, 2009c (forthcoming))*****Risk behaviors of international migrant workers***

Risk behavior data on international migrant workers are available from a few small research studies (Mercer, Khanam, Gurley, & Azim, 2006) (T. Blanchet et al., 2003; T Blanchet et al., 2005). Box 4 provides brief descriptions of the methodology employed for the two studies conducted by ICDDR,B.

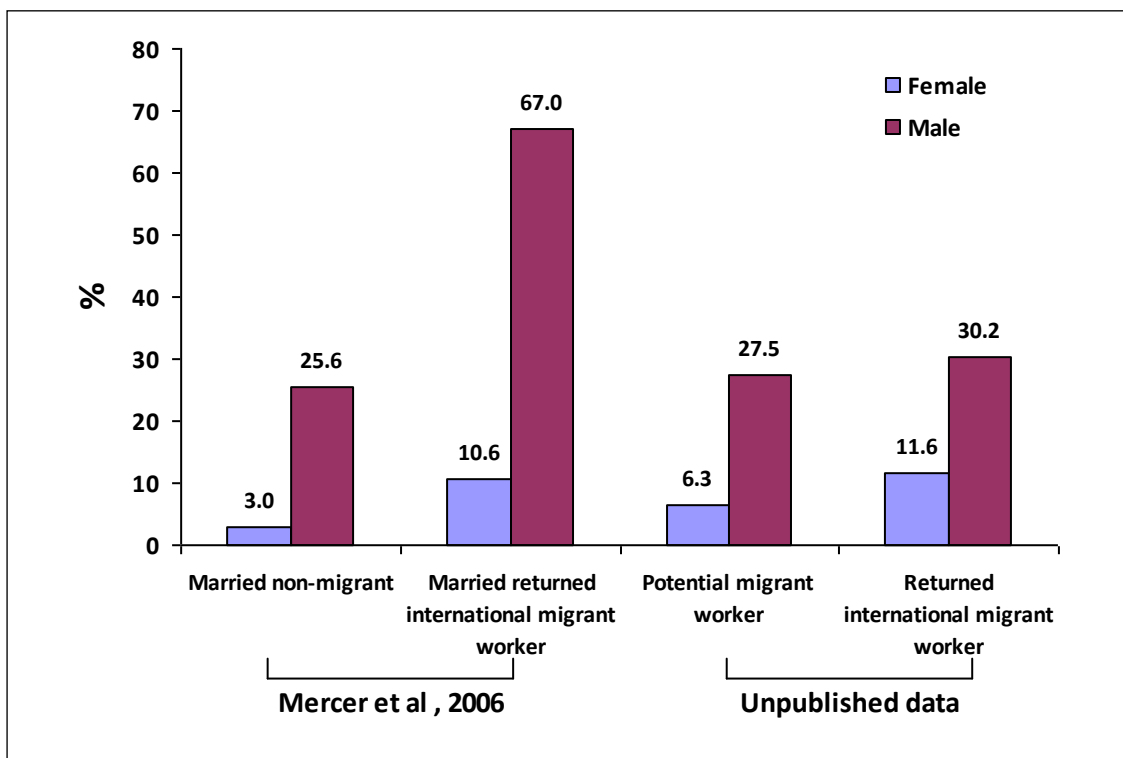
**Box 4: ICDDR,B Studies on migration and HIV risk behaviors**

A cross-sectional survey of married men and women separated due to migration of husbands (both internal and international) was conducted in two rural areas, Abhoynagar and Mirsarai, where health and demographic surveillance is carried out routinely by ICDDR,B (Mercer et al., 2006). The information available through the routine surveillance provided basic data on migration and enabled random sampling of married couples separated due to husband's work away from home. Men and women were categorized into four groups: men who had returned within the last five years of working away from home either within Bangladesh or abroad and a control group of men who had not left home; women whose husbands had been away from home for work either in Bangladesh or abroad within the last five years and a control group of women who were not separated from their husbands. A total of 1,175 women and 703 men were interviewed. The aim of the study was to compare prevalence of reported extramarital sex and condom use and to quantify association with separation from spouse and other factors. Interviews were conducted with men and women using a structured questionnaire.

An additional cross-sectional survey was conducted among random samples of males and females to assess health risks and outcomes of international migrant workers (unpublished). The study population consisted of working males and females, both married and unmarried, who were 15-59 years old. Participants were categorized in two groups – returned international migrant workers and potential migrant workers (who served as control groups). Males were selected from Mirsarai which is a rural, migration prone area for males. Females were sampled from Rupganj, Manikganj, Nababganj and Tongi - semi-urban migration prone areas for females. For both males and females, 200 individuals were sampled from each group and data on HIV risk behaviors and knowledge were collected through semi-structured interviews.

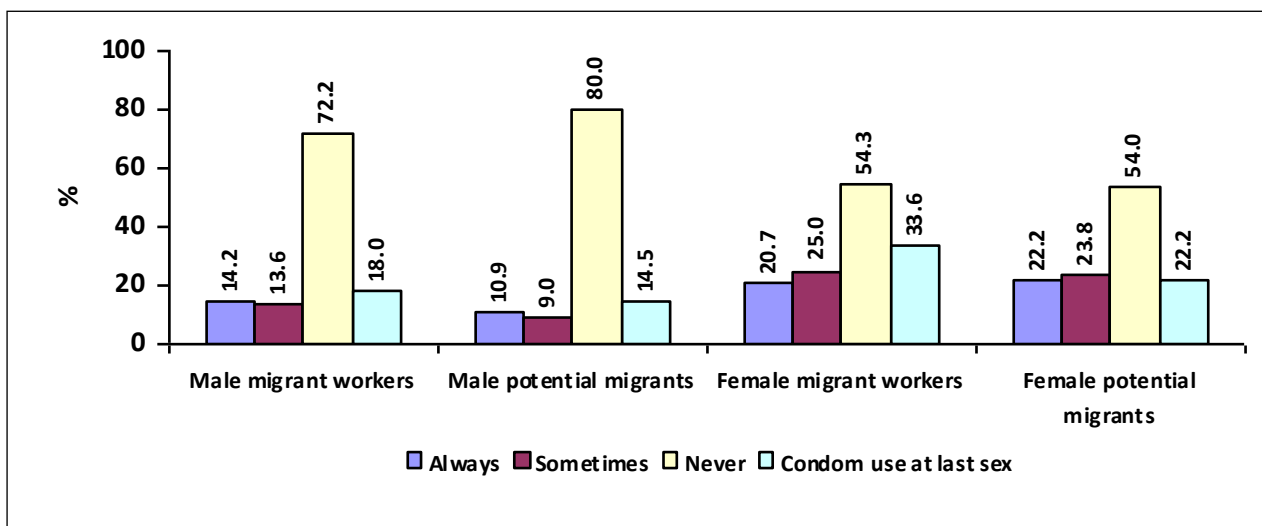
Non-marital sex (extra- and pre-marital) was reported by both men and women although the proportions were lower for women in both studies (Figure 33). In the study on married couples (Mercer et al., 2006), extramarital sex was more commonly reported by males and females separated by husband's work abroad compared to couples not separated. However, in the other study, there were no differences in the proportions reporting non-marital sex among potential and returned international migrant workers (unpublished data). The reason for the difference in findings between the two studies is not clear, but is most likely related to differences in study design. Nonetheless, it is notable that in both studies a quarter or more males who had not migrated had engaged in non-marital sex.

**Figure 33: Non-marital sex reported by males and females in the two ICDDR,B studies on migration (Mercer et al 2006 and unpublished data)**



Condom use in non-marital sex was investigated in the unpublished study on married and unmarried males and females (unpublished data, see Box 4). The data showed that most males and females had never used condoms during non-marital sex (Figure 34) and there was no difference between migrants and potential migrant workers.

**Figure 34: Use of condoms during any and last non-marital sex among migrant workers and potential migrant workers, by gender (unpublished data)**



Males were asked questions about buying sex from female sex workers and of condom use in these commercial sex acts (Table 6). In both studies, far more returned international migrant workers reported that they had ever bought sex from a sex worker than the comparison group; 58.7% of returned migrant husbands reported sex with a female sex worker (n=179) compared to 15.2% of non-migrant husbands (n=407, p<0.01). Likewise in the unpublished study, 23.3% of married and unmarried returned migrants (n=200) reported ever buying sex of whom 40.4% bought sex before they went abroad; only 16.0% of potential migrant workers (n=200) ever bought sex (p<0.01). Among those men who had purchased sex from a female sex worker, migrant workers were much less likely to report having used a condom (Table 6). In general, condom use was very low.

**Table 6: Buying sex from female sex workers by international migrant workers who have bought sex from a female sex worker: findings from two ICDDR,B studies**

Study	Mercer at al, 2006		Unpublished data	
Gender	Married males (%)		Married and unmarried males (%)	
Population group	Returned international migrants	Non-migrants	Returned international migrants	Potential migrant workers
Had sex with FSW since marriage	58.7	15.2		
Ever bought sex from FSW			23.3	16.0
Had sex with female sex worker before going abroad	23.8	NA	40.4 (of n=47 who ever bought sex)	NA <sup>§</sup>
Bought sex from a female sex worker while abroad	53.6	NA	74.5	NA
Ever used condom with female sex worker	31.4	24.2	53.2	35.2
Used condom with a female sex worker during the last sex	13.2	6.5	21.2	15.1
N	179	407	200	200

\* $\chi^2$  significant at  $p \leq 0.01$  <sup>§</sup>NA = not asked (not relevant)

Both studies confirm that commercial sex was more common among international migrant workers. Moreover, male to male sex was also reported by 5.4% of the international male migrant workers while abroad and this was a significantly higher level than that among than males who stayed at home (Mercer et al., 2006). The same study also showed that men who reported extramarital sex before going abroad were three times more likely to have extramarital sex while abroad. There is an assumption that once migrant workers return home, they return to their families and do not engage in commercial sex thereafter so that HIV transmission is contained with the family. However, in the married couples study (Mercer et al., 2006), 3.9% of the men who were international migrant workers and who reported buying sex from female sex workers while abroad, also reported buying sex in Bangladesh within 12 months after returning. It is fortunate that the HIV strains identified from returned international migrant workers have not yet started circulating locally (see section on "HIV subtyping") but if the general trend of low condom use by men continues, this scenario is likely to change.

For female international migrant workers an important risk factor is commercial sex work. While most female migrants are engaged in domestic work, small manufacturing industries, or hotel work, case histories of 677 female migrants (T. Blanchet et al., 2003; Siddiqui, 2003) showed that 67% of female migrant workers to the Middle East had either done commercial sex work or non-commercial

sex work in addition to domestic work (T. Blanchet et al., 2003). The study also included women who had migrated to Mumbai, and highlights their vulnerability at the hand of the *dalal* under whose protection they place themselves.

### ***Cross border migrants***

People living in areas bordering India and Myanmar frequently cross the border for various reasons. Some information has recently become available through a survey conducted at the Bangladesh India border to assess HIV risk from cross border mobility of truckers and female sex workers (Sikder, 2008). Of 93 female sex workers interviewed from the border areas of Burimari, Hili and Benapole, 88 sold sex in India and 89.7% of them did so once or twice a week. Similar information is available from the 8<sup>th</sup> round of serological surveillance which sampled casual (part-time) female sex workers from three border cities. The data showed that many of these sex workers crossed the border to India where they sold sex (Table 7) and all the HIV positive female sex workers identified in Hili had sold sex across the border (see section on “HIV in female sex workers”).

**Table 7: Mobility of casual female sex workers in the border area (8th round serological surveillance, 2007)**

<b>Variables</b>	<b>Teknaf</b>	<b>Hili</b>	<b>Burimari</b>
Crossed the border to India or Myanmar, %	6.5	89.3	9.3
Sold sex while in the neighboring country, %	87.5	98.5	100
N	246	150	300

There is relatively little information available on vulnerability to HIV from cross border movement between Myanmar and Bangladesh. A study conducted among boatmen in Teknaf in 2005 (Gazi et al., 2008) showed that 42% had been to Myanmar and of those who had visited Myanmar in the last three months, 39% bought sex from sex workers, and 4.2% had sex with other non-paying sexual partners. The mean duration of stay in Myanmar was three nights but the longer the stay, the greater was the likelihood of buying sex.

### ***Summary of key findings***

- Commercial sex is more common among men who migrate than among those who do not.
- In general, condom use is low.
- A small percentage of international migrant men buy sex after returning to Bangladesh which has the potential to spread HIV to a wider population.
- Cross border movement associated with selling and buying sex could spread HIV in Bangladesh; rising rates of HIV in female sex workers in Hili is already being observed.
- Given the limited, but increasing evidence of the importance of migration to HIV transmission in Bangladesh, more work is needed to understand the risk behaviors among migrant populations as well as operations research on how best to provide services for them.

### ***Indigenous people***

There is a general belief that indigenous people in Bangladesh are very vulnerable to HIV because of rituals and socio-cultural traditions that lead to risky behaviors. While available evidence is largely anecdotal, some information has now been generated from a recently completed anthropological study by ICDDR,B (S. I. Khan, Gourab et al., 2007a; S. I. Khan, Gourab et al., 2007b). The study



attempted to determine the risk and vulnerability to STI/HIV transmission of *santal* and *oraon* populations in Joypurhat district of the north western belt of Bangladesh by exploring their life situations including their sexual lives. The study findings suggest that like many populations in Bangladesh, they are vulnerable both because of their poverty and their unique socio-cultural and socio-economic context. These unique features are highlighted below:

- The traditional marital customs of the *santal* and *oraon* community influence sexual relationships. One particular form of tribal marriage, *itut bapla*, practiced in *santal* society forces women to marry against their will. *Itut bapla* occurs when a woman refuses a man's proposal, the man then forcibly applies vermilion to the woman's forehead which signifies that they are married. This is an accepted custom among the traditional *santal* (followers of either traditional-animistic religion or of Hinduism) and among Christian *santal*. However, among the latter group, it has been adapted with the woman captured and raped to ensure that she will not marry elsewhere—'chastity' is considered vital in traditional marriage. Women married in this way reported extra-marital relationships where condoms were never used. This adapted version is likely the result of gradual changes in marital traditions over the years since their migration to this region; changes that were influenced by the Liberation war in 1971, rapid urbanization, religious doctrines, influences of Bengali communities and economic transitions.
- Poverty and low status of indigenous women have driven them into non-traditional jobs, generally as daily laborers. Sexual relations were noted to play a crucial role in obtaining and continuing work as a wage laborer. Within the workplace, both consensual and non-consensual unprotected sex occurs. Female agricultural and *chatal* (rice mill) workers reported being raped and sexually abused by non-indigenous owners, managers and colleagues. All these incidents were generally unprotected. Women reported having multiple sexual relationships with different levels of managerial staff in order to maintain their jobs. Such sexual harassment takes place due to the 'lower' status of these indigenous women as well as their low socio-economic condition and powerlessness.
- Drinking alcohol is embedded in the practices of indigenous communities. Traditional wines such as *haria* (extracts of fermented rice and a local herb), *chuani* (produced through evaporation and distillation of a fermented blend of molasses and a local herb) and *tari* (fermented palm juice) are frequently used in rituals related to major life events and in festivals. At the rituals, when local wines are consumed, frequent incidents of forced, unprotected sex occur. In addition, indigenous men directly connect masculinity to prolonged duration of sexual intercourse and believe that these locally produced wines increase the time of ejaculation. Men's resulting display of 'manliness' through prolonged sexual intercourse were reported to be painful and unbearable to indigenous women. Moreover, some indigenous women who produce and sell *chuani* are reported to also exchange sex for money or goods. Indigenous men come to the *chuani*-sellers for two specific reasons: consuming *chuani* and having sex. Likewise, Bengali men who came to the indigenous villages to consume *chuani* were found to sexually abuse and harass indigenous women.

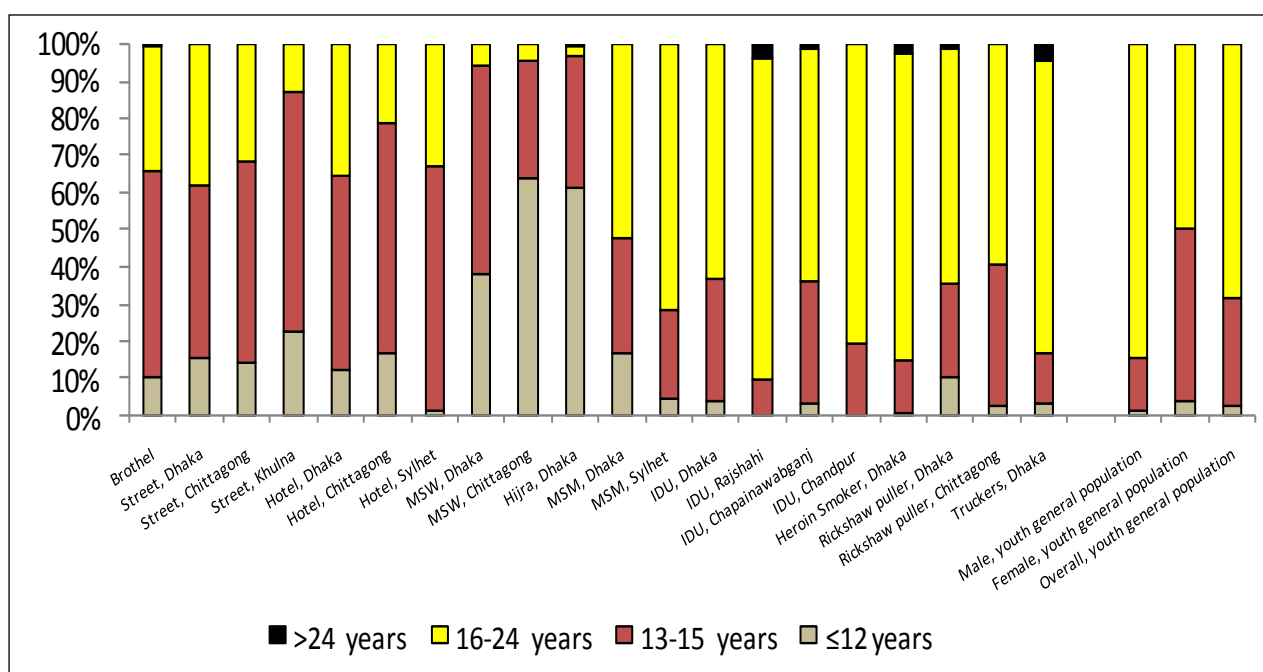
These findings suggest that tribal women are particularly vulnerable and their vulnerability has been enhanced by the "merging" of indigenous tribes with mainstream Bengali culture.

**Children**

Not all children are at risk of HIV/STIs but certain children are very vulnerable such as children of sex workers, male children who appear more feminized and become labeled as *hijra* and street children. Research on “Children victims of sexual abuse and exploitation” conducted among 250 street children in Dhaka (Thipthorpe & Ahmed, 2005) showed that the most common reason driving children to the streets was poverty followed by an oppressive family situation. Children living in the streets were very vulnerable -- most were sexually exploited (particularly girls), most used drugs and approximately 11% were addicted to heroin. Some children were forced into criminal activities such as selling and/or carrying drugs, arms, ammunition and explosives while others were involved with petty crime. When children relied on adults for their protection, this was provided in exchange for sexual favors. The extreme conditions under which street children survive are undeniable.

Indirect evidence on the vulnerability of children is also available through interviews with adult MARPs. The data show that many members of some MARPs report having their first sex before the age of 13 years. There was significant variation between groups, with anywhere from 2% to 60% reporting first sex before the age of 13 (Figure 35). The proportion was notably higher among MSW in Dhaka and Chittagong and among *hijra* in Dhaka. The proportion of MSM and female sex workers reporting first sex by age 15 is markedly higher than among general population youth, including rickshaw pullers. With the exception of Rajshahi, these groups were also more likely to have sex earlier than IDUs. In a national survey of youth aged 15-24 years (NASP, 2007a), the median age at first sex was 18.1 years for males and 15.6 years for females; however, 2.6% reported having had first sex before age 13 years.

**Figure 35: Age at first sex among different population groups (BSSS 2006-07 and NASP 2009)**



Secondary analysis to determine whether sex below the age of 13 years enhances vulnerability and risk of HIV among general population youth and MARPs showed that that is the case (Table 8). Young people who had sex before the age of 13 had significantly lower levels of sound HIV knowledge and

were more likely to report STIs. Sex workers who had sex before age 13 were at higher risk than those who had sex at a later age because they were more likely to:

- not have sound knowledge of HIV (street based female sex workers in Dhaka and Chittagong, brothel based sex workers and MSW in Dhaka and Chittagong)
- report STI symptoms (street based female sex workers in Khulna and general population)
- sell sex more often and to more clients (street based female sex workers in Dhaka and Chittagong, hotel based female sex workers in Dhaka and MSW in Dhaka)
- have experienced forced sex in the last year (brothel based and hotel based female sex workers in Dhaka and MSW in Chittagong)
- have group sex (hotel based female sex workers in Chittagong)
- not use condoms (street based female sex workers in Chittagong and MSW in Dhaka and Chittagong)
- use drugs (other than alcohol) (street based female sex workers in Chittagong, hotel based female sex workers in Dhaka and Chittagong)

These findings suggest that among those already at risk of HIV, vulnerability is enhanced if they experienced sex as a child.

An ethnographic study on *hijra* revealed that many *hijra* were sexually abused in their childhood by older males, some of whom were their relatives. A *hijra* described that her first sex act was forced by her older cousin who promised her good food in exchange but after that she enjoyed the sex and it was consensual. In her own words:

I did not have a moustache then. One night I slept with my paternal cousin and he had sex with me. From then I liked to have sex. He used to give me mangoes, jack fruit and had sex with me in the garden. I had first sex when I was 12 years old. After that both paternal and maternal cousins used to have sex with me.

*Hijra* also reported abuse while they were in school by teachers, classmates or senior students, and by neighbors, shopkeepers. They would use abusive terms to describe her sexuality - *maigga* or *chaiya* (meaning a feminine male). Some would also have sex with them.

Such studies have not been conducted among other MARPs, but no doubt, there are many stories on sexual coercion in early childhood that could shed light into what children in special situations are undergoing.

### ***Summary of key findings***

- Street children are constantly subjected to abuse including sexual abuse.
- MARPs who reported sex as children were more likely to practice riskier behaviors as adults.

**Table 8: Comparisons between those whose first sex was at <13 years versus those at ≥13 years of age (BSS 2006-07)**

Variables	Unadjusted odds ratio (age at first sex ≤13 vs. ≥13 years)								
	Female sex worker						Male sex worker		Youth General populati on
	Street based, Dhaka	Street based, Chitta- gong	Street based Khuln a	Broth el based, Dhaka	Hotel- based, Dhaka	Hotel- based, Chittag ong	Dhaka	Chittag ong	
Correct HIV knowledge	0.5**	0.5*		0.4*			0.5*	2.6**	0.5**
Presence of any STI symptom last year	0.4**		2.5**						1.5**
Frequency of selling sex Engaged in sex everyday during last week	2.1*						0.4**		NA
No. of vaginal sex with regular clients in last week ≤10 >10					0.1** 7.6**				
No. of vaginal sex with new clients last week ≤20 >20		0.1*** 7.2***			0.5* 2.1*				
No. of clients No. of regular clients last week ≤10 >10					0.2** 5.1**				NA
No. of new clients last week ≤20 >20		0.2*** 6.6***							
Had forced sex in last 12 months				3.0**	2.1*		0.4**	2.4**	NA
Had group sex in past month						3.4**			NA
Had sex with non-commercial sex partner last month Male/Hijra Female							0.4*** 0.2***		NA
Condom Use Ever used condom during any type of sexual intercourse	0.08*								NA
At least one partner used condom in last group sex last month							0.1***	0.2**	NA
Used condom in last anal sex with new clients last week							0.4**	0.3***	NA
Used condom in last anal sex with regular male clients last week								0.2***	NA
Taken any drug other than alcohol in last year		1.9*	0.4*		3.4**	10.7**			NA

\* p&lt;0.05; \*\* p&lt;0.01; \*\*\* p&lt;0.001 NA- Not applicable as no comparable question was asked

## General Population

All available information suggests that HIV prevalence is low in the general population in Bangladesh. Data have been obtained through surveys conducted among antenatal women, rural and urban men and women, patients with tuberculosis, patients with persistent diarrhea, and from blood transfusion centers (Alam et al., 2005; Bogaerts et al., 2001; Hawkes et al., 2002; Sabin et al., 2003). A review of risk behavior studies conducted on adult general population samples (Azim, Khan et al., 2008) reports that premarital and extramarital sex are not uncommon and approximately 10% of men in Bangladesh have bought sex from female sex workers (Chowdhury, Anwar, Alam, & Streathfield, 2006). Condom use is generally very low.

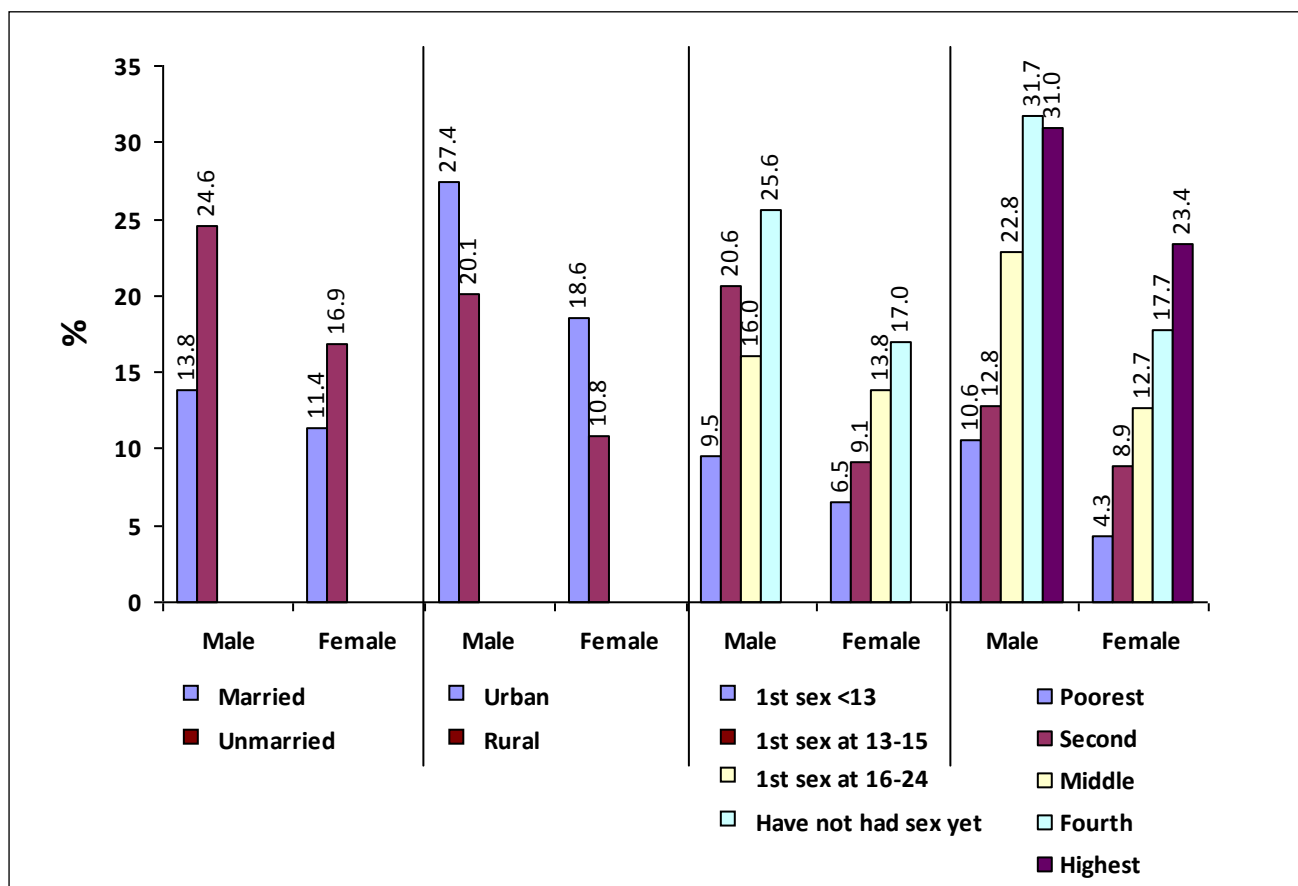
## General Population Youth

Youth aged 15-24 years are approximately one-fifth of the total population of Bangladesh. Although their estimated HIV prevalence is negligible, a national survey of 11,188 youth conducted in 2008 (NASP, Save the Children USA, & ICDDR, 2009a (forthcoming)) showed that young people are at risk of contracting STIs and HIV because of their lack of knowledge and awareness regarding HIV, their risky sexual behavior and their limited access to sexual and reproductive health information and services.

### HIV/AIDS Knowledge

Most young people (90.5%) had heard about HIV/AIDS but only 38.0% could correctly identify two or more routes of HIV transmission and 40.8% could identify two or more means of prevention. Sound knowledge was low at 17.7% (22.4% for males and 13.4% for females), meaning that few youth both correctly identified the two main ways of preventing sexual transmission of HIV and rejected 3 misconceptions about HIV transmission (correct answers to five questions: can people reduce their risk of HIV by using a condom correctly and consistently in any type of sex, can people reduce their risk of HIV by avoiding sex with multiple partners, can a person get HIV through mosquito bites, can a person get HIV by sharing a meal with someone who is HIV infected and can you tell by looking at someone whether s/he is infected with HIV). Significant differences in sound knowledge were found by gender, marital status, residence, age at first sex and wealth (Figure 36, all differences are statistically significant at  $p \leq 0.05$ ).

**Figure 36: Factors associated with sound knowledge of HIV among a nationally representative sample of youth aged 15-24 (NASP 2009)**



Multiple regression analysis (Table 9) showed that when the effects of other factors are controlled, the following factors had a significant positive effect on having sound knowledge of HIV:

- Education – a one year increase in education increased the odds of correct HIV knowledge by 20%
- Living in urban areas – increased the chance of having correct HIV knowledge by 40%
- Belonging to wealthy families – with every level of increase in economic status, young people were more likely to have correct HIV knowledge
- Frequent access to television – young people who watched television at least once a week were 90% more likely to have correct HIV knowledge than those who did not watch television that frequently.

On the other hand, the following factors were negatively associated with sound knowledge of HIV:

- Sex – females were 40% less likely to have sound knowledge than males
- Marital status – married youth were 10% less likely to have sound knowledge than unmarried youth.

**Table 9: Factors associated with some selected HIV related outcome indicators, among general population youth (NASP 2009)**

Predictors	Adjusted Odds Ratio (95% CI)		
	Sound HIV knowledge	Presence of STI symptoms <sup>†</sup>	STI services from a trained provider <sup>‡</sup>
Age			
15-19 (Ref)	1.0	1.0	1.0
20-24	1.1 (1.0-1.2)*	0.8 (0.7-1.0)***	1.4 (1.0-1.7)*
Gender			
Male (Ref)	1.0	1.0	
Female	0.6 (0.5-0.7)***	2.1 (1.7-2.6)***	
Area			
Rural (Ref)	1.0		1.0
Urban	1.4 (1.3-1.6)***		1.7 (1.3-2.2)***
Marital status			
Never married (Ref)	1.0		
Ever married	0.9 (0.7-1.0)*		
Wealth index			
Lowest (Ref)	1.0		1.0
2 <sup>nd</sup> lowest	1.1 (0.9-1.4)		1.1 (0.7-1.6)
Middle	1.6 (1.3-1.9)***		1.3 (0.8-1.9)
Fourth	2.0 (1.6-2.4)***		2.3 (1.6-3.5)***
Highest	1.8 (1.4-2.2)***		2.6 (1.7-4.1)***
History of premarital sex			
No (Ref)	1.0	1.0	
Yes	0.8 (0.7-1.0)*	1.6 (1.2-2.1)**	
Age at first sex			
>=13 years (Ref)	1.0		
<13 years	0.8 (0.5-1.5)		
Education (in single year)	1.2 (1.2-1.2)***		1.1 (1.0-1.1)*
Watched TV at least once weekly			
No (Ref)	1.0		
Yes	1.9 (1.6-2.2)***		
Correct HIV knowledge			
No (Ref)	-		
Yes	-		
N	11,188	6,009	1,608

\* p <=0.05, \*\* p <=0.01 \*\*\* p <=0.001

<sup>†</sup> Includes samples who ever had sex <sup>‡</sup> Among those who ever had sex and reported one or more STI symptoms

Note: Ref refers to reference category and empty cells reflect lack of statistical significance

### Prevalence of STI, STI symptoms and care seeking behavior

Data on prevalence of STIs among youth are limited. The national survey serological component found 0.3% of youth positive for active syphilis.

The number of young people reporting symptoms of STIs provides an alternative estimate of the presence of disease. The behavioral component of the same study found that 28.2% of young people who have ever had sex reported one or more symptoms of an STI in the past 12 months. Further analysis confirmed that the presence of STI symptoms was higher among younger adolescents, females and those with a history of first sex before the age of 13 compared (See Table 10). Older

youth (age 20-24 years) were 20% less likely to report STI symptoms. Females were twice as likely to report STI symptoms as males. Having premarital sex increased the likelihood of reporting STI symptoms by 60% and a history of first sex before age 13 increased the likelihood of having STI symptoms by 20%.

**Table 10: Percentage of young people who have ever had sex reporting symptoms of an STI in the last 12 months (NASP 2009)**

Characteristic	Reported Symptoms of STI	Number of youth
Age		
15-19	31.9***	1,764
20-24	26.4***	3,864
Sex		
Male	22.4***	1,911
Female	31.1***	3,717
Marital status		
Unmarried	26.3	867
Married	28.5	4,762
Residence		
Rural	28.2	3,843
Urban	28.1	1,786
History of premarital sex		
No	28.7	4,366
Yes	26.2	1,262
Age at first sex		
<13 year	34.8*	198
≥13 years	27.9*	5,431
All	28.2	5,629

\* Males were asked about urethral discharge, ulcer in genital region, burning sensation during urination and pain in scrotum. Females were asked about genital ulcer, increased vaginal discharge and pain during coitus.

\* p <=0.05, \*\* p <=0.01 \*\*\*p<=0.001

### Risk behaviors

While in Bangladesh the mainstream attitude towards sex and sexuality is still conservative, there is ample evidence that young people engage in premarital and extramarital sex (Caldwell, Pieris, Barkat e, Caldwell, & Caldwell, 1999; Government of the People's Republic of Bangladesh, 2003; Muna, 2005), with the potential consequence of infection with HIV/STIs. In the national survey of youth, almost 20% of unmarried males reported having premarital sex and one in three (28.1%) of them reported visiting sex workers for last sex. About 34.4% of young married males reported having sex before they were married. A few married males (9.2%) also reported having sex outside of marriage, half of whom (50.0%) had their last sex with a commercial sex worker.

In general, the majority of young people do not seek services for STI symptoms. The national survey found that only 24.6% of young people who reported an STI symptom sought services from a trained provider (doctor hospital, or clinic); 32.1% sought services from a non-trained provider and the rest (43.3%) did not seek any form of care. The major determinants of seeking STI services from a trained provider were:

- Age – older adolescents, age 20-24, were 40% more likely to seek STI services from a trained provider than younger adolescents, age 15-19.



- Residency – living in urban areas increased the likelihood of seeking STI services from a trained provider by 70% which is likely because trained providers tend to be located in urban areas.
- Household economic status – household economic status had a positive impact on the utilization of STI services from a trained provider.

### **Summary of key findings**

- Young people are at risk of contracting STIs and HIV because of their lack of knowledge and awareness regarding HIV, their risky sexual behavior and their limited access to sexual and reproductive health information and services.
- Overall most young people (90.5%) had heard about HIV/AIDS; however, only 38.0% of them could correctly identify two or more routes of HIV transmission and 40.8% could identify two or more ways to prevent HIV.
- Sound knowledge was low at 17.7%. Significant differences in sound knowledge were found based on gender, marital status, residence, age at first sex and wealth.
- About one in three (28.2%) young people who have ever had sex reported one or more symptoms of an STI in the past 12 months. Younger people, females and those whose first sex was before age 13 were more likely to report STI symptoms.
- The majority of young people did not seek services for STI symptoms. Only 24.6% of young people who reported an STI symptom sought services from a trained provider. Being older, wealthier and living in an urban area increased the likelihood of seeking STI services from a trained provider.
- Twenty percent of unmarried males reported having premarital sex and one in three (28.1) of them reported visiting sex workers for last sex. About 34.4% married males reported having had sex before marriage.
- Prevalence of extramarital sex among youth was 9.2% and half said the most recent time was with a sex worker.



# **Chapter III: Partners of Most-at-risk Populations**



## Partners of Most–at–risk Populations

According to the recent report on AIDS in Asia, most women who become infected with HIV are exposed to HIV during sex with a husband or boyfriend who had been infected during paid sex or when injecting drugs (Commission on AIDS in Asia, 2008). The report highlights the importance of male clients of female sex workers in driving the epidemic. The number of men who buy sex and the frequency with which they do so are key factors related to the development of an epidemic. Thus, understanding and addressing the needs and behaviors of sexual partners of MARPs is extremely important for HIV prevention programs. To date only a few research studies have been conducted in Bangladesh on MARP sexual partners. These findings are brought together in this section.

### Female Partners of Male IDUs

A RSRA was conducted in two localities of Dhaka city and in Gazipur and Natore from December 2007 to March 2008 with 397 regular female sex partners of male drug users (unpublished data), of whom 84.9% were spouses. Two thirds (66%, N=262) had only one sex partner in the last year. Of these 262 partners, 9.9% had themselves taken drugs at some point in their lives and 65.4% had started taking drugs after their relationship with their drug using partner; 48.5% were currently employed, most in garments factories or in providing services such as housemaids. More than 80% said that their earnings were mainly spent on supporting the family and the drug habit of their spouse/partner.

Only 28.6% reported condom use at last sex and 55% complained of an STI in the last year, 61.1% of them sought treatment -- more than half from qualified doctors, pharmacies or hospitals and 14.8% from NGO clinics. Although the main risk factor for female partners of male IDUs is unsafe sex, some of the women also took drugs themselves which put them at additional risk. However, the majority (69.2%) did not think they were at risk of HIV. It is encouraging to note that 38.2% were approached by NGOs and provided with information on HIV/AIDS and 7.6% of the women, all from Dhaka, had been tested for HIV. Among those not tested, 45.9% said they would like to be tested.

