RUSSIA

2005 Behavioral Monitoring Survey

USAID'S IMPLEMENTING AIDS PREVENTION AND CARE (IMPACT) PROJECT

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Abbreviations and Acronyms

ABC	Abstinence, Be faithful, Consistent Condom use
AIDS	Acquired Immunodeficiency Syndrome
ARV	Antiretroviral drug
BMS	Behavioral Monitoring Survey
BSS	Behavioral Surveillance Survey (or BSS+)
CSW	Commercial Sex Worker
DE	Design Effects
FHI	Family Health International
HIV	Human Immunodeficiency Virus
IBY	Institution-Based Youth
IDU	Injecting Drug User
MARP	Most-At-Risk Populations
MSM	Men Who Have Sex with Men
NGO	Non-Governmental Organization
PLWHA	People Living with HIV/AIDS
PSI	Population Services International
RDS	Respondent-Driven Sampling
RDSAT	Respondent-Driven Sampling Analysis Tool
SPSS	Statistical Package for the Social Sciences
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
Stellit	Saint Petersburg Non-governmental Organization of Social Projects
UNGASS	United Nations General Assembly Special Session
USAID	United States Agency for International Development
USAID/R	United States Agency for International Development/Russia
VCT	Voluntary Counseling and Testing
YTC	Youth in Transition Centers

Executive Summary

The Behavioral Monitoring Survey (BMS) is based on standard survey methods used in many countries to monitor HIV epidemic trends and assess the impact of HIV prevention programs. The primary purpose of the BMS in Russia was to quantify and assess changes over time in the levels of high-risk sexual and injecting drug practices in areas where the United States Agency for International Development (USAID) will be implementing HIV prevention projects for specific high-risk populations. This report summarizes the results from the 2004 BMS, which was conducted in St. Petersburg, Orenburg, and Irkutsk with the following target groups:

Target Groups	City	Definitions
Injection drug user (IDU)	St. Petersburg, Orenburg, Irkutsk	Any person who injects illicit drugs (age 15-49 years)
Commercial sex workers (CSW)	St. Petersburg, Orenburg, Irkutsk	Women who exchange sexual favors for money or drugs on the streets (age 15-49 years)
Men who have sex with men (MSM)	St. Petersburg	Men attending night clubs or bars and who engage in sexual activities with other men (age 15-49 years)
Institution-based youth (IBY)	St. Petersburg, Orenburg, Irkutsk	Youth aged 15-25 years in orphanages, boarding schools, vocational schools, and evening schools
Youth in transitory centers (YTC)	St. Petersburg, Orenburg, Irkutsk	Youth aged 15-25 years attending shelters, drop-in centers, and crisis centers

The overall goals of the current BMS were to: 1) Provide a baseline description of socio-demographic characteristics and HIV-related risk behaviors that are in need of change in these groups; 2) Identify priorities for planning prevention programs; and 3) Provide information needed for advocacy, support, and policy making. The BMS is conducted through a series of cross-sectional surveys using probability-sampling techniques and standardized questionnaires. This is the first cross-sectional survey conducted in these cities with these target groups. Trained interviewers administered a standardized questionnaire that consisted of questions on socio-demographic characteristics, types of sex partners, condom-use practices, injection drug-use practices, knowledge of HIV and sexually transmitted infections (STIs), stigma and discrimination, HIV test access, and exposure to HIV prevention programs. The total sample size for all five populations is as follows:

		St. Petersburg Achieved (Target)	Orenburg Achieved (Target)	Irkutsk Achieved (Target)	Total Achieved (Target)
IDU		**200 (200)**	**200 (200)**	**196 (200)**	**596 (600)**
CSW	**Exposed**[a]	**314 (330)**	**176 (305)**	**205 (305)**	**1043 (1270)**
	Non-exposed[a]	**348 (330)**			
MSM	**Exposed**[a]	**82 (305)**			**692 (610)**
	Non-exposed[a]	**610 (305)**			
YTC	Male	**64 (385)**	**18 (610)**	**25 (610)**	**198 (3210)**
	Female	**50 (385)**	**20 (610)**	**21 (610)**	
IBY	Male	**464 (385)**	**638 (385)**	**668 (385)**	**3582 (2310)**
	Female	**402 (385)**	**728 (385)**	**682 (385)**	

[a] Target group members had either been exposed or not exposed to targeted USAID-funded interventions. Interventions for MSM included the distribution of educational materials, condoms and lubricants at MSM night clubs. Interventions for CSWs included outreach at street-based locations where CSWs find clients and distribution of educational materials, condoms and lubricants.

Summary of Results

Injection Drug Users

In all three cities, estimates reveal that IDUs are predominately male, unmarried, between the ages of 23 to 32, and have injected drugs for 6 years or more. More than 60% of IDUs in each city started injecting drugs before the age of 22, with a substantial proportion starting before the age of 18. The most common drug injected in the month preceding the BMS survey was heroin. One striking difference in the pattern of drug use in these three cities was the frequency of drug injection; while the majority of IDUs in St. Petersburg (72.3%) and Irkutsk (91.7%) injected at least once a day in the previous month, only13.2% of IDUs in Orenburg injected at least once a day.

Only about one-half of the IDUs in all three cities reported using a new, unused needle every time they injected in the last month. Additionally, while borrowing of needles in the previous month was fairly uncommon (about a quarter of IDUs in St. Petersburg and Orenburg, and 15% in Irkutsk), none of them reported cleaning those needles with bleach. Other risky injection behaviors varied across the study sites. For instance, the majority of IDUs in St. Petersburg and Orenburg shared injection equipment and drew drugs from communal containers in the previous month; this was less common in Irkutsk, with about three-quarters reporting never practicing such practices in the previous month. The use of pre-filled syringes and backloading, frontloading or splitting were only frequently reported in Orenburg. While almost all IDU felt that it was possible to obtain new, unused needles, only 1.2% of IDU in St. Petersburg, compared to 69% in Orenburg and 37% in Irkutsk, cited needle exchange programs as a source of unused needles. This may be an indication of greater effectiveness and coverage of harm reduction programs in certain cities.

In addition to risky injection behaviors, there are indications of high-risk sexual behaviors. The age for first sexual intercourse was early for the majority of IDUs, with about 90% having had their first sexual contact under the age of 18. Multiple partnerships were also reported with an estimated two out of every five IDUs in St. Petersburg and Orenburg having had more than one non-regular partner in the previous 12 months. Consistent condom use was also low among IDUs with regular and non-regular sex partners, although higher with CSW partners.

IDUs in Orenburg appeared to be the most exposed to HIV programs targeted for IDUs. For example, in the last 12 months, IDUs in Orenburg were more likely to have sought HIV prevention services, including needle exchange (59.4% versus 28.2% in St. Petersburg and 7.5% in Irkutsk), receiving informational material on HIV and STIs (52.1% versus 7.8% in St. Petersburg and 1.5% in Irkutsk), and free HIV tests (44.8% versus 21.2% in St. Petersburg and 6.3% in Irkutsk). This suggests the need to broaden coverage for IDUs in St. Petersburg and Irkutsk. Overall, more than 70% of IDUs in each city have taken an HIV test sometime in the past.

Commercial Sex Workers

Overall, commercial sex workers (CSWs) across the three cities were in their mid-twenties, unmarried and living alone. One of the most distinctive differences between CSWs in the three cities was their involvement in injection drug use. Unlike IDUs in Orenburg, the majority of CSWs in St. Petersburg (83.9%) and Irkutsk (80.0%) also injected drugs in the last month. Approximately one-half to two-thirds reported using clean needles every time they injected in the last month.

Knowledge about HIV risk though sharing of drug injection needles and equipment among CSWs was almost universal in all three cities; however, a smaller proportion knew of the risk of HIV from inconsistent condom use, particularly in Orenburg, where only two-thirds knew this particular risk.

Condom use with paying partners was high in all three cities with over 80% of CSWs reporting consistent condom use in the last one month. However, condom use was lower with non-paying partners. CSWs in Orenburg were slightly more likely to use condoms with non-paying partners compared to CSWs in the other two cities. Additionally, a higher proportion of CSWs in Orenburg had more condoms on them at the time of the interview. Of particular note among CSWs in all three cities was the high level of sexual violence experienced by CSWs, from 23% among those in Orenburg to as high as 43% in Irkutsk.

CSWs in Orenburg (21.0%) had the highest rate of reported STI symptoms experienced in the last 12 months compared to CSWs in St. Petersburg (13.0%) and Irkutsk (5.9%). However, they had the least amount of knowledge about STI symptoms. This finding may be an indication of insufficient STI prevention education that goes along with STI testing in Orenburg.

Prevention services for CSWs appear to have had the greatest reach in St. Petersburg compared to Irkutsk and Orenburg. In Irkutsk, prevention activities related to HIV have primarily focused on injection-related HIV risk, as opposed to HIV risk through sexual transmission. In comparing CSWs exposed and not exposed to HIV prevention programs in St. Petersburg, there were slight differences in their demographic and risk profile. With regard to the risk behaviors, CSWs who were exposed to HIV prevention programs were more likely to inject drugs than those not exposed. This is likely an indication of the fact that HIV prevention programs in St. Petersburg have been targeting female IDUs knowing that many of the IDUs are engaging in commercial sex work. The exposed CSWs also exhibited higher injection risk behaviors compared to non-exposed CSWs; they were more likely to use pre-filled syringes, engage in backloading, frontloading, share injection equipment, and use drugs from a communal container. However, exposed CSWs did indicate that they were more likely to be able to obtain clean unused needles more often that those not exposed. There were no differences in condom use, HIV prevention knowledge and experiences of STI symptoms comparing exposed to non-exposed CSWs.

Men who have Sex with Men (St. Petersburg)

The majority of the MSM respondents in St. Petersburg were highly educated, had lived in the city for at least 11 years, and were between the ages of 18 and 27 years. At the time of the interview more than one third of MSM were married.

MSM HIV-risk behaviors were related to sex rather than the injection of drugs. Multiple partnerships were frequent with a third of MSM having more than 10 non-commercial male sex partners in the last six months. Condom use, however, was low; only 64% reported condom use during their last act of anal sex. In addition, 30% of MSM also had female sex partners in the last six months, more than half of whom had at least five female partners during that time period. Of particular concern is the low rate of condom use with female partners; 60% reported using a condom at last sex with a female partner.

Only about one-half of MSM had tested for HIV. However, MSM who were exposed to the HIV interventions (20.7%) were significantly more likely to have sought a free HIV test in the last 12 months than those not exposed (10.5%). Even though HIV programs for MSM exist in St. Petersburg, referral for HIV testing was low. Among MSM who were exposed to HIV programs, only 18% reported being referred for HIV testing. Although HIV prevention programs for MSM have existed in St. Petersburg since 2004, coverage has been low; only 12% of the MSM group had been exposed to HIV prevention programs for MSM. These HIV programs include outreach at gay nightclubs, primarily consisting of provision of free condoms and lubrication, and HIV/STI prevention education materials.

Youth in Transitory Centers

The majority of youth in transitory centers were under the age of 20 in St. Petersburg and all were 17 or younger in Irkutsk and Orenburg. It is a very stable population with the majority of them having lived in the respective cities for 11-20 years. In St. Petersburg and Irkutsk, most of the YTC were residing in a boarding school or a hostel/dormitory. In Orenburg, 45% were residing in boarding schools, and approximately one-third (37%) were residing at their parents' home.

There is a fairly high level of alcohol use among YTC, with the exception of those in Irkutsk. In St. Petersburg and Orenburg, about one-third indicated consuming alcohol at least a few times a week. A smaller percentage (9-17%) indicated having injected drugs in the last 12 months.

Of particular concern among YTC is the high level of sexual activity with low condom use. In St. Petersburg and Orenburg, about one-half to two-thirds had sex in the last 12 months. Among them, less than 20% used condoms consistently in the last 12 months. One of the important findings in this survey among YTC is the high level of sexual violence experienced by girls in Orenburg (23%).

Although the sample sizes were small, about a quarter of the female YTC in Orenburg and Irkutsk had experienced some kind of STI symptom. Although the majority of YTC in all three cities have heard of STIs, fewer than 20% knew about common male and female STI symptoms, particularly in Irkutsk. Knowledge about HIV prevention was also extremely low. Only one-half to two-thirds agreed that abstinence or that having one faithful uninfected partner can prevent HIV. A slightly higher proportion (66-83%) agreed that consistent condom use could prevent HIV infection. However, the majority of those surveyed agreed that injections with a used needle could transmit HIV. This is likely reflective of the fact that the HIV epidemic has been fueled by injection drug use and that prevention efforts have focused on injection risk and less so on sexual risk.

Institution-based Youth

The majority of IBY were under the age of 20 years. With the exception of those in St. Petersburg, one major difference between youth in institutions and those in transitory centers was the level of education. A greater proportion of IBY had completed secondary schooling compared to YTC. IBY were similarly stable as the YTC, with the majority having lived in their respective cities for 11-20 years. However, unlike the YTC, it was common for IBY to be residing at their parent's home (65-85%). A fair proportion (11%) of IBY in Orenburg reported residing on their own despite the fact that this was a slightly younger group than IBY in St. Petersburg and Irkutsk.

Less than 5% injected drugs in the last 12 months, however, sexual activity among this group was more common. Almost half of IBY had sex with non-commercial partners in the last 12 months; sex with commercial partners was not common. Of particular concern is that among sexually active youth consistent condom use was low (43% in St. Petersburg and Orenburg and 56% in Irkutsk), despite the fact that over 80% of those surveyed agreed that consistent condom use could prevent HIV infection. A slightly lower proportion (less than 70%) agreed that abstinence or having one faithful uninfected partner could prevent HIV. Again, as with other risk groups, the majority knew that injections with a used needle could prevent HIV infection, a reflection of the fact that HIV prevention programs have primarily focused on drug use prevention and injection-related risks.

History of STI symptoms in the past 12 months was infrequent; less than 4% in all three cities reported experiencing an STI symptom. While knowledge of the availability of HIV testing was fairly high (over 75%), few had actually been tested for HIV (as low as 10% in St. Petersburg and up to 15% in Orenburg and 20% in Irkutsk). Of particular concern is that only about 10% of those who tested actually received their HIV test results.

Program Implications

Injection Drug Users

- Strengthen comprehensive HIV/AIDS prevention programs using innovative behavior change strategies that go beyond increasing knowledge about safe injection behaviors.
- Conduct educational campaigns and advocacy with local law enforcement groups and other local authorities to ensure their support for service delivery to IDU.
- Expand interventions for IDUs to include safe sexual practices; interventions should take the opportunity to reach partners of IDUs, given that a high proportion of IDUs live with their sex partners.
- Ensure that HIV prevention programs are targeted for the level of drug use; appropriate messages for the regular drug users should be different from the occasional (or more recently initiated) drug users.
- A comprehensive drug abuse treatment program for IDUs should include clinical examination by narcologists to identify people with clinical drug addiction; provision of effective drug addiction treatment at narcology clinics; services at rehabilitation centers after receiving drug addiction treatment; social assistance by hospital staff and social workers for drug abuse treatment patients.

Commercial Sex Workers

- Programs targeted at CSWs need to address the high level of sexual violence experienced by these women.
- Strengthen drug rehabilitation, risk reduction, and substance abuse treatment programs in St. Petersburg and Irkutsk given the high level of drug use among CSWs; this should include the provision of a comprehensive drug abuse treatment program at the city's narcological clinic that includes drug abuse treatment and rehabilitation and provision of social services.
- Interventions for CSWs should not solely focus on sexual risk behaviors; the interventions must also include reducing their risk through comprehensive HIV/AIDS prevention programs including CT, education on risk reduction in drug use and other sexual health problems.
- STI diagnosis and treatment must be strengthened, particularly in Irkutsk. This includes making referrals for STI testing and treatment for CSWs.

Men who have Sex with Men

- Develop prevention interventions that address safer sexual practices with both male and female partners, including commercial sex partners.
- Provide access to condoms and water based lubricants
- Conduct anti-drug use activities that address the high use of 'soft' drugs such as marijuana.
- Conduct HIV and STI prevention activities through the internet given its high usage by this group; use techniques such as internet banners and communication with a social worker in internet forums and chat rooms.

Institution-based Youth

- Develop interventions that include drug use and alcohol prevention.
- Provide youth friendly STI education and testing at dermatovenerologic hospitals.
- Develop innovative strategies to promote safer sexual behaviors, particularly delayed sexual debut and consistent condom use.

Youth in Transitory Centers

- Develop interventions that include drug use and alcohol prevention.
- Ensure the protection of YTC again sexual violence in Orenburg given the high prevalence of victims of sexual violence; protective measures for YTC should include psychological services at transitory centers for victims of sexual violence and strengthening of law enforcement agencies and legal advocacy organizations.
- Provide youth friendly STI education and testing at dermatovenerologic hospitals
- Develop innovative strategies to promote safer sexual behaviors, particularly delayed sexual debut and consistent condom use.

I. INTRODUCTION & METHODOLOGY

Introduction

This report presents the results of the Behavioral Monitoring Survey (BMS) conducted in three cities (St. Petersburg, Orenburg, and Irkutsk) in Russia in 2005. The BMS collected data from the following groups: Injection drug users (IDUs), men who have sex with men (MSM), commercial sex workers (CSWs), and youth (institution-based and youth in transitory centers (YTCs). Data on MSM was collected only in St. Petersburg. The complete set of results for this report is presented in the Data Tables in Appendix A. Appendix B contains a list of the staff members from partner organizations that participated in the data collection.

The BMS was implemented by Russian and American researchers supported by Russian federal and regional authorities. Family Health International (FHI) provided technical assistance for the design, implementation, analysis, and report-writing of the BMS and Stellit (Saint Petersburg Non-governmental Organization of Social Projects) implemented the survey, from hiring staff and training to overseeing all parts of the data collection and analysis.

This introduction provides background to understand the social, economic, and epidemiological context of the target groups and their HIV prevention behaviors. Following this descriptive introduction, the report presents the results of the research and a comparative analysis of findings on key indicators for each study population. These indicators provide key information on the socio-demographic characteristics, risk behaviors, and other indicators related to HIV risk and prevention. Based on these results, practical implications for HIV and STI prevention programs and policies for each of the study populations are discussed.

Overview of the Behavioral Monitoring Survey (BMS)

The Behavioral Monitoring Survey is a monitoring and evaluation tool designed to track trends in HIV/AIDS-related knowledge, attitudes and behaviors in sub-populations at high-risk of HIV infection, including CSWs, IDUs, MSM and YTCs. The behavioral survey consists of repeated cross-sectional surveys conducted systematically to monitor changes in HIV/STI-related risk behaviors. The key benefit of this methodology is its standardized approach to questionnaire development, sampling frame construction, and survey implementation and analysis. Most of the questions in the questionnaire have been validated in many different populations. The results of the BMS serve multiple purposes:

1. They yield evidence for outcomes of projects (i.e., changes in knowledge, health-seeking behaviors, and risk behaviors);
2. They provide indicators of project successes and highlight problem areas;
3. They identify priority populations for interventions;
4. They identify specific behaviors in need of change; and
5. They can be used to advocate for support (political and financial) and policy changes.

In many countries around the world where FHI has conducted this behavioral survey with national counterparts, the behavioral survey is referred to as the *Behavioral Surveillance Survey* (BSS) (as opposed to BMS) because it serves as the **national** behavioral surveillance in respective

sub-populations. The BSS has been conducted in more than 25 countries in African, Latin and Central America, Eastern Europe, and Asia since 1999 where they have been valuable in understanding the HIV epidemic from regional and country-specific perspectives. In several countries, multiple rounds of BSS have already been conducted and the trend data are being used to formulate new programs and to adapt existing ones.

Objectives of BMS in Russia

- To provide information on behavioral patterns among high-risk sub-populations of MSM, CSWs, IDUs, and high-risk youth in three cities where intervention programs are being (or will be) implemented;
- To provide information to guide program planning;
- To initiate and continue dialogue (based on data) on HIV/AIDS with key stakeholders at various levels, including government, Non-Governmental Organizations (NGOs), and the affected communities;
- To provide baseline data needed to show evidence for the relative success of HIV prevention programs implemented in these cities; and
- To obtain data in a standardized format which will enable comparison with other behavioral surveillance conducted in other countries.

More specifically, the objectives of the BMS in St. Petersburg, Orenburg, and Irkutsk are:

1. **St. Petersburg**: to provide information on programmatic effect regarding behaviors in key target groups (CSWs, MSM), and to collect baseline data on risk behaviors of IDUs, and YTC and institution-based youth (IBY) for future HIV/AIDS projects.
2. **Orenburg and Irkutsk** - to provide information on behavior of key target groups (CSWs, IDUs, YTCs and IBY) which will serve as baseline information for current and future HIV/AIDS projects.

Methodology

Target Groups

The BMS was conducted in specific sub-populations considered to be at high-risk for HIV and play a major role in the spread of the virus in Russia. **Table 1.1** outlines the different study populations, their definitions, and the sites of data collection. The justification for including these target groups were as follows:

- ***Injection drug users***: The HIV epidemic in Russia has primarily been driven by IDUs. There are about 450,000 registered IDUs in Russia, however, estimates of IDUs are much higher at 1.5 to 3 million.[1]
- ***Commercial sex workers:*** CSWs are considered a core group driving the epidemic because of their high risk behaviors, high rates of STI infections, and their exposure to many sex partners. Additionally, of the estimated 4 million IDUs in Russia (Ruhel et al., 2002), a significant number are involved in commercial sex. The substantial overlap between IDU and CSW populations is serving to fuel an HIV epidemic in the general population. In fact, heterosexually transmitted HIV rates have been increasing in Russia.

[1] Rhodes T et al., HIV transmission and HIV prevention associated with IDU in the Russian Federation. *International Journal of Drug Policy* 2004, 15: 1-16.

Among new, reported infections, the proportion of HIV acquired through heterosexual intercourse increased dramatically, from only 5.3% in 2001 to 22-27% in 2004.[2]

- ***Men who have sex with men:*** Despite recent repeals of criminality for homosexual activities, the MSM population remains largely hidden, except in large cities such as Moscow and St. Petersburg. A few studies of MSM in Russia have revealed high levels of risky sexual behaviors.[3] Their vulnerability to HIV is compounded by high levels of stigmatization and discrimination.
- ***High-risk youth***: This group includes a diverse category of youth (aged 15-25) in orphanages, boarding schools, vocational schools, evening schools, rehabilitation centers, and crisis centers. Many of them have been orphaned through the death of their parents or are social orphans (abandoned by their parents). Due to their disadvantaged socio-economic situation, which offers limited opportunities, and their lack of social skills to integrate into independent adulthood, they are highly vulnerable to drug use and risky sexual behaviors.

Table 1.1 Target groups included in the BMS, locations, and definitions. Russia 2005.

Target Groups	City	Definitions
IDU	St. Petersburg, Orenburg, Irkutsk	Any person who injects illicit drugs (age 15-49 years)
CSW	St. Petersburg, Orenburg, Irkutsk	Women who exchange sexual favors for money or drugs on the streets (age 15-49 years)
MSM	St. Petersburg	Men attending night clubs or bars and who engage in sexual activities with other men (age 15-49 years)
Youth Institution-based Youth	St. Petersburg, Orenburg, Irkutsk	Youth aged 15-25 years in orphanages, boarding schools, vocational schools, and evening schools
Youth in Transitory Centers	St. Petersburg, Orenburg Irkutsk	Youth aged 15-25 years attending shelters, drop-in centers, and crisis centers.

Survey Instrument

The survey instrument was a standardized behavior study questionnaire provided in the manual, *Behavioral Surveillance Surveys: Guidelines for Repeated Behavioral Surveys in Populations at Risk for HIV*, published by Family Health International. Appropriate questionnaires for the four different study populations are included in the manual. The questionnaires have been tested and used for the study of risky sexual and drug-using behaviors among IDUs, CSWs, MSM, and youth in different countries.

A guide, which explains questions and their intended meaning, was developed for interviewers and supervisors. Supervisors and interviewers received a 3-4 day training, which included orientation to the BMS, consent procedures, confidentiality, sampling procedures, interviewing skills, data quality, sensitization to issues pertaining to high-risk populations, and roles and responsibilities. The training included role-playing with various types of participants. The questionnaires were pre-tested with the actual target population in St. Petersburg and adapted for the Russian setting. The questions used were the same for each city.

Sample Design

Probability sampling methods were used to select respondents from target groups in order to generalize the results to the larger reference population and to allow for the methods to

[2] UNAIDS. AIDS Epidemic Update, 2004.
[3] Amirkhanian YA, et al. Predictors of HIV risk behaviors among Russian men who have sex with men: an emerging epidemic. AIDS 2001, 15(3): 407-12.

be repeatable in order to measure trends over time. Different probability sampling strategies were used for different groups depending on their accessibility, mobility, and nature of the sites where they tend to congregate (if any).

IDU Using conventional probability sampling methods is difficult for a sub-population like IDUs in Russia since it is difficult to develop a sampling frame. IDUs in Russia are an extremely 'hidden population' due to the illicit nature of injection drug use and the criminalization. Currently, one of the most accepted probability sampling methodologies used to achieve a relatively unbiased sample where no sampling frame is available is Respondent-Driven Sampling (RDS).[4,5]

RDS is based on the principle that members of a hidden population are best able to access their own peers, and if incentives are provided, they will recruit a diverse set of peers.[6] It utilizes a chain-referral method that produces a relatively independent sample of the initial subjects from which sampling begins. The method is modified with the introduction of an incentive system of secondary rewards for recruiting others into the study.

RDS Procedure

1) "Seeds" of IDUs who met the eligibility criteria (10 each in Irkutsk and Orenburg, 13 in St. Petersburg) were recruited to participate in the survey. Seeds are the first individuals to participate in the survey. The seeds then recruited their peers into the study. Seeds were selected from needle exchange programs, members receiving services from local NGOs providing services to IDUs, and from among IDU contacts of volunteers of drug prevention services. An attempt was made to diversify the gender, age, and source of the seeds.
2) The seeds were interviewed and then offered a non-monetary gift for their participation as well as a gift for successfully recruiting their IDU peers. The gifts included goods such as coffee, chocolate boxes, condoms, and personal hygiene products. Each participant was limited to recruiting 3 participants (2 in Orenburg) to prevent recruiting from being done only by a number of participants. Participants were given coupons (marked with an ID number) to give to people they recruited. "Recruitees" were required to have with them the coupons they were given by the "recruiter" when they showed up at the study site to participate in the study. The coupons allowed for the link between recruiters and recruitees to be established.
3) A coupon manager spreadsheet was used to keep track of the participants, the coupon number they received, and the coupons they were given for recruitment. Each participant also had to indicate the size of their network (i.e., the number of people whom they know who also injected drugs in the last 6 months).
4) Data collection ended when the minimum target sample size of 210 was reached.

The duration of data collection varied (2 weeks in Irkutsk, 8 in St. Petersburg, and 11 in Orenburg).

CSW CSWs were recruited using time-location sampling strategy. Time-location clusters (i.e., night time on Thursday at X-Y street corner), representing the total number of potential time-location sets of places where CSWs find clients, formed the sampling frame. This sampling

[4] Heckathorn D. A new approach to the study of hidden populations. *Social Problems,* Vol. 44, #2 (May) 1997.
[5] Heckathorn D. Respondent driven sampling II: Deriving valid population estimates from chain-referral samples of hidden populations. *Social Problems,* Vol. 49, #1 (Feb) 2002.
[6] Extension of Respondent driven sampling: A new approach to the study of injecting drug users aged 18-25. AIDS and Behavior, Vol. 6, No. 1, March 2002.

frame was the result of a mapping activity conducted in each of the 3 cities a month prior to data collection. In Orenburg and Irkutsk, because the sum of estimated number of CSWs at the cluster sites were less than the target sample size, a 'take-all' approach was used (i.e., visiting all locations and recruiting all CSWs present at that particular time and site). In St. Petersburg, because the estimated number of CSWs from the mapping activity exceeded the target sample size, a sample of these clusters were selected in two stages: first, CSW clusters listed in the sampling frame were selected with a probability proportional to the total number of CSWs for each CSW cluster, and at the second stage, a fixed number of respondents were selected.

MSM MSM were recruited using time-location sampling [see description above in CSW recruitment]. The time-location units were MSM nightclubs. Mapping activities indicated that there were only 4 gay clubs in St. Petersburg. All clubs were selected and a fixed number of participants were recruited from the clubs during each night of data collection. Data collection was completed within 4 weeks from June 19--July 20, 2005. MSM were recruited from night clubs where USAID-funded activities have taken place.

IBY IBY were recruited from orphanages, vocational, evening, and boarding schools in which they reside or attend. A two-stage cluster sampling with probability proportional to size (PPS) was used to recruit IBY into the study. First, the institutions were selected using PPS and at the second stage, a random sample of classes was selected from a list. All the students from the selected classes were asked to participate.

YTC YTCs were recruited from shelters, drop-in centers and crisis centers. Mapping revealed that there were few such centers in the three cities, therefore, all eligible persons in these centers between 16-31 years of age were asked to participate in the study.

Sample Size

Sample sizes for each of the target groups were based on behavioral parameters observed in previous studies (where available) conducted in the respective target groups, the expected change in the behavioral parameter, the degree of confidence in such a change, the statistical power, and the design effect. All sample sizes were calculated to detect a change of 15 percentage points in several indicators for each target group. The initial value for the variable was estimated to be 50% (since little was known about their current risk behaviors and is the most conservative estimate possible that would generate the largest sample size). Design effects (DE) were included in the calculations to take into account the cluster sampling design. The DE for CSWs, MSM, IBY and YTCs were set at 2.0; the DE for IDUs was set at 1.3. The level of precision was set at 0.05 and a 15% non-response rate was included in the calculation.

For CSWs in St. Petersburg, an inflation factor of 93% was included to obtain information about changes in injecting drug use behaviors among street-based CSWs since previous research has shown that approximately 93% of street-based CSWs reached by USAID-funded projects in St. Petersburg also inject drugs. For IBY, an inflation factor of 50% in Orenburg and Irkutsk and 80% in St. Petersburg was used as it was anticipated that these were the proportions of IBY who were sexually active and potentially engaging in risky behaviors. For YTC, an inflation factor of 80% was used in all three cities to take into account that this proportion would be sexually active.

Sample sizes for CSWs and MSM in St. Petersburg include an intervention group (i.e., those exposed to USAID interventions) and an equivalent group not exposed to the

intervention. Exposure was assessed by asking a series of questions in the questionnaire about their exposure to specific activities targeted at these groups.

Table 1.2 lists the target sample sizes according to these calculations and the actual sample sizes achieved in the study.

Table 1.2 Sample size achieved (target), by study population and city.

	St. Petersburg Achieved (Target)		Orenburg City Achieved (Target)	Irkutsk Achieved (Target)	Total Achieved (Target)
IDU		200 (200)	200 (200)	196 (200)	596 (600)
CSW	Exposed	314 (330)	176 (305)	205 (305)	1043 (1270)
	Non-exposed	348 (330)			
MSM	Exposed	82 (305)			692 (610)
	Non-exposed	610 (305)			
YTC Male		64 (385)	18 (610)	25 (610)	198 (3210)
Female		50 (385)	20 (610)	21 (610)	
IBY Male		464 (385)	638 (385)	668 (385)	3582 (2310)
Female		402 (385)	728 (385)	682 (385)	

Data Collection Procedure

For time-location sampling (used for MSM and CSWs), outreach workers, healthcare providers or peers (people from the respective target population) who were experienced with the respective populations facilitated the recruitment of participants. They helped to introduce the interviewers to the participants. The interviewers then administered the questionnaire after obtaining verbal consent. In certain cases, participants were interviewed on the following day at an agreed-upon time and location if the participant did not want to be interviewed at the specific time of data collection.

Interviews for IDUs took place during fixed times at pre-determined sites: 2 sites in St. Petersburg and 1 site each in Orenburg and Irkutsk. For the recruitment of IBY, all students in the selected classrooms were asked to participate after an explanation of the study was given. Verbal consent was obtained by the interviewer in a private room prior to the interview.

The interviews were conducted one-on-one by the interviewer in privacy. Each interview lasted approximately 30 minutes. Field supervisors reviewed all completed questionnaires before leaving the field to ensure accuracy in recorded responses. No monetary incentives were used for the recruitment of any of the target groups.

Data Entry and Analysis

The completed questionnaires were reviewed in the field and transported to the field office for data processing. All completed questionnaires were entered into the database at Stellit in St. Petersburg using Excel. All data were double entered into the database. The files were converted into SPSS (version 13.0) for analysis (except for the IDU data). The IDU dataset was prepared in Excel and saved as a text-delimited document for analysis in RDSAT© (version 5.4).[7]

Percentages, means, and medians were calculated to assess prevalence of characteristics and behaviors. Bivariate relationships were examined using chi-square test and Fisher's exact test. For the analysis of IDU data in RDSAT, population proportion estimates and 95% confidence intervals were calculated. These estimated population proportions and their corresponding

[7] RDSAT: Respondent Driven Sampling Analysis Tool 5.4.0. Copyright 2003 Cornell University.

confidence intervals provide a method for characterizing the larger community of IDUs in the respective cities. Essentially, RDS makes it possible to estimate, based on the network data collected from the study sample, the characteristics of a broader network of IDUs in the respective cities. The IDU tables have two columns for each city: the left column presents the sample percentages (the actual proportion of the sample that had a specific characteristic) and the right column represents the estimated population proportion as calculated by RDS software. The population proportions are important for policymakers and program designers because the population estimates reflect the characteristics of the larger network of IDUs in the cities. Hence, the text of the results section for IDUs refers to these population estimates from the RDS analysis.

Ethical Considerations

The survey investigators were cognizant of the fact that individuals participating in this study may be at some risk of social harm if identified as part of the target group by participating in the survey. The survey methodology was designed and implemented to provide maximum protection for the participants. Participation in this survey was voluntary and verbal consent was obtained from all participants in a private setting. No names were recorded. All documentation was anonymous, linked only by a study number. Additionally, appropriate local authorities were informed of this survey prior to data collection in the field in order to reduce any interference and harassment of researchers and study participants. These authorities included police, local government officials, nightclub managers, and youth institution administrators. However, these officials were not involved in recruitment of participants or data collection. Letters of support were also obtained from appropriate local authorities to facilitate data collection in these populations. For data collection among youth, a child psychologist was readily available during the interviews. As an additional measure for the youth study group, the letter of support obtained from the Committee of Social Defense, Commission of Minor's Cause, and Committee of Education indicated that these governmental bodies have reviewed and approved of the study protocol. This was needed to inform the youth institutions of the local government support of the survey. The protocol was also approved by the Protection of Human Subjects Committee of FHI in Arlington, USA.

II. BACKGROUND INFORMATION

Russia

Russia, with a total population of approximately 143 million people (2006) and spanning an area of 17 million square kilometers[8], is the largest country in the world and a country with great diversity in terms of geography, climate, culture, ethnicity, and economics. The country is divided into 49 administrative regions (oblasts). The majority of the population is ethnically Russian (79.8%); the rest is made up of Tatar, Ukrainians, Bashkirs, and other (up to 160) ethnic groups. While over half (58%) of Russians self-identified as Russian Orthodox, the majority of them are non-practicing believers; and another 32% described themselves as non-religious.[9] The majority live in urban areas (73%).

Following the collapse of the Soviet Union in 1991, the standard of living declined dramatically. Approximately 17.8% (2004) of people live below the poverty line. Currently, the unemployment rate stands at 7.6%, however, underemployment is one of the critical issues faced by the labor force. The Russian population is highly literate (almost 100%), with 97% of children completing the standard 9-11 years of education.

Russia has been facing a demographic crisis since the early 1990s, with major population declines due to lower birth rates (9.9 births/1,000 population in 2006) and higher death rates (14.6 deaths/1,000 population in 2006); in 2004 alone, there was a decrease of 790,000 people. The sharp decline in population has been particularly notable among males, who have higher death rates mainly due to poverty, violent crimes, traffic accidents, alcohol abuse, and other life-style related preventable diseases. The male life expectancy is significantly lower (60.5 years) than the female life expectancy (74.1 years).

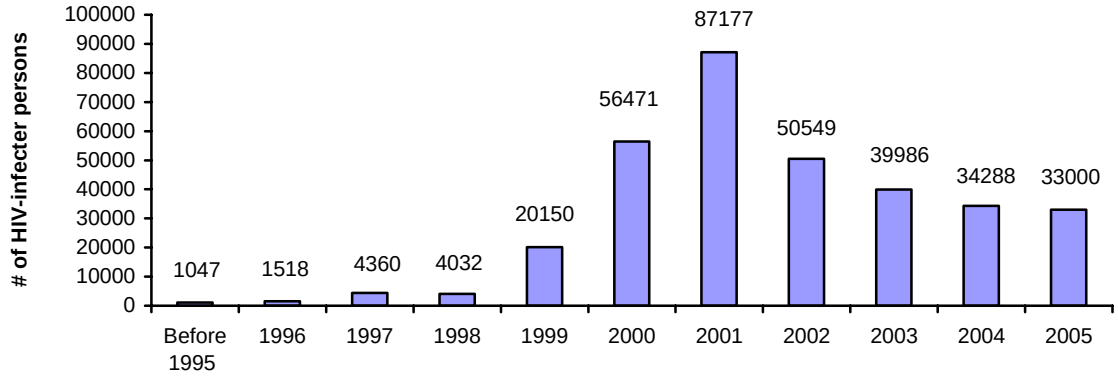
HIV/AIDS in Russia

The first case of HIV-infection in Russia was reported in 1987. However, the sharp growth in the number of HIV-infected persons in Russia did not start until about ten years later in 1998. And since 2000, Russia's HIV/AIDS epidemic has been considered to be one of the fastest growing epidemics in the world. The number of new cases of HIV continuously accrued between 1998 and 2001, and only in 2002-2004 has some recession been observed **(Figure 2.1)**.

By the end of 2005, there were 331,398 registered HIV-infected persons in Russia, 14,390 of whom are children. However, the estimated number of people infected with HIV stands at 600,000 to 1.5 million people, representing 0.4-1% of the total population.[10] Over 70% of people living with HIV/AIDS (PLWHA) are men between 15-39 years of age.[11]

[8] Central Intelligence Agency World Fact Book. (www.cia.gov/cia/publications/factbook/geos/rs.html#Intro). 2006.
[9] 2002 Survey: All-Russia Center for the Study of Public Opinion (VTsIOM).
[10] UNAIDS, HIV/AIDS Epidemic Update: December 2003 UNAIDS/03.39E.
[11] TPAA Research and Policy Analysis Department based on the data from the Federal Scientific and Methodological Center for HIV/AIDS (Informational bulletin № 22, 23, 24, 25) and data from Russian Ministry of Health, 2004.

Figure 2.1 Number of new cases of HIV infection in Russia through 2005.



Injection drug use (IDU) has been the primary driving force of the HIV epidemic. With an estimated 1.5-3 million IDUs, many of whom do not use sterile needles and injecting equipment, HIV infection has spread rapidly among this group. For example, in Irkutsk, it is estimated that 65% of street IDUs are HIV positive.[12] While the primary mode of HIV transmission in Russia since the epidemic began has been through injection drug use, the rate of heterosexual transmission has been on the increase (6% in 2001 to 27% in 2004). With this shift in the epidemic, there has been a rise in the proportion of women who are infected (38% in 2004).[13] These statistics are indicative of a gradual shift from at-risk groups into the general population. The reasons for this shift are that IDUs in Russia are young and sexually active and there is a large overlap between the commercial sex worker (CSW) and the IDU populations. Essentially, the HIV epidemic has been 'bridged' sexually from the IDU population to their sex partners, sex workers, and their clients.