Taken together these findings suggest that these women can be reached for services and are eager to avail those services.

## Summary of key findings

- Most female sex partners of male IDUs are their spouses who have only one sex partner and 90% do not take drugs themselves.
- Less than one third used condoms at last sex with their male IDU partners and more than half complained of an STI symptom in the last year.
- More than one third were approached by an NGO for HIV prevention services and more than 7% had been tested for HIV suggesting, that they can be reached for services.

## Male Sex Partners of Female Sex Workers

Female sex workers have two types of sexual partners, their clients and their regular, non-commercial sex partners. They are both discussed below.

### Clients of female sex workers

A nationally representative sample of males aged 18-49 years showed that approximately 10% of adult men in Bangladesh bought sex from sex workers in the last year (Chowdhury et al., 2006); this is comparable to figures from many countries in the region (Craiel, Slaymaker, Lyerla, & Sarkar, 2006). Reaching clients of sex workers is challenging and three separate surveys conducted with male clients of female sex workers (summarized in Box 5) have provided some insight into their behaviors and infection prevalence rates, and have allowed triangulation with data obtained from female sex workers.

#### Box 5: Studies on male clients of female sex workers

A youth client survey conducted for phase 1 of GFATM round 2 (National AIDS/STD Program & Save the Children USA, 2007) surveyed 1,013 youth aged 15-24 years visiting female sex workers in nine hotels in Dhaka. Six of the nine hotels were under HIV intervention programs. All youth clients visiting the nine selected hotels to buy sex were enrolled if they consented to interviews and provided a blood and urine sample after the sex act. Laboratory tests for STIs (N. gonorrhoea, C. trachomatis, T. vaginalis, syphilis and herpes simplex virus 2 [HSV2]) were conducted. Qualitative in-depth interviews were also conducted with clients.

A second youth client survey was conducted in phase 2 of round 2 (NASP, Save the Children USA, & ICDDR, 2009d (forthcoming)) following the same methodology as above. In the second study, 603 youth aged 15-24 years, visiting female sex workers in six hotels in Dhaka were surveyed. All hotels in this study were covered under an ongoing HIV prevention program. All youth clients who visited the hotels to buy sex during the 3-month study period (N=811) were invited to participate in interviews.

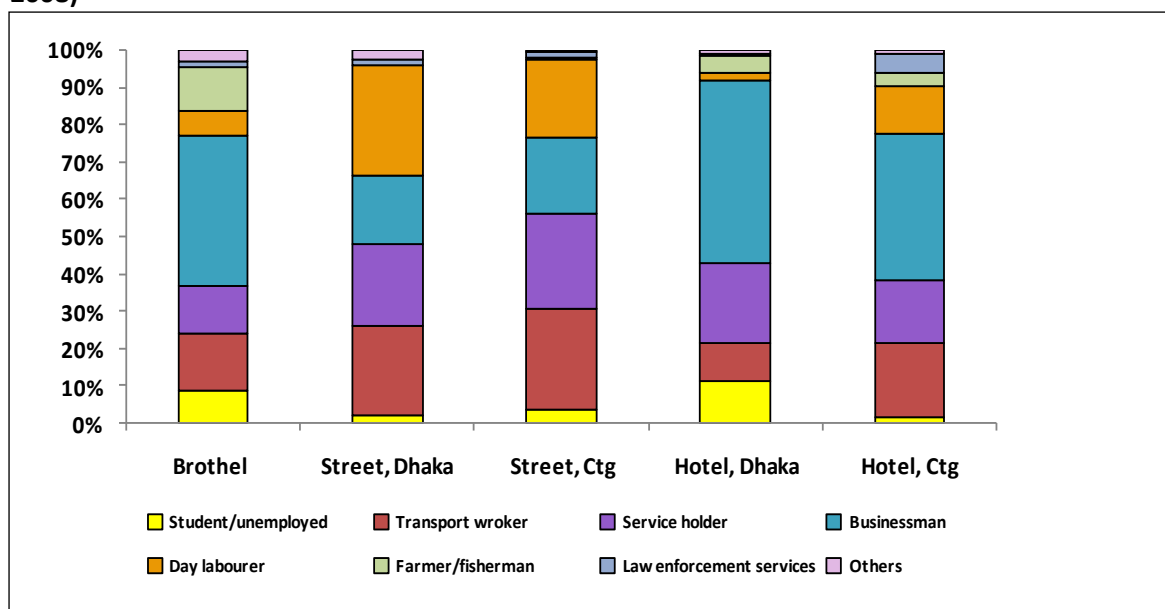
A survey conducted by Streatfield et al. (2008) interviewed 1,665 male clients of female sex workers from selected brothels, hotel and street settings. Street and hotel sex venues in Dhaka and Chittagong were included as well as brothels in Daulatdia and Tangail. For recruitment of clients from streets, a total of 54 street cruising spots in Dhaka and 27 in Chittagong were listed. From this list of 81 spots, 30 were selected by simple random sampling. A total of 519 men who said they had sex in the last one month in street settings were recruited in the study (313 from Dhaka and 206 from Chittagong). Hotels were randomly selected – 23 in Dhaka and seven in Chittagong, from a list of 96 hotels involved in the sex trade, and 515 male clients were recruited from the 30 hotels through exit interviews (435 from Dhaka and 80 from Chittagong). To recruit clients from brothels in Daulatdia and Tangail, the brothels were divided into a number of segments each consisting of approximately 30 houses. From 50 such segments, 30 were randomly selected. A total of 531 clients were recruited (270 from Tangail and 261 from Daulatdia) through exit interviews. Qualitative in-depth interviews were also conducted with clients in the same settings.

Some socio-demographic characteristics of clients differ depending on the venue where sex is purchased (Table 11). Among clients of all ages, approximately half were married (Streatfield et al., 2008) while, not surprisingly, most youth clients were unmarried (NASP et al., 2009d (forthcoming); National AIDS/STD Program & Save the Children USA, 2007). Close to half of the clients of street based sex workers were below 25 years of age, compared to just 30% of clients in brothels and hotels. Most had less than 10 years of schooling and very few earned more than Taka 10,000 a month, except among clients in hotels.

**Table 11: Socio-demographic characteristics of the clients who bought sex at different sex trade settings (Streatfield et al, 2008, NASP 2007 and NASP 2009)**

Socio-demographic characteristics	Street, Dhaka and Chittagong (Streatfield et al, 2008) n=519	Brothel, Daulatdia and Tangail (Streatfield et al, 2008) n=531	Hotel, Dhaka and Chittagong (Streatfield et al, 2008) n=515	Hotel, Dhaka (NASP, 2007) n=1,013	Hotel, Dhaka (NASP, Forthcoming 2009d) n=603
Age					
<18 yrs	4.4	1.7	1.2	8.3	7.4
18-20 yrs	16.6	10.3	10.4	28.1	24.7
21-24 yrs	27.2	19.3	17.8	63.6	45.7
25 yrs and above	51.9	68.7	70.6	NA*	21.2
Marital status					
Unmarried	57.3	51.3	55.4	84.5	80.1
Married	42.7	48.7	44.6	15.5	19.9
Years of schooling					
0	32.8	41.0	14.2	0	13.6
1-5 yrs	13.0	19.7	7.6	20.4	23.4
6-10 yrs	34.3	31.0	37.9	47.1	48.4
11 yrs and above	20.0	8.3	40.4	25.1	14.6
Monthly income					
Up to Tk.5000	82.0	64.6	35.4	56.7	37.0
Tk.5000-10,000	15.6	26.7	38.4	31.6	39.3
Tk.10,000 and above	2.5	8.7	26.2	11.7	23.7

\*NA = not applicable as those enrolled were between 15-24 years old

**Figure 37: Major occupation of clients who visited sex workers in Bangladesh (Streatfield et al, 2008)**

Note: Ctg Refers to Chittagong

Clients of all ages (Streatfield et al., 2008) reported a wide range of occupation groups (Figure 37) mostly business, services, transport, laborers and students/unemployed. Clients of street based sex workers were largely transport workers or day laborers. In brothel and hotel settings most clients were businessmen or worked in services, the same as reported by youth clients of Dhaka hotel based sex workers (NASP et al., 2009d (forthcoming); National AIDS/STD Program & Save the Children USA, 2007). The data match well with reports by sex workers in the 2006-07 BSS.

### ***STI among clients of female sex workers***

Youth clients of hotel based female sex workers in Dhaka were screened for different STIs (National AIDS/STD Program & Save the Children USA, 2007). Moderately high rates of HSV2 were recorded (Table 12). The STI rates were lower for clients than for female sex workers from different settings (Nessa et al., 2004; Rahman et al., 2000) which is expected. Except for syphilis, rates were higher than other studies recorded for general population males (Azim, et al., 2008; Bogaerts et al., 2001; Hawkes et al., 2002; Sabin et al., 2003).

**Table 12: Laboratory diagnosis of STIs in youth and adolescent clients of hotel based female sex workers in Dhaka (NASP, 2007)**

Sexually transmitted infections	Proportion tested positive (N=1,012)
Gonorrhoea	2.2%
Chlamydia	3.9%
Active syphilis	1.0%
HSV-2	12.9%

### ***Risk behaviors of clients of female sex workers***

Female sex workers in Bangladesh are reported to have the highest client turnover in Asian countries (Govt. of Bangladesh, 2001) based on BSS data on female sex workers. The high client turnover is corroborated by data obtained from two of the client studies. The study by Streatfield et al. (Figure



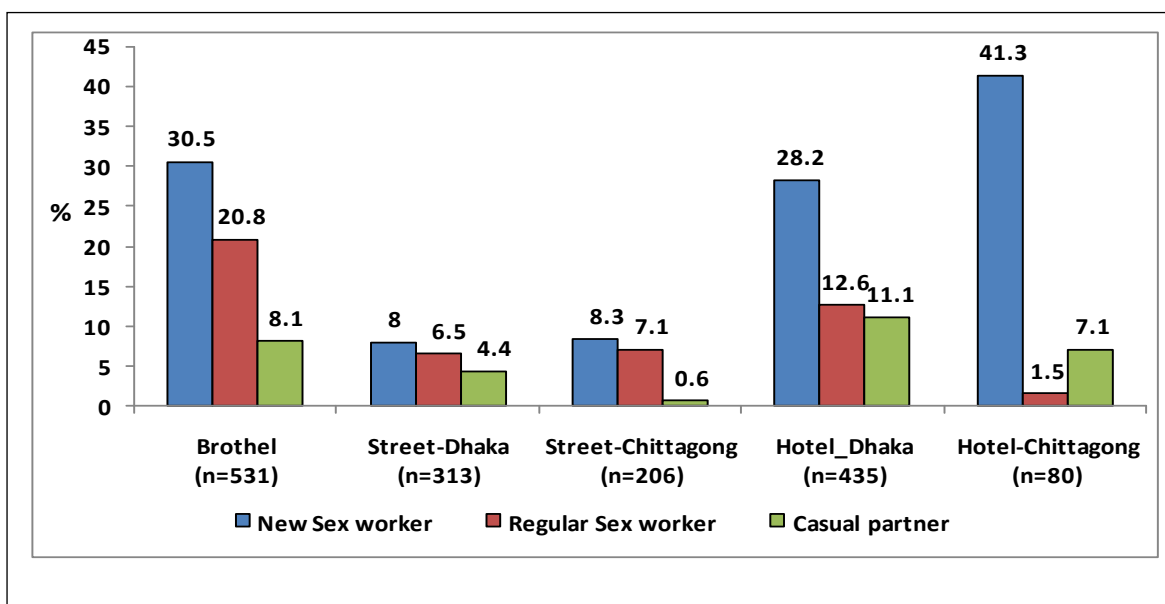
38) found that most clients (79.8%) visited a new sex worker in the month prior to interview; 37.4% visited one and 42.4% had visited two or more new sex workers in the last month. Amongst the youth clients of female sex workers, in 2005-06 only 7.3% said this was their first visit; a similar proportion as in 2008 (9.0%). Roughly one quarter of the clients reported visiting a hotel for sex once a month in both youth client studies, 22.0% and 35.6% reported more frequent visits in 2005-06 and 2008, respectively (NASP, 2007a; NASP et al., 2009a (forthcoming)). About one fifth of the clients also had non-commercial female sex partners (18.9%). Male sex partners were reported in the two studies in which clients were asked – 3.4% in the study by Streatfield et al (Figure 38) and 15.2% in the youth client study (National AIDS/STD Program & Save the Children USA, 2007). Group sex was commonly reported by youth clients in 2005-06.

**Figure 38: Number, type of sex workers clients reported visiting in last one month (Streatfield et al, 2008)**



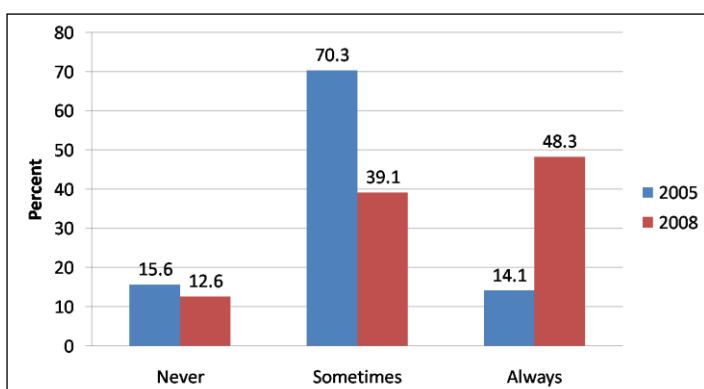
In general, consistent condom use was low among the clients of sex workers, particularly for clients of street based sex workers (Figure 39); which is in contrast to the data obtained from female sex workers from the streets of Dhaka and Chittagong (see section on “Risk behaviors in female sex workers”). In all study sites, a higher proportion of clients reported using condoms with new sex workers than with their regular sex worker partners, which is consistent with other data sources. This contradiction between reported behaviors by sex workers and clients confirms socially desirable reporting by sex workers.

**Figure 39: Consistent condom use by the clients of sex workers in different settings (Streatfield et al, 2008)**



Among youth clients in hotels covered by interventions, the percentage reporting that they always used condoms with sex workers increased dramatically from 14.1% in 2005-06 to 48.3% in 2008 (Figure 40), with most of the change resulting from a decrease in those reporting ‘sometime’ use (NASP et al., 2009d (forthcoming)). Changes were also seen in the numbers of youth clients reporting condom use at last sex, with an increase from 57.6% to 79.7% during the same period, and a decrease in the proportion that had ever had sex with a sex worker *without* a condom from 86.1% to 60.0%. Importantly, the proportion of youth reporting that they used condoms to prevent HIV more than doubled.

**Figure 40: Percentage of youth clients reporting ever use of condoms with sex workers (NASP 2007 and NASP 2009)**

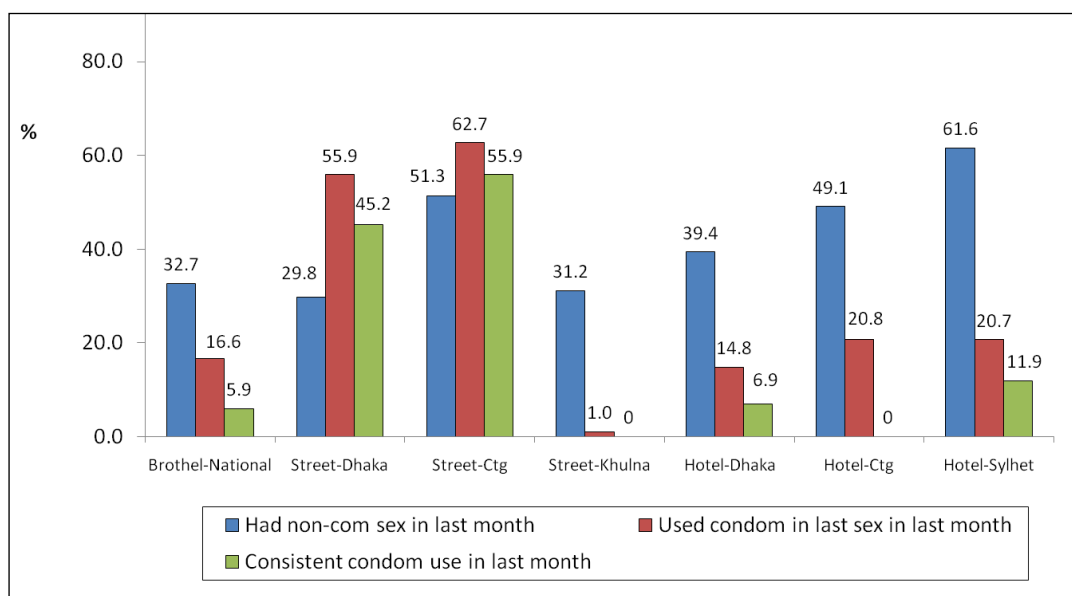


Although the client studies do not represent the behaviors of Bangladeshi males in general, they reveal the very risky behaviors of a subset of males who buy sex regularly and frequently.

### Regular, non-commercial sex partners of female sex workers

In addition to clients, female sex workers also have non-commercial, regular sex partners. This has been documented in multiple studies, including the BSS (Figure 41). A RSRA of sex workers in various cities of Bangladesh found that many sex workers were living with their husbands and children within a family setting, while selling sex on the streets and in hotels and residences (NASP et al., 2008a). Condom use in non-commercial relationships was often very low (Figure 41).

**Figure 41: Non-commercial sex partners of female sex workers in the last month and condom use with non-commercial partners (BSS 2006-07)**



Note: Ctg refers to Chittagong

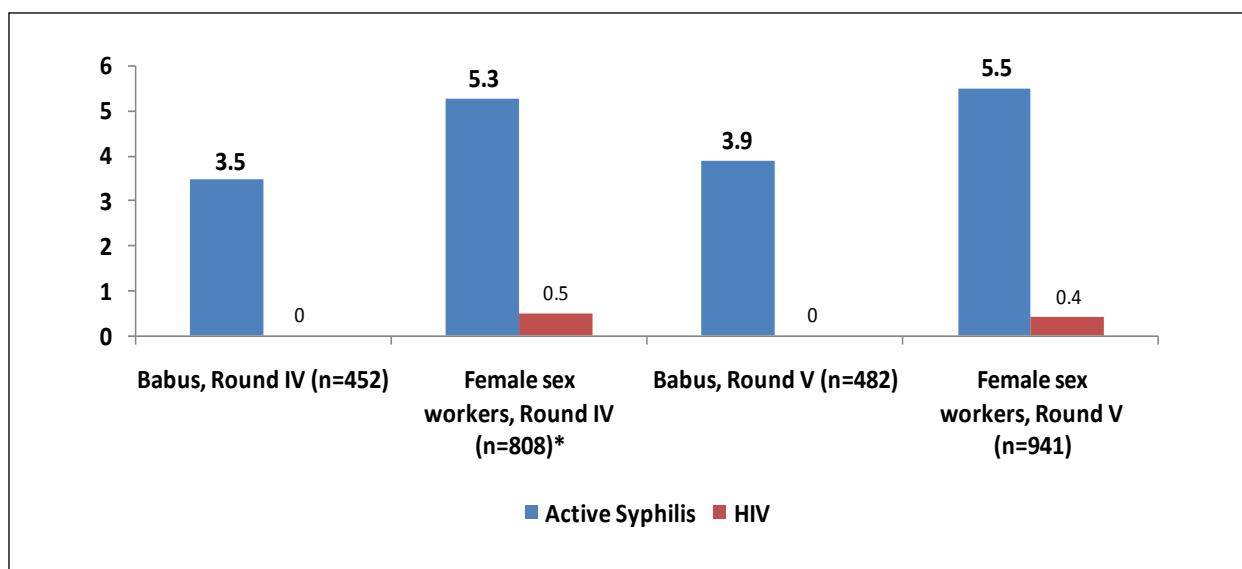
Although only one third of brothel-based sex workers report having non-commercial sex partners in the last month, qualitative data suggest that most independent sex workers i.e. those who do not work under a *Sarderni* have one or more *babu*. The terms *babu/bandhalok* are widely used in brothels to refer to the special/regular sex partner of a brothel based female sex worker. Although sex workers say that their relationship with *babu* is based on love and many live like “husband and wife”, the relationship is not always grounded only on love, but often on mutual convenience, such as economic and social security inside the brothel. In addition, there can be emotional dependence because the sex worker also wants to have an enjoyable sex life, which she cannot have with paid clients. Therefore, sex workers look for a *babu* whom they can love and depend upon. In addition, some sex workers are empowered through their relationship with an influential *babu*. Many sex workers have a *babu* who is a senior police officer, local political leader, member of the local administration, local businessman, or a local *mastan* (hoodlum). Sex workers who have permanent residences inside brothels also use *babu* to mitigate disputes with other sex workers and when legal problems arise; other sex workers fear sex workers with powerful *babu*.

### STI/HIV among regular, non-commercial sex partners of female sex workers

There is very limited information available on the prevalence of HIV and other STIs among partners of MARPs. During the 4<sup>th</sup> and 5<sup>th</sup> rounds of the national serological surveillance, *babu* from two brothels (Tangail and Daulatdia) were sampled. No HIV was detected in either of these rounds in

*babu* and active syphilis rates were lower than in female sex workers of corresponding brothels (Figure 42).

**Figure 42: Active syphilis and HIV among *babu* (regular clients) of brothels based sex workers (serological surveillance, 2007)**



#### ***Risk behaviors of regular, non-commercial sex partners of female sex workers***

BSS data (Figure 41) showed that condom use was low with *babu* of brothel and regular sex partners of hotel based sex workers, ranging from 0% in hotels in Chittagong to 11.9% in hotels in Sylhet. With the exception of Khulna, rates of condom use were much higher among street based sex workers, reaching over 50% in Chittagong.

Qualitative data confirm that condom use was not common with *babu* in brothels. The major underlying reasons for not using condoms were trust, emotion and love inherent in these relationships. Unprotected sex is common because neither *babu* nor sex worker want to use condoms. The reason why many sex workers do not want to use condoms with *babu* is not just to please their *babu* but also for their own pleasure, as they all find sex without condoms more pleasurable. But *babus* also have multiple sex partners; many *babus* have sex with other sex workers in different settings, some have wives at home, and some maintain girlfriends.

#### ***Summary of key findings***

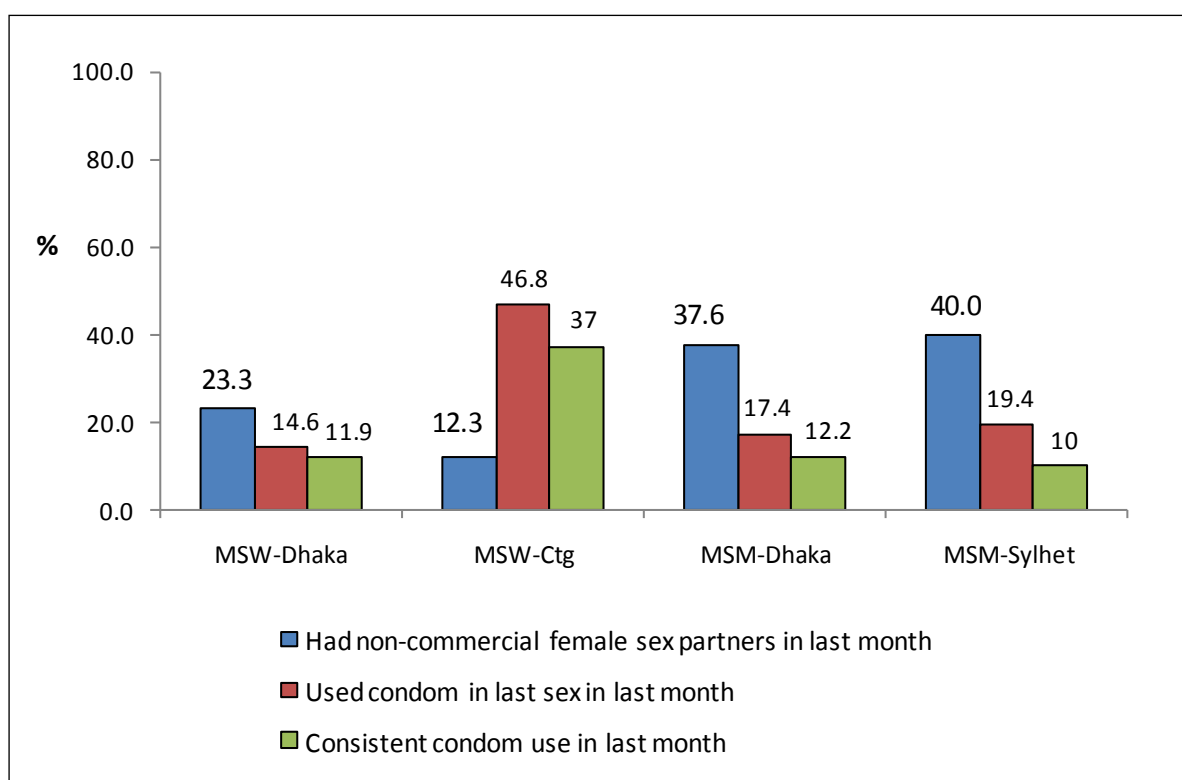
- The demographics of clients of female sex workers in streets and in hotels are different. Clients of street based sex workers are younger, poorer, less educated and composed mainly of transport workers and daily labors. Clients of hotel based sex workers are mainly businessmen and service sector workers.
- STI rates for youth clients are lower than that for sex workers but higher than recorded in males in the general population.
- Condom use appears to be increasing among youth clients of female sex workers.
- Many sex workers have non-commercial sex partners – many are married, and in brothels they have boyfriends or *babus*.
- Active syphilis rates in *babus* are lower than for sex workers in corresponding brothels.

- Condom use, especially consistent condom use with regular partners is low in most sites and often female sex workers themselves prefer not to use condoms with their regular partners. The same is true of clients who visit the same sex worker regularly.

### Female Sex Partners of MSM

Many MSW and MSM have regular, non commercial female sex partners (Figure 43). Condom use with such partners is rare. No data are available on STI and HIV prevalence among the female partners of MSM.

**Figure 43: Non-commercial female sex partners of MSM and MSW and condom use with non-commercial partners (BSS 2006-07)**



Note: Ctg refers to Chittagong

A qualitative study (S. I. Khan et al., 2005) contextualized female relationships of MSM. Many MSM do not see any contradiction between their male-to-male sexual relations and marriage with female partners. Masculine males (*panthi*, see section on “Definition of males who have sex with males”) who generally penetrate other males regularly have sex with females including female sex workers. The feminine males (*kothi*) who are generally penetrated by masculine males also have sex with females although less frequently than *panthi*. Reasons for engaging in sex with females differ between groups. A *panthi* or a *kothi* engages in sex with women to prove his virility, and to reject his inclination towards male to male sex. Penetrative vaginal, anal or oral sexual acts with women (and with other men) are seen as masculine sexual acts by MSM, and a man’s penetrative sex with women contributes to the formation of a masculine sexuality that is normative in Bangladeshi culture.

For most MSM in Bangladesh, marriage is the ultimate goal in which one is expected to find the meaning of personal and social life, love, children, heredity, household and peace. Regardless of an individual's desire to marry, MSM face socio-religious obligations to shoulder the responsibility of a married family man. Unmarried men may lose the right to inherit property and can be considered unmanly and, therefore, of little value to society. In addition, children continue to be seen as a source of security in old age, providing a further impetus for marriage.

Thus, most MSM have sex with both male and female partners. Women who have sex with MSM are particularly vulnerable because of the high risk behaviors of MSM and at present intervention programs do not have a strategy to address female partners of MSM.

### **Summary of key findings**

- MSM have female sex partners and some are married. These relationships respond to societal pressures, their own needs and desire to be a “real man” and to have a family.
- The proportion of MSM who use condoms with their female non-commercial sex partners is generally low.

### **Sex Partners of Hijra**

#### **Clients of hijra sex workers**

The mean number of clients of *hijra* sex workers was approximately 14 in the last week (see section on “STIs and sexual risk behaviors of *hijra*”, Figure 30). Clients vary in age and belong to all sections of society from slum dwellers to upper class men. Some rich clients pick them up from the roadside and take them to their residences. One *hijra* sex worker stated:

“By the grace of the Almighty, I get all types of clients ranging from princes to people of the streets (*raazputrer moto chhelerao ashey, abar kangali o ashey*).”

Many clients who prefer anal sex seek *hijra* sex workers. The reason why some men prefer *hijra* to women or men is exemplified by the quote below from a client of a *hijra*:

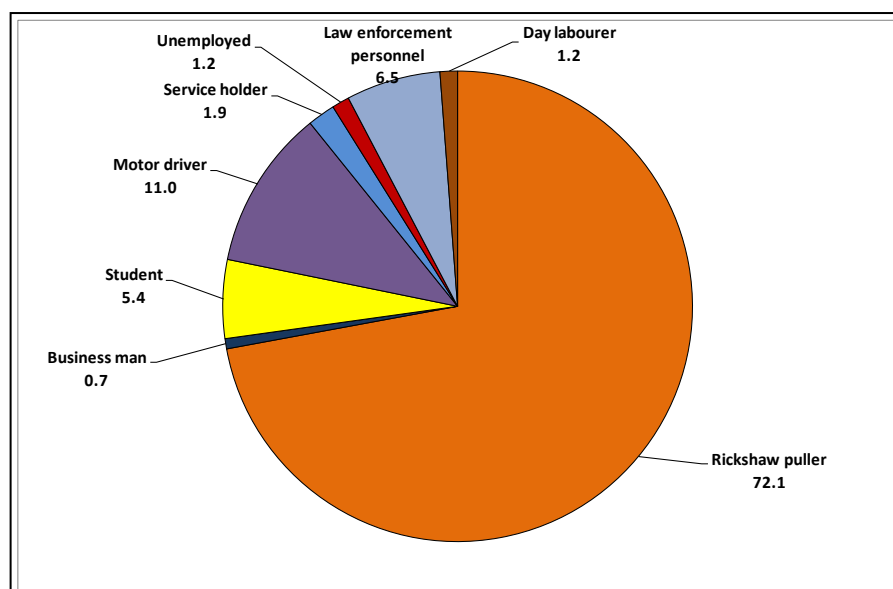
“We come to you to taste something different. We can always have sex with women, sometimes it becomes monotonous. Women are like dal bhat (rice and lentils), they are consumed daily. We come to you to taste unusual food.”

Another *hijra* sex worker said that some foreigners also buy sex from them:

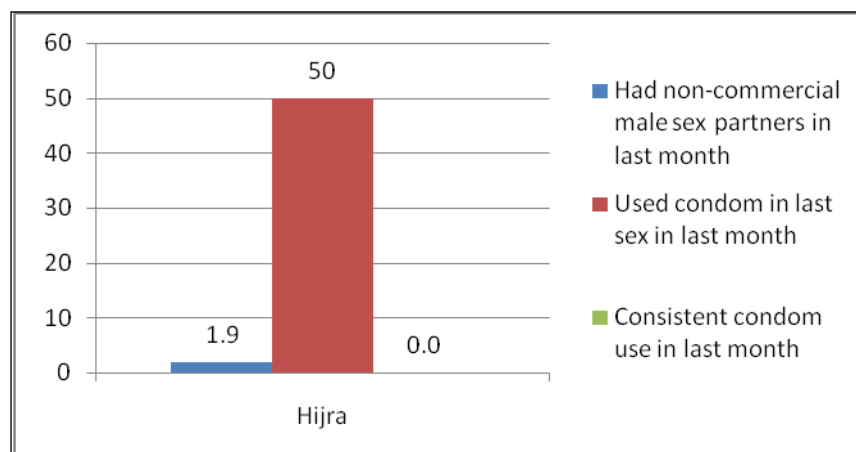
“I have tasted men from various countries of the world by standing in the Gulshan and Banani area.”

However, some *hijra* said that often clients mistake them for women because of poor lighting, lack of time and lack of sexual experience.

According to data from the 2006-07 BSS, the vast majority of the clients of *hijra* sex workers were rickshaw pullers.

**Figure 44: Occupation of clients of hijra sex worker (BSS 2006-07)****Regular, non-commercial sex partners of hijra**

A small proportion of *hijra* reported having non-commercial sex partners in the BSS (Figure 45). Among them, about half reported using condoms at last sex but none reported consistent condom use.

**Figure 45: Hijra reporting non-commercial male sex partner in the last month and condom use with such partners (BSS 2006-07)**

Qualitative data show that irrespective of whether *hijra* sell sex or not, they desire regular, non-commercial, relationships based on love (S. I. Khan, Parveen et al., 2007). *Hijra* often have multiple non-commercial partners, because they know that their lovers (*parik*) will ultimately leave: “who will leave when, we do not know.” A *hijra* explained:

“At the end we are *hijra*, not females, they [*parik*] ultimately leave us, marry women, become fathers, we cannot give them children, why should they stay with us? We cannot blame them.”

Qualitative data also show that *hijra* sex workers not only have non-commercial sex with men but on some occasions also with females, although this is strictly hidden because it is considered shameful (S. I. Khan, Parveen et al., 2007).

#### ***HIV and STI among regular non-commercial sex partners of hijra***

Eighty eight regular sex partners of *hijra* were sampled in the 5<sup>th</sup> round of serological surveillance (2003-2004) and although none were found to be HIV positive, 2.3% had active syphilis (in the same year 0.2% of 405 *hijra* were HIV positive and 10.4% had active syphilis).

#### ***Summary of key findings***

- *Hijra* have both commercial and non-commercial male sex partners.
- Clients of *hijra* are from a wide range of social strata, some are foreigners but the vast majority are rickshaw pullers.
- *Hijra*, in their pursuit of love, have multiple lovers or “pariks” because they are insecure in their relationships as they know that their lovers will ultimately leave to marry and have children.
- No HIV was detected in regular sex partners of *hijra* and active syphilis rates were lower than in *hijra*.



# **Chapter IV: Barriers to Condom Use**



## Barriers to Condom Use

Condom promotion is the main thrust of HIV prevention programs for sex workers in Bangladesh. These interventions run by NGOs have been working in Bangladesh since the late 1990s. Their work with sex workers in the streets of Dhaka and in the Tangail brothel have been cited as a best practice by UNAIDS (UNAIDS, 2000). However, Bangladesh has consistently documented low condom use by sex workers, and in fact, the data show that it has the lowest condom use amongst countries in the Asia Pacific region (Govt. of Bangladesh, 2001). More recent data show that condom use is increasing –apparent from the last BSS of 2006-07 and also indirectly from surveys conducted among clients (see section on “Risk behaviors of clients of female sex workers”).

In this section we explore the determinants of unsafe sex using data from different sources including the 2006-07 BSS and several qualitative studies.

### Determinants of Unsafe Sex

The BSS (2006-07) asked whether condoms were used at last sex with commercial sex partners for all MARPs sampled. Using this variable, secondary analyses were conducted to determine the factors associated with not using condoms at last sex. These analyses show that the factors associated with unsafe sex can vary from site to site which probably reflects differences in the way that MARPs are organized and also in the way that services are provided. As it is not always possible to explain differences among sites with existing data and therefore, this section attempts to understand the associations rather than to understand the differences between sites. Similar analysis was conducted on clients of female sex workers using the data from the client study of Streatfield et al (see Box 5).

#### Determinants of unsafe sex among drug users

Multiple regression analyses were done with data from IDUs and heroin smokers from different sites to assess factors associated with not using condoms at last sex with a female sex worker (in the last year) (Table 13). Only factors found to be significantly associated are shown in the table.

These results suggest:

**a) Lack of adequate knowledge** leads to the practice of unsafe sex – the most common predictor of unsafe sex across sites (in 4 of 5 sites) was not having sound knowledge about HIV transmission. Although it is well known that knowledge often does not translate into behavior change, an individual is unlikely to be able to adopt protective behaviors unless he/she knows how. Similarly, if knowledge and awareness is poor, individuals will more likely be unable to assess their own risk of infection. In two sites, inability to assess their own risks for HIV infection was also associated with unsafe sex. This suggests that appropriately provided HIV awareness education can lead to protective behaviors and also if such knowledge is internalized such that self risk perception is possible, safer behaviors will be adopted.

**Table 13: Factors associated with not using condoms at last sex with a female sex worker (in the last year): drug users (BSS 2006-07)**

Groups	IDUs, Dhaka	IDUs, Rajshahi	IDUs, Chapainawabganj	IDUs, Chandpur	Heroin Smokers, Dhaka
Type of sex partner	Female sex worker				
Predictor variables	Adjusted Odds Ratio (95% CI)				
Duration of stay in this city ( years) > 10 (Ref) ≤ 10	1.0 0.1* (0.01-0.9)				
Occupation Business Services Tokai (rag picker) Stealing/Snatching/Extortion Rickshaw puller (Ref) Unemployed/supported by families Daily labor Others		0.3* (0.1-0.9) 0.5 (0.1-2.5) 4.8 (0.7-34.1) 0.4 (0.1-1.4) 1.0 0.7 (0.1-3.7) 0.4 (0.05-2.6) 0.7 (0.1-5.7)			
Income in the last month (in Taka) ≤ 3500 > 3500 (Ref)	2.5* (1.1-5.8) 1.0				
Currently married Yes (Ref) No <sup>§</sup>		1.0 2.8 <sup>†</sup> (1.3-5.9)	1.0 7.0 <sup>†</sup> (2.2-22.6)		1.0 3.2* (1.1-9.2)
Number of commercial female sex partners in the last year ≤ 10 (Ref) > 10		1.0 4.1 <sup>†</sup> (1.8-9.1)			
Sound knowledge of HIV <sup>§§</sup> Yes (Ref) No	1.0 2.8* (1.1-7.2)	1.0 6.5 <sup>†</sup> (1.8-23.6)		1.0 4.9* (1.4-17.7)	1.0 3.4 <sup>†</sup> (1.4-8.4)
Able to assess own risk of HIV infection Yes (Ref) No	1.0 2.7* (1.3-5.6)				1.0 2.4* (1.2-5.0)
NSP involvement Yes (Ref) No			1.0 0.3* (0.1-0.9)		
N	253	184	99	90	147

Significance level: \*p<0.05; <sup>†</sup>p<0.01; <sup>‡</sup>p<0.001

Note: 'Ref' refers to reference category,

<sup>§</sup> Includes unmarried, divorced, separated, widowed

<sup>§§</sup> See section on Injection risk

**b) Being unmarried** - in three sites, unmarried drug users were more likely to not use condoms suggesting that having a spouse can make drug users behave more responsibly. Similar associations related to family support have also been found with sharing of needles/ syringes and relapsing back into drugs after drug detoxification treatment (see INTERVENTIONS FOR DRUG USERS, page 102). Thus, stability in a drug user's life through emotional support from a spouse or family is a protective factor.