In addition to IDUs, CSWs, and youth, another important group at high risk for HIV in Russia is men who have sex with men. Although they do not make up a high proportion of all HIV cases in Russia, there is a growing epidemic in this community, particularly in large metropolitan areas such as St. Petersburg. In 2004, 56.2% of registered HIV cases were due to injection drug use, 23.4% to heterosexual transmission, 19.3% through vertical transmission, and 1.1% through homosexual contact.[14] The majority of the people infected with HIV are young with approximately 80% of registered cases in people younger than 30 years of age.

The Russian government has committed to making the fight against HIV/AIDS a priority by signing the United Nations General Assembly Special Session (UNGASS) Declaration of Commitment to HIV/AIDS. In addition, over 100 NGOs funded by bilateral and multinational agencies have contributed a substantial amount of financial support for HIV prevention, treatment and care efforts. More recently, however, the Russian government, NGOs

[12] Rhodes T, Sarang A, Bobrik A, Bobkov E, Platt L. (2004). HIV transmission and HIV prevention associated with injecting drug use in the Russian Federation. Intl J Drug Policy, 15: 1-16.
[13] Regulatory Issue of 25/04/05, Federal Agency on surveillance in human rights and wellbeing. www.gsen.ru/doc/postan/ps_16_2005.html
[14] Federal Scientific and Methodical Center of AIDS prevention and struggle against AIDS of the Ministry of Health of the Russian Federation.

and international donor groups have begun to coordinate efforts. For example, in 2003, the Interagency Advisory Council on HIV/AIDS was established by the Ministry of Health of the Russian Federation, and in 2004, a Working Group on the Prevention and Fight Against AIDS was initiated in the Russian State Duma.

Although HIV cases have been registered in all regions of Russia, the socio-demographic characteristics as well as the HIV epidemic characteristics in the cities where the BMS was conducted vary greatly. A brief description of city and local HIV epidemic follows:

St. Petersburg: Saint Petersburg is located in the Northwest region of Russia, with a population of approximately 4.5 million (2004). It is second to Moscow based on population size. The city is an important manufacturing site and is the largest port in western Russia, serving as a gateway for goods to and from Europe and the west. The HIV/AIDS epidemic in St. Petersburg is related to the city's large urban population. There are over 25,000 officially registered HIV-infected people (or 560/100,000 population) in the city according to the Russian Federal AIDS Center. [15] It is ranked sixth highest for HIV prevalence among Russia's regions. As in the rest of Russia, the fast spread of the HIV epidemic in 1996 was driven by increased numbers of needle-sharing intravenous drug users. However, there has been a shift towards sexual transmission. In 2004, while injection drug use accounted for one-third of HIV cases registered, sexual transmission accounted for 18% of the cases (a steady but significant increase from 1% in 2001). The peak of the epidemic was in 2001, and although the incidence rates have been on the decline since then, the total number of HIV-infected people is steadily increasing.

Orenburg: Orenburg City is the administrative centre of the Orenburg Oblast (Province). The city is located to the west of the Ural Mountains, approximately 100 km from the border of Kazakhstan. It is situated on the divide between Europe and Central Asia and serves as a major trade and transportation center; Russia's major oil and gas pipelines run through Orenburg making it a major industrial center. The city has an estimated population of 544,700 (in 2004); the Province of Orenburg has a population of about 2.2 million. Orenburg is a relatively "young" city, where the youth (15-30 years) make up 23.8% of the population.

The first case of the HIV-infection in Orenburg was registered in 1997. The Oblast has a very high HIV prevalence rate (593 reported cases per 100,000). It has officially recorded a total of 12,913 cases of HIV infection as of 2004. Orenburg Oblast has the 4th highest HIV prevalence rate among Russia's regions and territories. The major age group affected by HIV is the 15-30 age range, which accounts for about 78% of the new registered cases. The infection rate among women is rapidly growing from 29% in 2002 to 38% in 2003. While needle sharing among IDUs is the major cause of HIV infection in the region, heterosexual route of infection has been increasing. In 2004, heterosexual transmission accounted for approximately 49.1% of new cases and parenteral transmission accounted for 42.7%.

Irkutsk: Irkutsk City, the administrative center of Irkutsk Oblast, has a population of 593,000 (the Oblast has a population of 2.8 million) and is located in Eastern Siberia. It is considered a major transportation hub given that it is situated on the Trans-Siberian Railway.

The first case of the HIV-infection in Irkutsk was registered in 199016. Only seven cases of HIV infection were in Irkutsk for the period of 1990-1998; all these cases were considered imported from other regions of Russia or from foreign countries. However, the epidemic picked up by 1999 due to widespread use of injection drugs. In 1999, over 2,600 HIV cases were

[15] Russian Federal AIDS Center, 2005.
[16] Irkutsk Regional Center on HIV Prevention and Fight Against AIDS.

registered. By the end of 2004, there were close to 8,000 registered cases of HIV infection, with a prevalence of 1,334.9/100,000 population. The Irkutsk Oblast has the highest HIV prevalence rate (2004) among all the regions and territories.

While data on HIV-related behavioral risks in marginalized populations exist for St. Petersburg, there is a lack of standardized data using standardized methodology and questions. Additionally, the data is often from a small group of individuals (such as those only reached at STI clinics or at needle exchange clinics or drop-in centers) rather than a representative sample of the reference target population in the city. This makes it difficult to compare results over time and across different cities. In Orenburg and Irkutsk there is insufficient data on risk behaviors from a representative sample of these high-risk groups. Taken together, this presents a challenge for monitoring and evaluation of HIV prevention programs. The objective of the Behavioral Monitoring Survey is to overcome these challenges and facilitate the evaluation of HIV programs by tracking trends in HIV-related risk behaviors.

III. INJECTION DRUG USERS

St. Petersburg

1. Sociodemographic Characteristics

A total of 596 IDUs completed the survey (200 in St. Petersburg, 200 in Orenburg, and 196 in Irkutsk). To assess the non-response bias, all recruiters who returned to collect their compensation for successful recruiting were asked to provide information on the number of people they tried to recruit and the number who refused to accept coupons. Approximately 19% out of the 165 participants approached to participate in St. Petersburg refused to accept the coupon. In Orenburg, 13% out of 189 approached and in Irkutsk, 6% out of 286 approached refused to accept a coupon.

The population estimates of IDUs in St. Petersburg revealed that about two-thirds were male (64.4%) and one-third were between 23-27 years of age (39.3%). Only 10% of IDUs were between 18-22 years of age. Males were significantly older than females, with 66.4% of males and 25.1% of females being 28 years or older [data not shown]. About a quarter of IDU have completed either secondary schooling (22.8%) or vocational schooling (25.8%) and one-third (36.6%) had completed special college education. While the majority had lived in St. Petersburg for over 21 years and were registered permanent residents, about one in five had lived in the city for 10 years or less. In terms of marital status, an estimated 10.8% of IDUs were married and living with their partner, 33.4% were not married but living with a partner and almost half (45.7%) were not married and living alone.

2. Alcohol and Drug Use

Alcohol consumption

Population estimates show that during the month preceding the survey, 21.5% of IDU consumed alcohol almost every day and 15.0% drank alcohol a few times a week.

Drug use

About half of IDU have injected drugs for 6 or more years and an estimated 23.4% started injecting before the age of 18 years. IDUs in St. Petersburg injected frequently; with an estimated 46.3% of the IDU population injecting two or more times a day and 26.0% once a day in the last one month. The most common type of drug injected was heroin (98.4%). Only 3.0% were currently in drug treatment.

Table 3.1 Drug use characteristics, St. Petersburg

Characteristic	Sample % (N=200)	Population Estimates (95% CI)
Duration of injection drug use		
< 1 year	6.5	5.9 (2.8-9.2)
1-5 years	37.5	41.7 (34.0-54.5)
6-10 years	41.7	41.4 (30.3-48.7)
11 years or more	14.0	10.5 (5.5-16.4)
Age at first drug injection		
<18	24.4	23.4 (11.0-31.6)
18-22	51.1	41.3 (16.5-51.5)
23-27	19.2	18.8 (6.1-23.4)
28-32	3.2	5.1 (0.4-11.2)
33 or older	14.8	11.1 (0.1-62.2)
Frequency of drug injection in last 1 month		
Once a week or less	5.1	5.6 (1.7-9.2)
2-6 times a week	15.9	21.9 (12.2-31.4)
Once a day	29.1	26.0 (21.6-36.1)
2 or more times a day	49.7	46.3 (36.8-54.1)

Needle and injection equipment sharing behaviors

Sharing of needles or syringe (referred from hereon as needles) and other injection equipment with other injectors was common among IDUs. About one-third of IDUs are estimated to have borrowed needles in the last one month. Borrowing of needles refers to using a needle or syringe that had previously been used by someone else. Among those who borrowed, the majority (88.9%) borrowed from a friend (76.2%), a regular sex partner (28.1%), or another drug user (23.8%). Population estimates show that only half (51.6%) of IDU used clean unused needles every time they injected in the last one month. Among those who borrowed needles, only 33.7% are estimated to have cleaned the used needles every time in the last month. Cold water (84.3%) and hot water (17.2%) were the most common methods of cleaning needles. No one reported using bleach.

Table 3.2 Needle and injection equipment sharing behaviors, St. Petersburg.

Characteristic	Sample % (N=200)	Population Estimates (95% CI)
Borrowing needles[a] in last 1 month		
Frequency of borrowing needles in last 1 month		
At least half the time	11.1	8.4 (4.8-12.3)
Some of the time	25.8	24.8 (18.7-32.6)
Never	62.4	65.2 (57.3-73.2)
Number of people from whom respondent borrowed needles in last 1 month		
1-5 people	86.5	88.9 (87.1-98.3)
6-10 people	7.3	4.2 (0.0-7.9)
More then 11 people	2.4	3.3 (0.0-5.3)
Frequency of using clean needles in last 1 month		
Every time	51.1	51.6 (41.1-58.6)
Most of the time	31.4	32.1 (25.8-41.5)
Some of the time	15.0	12.3 (9.6-20.0)
Never	1.8	1.7 (0.1-3.0)
Lending[b] needles in last 1 month		
Frequency of lending needles in last 1 month		
At least half the time	2.8	2.7 (0.0-2.8)
Some of the time	39.9	34.0 (27.2-44.8)
Never	57.7	63.0 (53.1-70.7)
Number of people to whom respondent lent needles in last 1 month		
1-5 people	76.6	71.5 (61.3-90.7)
6-10 people	12.2	28.4 (6.3-34.3)
More then 11 people	0.0	0.0
Used pre-filled syringe[c] in last 1 month	12.6	11.4 (6.5-14.3)
Frequency of sharing injection equipment[d] in last 1 month		
Every time	1.8	0.2 (0.0-1.2)
Almost all the time	27.6	30.0 (22.6-38.2)
Some of the time	46.0	50.4 (42.0-60.7)
Never	23.9	18.1 (12.3-22.7)
Frequency of drawing drugs from communal container in last 1 month		
Every time	2.3	2.2 (0.0-6.6)
Almost all the time	29.5	32.5 (24.1-41.2)
Some of the time	43.6	46.5 (36.5-56.2)
Never	23.9	18.6 (12.1-23.6)

a *Borrowing* needle refers to using a needle or syringe that had previously been used by someone else.
b *Lending* needles refers to giving, selling, or renting a needle/syringe to someone else, after respondent had already used it.
c *Pre-filled syringe* refers to a syringe that was filled without the respondent witnessing it.
d *Sharing of injection equipment* refers to sharing of cookers, vials, containers, cotton, filters, or rinse water.

Lending of needles to other IDUs was also common. Lending refers to giving, selling, or renting a needle to someone else after respondent had already used it. Population estimates show that over one-third lent needles to others, typically to other drug users (72.2%) or friends (53.6%).

IDUs engaged in other risky injection practices. These include using pre-filled syringes (syringe that was filled without the respondent witnessing it), backloading, frontloading, splitting, sharing injection equipment, drawing drugs from communal containers. Backloading, frontloading and splitting of drugs refer to a syringe that was filled by someone else squirting drugs into it from his/her used syringe. Although backloading, frontloading and splitting of drugs were not common among IDUs, population estimates reveal that 11.4% of IDUs used pre-filled syringes, over 80% had shared injection equipment, and over 80% had drawn drugs from a communal container at least some of the time in the last one month.

Accessibility to clean unused needles

The overwhelming majority of IDUs (99.1%) are estimated to be able to obtain clean, unused needles for injections, with 96.4% indicating pharmacies as a place to obtain new needles. Only 1.2% cited needle exchange programs as a source of clean needles. One of the primary reasons for not being able to obtain unused needles was that the place where they can get needles was not open (56.2%).

3. Sexual Behavior, Condom Use, and Sexual Violence

Sexual behavior

The majority (94.9%) of IDUs first had sexual intercourse before the age of 18 years. A significantly higher proportion of males (98.6%) than females (89.2%) first had sex before the age of 18 years [data not shown]. Almost all (99.5%) IDUs have had sex in the 12 months prior to the survey. Population estimates show that almost three-quarters (69.3%) had sex with regular partners (defined as spouse or live-in sex partner), 11.6% had sex with commercial partners, and 48.8% had sex with non-regular partners (defined as a partner respondent is not married to, has never lived with and did not have sex in exchange for money). Having more than one non-regular sex partner was common among IDUs; 12.7% of all IDUs had 2-4 non-regular sex partners, 16.6% had 5-10 non-regular partners, and 3.8% had 11 or more non-regular partners.

Table 3.3 Sexual behaviors, St. Petersburg.

Characteristic	Sample % (N=200)	Population Estimates (95% CI)
Had sex in the last 12 months	99.0	99.5 (98.9-99.8)
Sex with regular[a] partners	75.8	69.3 (55.4-80.5)
Number of regular partners in last 12 months		
None	24.1	30.9 (19.3-45.2)
1 person	65.8	61.9 (48.7-72.7)
2-4 people	9.0	6.3 (3.6-9.5)
5-10 people	0.9	0.7 (0.0-1.6)
11-20	0.0	0.0
More then 20 people	0.0	0.0
Sex with commercial[b] partners	14.9	11.6 (7.5-16.9)
Number of commercial partners in last 12 months		
None	84.3	86.4 (81.9-91.2)
1 person	1.4	1.2 (0.1-2.4)
2-4 people	4.7	3.2 (1.0-6.2)
5-10 people	2.8	2.8 (0.8-4.6)
11-20	0.0	0.0
More then 20 people	6.1	5.7 (2.8-8.8)
Sex with non-regular[c] partners	40.2	48.8 (39.0-62.7)
Number of non-regular partners in last 12 months		
None	59.2	53.2 (41.9-64.5)
1 person	5.6	2.9 (1.0-5.4)
2-4 people	16.5	12.7 (8.5-17.9)
5-10 people	13.2	16.6 (10.3-26.1)
11-20	1.8	11.3 (0.4-24.9)
More then 20 people	2.8	2.5 (0.3-4.2)

a *Regular partner* refer to spouse or live-in sex partner.

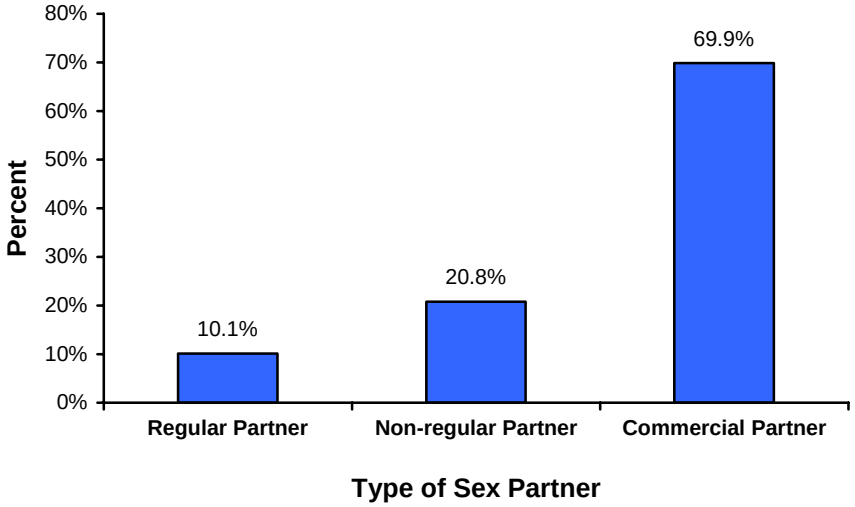
b *Commercial sex partner* refers to a partner with whom respondent bought sex in exchange for money or drugs or other compensations.

c *Non-regular sex partner* refers to a partner who respondent: i) is not married to, ii) has never lived with, and iii) did not have sex in exchange for money.

Condom use

Condom use varied greatly depending on the type of sex partner. Consistent condom use in the last 12 months was estimated to be 10.1% with a regular partner, 20.8% with a non-regular partner, and 69.9% with a commercial partner **(Figure 3.1)**.

Figure 3.1 Population Estimates of consistent condom use in the last 12 months with different types of sex partners, St. Petersburg.



Condom use at last sex followed a similar pattern: 17.1% with regular partners, 52.3% with non-regular partners, and 100% with commercial partners **(Table 3.4)**. The main reasons cited for not using condoms with regular partners were not thinking it was necessary (60.7%).

The vast majority of IDUs knew where to obtain condoms, with the majority mentioning pharmacies (97.7%), and stores (64.6%). Slightly less than two-thirds (60.0%) indicated they could obtain condoms in less than 10 minutes.

Table 3.4 Condom use at last sex with different types of sex partners, St. Petersburg.

Characteristic	Sample % (N=200)	Population Estimates (95% CI)
Condom use at last sex with regular partners	19.3	17.1 (13.0-24.6)
Reasons for not using condoms at last sex with regular partner		
Not available	2.3	2.2 (0.0-4.7)
Too expensive	0.0	0.0
Partner objected	3.1	2.0 (0.0-2.1)
Don't like condoms	19.5	15.4 (8.4-25.6)
Other contraception	10.9	11.2 (3.5-24.1)
Didn't think it necessary	61.7	60.7 (53.2-77.0)
Didn't think of it	3.1	4.0 (0.7-10.3)
Other	0.0	0.0
Condom use at last sex with non-regular partners	65.1	52.3 (22.5-82.3)
Reasons for not using condoms at last sex with non-regular partner		
Not available	16.6	NA[a]
Too expensive	0.0	
Partner objected	3.3	
Don't like condoms	36.6	
Other contraception	3.3	
Didn't think it necessary	30.0	
Didn't think of it	16.6	
Other	6.6	
Condom use at last sex with commercial partners	100.0	100.0

a Sample size too small to calculate valid estimates in RDSAT.

Sexual violence

Population estimates showed that 4.1% experienced sexual violence (forced to have sex by use or threat of force) during the last year.

4. STI Knowledge and Symptoms

While all IDUs are estimated to have heard of STIs, knowledge about specific male and female STI symptoms were low. When asked to identify female STI symptoms, 42.6% of IDUs named burning pain upon urination, 30.8% named foul-smelling genital discharge, 27.4% named genital ulcers and sores, and 26.1% named itching. When asked about male STI symptoms, 49.5% noted genital discharge, 39.6% named burning pain upon urination, and 31.2% mentioned genital ulcers and sores. During the last year, 0.7% of IDUs are estimated to have reported experiencing any STI symptoms with 0.8% having abnormal genital discharge and 0.8% reporting having had genital ulcers or sores.

5. HIV Knowledge and Testing Behaviors

All IDUs had heard of HIV/AIDS. Population estimates showed that a considerable proportion of IDUs (86.1%) knew someone who was HIV positive and/or had died of AIDS and 40.0% had a close friend or a relative with HIV or who had died of AIDS.

The majority of IDUs in St. Petersburg knew that abstinence (88.6%), using condoms correctly during every act of sexual intercourse (88.6), and having one uninfected partner (81.9%) could prevent HIV infection. Almost all (98.3%) knew that one can be infected with HIV through sharing a needle for injection. Knowledge of mother to child transmission was also fairly high with 70.5% knowing that an HIV positive mother can transmit the virus to her new-born child through breast milk and 87.9% that an HIV infected pregnant woman can transmit the

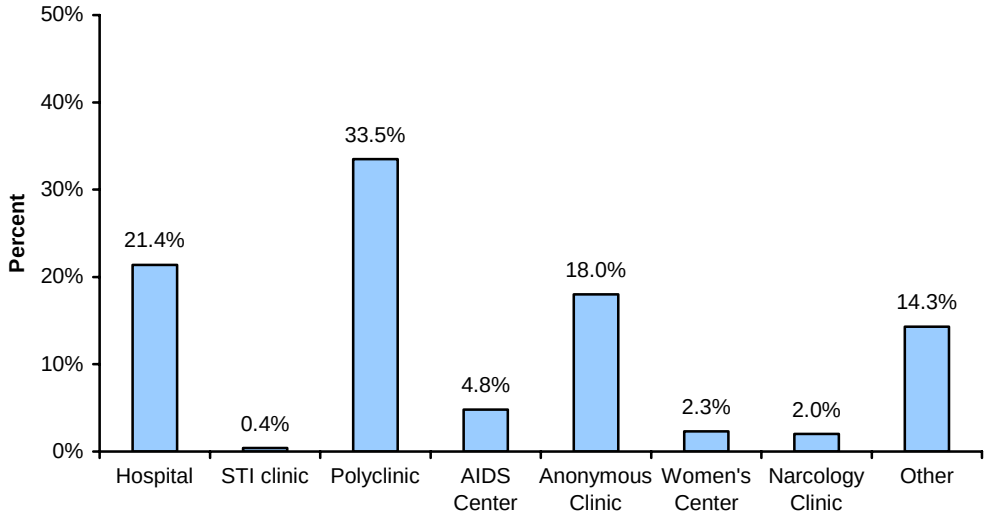
virus to her fetus. Knowledge regarding antiretroviral drugs was lower with only 36.0% knowing that an HIV infected pregnant woman can reduce the risk of HIV transmission to her unborn child by taking ARVs.

Misconceptions about HIV transmission were fairly low in the IDU population. An estimated three-quarters (78.7%) knew that one cannot get HIV from a mosquito bite, 91.8% knew that one cannot contract HIV through sharing a meal with an HIV positive person, and 99.7% knew that a healthy looking person can be HIV infected.

HIV counseling and testing

An estimated 74.3% of IDU have ever had an HIV test, the majority of whom had taken the test voluntarily (95.7%) and had found out their test results (98.2%). Population estimates show that 63.0% of those who had ever taken an HIV test had done so within the last 12 months. The most common places where IDU had received the HIV test were polyclinics, hospitals or anonymous clinics. Only 4.8% indicated they had tested at the AIDS Center.

Figure 3.2 Population estimates of places of last HIV test among IDUs, St. Petersburg



6. Stigma and Discrimination

Stigma and discrimination towards people living with HIV/AIDS was not common in IDUs in St. Petersburg. An estimated 6.6% of IDUs would not be willing to share a meal with an HIV infected person, and 3.7% would not buy food from an HIV positive shopkeeper or food seller. Less than one percent of IDUs would refuse to provide care for an HIV positive relative in the household or thought that an HIV-infected teacher should stop teaching or an HIV positive student should stop attending classes, even if he/she was not sick. An estimated majority of IDUs (92.2%) would conceal from friends and acquaintances the fact that a member of their family was infected with HIV.

7. Exposure to HIV prevention programs

Only an estimated quarter (23.6%) were aware of STI/HIV prevention programs for IDUs in the city, the majority of whom had taken part in these programs (69.9%). The most

common services received by IDUs were counseling with a social worker (94.9%), referral for anonymous HIV test (87.2%), referral for anonymous hepatitis test (87.2%), receiving condoms (85.5%), and needle exchange services (80.6%).

Awareness of where to receive HIV and STI prevention services were very low. Population estimates show that only half of IDU, or in some cases less, knew where to receive the following services: free STI test (39.5%), information materials on HIV and STIs (52.3%), needle exchange (52.9%), and rehabilitation for drug users (18.4%). In addition, 64.1% knew where to receive a free HIV test (64.1%). These knowledge indicators correspond with actual use of services. In the previous 12 months, the most common services IDUs in St. Petersburg sought were needle exchange, free HIV tests, condoms and free STI tests.

Table 3.5 Services sought from HIV/STI prevention programs in last 12 months.

Characteristic	Sample % (N=200)	Population Estimates (95% CI)
Free STI test	16.9	16.0 (10.2-24.3)
Free STI treatment	14.5	12.0 (6.7-18.3)
Free HIV test	25.3	21.2 (14.8-29.0)
Informational leaflets on STI and HIV/AIDS	14.5	7.8 (4.7-11.0)
Support groups for HIV positives	0.0	0.0
Medical help for HIV/AIDS infected people	0.9	1.2 (0.0-3.1)
Needle exchange	30.5	28.2 (20.3-36.7)
Free services for drug abuse	5.6	5.1 (2.3-7.9)
Rehabilitation for drug users	4.2	3.2 (1.1-5.7)
Receive condoms	22.0	19.3 (12.6-25.9)
Support groups for drug users	3.2	1.9 (0.7-3.4)
Help with recovering official documents (passport, medical insurance)	2.8	0.2 (0.0-0.5)
Free legal consultation	2.8	1.5 (0.4-3.0)
Free psychological help	8.4	7.1 (3.8-11.0)

Orenburg

1. Sociodemographic Characteristics

The population estimates of IDUs in Orenburg revealed that the majority were male (83.1%) and that almost half were between 23-27 years of age. Only 2.4% were between 18-22 years of age. Almost half (41.3%) have also completed secondary schooling, 19.0% had completed special college, and 17.5% had completed 3-4 years of university. About three-quarters had lived in Orenburg for over 21 years with the majority (92.3%) registered as permanent residents of the city. In terms of marital status, an estimated 17.3% of IDUs were married and living with their partner, however, 29.0% were not married but living with a partner and almost half (45.7%) were not married and living alone.

2. Alcohol and Drug Use

Alcohol use

Population estimates show that during the month preceding the survey, 13.8% of IDU in Orenburg consumed alcohol almost every day and half (49.2%) drank alcohol a few times a week.

Drug use

Population estimates show that 76% of IDU had been injecting for more than five years. A significantly higher proportion of male IDUs (14.6%) compared to female IDUs (1.8%) had been injecting for 11 years of more [data not shown]. Many IDU started injecting drugs at a fairly young age; an estimated 23.8% started injecting before the age of 18 years and 60.0% started injecting between 18-22 years of age.

Table 3.6 Drug use characteristics, Orenburg

Characteristic	Sample % (N=200)	Population Estimates (95% CI)
Duration of injection drug use		
< 1 year	2.3	2.1 (0.6-4.0)
1-5 years	43.3	44.4 (39.8-52.8)
6-10 years	41.9	40.8 (34.4-47.5)
11 years or more	12.3	12.5 (6.1-15.9)
Age at first drug injection		
<18	22.8	23.8 (17.2-29.4)
18-22	60.9	60.0 (54.0-67.0)
23-27	12.8	12.1 (8.4-17.4)
28-32	1.9	2.4 (0.4-3.7)
33 or older	0.9	1.6 (0.0-2.5)
Frequency of drug injection in last 1 month		
Once a week or less	46.1	47.0 (37.0-53.3)
2-6 times a week	39.0	39.6 (34.2-48.4)
Once a day	12.8	12.1 (8.5-17.6)
2 or more times a day	1.9	1.1 (0.-1.6)

Less than 15% of IDUs injected daily, while 39.0% injected 2-6 times per week and 47.0% injected once a week or less. The most common type of drug injected was heroin (84.6%), followed by stimulants (46.6%) and home-made opiates (34.8%). None of the IDUs were currently in drug treatment.

Needle and injection equipment sharing behaviors

About one-third of IDUs borrowed needles in the last one month, with 26.1% borrowing needles some of the time and 3.0% at least half the time they injected. Borrowing of needles refers to using a needle or syringe that had previously been used by someone else. IDUs typically borrowed needles from another drug user (49.6%), a friend (30.4%), or a regular sex partner (26.3%). Among those who borrowed needles, the majority never cleaned their borrowed needles and almost none (0.7%) cleaned their used needles every time they injected in the last month. IDUs who did clean their needles most commonly used hot (72.6%) and cold water (57.1%). No one reported using bleach. Population estimates show that in Orenburg almost two-thirds of IDUs (62.9%) used clean unused needles every time they injected in the last one month.

Table 3.7 Needle and injection equipment sharing behaviors, Orenburg.

Characteristic	Sample % (N=200)	Population Estimates (95% CI)
Borrowing needles[a] in last 1 month		
Frequency of borrowing needles in last 1 month		
At least half the time	2.8	3.0 (0.1-6.0)
Some of the time	24.7	26.1 (19.6-32.4)
Never	70.9	70.7 (62.3-76.0)
Number of people from whom respondent borrowed needles in last 1 month		
1-5 people	98.3	97.9 (95.9-99.9)
6-10 people	1.6	2.0 (0.0-2.0)
More then 11 people	0.0	0.0
Frequency of using clean needles in last 1 month		
Every time	64.7	62.9 (55.2-68.8)
Most of the time	29.0	30.9 (25.0-38.0)
Some of the time	4.7	5.0 (2.3-8.2)
Never	0.9	1.5 (0.0-2.8)
Lending[b] needles in last 1 month		
Frequency of lending needles in last 1 month		
At least half the time	3.5	3.5 (0.5-7.1)
Some of the time	26.1	26.7 (21.3-35.0)
Never	69.0	68.1 (59.6-73.1)
Number of people to whom respondent lent needles in last 1 month		
1-5 people	86.1	93.9 (79.9-98.0)
6-10 people	3.0	5.8 (0.0-5.8)
More then 11 people	0.0	0.0
Used pre-filled syringe[c] in last 1 month	31.4	29.0 (22.6-36.1)
Frequency of sharing injection equipment[d] in last 1 month		
Every time	11.9	14.4 (8.2-17.7)
Almost all the time	27.6	28.6 (23.7-36.2)
Some of the time	34.7	30.2 (4.2-35.4)
Never	24.7	26.2 (0.3-33.6)
Frequency of drawing drugs from communal container in last 1 month		
Every time	14.2	15.2 (9.2-18.8)
Almost all the time	31.9	35.1 (23.8-42.2)
Some of the time	32.8	30.2 (25.0-36.6)
Never	20.0	19.3 (13.0-23.6)

a *Borrowing* needle refers to using a needle or syringe that had previously been used by someone else.
b *Lending* needles refers to giving, selling, or renting a needle/syringe to someone else, after respondent had already used it.
c *Pre-filled syringe* refers to a syringe that was filled without the respondent witnessing it.
d *Sharing of injection equipment* refers to sharing of cookers, vials, containers, cotton, filters, or rinse water.

Lending of needles to other IDUs was also common. Lending refers to giving, selling, or renting a needle to someone else after respondent had already used it. Population estimates show that approximately one-third lent needles to others in the last one month, typically to regular sex partners (50.3%), other drug users (43.6%) or friends (25.5%).

IDUs engaged in other risky injection practices. These include using pre-filled syringes (syringe that was filled without the respondent witnessing it), backloading, frontloading, splitting, sharing injection equipment, drawing drugs from communal containers. Backloading, frontloading and splitting of drugs refer to a syringe that was filled by someone else squirting drugs into it from his/her used syringe. Although backloading, frontloading and splitting of drugs were not common among IDUs, population estimates reveal that 29.0% of IDUs used pre-filled syringes, over 70% had shared injection equipment, and around 80% had drawn drugs from a communal container at least some of the time in the last one month.

Accessibility to clean unused needles

The overwhelming majority of IDUs (95.9%) are estimated to be able to obtain clean, unused needles for injections. The most frequently mentioned places where clean unused needles may be obtained included pharmacies (96.4%), needle exchange programs (69.0%), other drug users (54.7%), or friends (45.0%). One of the primary reasons for not being able to obtain unused needles was that the place where they can get needles was not open (45.5%).

3. Sexual Behavior, Condom Use, and Sexual Violence

The majority (96.7%) of IDUs first had sexual intercourse before the age of 18 years. A significantly higher proportion of males (98.7%) than females (86.8%) first had sex before the age of 18 [data not shown]. Almost all (98.1%) IDUs have had sex in the last 12 months. Population estimates show that 80.0% had sex with regular partners (defined as spouse or live-in sex partner), 16.6% with commercial partners, and 64.0% with non-regular partners (defined as a partner respondent is not married to, has never lived with and did not have sex in exchange for money). About 19% of IDU had multiple regular sex partners, and more than one-third had multiple non-regular sex partner.

Table 3.8 Sexual behaviors, Orenburg.

Characteristic	Sample % (N=200)	Population Estimates (95% CI)
Had sex in the last 12 months	96.9	98.1 (91.5-99.6)
Sex with regular[a] partners	80.3	82.2 (79.6-85.4)
Number of regular partners in last 12 months		
None	18.7	20.2 (14.3-25.7)
1 person	62.0	61.2 (55.6-69.7)
2-4 people	17.2	16.8 (10.2-21.5)
5-10 people	1.9	1.7 (0.0-3.5)
11-20	0.0	0.0
More then 20 people	0.0	0.0
Sex with commercial[b] partners	17.2	16.6 (11.4-20.8)
Number of commercial partners in last 12 months		
None	81.2	82.2 (77.4-87.3)
1 person	4.4	4.0 (1.6-7.0)
2-4 people	6.4	5.6 (3.3-9.0)
5-10 people	1.9	1.3 (0.2-3.3)
11-20	0.4	0.3 (0.0-1.0)
More then 20 people	0.9	0.7 (0.0-1.8)
Sex with non-regular[c] partners	61.0	64.0 (56.3-68.0)
Number of non-regular partners in last 12 months		
None	39.4	37.3 (32.5-44.3)
1 person	10.8	12.3 (6.7-17.0)
2-4 people	18.7	18.7 (13.7-23.5)
5-10 people	12.8	12.2 (8.0-16.7)
11-20 people	4.9	3.9 (1.9-7.8)
More then 20 people	1.9	2.2 (0.0-3.7)

[a] Regular partner refer to spouse or live-in sex partner.

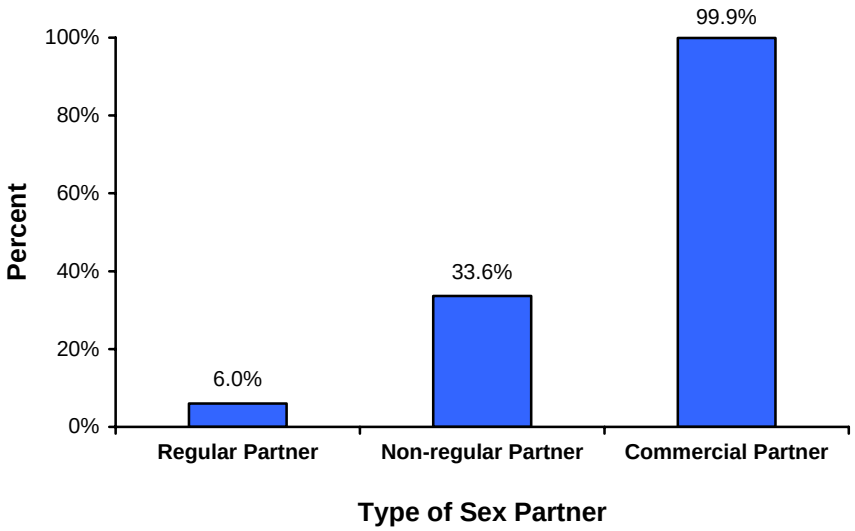
[b] Commercial sex partner refers to a partner with whom respondent bought sex in exchange for money or drugs or other compensations.

[c] Non-regular sex partner refers to8a partner who respondent: i) is not married to, ii) has never lived with, and iii) did not have sex in exchange for money.

Condom use

Condom use varied greatly depending on the type of sex partner. Consistent condom use in the last 12 months was estimated to be 6.0% with a regular partner, 33.6% with a non-regular partner, and 99.9% with a commercial partner **(Figure 3.3)**.

Figure 3.3 Population estimates of consistent condom use in the last 12 months with different types of sex partners, Orenburg.



Condom use at last sex followed a similar pattern: 20.4% with regular partners, 60.9% with non-regular partners, and 99.9% with commercial partners **(Table 3.9)**. The main reasons cited for not using condoms with regular partners were not liking condoms (28.2%), used other contraception (23.3%), or not thinking it was necessary (19.1%). The major reasons for not using condoms with non-regular partners were condom not being available (28.7%), not thinking it was necessary (27.1%), and not liking condoms (25.6%).

The vast majority of IDUs knew where to obtain condoms, with the majority mentioning pharmacies (97.5%), stores (74.3%), and social workers (64.5%). Less than one-half (45.1%) indicated they could obtain condoms in less than 10 minutes.

Table 3.9 Condom use at last sex with different types of sex partners, Orenburg.

Characteristic	Sample % (N=200)	Population Estimates (95% CI)
Condom use at last sex with regular partners	19.3	20.4(15.2-28.3)
Reasons for not using condoms at last sex with regular partner		
Not available	13.6	10.9 (5.7-25.2)
Too expensive	6.7	0.0
Partner objected	5.3	6.9 (2.6-12.5)
Don't like condoms	34.8	28.2 (16.2-41.0)
Other contraception	25.0	23.3 (14.3-30.3)
Didn't think it necessary	17.4	19.1 (11.0-26.6)
Didn't think of it	4.5	4.8 (0.7-12.8)
Other	5.3	5.6 (1.3-10.4)
Condom use at last sex with non-regular partners	54.8	60.9 (45.5-70.5)
Reasons for not using condoms at last sex with non-regular partner		
Not available	33.8	28.7(11.8-44.0)
Too expensive	0.0	0.0
Partner objected	8.5	0.0
Don't like condoms	28.3	25.6(2.4-38.0)
Other contraception	1.8	0.0
Didn't think it necessary	16.9	27.1 (0.0-76.9)
Didn't think of it	11.3	10.5 (0.0-25.0)
Other	3.7	0.0
Condom use at last sex with commercial partners	97.1	99.9 (99.9-99.9)

Sexual violence

Sexual violence does not appear to be common among IDUs in Orenburg. Population estimates showed that 2.8% reported having suffered sexual abuse (forced to have sex by use or threat of force) during the last year.

4. STI Knowledge and Symptoms

Almost all IDUs are estimated to have heard of STIs. Knowledge about specific female STI symptoms was low; however, knowledge about specific male STI symptoms was slightly higher. When asked to identify female STI symptoms, 61.5% named foul-smelling genital discharge, 57.5% burning pain upon urination, 48.0% abdominal pain, and 31.6% itching. When asked about male STI symptoms, the vast majority (86.5%) noted genital discharge, 64.6% named burning pain upon urination, and 61.4% mentioned genital ulcers and sores. During the last year, almost one out of five (18.1%) of IDUs experienced any STI symptoms with 17.6% having had abnormal genital discharge and 1.5% having had genital ulcers or sores.