**c) Income** – in Dhaka those who earned less were less likely to use condoms and in Rajshahi businessmen were more likely to use condoms suggesting that if drug users are better off economically, they will practice safer behaviors. It is not clear why this is the case and could be due to multiple factors such as being able to afford to buy condoms.

**d) Accessing HIV prevention services** – a worrying association was observed in Chapainawabganj, where using NSP services in the last year and not using condoms at last sex were significantly correlated. This finding is similar to that observed for Dhaka IDUs who were more likely to share needles/syringes if they were using NSP services (see section on "Injection risk"). The data for injection sharing clearly showed that in Dhaka, IDUs accessing NSP were those who were generally more vulnerable than those not accessing NSP. The same may be true for IDUs in Chapainawabganj. However, all data available point to increased risk among IDUs in Chapainawabganj compared to previous years along with weakening of available services (see section on "Interventions for Drug users"). Special attention is urgently required to services being provided to IDUs in Chapainawabganj, particularly to condom services.

The factors identified in this analysis relate to both socioeconomic as well as service delivery issues. Homelessness and poverty are structural factors that need to be addressed at a different level (see section V). Knowledge and awareness about HIV and understanding how NSP is utilized need to be addressed by targeted intervention programs for HIV prevention and this is discussed further in section VI.

### **Determinants of unsafe sex among female sex workers**

Secondary bivariate analyses were conducted to assess factors associated with not using a condom at last sex with a new or regular client. Tables 14, 15 and 16 list the factors that were found to be significantly associated at the 5% level. The analyses expose several factors related to unsafe sex:

a) Empowerment of female sex workers such that they can **ask all their clients to use condoms** is protective – if sex workers did not ask all clients to use condoms, condoms were less likely to be used at last sex. Moreover, the odds of not using a condom were higher if sex workers did not ask any client to use condoms versus asking some of them. Qualitative data (see section on "Reasons condoms are not used) show clearly that it is not possible for female sex workers to negotiate condom use in all situations, and often sex workers themselves do not want to use condoms. However, the analyses suggest that clients are amenable to using condoms if requested by sex workers. Understanding the situation is crucial and making available different strategies under different situations should be considered. Workable solutions are most likely to come from sex workers themselves and also from clients.

b) **Lack of adequate knowledge** leads to the practice of unsafe sex – not being able to assess own risk for HIV infection and not knowing where to get a confidential HIV test are both associated

with not using condoms in 2/7 sites. Also, in hotels and brothels, less schooling was associated with not using condoms. These findings suggest that knowledge is an important determinant, directly or indirectly, in practicing safe sex. However, education on safe sex needs to be imparted such that it can be used by the target audience. BSS data showed that although most sex workers said they had learnt about HIV prevention from NGO intervention programs, very few could use that knowledge to change their behaviors (see INTERVENTIONS FOR FEMALE SEX WORKERS, page 110).

c) **Forced sex** is a predictor of unsafe sex – hotel based sex workers who were subjected to forced sex last year were more than twice as likely to have not used condoms at last sex. Violence and rape were commonly reported by female sex workers (see section on “Prevalence and perpetrators of violence among female sex workers”) and sex workers often prioritize this problem over all others; it has proven to be hard to address especially where violence is committed by clients.

d) **Involvement with an HIV NGO program** had a protective effect – in two sites (Chittagong street sex workers and hotels in Dhaka), female sex workers who used the services of an HIV prevention program in the last year were more likely to use condoms. This shows that these programs are having a beneficial effect. The intervention program in the hotels of Dhaka covered only 20% of hotel based female sex workers in this city but nonetheless it proved effective (see INTERVENTIONS FOR FEMALE SEX WORKERS, page 110). Such good examples may be highlighted and the reasons for success better understood to shed light into how services in other cities and venues can also be provided. The targeted intervention programs in other cities and venues should also be assessed and evaluated thoroughly to better understand the realities on the ground.

e) **Higher client numbers** are related to unsafe sex – hotel based sex workers in Dhaka who had more than 20 clients a week were twice as likely to not use a condom at last sex as those with fewer clients. The numbers of clients seen by sex workers in the hotels is amongst the highest in the Asia Pacific region (Govt. of Bangladesh, 2001). Hotel authorities that regulate client flow (see Power structures in the sex trade, page 93) need to be brought more actively into HIV prevention programs. Furthermore, available data should be used to advocate not only with sex workers but also with those controlling the sex trade.

f) **Shorter duration of selling sex** as a whole or in a particular venue/city is associated with condom use — hotel based female sex workers in Chittagong and street based sex workers from Khulna were more likely to have used a condom at last sex if they had been selling sex for less than four years. This finding is contrary to popular belief that those who are new to sex work are likely to be more vulnerable. At present this finding is difficult to explain with available data but could mean that newer sex workers are more responsive to information provided on safe sex.

Overall the findings suggest that when a sex worker is empowered enough to request clients to use condoms, condoms are more likely be used. It is expected that such empowerment is likely due to activities of NGOs providing HIV prevention services. However, a positive association between condom use and participation in any HIV prevention activity was obtained in only two sites – hotels in Dhaka and streets of Chittagong. It is not clear why such an association was not seen in other settings and this calls for more in-depth assessment and evaluation of all sex worker intervention programs.

**Table 14: Factors associated with not using a condom in the last sex in last week with clients: hotel-based female sex workers (BSS, 2006-07)**

Groups	Hotel, Dhaka		Hotel, Chittagong		Hotel, Sylhet	
	New Clients	Regular Clients	New Clients	Regular Clients	New Clients	Regular Clients
<b>Predictor variables</b>	<b>Adjusted Odds Ratio (95% CI)</b>					
Years of schooling						
No education	2.8 <sup>†</sup> (1.5-4.9)		3.3* (1.2-9.3)			
Primary or less	1.8 (1.0-3.4)		3.6 <sup>†</sup> (1.5-8.7)			
More than primary (Ref)	1.0		1.0			
Duration of stay in this city (in years)						
> 10 (Ref)		1.0				
≤ 10		2.1* (1.1-4.0)				
Duration of sex work (in years)						
≤ 4			0.4* (0.2-0.8)			
> 4 (Ref)			1.0			
Asked clients to use condoms last week						
All of them (Ref)	1.0	1.0	1.0			
Some/none of them	3.6 <sup>†</sup> (1.7-7.6)	6.4 <sup>†</sup> (2.5-16.5)	10.5* (1.4-79.4)			
Number of new clients last week						
≤ 20 (Ref)	1.0					
> 20	2.0* (1.2-3.6)					
Sold sex in another country last year						
Yes					2.0* (1.2-3.6)	
No (Ref)					1.0	
Knowledge of confidential HIV testing						
Yes (Ref)	1.0					
No	2.4* (1.01-5.8)					
Subjected to forced sex last year						
Yes					2.6* (1.1-6.3)	
No (Ref)					1.0	
Received NGO services last year						
Yes (Ref)		1.0				
No		3.3* (1.3-8.2)				
N	324	234	100	70	145	113

\* p<0.05; <sup>†</sup>p<0.01; <sup>‡</sup>p<0.001

Note: Ref refers to reference category and empty cells reflect lack of statistical significance

**Table 15: Factors associated with not using a condom in the last sex in last week with clients: street-based female sex workers (BSS, 2006-07)**

Groups	Street, Dhaka		Street, Chittagong		Street, Khulna	
	New Clients	Regular Clients	New Clients	Regular Clients	New Clients	Regular Clients
<b>Predictor variables</b>	<b>Adjusted Odds Ratio (95% CI)</b>					
Duration of sex work in this street (in years)						
≤ 4					0.4 <sup>†</sup> (0.2-0.7)	
> 4 (Ref)					1.0	
Asked clients to use condoms last week						
All of them (Ref)	1.0	1.0	1.0	1.0	1.0	1.0
Some/none of them	5.6 <sup>‡</sup> (2.2-14.2)	6.9 <sup>‡</sup> (3.3-14.3)	14.2* (1.3-160.9)	6.3* (1.2-33.4)	8.9 <sup>‡</sup> (4.2-18.8)	3.0* (1.3-7.1)
Taken any drugs other than alcohol in last year						
Yes	0.5* (0.3-0.96)					
No (Ref)	1.0					
Knowledge of confidential HIV testing						
Yes (Ref)		1.0				
No		0.5* (0.3-0.9)				
Were able to assess own risk of HIV/AIDS						
Yes (Ref)					1.0	
No					4.1 <sup>†</sup> (1.4-11.4)	
Received NGO services in last year						
Yes (Ref)	1.0		1.0	1.0		
No	2.3* (1.01-5.2)		3.1* (1.03-9.2)	3.3* (1.2-9.3)		
N	395	381	247	238	264	184

\* p<0.05; <sup>†</sup>p<0.01; <sup>‡</sup>p<0.001

Note: Ref refers to reference category and empty cells reflect lack of statistical significance

<sup>§</sup> Includes unmarried, divorced, separated, widower<sup>§§</sup> See section on Injection risk**Table 16: Factors associated with not using a condom at last sex in last week with clients: brothel based female sex workers (BSS, 2006-07)**

Group	Brothel, National, New clients
<b>Predictor variables</b>	<b>Adjusted Odds Ratio (95% CI)</b>
Years of schooling	
No education	1.9* (1.1-3.5)
Primary or less	1.2 (0.6-2.4)
More than primary (Ref)	1.0
Age at first sex (in years)	
< 13	0.5* (0.2-0.9)
≥ 13 (Ref)	1.0
N	625

\* p&lt;0.05 Note: Ref refers to reference category



### **Determinants of unsafe sex among MSM, MSW and hijra**

Secondary analyses were conducted to assess factors associated with not using a condom at last sex with a new or regular client by male sex workers in Dhaka and Chittagong and *hijra* in Dhaka (Table 17). The findings are highlighted below:

Empowerment of male sex workers such that they can **ask all their clients to use condoms** is protective – overall for MSW, if they did not ask all their clients to use condoms, but only some or none of them, they were more likely to have not used condoms during the last commercial sex. This is similar to the finding from female sex workers (see section on “Determinants of unsafe sex among female sex workers”) and again, it is well known that sex workers are not adequately empowered to negotiate condom use with their clients and it is becoming more and more apparent that more work is required with clients and those managing the sex trade alongside work with sex workers.

- a) **Lack of adequate knowledge** leads to the practice of unsafe sex – not having sound knowledge about HIV/AIDS, not being able to assess own risk for HIV infection, not knowing where to get a confidential HIV test were associated with not using condoms in some sites. Again, these findings are similar to female sex workers highlighting the importance of correct knowledge in practicing safe sex.
- b) **Selling sex in another city** – MSW in Chittagong who sold sex in another city were less likely to use condoms which may reflect either that with mobility the likelihood of practicing unsafe behaviors increases or that MSW who are more likely to take risks are also more likely to be mobile. However, mobility in MARPs needs to be considered as it is likely that such MSW may have difficulty in accessing regular services and therefore not have condoms available at all times.
- c) **Age at first sex** as a child ( $\leq 13$  years) was associated with not using condoms with new or regular clients for MSW in Chittagong (see section on “Determinants of unsafe sex among MSM and *hijra*”, for a more in depth discussion).

Several factors were found to be associated with not using condoms for *hijra*.

- less education and lower income
- not living with a regular sex partner
- longer duration of selling sex

These findings suggest that those who are in a better socioeconomic situation and live in a more stable environment are more likely to use condoms. This in turn indicates that condom use may be influenced by social factors and interventions that focus only on individuals are less likely to be completely successful.

Encouragingly, a positive effect of NGOs on condom use was found for MSW in Dhaka and *hijra*.

**Table 17: Factors associated with not using a condom at last sex in the last week with regular and new clients: MSW and hijra (BSS, 2006-07)**

Groups	MSW, Dhaka		MSW, Chittagong		Hijra	
	New Clients	Regular Clients	New Clients	Regular Clients	New Clients	Regular Clients
<b>Predictor variables</b>	<b>Adjusted Odds Ratio (95% CI)</b>					
Years of schooling						
No education					3.0* (1.1-8.0)	5.2 <sup>†</sup> (2.3-11.9)
Primary or less					0.8 (0.5-1.5)	1.2 (0.7-2.0)
More than primary (Ref)					1.0	1.0
Income in the last month						
≤ 3500 Taka					4.3 <sup>†</sup> (1.9-9.9)	2.6 <sup>†</sup> (1.3-5.5)
> 3500 Take (Ref)					1.0	1.0
Currently living with sex partner						
Yes					0.3 <sup>†</sup> (0.1-0.6)	0.5* (0.2-0.9)
No (Ref)					1.0	1.0
Age at first sex (in years)						
≤ 12			7.7 <sup>†</sup> (2.9-20.5)	15.6 <sup>‡</sup> (3.6-68.1)		
> 12 (Ref)			1.0	1.0		
Duration of selling sex in this city (in years)						
≤ 4					3.3* (1.2-8.9)	5.8* (1.4-24.3)
> 4 (Ref)					1.0	1.0
Asked clients to use condoms last week						
All of them (Ref)	1.0	1.0	1.0	1.0		
Some/none of them	18.7 <sup>‡</sup> (6.7-52.1)	18.9 <sup>‡</sup> (7.5-47.9)	19.5 <sup>‡</sup> (7.9-48.1)	68.9 <sup>‡</sup> (15.0-317.7)		
Number of clients in the last week						
≤ 20 (Ref)	1.0				1.0	
> 20	0.2 <sup>†</sup> (0.1-0.5)				7.2* (1.02-50.9)	
Sold sex outside this city in the last year						
Yes					6.3 <sup>†</sup> (1.6-24.1)	
No (Ref)					1.0	
Injected drugs last year						
Yes					0.04 <sup>†</sup> (0.0-0.6)	
No					1.0	
Sound knowledge of HIV <sup>§</sup>						
Yes (Ref)					1.0	
No					3.7* (1.3-10.5)	
Knowledge of confidential HIV testing						
Yes (Ref)					1.0	
No					4.1* (1.4-12.2)	
Able to assess own risk of HIV/AIDS						
Yes (Ref)	1.0					
No	3.8* (1.1-12.9)					
Received NGO services last year						
Yes (Ref)	1.0				1.0	1.0
No	4.6 <sup>‡</sup> (2.1-10.1)				4.7 <sup>†</sup> (2.0-11.5)	2.4* (1.1-5.5)
N	218	358	242	203	372	372

\* p<0.05; <sup>†</sup> p<0.01; <sup>‡</sup> p<0.001

Note: Ref refers to reference category and empty cells reflect lack of statistical significance

<sup>§</sup> See section on Injection risk

For MSM, secondary analyses were conducted using BSS data to determine factors associated with not using condoms at last sex with commercial male and female sex partners (Table 18). These factors are discussed below:

- **Lack of adequate knowledge** leads to the practice of unsafe sex - as for MSW, female sex workers and drug users, low education, not having sound knowledge about HIV/AIDS, including not knowing where to get a confidential HIV test, were all associated with unsafe sex in particular groups.
- **Not living in the same city for long**, which could reflect lack of stability, was associated with not using condoms.
- **Forced sex** is a predictor of unsafe sex – for MSM in Dhaka and in Sylhet, experiencing forced sex increased the likelihood of not using condoms. This is similar to the finding in female sex workers (see section on “Determinants of unsafe sex among female sex workers”) and again highlights the extreme vulnerability of these stigmatized population groups.
- **Involvement with an HIV NGO program** had a protective effect for MSM in Sylhet, those who used NGO services for HIV prevention were more likely to use condoms.

**Table 18: Factors associated with not using a condom at last sex in the last week while buying sex: MSM (BSS, 2006-07)**

	MSM, Dhaka		MSM, Sylhet	
	Buying sex from males	Buying sex from females	Buying sex from males	Buying sex from females
<b>Predictor variables</b>	<b>Adjusted Odds ratio (95% CI)</b>			
Age (in years)				
15-24				6.2* (1.1-35.1)
25-49 (Ref)				1.0
> 49				-
Years of schooling				
No education	11.1* (1.1-108.6)			
Primary or less	8.6 <sup>†</sup> (1.9-38.6)			
More than primary (Ref)	1.0			
Duration of stay in this city (in years)				
> 10 (Ref)				1.0
≤ 10				4.4* (1.4-14.1)
Income in the last month (in Taka)				
≤ 3500		13.8* (1.6-121.9)	4.3* (1.1-17.2)	
> 3500 (Ref)		1.0	1.0	
Sound knowledge of HIV <sup>s</sup>				
Yes (Ref)	1.0			
No	2.7 <sup>†</sup> (1.3-5.6)			
Knowledge of confidential HIV testing				
Yes (Ref)			1.0	
No			3.8 <sup>†</sup> (2.5-5.8)	
Subjected to forced sex last year				
Yes	13.4 <sup>‡</sup> (3.9-45.5)		5.6 <sup>†</sup> (1.8-17.0)	7.7 <sup>†</sup> (2.5-23.1)
No (Ref)	1.0		1.0	1.0
Received NGO services in last year				
Yes (Ref)			1.0	
No			9.9* (1.5-65.1)	
N	251	101	323	124

Note: Ref refers to reference category and empty cells reflect lack of statistical significance

### Summary of key findings

- Inadequate knowledge regarding HIV/AIDS and services available for prevention, care and support was associated with lower condom use among IDUs, female sex workers, MSW, *hijra* and MSM
- Lack of empowerment of sex workers – female and male sex workers who did not ask clients to use condoms were less likely to have used condoms
- Forced sex for female sex workers and MSM was associated with not using condoms
- Lack of stability reflected in absence of family support, living alone, and poverty were associated with not using condoms in data from for drug users, *hijra* and MSM
- Not accessing HIV prevention services: across all MARPs, using NGO-run HIV prevention services showed a variable association with unsafe sex. In one case — IDUs in Chapainawabganj — using NGO services was associated with *not* using condoms. A positive correlation (i.e. using services was associated with a greater likelihood of using condoms) was found among: Hotel based female sex workers in Dhaka and Chittagong, Street based female sex workers in Chittagong, MSW and *Hijra* in Dhaka, and MSM in Sylhet.

In all other MARPs and sites, no association was found. The relevance of these associations are discussed further under Services (see page 98).

### Clients of Sex Workers

Using data from the Streatfield et al. survey male clients of female sex workers (see Box 5), secondary analyses were conducted to determine factors associated with not using condoms at last sex (Table 19) in three different settings (brothels, streets and hotels). These factors are discussed below:

- Irrespective of venue, if condoms were not available, clients were less likely to use them. Efforts needs to be made to ensure that condoms are available either with sex workers, with hotel management or whichever is the suitable location.
- Lack of knowledge on condom use (which was measured using responses to 12 questions on the steps in using a condom (Kalichman et al., 2002; Somlai et al., 1998) among clients as well as a lack of perception of risk of HIV infection, were both predictors of unsafe sex. This finding is similar to data from sex workers, MSM and *hijra* which showed a clear association between lack of adequate knowledge and unsafe sex.
- In brothels, clients who were regular customers of sex workers were less likely to use condoms as found in other studies including the BSS (see section on “Risk behaviors of clients of female sex workers”).
- A surprising finding was that unmarried clients were more likely to use condoms in the hotel setting. This finding is difficult to explain with available information.

**Table 19: Factors associated with not using a condom at last sex by clients while buying sex from female sex workers in brothel, street and hotel settings (BSS, 2006-07)**

Groups	Brothel	Street	Hotel
Predictor variables	Adjusted Odds Ratio (95% CI)		
Marital status			
Currently unmarried			0.5 (0.3-0.9) <sup>†</sup>
Currently married (Ref)			1.0
Perceived HIV as a risk			
Yes	0.3 (0.2-0.4) <sup>‡</sup>		0.5 (0.3-0.9) <sup>†</sup>
No (Ref)	1.0		1.0
Knowledge on condom use			
Low	2.0 (1.1-3.3) <sup>†</sup>		1.9 (1.1-3.4) <sup>†</sup>
Moderate	1.4 (0.8-2.3)		1.6 (0.9-2.7)
High	1.0		1.0
Condom availability			
Yes	0.1 (0.03-0.2) <sup>‡</sup>	0.2 (0.1-0.5) <sup>‡</sup>	0.04 (0.02-0.11) <sup>‡</sup>
No (Ref)	1.0	1.0	1.0
Type of partner			
New	0.6 (0.4-0.9) <sup>†</sup>		
Regular (Ref)	1.0		

\*Adjusted for variables in the list, <sup>†</sup>p<0.05, <sup>‡</sup>p<0.01

Note: Ref refers to reference category and empty cells reflect lack of statistical significance

### Summary of key findings

- Where condoms were available, clients were more likely to use them.
- Condom use is correlated with knowledge and risk perception.
- Condoms use was less common with regular commercial sex partners.

### Reasons Condoms are not used

Qualitative studies conducted among street and hotel based female sex workers and their clients (see Box 5) to better understand why condoms are not used highlighted many factors, some of which are deeply held beliefs while others are more practical issues that can be addressed by intervention programs.

#### Condoms are a barrier to pleasurable sex

Both clients and sex workers had negative feelings towards condoms for several reasons which are often interpreted broadly as barriers to pleasurable sex. These are explained below:

**Delay in ejaculation:** Sex workers and their clients said that condoms delay ejaculation. A prolonged sex act was pleasurable to some customers, but not to sex workers because it made the act more painful. A street sex worker in Dhaka said:

“There are many customers who take a long time to ejaculate when using condoms and I feel pain. Therefore, I do not want my clients to use condoms always. When I feel pain, I even tell them to take condoms off.”

Even if a prolonged sex act is pleasurable for some clients, in most situations, within the context of the sex trade, this is not feasible. For example, when sex is sold in open public venues, the act needs

to be hurried to avoid harassment by law enforcement agents or *mastans*. From a sex worker's point of view, short sex acts help to avoid harassment and enable her to get more clients. In hotels, a client's transaction takes place with the hotel management and not directly with the sex worker. The client hands over to the hotel boy a fixed amount for a single sex act before entering the room. He is allowed 10 to 15 minutes with the sex worker. If the agreed time is exceeded, the hotel boy knocks on the door to ensure that the client does not enter into a direct negotiation with the sex worker for multiple sex acts. In such situations, the sex workers may also be harassed by hotel management. Therefore, because condoms delay ejaculation, sex workers sometimes discourage clients from using condoms.

**Reduced pleasure:** Clients commonly complained that a condom acts as a barrier preventing direct contact between the penis and vagina, and then the warmth of the vagina cannot be felt during intercourse. In their opinion, 'sex gets lost' if a condom is used. According to a client of a street based female sex worker in Dhaka:

"A woman has a sex organ which is warm and wet. Due to condoms, one cannot feel this, so that pleasure is reduced."

Some clients said that the pleasure decreases so much that they do not feel they are having sex at all.

"It happens sometimes; I mean, when I use condom, I don't feel what I'm doing (sex); I don't feel like I'm doing anything at all. It feels bad, and then I take it off and throw it away".

Some clients said that with condoms their penis loses its hardness. They also said that wearing a condom at the moment of sexual excitement is time consuming (e.g., to unwrap condom properly from the packet, to put it on) and distracting, lessens the excitement and ultimately reduces sexual pleasure and even erection.

Like clients, many sex workers consider it as an obstacle to sexual pleasure. For example, a brothel sex worker mentioned:

"Although I sell sex, I also want to enjoy sex with my *babu* [boyfriend in brothel settings], and sex is more enjoyable without condoms. So I do not use condoms."

Not using condoms with *babu* is very common and was reported by many brothel based sex workers. This was also true for other types of sex workers who said they had a "special" relationship with some clients with whom they generally did not use condoms so as to enjoy their sexual relationship. It was not just enjoyable sex, but also that they had trust and faith in those special clients. This is corroborated by the finding on regular clients of brothel based sex workers (see section on "Regular, non-commercial sex partners of female sex workers").

**Clients' rights:** Some clients said that because they were paying for sex, it was their right to enjoy sex in a manner that they chose and which they felt would give them value for their money.

"I do not pay less, then why should I get less pleasure. I paid money to enjoy sex, then why should I listen to her?"

### **Misconceptions and beliefs about condoms: Diverse contexts**

Some clients think that the 'oil' (lubricant) on a condom can lead to infection in the penis. These clients wash condoms prior to using them. Some have deep-rooted fears that condoms may rupture and cause harm rather than protection:

"Because condom is so thin, I think that if it ruptures then it may be more harmful... I heard that when a condom ruptures the penis is damaged. Now don't ask me what damage because I don't know. Don't have any experience of that."

A few clients even believed that condoms spread diseases. This is exemplified by the quote below from an illiterate client of street based female sex worker:

"Condoms spread diseases. The girls who want to use condoms most likely suffer more from *gopon rog* [STIs] which are dangerous. The germs of these diseases are attached to condoms and finally infect the penis through condoms."

In the context of low HIV prevalence, sometimes the messages conveyed are confusing and clients misinterpret those messages. For example, clients find the message that "all penetrative sex acts without condom(s) are risky", confusing. Some mentioned that they "never used condoms, but they never suffered from *jouno rog* (STIs), so why should they get HIV?" Many clients believed in fate:

"if I have to suffer from disease, if Allah wants me to suffer, then there is nothing that can be done to save me."

A few clients felt that condoms are foreign propaganda. According to an educated client visiting a hotel in Dhaka for sex:

"Advertisements on condoms are nothing but a business strategy; see we do not produce condoms, as far as I know condoms are imported from America which wants to promote condoms around the world in the name of protection from AIDS. They earn millions by selling condoms to a poor country. If you watch their pornographic movies, you can see that none of them are using condoms. I also heard from my friend who lived in America that Americans enjoy sex and do not use condoms. Are the Americans suffering from AIDS? I do not know."

Another client said:

"I heard that condoms are good for those who have both anal and vaginal sex. I believe we Bangladeshis do not have anal sex like the Westerners. We mostly have vaginal sex. Condoms are not for us, although it may be okay for contraception, but there are other methods for that. So condoms are not necessary."

### **Notions about semen**

Although men in the cultural context of Bangladesh generally consider semen as a vital essence of life (S. I. Khan et al., 2006), some men consider semen to be the source of diseases. They believe that if semen comes in contact with the penis after ejaculation, the penis will become infected. This occurs when condoms are used, because a condom leaves semen around the penile shaft. On the other hand, when condoms are not used and semen is discharged into the vagina, the penis does not

get into close contact with semen, and therefore there is no risk of infection. A middle aged client of a hotel based female sex worker said:

“Yeah, that ‘thing’ [semen] is poisonous when it comes out from the body. Think that it touches your thighs and you don’t wash it. What do you see on the next day? Itching and warts! Right? Why? Because it’s poisonous. Now if you wash that place with hot water then the thing goes away. So it’s easy to understand.”

Others found being soiled with semen uncomfortable and disgusting. One young client of a street based female sex worker in Dhaka said:

“There is no water. If I use a condom, my pants, or *lungi* or thigh gets soiled with semen. So I don’t like using condoms”.

### **The quality of condoms**

Many customers found the smell of the lubricant with condoms sickening:

“It stinks, man! ...No advantages – problems far outweigh benefits. I hate that smell.”

Although perfumed and flavored condoms are available in the market, clients did not know this. Also, sex workers do not have a choice in the condoms they get from NGOs providing HIV prevention services. The peer educators were aware that many clients complained about the ‘bad’ smell of condoms, but did not have a choice as condoms were given by the NGOs to be distributed free or at subsidized rates. Reported poor quality condoms or condoms that do not fulfill the needs of clients are often barriers to using condoms. Some issues around condom quality that clients raised were:

- Level of lubrication – some condoms are not adequately lubricated. Some clients, on the other hand said that condoms were over lubricated which was also a problem.
- Thickness of the condoms –some clients said condoms were very thick and this reduced sensation during intercourse.
- Size and shape of the condoms – as penis size varies, so condoms should be available in different sizes and shapes. Many clients objected that condoms create a ‘fold’ in front of the penis and at the base which creates problems during intercourse.

### **Requesting clients to use condoms creates suspicion of STI**

When clients are requested to use condoms by sex workers, they (the clients) often become suspicious that the sex worker probably has an STI – this was particularly mentioned by hotel based female sex workers. On many such occasions, sex workers reported that clients reject the sex worker. Hotel authorities always claim that their sex workers are “fresh and healthy”, and because of the association of condoms with STI/HIV, sometimes the hotel authorities advise the sex workers not to ask clients to use condoms because this might reduce the client flow to that hotel. Requesting condom use can thus threaten a sex worker’s income.

On the other hand, secondary analyses of data revealed that when sex workers request their clients to use condoms, condoms are more likely be used, and if condoms are available, they are also more likely be used (see section on “Determinants of unsafe sex among female sex workers”). These facts should be used to further motivate female sex workers and also hotel authorities who need to be involved in encouraging condom use by clients.



### **Group sex: The unique context of unprotected sex**

Group sex is often practiced with sex workers and among MSM and it is often unprotected (see section on “STIs and sexual risk behaviors of MSM”). Some female sex workers complained that sometimes when a client contracts a sex worker, he hides the number of clients who will be involved in the sex act. These sex acts usually take place in unoccupied offices or school rooms or, in some cases, at student messes. When the sex worker arrives at the designated venue, she finds more clients than agreed upon but her objection is often overruled and if she does not have the adequate number of condoms with her, some of the clients have sex without condoms. The quote below reflects such a situation:

“Say, I took five pieces of condom, all are used up. Then the number (of clients) increased by three, I don’t have condoms for these additional folks. Nonetheless, I must have sex with them. It’s risky to stay there ... I was beaten, clothes had been torn up, I was abused. ... In many cases, I took three condoms and once there I found nine customers!”

Also, during group sex, a sex worker wants the act to be over as quickly as possible as group sex is often painful. Therefore, because condoms delay ejaculation (see section on “Condoms are a barrier to pleasurable sex”), she does not object to sex without condoms.

### **Availability of condoms**

A recent assessment of condom availability (unpublished data) provides insight into supply side issues affecting condom use. Interviews with decision makers and NGO field staff as well as a review of records showed that stock levels of condoms are commonly less than ideal. Inadequate or inconsistent supply has resulted in stock outs at many NGOs; 15 of the 16 NGOs included reported a stock out of at least one month in the past year. In addition, between 31% and 69% of sex workers reported experiencing stock outs in the preceding three months and irregular supply of condoms was mentioned by 90% of the sex workers interviewed as a main barrier to using condoms during sex (unpublished data). Furthermore, the number of condoms provided to sex workers does not appear to be adequate to meet their needs. Sex workers’ rough estimates of the number of condoms they need per day ranged from 5-12 (with variation based on the location of the sex trade) but the actual number supplied ranged from two to six per day.

### **Summary of key findings**

- That condoms decrease sexual pleasure was cited as a major barrier by both clients and sex workers.
- Condoms delay ejaculation which was not desirable to sex workers as it increased pain. It also was not feasible for clients in situations such as streets and hotels where time for the sex act is limited.
- Deep seated beliefs, misconceptions and prejudices about condoms and semen constitute barriers to condom use.
- Messages on how condoms can protect are often misleading and need to be clearer.
- Perceived poor quality of condoms and lack of choice in condoms also undermine willingness to use condoms.
- When sex workers request clients to use condoms, it can create suspicion that she may be infected with STIs/HIV, leading her to lose clients.
- Group sex was often associated with not using condoms either because the sex worker did not have enough condoms for unexpectedly many clients or when violence was involved.
- Supply side issues at both the national and local level affect use of condoms by sex workers.



# **Chapter V: Structural Factors Affecting HIV Interventions in Bangladesh**



## Structural Factors Affecting HIV Interventions

Structural factors have been defined as “barriers to, or facilitators of an individual’s HIV prevention behaviors; they may relate to economic, social, policy, organizational or other aspects of the environment” (Sumartojo, 2000). Structural factors act at both the macro and intermediate levels. Macro-level factors are those broad social structural characteristics that, like socioeconomic status and gender inequality, affect vulnerability to HIV but are beyond the control of individuals. Intermediate level factors are more closely linked to individual behaviors such as laws or policies that limit access to prevention services (Sumartojo, 2000). Research globally has explored the influence of three main factors: economic development and poverty, mobility, and gender inequalities, as well as the role of national policies and legislation (Parker, Easton, & Klein, 2000). In Bangladesh, few studies have addressed structural factors explicitly, but evidence from numerous studies shows their influence on vulnerability and on access to HIV prevention and treatment interventions. This chapter brings together evidence from multiple sources about the role of structural factors. Because the availability of data varies by group, it provides varying levels of detail on how these factors affect specific population groups.

### Macro Level Factors

#### Economic factors

Economic development has been linked to HIV vulnerability globally and in country-specific studies (Parker et al., 2000). In Bangladesh, this has not been explored but evidence from some studies shows the impact of economic circumstances on risks of HIV among certain groups.

#### ***Selling sex in public venues increases vulnerability to HIV***

Vulnerability to HIV is enhanced in poorer sex workers because of the adverse conditions under which they work. Sex workers (female, male and *hijra*) who sell sex in open public venues such as parks and streets usually do so because they are poor. These open venues are not safe -- law enforcement agents and local *mastan* often harass them and sometimes take their money or have forced sex without any payment, or take bribes. Clients are also harassed so they are always in a hurry and condom use becomes difficult as it involves additional time (see Reasons Condoms are not used, page 78). Weather conditions can also make transactions difficult; when it is raining, client numbers decline and sex workers accept whatever client is available without considering their willingness to use a condom.

***Increasing food prices increase HIV vulnerability of sex workers***

Global food prices have more than doubled since 2002, and have increased most dramatically since 2006 (Mitchell, 2008). There were rapid increases in the price of essential items in Bangladesh. Recently, sex workers reported that the increasing cost of daily commodities had reduced the flow of clients and some clients did not want to pay their usual fees (NASP et al., 2008a). As a result, their income had decreased and they had to sacrifice the consumption of certain goods and services, especially luxury goods which for them include condoms. Their economic vulnerability and the decreased number of clients also led some sex workers to deliberately avoid condoms and agree to have anal sex.

***Homeless IDUs and vulnerability to infections***

As noted in Injection risk behaviors (page 9), homeless IDU are more than five times as likely as IDU who have a fixed address to be HIV positive. It is not clear whether drug use leads to homelessness or vice versa from available data. However, the vulnerability of IDUs living in unstable conditions has been documented in multiple settings including Vancouver (Shannon, Ishida, Lai, & Tyndall, 2006), Baltimore (Song, Safaeian, Strathdee, Vlahov, & Celentano, 2000) and Puerto Rico (Reyes et al., 2005). Also, relapse following drug treatment was found to be associated with homelessness in male IDUs (see section on “Detoxification services”).

***Mobility***

Mobility is a key structural factor that has been linked to increased HIV incidence and vulnerability globally (Parker et al., 2000). Migration, both internal and external, is a facet of the Bangladeshi economy. Rural-urban migration has grown rapidly since the mid-1970s, largely as a means of poverty alleviation and income maximization for poor, rural families but it has been facilitated by a shift to an export-oriented economy (Afsar, 1999; World Bank Office Dhaka, 2007). Bangladesh is also a labor-sending country to multiple international destinations (especially the Middle East). Bangladeshi migrant workers suffer problems found among other internal and international migrant groups including socioeconomic and power inequalities, limited social capital, loneliness, and coping with different cultural norms relating to sex (Soskolne & Shtarkshall, 2002). The high numbers of international migrant workers among those testing positive for HIV (see section on “HIV infection in international migrant workers”) reflect this vulnerability.

***Gender***

Gender influences vulnerability to HIV and the effect of interventions for prevention, care and treatment. Two cases in Bangladesh, female IDUs and MSM and *hijra*, highlight the increased vulnerability that results from gender norms.

***Effect of gender norms on the vulnerability of female IDUs***

The subordination of women in society affects societal responses towards female drug users. The qualitative study on female drug users (see section on “Female drug users”) provides some insights into how female drug users are perceived by society and themselves in relation to their male counterparts. While society expects every woman to be an ideal woman, loving wife/girlfriend and caring mother/sister, there is more tolerance for men to experiment and participate in antisocial activities. Thus, while male drug users are condemned, they are less likely to be thrown out of the family than female drug users. Rather, a male drug user is often married to a “good” woman with

the hope that the wife will be able to fix her husband's drug problem. For female drug users, however, marriage prospects are limited and it is not uncommon for them to be thrown out of their families. This forces them to live socially excluded lives as homeless street women. One such woman said:

“We were born as females. We should have stayed at home with our parents and husbands. Now we take drugs on streets, we get assaulted by people. Society keeps silent about a male drug user, but never behaves in the same way with a female drug user.”

Many female drug users tend to isolate themselves because they feel that it is worse for women than men to be dependent on drugs and this belief that they are “very bad” leads them to further isolate themselves.

The subordinate role of women also leads some women to use drugs. The wives of male drug users are often forced into drug use by their husbands. According to some females, their husbands gave them drugs in order to make them dependant so that they would ensure a drug supply for the husband. In some cases male drug users under the cover of “dependable partners” exploited their female partners emotionally, financially and physically. Some were tortured by their IDU husbands to bring money from their parents to ensure a sustained supply of funds for purchasing drugs. Other female drug users reported that they had been forced by their unemployed husbands to sell sex in order to earn and ensure funds for drugs. In one case, a wife had to engage in sex with a colleague of her husband, who was also an IDU, so that her husband could get drugs from this man.

#### ***Gender norms and vulnerability of MSM and Hijra***

In the hetero-normative society of Bangladesh, alternative sexualities and genders are not readily accepted. It was noted earlier that MSM, especially *kothi* (feminine MSM) and *hijra* encounter harassment (S. I. Khan, Parveen et al., 2007) that drives many out of school and the job market. Participants reported that because they had no viable means of earning, they joined the sex trade and engaged in behaviors that put them at risk of HIV.

Gender norms affect MSM and *hijra* in other ways. For example, many outreach staff working in various NGOs/CBOs reported that MSM (Coghlan & Khan, 2005) who were imprisoned for their MSM behavior were often raped by the police and/or prison-mates. Prisons are closed institutions with strict segregation based on sex, and male wards are generally highly masculine spaces without heterosexual contact. Inmates considered not ‘masculine’ enough (*kothi* and *hijra*) are often subject to brutal sexual violence.

## Intermediate Level Factors

As noted above, intermediate level factors are more closely linked to individual behaviors such as laws or policies that limit access to prevention services (Sumartojo, 2000). A number of the factors that have been explored in Bangladesh, like violence and the law, are relevant to a range of MARPs while others, like power structures of the sex trade are specific to a single group. This section explores a range of factors on which data are available.