Table 3.10 Knowledge of female and male STI symptoms, Orenburg.

Characteristics	Sample % (N=200)	Population Estimates (95% CI)
Has heard of STI	99.0	99.1 (97.1-99.6)
Knowledge of female STI symptoms		
Genital discharge	20.6	19.0 (14.8-25.1)
Burning pain on urination	58.6	57.5 (49.5-63.5)
Foul smelling discharge	61.5	61.5 (54.7-66.9)
Genital ulcers/sores	21.6	19.2 (14.0-24.1)
Abdominal pain	48.5	48.0 (40.6-54.2)
Swelling in groin area	10.0	8.9 (4.9-13.6)
Itching	34.6	34.0 (28.0-40.5)
Others	2.8	2.7 (1.0-5.1)
Knowledge of male STI symptoms		
Genital discharge	86.0	86.5 (81.3-90.5)
Burning pain on urination	65.8	64.6 (58.8-70.6)
Genital ulcers/sores	61.0	61.4 (56.0-68.1)
Swelling in groin area	13.4	11.9 (8.4-16.3)
Others	12.9	14.5 (8.3-19.2)
Experienced any STI symptoms[a] in the last 12 months	17.1	18.1 (12.0-21.7)
Had abnormal genital discharge	16.6	17.6 (11.3-21.4)
Had genital ulcers or sores	0.8	1.5 (0.3-3.1)

[a] 'Any STI symptoms' was defined as having any abnormal genital discharge or any genital ulcers or sores.

5. HIV Knowledge and Testing Behaviors

All IDUs had heard of HIV/AIDS. Population estimates show that a considerable proportion of IDUs (86.2%) knew someone who was HIV positive and/or had died of AIDS and 93.6% had a close friend or a relative with HIV or died of AIDS.

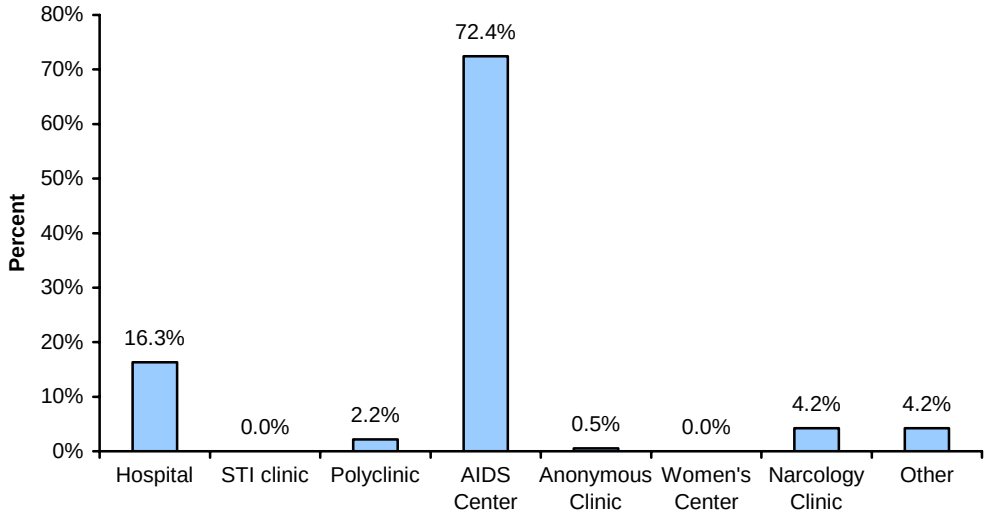
The majority of IDUs knew that abstinence (65.3%), using condoms correctly during every act of sexual intercourse (85.6%), and that having one uninfected partner (60.7%) could prevent HIV infection. Almost all (96.0%) knew that one can be infected with HIV through sharing a needle for injection. Knowledge of mother to child transmission was also fairly high with 71.8% knowing an HIV positive mother can transmit the virus to her new-born child through breast milk and 88.8% knowing that an HIV infected pregnant woman can transmit the virus to her fetus. Knowledge regarding antiretroviral drugs was extremely low with only 2.7% aware that an HIV infected pregnant woman can reduce the risk of HIV transmission to her unborn child by taking ARVs.

Misconceptions about HIV transmission were fairly low in the IDU population. An estimated three-quarters (86.0%) knew that one cannot get HIV from a mosquito bite, 94.3% knew one cannot contract HIV through sharing a meal with an HIV positive person, and 96.6% knew that a healthy looking person can be HIV infected.

HIV counseling and testing

Population estimates indicated that all (100.0%) IDUs were aware of the availability of anonymous HIV testing in the city. Over three-quarters (79.6%) have also undergone an HIV test, the majority of whom had taken the test voluntarily (89.5%) and had found out their test results (99.9%). About 56.1% of tested IDU had taken an HIV test within the past 12 months and 21.2% had taken it between 1 to 2 years ago. The most common places where IDU in Orenburg had tested were the AIDS center (72.4%) and a hospital (16.3%).

Figure 3.4 Population estimates of places of last HIV test among IDUs, Orenburg



6. Stigma and Discrimination

Stigma and discrimination towards people living with HIV/AIDS was not common in IDUs in Orenburg. An estimated 4.8% would not be willing to share a meal with an HIV infected person, and 5.5% would not buy food from an HIV positive shopkeeper or food seller. About one out of ten (10.1%) would refuse to provide care for an HIV positive male relative in the household, and 8.1% would not provide care for an HIV positive female relative. Less than ten percent thought that an HIV-infected teacher should stop teaching even if he/she was not sick (5.3%), and thought that an HIV positive student should stop attending classes even if he/she was not sick (2.7%). An estimated majority of IDUs (97%) would conceal from friends and acquaintances the fact that a member of their family was infected with HIV.

7. Exposure to HIV prevention programs

The vast majority (89.1%) of IDUs were aware of STI/HIV prevention programs for injection drug users in the city, primarily because they have taken part in these programs (64.8%). The most common services received by IDUs were counseling with a social worker (100.0%), receiving condoms (84.8%), receiving informational leaflets (89.6%), and referral for anonymous HIV test (59.3%).

Awareness of where to receive HIV and STI prevention services was fairly high. The most commonly known services were: free HIV testing (96.6%), information materials on HIV and STIs (92.0%), needle exchange (92.2%), receiving condoms (90.8%), rehabilitation for drug users (75.0%), and free STI test (70.4%). In the last 12 months, IDUs in Orenburg sought the following services: receiving condoms (60.5%), needle exchange (59.4%), informational leaflets on STI and HIV/AIDS (52.1) and free HIV test (44.8%).

Table 3.11 Services sought from HIV/STI prevention programs in last 12 months.

CHARACTERISTIC	Sample % (N=200)	Population Estimates (95% CI)
Free STI test	8.0	8.8 (3.8-10.2)
Free STI treatment	3.3	4.8 (1.2-7.2)
Free HIV test	43.3	44.8 (37.4-50.5)
Informational leaflets on STI and HIV/AIDS	52.3	52.1 (44.1-57.5)
Support groups for HIV positives	11.4	10.3 (6.3-14.9)
Medical help for HIV/AIDS infected people	11.9	12.3 (6.8-17.3)
Needle exchange	59.5	59.4 (50.2-65.4)
Free services for drug abuse	4.7	5.9 (2.1-7.8)
Rehabilitation for drug users	3.8	4.3 (1.1-6.3)
Receive condoms	60.4	60.5 (53.1-66.1)
Support groups for drug users	2.8	2.1 (0.4-3.4)
Help with recovering official documents (passport, medical insurance)	0.9	1.3 (0.0-3.2)
Free legal consultation	9.5	10.5 (5.7-14.8)
Free psychological help	10.0	8.8 (4.3-11.7)

Irkutsk

1. Sociodemographic Characteristics

The population estimates of IDUs in Irkutsk revealed that about three-quarters were male (77.9%) and almost 80% were 23 years of age or older. The majority had completed either secondary schooling (40.0%) or special college (31.7%) and had lived in Irkutsk for over 21 years; 68.9% for 21-30 years and 14.5% for 31 years or more. The majority were registered permanent residents of the city. In terms of marital status, an estimated 60.7% were not married and living alone and 16.9% of IDUs were married and living with their partner.

2. Alcohol and Drug Use

Alcohol use

Population estimates show that during the month preceding the survey, 8.2% of IDUs in Irkutsk consumed alcohol almost every day, 23.8% drank alcohol a few times a week, and 35.6% did not drink at all.

Drug use

Over half of IDU had been injecting for more than five years with 41.4% having injected for 6-10 years and 10.0% for 11 or more years. A significantly higher proportion of male IDUs (12.7%) compared to female IDUs (3.7%) had been injecting for 11 years of more [data not shown]. Many IDUs started injecting drugs before the age of 18 years (36.0%). IDUs in Irkutsk also injected frequently; with about half (51.3%) injecting two or more times a day and 40.4% once a day in the last one month. The most common type of drug injected was heroin (96.5%). Only 1.8% were currently in drug treatment.

Table 3.12 Drug use characteristics, Irkutsk

CHARACTERISTIC	Sample % (N=196)	Population Estimates (95% CI)
Duration of injection drug use		
< 1 year	6.3	9.3 (1.9-13.0)
1-5 years	31.5	39.1 (27.8-48.2)
6-10 years	42.7	41.4 (35.6-56.1)
11 years or more	19.34	10.0* (5.7-14.6)
Age at first drug injection		
<18	39.8	36.0 (27.8-49.2)
18-22	42.2	42.9 (30.2-50.0)
23-27	12.1	13.2 (6.9-25.4)
28-32	5.8	7.7 (2.4-12.7)
33 or older	0.0	0.0
Frequency of drug injection in last 1 month		
Once a week or less	2.4	2.7 (0.5-4.3)
2-6 times a week	4.8	5.6 (0.9-7.0)
Once a day	28.6	40.4 (30.0-50.2)
2 or more times a day	63.5	51.3 (43.0-63.5)

Needle and injection equipment sharing behaviors

Sharing of needles or syringe (referred from hereon as needles) was measured during the BMS. Only 13.0% of IDUs had borrowed a needle some of the time and 2.2% at least half the time they injected in the last one month. Borrowing of needles refers to using a needle or syringe that had previously been used by someone else. Among those who borrowed needles, only 13.2% were estimated to have cleaned the used needles every time in the last month. Cold water (59.2%) and hot water (39.5%) were the most common methods of cleaning needles. No one reported using bleach. Population estimates also showed that only half (54.7%) of IDUs had used clean unused needles every time they injected in the last month.

Table 3.13 Needle and injection equipment sharing behaviors, Irkutsk.

Characteristic	Sample % (N=196)	Population Estimates (95% CI)
Borrowing needles[a]		
Borrowed needles at last injection	12.6	17.1 (9.8-28.1)
Frequency of borrowing needles in last 1 month		
At least half the time	1.8	2.2 (0.2-4.1)
Some of the time	8.2	13.0 (5.3-22.5)
Never	88.8	84.7 (75.6-92.6)
Number of people from whom respondent borrowed needles in last 1 month		
1-5 people	78.2	NA[b]
6-10 people	13.0	
More then 11 people	8.6	
Frequency of using clean needles in last 1 month		
Every time	61.1	54.7 (45.7-66.8)
Most of the time	23.7	19.9 (11.7-27.1)
Some of the time	11.6	21.3 (11.3-33.9)
Never	2.4	3.9 (0.1-3.9)
Lending[c] needles		
Frequency of lending needles in last 1 month		
At least half the time	0.9	0.5 (0.0-1.3)
Some of the time	22.8	24.9 (14.0-31.3)
Never	76.2	75.0 (68.7-85.9)
Number of people to whom respondent lent needles in last 1 month		
1-5 people	83.6	NA[b]
6-10 people	4.0	
More then 11 people	6.1	
Used pre-filled syringe[d] in last 1 month	5.3	4.1 (1.8-6.1)
Frequency of sharing injection equipment[e] in last 1 month		
Every time	1.9	2.0 (0.2-3.0)
Almost all the time	5.3	5.2 (2.0-8.6)
Some of the time	23.3	19.5 (13.5-28.4)
Never	69.4	73.1 (64.5-80.5)
Frequency of drawing drugs from communal container in last 1 month		
Every time	1.9	2.1 (0.2-2.9)
Almost all the time	5.3	6.9 (2.6-10.9)
Some of the time	20.8	18.5 (13.2-26.6)
Never	71.3	72.3 (64.0-79.4)

[a] *Borrowing* needles refers to using a needle or syringe that had previously been used by someone else.
[b] Sample size too small to calculate valid estimates in RDSAT.
[c] *Lending* needles refers to giving, selling, or renting a needle/syringe to someone else, after respondent had already used it.
[d] *Pre-filled syringe* refers to a syringe that was filled without the respondent witnessing it.
[e] *Sharing of injection equipment* refers to sharing of cookers, vials, containers, cotton, filters, or rinse water.

Lending of needles to other IDUs was somewhat common. Lending refers to giving, selling, or renting a needle to someone else after respondent had already used it. Population estimates show although three-quarters (75.0%) never lent needles to others in the last month, a quarter (24.9%) lent needles to others some of the time. Typically, the people to whom they lent needles were friends (70.7%) or other drug users (44.6%).

IDUs engaged in other risky injection practices, although it was less common compared to IDUs in St. Petersburg and Orenburg. Less than five percent using pre-filled syringes (syringe that was filled without the respondent witnessing it) in the last month. The majority (82.7%) also never practiced backloading, frontloading or splitting of drugs (defined as using a syringe that was filled by someone else squirting drugs into it from his/her used syringe) in the last month.

Additionally, while population estimates reveal that 73.1% never shared injection equipment in the last month, the remainder did so at least some of the time. Lastly, although almost three-quarters (72.3%) are estimated to have never drawn drugs from a communal container in the last month, 18.5% reported doing so some of the time and 6.9% did so almost all the time in the last month.

Accessibility to clean unused needles

The majority of IDUs (82.8%) are estimated to be able to obtain clean, unused needles for injections, with 87.1% indicating pharmacies as a place to obtain new needles, 40.0% from a drug dealer, and 37.3% from a needle exchange program. One of the primary reasons for not being able to obtain unused needles was having no money (36.0%).

3. Sexual Behaviors, Condom Use, and Sexual Violence

The majority (88.8%) of IDUs first had sexual intercourse before the age of 18 years. A significantly higher proportion of males (94.4%) than females (67.1%) first had sex before the age of 18 years [data not shown]. The majority (86.7%) of IDUs in Irkutsk are also estimated to have had sex in the last 12 months. Population estimates show that 85.6% had sex with regular partners (defined as spouse or live-in sex partner), 6.9% with commercial partners, and 22.7% with non-regular partners (defined as a partner respondent is not married to, has never lived with and did not have sex in exchange for money). About three-quarters (75.7%) of all IDUs in Irkutsk are estimated to have had one regular sex partner and about ten percent are estimated to have had two or more regular sex partners in the last 12 months. Less than ten percent of all IDUs reported two or more commercial sex partners in the last 12 months and slightly less than 20 percent reported two or more non-regular sex partners.

Table 3.14 Sexual behaviors, Irkutsk.

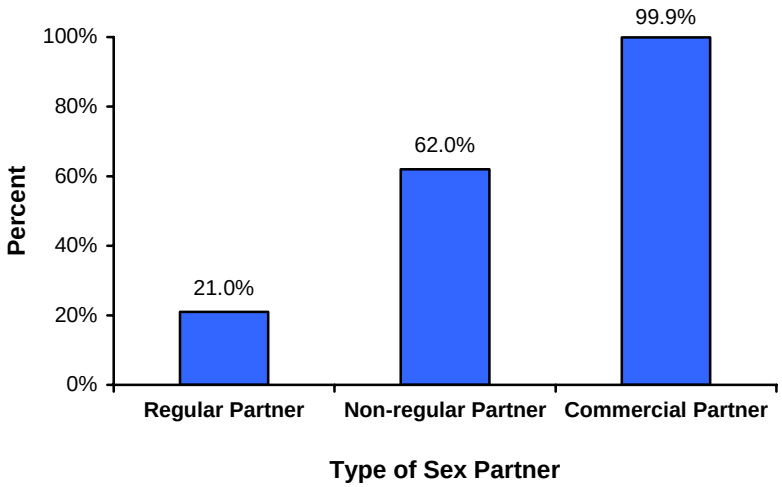
CHARACTERISTIC	Sample % (N=196)	Population Estimates (95% CI)
Had sex in the last 12 months	84.7	86.7 (79.6-91.6)
Sex with regular[a] partners	83.6	85.6 (82.8-94.8)
Number of regular partners in last 12 months		
None	15.7	13.9 (6.1-18.1)
1 person	64.3	75.7 (71.1-86.7)
2-4 people	16.9	8.1 (4.6-11.0)
5-10 people	1.7	1.4 (0.0-3.2)
11-20 people	0.5	0.1 (0.0-0.2)
More than 20 people	0.0	0.0
Sex with commercial[b] partners	11.6	6.9 (2.4-13.0)
Number of commercial partners in last 12 months		
None	87.1	92.4 (86.9-97.3)
1 person	1.7	0.6 (0.0-0.9)
2-4 people	3.5	2.3 (0.1-3.4)
5-10 people	5.2	3.5 (0.5-9.6)
11-20 people	0.5	0.0
More than 20 people	0.5	0.0
Sex with non-regular[c] partners	33.3	22.7 (13.5-30.0)
Number of non-regular partners in last 12 months		
None	65.4	74.3 (70.9-86.4)
1 person	7.0	5.3 (2.0-11.2)
2-4 people	15.2	6.8 (2.8-11.0)
5-10 people	7.0	9.9 (1.9-8.0)
11-20 people	1.7	1.1 (0.0-4.1)
More than 20 people	1.7	0.9 (0.0-2.3)

[a] Regular partner refer to spouse or live-in sex partner.
[b] Commercial sex partner refers to a partner with whom respondent bought sex in exchange for money or drugs or other compensations.
[c] Non-regular sex partner refers to8a partner who respondent: i) is not married to, ii) has never lived with, and iii) did not have sex in exchange for money.

Condom use

Condom use varied greatly depending on the type of sex partner. Consistent condom use in the last 12 months was estimated to be 21.0% with a regular partner, 62.0% with a non-regular partner, and 99.9% with a commercial partner **(Figure 3.5)**.

Figure 3.5 Population of consistent condom use in the last 12 months with different types of sex partners, Irkutsk.



Condom use at last sex followed a similar pattern: 36.4% with regular partners, 89.2% with non-regular partners, and 99.9% with commercial partners **(Table 3.15)**. The main

reasons cited for not using condoms with regular partners were not liking condoms (63.0%) or not thinking it was necessary (30.0%), or the partner objecting (20.9%). All IDUs knew where to obtain condoms, with the majority mentioning pharmacies (97.4%) and stores (61.1%). The majority (85.9%) indicated they could obtain condoms in less than 10 minutes.

Table 3.15 Condom use at last sex with different types of sex partners, Irkutsk.

CHARACTERISTIC	Sample % (N=196)	Population Estimates (95% CI)
Condom use at last sex with regular partners[a]	40.5	36.4 (21.7-42.5)
Reasons for not using condoms at last sex with regular partner		
Not available	3.6	0.0
Too expensive	0.0	0.0
Partner objected	4.8	20.9 (0.0-22.3)
Don't like condoms	34.9	63.0 (40.7-88.5)
Other contraception	3.6	1.5 (0.0-5.8)
Didn't think it necessary	42.1	30.0 (8.1-38.2)
Didn't think of it	2.0	0.0
Other	12.0	3.7 (1.0-8.5)
Condom use at last sex with commercial partners[b]	95.0	99.9 (99.9-99.9)
Condom use at last sex with non-regular partners[c]	80.7	89.2 (53.3-91.5)
Reasons for not using condoms at last sex with non-regular partner		
Not available	22.2	NA[d]
Too expensive	0.0	
Partner objected	0.0	
Don't like condoms	33.3	
Other contraception	0.0	
Didn't think it necessary	22.2	
Didn't think of it	0.0	
Other	22.2	

[a] *Regular partner* refer to spouse or live-in sex partner.
[b] *Commercial sex partner* refers to a partner with whom respondent bought sex in exchange for money or drugs o34,9r other compensations.
[c] *Non-regular sex partner* refers to8a partner who respondent: i) is not married to, ii) has never lived with, and iii) did not have sex in exchange for money.
[d] Sample size too small to calculate valid estimates in RDSAT.

Sexual violence

Population estimates showed that 3.0% of IDUs in Irkutsk experienced sexual violence (forced to have sex by use or threat of force) during the last year.

4. STI Knowledge and Symptoms

Almost all (94.9%) IDUs are estimated to have heard of STIs. Knowledge about specific female STI symptoms was low, however, knowledge about specific male STI symptoms was slightly higher. When asked to identify female STI symptoms, 21.7% of IDUs named burning pain upon urination, 14.2% named itching, and 11.5% named foul-smelling genital discharge. When asked about male STI symptoms, 49.4% noted genital discharge, 23.5% mentioned genital ulcers and sores, and 22.1% named burning pain upon urination. During the last year, fewer than one out of ten (6.8%) are estimated to have reported experiencing some STI symptom, with 5.4% having abnormal genital discharge and 6.5% reporting having had genital ulcers or sores.

Table 3.16 Knowledge of female and male STI symptoms, Irkutsk.

Characteristics	Sample % (N=196)	Population Estimates (95% CI)
Has heard of STI	97.5	94.9 (91.4-98.8)
Knowledge of female STI symptoms		
Genital discharge	7.4	9.6 (4.3-15.3)
Burning pain on urination	28.2	21.7 (14.7-30.7)
Foul smelling discharge	14.3	11.5 (7.1-18.0)
Genital ulcers/sores	10.3	9.6 (4.5-15.3)
Abdominal pain	12.8	9.2 (5.1-16.2)
Swelling in groin area	2.4	4.4 (0.5-10.0)
Itching	14.3	14.2 (8.7-25.1)
Others	8.9	3.3 (1.2-6.0)
Knowledge of male STI symptoms		
Genital discharge	53.4	49.4 (43.4-65.0)
Burning pain on urination	25.2	22.1 (17.8-32.3)
Genital ulcers/sores	20.7	23.5 (16.8-36.1)
Swelling in groin area	7.9	9.4 (5.4-17.0)
Others	14.3	5.0 (2.9-9.4)
Experienced any STI symptoms[a] in the last 12 months	5.8	6.8 (2.7-12.3)
Had abnormal genital discharge	5.3	5.4 (1.6-10.7)
Had genital ulcers or sores	5.3	6.5 (2.2-11.8)

[a] 'Any STI symptoms' was defined as having any abnormal genital discharge or any genital ulcers or sores.

5. HIV Knowledge and Testing Behaviors

Almost all (93.8%) IDUs had heard of HIV/AIDS. Population estimates show that a considerable proportion of IDUs (75.3%) knew someone who was HIV positive and/or had died of AIDS and 69.2% had a close friend or a relative with HIV or died of AIDS.

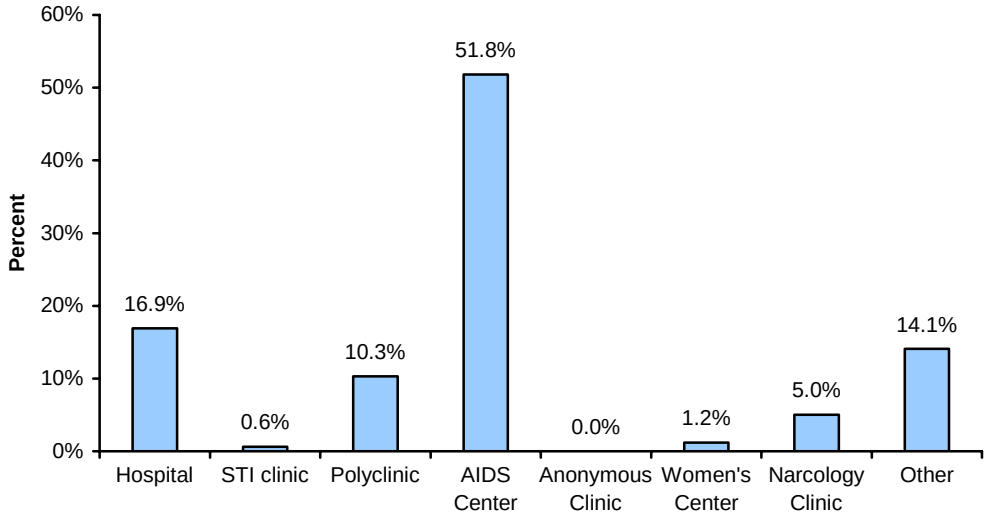
The majority of IDUs knew that abstinence (88.5%), using condoms correctly during every sexual intercourse (94.8%), and having one uninfected partner (77.9%) could prevent HIV infection. Almost all (99.8%) knew that one can be infected with HIV through sharing a needle for injection. Knowledge of mother to child transmission was also fairly high with 70.4% correctly answering that an HIV positive mother can transmit the virus to her new-born child through breast milk and 92.3% answering that an HIV infected pregnant woman can transmit the virus to her fetus. Knowledge regarding antiretroviral drugs was low with only 25.9% knowing that an HIV infected pregnant woman can reduce the risk of HIV transmission to her unborn child by taking ARVs.

In terms of misconceptions about HIV transmission, an estimated three-quarters (78.6%) knew that one cannot get HIV from a mosquito bite, 70.8% knew that one cannot contract HIV through sharing a meal with an HIV positive person, and 90.9% knew that a healthy looking person can be HIV infected. Only slightly more than half of IDU respondents, however, answered all three of the above knowledge questions correctly (53.9%)

HIV counseling and testing

Population estimates indicated that almost all (95.5%) IDUs were aware of the availability of anonymous HIV testing in the city. About three-quarters (70.4%) were estimated to have ever had an HIV test, almost all (85.1%) of whom had found out their test results. Over three-quarters (78.5%) of those who had ever tested had the test within the past 12 months and 13.6% had taken it 1-2 years ago. About half (51.8%) had the test done at the AIDS Center. Others had the last HIV test at a hospital (16.9%) or a polyclinic (10.3%).

Figure 3.6 Population estimates of places of last HIV test among IDUs, Irkutsk



6. Stigma and Discrimination

In terms of stigma and discrimination towards people living with HIV/AIDS over one-third of IDUs would not be willing to share a meal with an HIV infected person (38.5%), and one-fifth would not buy food from an HIV positive shopkeeper or food seller (21.3%). About one out of ten would refuse to provide care for an HIV positive male or female relative in the household. A small proportion felt that an HIV-infected teacher should stop teaching even if he/she was not sick (11.6%) or that an HIV positive student should stop attending classes even if he/she was not sick (8.9%). An estimated majority of IDUs (83.5%) would conceal from friends and acquaintances the fact that a family member became infected with HIV.

7. Exposure to HIV prevention programs

Very few (5.8%) IDUs were aware of STI/HIV prevention programs for injection drug users in the city. Awareness of where to receive HIV and STI prevention services was also very low. Population estimates show that only a small proportion of IDUs knew where to receive the following services: free HIV test (19.1%) and needle exchange services (17.3%). Even fewer knew where to receive other services such as receiving free STI test (9.0%), receiving condoms (8.5%), and rehabilitation for drug users (9.9%). However, a fairly high proportion knew where to receive medical help for HIV/AIDS infected people (75.4%) and free psychological help (72.7%). In the last 12 months, IDUs in Irkutsk actually sought very few services. The most commonly sought service was receiving condoms (64.8%). Only 6.3% sought a free HIV test and 7.5% sought services from a needle exchange.

Table 3.17 Services sought from HIV/STI prevention programs in last 12 months.

Characteristic	Sample % (N=196)	Population Estimates (95% CI)
Free STI test	1.4	0.4 (0.0-0.8)
Free STI treatment	0.9	0.2 (0.0-0.3)
Free HIV test	11.6	6.3 (3.1-9.7)
Informational leaflets on STI and HIV/AIDS	3.8	1.5 (0.3-2.5)
Support groups for HIV positives	0.0	0.0
Medical help for HIV/AIDS infected people	1.4	0.9 (0.0-1.8)
Needle exchange	13.5	7.5 (4.7-11.5)
Free services for drug abuse	1.4	0.3 (0.0-0.8)
Rehabilitation for drug users	1.9	2.6 (0.0-5.7)
Receive condoms	66.0	64.8 (54.8-74.5)
Support groups for drug users	0.9	0.2 (0.0-0.1)
Help with recovering official documents (passport, medical insurance)	0.9	0.6 (0.0-1.9)
Free legal consultation	1.9	0.6 (0.0-1.1)
Free psychological help	1.9	0.5 (0.0-0.9)

Network Size

IDUs in all three cities were recruited using the RDS methodology. As part of the method, participants were asked to self-report their network size (i.e., the number of other IDUs they know and who also know them and who they have seen in the last one month). The RDS software, with this information, was used to calculate adjusted network sizes for IDUs by sex, age, education, and duration of injection drug use.

In general, IDUs in St. Petersburg had larger average network sizes compared to IDUs in Orenburg and Irkutsk. Female IDUs had larger average network sizes compared to males, except for IDUs in Orenburg, where average network sizes were similar between males and females. The variation in the network sizes was different in all three cities. In St. Petersburg, those in the youngest and oldest age groups had significantly smaller networks; however, in Orenburg and Irkutsk, those in the youngest group had larger networks than their older counterparts. Again with regard to education, the variation in network sizes differed between cities. In St. Petersburg, those with greater schooling had smaller networks, however, in Orenburg, those with greater years of schooling had slighter larger networks. Lastly, in St. Petersburg and Irkutsk, those who had injected the longest had the largest network sizes. However, in Orenburg, more recent initiates of injection drug use had larger network sizes.

Table 3.18 Adjusted network sizes, by selected characteristics and city

	St. Petersburg (N=200)	Orenburg (N=200)	Irkutsk (N=196)
Sex			
Male	17	12	9
Female	20	11	14
Age			
16-18	10	14	15
18-22	26	11	11
23-27	20	11	8
28-32	19	12	13
33 or older	9	12	13
Education			
Primary School	-	13	16
Secondary School	20	10	14
Vocational School	22	11	5
Special College	16	11	9
University, 3-4 yrs	14	13	13
University, 5-6 yrs	14	14	6
Duration of injection drug use			
< 1 year	19	13	9
1-5 years	17	12	8
6-10 years	18	11	11
11 years or more	23	11	18

IV. COMMERCIAL SEX WORKERS

St. Petersburg

1. Sociodemographic Characteristics

Six hundred and sixty-two commercial sex workers (CSW) participated in the BMS in Saint-Petersburg. With a mean age of 27.3 years, approximately a quarter (28.4%) had completed secondary school, 16.9% had completed vocational school, and about one-third (36.3%) had completed special college education. The majority (95.5%) of CSWs were permanent residents of Saint-Petersburg (i.e., held permanent registration). They resided mainly in Vyborgsky, Kalininsky, Central, Petrogradsky, Krasnogvardeysky, Kirovsky, Primorsky and Nevsky districts of the city of Saint-Petersburg (data not shown). The majority of CSWs are unmarried women; 60.7% of whom were not married and living alone and 24.9% were not married, but living with a partner.

At the time of the survey, one in three CSWs (31.3%) earned money outside of provision of sexual services. Among them, about half were involved in selling goods (46.6%), one- third (34.6%) in the service sector, and 13.0% in manufacturing. Over one half of the CSW (53.5%) were financially supporting other people; the median number of dependent persons was equal to one.

2. Alcohol and Drug Use

Alcohol use

During the month preceding the survey, the majority of CSWs reported drinking alcohol every day (61.9%) or a few times a week (21.9%).

Drug use

Ninety-one percent of respondents had used drugs with about half (48.1) having used illicit drugs for 6-10 years and 12.2% for 11 years or more. Injection drug use in the previous one month was also high (83.9%), with 66.6% having injected 2 or more times a day and 21.3% injected once daily in the last month. The most common type of drug injected was heroin (91.5%). Only 1.4% of these CSWs were currently in drug treatment.

Needle and injection equipment sharing behaviors

Out of all CSWs, 6.3% reported using a needle at the time of their last injection that had previously been used by someone else (i.e., borrowing needles). About twice as many CSWs (14.6%) had borrowed a needle at least some of the time during the last one month. Typically, respondents borrowed from one other person, mainly friends (63.8%), or regular sex partners (37.9%). Only 11.0% indicated that they cleaned their used needles every time and 34.6% indicated they never cleaned their used needles in the last month. The most common methods of cleaning were using cold water (57.1%), hot water (30.8%), and boiled water (25.8%). Less than 1% of respondents who injected used bleach for cleaning. Among CSWs who injected, only 51.2% reported using a needle not previously used by someone else every time they injected in the last one month.

Survey participants were also asked about behaviors related to lending needles (giving, lending, selling, or renting out needles to someone else after he/she had already used the needle).

Among respondents who injected drugs in the last one month, 79.9% reported never lending needles, while 18.0% lent needles to someone else, typically to a friend (78.6%) or a regular sex partner (21.4%). CSWs who injected reported other risky injection behaviors in the last one month; 19.6% used pre-filled syringes (a syringe that was filled without the respondent witnessing it), 22.8% reported backloading, frontloading or splitting[17] drugs at least some of the time, 57.7% reported sharing injection equipment at least some of the time, and 58.9% reported drawing drugs from a communal container at least some of the time.

Accessibility to clean unused needles

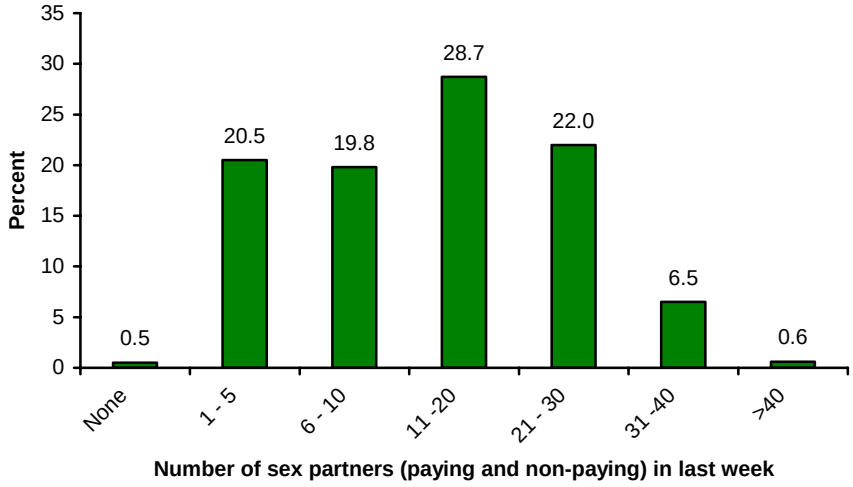
The majority of CSWs (89.6%) indicated that they could obtain clean, unused needles for injections. Most respondents indicated that they could obtain needles from pharmacies (96.0%) and/or needle exchange (39.9%). One of the primary reasons for not being able to obtain unused needles was that the place where they can get needles was not open (44.6%).

3. Sexual Behaviors, Condom Use, and Sexual Violence

Among CSWs in St. Petersburg, the median age of first intercourse was 16 years and only 25.0% had used a condom when they first had sexual intercourse. The median age at which respondents began working in commercial sex was 22 years.

The median number of sex partners (paying and non-paying) within the week preceding the survey was fifteen. In the previous week, one-fifth of CSWs reported having 1-5 sex partners, while more than three-quarters had 6 or more partners, including both paying and non-paying sex partners.

Figure 4.1 Number of sex partners (paying and non-paying) in last one week, %.



Sex with paying partners

During the last working day preceding the survey, CSWs had a median of 2.6 commercial sex partners, with 94.8% having had 1 to 5 partners. Earnings for CSWs in St. Petersburg per sexual contact with a paying client varied; 29.7% earned 700 rubles or less, 37.2% earned 701-1000 rubles, and 32.7% earned more than 1,000 rubles.

[17] Backloading, frontloading and splitting of drugs refer to a syringe that was filled by someone else

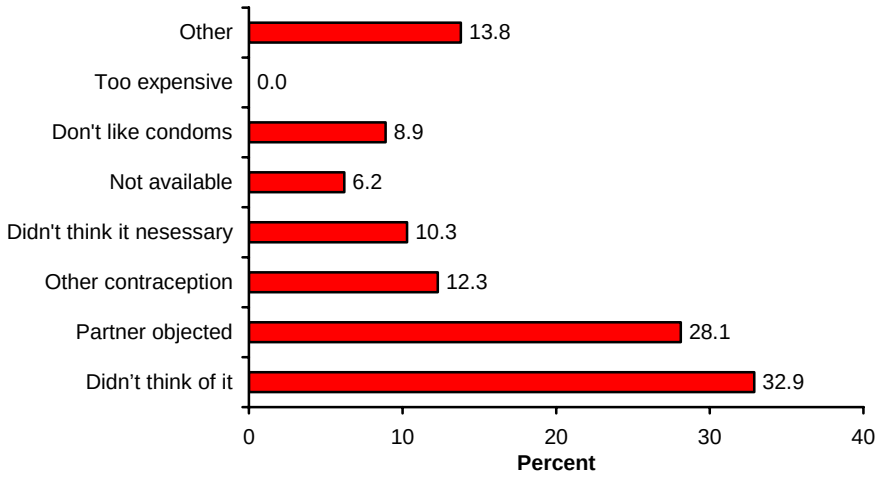
Sex with non-paying partners

Approximately one-third (31.0%) of CSWs also reported having sex with non-paying partners; most of whom had sex with these non-paying partners more than 6 times in the last 30 days.

Condom use

Condom use during last sex with a paying partner was common (98.9%), while use with non-paying partners occurred less frequently (28.8%). Similarly, over the last 30 days consistent condom use (using condoms every time they had sex) was high with paying partners (95.6%), but low with non-paying partners (17.1%). The main reasons cited for not using condoms with non-paying partners were not thinking of it and objection by partner.

Figure 4.2 Reasons for not using condoms at last sex with last non-paying partner, St. Petersburg, %.



Sexual violence

Approximately one third of CSWs (35.3%) reported having suffered sexual violence (forced to have sex by use or threat of force) during the last year.

4. STI Knowledge and Symptoms

All respondents had heard of diseases that are sexually transmitted. When asked to identify female Sexually Transmitted Infection (STI) symptoms, the most frequent responses were genital discharge and itching. When asked about male STI symptoms, respondents most often mentioned genital discharge, burning pain upon urination, and genital ulcers and sores.

Table 4.1 Knowledge of female and male STI symptoms, St. Petersburg, %.

	St. Peters burg (N=662) %
Has heard of STI	100.0
Female STI symptoms	
Genital discharge	78.9
Burning pain on urination	31.3
Foul smelling discharge	58.3
Genital ulcers/sores	25.2
Abdominal pain	30.5
Swelling in groin area	14.4
Itching	41.4
Others	6.9
No response	1.7
Male STI symptoms	
Genital discharge	72.2
Burning pain on urination	31.7
Genital ulcers/sores	18.3
Swelling in groin area	11.3
Others	4.7
No response	0.8

During the last year, about 13% of women reported experiencing an STI symptom with 12.1% having abnormal genital discharge and 4.2% having had genital ulcers or sores. Upon discovery of the symptoms, 60.5% sought care first at a government clinic or hospital and 14.0% took medicine from home. Almost half (44.8%) sought medical care for the STI symptom within one week or less after recognizing the symptom.