### Legal factors

#### ***The Narcotics Control Act: Barriers to harm reduction intervention for IDUs***

According to Article 18 of the Bangladesh constitution: “Public health and morality (1) The state shall ....., and in particular shall adopt effective measures to prevent the consumption, except for medical purposes or for such other purposes as may be prescribed by law, of alcoholic and other intoxicating drinks and of drugs which are injurious to health.” The Narcotics Control Act (NCA), passed in 1990, made drug use a criminal offense, made drug users criminals, and called for mandatory treatment of drug users. The act gave law enforcement agents control over drug sales and use and gave provision for harassment of drug sellers and users. However, the national AIDS policy recognizes harm reduction approaches and the NASP incorporated harm reduction services for IDUs in its strategic plan 2004-2010. Bangladesh started its NSP for IDUs in the late 1990s, expanded it over the years and has now approved a pilot of OST. However, law reform remains an urgent need in order to facilitate intervention activities with drug users.

According to NGO staff, the NCA has limited access to prevention services in two main ways. First, although the act does not prohibit possession of injection paraphernalia (needles, syringes, bleach), distribution of paraphernalia is interpreted as helping an individual to use drugs, or helping a person to commit a crime. Law enforcement agents physically search people, particularly NGO staff, for drugs, needle and syringes. This makes it difficult for staff working in harm reduction programs to carry disposable needles and syringes in their bags. Second, the act makes it illegal to rent premises, means of transport or equipment for “the commission of an offense”. Therefore, renting a space to use as a DIC is very difficult and house owners who allow their houses to be used as DICs impose many restrictions so that the actual purpose of the place is kept hidden in the community. In addition, any DIC or NSP site can be raided, and equipment or records can be seized. These restrictions are a barrier for IDUs to access services. For example, cases have been reported in which police evicted drug selling and drug using spots, which caused the IDUs to go underground, and NGO staff had difficulty reaching them (Hassan, 2005).

Several human rights organizations have condemned the manner in which these laws are misused against the poor and marginalized population including groups vulnerable to HIV. They have urged the government to reform the law (UNODC, 2007).

#### ***Legal ambiguity around the sex trade acts as a barrier to effective interventions***

A number of laws and ordinances are used to limit and control sex workers in Bangladesh but the ambiguity in these laws leaves sex workers in a vulnerable position and at the mercy of law enforcement. Laws and ordinances that refer explicitly to prostitution include the constitution (article 18, subsection 2), which says that “The State shall adopt effective measures to prevent



prostitution and gambling”; Metropolitan police ordinances in a number of major cities that allow punishment of anyone who “endeavors to attract attention for the purposes of prostitution, or even solicits or molests any person for the purposes of prostitution”; and the Bengal Suppression of Immoral Traffic Act 1933, which refers explicitly to females under age 18 and to any “promiscuous sexual act that is bought, whether for money or for kind.” The Bangladesh penal code 290, which refers to “public nuisances,” is also applied to sex workers. Although it does not specifically refer to sex work, it addresses trades or professions that are hazardous for the public health or create uncomfortable situations for common people and is used by the police to harass and punish sex workers.

The ambiguity arises because the law addresses sex work from a number of perspectives. For example, the constitution does not necessarily make sex work illegal. It could be and has been interpreted to mean that the state should take initiatives to stop gambling and prostitution by abolishing factors that encourage these activities such as poverty, illiteracy, women’s exploitation, and trafficking. Likewise, the act of 1933 was designed to protect women from repression and kidnapping and it does not refer to consensual sex. In fact, there is a provision under which any woman over 18 years can go to the court and declare that she has joined the sex work profession by her own choice. While this process was meant to ensure women sex workers’ protection, it is more often used to protect *dalal* and middleman from prostitution charges and to enter minor girls into sex trade, as Bangladesh has no birth certificates, and the age of a girl is not certified. Furthermore, residential brothels have existed for over a century in Bangladesh. Technically, their status is neither legal nor illegal (C Jenkins, 1999; C. Jenkins & Rahman, 2002).

Even though law enforcement officials carry out punishment, they also have several responsibilities in controlling brothels, such as listing the names and particulars of all sex workers, maintaining peace in the brothels, ensuring the protection of clients, and ensuring that minor girls do not enter the trade. This does not, however, provide sex workers in brothels with legal security and is a concrete example of the ambiguity surrounding the sex trade. The eviction of the Tanbazar brothel in Narayanganj in 1999 (C. Jenkins & Rahman, 2002) is as an example of sex workers’ lack of security and human rights protection. When the brothel was evicted, nothing could be done against the eviction and sex workers were forced to move their business to other venues, such as in temporary rented residences where they are at higher risk than in brothels (see violence, below) and where interventions are harder to implement.

### ***Sodomy law limits access to interventions for MSM and transgender***

In Bangladesh, as in many other countries globally, MSM practice is criminalized. The “sodomy law,” Section 377 of the Bangladesh Penal Code (BPC), says that “whoever voluntarily has carnal intercourse against the order of nature with any man, woman or animal shall be punished with imprisonment for life, or with imprisonment of either description for a term which may be extended to ten years, and shall also be liable to fine.” This section came as a continuation of the colonial Indian Penal Code formulated in 1860 by Lord Macaulay (Bondyopadhyay & Khan, 2004), which basically represents the social context of Victorian England. However, what constitutes “carnal intercourse against the order of nature” is not clearly defined. Under the act, an MSM can be sentenced to prison (up to 10 years) or to paying a fine if convicted of such a crime.

MSM, however, are often not arrested under section 377 of BPC, which requires proof that “carnal intercourse” has occurred and a warrant, rather they are arrested under Section 54 of Code of Criminal Procedure 1898 which allows the police to arrest a person without a warrant under some “suspicious” conditions. In addition, many MSM are arrested and sent to prison for three to four days without any legal protection under this section.

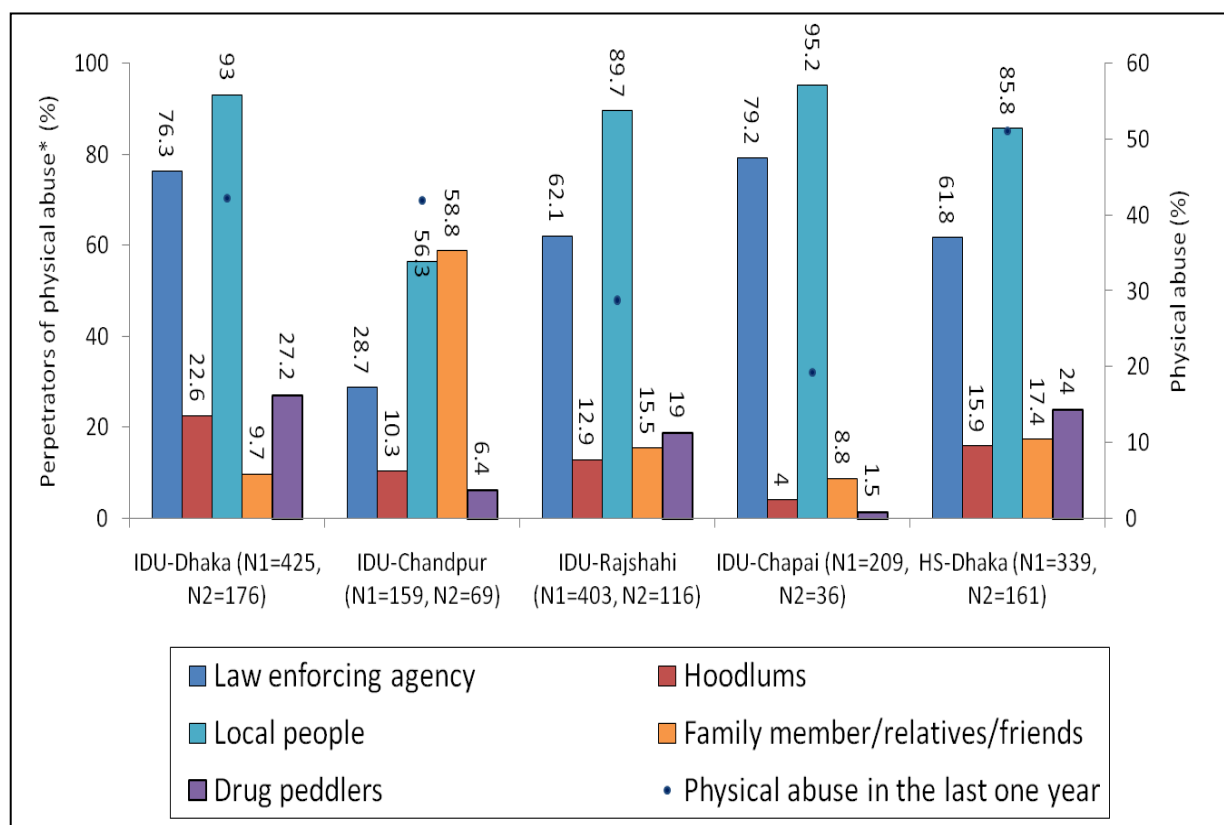
This legal context has made it difficult to work openly with MSM and *hijra* in Bangladesh, and to carry out relevant HIV prevention campaigns or field-based activities. Outreach workers (Coghlan & Khan, 2005; S. I. Khan, Parveen et al., 2007) reported that they had been harassed for “promoting homosexuality”. Nevertheless, a number of NGOs are continuing the fight against HIV and ensuring human rights and social justice for MSM. As the basis for their advocacy work they use the human rights framework, which says that MSM should be protected from abuse and violence. Unfortunately, surveillance has shown that little has been achieved in terms of reducing abuse and harassment since 1998 when the surveillance began (see violence, below).

### **Violence**

The intersection between violence and HIV vulnerability has been most well studied with regard to domestic violence (Maman, Campbell, Sweat, & Gielen, 2000). However, data from multiple studies and from BSS in Bangladesh highlight the high risk of violence faced by MARPs. There are similarities with domestic violence, namely: (1) forced or coercive sexual intercourse, (2) by limiting ability to negotiate safe sexual behaviors, and (3) establishing a pattern of sexual risk taking among individuals assaulted in childhood and adolescence. For example, as noted in the section on “Determinants of unsafe sex among MSM, MSW and *hijra*), having experienced forced sex was associated with MSM not using condoms when buying sex from other males. This section reports data on perpetrators and rates of violence directed at MARPs in Bangladesh and provides some qualitative data that highlight the impact of violence on particular risk groups.

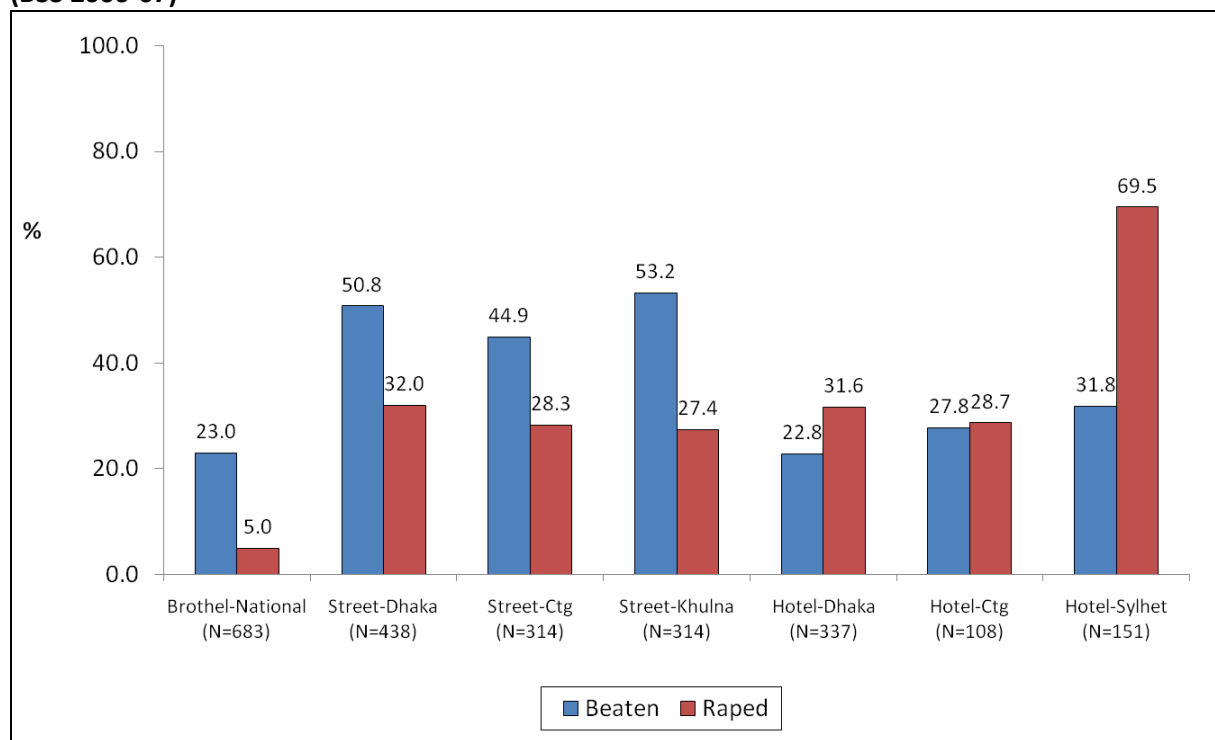
#### ***Prevalence and perpetrators of violence among IDU***

BSS (2006-07) data indicate that 42% of IDUs in Dhaka were physically abused in the previous year; harassment was perpetrated most commonly by local people followed by law enforcement (Figure 46).

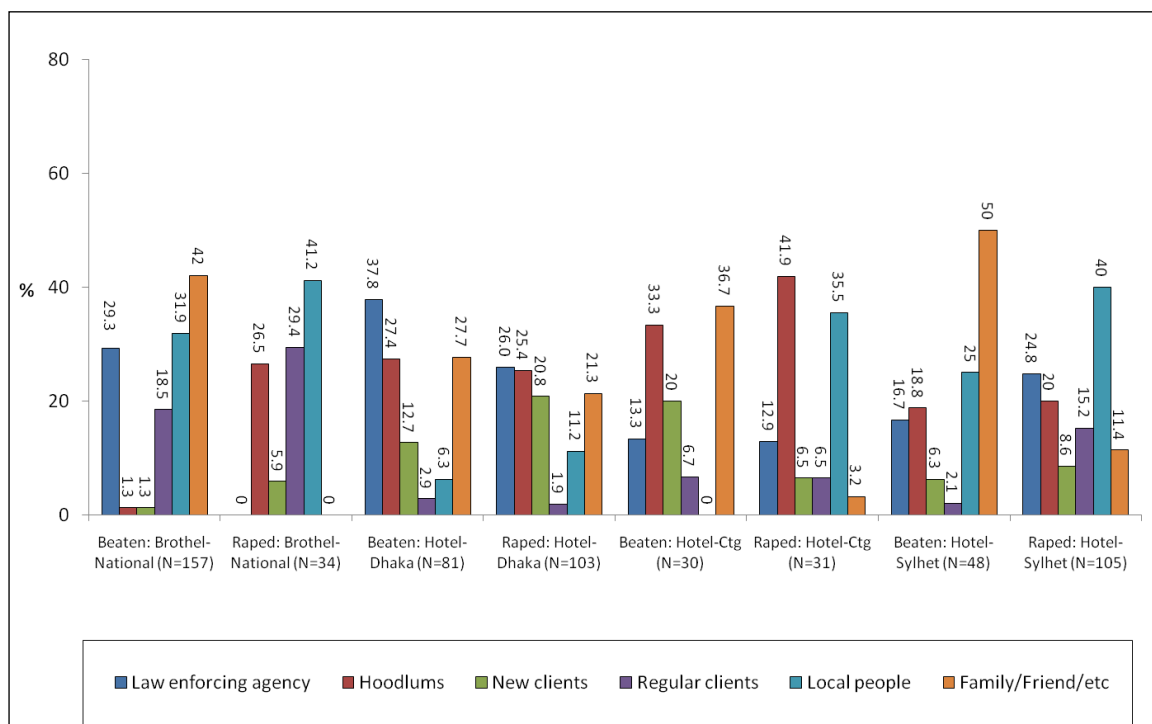
**Figure 46: Prevalence and perpetrators of violence against IDU in the last year (BSS 2006-07)*****Prevalence and perpetrators of violence among female sex workers***

Female sex workers also commonly report various types of violent incidents, particularly beating and rape (Figure 47). Rape was more common in streets and hotels, particularly in hotels in Sylhet, where around 70% of sex workers reported rape in the last one year (Govt. of Bangladesh, 2009). In general, brothel based sex workers reported lower rates of beating and rape than hotel and street based sex workers. The perpetrators who commit this violence in brothels are local people, friends and family members and hoodlums, whereas in hotels and on streets, law enforcement and hoodlums are the main perpetrators of violence (Figures 48 and 49).

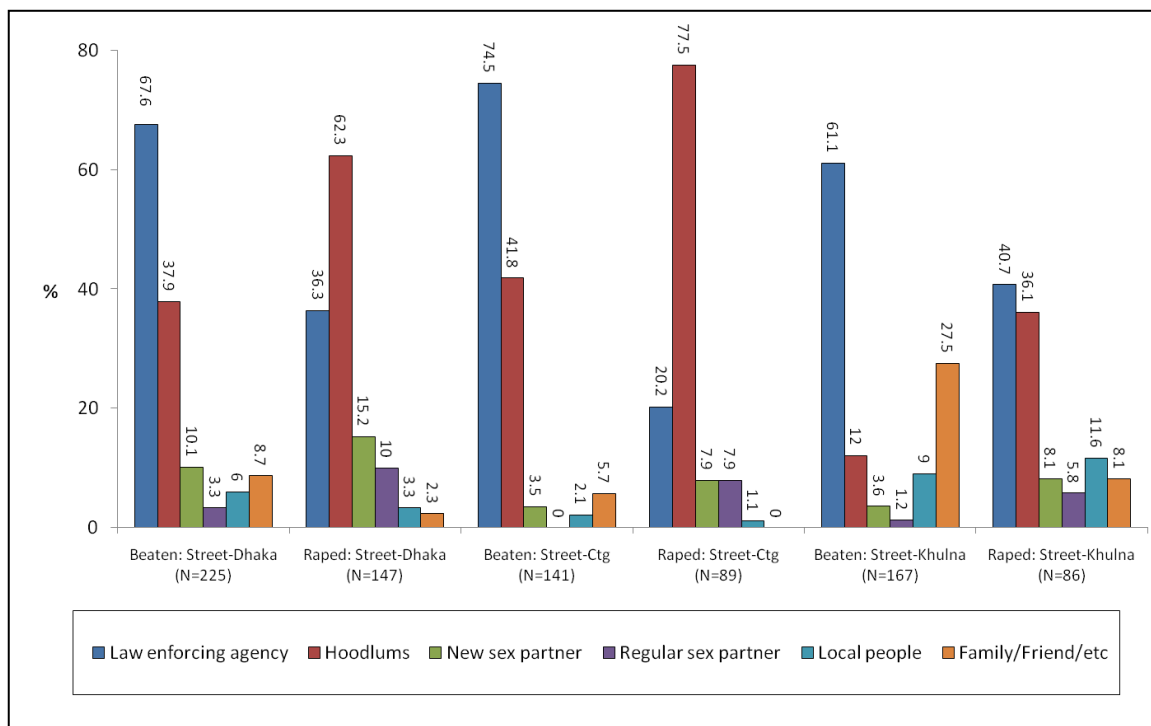
**Figure 47: Percentage of female sex workers beaten and raped in the last year, by venue and city (BSS 2006-07)**



**Figure 48: Perpetrators of violence against brothel and hotel based female sex workers in the last year (BSS 2006-07)**



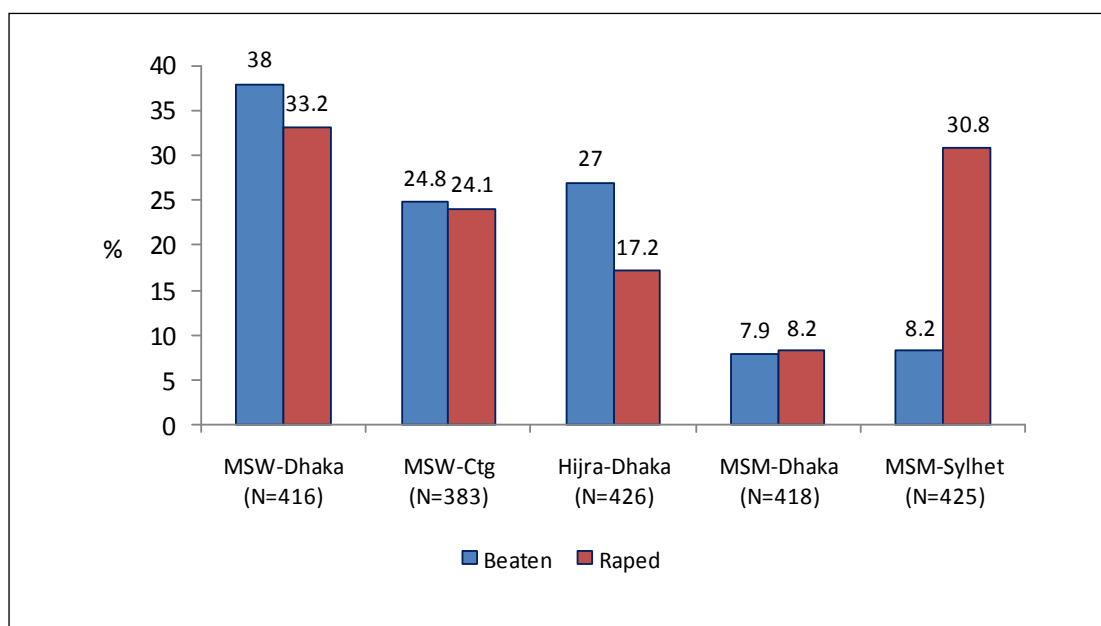
**Figure 49: Perpetrators of violence against street based female sex workers in the last year (BSS 2006-07)**



**Prevalence and perpetrators of violence among MSM and Hijra**

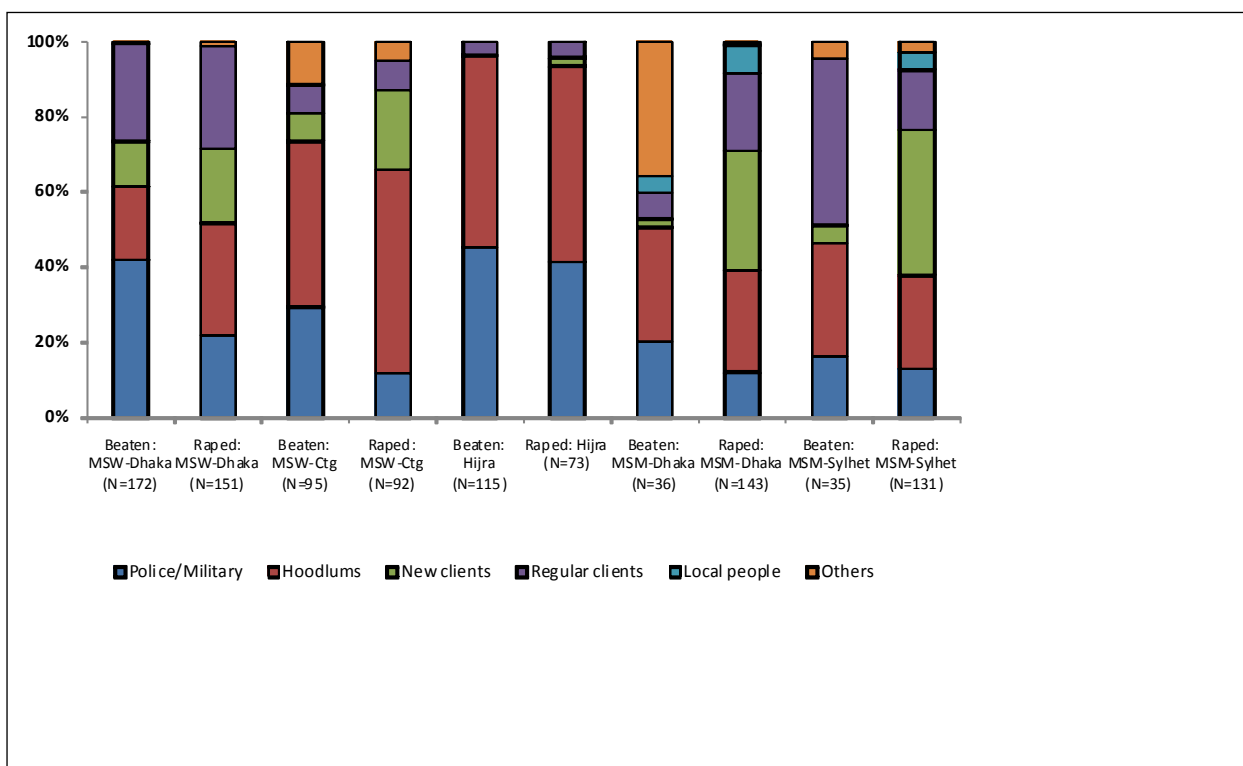
MSM, MSW and *hijra* also reported being beaten or raped in the last year (Figure 50). Although the proportions of MSM raped were somewhat lower than those among MSW and *hijra*, the phenomenon is not uncommon among them. These recent data are supported by past studies that highlight abuse and harassment of MSM and MSW (S. Ahmed, 2004; Bondyopadhyay & Khan, 2004).

**Figure 50: Proportion of MSM, MSW and Hijra beaten or raped in the last year (BSS 2006-07)**



It is worrying that clients (new or regular) are often the perpetrators of rape for MSW and MSM because there is no way for sex workers to avoid having clients, and interventions on client rape are difficult. For *hijra*, law enforcement and hoodlums were the main perpetrators (Figure 51); interventions targeted to these groups may be easier to implement.

**Figure 51: Perpetrators of violence against MSM, MSW and *Hijra* in the last year (BSS 2006-07)**



Violence against MSM is also committed by their sex partners (new and regular) in the form of beating and rape – 38% of MSM in Dhaka and 43% in Sylhet reported harassment committed by a new sex partner (Govt. of Bangladesh, 2009).

Local *mastans* (hoodlums) are the primary sources of harassment for MSM and *hijra* (Govt. of Bangladesh, 2009), with 33% of MSM respondents in Dhaka and 28% in Sylhet reporting being raped or beaten by local *mastans*. Hijra report that *mastans* and police/military perpetrate almost all beatings and rapes they suffer.

### **Impact of violence by law enforcement on interventions for MSM**

As highlighted above, MSM and *hijra* are often the victims of violence at the hands of law enforcement. While the power of law enforcement is great, it is to some extent checked in public spaces, but research suggests that it is abused in the closed environment of the police station. One *kothi* outreach staff working for an NGO stated:

"The police arrested me twice while I was doing outreach services for MSM in Ramna Park. I showed them my ID card, but they did not listen to me and I was beaten up brutally in police custody. At night, I was raped by two police officers."

Similar stories came from peer-educators, outreach staff and volunteers who were interviewed.

This type of harassment and abuse has important implications for the effectiveness of HIV interventions that remain narrowly focused on individual behaviors. The incidents of violence and harassment either MSM, *hijra* and project staff diminish their self-esteem and motivation towards practicing safer sex. Because of this, many MSM and *hijra* have lost interest in and ownership of the HIV interventions. Violence and harassment are both human rights violations and undermine HIV interventions.

### **Modernization in communications and networking**

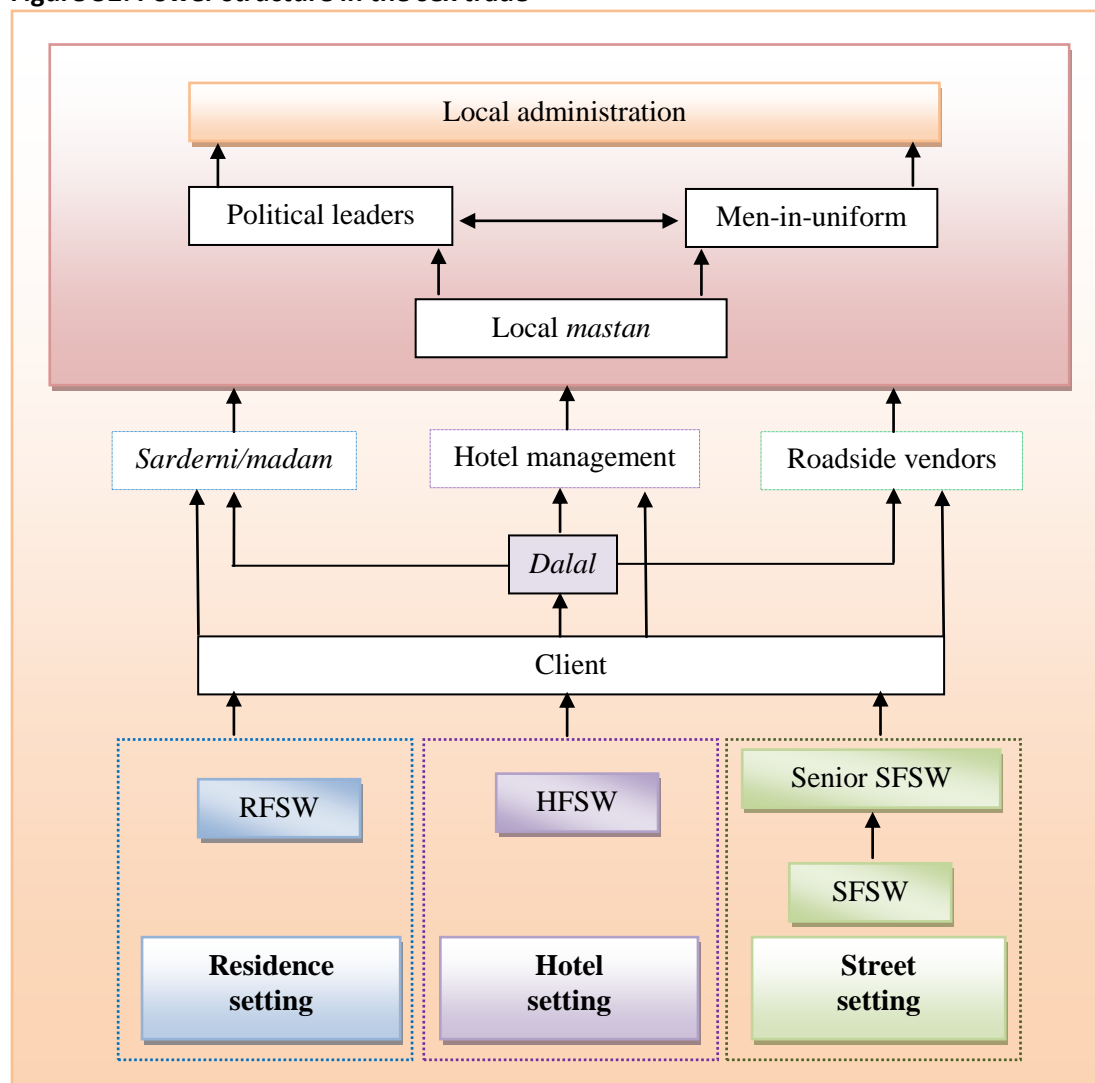
Access to information technology in Bangladesh has undergone a recent transformation. For example, the percentage of persons who subscribe to mobile phone service grew from less than 1% in 2000 to over 12% in 2006 (World Bank, 2008). Access to television has also grown; the number of women of reproductive age reporting that they watch television at least once per week increased from 17.8% in 1993/1994 (National Institute of Population Research and Training (NIPORT), Mitra and Associates, & ORC Macro, 2000) to 45.6% in 2004 (National Institute of Population Research and Training (NIPORT), Mitra and Associates, & ORC Macro, 2005). Levels of access are higher in urban areas and for men (National Institute of Population Research and Training (NIPORT) et al., 2005). The greater access to information that this technology affords is relevant to HIV interventions for MARPs and the general population. Greater access to television provides a channel for BCC. In fact, national surveys of youth have highlighted that television is their preferred means of communication for HIV messages (NASP, 2007b; NASP, Save the Children USA, & ICDDR, 2009e (forthcoming)).

Most sex workers in hotels and residences, and a few on the streets, use mobile phones to contact their clients and many clients use their mobile phones to contact a sex worker who is known to them (NASP et al., 2008a). The use of mobile phones has an enormous impact on the sex trade, particularly in establishing networks among sex workers, between sex workers and clients, and on the power structure of the sex trade. Most sex workers reported a positive impact of mobile phones on their lives as well as on their ability to contact clients. Mobile phone technology has made communication easier and increased the ability of sex workers to keep their venues hidden because it is easy to inform clients of their new location. No clients mentioned any negative aspects, however, NGO service providers clearly acknowledged the benefits of mobile phones to sex workers but noted that difficulties were posed for interventions. Because sex workers are more mobile and change residences often, they are more difficult for NGOs to reach. Unless the sex worker informs the staff of the new location, the NGO will not be able to locate her. However, mobile technology also offers a potential mechanism by which to reach sex workers.

### **Power structures in the sex trade**

Several layers of people are directly or indirectly involved and benefit from the sex trade in Bangladesh (Figure 52), and try to maximize profits (NASP et al., 2008a). Current interventions incorporate the people who influence the sex trade only in a cursory manner, usually through occasional meetings (NASP et al., 2008a). However, concerns have been raised about the impact of such efforts; hotel management is rarely actively engaged in interventions and may even subvert the efforts despite agreeing in principal to their content. This section brings together the information on the dynamics of the power structure in the sex trade.

Figure 52: Power structure in the sex trade



Note: RFSW=residence based sex worker, HFSW=hotel based sex worker, SFSW= street based sex worker

Across all settings of the sex trade, clients are the first layer of the power structure. They can contact sex workers either directly through the organizers of the sex trade or through *dalals* (pimps). The *dalals* are key persons who connect the sex workers with their clients and take a percentage of their income. The type and role of *dalal* are different in different settings and in different districts. In street settings, *dalal* wait on the streets with the sex workers and participate in the negotiations with clients, after which they find a secure place for the sex act. Such *dalals* directly receive money from the clients, and keep a significant portion of it, before giving the rest to the sex worker. Another category of *dalal* in the streets includes influential local people who control the public venues (e.g., streets, parks, stations). They get a share from the street based sex workers who work in their specific location. These *dalal* ensure security and safety of the clients and street based sex workers. Sometimes rickshaw pullers also play the role of a *dalal* by cruising with the sex workers in the rickshaws to help them find clients. *Dalal* are also common in hotel based sex trade. They ensure the supply of sex workers in most of the hotels and sex workers rely on them for ensuring sustained earnings. In a few hotels, *dalal* are very powerful and the hotel management is completely dependent on them for the supply of sex workers. Although maximizing profit is the main aim of



*dalal*, they also play a supportive role for the sex workers. In the residence based sex trade the *madam/sarderni/apa* (generally senior females who organize and operate the sex trade, many of whom are ex-sex workers and a few also sell sex currently) generally rents a house and often introduce *dalal* as her husband.

Other than *dalal*, there are many people that sex workers have to maintain a good relationship with in order to conduct their business. Street based sex workers have to deal with roadside professionals such as vendors and hawkers. If these relationships are not maintained, they can create barriers in various ways, thus sex workers often give money or sex as bribes. The most powerful group affecting the sex trade are local *mastans* who belong to gangs or to local political groups. They threaten the sex trade in all settings if they are not paid money. The *dalal, madam/sarderni/apa* and sex workers maintain good relations with the local *mastan* by paying them regularly. Generally, they are paid by the sex workers in the street setting, hotel management in hotel settings and *dalal* or *madam/sarderni* in residence settings. Often, in street settings, it is reported that *mastan* force sex on street based sex workers without payment and mostly without condoms.

The hotel management plays a significant role in the hotel based sex trade. Hotel owners who are involved in the sex trade are the most influential people in hotel settings. An exception was observed in a few hotels in Sylhet and Rajshahi division, where hotel owners were not aware of the sex trade going on in their hotels, and hotel managers had extreme power. Owners maintain liaison with law enforcement, political leaders and local administration in order to ensure smooth operation of the sex trade. Hotel managers play a crucial role as they are responsible for arranging and maintaining the overall sex trade in hotels. In the absence of the hotel owner, they maintain liaison with members of law enforcement agencies, political leaders and local administration to run the sex trade without any “hazards”. They also deal with local *mastan*. They exercise power over sex workers, clients, *dalal* and hotel boys.

Hotel boys play a vital role too, as they manage the flow of clients, clean the rooms, collect money from the clients, supply condoms, provide any other services required by the clients and to some extent by the sex workers.

Local leaders, members of law enforcement agencies, and local administration, because of their powerful status, are positioned in the highest level of hierarchy of the power structure across all settings. It was reported that local leaders benefited economically by the sex trade, as money was collected and sent to them directly or indirectly. They also deputed their *mastan* to control the sex trade. In some districts, their involvement was quite open as they themselves were owners of hotels where sex trade took place.

Because of the illegal status of sex trade, law enforcement agencies can easily interfere and play a critical role in making sex trade smooth or difficult. They are direct beneficiaries as they receive money through the trade.

### **Social Norms**

It is generally believed that social norms are a barrier to HIV prevention efforts in Bangladesh. However, the results of multiple studies conducted over the past three years show that opposition at the community level has not been a substantial obstacle for HIV prevention efforts focused on

youth which took place as part of the GoB project entitled 'Prevention of HIV/AIDS among Young People in Bangladesh', which is funded by the GFATM. This section highlights some of these findings.

### ***Lack of opposition to HIV in the curriculum for secondary schools***

An HIV/AIDS curriculum for class VI - XII was first implemented in Bangladesh in 2007. The introduction of the curriculum included a teacher training program that initially targeted teachers in 21 districts. A rapid assessment of the teacher-training program (NASP, Save the Children USA, & ICDDRDB, 200h (forthcoming)) assessed the community response given evidence that this is an important factors in the success of such programs (Gallant & Maticka-Tyndale, 2004; UNAIDS, 2006b). As part of the assessment, teachers who taught HIV classes in the school were asked about the response they received from the community, school managing committee and other teachers. Less than 1% of teachers reported opposition to teaching HIV/AIDS from different community groups. Holding the recommended meetings with community members about the HIV instruction was positively associated with support from parents and school managing committees.