Table 4.2 Places CSWs first sought medical care for STI symptoms in the last 12 months, St. Petersburg, %.

Type of places where medical care was FIRST sought for STI symptoms in the last 12 months	St. Peters burg (N=662) %
Workplace clinic/hospital	0.0
Government clinics/hospitals	60.5
Church or charity-run clinics/hospitals	5.8
Private clinic/hospital	3.5
Private pharmacy	10.5
Traditional healer	0.0
Took medicine from home	14.0

Among those who experienced an STI symptom in the past year, 34.9% indicated that they stopped having sex when experiencing the STI symptom, 68.6% used a condom when having sex, and 44.2% told her sex partner about the STI/discharge.

5. HIV Knowledge and Testing Behaviors

All CSWs had heard of HIV/AIDS. The majority (84.5%) also knew someone who was HIV positive and/or had died of AIDS, of whom 74.0% stated that they had a close friend or a relative with HIV or who has died of AIDS.

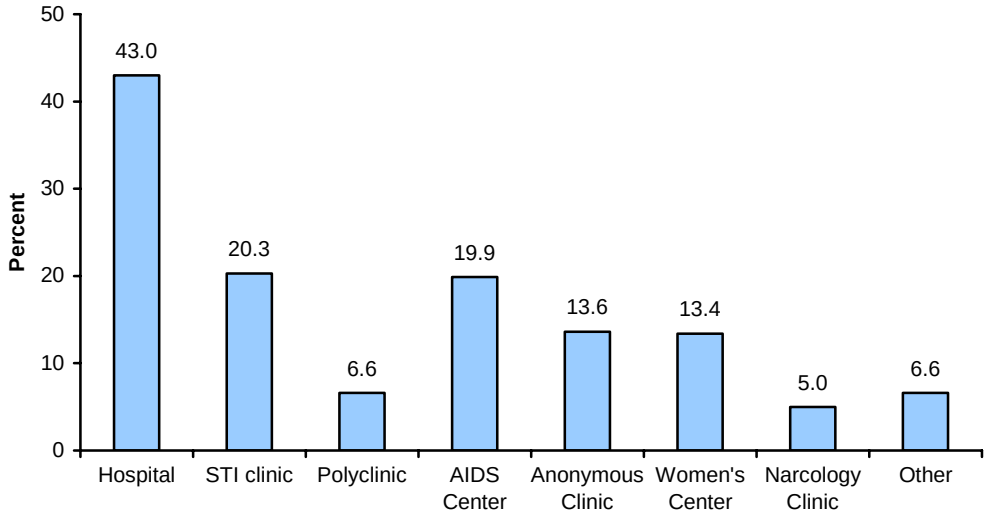
The respondents also showed moderate levels of knowledge on the routes of HIV transmission and its prevention. About three-quarters (78.8%) indicated that using condoms correctly during every sexual intercourse can prevent HIV infection. The majority (98.3%) responded correctly that one can be infected with HIV through sharing a needle for injection. Knowledge of mother-to-child transmission was fairly high with 79.4% correctly answering that an HIV positive mother can transmit the virus to her new-born child through breast milk, and 76.2% answering that an HIV infected pregnant woman can transmit the virus to her fetus. Knowledge regarding antiretroviral drugs was lower with only 40.6% knowing that an HIV infected pregnant woman can reduce the risk of HIV transmission to her unborn child by taking Antiretroviral drugs (ARVs).

Over half of the interviewed women (64.8%) did not have misconceptions about the routes of the HIV transmission.[18] In total, 87.4% of the CSWs agreed that one cannot contract HIV through sharing a meal with an HIV positive person, 86.2% knew that a healthy looking person can be HIV infected, and 83.6% of the CSWs knew that one cannot get HIV from a mosquito bite.

HIV testing

Awareness of the availability of anonymous HIV testing in the city is very high (98.5%), and is consistent with a relatively high level of HIV testing by CSWs, with 84.5% ever having undergone HIV testing. Among those who have taken an HIV test, 90.7% of CSWs voluntarily took and received their test results and three-quarters (75.4%) took the HIV test within the past 12 months. The most common places where respondents had taken an HIV test included hospitals and the AIDS Center.

Figure 4.3 Places of last HIV test among CSWs, St. Petersburg, %.



6. Stigma and Discrimination

About one-third of CSWs (34.1%) would not be willing to share a meal with an HIV infected person and around 13% would refuse to provide care for an HIV positive relative in the

[18] Absence of wrong representations about a HIV includes knowledge that the HIV is not transferred with the sting of a mosquito, during the joint acceptance of food with a HIV-infected, and knowledge that the person who looks healthy, can be a HIV-infected.

household. In addition, 19.2% claimed that an HIV-infected teacher should stop teaching even if he/she was not sick, and 13.0% thought that an HIV positive student should stop attending classes even if he/she was not sick. About one-third of the CSWs (28.9%) would not buy food from an HIV positive shopkeeper or food seller. The majority of CSWs (85.3%) would conceal from friends and acquaintances the fact that a member of their family was infected with HIV.

7. Exposure to HIV prevention programs

The most commonly used media among respondents were radio and television. The majority of CSWs listened to the radio (82.5%), watched television (92.6%), and read magazines or newspapers (61.4%) at least once a week in the last 4 weeks. Respondents also reported seeing HIV programs or messages on television (88.8%), in printed materials (88.0%), and on the radio (58.2%) in the past 12 months. Internet use was not common among CSWs with 87.3% reporting never having used the internet in the last 4 weeks.

Over half (60.7%) were aware of STI/HIV prevention programs for women in sex work in the city, primarily because they have taken part in these programs (78.1%). Services or products received from STI/HIV prevention programs included condoms, counseling by an outreach worker, and receiving informational leaflets. In the last 12 months, CSWs reported receiving services from HIV/STI prevention programs about once a month (33.1%) or about once a week (43.6%).

Table 4.3 Services received from HIV/STI prevention programs, St. Petersburg, %.

Services received from STI/HIV prevention program in the city for women in sex work	**St. Petersburg** (N=662) %
Counseling with social worker	89.2
Received condoms	94.3
Received lubricants	63.7
Received informational leaflets	86.9
Was referred for anonymous HIV test	76.4
Was referred for anonymous hepatitis test	67.5
Was referred for anonymous STI test	67.5
Was referred for medical examination	60.2
Received medical consultation	43.9
Needle exchange	81.2
Other	8.3

The main services CSWs in St. Petersburg sought in the last 12 months were receiving condoms, needle exchange services, and HIV and STI testing.

Table 4.4 Services sought from HIV/STI prevention programs in last 12 months, %.

Services sought in the last 12 months	St. Petersburg (N=662) %
Free STI test	44.7
Free STI treatment	3.3
Free HIV test	59.8
Informational leaflets on STI and HIV/AIDS	40.3
Support groups for HIV positives	3.9
Medical help for HIV/AIDS infected people	8.5
Needle exchange	63.0
Free services for drug abuse	5.0
Rehabilitation for drug users	4.8
Receive condoms	76.7
Support groups for drug users	2.0
Help with recovering official documents (passport. medical insurance)	4.4
Free legal consultation	6.5
Free psychological help	11.0

8. Comparison of CSWs exposed and not exposed to HIV prevention programs for CSWs

CSWs in St. Petersburg were asked a number of questions regarding their exposure to specific HIV prevention interventions targeted at CSWs. This survey assessed prevention program exposure only among CSWs in St. Petersburg where USAID-funded programs were being implemented. There were no USAID-funded programs for CSWs in Orenburg and Irkutsk.

Exposure was defined as having received HIV prevention educational materials and condoms through outreach workers in sites (street-based) where CSWs tend to congregate to find clients in the last one year in St. Petersburg. Among the 662 CSWs surveyed, 314 (47.4%) reported having been exposed to the specific HIV prevention interventions. The following results compare those exposed to these specific prevention activities to those not exposed.

Socio-demographic characteristics

Socio-demographic characteristics did not differ significantly between CSWs exposed to the prevention programs and those not exposed with the exception of age, age at first marriage, and earning money outside of sex work. Exposed CSWs were slightly older (27.0 years median age versus 26.0 years), married at a younger age (19 years versus 20 years), and were less likely to earn money outside of sex work (24.8% versus 37.1%) compared to those not exposed to the programs.

Alcohol and drug use

Alcohol use was more common among those exposed to the programs; 88.2% of those exposed and 79.9% of those not exposed consumed alcohol at least a few times a week. CSWs exposed to programs were significantly more likely to have used illicit drugs (95.9% versus 86.3%). Additionally, they were also more likely to have used illicit drugs for a longer period of time -- 64.8% of exposed CSWs reported using drugs for 6 or more years compared to those not exposed (52.5%). There was no statistical difference between the two groups in the percentage injecting drugs in the last month, however, those exposed to the programs injected drugs more frequently; 80.7% of exposed and 52.7% of non-exposed CSWs injected two or more times a day.

Sharing of needles and injection equipment

Borrowing of needles did not differ significantly between those exposed and not exposed to programs. **(Table 4.5)** However, lending of needles was significantly more common among exposed versus non-exposed CSWs (25.6% versus 13.7% lending needles at least some of the time). Cleaning of used needles (whether used by someone else or oneself) was also significantly more common among exposed versus non-exposed respondents (36.7% vs. 29.9% respectively). Additionally, exposed CSWs were significantly more likely to exhibit other high-risk injection behaviors, including using pre-filled syringes in the last one month, backloading, frontloading or splitting drugs[19], sharing injection equipment, and drawing drugs from a communal container.

[19] Backloading, frontloading and splitting of drugs refer to a syringe that was filled by someone else

Table 4.5 Needle sharing behaviors among CSWs exposed and not exposed to HIV programs in St. Petersburg, %.

Characteristics	Exposed (N=314) %	Non-Exposed (N=348) %	P-value
Borrowed[1] needle at last injection	5.5	7.1	N.S.
Borrowed needles in last 1 month	23.2	18.2	N.S.
Frequency of borrowing needles in last 1 month			
At least half the time	8.3	4.8	N.S.
Some of the time	14.9	13.4	
Never	76.8	81.7	
Frequency of cleaning used needles in last 1 month			
Every time	9,0	13,1	p≤0.001
Most of the time	27,7	16,8	
Some of the time	37,7	25,7	
Never	25,6	44,4	
Frequency of using clean needles in last 1 month			
Every time	52,9	49,3	N.S
Most of the time	23,9	32,1	
Some of the time	22,1	18,3	
Never	0,7	0,4	
Lent[2] needles in last 1 month	25.6	13.7	p≤0.01
Frequency of lending needles in last 1 month			
At least half the time	2,1	1,8	p≤0.01
Some of the time	23,5	11,9	
Never	74,4	85,8	
Median number of people from whom respondent borrowed needles in last 1 month	2.0	1.0	N.S.
Used pre-filled syringe[3] in last 1 month	29.8	8.6	p≤0.001
Frequency of backloading, frontloading or splitting[4] in last 1 month			
Every time	3,8	1,1	p≤0.001
Almost all the time	7,3	1,9	
Some of the time	20,1	10,8	
Never	68,5	86,2	
Frequency of sharing injection equipment[5] in last 1 month			
Every time	19,7	10,4	p≤0.001
Almost all the time	18,0	8,6	
Some of the time	31,1	26,5	
Never	30,4	54,5	
Frequency of drawing drugs from communal container in last 1 month			
Every time	21,1	12,3	p≤0.001
Almost all the time	18,7	9,3	
Some of the time	31,1	24,3	
Never	29,1	54,1	

[1] ***Borrowing*** needle refers to using a needle or syringe that had previously been used by someone else.

[2] ***Lending*** needles refers to giving, lending, selling, or renting a needle or syringe to someone else, after respondent had already used it.

[3] ***Pre-filled syringe*** refers to a syringe that was filled without the respondent witnessing it.

[4] ***Backloading, frontloading and splitting of drugs*** refer to a syringe that was filled by someone else squirting drugs into it from his/her used syringe.

[5] ***Sharing of injection equipment*** refers to sharing of cookers, vials, containers, cotton, filters, or rinse water.

Accessibility to unused needles

Despite the higher level of sharing among exposed respondents, they were also significantly more likely to report that they are able to obtain new, unused needles compared to non-exposed CSWs (96.5% versus 82.1%), especially from needle exchange programs (58.8% versus 19.5%, respectively).

Sexual risk behaviors

Sexual risk behaviors were significantly different between CSWs exposed to programs and those not exposed to programs. Those exposed were more likely to have a higher number of sex partners (paying and non-paying) in the last one week compared to those not exposed (median of 20 versus 12 partners).

Condom use

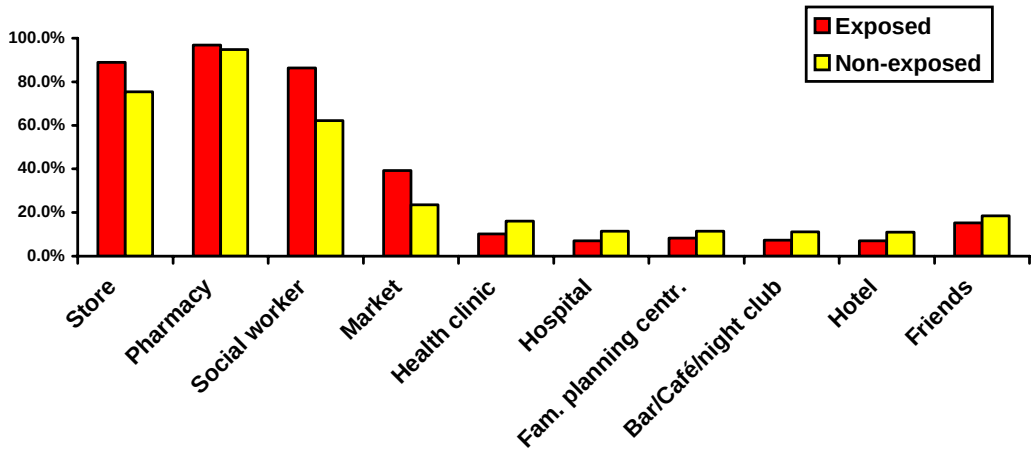
Condom use with both paying and non-paying partners did not differ by program exposure status. Further, when asked about whether the respondent had a condom at the time of the interview (during working hours), equal proportions of exposed and non-exposed CSWs had a condom with them.

Table 4.6 Sexual behaviors of CSWs with paying and non-paying partners, St. Petersburg.

Characteristics	Exposed (N=314) %	Non-Exposed (N=348) %	P-value
Sex with paying partners			
Number of paying partners on last day worked			
None	0,6	1,2	p≤0.001
0 to 5	11,9	28,1	
6 to 10	19,7	20,5	
11 to 20	31,9	26,6	
More than 20	35,8	23,7	
Condom use during last sex with last paying partner	99.7	98.3	N.S.
Consistent (100%) condom use with all paying partner in last 30 days	94.3	96.8	N.S.
Sex with non-paying sex partners			
Number times respondent had sex with non-paying partners in last 30 days			
None	0.0	0.0	N.S.
0 to 5	14,9	17,5	
6 to 10	27,6	28,9	
11 to 20	32,2	36,1	
21 to 30	16,1	14,4	
More than 30	9,2	3,1	
Condom use at last sex with last non-paying partner	31.9	26.1	N.S.
Consistent (100%) condom use with non-paying partner in last 30 days	14.9	18.9	N.S.
Number of condoms respondent had on her at time of interview			
None	15,9	14,9	N.S.
1 to 5	69,1	70,1	
6 to 10	14,0	12,1	
11 to 15	1,0	2,0	
16 or more	0.0	0,9	

However, knowledge of where they can obtain condoms differed significantly between exposed and non-exposed CSWs. Significantly higher proportions of exposed CSWs compared to non-exposed CSWs knew they could obtain condoms at a store (88.9% versus 75.3%), from a social worker (86.3% versus 62.1%), and at the market (39.2% versus 23.6%).

Figure 4.4 Places where CSWs knew where to obtain condoms by exposure status, St. Petersburg.



STI knowledge and symptoms

There were no significant differences in knowledge about STIs symptoms between those exposed and not exposed to programs. History of STI in the past 12 months was also similar between the two groups. However, those who were exposed to programs were significantly less likely to have stopped having sex during the time of STI symptoms in the last 12 months (22% vs. 50%).

HIV knowledge and HIV testing behaviors

There were no statistically significant differences in knowledge about HIV prevention methods or misconceptions about HIV between exposed and non-exposed persons. While both exposed and non-exposed CSWs were equally likely to have taken an HIV test, those exposed to the program were significantly more likely to have voluntarily taken an HIV test and receive a test result compared to non-exposed CSWs (94.6% versus 87.4%).

Stigma and discrimination

Stigma and discrimination towards people living with HIV/AIDS was expressed significantly less often among exposed respondents, including a willingness to share a meal with HIV positive persons, thinking that a teacher with HIV should continue to teach in a school, an HIV positive student should be allowed to continue his/her studies, and willingness to buy food from an HIV positive vendor.

Table 4.7 Stigma and discrimination attitudes towards people living with HIV/AIDS by exposure status, St. Petersburg.

Characteristics	Exposed (N=314) %	Non-Exposed (N=348) %	P-value
Willingness to share a meal with HIV positive person (No)	24.5	42.8	p≤0.001
Willingness to care for HIV positive male relative in household (No)	12.4	12.1	N.S.
Willingness to care for HIV positive female relative in the household (No)	12.1	13.9	N.S.
HIV positive teacher should be allowed to continue teaching in school is she/he is not sick (No)	9.2	28.3	p≤0.001
HIV positive student should be allowed to continue attending school (No)	3.8	21.4	p≤0.001
Willingness to buy food from HIV positive shopkeeper or food seller (No)	26.4	31.2	p≤0.01
Want to keep secret if family member became HIV infected (Yes)	86.6	84.1	N.S.

Those exposed to HIV prevention interventions were significantly more likely to have used some medical and social services in the city in the past 12 months compared to those not exposed (**Table 4.8**), including needle exchange (79.3% versus. 48.3%), informational leaflets about STI and HIV/AIDS (62.1% versus. 20.7%) and free condoms (89.2 versus 65.5%). Non-exposed CSW, however, were more likely to have sought STI tests.

Table 4.8 Services sought in last 12 months by CSW, by exposure status, St. Petersburg.

CHARACTERISTIC	Exposed (N=314) %	Non-Exposed (N=348) %	P-value
Services sought in the last 12 months			
Free STI test	39.5	49.4	p≤0.01
Free STI treatment	11.1	6.0	p≤0.05
Free HIV test	57.3	62.1	N.S.
Informational leaflets on STI and HIV/AIDS	62.1	20.7	p≤0.001
Support groups for HIV positives	5.4	2.6	N.S.
Medical help for HIV/AIDS infected people	11.1	6.0	p≤0.05
Needle exchange	79.3	48.3	p≤0.001
Free services for drug abuse	3.8	6.0	N.S.
Rehabilitation for drug users	5.1	4.6	N.S.
Receive condoms	89.2	65.5	p≤0.001
Support groups for drug users	1.9	2.0	N.S.
Help with recovering official documents (passport. medical insurance)	1.6	6.9	p≤0.001
Free legal consultation	4.1	8.6	p≤0.05
Free psychological help	10.5	11.5	N.S.

Orenburg

1. Sociodemographic Characteristics

The mean age of the 176 street-recruited CSWs in Orenburg was 22.1 years. Approximately one third (35.2%) had completed secondary school, 11.9% had completed vocational school, and 20.5% had completed special college education. The majority (84.1%) of the CSWs are permanent residents of Orenburg (i.e., held permanent registration). They reside mainly in Promishlenny, Dzerzhinsky, Central and Leninsky districts of the city of Orenburg (data not shown). Thirteen percent of CSWs interviewed in Orenburg, however, were not

registered in the city. The majority of CSWs are unmarried women; 79.0% of whom were not married and living alone and 11.9% were not married but living with a partner.