### ***Changing reactions to life skills education for youth***

Under the GoB project, two organizations are carrying out life skills education (LSE) programs for young people. A qualitative assessment of the community response to the LSE programs was conducted by interviewing peer educators who conducted the LSE sessions and youth participants about their experience (NASP, Save the Children USA, & ICDDRDB, 2009f (forthcoming)). Both reported that initial problems faced were overcome once explanation was provided.

Among the six peer educators interviewed, two females faced some problems; the remaining four did not. They reported that when the community heard that they had held discussions about HIV/AIDS, they associated the LSE program with a condom distribution program that had been held in a brothel in the area which made them hesitant about the LSE program.

When participants mentioned resistance it was largely from family members, neighbors and/or local people but the participants noted that those who were resistant became supportive after some time. The following quote shows the experience of one 24 year old male participant:

“Community people first took it otherwise. They said, this is a Muslim country. It’s not good to say something in a direct way. They said, we did not even know about all these things. After they heard the details (of the program), they called it bhalo (good).”

### ***Community reactions to HIV prevention messages in religious sermons***

As part of an operations research study designed to better understand how to best prepare imams to participate in HIV prevention (NASP, Save the Children USA, & ICDDRDB, 2009j (forthcoming)), focus group discussions (FGDs) were held with imams after they had provided HIV prevention messages in their mosques. These results as well as a survey of the imam participants showed high levels of community acceptance for HIV prevention through the mosque, albeit with a few exceptions. The imams viewed community support as enabling their participation in HIV prevention while in the two cases where an imam faced community resistance, this negatively affected his participation.

Most of the imams said that HIV prevention was strongly supported by their communities. One imam noted that some community members came to him after the sermon and praised him. Other

direct evidence of support included a doctor adding supplementary information during one sermon and an imam who reported that people who attended other mosques began coming to his mosque to hear the *khutba* (sermon) on HIV. Community engagement through questions was another cited example of support as was the lack of response in some mosques. Although silence is not necessarily a strong indicator of support, imams suggested that it was by bringing in other evidence like: “While delivering my speech on HIV the ‘*Musullee*’ (mosque attendee) appeared to be more attentive and this was clear to me from their body language; in many other religious topics I’ve found many of them sleeping, but in HIV topic I didn’t observe this”.

While most imams reported support from the community, in a few cases, imams faced opposition that stopped them from delivering HIV messages. One imam reported that the Mosque committee did not permit him to discuss HIV in the mosque and were not aware about his training. Another imam reported that he was transferred because of his speech on HIV prevention in the mosque after the principal of the area cadet college reported that the imam’s discussion was making his students promiscuous.

### ***Imams’ response to training on HIV message delivery***

Because imams are key community leaders in Bangladesh, their reaction to and experience of attempts to include them in HIV prevention programs is an indicator of community reactions. Overall, the imams participating in the study felt that talking about HIV and AIDS and its consequences in mosques was a revolution for the Bangladeshi community. One imam said that it would have been impossible to discuss HIV and AIDS in the past, but now that people have accepted discussion on a sensitive topic like HIV in mosques, it will not be long before other HIV/AIDS related issues are accepted.

Observations of sermons in which HIV messages were provided found that sexual relationships and the spread of HIV were largely discussed by imams within the context of illegal sex or “*jena*” (sex outside marriage). The imams were more receptive to this line of reasoning because the Hadith and Quran provide evidence of strong disapproval of sex outside marriage.

While the imams agreed in principal with the prevention messages presented in the training they received, their implementation was often not consistent with the training. For example, the phrase “unsafe sex,” which was discussed in the training was rarely used. The common reason for this is represented in the following quote:

“‘unsafe sex’ is a provocation for sex outside marriage”. “I don’t agree with using the phrase ‘unsafe sex’. It doesn’t matter what is correct and what is not. I will never use this kind of phrase. This is against Islam”.

Discussion of prevention focused instead mainly on abstinence and faithfulness, especially with regard to youth. The observations and FGDs showed that imams had difficulty discussing condom use despite widespread support for condoms as a means of prevention. A major concern was that promotion of condoms would promote unacceptable sexual behaviors. Widest support was found for condom promotion within the context of a spousal relationship. Many imams recognized the need for condom use in particular situations, like when a husband is unfaithful or when HIV is transmitted to the husband through a blood transfusion although some imams did not feel that such messages could be discussed with a mixed age congregation.

***Community readiness for HIV prevention***

Finally, as part of the GoB project, community readiness for HIV prevention among youth has been assessed—first in three communities (National AIDS/STD Program, Save the Children USA, & ICDDR, 2007) and then in a nationwide sample of leaders in 100 communities throughout Bangladesh (NASP et al., 200a (forthcoming)). In addition, a demonstration project was conducted that showed the effectiveness of interventions to increase community readiness and support for HIV prevention (NASP, Save the Children USA, & ICDDR, 2009b (forthcoming)). The national assessment of community readiness showed good knowledge of vulnerability of their communities to HIV and of transmission and prevention of HIV, which represent early stages of readiness, but little planning or action by community groups. Only among teachers and imams had more than 5% of communities begun to plan for HIV prevention activities—a more advanced stage of readiness. Respondents in only a few communities reported any preparation or initiation of HIV prevention activities. Overall, this work supports the findings from the other studies that communities are not opposed to HIV prevention efforts for youth, but are not necessarily actively supporting these activities. The high levels of knowledge of HIV are likely a reason for greater community acceptance of HIV prevention activities, including those that address sexual topics, than seen in the past.

# **Chapter VI: The HIV Response and Services**



## Response and Services

Bangladesh has a long history of strong political commitment to combating HIV, and a response that has been guided by data on the epidemic. Efforts began even before the first case of HIV was detected. From the start, emphasis was given to surveillance to gather evidence on which to base program decisions, which have focused on preventing HIV in the groups most at risk. Over the last 20 years, the scope, size, reach and complexity of the HIV/AIDS program has grown greatly. Starting from just awareness raising, it now encompasses a fairly comprehensive set of policies, guidelines, and strategic frameworks and a comprehensive panel of services targeted to MARPs and serving the general population. Programs geared to MARPs in Bangladesh began in the 1990s, with considerable expansion of services over time. The focus has been mainly on expanding coverage, but as highlighted in the Commission on AIDS in Asia report (2008), this is only one part of providing services. This chapter briefly summarizes the organizational structure, scope and focus of Bangladesh's overall HIV response (more details are provided in Annex 2). The chapter then looks in more detail at services for MARPs, exploring the benefits of services reported by clients, and relationships between participation in programs and risk behaviors.

### National HIV Response in Bangladesh

#### Oversight and Coordination

The National AIDS Committee (NAC) was formed in 1985 with the President of Bangladesh as chief Patron, and the Minister of Health and Family Welfare as Chair. The NAC is an advisory body responsible for formulating major policies and strategies on HIV/AIDS in Bangladesh, supervising program implementation, and mobilizing resources. A Technical Committee (TC-NAC) of experts provides technical advice to the NAC and the NASP, and forms technical sub-committees as needed.

The National AIDS/STD Program (NASP) is the main government body responsible for overseeing prevention and control of HIV/AIDS, ensuring that the National HIV/AIDS Strategy and national policies are implemented. The NASP is within the Directorate of Health Services of the MOHFW. Other ministries carry out HIV prevention and control activities through their core administrative structures, and the 16 HIV/AIDS focal points were appointed in key ministries and departments to collaborate and rationalize roles and responsibilities.

The National STD/AIDS Network of 235 member NGOs in Bangladesh working on different aspects of HIV and AIDS was formed in 1993. The Network is mandated to speak for its members in national decision-making processes, represent Bangladesh and its members at regional and international fora and events, facilitate coordination among its members, disseminate news and information on policy issues and successful interventions, and provide training for members.

A Country Coordination Mechanism (CCM) was set up in 2002 in response to GFATM requirements, to decide matters related to projects supported by the GFATM. Current CCM members represent the government, NGOs, the private sector, civil society (including people with HIV and TB, and young people's organizations and movements), academicians and development partners. The Secretary of Health chairs the meetings.

### **National Plans and Policies**

A series of national plans guided the response in Bangladesh. The initial 1988 'Short Term Plan' for HIV prevention focused on determining HIV prevalence and developing prevention measures, particularly in the health sector. The 3-year 'Medium Term Plan' formulated in 1989 included development of surveillance and laboratory diagnostic capacity. Bangladesh was the first country in the region to adopt a comprehensive national policy on HIV-AIDS and STDs (in 1997), and then also developed the first National Strategic Plan for HIV/AIDS, 1997-2002. In line with global practice, the plan emphasized a multi-sectoral response, with enhanced involvement of ministries, NGOs, the private sector, and the community.

After extensive consultation with stakeholders, the 2<sup>nd</sup> National Strategic Plan for HIV-AIDS, 2004-2010 was adopted, with a strong focus on its first strategic objective: to provide support and services for priority groups (those with the highest HIV prevalence and risk). The four other objectives are: to prevent vulnerability to HIV infection; promote safe practices in the health care system; provide care and treatment services to people living with HIV (PLHIV); and minimize the impact of the epidemic. Subsequently, in order to address gaps and to elaborate further on the 2<sup>nd</sup> National Strategic Plan, with the assistance of UNAIDS, the NASP developed the 'National AIDS Monitoring and Evaluation Framework and Operational Plan' in 2007.

The NASP has also developed national guidelines, manuals and policies/strategies on specific intervention areas, including: The Safe Blood Transfusion Act (passed in 2002); The National Harm Reduction Strategy for Drug Use and HIV, 2004-2010; National HIV Advocacy and Communication Strategy 2005-10; National Anti Retroviral Therapy Guidelines, 2006; National STI Management Guidelines, 2006; National Policy and Strategy for Blood Safety, 2007; Guidelines for VCT; and various training modules for health professionals, educators, and the public at large.

### **HIV/AIDS Program areas and Activities**

Bangladesh has implemented activities to inform the general population and reduce transmission risk during health care, while putting most emphasis on prevention interventions targeted to MARPs, generally well in line with the trends and patterns in the epidemic in the country. Annex 2 provides more details on the major HIV/AIDS projects and programs; total HIV expenditures since 2000 are just more than US\$127 million.



***Surveillance, research, monitoring and evaluation***

Bangladesh began HIV (and syphilis) serological surveillance and (separate) behavioral surveys in 1988, and has expanded this surveillance and the sample sizes over the years (see Annex 1 for more details). Since 1998, eight rounds of sero surveillance and six rounds of behavioral surveys have been completed at sentinel sites across the country. All efforts are made to maintain strict anonymity and confidentiality. Blood samples and information are collected from populations of highest epidemiological interest – male and female sex workers, IDUs, MSM, *hijras*, and male groups likely to be clients of sex workers, such as rickshaw pullers, transport workers, dock workers, male STD patients, etc. To improve surveillance design, a pilot of “Respondent Driven Sampling” methodology was done in 2007.

Some additional data to inform program decisions have been collected in other ways: for example, a GIS mapping of 17 brothels and nearby police stations, NGOs and clinics; workshops to take stock of relevant areas of knowledge; and several surveys, research and evaluation studies (which this report has drawn on heavily and referenced throughout). However, the fragmented and relatively unclear picture of HIV program performance reflects the relative weakness of program monitoring and evaluation.

***Health system***

Activities to prevent transmission in health care settings have focused on: training health care providers on Universal Precautions to prevent HIV in health care settings, and more recently, on provision of HIV-related clinical services, including VCT, management of STIs, antiretroviral therapy (ARV) and treatment for opportunistic infections. Steps have also been taken to improve the safety of Bangladesh’s blood supply by upgrading 19 hospitals and blood banks, training staff, supplying screening kits, recruiting volunteer donors, and instituting quality assurance. Good progress has been made in decreasing professional blood donations (that are more likely to be infected) from 70% to 19% of the supply and increasing voluntary donations from 10% to 31%.

***General population***

Other early activities (in 1996-1997) included radio programs on HIV awareness and prevention, workshops on HIV awareness as well as communications and advocacy with opinion leaders. Imams have been provided with information and asked to talk about AIDS (Community reactions to HIV prevention messages in religious sermons, p95). NGOs working with micro-credit programs are now disseminating information on HIV through their regular group discussions with credit beneficiaries, another channel for reaching the general population. Young people age 10-24 comprise nearly one third of the population of Bangladesh, and have been the main focus of interventions for the general population. Activities include: HIV prevention information through radio and television shows that have attracted very large audiences, open air concerts and print media (billboards, buses, advertisements, posters, leaflets, stickers, calendars, T-shirts and caps); life skills education through youth organizations and clubs; integration of HIV prevention information into the secondary school curriculum; youth friendly services for sexually transmitted infections and counseling; and outreach activities and peer education to promote safer sexual behavior and encourage more counseling and treatment seeking behavior.

***Care and support for People with HIV***

The first VCT center in Bangladesh was set up in 2002, with numbers increasing to about 90 by 2008. The quality and range of services vary – only a few centers have professionally trained counselors, physicians to offer medical examinations when other STIs are suspected, and gold-standard HIV test and laboratory procedures, quality assurance and validation of HIV test results. Outside of Dhaka, test results can take up to a week in some centers. Post counseling for people who test positive includes referral to PLHIV support groups.

In recent years, PLHIV peer support groups have expanded to well over 500 members. They provide counseling, home visits, referrals and some health care free treatment for opportunistic infections, advice and information on positive living, and communications to the broader public to try and reduce stigma and discrimination.

Many NGOs provide clinical STI services as part of the basic healthcare they offer through fixed clinics or mobile units. The MOHFW trains primary health care workers at District and Thana levels on STI case management, but irregular drug supplies are an issue at all levels of health care services. Moreover, there are numerous reports of denial of treatment to high risk individuals by the health sector (United Nations, 2008; UNGASS, 2008; Bondurant et al., 2007). Only a few facilities in Bangladesh (mostly in Dhaka) are able to treat HIV-related infections, or provide ART. In mid-2009, there were around 200 people on ART, estimated at only 3 percent of those who need treatment (the 1,495 confirmed HIV cases as of the end of 2008 were only 12.5% of the estimated 12,000 people with HIV in Bangladesh.)

Condom promotion and distribution is done by NGOs, some government facilities, and through creative social marketing to the general population, truckers, sex workers, male factory and port workers, youth groups, security personnel, and pharmacists. Condoms are advertised on billboards, posters, cinemas, point-of-purchase displays and sold at 300,000 sales outlets across the country and through 'peer agents'.

***Targeted interventions for most at risk populations***

The first targeted interventions were started in 1995 by NGOs; later, strong partnerships among Government, NGOs, and civil society and donors evolved. The main groups targeted are female sex workers, IDUs, males having sex with males, *hijras* and armed forces serving in other countries, to some extent also male clients of sex workers and transport workers (Habib 2006). Depending on the target group, intervention packages include condom promotion and distribution, STI management, NSP, drug dependence treatment, health education, counseling and testing, peer education, support for self help groups, community awareness and local level advocacy. Efforts are made to influence and orient local officials and others influential people who can facilitate or inhibit access to the target populations, and at higher levels to work with different government departments towards favorable policy changes. Programs work with the police, prisons, Department of Narcotics Control, and local communities.

There are several self-help organizations of sex workers (in different parts of Bangladesh) as well as a network of sex worker organizations. Some self help organizations offer a range of services and support to several hundred members, including adult literacy classes, selling condoms, and advice on STIs, legal issues. Current and recovering IDUs have formed self help organizations (with well over

400 members) to support each other, provide health education, participate in research and surveillance, advise on improvements to IDU outreach and services, and advocate locally and nationally for their interests. The group of ex-drug users also provides home visits and follow-up, counseling and manage detoxification camps.

Services to IDUs are provided through numerous specially set-up Drop-in-Centers (DIC), outreach by NGOs and IDU peers, in places where IDUs gather to inject drugs (*addas*), and at four prototype integrated health “*Modhu-Mita* centers” that have become well known for the range of services they provide to IDU (and sex workers). DICs offer clean and safe places for IDUs to rest, sleep, bathe, needle/syringe exchange, condom distribution, and some clinical services (treatment of abscesses, STIs and other illnesses), health education, and counseling. Efforts to create demand for the services offered at the DICs and draw in clients have not always been fully successful, with the additional challenge of ensuring that DICs can offer a safe haven for using health services rather than being stalking grounds for arrests or raids (Habib 2003a). The DICs try to ensure constructive relationships with community and local leaders, and some advocacy efforts have been directed towards law enforcement authorities, Ward Commissioners, the Department of Narcotic Control, and religious and community leaders. However, drug users remain highly marginalized and coverage of programs remains limited.

Interventions targeting female sex workers are discussed in detail later in the chapter. Some (limited) efforts target clients of sex workers, especially people whose work takes them away from home frequently or for long periods. An earlier project (2000-2005) offered STI/HIV prevention services in major transport depots and border areas to sex workers and transport workers. The HNPSF funds NGOs to work with clients of sex workers and internal migrants, including transport workers at border areas.

An intensive HIV prevention program run by the Medical Services of the Bangladesh Armed Forces since 1989 has kept HIV rate very low among personnel deployed overseas. An integral part of the pre-departure and post-arrival preparation and education, the multi-faceted program uses religious motivation, peer pressure, the hierarchical structure of the army and regular HIV tests. It has been recognized as a best practice by UNAIDS.

### **Summary of key findings**

- Bangladesh responded early to HIV. State-of-the-art surveillance and use of the epidemic data to guide program decisions are strong points.
- Consistent with the pattern of the epidemic in Bangladesh, much of the response focus has been on preventing HIV in groups whose drug injecting and/or unprotected sex with multiple partners put them at most risk for HIV and other STIs.
- A fairly comprehensive set of policies, guidelines and strategic frameworks and a comprehensive panel of services targeted to MARPs and serving the general population are in place. Some interventions are recognized internationally as best practice.
- However, there is scope to increase coverage and effectiveness – as indicated in the sections that follow that provide more details on services provided for groups at highest risk of HIV from the beneficiaries’ viewpoint, including their risk behaviors.

## Interventions for Drug Users

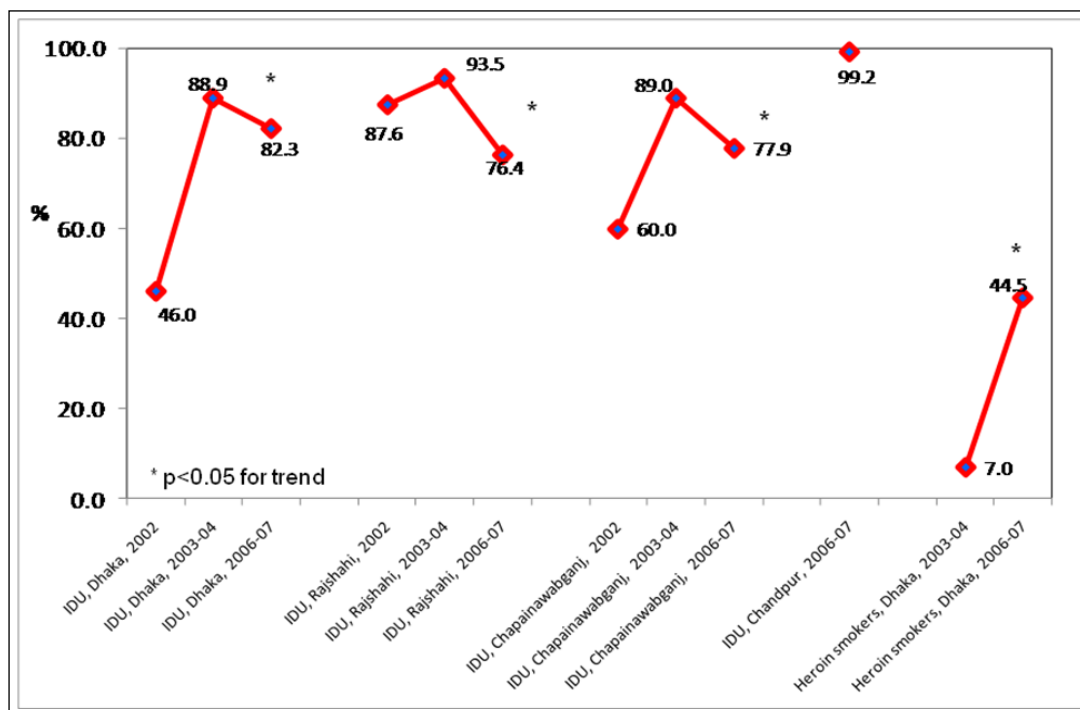
Harm reduction services for IDUs were initiated in Dhaka, Bangladesh in 1998, and later expanded to other cities. At present, 20,000 IDUs are covered through the Government's HIV/AIDS Targeted Intervention (HATI) program and GFATM round 6 HIV Prevention project (Annex 2). The package of services includes: needle/syringe programs (NSP), condom promotion and distribution, BCC, STI treatment, abscess management, advocacy, referrals to detoxification and rehabilitation programs, and in some instances short term community based detoxification camps.

The NSP in Dhaka was initiated early, before the HIV epidemic started and has been cited as best practice by UNAIDS (UNAIDS & Best Practice Collection, 2006). In addition, analysis that modeled the impact of the program in Dhaka showed that it was very effective in delaying the epidemic in the 1990s (Foss et al., 2007). However, now that there is a concentrated epidemic in Dhaka it is time to reassess these programs.

The BSS data from 2006-07 show that coverage of IDUs declined in all cities compared to previous years (Figure 53). At that time, one large NGO consortium was providing harm reduction services to IDUs in the BSS sites which were supported by the Government's HIV AIDS Prevention Project (HAPP, which later became HATI) (Annex 2). There were major funding constraints at the time, and a funding gap during a period of transition that resulted in an acute shortage of needles/syringes (anecdotal findings through field notes). Moreover, especially in cities of the northwest (Rajshahi and Chapainawabganj), eviction drives were being conducted frequently during that period, aimed at destroying the traditional "*addas*" where IDUs gathered for their injections and where NSP was conducted. With the destruction of these *addas*, IDUs were scattered and difficult to locate.

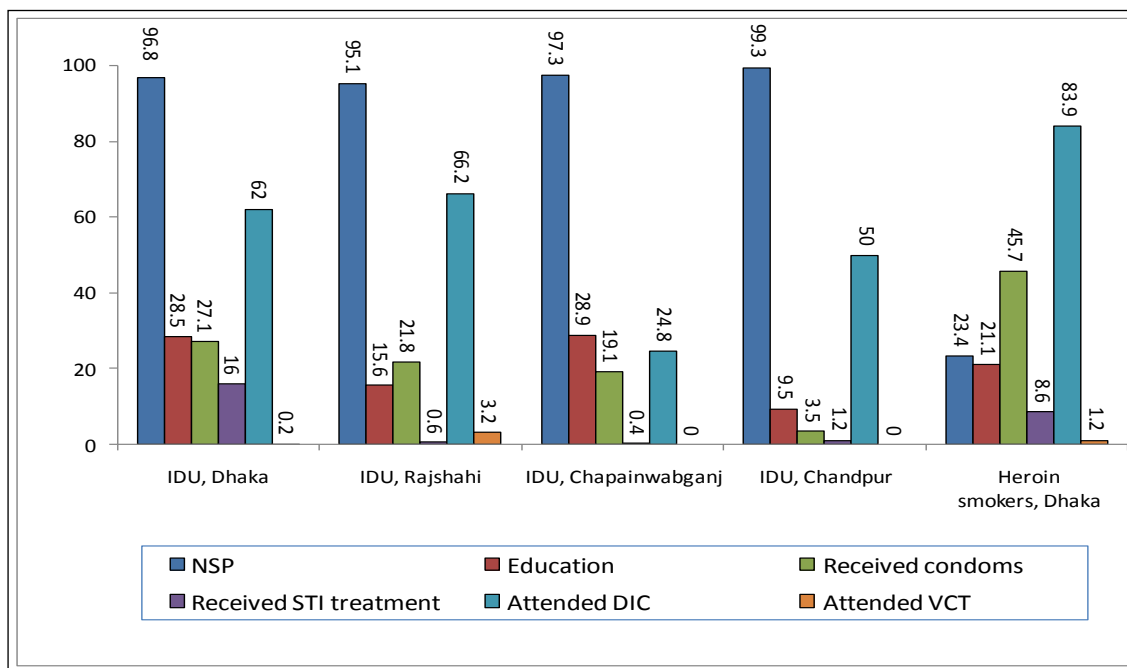
In Chandpur, where the program was new, it reached almost all IDUs. In Dhaka, although the harm reduction services are geared towards IDUs, many heroin smokers (as defined in the BSS) accessed HIV prevention services and this is the only drug user population where coverage increased between 2003/04 and 2006/07. This is likely an outcome of networking among drug users as many heroin smokers inject intermittently (see section on "Definitions of drug users") so that services available to IDUs are also utilized by heroin smokers.

**Figure 53: Proportions of IDUs and heroin smokers covered by HIV prevention services in the last year, by site (BSS)**



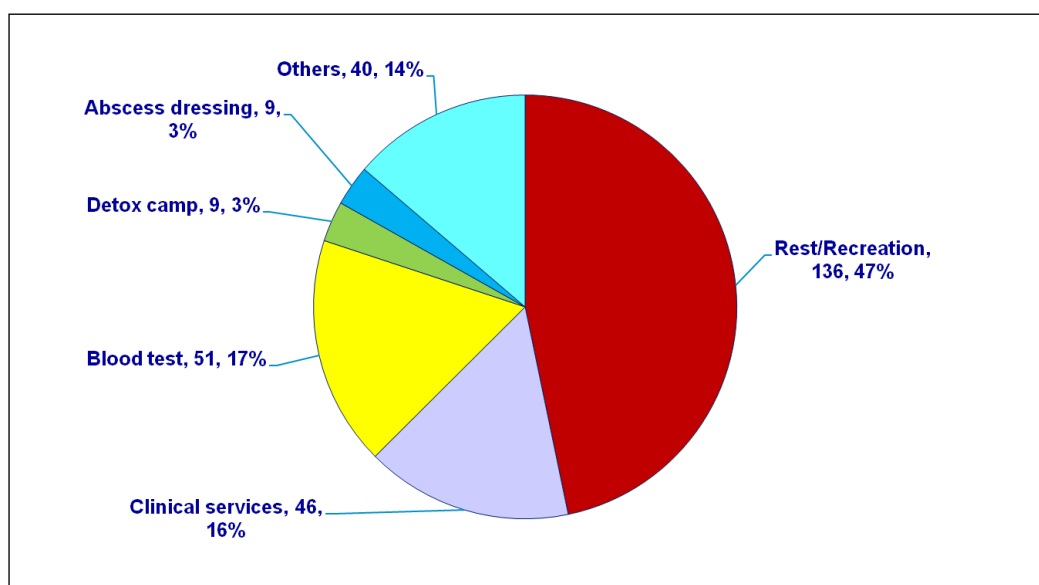
Almost all IDUs (and one quarter of heroin smokers) from the four cities who said they had accessed HIV prevention services in the last year used NSP services (Figure 54). Condom provision was low in all cities for IDUs, but nearly half the heroin smokers in Dhaka said they had received condoms, which is encouraging as they are more sexually active than IDUs. Other than in Chapainawabganj, 50% or more attended DICs, where other services such as rest and recreation, STI treatment and abscess management are provided. A possible reason why the DIC of Chapainawabganj was not used by most IDUs could be that at the time the BSS was conducted, major funding constraints mentioned earlier affected services that were usually provided by the DIC in Chapainawabganj. A worrying finding is that although many drug users attended DICs, very few said that they received treatment for STIs although substantial proportions of IDUs reported STI symptoms in the last year (see section on “Sexual risk”, Figure 10). Uptake of VCT services was very low.

**Figure 54: Services accessed from NGOs in the last year by IDUs who had been exposed to interventions (BSS 2006-07)**



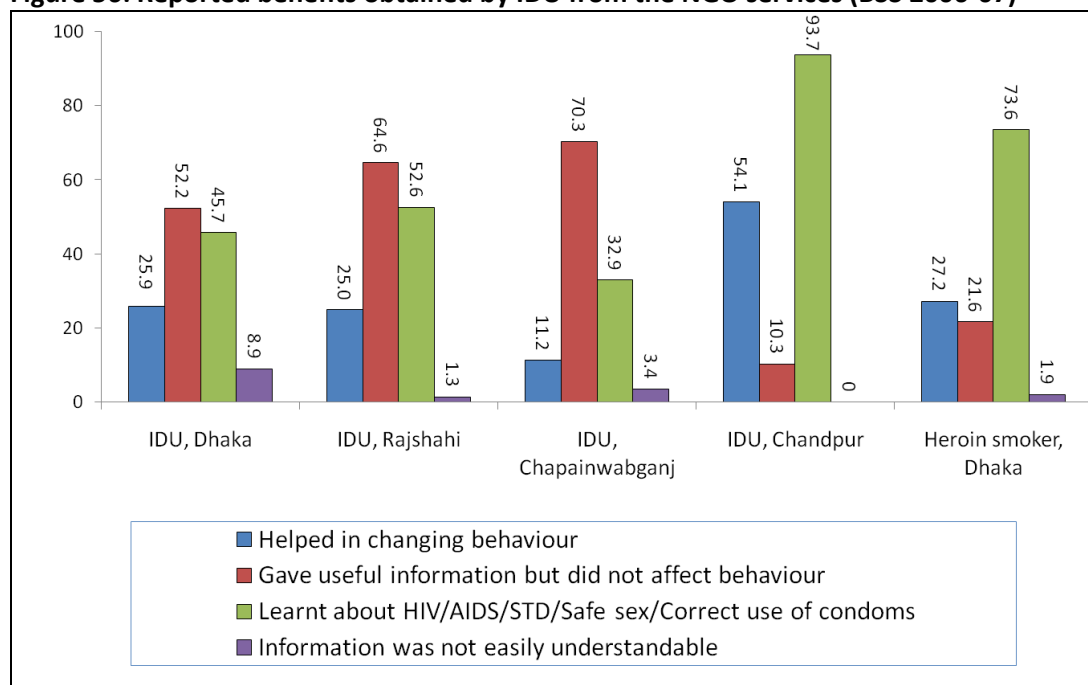
These data suggest that for IDUs the main stress is on injection risks; sexual risk behaviors are not given much priority and although many attend DICs, few use the clinical services. Analysis of data from the Dhaka male IDU cohort study (see Box 1) on reasons for using the DIC during the last visit confirmed that the vast majority used the rest and recreation facilities which include bathing, resting, praying, getting a shave, etc. Only 16% said they used clinical services (mainly from the physician who not only provided STI treatment but also overall primary health care, Figure 55). Testing blood for infections was categorized separately as this was not part of routine clinical services but a component of the cohort study. It is not clear why most IDUs did not use the clinical services.

**Figure 55: Reasons for attending the DIC during the last visit in the last six months (Dhaka male IDU cohort study, June-October 2007)**



Self-reported behavior change as a result of NGO-run HIV prevention programs varied by location (Figure 56). Among IDUs in Chapainawabganj, very few said that those programs helped them change their behavior, and in Dhaka and Rajshahi only one quarter said this was the case. In Chandpur, however, more than half claimed that the program had helped them change their behavior although the data on needle/syringe sharing show no change in sharing compared to before NSP (see section on “Injection risk”, Figure 8).

**Figure 56: Reported benefits obtained by IDU from the NGO services (BSS 2006-07)**



This lack of effect is also apparent from secondary analysis of the BSS data. As shown in Table 1 and Table 13 (see the sections on “Injection risk” and “Determinants of unsafe sex among drug users”) participation in an NSP was not associated with not lending or borrowing needles and syringes during the last injection in the last two months or using condoms in the last sex with a female sex worker. While earlier analysis showed that IDUs in HIV intervention programs did indeed practice safer behaviors (C. Jenkins, Rahman, Saidel, Jana, & Hussain, 2001; MAP Report, 2004), the present data do not corroborate this (Table 1). Several reasons were cited by IDUs in the cohort studies for sharing needles/syringes despite accessing NSP (Table 20) of which the three main reasons were:

- inadequacy of the NSP – mainly that IDUs could not collect needles/syringes from outreach workers for different reasons
- peer pressure – often other IDUs pressure them to lend needles/syringes or drug ampoules
- withdrawal from drugs – when IDUs suffer from withdrawal symptoms, they will do anything to get their next drug dose and this may involve sharing of injection equipment.

**Table 20: Proportions of IDUs reporting specific reasons for borrowing/lending used needles syringes, among IDU who shared injections in the last 6 months (IDU cohort studies – Dhaka male and female)**

Proportions of IDUs	Male IDU (June – October 2007), N=117	Female drug users (January – May 2007), N=25
Outreach worker did not supply needles/syringes at all the times of the day	6.8	4.0
Could not collect needles/syringes from outreach worker for different reasons	43.6	28.0
Peer pressure	34.2	28.0
During withdrawal	5.1	12.0
Did not have money to buy new needles/syringes	3.4	0
When injecting in a group it takes more time to use separate needles/syringes	3.4	0
Police harassment	0.9	0
Cannot inject myself	0	8.0
Takes more time if separate needles/syringes are used when injecting in a group	0	8.0
Sharing with husband is safe	0	12.0
Others	2.6	0

It is also apparent that female drug users often shared because they were unable to inject themselves and also because they had “faith” in their drug using partners’ HIV free status (Table 20). This is discussed further under gender issues in structural factors (see section on “Effect of gender norms on the vulnerability of female IDUs”).

From the point of view of service providers, difficulties were often faced in ensuring adequate supply and distribution of clean needles/syringes as exemplified by the quote below from a service provider during the GFATM round 6 RSRA (NASP et al., 2009g (Forthcoming)):

“...the number of IDUs gradually increased since the time we started working in the field. We developed a new list and we conducted one to one interviews, and we found even more IDUs... But the main concern was that although the number of IDUs increased about 4 fold over time, the number of DICs went down from three to two..... number of outreach workers available to cover the whole city was inadequate. Moreover we simply do not get the required number of baby needles. Some injectors need 5-7 needles daily because they inject 5-7 times daily...”

Thus, it is clear that much needs to be done to improve existing services. The basic issue of adequate supply of needles/syringes has to be addressed. At present the format for service provision is more or less similar for IDUs in the different cities. But, as discussed under the section on “Geographic variation in profiles of IDUs”, drug taking behaviors vary from city to city and even within a city. Using that understanding is key in providing effective services to IDUs, and Bangladesh has some experience in doing that, such as in Rajshahi and Chapainawabganj, where services were provided at *addas* (see section on “Geographic variation in profiles of IDUs”). As more expansion of services is planned for IDUs, using local knowledge and information available through surveys and research studies (beyond just IDU numbers) is essential.



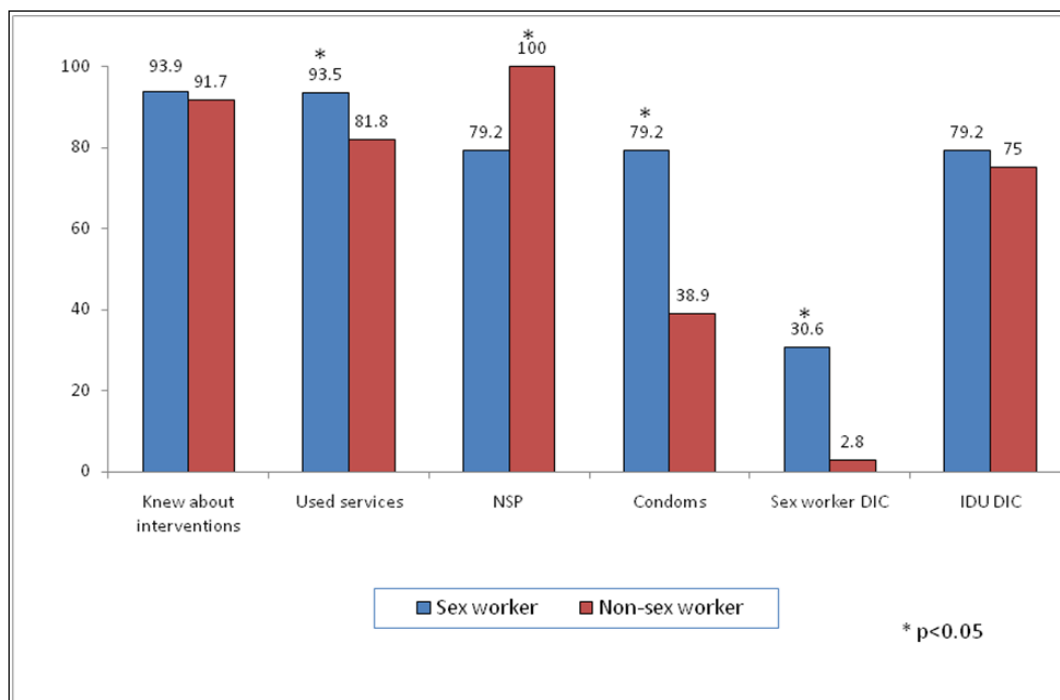
### Special needs of female drug users

Observed differences between female drug users and their male counterparts have been noted in the section on “Female drug users”. Female drug users often rely on their male partners to buy their drugs and they then share their drugs with them. However, women do not consider sharing needles/syringes with their close partners as ‘sharing’ and do not report it as such. Therefore, their risk is often underestimated not only by themselves but also by service providers.

Among female drug users there are differences between those who sell sex and those who do not sell sex (Azim et al., 2006) including in the services they access (Figure 57). Compared to non-sex workers, female drug users who also sold sex were

- more likely to use any HIV prevention services
- less likely to use NSP services
- more likely to receive condoms
- more likely to visit NGO-run DICs for sex workers
- equally likely to visit NGO-run DICs for IDUs

**Figure 57: HIV prevention services used by sex worker and non-sex worker female drug users (female IDU cohort study)**



Although similar proportions of sex worker and non-sex worker drug users attended DICs for IDUs, NSP access by sex workers was less. Needle/syringe exchange is conducted by outreach workers and not at DICs. It is likely that outreach workers providing NSP do not recognize sex workers as falling under their programs, assuming that they are reached by interventions for sex workers.

Interventions for drug users and sex workers differ – the latter do not provide NSP while the former focus on the provision of clean needles/syringes and BCC for safe injection practices and do not stress condom use and condom distribution (see section on “Determinants of unsafe sex among

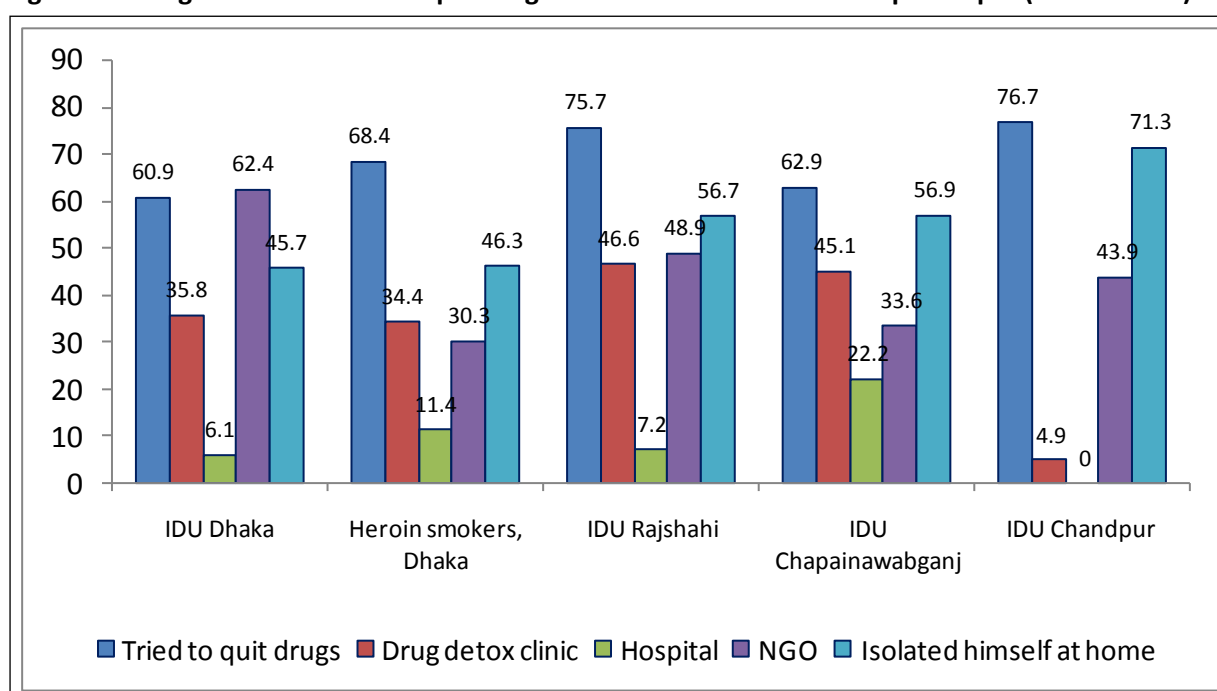
drug users) and there is no coordination between the two streams of intervention. This may mean that the special needs of sex workers who use drugs and of drug users who sell sex are often not met.

At present alongside existing traditional DICs for IDUs, a few DICs dedicated to female drug users (both smokers and injectors) have been opened with technical assistance from UNODC and special efforts are being made to refer them to detoxification and rehabilitation programs. It remains to be seen how effective these services will prove in reducing the vulnerability of female drug users.

### Detoxification services

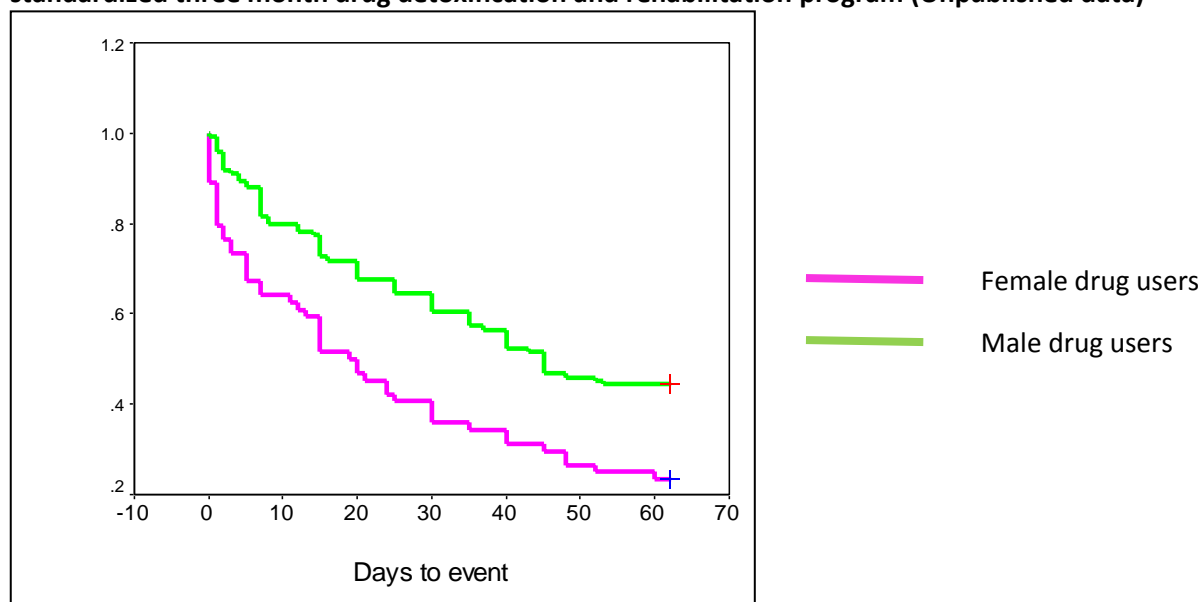
A high proportion of drug users said that they had ever tried to quit drugs (Figure 58). The methods employed varied but the majority had tried quitting on their own, by isolating themselves at home. Most detoxification services are concentrated in Dhaka and the majority are non-governmental clinics (private and NGOs) with little or no standardization of procedures.

**Figure 58: Drug users who tried to quit drugs and methods used in attempts to quit (BSS 2006-07)**



A preliminary analysis of relapse rates following completion of a three month detoxification and rehabilitation program conducted by three NGOs in Dhaka showed that relapse rates were already high at two months after treatment and significantly more females (76%) than males (56%) relapsed (Figure 59). The reason for this gender difference is not clear but it appears that female drug users who sold sex were more vulnerable. In the cohort study, these women noted that lack of child care was a barrier to their use of detoxification services. Factors associated with relapse among males - having no child care obligations and living on the streets - reflect the importance of family support and responsibilities, both of which may be protective.

**Figure 59: Relapse rates of male and female drug users attending drug three clinics providing a standardized three month drug detoxification and rehabilitation program (Unpublished data)**



Global evidence suggests that drug treatment programs are less likely to be successful if not accompanied by other programs such as OST and rehabilitation into jobs (Zhang, Gerstein, & Friedmann, 2008).

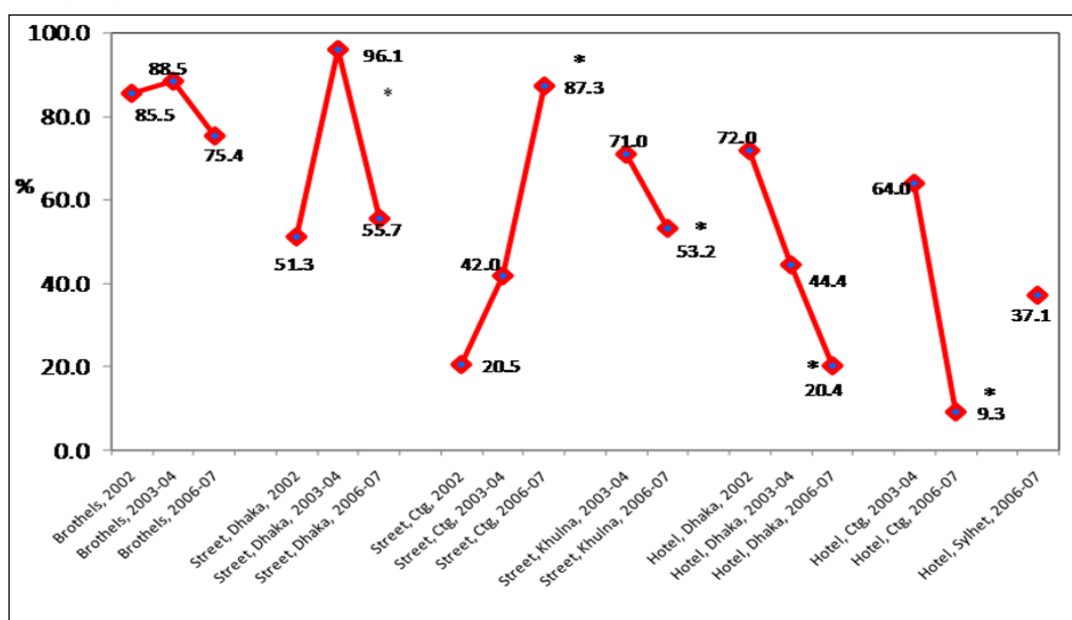
### Summary of key findings

- NSP coverage declined in most sites for IDUs. In Chandpur NSP was newly established and reached almost all IDUs. Heroin smokers in Dhaka used NSP and their use increased over the years.
- The sexual health of IDUs appears to receive less attention indicated by low condom distribution and STI treatment among IDUs.
- The main reason for visiting DICs was rest and recreation.
- DIC use was low in Chapainawabganj. Very few IDUs there said that the HIV awareness education provided by the harm reduction services helped to change their behaviors.
- Uptake of VCT services is almost non-existent for all IDU sites.
- Two major reasons for sharing needles/syringes despite using the NSP were not being able to collect enough needles/syringes, and peer pressure.
- From the service providers' perspective, inadequate availability of needles/syringes, wrong size of needles and lack of flexibility in the service package reduce service effectiveness.
- Female drug users have special needs, particularly because many are sex workers.
- High relapse rates were observed after completion of detoxification treatment, especially for females. Relapse was associated with homelessness and living alone.

## Interventions for Female Sex Workers

At present HIV prevention services for female sex workers are provided by NGOs through the HATI project of the GoB (previously HAPP; see Annex 2), through USAID/ Family Health International (FHI) funded projects known as Bangladesh AIDS Prevention (BAP) projects, and through the GFATM Round 6 grant. During the 2006-07 BSS, HIV prevention services were being provided through support from HAPP and BAP. HIV prevention coverage of female sex workers declined compared to previous BSS rounds except for those in the streets of Chittagong (Figure 60).

**Figure 60: Proportion of female sex workers covered by HIV prevention services in the last year, by site (BSS)**



Note: Ctg refers to Chittagong, \* =  $p < 0.05$

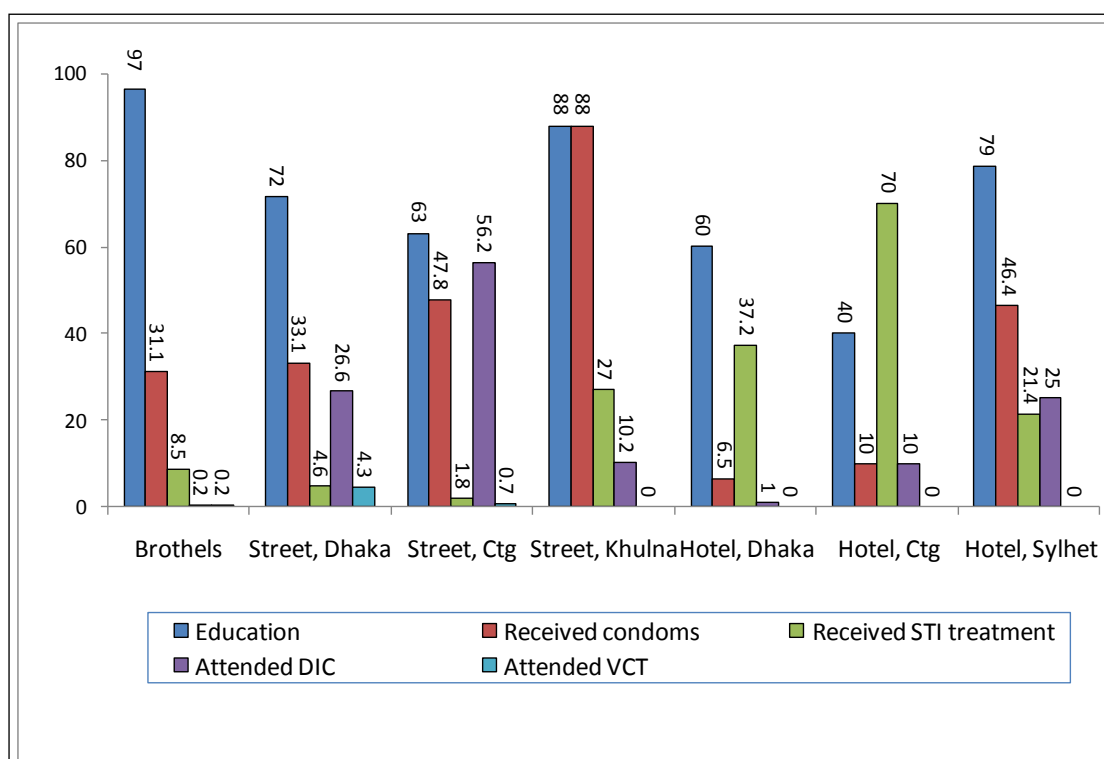
A closer analysis of the data on interventions being accessed by female sex workers shows that the majority of sex workers received HIV/AIDS education (Figure 61). The proportion that said that condoms were provided varied, with only one third saying this in brothels and the streets of Dhaka. In the hotels of Dhaka and Chittagong, 10% or less said they received condoms. These rates are shockingly low especially as the mainstay of the intervention programs is condom promotion and distribution. In a recent assessment of service delivery for HIV prevention in sex workers conducted as part of a survey for GFATM round 6 (NASP et al., 2008a) both sex workers and providers reported that the supply of condoms was inadequate. An assessment of condom procurement (see section on "Availability of condoms") and distribution conducted under GFATM Round 6 supported these reports. It showed both that the total number of condoms procured nationally and the number made available to district level NGO offices was not adequate to meet estimated need; and that the number of condoms distributed to sex workers was lower for all NGOs than the number needed (unpublished data).

Other than sex workers in hotels of Dhaka and Chittagong, the proportions that received treatment for STIs were very low. Interventions among street sex workers appear to be largely geared towards providing HIV awareness with actual services reaching only a small percentage of sex workers. Use of

VCT was also very low; only 4.3% of street based sex workers in Dhaka reported attending VCT and none of the sex workers had used these services in most other groups. VCT services have been made available to female sex workers through special centers established by FHI and through referrals by the HAPP/HATI-funded NGOs to the ICDDR,B VCT units in Dhaka, Chittagong and Sylhet. Obviously, these are not adequate and an assessment is required as to whether it is simply a question of numbers and location or whether the services do not meet the needs of sex workers.

It is also apparent from the BSS data (Figure 61) that most sex workers did not use DICs. One possibility is that sex workers may not apply the same terminology to themselves that programs use (see section on “Definitions of female sex workers”). This may play out in failure to reach sex workers if services at a DIC are limited to a specific group of sex workers, if intervention messages and design of DICs are inappropriate and if intervention approaches do not meet the needs of sex workers, regardless of categorization. Interventions for sex workers cannot be generic and expect to match the needs of all sex workers, or even within categories, in all settings. Socio-economic and other differences exist among sex workers, and the pattern of the sex trade also varies from district to district. Moreover, the mobility of sex workers within and outside cities and venues (see section on “HIV in female sex workers”) makes the situation more complex.

**Figure 61: Services accessed from NGOs in the last year by female sex workers who had been exposed to interventions (BSS 2006-07)**



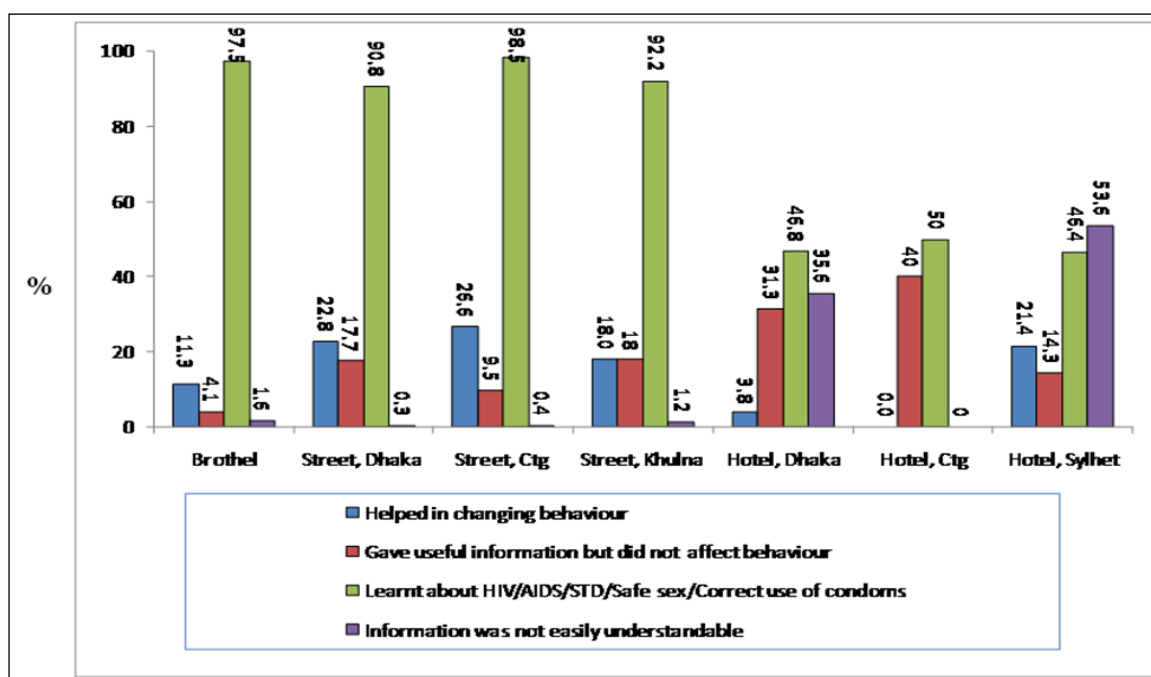
Note: Ctg refers to Chittagong

A recent study (NASP et al., 2008a) has shown that HIV interventions for female sex workers under round 6 GFATM operate through three types of DICs: integrated for hotel and residence based sex workers, exclusively for street based sex workers, and integrated for all types of sex workers. Many of the peer educators working at DICs for residence and hotel based sex workers were selected from street settings and are more comfortable reaching street based sex workers and appear to be more

likely to provide services to them than to their target groups. The targets numbers of sex workers to reach set by the providers do not distinguish among the different categories of sex workers. This integration has to some extent been in response to suggestions that categorization of sex workers, particularly by contact and action venue, is not helpful as there is considerable mobility across venue types. It would be useful to look carefully at which DICs are most effective in providing services to sex workers.

In response to the question asked in the BSS about how sex workers who had used services in the last year had benefitted from them, the vast majority of sex workers from the streets said they learnt about HIV and how to protect themselves (Figure 62). However, substantial proportions of sex workers from hotels of Dhaka and Sylhet said that they could not understand the information they were provided. The highest proportion that said the information helped to change their behavior was in the streets of Chittagong (26.6%); in other sites reported impact on behavior was dismally low with no sex workers from hotels of Chittagong reporting that the information affected their behavior.

**Figure 62: Reported benefits obtained from the NGO services by female sex workers (BSS 2006-07)**



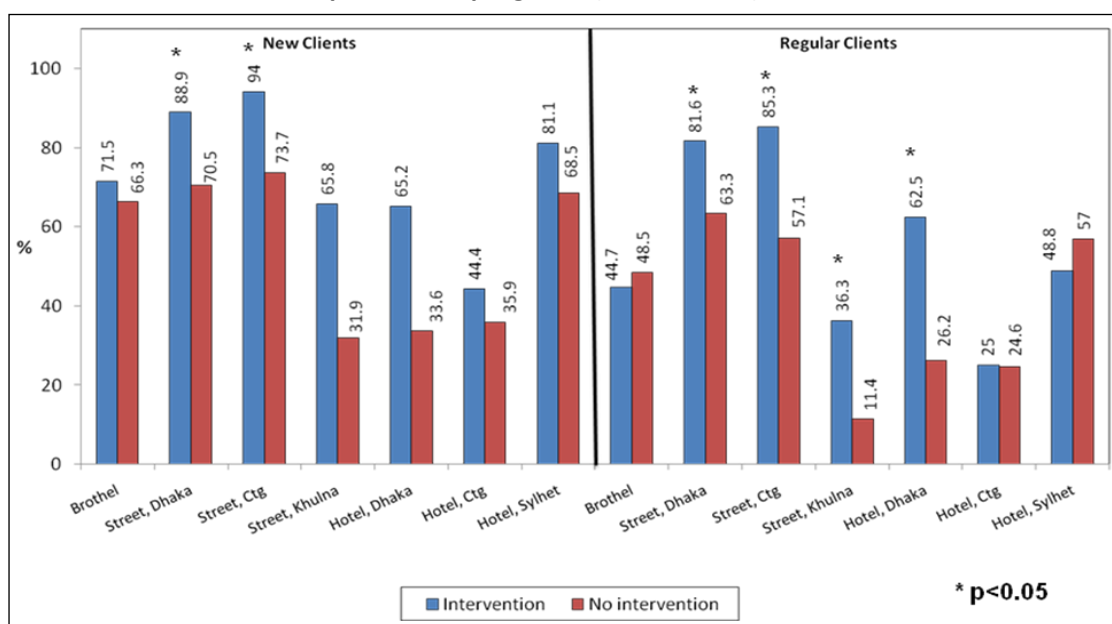
Note: Ctg refers to Chittagong

In a qualitative study with female sex workers from various settings in Dhaka and Chittagong, and from the brothels of Tangail and Faridpur, many sex workers reported participating in HIV surveillance and many knew that sex workers as a whole had a low prevalence of HIV (Streatfield et al., 2008). Because of this low prevalence, some sex workers, and other stakeholders such as *sarderni*, hotel management staff and peer-educators felt that HIV is not a problem for female sex workers in Bangladesh. Those who had unprotected sex and remained uninfected for several years felt that this showed that condoms are not needed for protection. Clients also valued the blood tests, assuming that if nothing is found in the blood report of a sex worker, she is safe. Thus, knowledge of a negative syphilis test result and that HIV prevalence is low overall contribute to perceptions of low personal risk and high rates of unprotected sex. Therefore, the dissemination of

information about Bangladesh as a low HIV prevalence country with almost no cases among sex workers needs to be provided contextually, along with risk behavior data and information on different STIs so that sex workers internalize their own risks.

Bivariate analyses of BSS data on the effect of HIV prevention programs on condom use during last sex showed significant differences with higher proportions of sex workers in interventions reporting condom use compared to those not in interventions in several venues (Figure 63). However, with further multivariate analyses, the associations persisted only in two sites – hotels of Dhaka and streets of Chittagong (see Table 14 in B). Street based sex workers in Chittagong who did not use NGO services were three times as likely to say that they did not use a condom at last sex with a regular client in the last week. In Dhaka, hotel based sex workers who had not accessed NGO services in the last year were more than three times as likely to say that they had not used a condom. NGO programs in Dhaka hotels covered only 20% of the female sex workers; nonetheless, the small program appeared to be effective.

**Figure 63: Condom use in last sex with new and regular clients by female sex workers: comparison of those in and out of HIV prevention programs (BSS 2006-07)**



Note: Ctg refers to Chittagong

### Summary of key findings

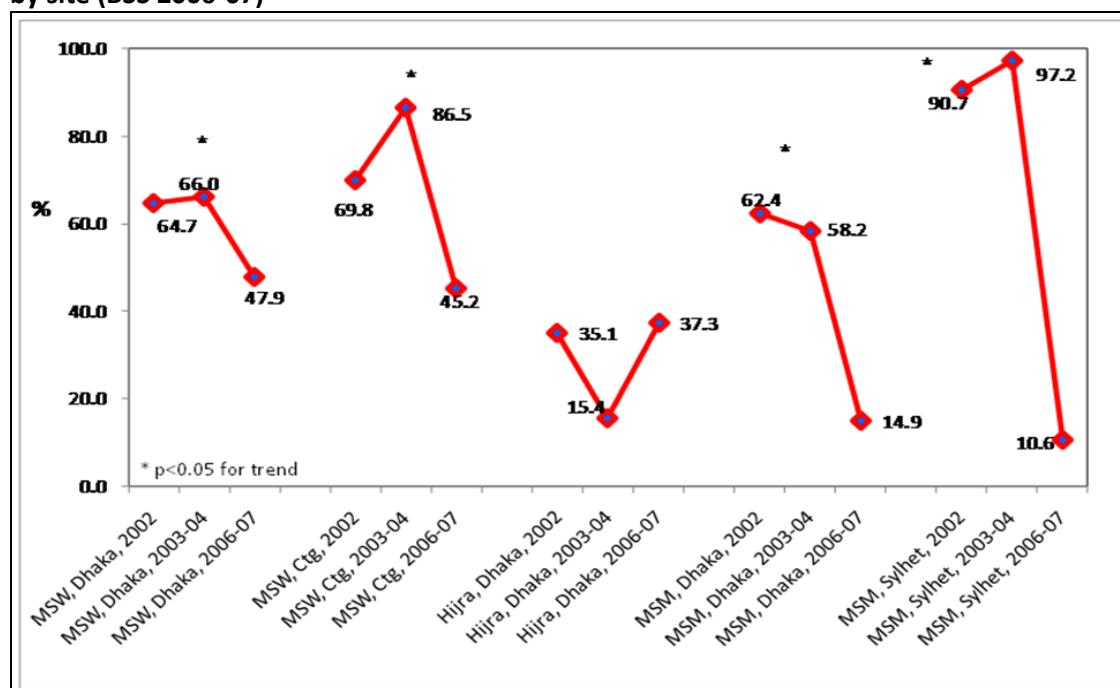
- Coverage of female sex workers by HIV prevention services declined in all sites except for street based sex workers in Chittagong.
- The most common service received through these programs was HIV awareness education. But many could not comprehend the information that was provided. Depending on site and city, at most 27% - and at least 0% - said that the information helped them to practice safer behaviors.
- Typically one third to one half of the female sex workers received condoms, but the range was 88% (Chittagong street based) to only 6.5%.
- DICs were used by one quarter or less of the sex workers in most sites except for streets of Dhaka and Chittagong.
- Proportions of sex workers who received treatment for STIs was very low except in hotels. Use of VCT was very low.

- The worst quality of service was observed in hotel based sex workers of Dhaka and Chittagong – most did not comprehend the HIV prevention information, very few said it helped them to change their behaviors, very few received condoms, and DICs were not commonly used. On the other hand, it was among Dhaka hotel sex workers that the largest differences were reported in use of condoms comparing the 20% who were covered by an NGO program and those who were not.
- Despite the weaknesses in existing services, in most sites, those female sex workers that were covered by an intervention program were more likely to use condoms.
- Knowledge of low HIV prevalence rates among female sex workers in Bangladesh and a negative syphilis result are seen as reasons to not use condoms.
- To improve existing services, new interventions are needed that address the fluidity and movement between categories of sex workers.

### Interventions for MSM, MSW AND Hijra

BSS data showed that more MSW and *hijra* had accessed NGO HIV prevention services in the last year than MSM (Figure 64). Other than for *hijra*, coverage by prevention programs declined during 2006-07 compared to previous years and most sharply to only 10-15% of MSM. At the time of the 2006-07 BSS, services were being provided through funds from Bangladesh AIDS Program (BAP) and smaller resources were available from other Development Partners; the large government operated HAPP did not cover this MARP.

**Figure 64: Proportion of MSM, MSW and *Hijra* covered by HIV prevention services in the last year, by site (BSS 2006-07)**



Note: Ctg refers to Chittagong

Of the services received (Figure 65) , it is encouraging to see that condoms were by far the most common, except among MSM in Dhaka, who were more likely to receive information. And concomitantly, secondary analysis confirms that those who were not accessing services were less



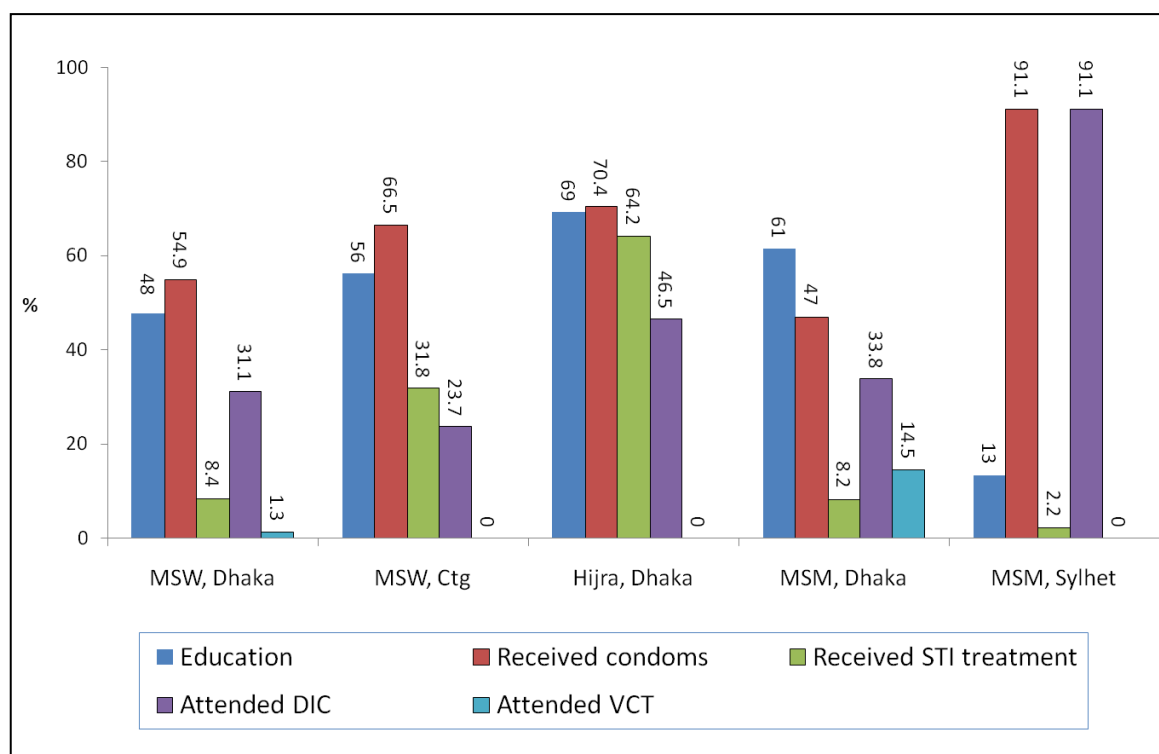
likely to be using condoms during last sex (see section on “Determinants of unsafe sex among MSM, MSW and *hijra*”). Although not consistent across all sites, among all groups of MSM, NGO services were associated with increased odds of condom use in last sex. But consistent condom use was very low in MSW and particularly low in *hijra* (see Figures 25 and 30).

The interventions for *hijra* are compromised in many ways, particularly because there is no evidence for how to implement successful interventions in Bangladesh. Current interventions for *hijra* replicate MSM interventions, but this may not be appropriate because their sexual and cultural practices are different from those of MSM and MSW (see the section on “Definition of *Hijra*”). This mismatch is documented in a recent assessment report (S. I. Khan, Parveen et al., 2007).

As with female sex workers, VCT service use was poor, with none of the MSM and MSW outside of Dhaka reporting use. Even in Dhaka, only 14.5% of MSM had used services and only 1.3% of MSW. None of the *hijra* reported accessing VCT services. The limited use of VCT services by MSM, MSW and *hijra* is not surprising because available VCT units are not sites where they feel comfortable revealing their sexual behavior.

Education on HIV was provided to most groups other than MSM in Sylhet through NGOs. Multiple regression analyses showed that *hijra* who had attended an NGO intervention program in the last year were two to six times more likely to have sound knowledge on HIV/AIDS than *hijra* who had not attended a program.

**Figure 65: Services accessed from NGOs in the last year by MSM, MSW and *Hijra* who had been exposed to interventions (BSS 2006-07)**



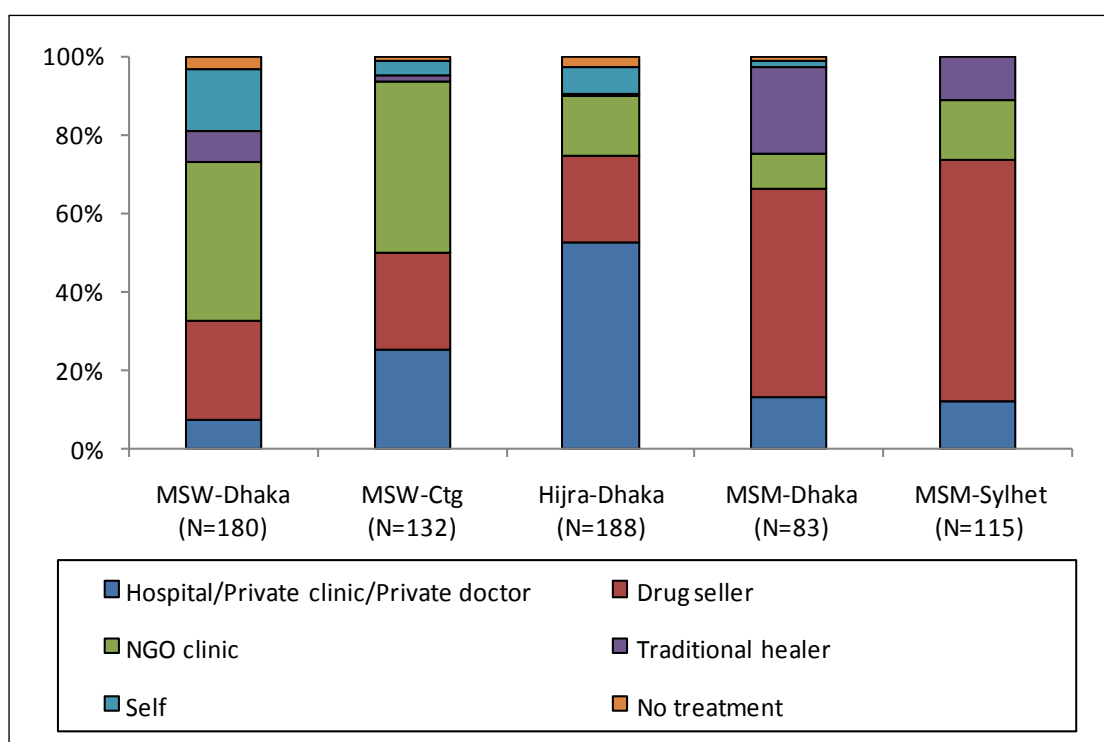
Note: Ctg refers to Chittagong

Of those who reported having an STI last year, most sought services but the nature of those services varied (Figure 66). For MSW, NGO clinics were most commonly used. However, STI services are not easily available to MSM because current intervention programs are directed towards MSW and

MSM do not access such services. In the RDS pilot conducted among MSM in Dhaka in 2006 (see Box 2), the majority of MSM stated that their main motivation for enrolling in the survey was to receive a medical examination and syphilis test because this is not easily available to them (Johnston et al, 2007). This unmet need of MSM stems from the perceived notion that MSW need to be targeted more than MSM not taking into account that the clients of MSW are MSM and at the cruising venues where MSW are reached, large numbers of MSM are available who also desperately need the very same services.

Most *hijra* sampled in the BSS said they went to a private clinic or private doctor for clinical services. However, the *hijra* ethnographic study (see Box 3) clarified the context of this response. In the ethnographic study *hijra* complained that most doctors in the private sector refused to provide them services. Therefore, *hijra* dress as ordinary men when they visit doctors in order to receive services and do not discuss their risk behaviors.

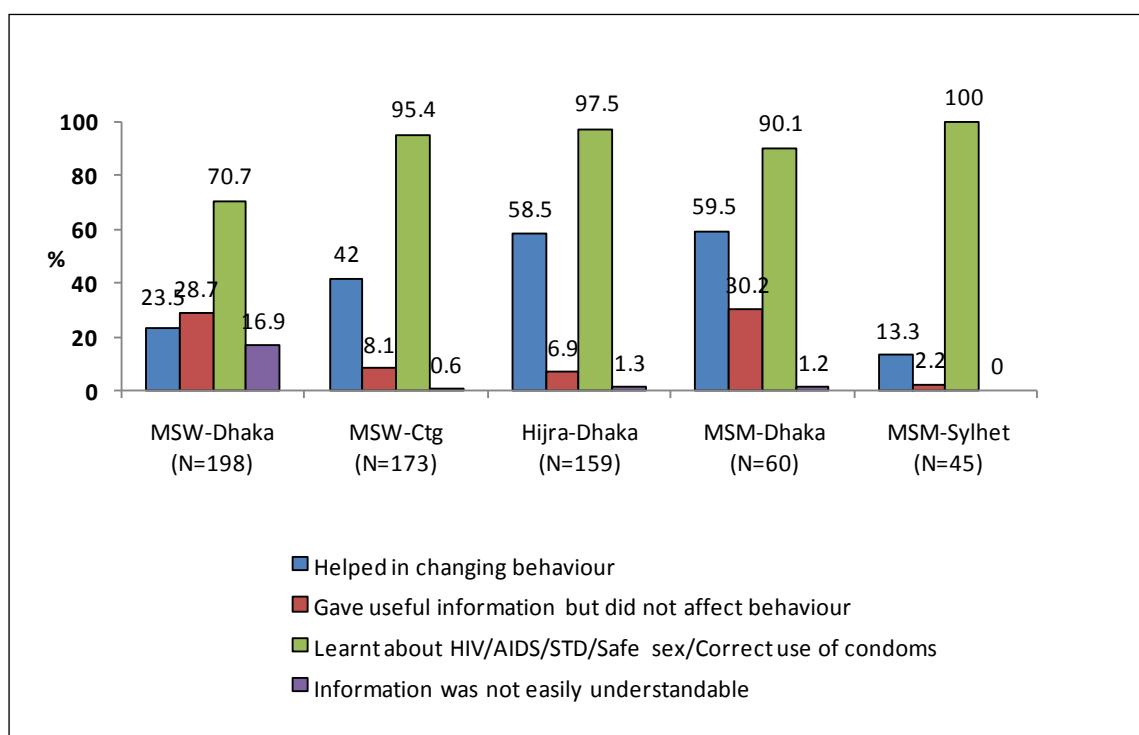
**Figure 66: Sources of STI treatment among MSM, MSW and *Hijra* who complained of STIs in the last year (BSS 2006-07)**



Note: Ctg refers to Chittagong

When BSS participants were asked how they had benefited from the services they received (Figure 67) most said they received information; over one quarter of *hijra*, MSM and MSW in Dhaka said that this information helped them to change their behavior but an equal number of MSM and MSW in Dhaka said that the information had not helped them to change their behavior. This raises questions whether the contents and method of providing information to different population groups are appropriate and comprehensible to the target populations.

**Figure 67: Reported benefits obtained from the NGO services by MSM, MSW and *Hijra* (BSS 2006-07)**



Note: Ctg refers to Chittagong

A possible mechanism of effectively transferring knowledge to the target population is to work with them, so that they can design their own BCC material. This approach was used successfully through an action research study conducted with *hijra* (see Box 3). Research findings were used by *hijra*, with help from an organization experienced in developing BCC materials for stigmatized populations, to develop flip charts, posters, booklets, stickers. In addition, *hijra* formed their own theatre group called *Rongberong* and staged a drama reflecting their lives, their vulnerabilities and also solutions to overcome some of their problems. This experience was empowering for *hijra* and provided the language and a community based platform from which the members of the *hijra* community could draw the attention of mainstream society to bring positive changes in their lives (S. I. Khan, Parveen et al., 2007).

A drawback in the design of the current intervention programs is the narrow focus on prevention and treatment of HIV/STIs. The broader issues of health, human and sexual rights, social and economic development are not adequately integrated in the overall approach of interventions. As a result, interventions have limited appeal to target populations. Stigma and discrimination against drug users, female sex workers, MSM, MSW and *hijra* are pervasive (S. Ahmed, 2004; Bondyopadhyay & Khan, 2004; S. I. Khan, 2008; S. I. Khan, Parveen et al., 2007).

Involving self help groups in implementing intervention programs has made notable contributions to their empowerment and to program effectiveness. Two self-help groups of *hijra*, *Badhan Hijra* Shangha and *Sustho Jibon*, have gradually evolved from being self help groups to registered CBOs and both are now actively providing HIV prevention services for the *hijra* community. The ethnographic research study on *hijra* (see Box 3) showed that employment of *hijra* in NGOs/CBOs has led to changes in attitudes so that they now want to move away from selling sex or even from

their *badhai* profession (see section of “Definition of *Hijra*”) and have learnt to think professionally, about their responsibilities, their future, and their job stability. At the same time, they feel more empowered because they can openly attend meetings and conferences and talk about their sexuality. Many *hijra* acknowledge this and one *hijra* stated:

“Now we can meet people. Years back, *hijra* did not know how to mingle with ordinary people. This has been possible due to the contribution of the NGOs.”

At the same time, this change has also isolated *hijra* working in NGOs from their traditional *hijra* community making it difficult for them to participate in *hijra* community rituals. As discussed in the section on “Definition of *Hijra*”, a *hijra* community is strongly networked. It is popularly said that in the *hijra* community, no one can live independently; she must have a guru and abide by the *hijra* hierarchy. *Hijra* who are working in NGOs/CBOs do not abide by those norms and their own community often disowns them - they are considered ‘deviated’ *hijra* by their guru. The *badhai hijra* are particularly threatened by the activities of the NGOs which has revealed their private and personal information such as the true nature of their sexual organ and sexual life. They are generally identified as eunuch and portrayed as special people devoid of sexuality and thus unable to procreate. The *hijra* use this to create sympathy in people’s minds and help ensure their earnings. *Badhai hijra* have therefore resisted the interventions, with many *badhai hijra* unwilling to come to the DICs. Nonetheless, at present many influential *badhai* gurus are working in interventions although they do not acknowledge that *hijra* sell sex. At the same time, *hijra* working for NGOs/CBOs have new insecurities which revolve primarily around continued funding.

These interventions have not yet succeeded in attracting all kinds of *hijra* because the interventions focus primarily on sexual safety, not taking into account the complex reality of the *hijra* community.

### Summary of key findings

- Coverage declined for MSM and MSW, to very low levels for MSM. Although coverage was limited, programs were effective in providing condoms with the exception of MSM in Dhaka.
- A disadvantage of the intervention package for *hijra* is that it is based on the package of MSM and MSW and not the specific needs of *hijra*.
- STI services were not easily available to MSM. MSW received STI services from NGOs while *hijra* dressed as ordinary men to access services from private practitioners.
- Although many said that information provided by the NGOs was not easily comprehensible, the proportions who said that information helped them to change their behaviors was higher than for either IDUs or female sex workers.
- VCT coverage was low, but higher than for any other MARP among MSM in Dhaka.
- The Sylhet program for MSM was not very effective in providing HIV/STI prevention education.
- Involving MARPs in the design of interventions enhances their ownership and participation as exemplified by an innovative program for *hijra*.
- Employment of *hijra* has had both positive and negative effects – it has empowered them but also alienated them from their traditional community. Many *hijra* have refused to participate in the activities of NGOs as it conflicts with their traditional beliefs and norms. Solutions to overcome these problems need to arise from *hijra* themselves.

## Failure to Develop Context Specific Interventions

None of the services for any of the MARPs take into account multiple risks that an individual may be exposed to such as sex and drugs (see section on “Overlapping Risks (Commercial sex and injecting drugs)”) and cross border mobility (see International and cross border migrants). Formal referral links between intervention programs for different MARPs do not exist and often there is competition for target numbers. In some cases, mere referrals may not work and special services may need to be established for people with multiple risk behaviors. DICS for female sex workers who also inject drugs is being tried, but so far there is no recognition of MSM injecting drugs although data from Chittagong has shown that 5% MSW injected drugs in the last year (see section on “MSM and IDUs”). Another concern is cross border mobility of female sex workers living in border towns – serological surveillance data show that 2.7% of FSW in Hili have HIV and all sold sex across the border (see section on “HIV in female sex workers”). Existing programs have not dealt with the risks such sex workers face.

The intervention programs are designed and implemented as packages that are duplicated all over the country. The package does not take into account multiple risks or variations in local scenarios. This lack of flexibility is a hindrance to effective programming and appears to be more about ease in management of services than quality of services.

### Summary of key findings

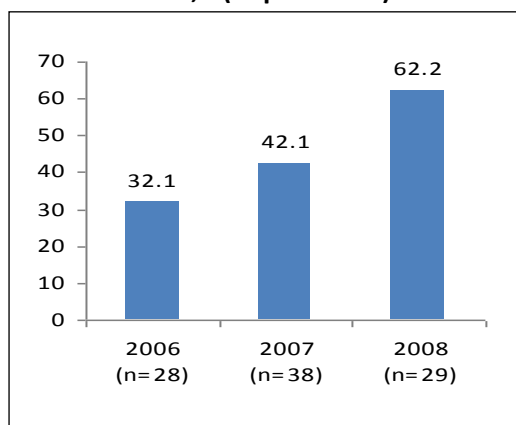
- The design of service packages does not take into account multiple risk factors that an individual may face.

## Partner Notification for Management of Sexually Transmitted Infections

Referral of recent sex partners of patients with STIs is an important public health intervention in successful STI management. The presence of untreated ulcerative or non-ulcerative STIs can increase the risk of both acquisition and transmission of HIV by a factor of up to 10 (Grosskurth et al., 1995; Mayaud, Hawkes, & Mabey, 1998). A person who is co-infected with HIV and another STI is also more likely to transmit HIV to a sex partner than someone who is infected with HIV alone (Chen et al., 2007; Korenromp et al., 2005; Nusbaum, Wallace, Slatt, & Kondrad, 2004; Over & Piot, 1996).

In Bangladesh, information on partner notification for STI patients is scarce. Service delivery data from primary health care clinics in rural Bangladesh indicate that service providers only rarely recommend partner referral to the STI patients (M. Ahmed et al., 1999). In a survey of private providers in eight locations throughout Bangladesh, only 58% of formal providers and 12% of non-formal providers reported advising STI clients to encourage their partners to seek care (NASP, Save the Children USA, & ICDDR,B, 2009i, Forthcoming). However, recent findings suggest that Bangladeshi service providers with experience can successfully convince people to talk to their sex partners and bring them to service centers. Data from the VCT unit of ICDDR,B, where intensive counseling is provided to those who are HIV positive, show an increase in referrals of spouses over the years (Figure 68).

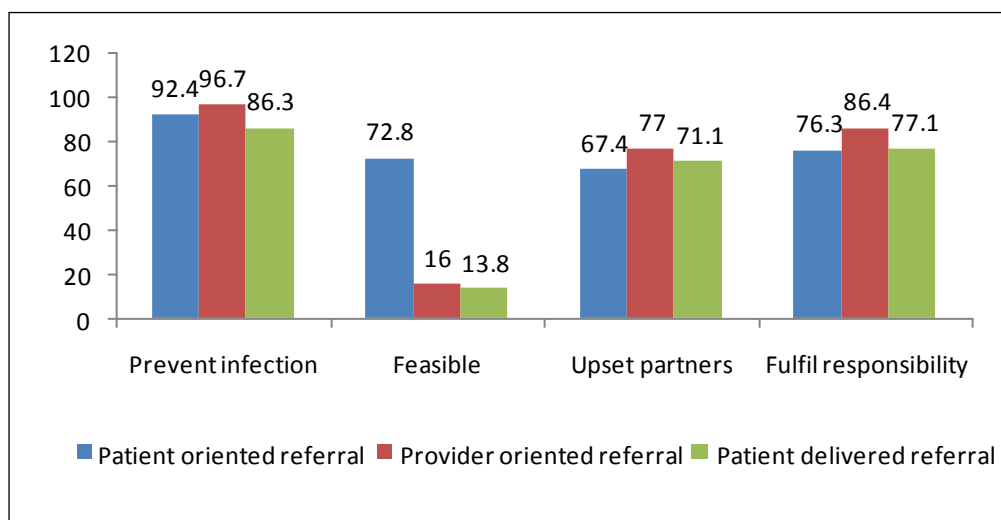
**Figure 68: Proportion of sex partners of married HIV positive individuals who attended the VCT Unit of ICDDR,B (unpublished)**



WHO recommends three different approaches to STI partner notification (World Health Organization, 1989; World Health Organization & Joint United Nations Program on HIV/AIDS, 1999). The three methods are: 1) *Patient-oriented referral*, where the index patient informs his/her partner, 2) *Provider-oriented referral*, where health care workers inform partners of patients about their possible exposure, and 3) *Patient delivered referral*, where the index patient is given necessary medication to pass on to his/her partners.

A survey using a self administrated questionnaire was conducted in 2007 among STI service providers in Dhaka and Chittagong city corporations to solicit providers’ opinions on the three methods of partner notification. Most of the 236 providers surveyed from NGO clinics, city corporation clinics, and government hospitals thought that patient-oriented referral is the most feasible in Bangladesh (Figure 69).

**Figure 69: STI service provider’s opinion about the three WHO recommended partner referral approaches (partner notification study, 2007)**



Counseling is the mainstay behind patient-oriented referral, so a randomized clinical trial testing the effectiveness of single session counseling versus no counseling was conducted in selected government and non-government clinics providing clinical management of STIs in Dhaka and Chittagong. This “STI partner notification study” is described briefly in Box 6.

**Box 6. STI partner notification study, 2007**

This study was conducted in selected clinics that provide clinical management of STIs in Dhaka and Chittagong City Corporation. The study had multiple components, implemented in two phases using quantitative and qualitative approaches. In phase I, formative research was carried out to identify government and non-government health service centers providing STI management services and to assess their capacity in terms of trained personnel, equipment, supplies, client flow and record keeping system. A self administered survey was also carried out among the clinical service providers to understand service providers' perspectives and practices on partner notification as a component of STI case management. In phase II, three government hospital outpatient clinics and six NGO clinics were purposively selected for the study. A randomized trial was implemented to understand the effectiveness of a single counseling session on reaching partners of index patients diagnosed with STIs and a questionnaire was administered to understand patients' perspective on partner notification.

A total of 1,339 patients attending clinics in Dhaka and Chittagong in 2007 with STI were randomized (675 in the counseling group and 664 in the control group).

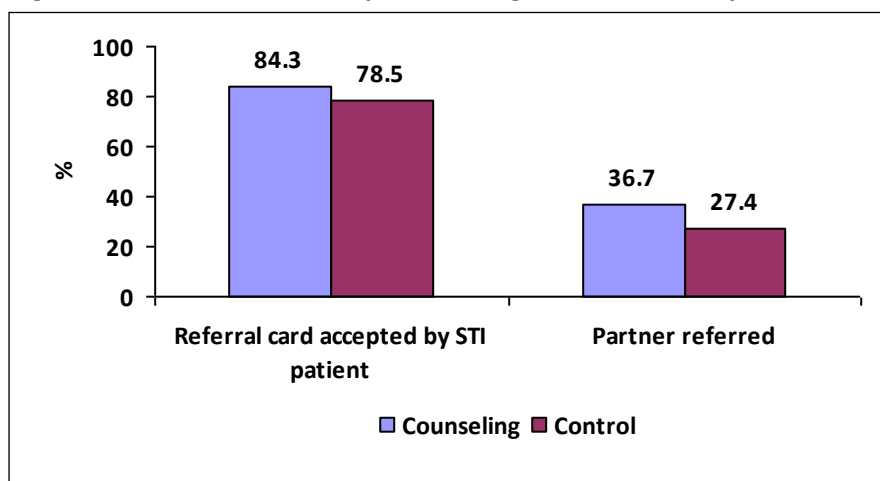
Counseling was provided for approximately 10 minutes on five topics:

- Risk of re-infection
- Development of complications
- Rapid spread of infection
- Asymptomatic infection
- Coping and social obligations

Both the counseling and control group patients received standard, pre-tested anonymous partner referral cards. Referral cards were used to assess partner referral by tracking the patient identification number and disease code on the cards.

The trial results showed that patients who received counseling were more likely to refer their partners for STI treatment than those who were not counseled (Figure 70). However, only one third of the STI patients in this study actually referred their partner, even though the majority accepted the referral card that was provided.

**Figure 70: Partner referral of patients diagnosed with STIs (partner notification study, 2007)**



Multivariate regression analysis conducted to understand the factors associated with partner referral (Table 21) showed that counseling had a positive effect on referrals, referral was also more likely if patients were married, and if they expressed an intention to refer their partners. Only one

feature was found to be negatively associated: low income. There was no difference between male and female STI patients in the likelihood of referring their partners.

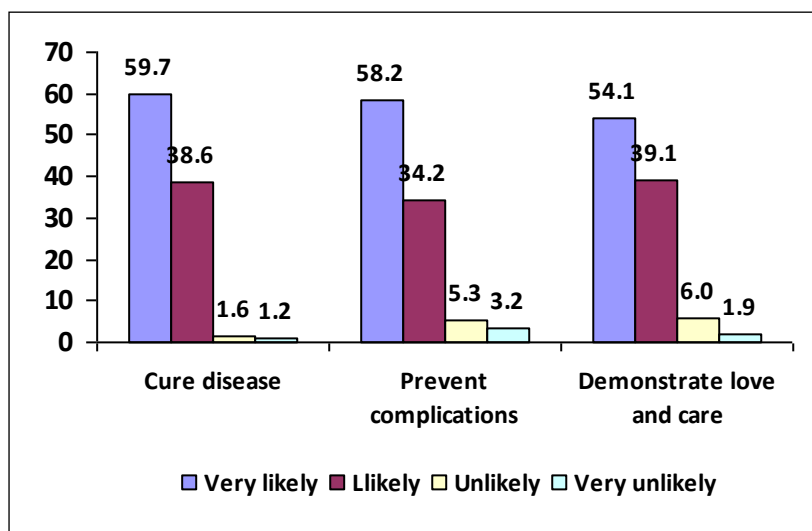
**Table 21: Predictors of partner referral within one month of interview of the index patients with sexually transmitted diseases**

Variables	Adjusted <sup>§</sup> OR (95% CI)
Attended Counseling	1.6 (1.3-2.1)*
No counseling (ref)	1
Married	2.9 (1.7-5.0)*
Unmarried	1
Income	
Tk.5000 or less	0.4 (0.3-0.5)*
Tk.5000 – 10000	0.5 (0.4-0.8)*
>Tk.10000 (ref)	1
Prior intention to inform partner	3.4 (2.2-5.1)*
No (ref)	1

<sup>§</sup>Adjusted for age, education, marital status, living arrangement with partners  
OR=Odds ratio, \* p<0.05

The study also assessed the motivational factors and barriers to partner notification using both quantitative questionnaires and in-depth interviews. When asked three specific questions on reasons for notifying their partners, the majority said that referral was very likely to increase chances of curing the infection as both would be treated, treatment would prevent complications and that this would demonstrate their feelings of care and love for their partner (Figure 71).

**Figure 71: Perceived motivations for partner referral by STI patients (partner notification study, 2007)**



This was confirmed through the qualitative interviews where the main reason cited was the sense of responsibility, care and love for one’s partner. Male patients reported that they certainly wanted their wives to be treated. This notion was reflected in this voice: “I love my wife, she is the mother of my son, and I must ensure her treatment.”

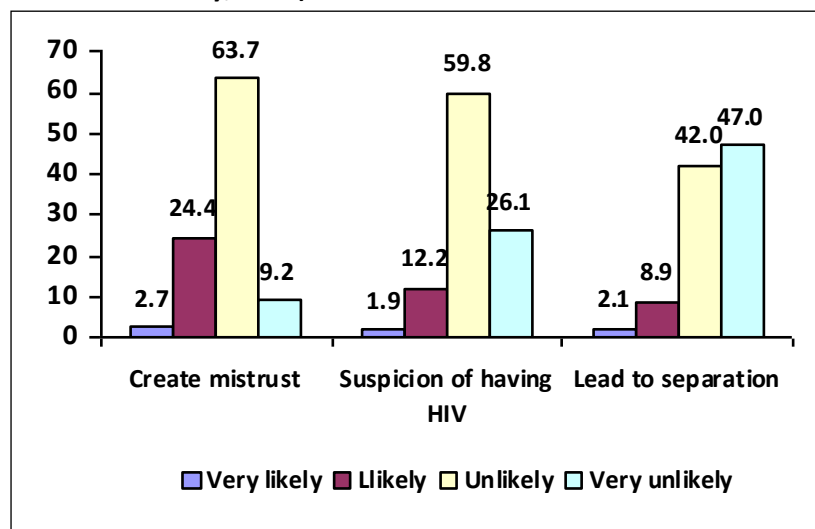
For some male STI patients the reason for wanting their partners to be treated was that it would protect themselves against re-infection.

Contrary to common perceptions, it was apparent from the data that most STI patients (male and female) did not think that notifying their partners of their disease status would lead to mistrust in their relationship, separation or suspicion by their partners that they may be HIV infected (Figure 72). However, substantial proportions did have such misgivings; one quarter felt that partner referral



would create mistrust, 14% that referral would create suspicion of HIV infection and 11% thought that partner referral would lead to separation in their relationship (Figure 72).

**Figure 72: Responses of STI patients to perceived barriers for partner notification (partner notification study, 2007)**



The qualitative component of the study sheds more light on these data. The main barrier across both genders with regard to their spouses or regular partners was that disclosure of their STI to their partners would destroy their “good” image to the partner by revealing their “immoral” sexual behavior. One married male patient said:

“If my wife knows that I had sex with someone else, she will be very angry and who knows she may even leave me.”

Some men felt that the relationship could survive but they would lose the trust and respect of their partner:

“Nothing will happen to my relationship, we have deep love, but it’s a matter of prestige in front of my partner. She trusts me, why should I lose my prestige and trust?”

Most female STI patients, whether married or unmarried, reported that if their “immoral” sexual relationship was revealed to their steady partner [lover or husband], this would most likely end their relationship. These findings highlight the impact of gender norms for partner notification. While males felt confident that revealing extramarital or casual sex relationships would not ruin their relationships because this behavior was acceptable for them, and because of their dominant role in the relationship and the limited options available to their partners; females believed that revealing such an affair would end their relationships because it is not acceptable for them.

Overcoming these fears is a challenge and will require more in-depth counseling and in many cases referrals may not occur. However, counseling clearly can greatly improve referral rates as shown from the experience of the VCT Unit of ICDDR,B (Figure 68).

Qualitative data provided helpful insights into the responses of many male patients who said that disclosure would not lead to separation. These men felt that their partners either would not comprehend the meaning of the infection or that they (the men) could override any misgivings expressed by their partners. This is exemplified by these two quotes:

- “It is better for me not to disclose that I am suffering from STIs, and even if I disclose, she will not understand the meaning of STI.”
- “Even if my wife suspects - separation! Impossible! She will never leave, she may be upset, but I know how to manage her.”

The responses of men to their commercial female partners, i.e. sex workers, reflected the complete lack of responsibility that they felt to these women. A typical response was:

“I do not care about their [female sex worker’s] treatment. They are bad women; they will have disease from others. I did not infect them; rather they infected me, why should I bother about their treatment?”

In contrast to the more deep seated attitudinal barriers described above, some practical issues were also highlighted by female STI patients who agreed that having their partners treated was important but the way services are provided made it difficult for them to refer their partners. These difficulties included:

- their partner is not available during clinic hours
- partners of several women were usually away from home
- partners would prefer to consult with private practitioners.

Taken together, the findings on motivating factors and barriers to disclosure suggest that married males can be counseled to refer their spouses for treatment. However, for paid sex partners, male clients are not likely to take responsibility for referrals and treatment. Addressing the fears of both men and women regarding exposure of their other sexual relationships will need more in-depth counseling.

It is clear from the discussion above that partner notification if conducted properly, can work for STI treatment provided that counseling facilities are available including trained counselors who can use the motivating factors and overcome the barriers. Therefore, as part of the study, in-depth interviews were conducted with service providers from clinics in the different sectors. The responses from service providers in different sectors were quite different; providers from government clinics were fairly resistant to partner notification while those from NGOs were more open.

In government clinics, counselors were not available and views commonly expressed were.

- the enormous patient load leaves no time for counseling
- partner notification is not feasible given the cultural context (because this would reveal “immoral” behavior). A senior medical doctor of a government hospital argued against the policy from a religious and moral point of view saying that “because such patients are “sinful” and because their immoral behavior cannot be disclosed to their spouse or parents, it is “better not to listen to their nasty life story.”

In NGO clinics, most doctors said that partner referral for STI management is needed. A few NGO clinics were already providing this service but providers found it difficult to convince patients for reasons similar to those presented above. Other barriers identified included:

- lack of trained counselors, inappropriate individuals recruited as counselors

- inadequate time for counseling, as in many cases short term counseling will not work, especially where the index case does not have the intent to refer and where there are deep seated fears related to the outcome of disclosure
- the counselor has multiple responsibilities, and counseling can become secondary to those responsibilities
- inadequate environment and resources available for partner notification and referral

As part of prevention, care and support services, partners of STI/HIV cases need to be referred for management, and effective counseling is required for this. Policy makers and service providers need to understand the critical role and responsibilities of counselors in STI/HIV management and appropriate facilities should be made available in all intervention packages for targeted intervention. The existing information presented above suggests that changes can more easily be made within the NGO sector whereas considerably more effort will be required to establish these services in the government sector. However, referral linkages could be established between different sectors and also within sectors.

### **Summary of key findings**

- Partner notification for STI treatment is not practiced routinely in Bangladesh but experience from VCT suggests that it is possible with extensive counseling.
- Providers felt that patient-oriented referral is the most feasible method in Bangladesh.
- Successful partner referral was associated with counseling (even brief counseling), being married and patient intention/agreement to refer. Those from a lower socioeconomic stratum were less likely to refer partners.
- For paid sex partners, male clients are not likely to take responsibility for referral for treatment as they had little concern and/or respect for female sex workers.
- The main barrier to partner notification was fear that disclosure would lead to mistrust, separation and divorce, especially among women.
- Practical issues around clinic hours and location were cited as barriers by some women.
- Providers in the NGO sector were more aware of and open to partner notification for STI treatment than those from the public sector.



# **Chapter VII: Discussion and Recommendations**



## Discussion

This report brings together recent data from different sources, some of which are unpublished, in an attempt to better understand the epidemic in Bangladesh, the population groups that are most vulnerable including the geographical areas, the coverage and impact of services, and barriers and facilitators of risk behaviors. Given the attention to traditional MARPs (IDUs, sex workers, MSM and *hijra*) for HIV in Bangladesh, most data presented in this document are on MARPs. However, it is clear that other groups such as international migrant workers are also at risk – data are becoming available but more needs to be understood. In this chapter a brief summary of the findings will be presented along with strengths and gaps in services and recommendations on the way forward.

### Summary of Findings

The current HIV epidemic situation in Bangladesh suggests the presence of two different and parallel streams of HIV in the country:

- IDUs, where the epidemic has started to take off in Dhaka but is concentrated in one neighborhood
- International returned migrant workers, which constitute the majority of the passively reported cases of HIV in the country and may be a potential source of HIV transmission

In addition, an epidemic may be emerging among female sex workers in towns along the border with India, indicated by surveillance data from a town bordering West Bengal, India.

A preliminary genetic analysis of HIV strains confirms that these groups had not overlapped as of 2005. However, risk behavior data from all groups suggest that spread from one group to another is very likely to occur if such risky behaviors persist (Reddy, Kelly, & Brown, 2008).

No doubt there are protective factors at play that are helping Bangladesh maintain its low prevalence status. A very important factor is the early implementation of HIV prevention programs among MARPs – female sex workers, IDUs and MSM. These early interventions have been cited as best practice by UNAIDS (UNAIDS, 2000, 2006a; UNAIDS & Best Practice Collection, 2006). Analysis that modeled the impact of the IDU intervention in Dhaka showed beneficial effects in delaying the epidemic (Foss et al., 2007). Another major factor is probably circumcision – the majority of

Bangladeshis are Muslim and Muslim men are generally circumcised. However, more and more Muslim countries are reporting HIV epidemics including Indonesia, Iran, Malaysia and Pakistan (Center for Disease Management IMoHaME, 2005; National AIDS Control Program, 2008; UNAIDS, 2008). Whether there are other biological (genetic) factors protecting Bangladeshis is not possible to say with existing data and so far it has not been shown to be the case in any country.

Bangladesh continues to be vulnerable to an HIV epidemic because of continuing practice of risky behaviors – in some cities this has improved while in others it has deteriorated. During scale up of the programs, quality may have been compromised given that in many places a lack of understanding of how MARPs function, how they are organized, and their needs were not taken into account – rather a ‘one size fits all’ policy has been adopted which may have reduced the effectiveness of programs. Many structural barriers which are beyond individual control further obstruct the adoption of safer behaviors by MARPs and these need to be better understood before they can be addressed; such barriers are well recognized impediments to behavior change (Gupta et al., 2008). A greater involvement of MARPs themselves in programming could help resolve some of these issues. This is taking place to some extent with female sex workers (Hoque, 2008) and to a lesser extent with *hijra* and MSM (Bandhu Social Welfare Society, 2008) but it is almost non-existent with IDUs. Overall, self help groups and CBOs are weak but their input and involvement is essential in the effective uptake of programs. Adoption of safer behaviors is also hampered by interruptions in service provision – due to irregular funding, or irregular supply of materials including condoms, sterile needles/syringes, and STI drugs. Some services such as VCT are not widely available.

Of considerable concern is the rising HIV prevalence rate in the states of India bordering Bangladesh (National Institute of Health and Family Welfare & National AIDS Control Organization, 2007) and this coupled with cross border mobility alongside practice of risky sex makes Bangladesh particularly vulnerable. International migration and its relation to HIV need to be better understood. Although studies show that HIV transmission from most returned international migrant workers may be restricted to their spouse, a small but substantial proportion of returned migrant workers did buy sex from female sex workers after returning home (Mercer et al., 2006) – this small proportion can translate into large numbers. Migrants (international and cross border) have not been targeted by HIV prevention efforts and there is little understanding as to how this can be done without stigmatizing communities and driving them underground.

Clients of sex workers are a diverse group of males and include adolescents, young men and adults. Barriers to condom use may be deeply imbedded in their beliefs, but the evidence presented here suggests that making condoms available and empowering female sex workers such that they request condom use, make condoms use much more likely. Knowing how to prevent HIV transmission and internalizing that knowledge also play an important role in the adoption of safer behaviors.

There are likely population groups and geographical areas in Bangladesh that have not been addressed either in gathering strategic information or in providing services. A glaring gap is in the Chittagong Hill tracts – very little is known about HIV risks, vulnerabilities, or prevalence in this area. Although some tribal groups may have special features that could enhance their vulnerability to HIV, such as those presented in this document, the fact that their social status is considered “lower” than the mainstream society adds to their vulnerability. Children remain outside the umbrella of services and information gathering and their vulnerability is obvious. Spousal transmission has been well



documented among wives of IDUs in Chennai, India (Panda et al., 2005) and some wives of IDUs in Dhaka are now HIV positive. In addition, many wives of returned international migrant workers in Bangladesh are HIV positive. However, in general, the extent of spousal transmission and the presence of discordant couples (one but not both are HIV positive) have not been assessed systematically in Bangladesh. Approaching sex partners of MARPs has been difficult and more effort needs to be made towards achieving this.

The practice of safe behaviors by individuals is not entirely dependent on the individual. As MARPs are highly stigmatized and indulge in socially (and often legally) prohibited activities, violence and abuse are an inherent part of their daily lives. Abuse violates their human rights and diminishes their self esteem giving them little incentive to practice protective behaviors. Linkages to different service needs of MARPs such as legal support, are lacking.

Overall, the data show some positive effects of ongoing prevention efforts and these are highlighted below:

1. Surrogate markers of risk - hepatitis C (HCV) and active syphilis - have declined in many sites and population groups. HCV prevalence and incidence declined among Dhaka IDU, suggesting that safer injecting practices are being adopted (except in the epidemic neighborhood) and active syphilis rates declined in many sites among females sex workers.
2. A substantial proportion of heroin smokers reported accessing needle/syringe programs (NSP), suggesting that the NSP reach regular injectors and also intermittent injectors.
3. Condom use appears to have increased, based on reports by sex workers and by their clients.
4. Facilitators of condom use – knowledge on HIV transmission and prevention, better risk perception, availability of condoms and requesting clients to use condoms resulted in greater likelihood of condoms being used. For female sex workers in most sites, taking services from intervention programs increased condom use. It appears that empowerment of female sex workers has taken place to some extent as many could request clients to use condoms.
5. Among the MARPs, MSM reported the maximum benefit from the HIV prevention programs. The programs although small, i.e. covering only a small proportion of MSM, appear to be more effective than programs for female sex workers and IDUs.
6. A substantial proportion of female sex partners of male IDUs are being approached by HIV prevention programs and they are open to receiving services including being tested for HIV. However, in general, partner notification for STI treatment is difficult, but it is possible if appropriate counseling services are provided.
7. Active involvement of MARPs in the design and development of programs is possible and when this is done there is greater ownership by the communities as exemplified by the work with *hijra*.

Taking these points into consideration, it appears that prevention programs in Bangladesh are continuing to play a pivotal role in delaying an epidemic. However, the data also show that there are many gaps in services and opportunities for improving the reach and effectiveness of services, which the country cannot afford to ignore at this stage of an impending epidemic.

## **Gaps in Understanding, Planning and Provision of Services**

Gaps in services stem from a lack of detailed understanding of client needs and situations, from poor planning, and low capacity for effective implementation, especially when programs are scaled up. These weaknesses exist at different levels, from the level of the policy maker to that of program implementers in the field. These are discussed below:

### ***A lack of in-depth knowledge on the needs of MARPs***

In general for all MARPs the intervention programs are focused on safe sex or safe injections for preventing infections. The programs do not take into consideration that each of these marginalized population groups has deep seated issues like violence, social exclusion and humiliation which are part of their daily lives and take priority over HIV. Their more immediate and urgent concerns such as shelter, food, drugs, and must be alleviated before they will be concerned about the more distant and abstract fear of HIV. This basic premise has to be taken into consideration if programs are to succeed.

### ***A lack of understanding on how MARPs are structured***

Drug taking or selling sex behaviors are practiced by each MARPs within structures that allow them some relative safety and comfort. For example, hotel based female sex workers work within the structure of the hotel management and the hotel based sex trade. IDUs obtain drugs and gather in different venues which may depend on their economic solvency, gender, social circle and city. Without understanding the complexities of each situation, simply replicating a service package at all sites is unlikely to meet MARPs' needs. Local knowledge is essential, and flexibility to adapt to different situations.

### ***Inadequate resources with poor planning***

Planning for sustained HIV prevention programs is essential for an effective response. In order to do this, not only is it important to have knowledge and understanding of the local situation, but there also needs to be capacity to develop a strategic plan based on that knowledge. Inadequate resources (personnel, funding, infrastructure) for the NASP, which is the government body responsible for coordinating the national response to HIV in Bangladesh, has prevented them from playing a more proactive role in effective planning and coordination at the national level. This inadequacy has translated into interruptions in service delivery at the field level as well as inadequate, inappropriate and irregular supplies of materials (condoms, lubricants, sterile injection equipment, and STI drugs).

### ***Lack of coordination, involvement of multiple sectors and linkages to other service providers***

The response to HIV in Bangladesh is provided through multiple funders and multiple implementers. Still others are involved in data gathering, developing strategies for BCC, procurement for

commodities and so on. Lack of smooth coordination between players has been a major hindrance to providing services. Within the government, multiple ministries need to be engaged to ensure the active involvement of key services such as law enforcement; this has not been carried out effectively. In addition, not all services can be provided through the HIV prevention programs. The needs of MARPs that are beyond the scope of HIV prevention services, such as legal support, may be better served by others but linkages to other service providers are often lacking.

#### ***Poor capacity in scaling up of prevention programs***

Evidence shows that when the HIV prevention programs were smaller they were more effective. Scaling up has possibly led to dilution of the effect of services and in many cities it has also resulted in lower coverage than in previous years. Scaling up has often been done using packages that were effective in one setting or locale in all new settings as well, where they may not be fully applicable as discussed above. Lack of adequate skilled personnel is also a major barrier.

#### ***Lack of effective involvement of self help groups***

Involvement of MARPs themselves in designing HIV prevention programs has not always been possible and this is especially true for IDUs. Where MARPs have been involved, such as female street based sex workers, it has been very effective for the street situation. However, such strategies need to be considered carefully. For example, efforts to use street based female sex workers to reach residence and hotel based sex workers are not likely to work as the groups of sex workers are fairly distinct. Without further strengthening and capacitating existing CBOs and developing new ones, effective scaling up of services will be difficult.

#### ***Lack of a comprehensive approach***

In most cases, implementers overlook multiple risks that MARPs may be facing. For IDUs, the stress is on safe injections – safe sex is often ignored and condom distribution is poor. For sex workers, drug use is not addressed and neither is mobility. Such a single minded approach to HIV prevention reflects poor understanding of MARPs and leads to partial delivery of fully responsive prevention package.

#### ***Gaps in information***

Data gathering through surveillance, surveys and research have been under-resourced in Bangladesh. All countries are advised to “know their epidemic”. However, in order to have this knowledge it is essential that data are gathered regularly not only through surveillance but through different sources. Research studies have received little priority in Bangladesh but it is clear from this document that the few studies that have been conducted provide rich material for better understanding the HIV epidemic and also its response. There are major gaps in information in some key areas (such as international and cross border migrants). Studies piloting innovative prevention designs through operations research are needed, as is frequent triangulation of data to determine how the HIV scenario is changing in Bangladesh, including estimation of sizes of MARPs and geographical distribution of risk and vulnerabilities.

## Recommendations

Taking into account the evidence on strengths and weaknesses of the response to HIV in Bangladesh, general recommendations on the way forward are provided here and on some specific issues:

### General recommendations

#### ***Continuing, scaling up and improving HIV prevention programs for MARPs***

Evidence on the whole suggests that HIV prevention programs for MARPs are working and they need to be continued and scaled up and can be improved. Overall, the programs for MSM were the strongest amongst the MARPs. However, the strengths and weaknesses varied for the different population groups and different cities and need to be understood, acknowledged and addressed. Care needs to be taken so that while scaling up, quality is not compromised.

#### ***Understanding the local context***

For the prevention programs to be effective, it is essential that implementers have a better understanding of the local context. This may be done by involving local groups including the target population in the design and implementation of the program. Policy makers need to understand that for an effective program, flexibility is crucial and that a 'one size fits all' policy cannot work.

#### ***Enhancing understanding and capacity at all levels***

Policy makers need to understand that situations vary and can change with time, and that they need to keep abreast of the changes and allow flexibility to accommodate variations and changes over time. For this purpose, field or local level knowledge needs to be shared at regular intervals and used to modify interventions if required.

Appropriate resources need to be provided to enhance the capacity of NASP to allow for long term strategic planning, coordination, and engage the sectors that are important to the success of interventions.

Implementers need enhanced skills in designing, managing and running their interventions. Training on each of these skills needs to be provided by experienced individuals/organizations from either in-country or abroad.

Community based organizations need to be strengthened, new ones need to be created and linkages or networks need to be established. For this, special effort has to be undertaken and if needed regional experience could be brought in.

#### ***Targeted Advocacy***

A conducive environment is essential to enable MARPs to practice safe behaviors, and for service providers to provide services effectively. Therefore, greater involvement by multiple sectors and at different levels - from policy makers to the community, is essential. This needs to be done through a

planned and systematic advocacy strategy and if required training of key stakeholders may be provided.

### ***Regular evaluation of ongoing HIV prevention programs***

HIV intervention programs for IDUs and female sex workers have been expanded considerably to cover more than half of the districts in Bangladesh. Available data suggest that interventions are working better in some areas than others. It is very important to have an independent evaluation of ongoing programs at regular intervals and not just at the end of the funding support period. Information from the evaluation needs to feed into programs so that they can be modified and improved.

### ***Collecting strategic information through surveillance, surveys and research and developing a national database***

Although it is acknowledged that Bangladesh has relatively good information systems in place, this is still inadequate and triangulation of data is infrequent. In order for Bangladesh to be able to provide a comprehensive picture of the country situation and respond to the need to “know your epidemic”, it is essential that a national database be created. For this appropriate training, personnel and infrastructure are essential and linkages to regional and international groups/institutions are needed. Strategic information gathering through research is poorly supported and more resources need to be mobilized for this.

### **Specific recommendations**

1. VCT has to be made available to MARPs on a wider scale.
2. STI services need to be strengthened. Counseling for partner notification needs to become part of the service package and STI treatment for regular sex partners of MARPs needs to be promoted. Strategies for addressing female sex partners of MSM need to be explored.
3. Multiple risks of MARPs, such as IDUs who have unsafe sex in and MSM who inject drugs, are often overlooked. More stress on condom promotion and distribution is essential for IDUs especially female IDUs and referrals for NSP among sex workers who inject drugs are needed.
4. Better linkages between harm reduction services for IDUs and drug treatment and rehabilitation facilities need to be established.
5. Commodity requirements for HIV prevention (condoms, sterile needles/syringes, lubricants, STI drugs) must be appropriately assessed by planners and implementers. Thereafter, standard quality, adequate and sustained supplies have to be ensured.
6. A strategy needs to be developed to address mobility of MARPs, so that female sex workers may access services from any DIC or outreach worker they choose. Development of more cross linkages between programs can facilitate better coordination and allow people to access services from different service delivery sites.

7. Cross border mobility needs to be addressed by implementers. Implementers need to understand what occurs during cross border movements, how to address the risks involved and then develop strategies accordingly. Again, involvement of the target population in designing and implementing the intervention would likely strengthen the program.
8. Services for *hijra* are at present based on the services provided for MSM. A more *hijra* specific program needs to be developed based on their real life situation and needs. The involvement of *hijra* in the design and implementation would be helpful.
9. For MSM, expansion of services is needed urgently. However, while scaling up, quality of services must be ensured.
10. Novel methods need to be tried to access the more hidden populations such as residence based female sex workers and MSM. Using networks of MARPs is a method that may be piloted. In addition, more operations research on international migrant workers is needed.
11. While the focus of efforts in a low prevalence country like Bangladesh should be squarely on MARPs, the long-term efforts to increase knowledge and awareness among the general population appear to have been effective in increasing acceptance of interventions and in increasing condom use among youth clients of sex workers. Thus, continued attention is needed to specific interventions for the general population to maintain and improve current levels of knowledge, decrease stigma and help to foster an enabling environment for HIV prevention, care and support. Such efforts may also be an effective way to reach returned and potential migrant workers who are a difficult group to target but who data suggest have higher risk.

# **Chapter VIII: Annexes**





## Annex 1. The Surveillance System in Bangladesh

The national HIV surveillance system set up by the GoB has been active since 1998. It is based on the UNAIDS/WHO guidelines for 2<sup>nd</sup> generation HIV surveillance, a key priority of which is to improve the monitoring of developing epidemics like that in Bangladesh. In Bangladesh the surveillance system has two separate components – serological surveillance and behavioral (BSS). Serological surveillance monitors HIV prevalence annually among selected groups at sentinel sites across the country. Syphilis and HCV are also monitored as surrogate markers to corroborate behavioral data regarding unprotected sex and unsafe injections. Through the BSS, behaviors that carry a risk of HIV infection are evaluated. The serological surveillance and BSS are run in parallel in similar population groups but the individuals sampled and the sampling methodologies are different.

In the serological system, participants are sampled non-randomly and are accessed through intervention programs for HIV. Prior to starting the surveillance process, organizations providing HIV prevention services to the selected populations are informed about the entire process and information regarding the populations they provide services to is obtained from them – numbers, characteristics, etc. In order that an organization be accepted for participation in surveillance, it has to fulfill pre-set criteria which include:

- capacity to access the selected population groups,
- availability of an established clinic with medical professionals providing services, and
- availability of staff willing to collaborate with serological surveillance.

In cases where all criteria cannot be fulfilled, e.g. not having a clinician available, and/or not having adequate sample size but where it is felt prudent to include the population despite these deficiencies, adjustments are made to allow inclusion. As an example, if an organization has no physician at a site, a physician is provided through the surveillance system for the duration of surveillance to manage and treat STIs and provide results for syphilis surveillance. In places where adequate numbers of target populations are not available (based on the calculated sample size), all available individuals may be included. Flexibility is essential as it has allowed inclusion of many sites which otherwise would not have been possible.

During surveillance, individuals belonging to selected population groups are asked to visit a respective clinic where blood is drawn when informed consent is granted. A clinic site is required because blood samples cannot be collected in the field setting and results of syphilis tests and treatment for syphilis can only be provided in a clinical setting. The sampling is based on first 400 participants who select themselves into the study or if there are less than 400, all available and consenting individuals belonging to that specific population group are sampled. This type of sampling tends to include people who attend intervention programs, whose behaviors may differ from those who do not attend intervention programs.

Sampling for BSS, on the other hand, is random. The methodology used is Time Location Sampling (TLS) except in brothels where proportionate random sampling is done. The sampling involves a two-stage probability sampling methodology with time location as the first stage to select primary

sampling units (PSUs) and a 'fixed' or 'take all' approach as the second stage. The PSUs are spots where a fixed number of individuals from each of the population groups are assembled in a visible spot in a specific time frame. This methodology allows sampling of individuals both in and out of interventions, but only captures those individuals that spend time in visible locations. As individuals are interviewed in public venues where they gather for selling sex, taking drugs, the time that they can provide for the interview may be limited.

A summary of the two systems is provided in Table A1.

**Table A1. Key features of the surveillance system in Bangladesh**

	<b>Serological surveillance</b>	<b>Behavioral surveillance survey</b>
Sampling methodology	Convenience; conducted in collaboration with intervention organizations	Random using TLS or proportionate random sampling; conducted independent of intervention organizations
Sampling site	Sentinel sites located at intervention sites such as Drop In Centers	Public venues such as fields, hotels, etc
Service provision	Syphilis test results and treatment provided Referrals to intervention organizations for other services	Condoms and a few IEC materials provided No referrals provided

The present system has provided Bangladesh with considerable information that has helped in program planning. One of the aims of a surveillance system is to provide early warning of an epidemic and this was provided for IDUs in Dhaka. Early on, the surveillance system made it clear that IDUs in Dhaka were the most vulnerable population, and BSS data made it even clearer that an epidemic was impending amongst this population group. The surveillance findings were strengthened through triangulation of data with research which highlighted the localized nature of the epidemic in IDUs in Dhaka. The availability of information on Dhaka IDUs has brought home the message that NSP and other harm reduction services cannot be curtailed, rather they need to be expanded to other cities in Bangladesh where IDUs are present. Thus, the grant from round 6 of Global Fund expands coverage of IDUs to new districts where HAPP/HATI are not providing services (annex 2). The information has also helped to convince high level GoB policy makers to pilot OST in Bangladesh.

Similar to the IDU HIV epidemic in Dhaka, the beginnings of an epidemic among female sex workers in Hili is now being observed through serological surveillance. The need for BSS in this town is urgently needed to better understand the driving factors behind this epidemic as well as in-depth research to provide a more complete picture.

The present design of the serological surveillance system has allowed sampling of large numbers of individuals in a relatively short time. As serological surveillance only requires drawing of blood following consent, and responding to a brief questionnaire on demographics (5-6 questions), very little time is required for each individual and depending on the availability of resources, up to 50 individuals can be sampled in one day. This rapid sample collection means that large sample sizes can be obtained in a relatively short time period. Over the years of serological surveillance in Bangladesh, considerable expansion occurred each year in the numbers of individuals sampled (Table 2). In contrast, the long questionnaires used in BSS take 30-40 minutes for each interview.

Moreover, the initial mapping to identify the PSUs is also time-consuming. This limits the number of individuals that can be sampled in a round of BSS, and these numbers have changed very since 2000/01 (Table A2). By keeping the two systems separate, the serological surveillance has been able to cover a much wider geographical area.

**Table A2. Numbers of individuals sampled for serological surveillance and BSS over the years**

Surveillance year	Numbers Tested	
	Serological surveillance	Behavioral surveillance survey
1998-1999	3886	3450
1999-2000	4338	4536
2000-2001	7063	7142
2002	7877	6905
2003-2004	10445	6954
2004-2005	11029	-
2006	10368	7167
2007	12786	

The biggest disadvantage of the present surveillance system is that the serological surveillance system does not sample individuals randomly and that it uses intervention organizations for access. The biases created through such sampling are difficult to gauge. However it is fortunate that in most cities, all available individuals belonging to MARPs are surveyed so that bias is reduced. However, it would be ideal to work on developing a random sampling system for serological surveillance that would be feasible to conduct in the field and also that would allow reaching them a second time to provide results and treatment for syphilis. The BSS, on the other hand, by using a random sampling design has provided more reliable information in the population groups sampled.

Many countries in the region, including Pakistan, Nepal, some sites in India, Indonesia, Vietnam and others are moving towards integrating their serological and behavioral systems, referred to as Integrated Bio-Behavioral Surveillance (IBBS). The advantages to integration include:

- The findings from the serological surveillance and BSS can be directly linked and trends over time can be monitored.
- HIV and other infection prevalence data will be available from a random sample of the specific population.

In Bangladesh, as a trial for integration, RDS was piloted as an alternative sampling technique among MSM in Dhaka in 2006. This was done to overcome the limitations of:

- not accessing individuals who were not available in visible locations
- not integrating the serological with the BSS in an ethical way that allows services to be provided to the target population .

The pilot was very successful in overcoming the above limitations and also showed that the technique is feasible to conduct among MSM. However, there are pros and cons to IBBS which are summarized in Table A3.

**Table A3. Pros and cons of converting to IBBS in Bangladesh**

Pros	Cons
Sampling the same individuals will ensure that reported behaviors and data on infection prevalence can be correlated	High refusal rates are expected in IBBS which could potentially lead to selection bias
It will be possible to conduct more in-depth analysis which will give more information from the same data	Direct linkages with an intervention organization for clinical services will be difficult
The selection bias in serological surveillance will be reduced as a random sampling methodology will be used	There may be problems in determining trends with the change in sampling methodologies

The main advantage of integrating the two systems is that it increases the ability to follow trends and increases the information available on the data collected. IBBS would use a random sample for serological surveillance which may make the data more representative especially in those sites where a “take all” approach is not employed.

A disadvantage is the bias it may introduce in sampling as those who will not be willing to provide blood will not be included. This can potentially lead to large numbers of refusals which at present is not high for BSS.

Another disadvantage in Bangladesh will be the difficulty in directly linking all the participants to intervention organizations and providing services. In IBBS, as sampling will not be linked to any intervention organization, it will be difficult to provide clinical services directly through the surveillance system as was being done in the serological surveillance. Temporary sites will need to be set up to provide at least minimal services.

Finally, converting from a design where the two systems are not integrated to one that is integrated will change the sampling design and may make it difficult to determine trends.

Bangladesh has been a pioneer in establishing a 2<sup>nd</sup> generation surveillance system, but needs to keep ahead of the epidemic and ensure that the surveillance system is able to inform the country on where the epidemic may be emerging more and becoming more concentrated. It is therefore essential that the surveillance system covers relevant geographical or epidemic “zones” and be as representative as possible. For this reason, the GoB has initiated the process of revisiting the surveillance system of Bangladesh.

## Annex 2: Further Details on the HIV Response

### ORGANISATIONAL STRUCTURE

The **National AIDS Committee (NAC)** was formed in 1985 with the President of Bangladesh as chief Patron, and the Minister of Health and Family Welfare as Chair. The NAC is an advisory body responsible for formulating major policies and strategies on HIV/AIDS in Bangladesh, supervising program implementation, and mobilizing resources. The **Technical Committee of the National AIDS Committee (TC-NAC)** of experts on the prevention and control of HIV/AIDS provides technical advice to the NAC and the NASP. Technical sub-committees are formed as and when required, such as the Estimates Working Group.

#### ***National AIDS/STD Program (NASP)***

Bangladesh AIDS Prevention and Control Program (BAPCP) was established in 1996. In 1998, BAPCP was changed to the National AIDS/STD Program (NASP) and placed under the Directorate of Health Services of the MOHFW. NASP provides national leadership as the main government body responsible for overseeing prevention and control of HIV/AIDS, and for ensuring that the National HIV/AIDS strategy is implemented. The NASP is led by a Director who is supported by a Program Manager and Deputy Program Managers.

#### ***Ministerial Focal Points on HIV/AIDS***

Each ministry carries out HIV prevention and control activities through its existing core administrative structures. Some of the key ministries that have been involved in the program are: Finance, Religious Affairs, Home Affairs, Information and Broadcasting, Women and Children Affairs, Youth and Sports, Labor and Manpower, Education, Social Welfare, Posts and Telegraph, and Expatriates Welfare and Overseas Employment. The Government nominated focal points for HIV/AIDS in 16 ministries and departments. The focal points were trained and provided exposure to HIV programming. The objectives of having focal points are to identify best practices for collaboration, develop collaboration mechanisms, and rationalize the roles and responsibilities of the key ministries.

#### ***The National STD/AIDS Network***

The network was formed in 1993 as a forum of NGOs in Bangladesh working on different aspects of HIV and AIDS. The National STD/AIDS Network has been active on a range of HIV and AIDS issues: it acts as a spokesperson for members in the national decision-making process; represents Bangladesh and the members at regional and international HIV and AIDS fora and events; facilitates coordination among member organizations, and disseminates information on successful HIV and AIDS interventions, news, and policy issues, and provides capacity building training courses and workshops for members. Currently the network has 235 NGO members.

#### ***Country Coordination Mechanism (CCM)***

The CCM was established in February, 2002 in response to GFATM requirements, and has gone through several changes. The present CCM members represent the government, NGOs, the private

sector, civil society (including PLHIV and TB, and young people's organizations and movements), academicians and development partners. The Secretary of Health chairs the meetings. The CCM is the supreme authority governing any decisions on matters related to projects supported by the GFATM. A Government Order for the formation of CCM with Terms of Reference has been issued. The CCM has three technical sub-committees (AIDS, TB and Malaria) which meet regularly during proposal development.

## **NATIONAL POLICIES AND GUIDELINES**

### **National Policy on HIV and AIDS and STD Related Issues, 1997**

The 'National Policy on HIV and AIDS and STD Related Issues' was approved by the Cabinet in 1997, after review by experts and discussion to ensure consensus. It emphasizes human rights, gender equity, information, education and communication, and behavior change. It includes specific guidelines on: HIV and AIDS Epidemiological Surveillance, HIV Testing Policy, Management of AIDS and HIV infection, including associated TB, Counseling of HIV and AIDS patients and confidentiality, National blood transfusion services, HIV and AIDS and women, Children and HIV and AIDS, HIV and AIDS and the workplace, HIV and AIDS and Mobility, Commercial Sex, Information, Education and Communication, Condom promotion and distribution, HIV and AIDS in prisons, HIV and AIDS and the media, Drug users and HIV and AIDS, Clinical/Vaccine Trials for HIV and AIDS/STDs, Ethical aspects of HIV and AIDS research, Legal Aspects of HIV and AIDS.

**National Guidelines for ART** include guiding principles and minimum requirements for ART, clinical staging for HIV infection in adults and adolescents, antiretroviral (ARV) regimens and dosages and steps to follow to introduce ART in clinical practice, recommendations for initiating ART in adults and adolescents, reasons for changing ART in adults and adolescents, indications for changing therapy, toxicity and treatment failure and how treatment will be monitored.

### **National STI management guidelines, 2006**

The first National Guideline for STI Management was developed in 1997. Subsequently, studies indicated that syndromic management results in over-treatment in females from the general population and under-treatment of high risk women. Antimicrobial resistance in STI pathogens has increased and validation studies recommended modification of the treatment flowchart, and to develop a separate flowchart for females with high risk behavior (consistent with WHO's 2003 revised STI management guidelines). The experts recommend appropriate drugs for STIs based on antimicrobial susceptibility and treatment based on risk of acquisition of infection and not only symptoms. The 2006 National Guideline for Management of Sexually Transmitted Infections include sections on the epidemiology of STIs in Bangladesh, STI case management, diagnosis and treatment, STI management in special situations e.g. diagnosis and treatment for most at risk populations (e.g. Sex workers and MSM), general population, pregnant women. It also addresses sexuality and safe sex, laboratory techniques, infection prevention, STI case management, and etiological agents of STIs.

## NATIONAL STRATEGIES AND PLANS

In 1988, HIV prevention began with a **Short Term Plan (STP)** that focused on determining HIV prevalence and in developing prevention and control measures, particularly in the health sector. A 3-year **Medium Term Plan (MTP)** was formulated 1989 and during the 1990s, prevention activities were carried out with WHO support in areas of surveillance, laboratory diagnoses,

**The National Strategic Plan for HIV/AIDS, 1997-2002** was drafted by a technical Task Force and finalized by the NASP after a multi-sectoral consensus workshop in 2000 with UNDP support. It reflects National Policy, and defined strategies and priorities, outlined program management aspects, including monitoring and evaluation, and provided a guide for developing sector-specific work plans.

**The National HIV and AIDS Behavior Change Communication Strategic Implementation Plan** for Bangladesh was developed in 1999 with funding support from UNDP, UNAIDS, and USAID through a collaboration among the National AIDS/STD Program, Bangladesh Centre for Communication Programs (BCCP), and other stakeholders.

### ***The National Strategic Plan for HIV-AIDS, 2004-2010 (NSP II)***

The National Strategic Plan 2004-2010 (NSP II) has five main objectives (goals are set out below):

- a) Provide support and services for priority groups
- b) Prevent vulnerability to HIV infection in Bangladesh
- c) Promote safe practices in the health care system
- d) Provide care and treatment services to people living with HIV; and
- e) Minimize the impact of the HIV/AIDS epidemic

*Program Objective-1: Provide Support and Services to the Priority Groups of People.* Provide the priority groups of people at risk of HIV infection with access to the means of protection in ways that respect their human rights and dignity, empower them to protect themselves and others. This will help to create a nation in which all those whose livelihood and employment strategies or lifestyles put them and others at risk of infection are protected. The possible priority groups such as sex workers (brothel/street/hotel/resident), drug users, men who have sex with men, transport and dock/river workers, and street children have been identified through survey and research.

*Program Objective-2: Prevent Vulnerability to HIV Infection in Bangladesh Society by the year 2010.* Identify social values, social norms and practices that affect vulnerability to HIV infection, and strengthen those that reduce vulnerability (for example; lack of understanding of HIV epidemic, gender, exploitation and abuse, including other forms of vulnerability).

*Program Objective-3: Promote Safe Practices in the Health Care System by the year 2010.* The goals are to secure the total blood supply, develop volunteer-based blood supply, minimize unsafe practices and unnecessary procedures throughout the health sector (apply universal infection control procedures, develop policies and practices for the rational use of blood/blood products).

*Program Objective-4: Provide Care and Support Services to the People Living With HIV/AIDS.* The aim is that by 2010 people infected and affected by HIV and AIDS will have access to comprehensive systems of care, support and treatment, which respect their rights and dignity.

*Program Objective-5: Minimize Impact of HIV Epidemic.* Goal: By the year 2010 Bangladesh will continue to have low rates of HIV infection and minimize impact of HIV epidemic. This includes non-discrimination of people living with HIV and AIDS and their families, including medical care without discrimination or prejudice.

### **National AIDS Monitoring and Evaluation Framework and Operation Plan 2006-2010**

The purpose is to guide the gathering of strategic information needed to improve the efficiency, effectiveness and impact of response to the epidemic as well as ensuring accountability of all partners who are contributing to the national AIDS response. The specific objectives are:

- To provide common understanding on the priorities of a national M&E system
- To ensure greater transparency, effective coordination and good communication among all stakeholders involved in the national response
- To guide stakeholders and implementing partners in the collection of the priority data for measuring the progress of the National Strategic Plan.
- To provide stakeholders with data collection tools, including recording and reporting formats and specifics on the needed frequency of collection, compilation and analysis of priority information
- To provide stakeholders with information on the future resource needs for conducting M&E activities and a road map for implementing the M&E framework from 2006 through 2010.

**The National Harm Reduction Strategy 2004-2010** is based on an analysis of drug use and HIV risk. It lists 11 strategies for reducing HIV risk associated with drug use:

Strategy 1: Strengthen understanding of drug using patterns, locations, by expanding research on drug use.

Strategy 2: Strengthen and expand programs to reduce and eliminate the harm caused by drug injecting practices throughout the country (describes the essential elements of comprehensive quality programming, with focus areas).

Strategy 3: Better understand the ways in which drug use influences sexual behavior and ensure access to protection.

Strategy 4: Slow down entry into drug use (actions that aim to delay or prevent entry of potential users in to drug use, with special focus on adolescents and youths).

Strategy 5: Generate political, bureaucratic and legal support required for an effective programmatic response to drug use and HIV

Strategy 6: Develop multi-stakeholder coordination to harmonize and integrate HIV/AIDS and drug use prevention, care and treatment policies of government agencies, private sector community, NGOs and the community to achieve desired objectives effectively and efficiently

Strategy 7: Develop capacity for a sustainable response to drug use and HIV at all levels of administration through high commitment and strong leadership with information and resources to support it

Strategy 8: Enhance monitoring and evaluation on impacts of drug use related HIV/AIDS prevention and care programs in the country



Strategy 9: Provide access to necessary HIV/AIDS treatment and care services to drug users, their families and partners living with HIV/AIDS

Strategy 10: Introduce harm reduction measures into prisons

Strategy 11: Develop a partnership between law enforcement and the health sector to improve the effectiveness and efficiency of HIV/AIDS prevention and control measures targeting drug users

## FUNDING

Much of the funding for HIV in Bangladesh comes from international donors, Table A4 below shows major funding sources and projects during the years of the current national strategy.

**Table A4: Financing for HIV in Bangladesh**

Source	Project Name	US\$ (million)
GoB/WB/DFID (2000-2006) implemented 2004-2008.	HIV/AIDS Prevention Project (HAPP)	26.0
GFATM (2004-2009) Round 2	Prevention of HIV/AIDS Among Young People	19.7
USAID/FHI (2005-2009)	Bangladesh AIDS Program (BAP)	13.0
GFATM (2007-2012) Round 6	HIV Prevention and Control among High-Risk Population and vulnerable Young People in Bangladesh	36.7
GoB, WB, DFID, EC, EKN, CIDA, Sida, KfW, UNFPA (2008-2011)	Health, Nutrition & Population Sector Program (HNPS)	22.0
GTZ ( 2006-7)	Multisectoral HIV program in Chittagong City Corp.	2.0
GTZ ( 2009-11)	Multidisciplinary HIV/AIDS project in Cities in Bangladesh	3.7
UN (UNAIDS, UNICEF, UNFPA, WHO, UNHCR, UNODC) 2008-9	UN joint & agency projects and activities including PPTCT pilot project (UNICEF), OST pilot (UNODC).	3.2
ADB (2006-10)	HIV prevention integrated into Urban Primary health care including VCT	10.0
Netherlands (2006-7)	Various Including targeted intervention (MSM)	0.155
AusAID (2006-7)	Various	1.2
SIDA(2006-7)	Including ARV	0.58
<b>Total funding</b>		<b>127.235</b>

## PROGRAMS

### **Bangladesh AIDS Prevention and Control Program, 1996-1997**

Funded by UNDP (BGD/97/042), this was the first prevention project, and activities were implemented by DGHS, WHO, HASAB, Radio Bangladesh, Islamic Medical Mission, Bangladesh Television, Bonanza Communication, UCHP, Bangla Academy and Bangladesh Chemical Industries Corporation. The main outputs were as follows:

“Sunder Jiban” Radio program: 26 episodes of this 30-minute radio program were broadcast in colloquial language, from the commercial services of Dhaka, Chittagong, Rajshahi, Khulna, Sylhet and Rangpur center of Bangladesh Betar. Short plays, slogans, Jari and Shari songs and Bangla Kawali and Puthi path were used to convey awareness and prevention messages on HIV/AIDS.

GIS mapping of 17 brothels: GIS maps were made showing exact locations and detailed layouts of 17 brothels in 13 thanas of 12 districts, and a data base of NGOs working in the brothels, and nearby health facilities, police stations and their distance from the brothel, to identify the staff capacity and range of services provided by the NGOs and health facilities (FHI 2002).

Computerized inventory of NGOs working on HIV in Bangladesh (contractor: HIV/AIDS and STD Alliance Bangladesh).

Workshops: (1) Staff from district administration and hospitals, journalists, private medical practitioners (BPMP), political leaders, school teachers and NGO workers discussed HIV in Bangladesh, transfusion transmissible diseases and how social workers, journalists and political leaders could raise public awareness on voluntary blood donation. (2) Workshop with WHO, professionals from Medical Colleges, DGHS and BAPCP to prepare a module on “Universal Precautions” to prevent HIV/AIDS in health care settings. (3) A National HIV/AIDS BCC Strategy was drafted after listing all programs, collecting HIV/AIDS/BCC materials, doing interviews and program observations, and literature review.

### **DFID/CARE-Bangladesh collaborative efforts, from 1995**

SHAKTI (Stopping HIV/AIDS through Knowledge and Training Initiative) was one of the first projects to shift from awareness raising to behavioral change interventions targeting brothel based sex workers in three district towns, street based sex workers in 16 urban areas including Dhaka and sea and land port locations, IDUs and later on transgender populations (TG) and men who have sex with men (MSM), hotel-based, home-based and casual sex workers. In harm reduction, CARE worked in 29 districts, implementing interventions in Dhaka, Rajshahi, Chapainawabgong, Tongi, Narayanganj, Pabna, Ishwardy and Chandpur areas to prevent HIV and reduce negative health effects among injecting drug users ([Azim, Hussein & Kelly 2005](#); [Jenkins et al. 2001](#)). The interventions include: outreach, monitoring, evaluation and surveys, advocacy and networking, drop-in centers, treatment of abscesses, needle/syringe programs and condom distribution.

Interventions for transport workers and sex workers at transport hubs were implemented from 2000-2005 (Habib 2005). The *RASTTA Bondor project* interventions took place in all of the country’s major transport depots and border areas, river and sea ports, docks and harbors. CARE partnered with an Indian NGO working in border areas to address the high cross border movement of transport workers between India and Bangladesh. Referral services were offered at clinics on both sides of the border and DIC services were available to Indian and Bangladeshi truckers and their helpers.

### ***HIV/AIDS Prevention Project (HAPP) 2000 - 2007***

The HAPP was approved in December 2000, financed through a credit from the International Development Association (IDA) and a grant from DFID, with financial contributions from GoB. HAPP focused primarily on harm reduction to prevent HIV transmission amongst high risk groups -- IDUs, sex workers and their clients, MSM, and hijras. After a slow start, project activities were prioritized and implementation arrangements were simplified as recommended after a Mid Term Review in June 2003.

The revised project was implemented with technical and management support from UN Agencies as follows: a) UNICEF - USD 5.5 million for targeted interventions for MARPs through 45 NGOs working in 14 consortia; USD 2.5 million for small grant fund to NGOs, CBOs and other agencies through an HIV/AIDS Intervention Fund (HAIF), and USD 3.5 million for communication and advocacy, b) UNFPA - Institutional capacity strengthening of NASP (USD 0.99 million for technical assistance) and condom procurement, and c) WHO - blood safety program (USD 3.09 million). The NASP managed the remaining USD 10.65 million for advocacy/communication activities, institutional strengthening and capacity development. When completed at the end of December 2007, (a) NGOs under the HAPP program were managing 130 Drop in Centers which provided outreach, peer education, needle-syringe exchange, STI care, and Voluntary Counseling and Testing (VCT) referral services, and covered 43 of the 64 districts. The project provided guidelines, standardized operating procedures and training to the NGOs. (b) An HIV/AIDS Intervention Fund (HAIF) gave 74 small grants of up to US\$20,000 to 74 NGOs, selected from 1185 proposals. (c) A National HIV and AIDS Communication Strategy 2005-2010 was developed, communication materials (flip charts, booklets) developed and distributed, and training in advocacy and communication provided. (d) Hospital blood transfusion capacity was upgraded, and blood screening kits and training provided. (e) Consultant and logistical support was provided to the NASP in program implementation, safe sex promotion, drug users' interventions, advocacy/BCC, STI management, monitoring and evaluation, financial and administrative management. Development of policy / program documents as facilitated; e.g. National Strategic Plan for HIV/AIDS for 2004-2010, HIV/AIDS Module for Health Managers, National Harm Reduction Strategy, National Guidelines for ART, National STI management guideline, Nurses' manual on HIV/AIDS, Media workshop guideline, HNPSP Operational Plan for HIV/AIDS (2006-2010), Conceptual framework of the National HIV/AIDS Monitoring and Evaluation.

### ***HIV/AIDS Targeted Intervention (HATI) 2005-ongoing***

The HIV/AIDS Targeted Interventions (HATI) supported by the HAPP were continued under the World Bank financed Health, Nutrition and Population Sector Program (HNPSP, 2005-2010). HATI focuses on intervention packages for six high risk groups: IDUs, brothel based sex workers, street based sex workers, hotel and residence based sex workers, clients of sex workers, and MSM, MSW and *hijra*. A total of 41 NGOs under the 12 consortia work in 67 upazilas of 44 districts. UNICEF has been entrusted to manage the targeted interventions.

### ***USAID/FHI Bangladesh, from 2000-2009***

Activities supported have included: interventions for MARPs (IDUs, sex workers, MSM, *hijras*), support for NGOs, FBOs and groups addressing the needs of PLHIV, national Behavioral and Serological Surveillance surveys, condom promotion, training of health providers in syndromic management of STIs, STI studies, VCT centers and training for VCT center staff, advocacy for IDU

interventions and work with police, prison, Department of Narcotics Control (DNC), and local communities/NGOs, media behavior change campaigns, a workplace intervention for rickshaw-pullers in Chittagong, *Modhu-Mita* integrated health centers that provide NSP for IDUs and medical care for sex workers, technical assistance to a PLHIV peer support organization, and input into the National HIV/AIDS Strategy, the National Advocacy/BCC Strategy, National STI Guidelines, and GFATM second round proposal. The **Bangladesh AIDS Program (BAP) 2005-2009** was funded by USAID with about 12 million USD, and implemented through a team comprising FHI, Social Marketing Company (SMC), John Snow Incorporated Bangladesh (JSI Bangladesh) and Masjid Council for Community Advancement (MACCA), with the support of 18 implementing agencies and numerous collaborating partners. BAP activities included NSP, ABC program to reduce sexual transmission, and roll-out of clinical services, including VCT and care and treatment centers.

***Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) round 2, 2004-2009***

The goal of the GFATM round 2 grant is “to prevent HIV infections in young people, ages 15-24, and thereby help avert a generalized HIV epidemic in Bangladesh”. The grant was under the management of Save the Children, USA. Specific activities funded are: HIV prevention information to young people through mass and print media, making health services more youth friendly, providing life skills education through youth organizations, movements and clubs, condom social marketing, integration of HIV prevention information into secondary schools and higher secondary curriculum, advocacy and sensitization with gatekeepers – religious and community leaders, policy makers and parents, baseline surveys and evaluation surveys and in-depth studies on community dynamics, sexual practices and attitudes of young people.

Some specific project outputs: (a) The "Bachte Holey Jante Hobe" media campaign used print and electronic media, with TV spots and a drama series on HIV prevention, has been recognized for its strong brand recognition. The 20-episode TV drama serial Heeraphul (BTV) and 104-episode radio program Jholmolia that aired on Bangladesh Betar attracted huge audiences. TV and radio talk shows, jingles, billboards, bus paneling, open air concerts, advertisements, posters, leaflets, stickers, calendars, T-shirts, sun caps, umbrellas, folders and events to mark World AIDS Day and World Friendship Day have reached many young people in Bangladesh. (b) Life Skills Education (LSE) targets young people and also engages them in providing information to others. It has extensive reach – even to students at madrasahs. (c) HIV / AIDS information has been incorporated into secondary and higher secondary (grade VI to XII) curricula at colleges, madrasahs, vocational institutions and English medium schools in urban and rural Bangladesh. (d) 136 grass-root level NGOs mainly working with micro-credit programs are disseminating HIV related information through regular group discussions with beneficiaries. (e) Religious leaders have been provided with HIV prevention information and involved in disseminating it in their mosques.

***Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) round 6, 2008-2012***

This GFATM grant aims to limit the spread and impact of HIV in the country by (1) improving coverage and quality of essential HIV services for the most vulnerable, high-risk populations, (2) increase coverage and quality of HIV prevention interventions and risk reduction for especially vulnerable young people, and (3) build capacity of government and NGO partners at national and district levels to scale up standardized, high-quality interventions, to monitor and improve coverage and quality, and to improve coordination. Total funding of up to \$40 was approved; phase I (\$13 million) started in February 2008 and ended in April 2009, phase II (around \$26 million) should be

completed in April 2012. As in the earlier GFATM grant, Save the Children, USA has been contracted as the Management Agency and has involved 13 NGOs as implementing partners.

The initial phase scaled up the essential service package for female sex workers and IDUs. Activities include promoting and supplying condoms, and providing STI services for sex workers, and a needle-syringe component and drug dependence treatment for IDUs. These activities continue during the second phase. In addition, the intention is to expand and strengthen HIV-related treatment --for opportunistic infections, TB, and ART, train clinical staff and strengthen community-based care and support with involvement of positive networks. Planned activities also include: community-level advocacy in intervention areas and advocacy with police and other authorities; providing prevention information especially focused on young people through mass and print media (TV, radio, press, mobile phones and internet, print materials); expanding Youth Friendly Health Services in GOB, NGOs and private clinics including selecting and refurbishing new sites, training service providers, generating demand by targeted communication, developing BCC and IEC materials training community-level providers; continued condom social marketing; training teachers' trainers; developing and delivering interventions to help young people avoid starting drug use; developing guidelines, standards and tools and training and supporting NGOs that provide services to improve service quality, monitoring outcomes and conducting operations research.

### **Safe Blood Transfusion Program**

The main challenges were very low capacity to screen blood, high reliance on paid donors, and an inadequate supply of blood. Safe Blood Legislation was enacted in 2002, after persistent efforts by the TC -NAC and NASP. It requires blood transfusion centers to register and meet specific guidelines and criteria in order to be licensed to operate, and requires all blood transfusion centers to screen blood for syphilis, HIV, Hepatitis B and C, and malaria. Initial steps in implementing the law have included training at 98 hospitals across the country for 135 medical technicians and 127 Medical Officers; supplying testing kits/reagents, blood bank refrigerators and 44 ELISA machines to test for HIV; and screening interviews for potential donors. Progress has been made in shifting away from professional blood donation (down from 70% to 19% of donors) to voluntary donations (up from 10% to 31%) and increasing donations from relatives (20-25%) when blood is needed. Between 2001 and 2006, HIV was only detected in 44 of the 479,843 units of donated blood that were screened.

### **Armed Forces Intervention**

Bangladesh is a major contributor to the United Nations Peacekeeping Forces and the Kuwait Peacekeepers. Since 1989, several thousand troops have served in peacekeeping missions and operations in Cambodia, Kosovo, Sierra Leone, Congo, Mozambique, and others. Although these mainly young men have served in some countries with high HIV prevalence rates, HIV infections among the Peacekeepers remain commendably low. An intensive and comprehensive HIV prevention program was initiated in 1989 by the Director General of Medical Services, Bangladesh Armed Forces as an integral part of pre- departure and post-arrival preparation and education of personnel deployed overseas. The program combines religious motivation, peer pressure, and positive use of the hierarchical structure of the army. Peacekeepers are tested for HIV regularly. This program has been identified as a best practice example by UNAIDS.

**Multidisciplinary HIV/AIDS Program in Chittagong, Rajshahi, Khulna and Sylhet, German Technical Cooperation (GTZ), 2004-2008.** The goal was to improve prevention, diagnosis and treatment of STDs and HIV/AIDS in Chittagong, Khulna, Rajshahi and Sylhet, working with municipalities, the Ministry of Local Government, Rural Development and Cooperatives (MoLGRDC) and Ministry of Health & Family Welfare (MoHFW). A comprehensive study on HIV risk profiles was conducted in Chittagong to assess needs, and health personnel were trained on HIV/AIDS, STDs and infection prophylaxis.

### **SELF-HELP GROUPS**

**Prochesta** is a self help organization of current Injecting Drug Users. It means “Endeavor”. It was formed in 2000 after about 70 drug users and outreach workers of CARE SHAKTI project got together to discuss problems and consider solutions. A priority is to reduce harassment by police and local mastans etc. It also aims to improve self care through participating in HIV prevention activities, and to advocate for IDUs. In 2008, there were 465 members, but there are challenges in retaining and recruiting members, and in connecting members. Prochesta’s participation in sero-surveillance has made the process easier.

**BODAR** (Bangladesh Organization of Drug Addict Rehabilitation) is a self help organization of ex-drug users. In February 2001 about 15 recovering addicts who had completed treatment in a community based detoxification camp decided to create a group to help keep themselves drug free. High relapse rates affect participation in the group activities. However, BODAR has been able to maintain relationships with external organizations, organize and manage detoxification camps, provide counseling, follow up and home visits, and participate in various forums.

**Nari Mukti Sangha (NMS)** was established in 1998 and registered with the Social and Welfare Department in 2000. This Sex Workers' organization is based in Kandapara Brothel, Tangail, and coordinates project activities at the brothel. NMS has had considerable influence in shifting the balance of power at the brothel from a single landlord to many of the women and their babus. Door to door visits within the brothel helped recruit nearly 400 members, over half of the total number of sex workers within the brothel complex. NMS has arranged adult literacy sessions in collaboration with three NGOs, sells condoms to SWs and brothel clients, work with CARE to provide prevention services, and with ICDDRB to conduct surveys and sero surveillance. NMS has established good links with the local police, district administration, and health department, and representatives have attended national and international meetings.

**Durjoy Nari Shangha (DNS)** is an organization of street based sex workers in Dhaka city. It was set up in 1998 and registered itself with the Department of Women’s Affairs in year 2000. Durjoy provides outreach to SWs who use drugs, runs a child care center and two DICs, and provides training in communication skills, and sells condoms. It is run by an elected eleven member executive committee.

**Ashar Alo Society (AAS)** is a community based non government registered organization working for rights, support, care, empowerment and greater involvement of people living with or effected by HIV and AIDS in Bangladesh. It was formally established in 2000, and has secured financial support from Family health International, UNICEF, Action Aid Bangladesh, HASAB, CAFOD, Tides Foundation and the GFATM round 6 grant. AAS provides peer counseling and VCT; training in life skills, peer

education, and positive living; outreach services, medical assistance, advocacy, community sensitization, and members share their experience as HIV positive people in different forum. As of February 2008, there were 511 positive members and approximately 950 family members all over the country.

**Mukta Akash Bangladesh (MAB)** is a self help group working with people infected and affected by HIV and AIDS. With the help of CARE Bangladesh the organization was born in MAB, and began implementing activities in mid-2005. MAB works in Dhaka and Khulna. Members are referred by several VCT Centers. MAB holds monthly meetings where PLHIV can share experiences in order to support each other and share information regarding positive living. MAB offers PLWHAs HIV and AIDS information; family, hospital, group, one on one, hotline (telephone) and peer counseling; referral for testing and clinical services through a doctor who checks members every once a week at MAB premises after which MAB provides prescribed drugs for opportunistic infections free of charge.





# **Chapter IX: References**



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