At the time of the survey, about a quarter of the CSWs (23.9%) earned money outside of provision of sexual services. Among them, about two-thirds (64.3%) were involved in selling goods, almost half (42.9%) in the service sector, and 9.5% in manufacturing. About one-third of the CSW (38.1%) were also financially supporting other people; the median number of dependent persons was equal to one.

2. Alcohol and Drug Use

Alcohol use

About half of the CSWs (51.1%) in Orenburg drank alcohol several times a week and more than a quarter (26.1%) drank every day during the month preceding the survey.

Drug use

The history of drug use ever in their lifetime among CSWs in Orenburg was relatively low (17.0%). The duration of drug use appears to be fairly short with 20.0% reporting less than one year of illicit drug use and 50.0% having used illicit drugs for 1-5 years. However, at the other extreme, 16.6% of respondents had used drugs for 11 years or more. About 7% of respondents injected drug in the previous one month. Of these CSWs, a large proportion (73.2%) injected drugs once a week or less in the last month.

Needle and injection equipment sharing behaviors

Needle and injection equipment sharing behaviors will not be described here in detail since the number of CSWs who injected was small (n=12). However, briefly, respondents who injected reported using clean unused needles in the last one month most of the time (54.5%) or every time they injected (45.5%). During the month prior to the survey, using pre-filled syringes was not common (18.2%) and the majority (81.8%) reported never backloading, frontloading or splitting drugs. However, a smaller percentage reported never sharing injection equipment (54.5%) or never drawing drugs from a communal container (54.5%) in the last one month.

Accessibility to Clean Unused Needles

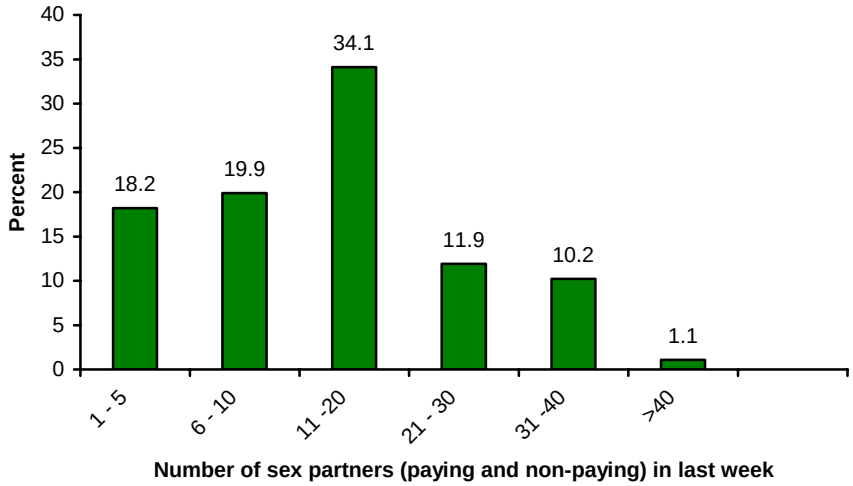
The majority (81.8%) of respondents surveyed indicated that they could obtain clean, unused needles for injections, mainly from pharmacies (100.0%), needle exchange programs (90.0%), sex partner (70.0%), a friend (70.0%), or other drug users (70.0%).

3. Sexual Behaviors, Condom Use, and Sexual Violence

Among CSWs in Orenburg, the median age of first intercourse was 15 years. A high proportion (78.3%) stated that they had used a condom during their first experience with sexual intercourse. The median age at which commercial sex work was initiated was 19 years.

The median number of sex partners (paying and non-paying) within the week preceding the survey was thirteen. In the previous week, almost one-fifth of CSWs reported having 1-5 sex partners, while more than three-quarters had 6 or more partners, including both paying and non-paying sex partners (**Figure 4.4**).

Figure 4.4 Number of sex partners (paying and non-paying) in last one week, Orenburg, %.



Sex with paying partners

During the last working day preceding the survey, CSWs had a median of 2.6 commercial sex partners, with 92.6% reporting 1-5 partners. Earnings for CSWs in Orenburg per sexual contact with a paying client varied; 67.0% earned 700 rubles or less, 10.2% earned 701-1000 rubles, and 18.2% earned more than 1,000 rubles.

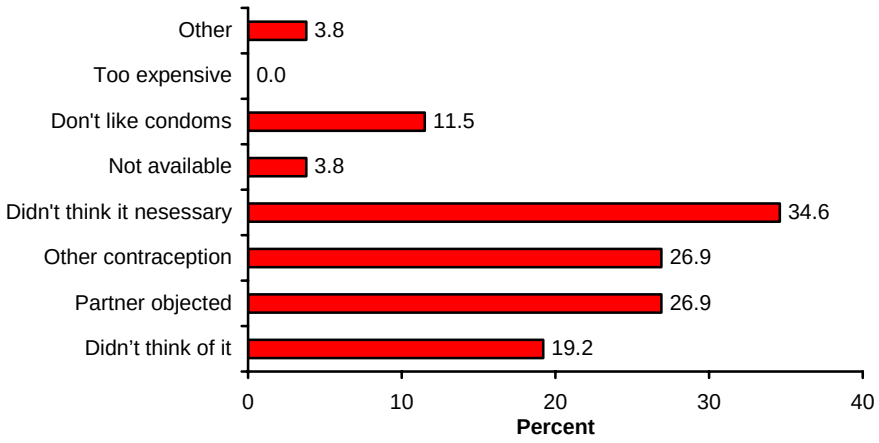
Sex with non-paying partners

Approximately half (48.3%) of CSWs also reported having sex with non-paying partners; most of whom had sex with these non-paying partners 1-5 times (23.5%), 6-10 times (29.4%), 11-20 times (21.2%) or 21 or more times (1.2%) in the last 30 days.

Condom use

Condom use during last sex with a paying partner was high (94.3%), while use with non-paying partners was lower (64.7%). A similar trend was found regarding consistent condom use (using condoms every time they had sex) over the last 30 days (80.7% with paying partners vs. 43.5% with non-paying partners). The main reasons cited for not using condoms with non-paying partners were not thinking it was necessary, objection by partner, and use of other contraception.

Figure 4.5 Reasons for not using condoms at last sex with last non-paying partner, Orenburg, %.



Sexual violence

Approximately one quarter of CSWs (22.7%) reported having suffered sexual abuse (use or threat of force for sex) during the last year.

4. STI Knowledge and Symptoms

While almost all respondents had heard of diseases transmitted sexually, there was a fairly low level of awareness of STIs among CSWs. When asked to identify female STI symptoms, less than half named genital discharge or itching. However, CSWs appear to be more knowledgeable about male STI symptoms with the most frequently mentioned symptom being genital discharge, followed by burning pain upon urination and genital ulcers and sores.

Table 4.9 Knowledge of female and male STI symptoms, Orenburg, %.

	Orenburg (N=176) %
Has heard of STI	98.9
Female STI symptoms	
Genital discharge	48.9
Burning pain on urination	16.1
Foul smelling discharge	45.4
Genital ulcers/sores	21.3
Abdominal pain	36.2
Swelling in groin area	6.3
Itching	45.4
Others	12.1
No response	0.6
Male STI symptoms	
Genital discharge	78.7
Burning pain on urination	25.9
Genital ulcers/sores	21.3
Swelling in groin area	6.9
Others	16.7
No response	0.6

During the last year, 21.0% (n=37) reported experiencing STI symptoms: 17.6% with abnormal genital discharge and 5.1% with genital ulcers or sores. Upon discovery of the symptoms, 59.5% first sought care at a government clinic or hospital and 16.2% took medicine from home. Almost half (46.2%) sought medical care for the STI symptom within one week or less of recognition of the symptom.

Table 4.10 Places CSWs first sought medical care for STI symptoms in the last 12 months, Orenburg, %.

Type of places where medical care was FIRST sought for STI symptoms in the last 12 months	**Orenburg** (N=176) %
Workplace clinic/hospital	0.0
Government clinics/hospitals	59.5
Church or charity-run clinics/hospitals	0.0
Private clinic/hospital	5.4
Private pharmacy	10.8
Traditional healer	0.0
Took medicine from home	16.2

Among those who experienced an STI symptom in the past year, 13.5% indicated that they stopped having sex during time of STI symptom, 54.1% used a condom when having sex, and 10.8% told her sex partner about the STI/discharge.

5. HIV Knowledge and Testing Behaviors

All CSWs had heard of HIV/AIDS. One-third of respondents in Orenburg (36.4%) knew someone who was HIV positive and/or had died of AIDS, of whom 45.3% stated that they had a close friend or a relative with HIV or who has died of AIDS.

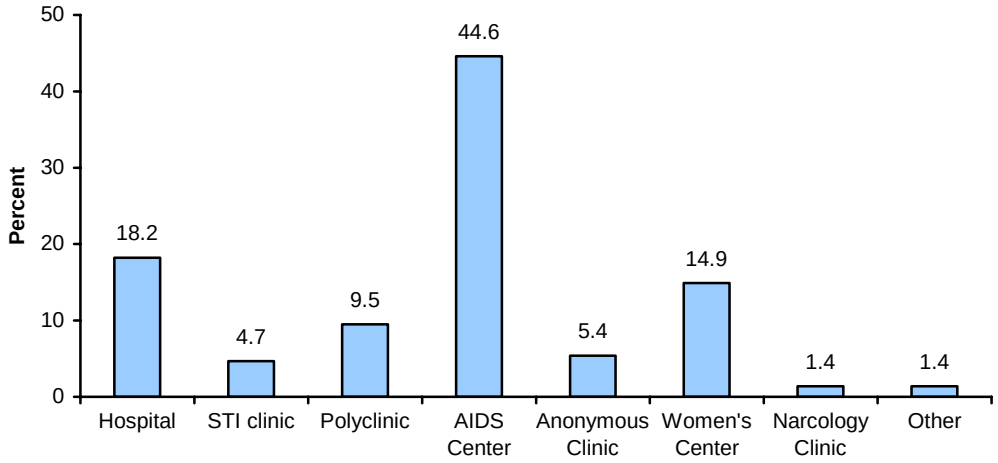
The CSWs interviewed during the study showed moderate levels of knowledge on the routes of HIV transmission and its prevention. About two-thirds (66.5%) indicated that using condoms correctly during every sexual intercourse can prevent HIV infection. The majority (97.7%) responded correctly that one could be infected with HIV through sharing a needle for injection. Knowledge of mother-to-child transmission was fairly high with 72.2% correctly answering that an HIV positive mother can transmit the virus to her newborn child through breast milk and 94.9% answering that an HIV infected pregnant woman can transmit the virus to her fetus. Knowledge regarding antiretroviral drugs was lower with only 42.5% knowing that an HIV infected pregnant woman can reduce the risk of HIV transmission to her unborn child by taking ARVs.

Only half of the interviewed CSWs (45.5%) did not have misconceptions about the routes of the HIV transmission.[20] In total, 76.7% of the CSWs agreed that one cannot contract HIV through sharing a meal with an HIV positive person, 88.6% knew that a healthy looking person can be HIV infected, and 57.4% of the CSWs knew that one cannot get HIV from a mosquito bite.

Awareness of the availability of anonymous HIV testing in the city is very high (92.6%), and is consistent with a relatively high level of HIV testing by CSWs, with 84.1% having undergone HIV testing. Among those who had ever taken an HIV test, 93.9% of CSWs voluntarily took the test and received their test results and the majority (83.1%) took the HIV test within the past 12 months. The most common places where respondents had taken an HIV test include the AIDS Center and hospitals **(Figure 4.6)**.

[20] Absence of wrong representations about a HIV includes knowledge that the HIV is not transferred with the sting of a mosquito, during the joint acceptance of food with a HIV-infected, and knowledge that the person who looks healthy, can be a HIV-infected.

Figure 4.6 Places of last HIV test among CSWs, Orenburg, %.



6. Stigma and Discrimination

About half of the CSWs (52.8%) would not be willing to share a meal with an HIV infected person and approximately 30% would refuse to provide care for an HIV positive relative in the household. In addition, 37.5% claimed that an HIV-infected teacher should stop teaching even if he/she was not sick, and 21.6% thought that an HIV positive student should stop attending classes even if he/she was not sick. Over half of the CSWs (59.7%) would not buy food from an HIV positive shopkeeper or food seller. The majority of CSWs (85.8%) would conceal from friends and acquaintances the fact that a member of their family was infected with HIV.

7. Exposure to HIV prevention programs

The most commonly used media among respondents were radio and television. The majority of CSWs indicated they listened to the radio (88.1%), watched television (91.4%), and read magazines or newspapers (65.4%) at least once a week in the last 4 weeks. CSWs reported seeing HIV programs or messages on television (58.6%), in printed materials (66.1%), and on the radio (50.6%) in the last 12 months. Internet use was not common among CSWs with only about 19% having used the internet in the last 4 weeks.

Less than half (46.0%) were aware of STI/HIV prevention programs for women in sex work in the city, primarily because they have taken part in these programs (85.2%). Services received from STI/HIV prevention programs included condoms, counseling by an outreach worker, receiving informational leaflets, and being referred for anonymous STI test, or HIV test. In the last 12 months, CSWs reported receiving services from HIV/STI prevention programs about once a month (42.0%) or about once a week (18.8%) or only once (29.0%).

Table 4.11 Services received from HIV/STI prevention programs, Orenburg, %.

Services received from STI/HIV prevention program in the city for women in sex work	Orenburg (N=176) %
Counseling with social worker	94.2
Received condoms	97.1
Received lubricants	20.3
Received informational leaflets	89.9
Was referred for anonymous HIV test	72.5
Was referred for anonymous hepatitis test	8.7
Was referred for anonymous STI test	75.4
Was referred for medical examination	31.9
Received medical consultation	18.8
Needle exchange	0.0
Other	4.3

The main services CSWs in Orenburg sought in the last 12 months were free HIV tests, condoms, information leaflets on STI/HIV/AIDS and free STI tests.

Table 4.12 Services sought from HIV/STI prevention programs in last 12 months, Orenburg, %.

Services sought in the last 12 months	Orenburg (N=176) %
Free STI test	40.9
Free STI treatment	8.0
Free HIV test	63.1
Informational leaflets on STI and HIV/AIDS	42.0
Support groups for HIV positives	1.7
Medical help for HIV/AIDS infected people	6.3
Needle exchange	4.0
Free services for drug abuse	1.1
Rehabilitation for drug users	0.6
Receive condoms	53.4
Support groups for drug users	0.6
Help with recovering official documents (passport. medical insurance)	4.5
Free legal consultation	9.1
Free psychological help	8.0

Irkutsk

1. Sociodemographic Characteristics

The mean age of the 205 CSWs who participated in Irkutsk was 24.7 years. Almost half (43.9%) had completed secondary school, 13.7% had completed vocational school, and about one-quarter (23.4%) had completed special college education. Approximately three-quarters (73.2%) of the CSWs were permanent residents of Irkutsk (i.e., held permanent registration), residing in Sverdlovsky, Octyabrsky, Kuybashevsky, Leninsky and Kirovsky districts of the city (data not shown). However, 20.0% did not have an official registration (permanent or temporary) to live in the city. The majority of CSWs are unmarried women; 70.2% of whom were not married and living alone and 16.1% were not married but living with a partner.

At the time of the survey, 13.7% of respondents earned money outside of the provision of sexual services. Among them, almost half (42.9%) were involved in selling goods, 42.9% were in the service sector, and 25.0% were involved in manufacturing. Twenty-nine percent of those earning money outside of sex work were involved in illegal activities (robbery, theft). At the time of the survey, about one-third of the CSWs (31.7%) were financially supporting other people; the median number of dependent persons was equal to one.

2. Alcohol and Drug Use

Alcohol Consumption

During the month preceding the survey, more than half of respondents in Irkutsk reported drinking alcohol almost every day (19.5%) or a few times a week (36.1%).

Drug Use

The majority of respondents have used drugs (84.9%). The duration of drug use appears to be lengthy with about half (54.0%) having used illicit drugs for 6-10 years and 10.3% for 11 years or more. Injection drug use in the previous one month was also high (80.0%) with 6.3% or respondents who inject injecting 2 or more times a day, 20.7% once daily, and 59.5% 2-6 times a week in the last month. The most common type of drug injected was heroin (94.3%). Only 0.6% of these CSWs were currently in treatment for drug abuse.

Needle and injection equipment sharing behaviors

Out of all the CSWs, 11.6% reported using a needle at last injection that had previously been used by someone else (i.e., borrowing needles). Sixteen percent also reported borrowing needles at least some of the time for injections in the last one month. Typically, those who borrowed needles borrowed from one other person, mainly a friend (48.1%) or a regular sex partner (33.3%). Only 2.4% indicated that they cleaned their used needles (whether used by someone else or by oneself) every time or most of the time (15.2%) in the last one month. The most common methods of cleaning were cold (68.8%) and hot water (32.1%). Bleach was not used for cleaning by any of the respondents. Among CSWs who injected, only 63.4% reported using a needle not previously used by someone else every time they injected in the last one month.

Survey participants were also asked about behaviors related to lending needles (giving, lending, selling, or renting out needles to someone else after he/she had already used the needle). Among the CSWs who injected drugs in the last one month, 67.7% reported never lending needles, while 31.7% lent needles to someone else, typically to a friend (43.4%) or a regular sex partner (15.1%). CSWs who injected reported other risky injection behaviors in the last one month; 8.5% used pre-filled syringes (a syringe that was filled without the respondent witnessing it), 32.3% reported backloading, frontloading or splitting drugs at least some of the time, 37.2% reported sharing injection equipment at least some of the time, and 35.4% reported drawing drugs from a communal container at least some of the time.

Accessibility to Clean Unused Needles

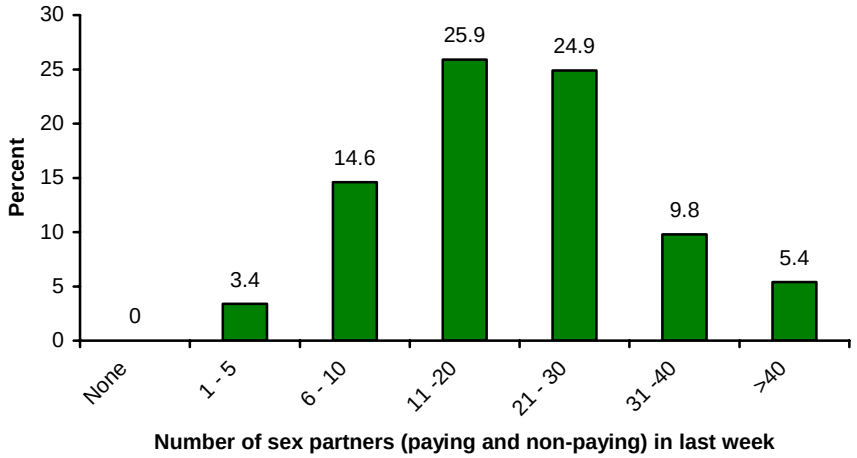
The majority of CSWs (89.6%) indicated that they could obtain clean, unused needles for injections. All respondents indicated that they could obtain needles from pharmacies and almost two-thirds (60.4%) said they could obtain unused needles from a needle exchange.

3. Sexual Behaviors, Condom Use, and Sexual Violence

Among CSWs in Irkutsk, the median age of first intercourse was 16 years and only half stated that they had used a condom when they first had sex. The median age at which respondents began working in commercial sex work was 21 years.

The median number of sex partners (paying and non-paying) within the week preceding the survey was 20. During that week, the majority of CSWs reported having 11 or more partners, including both paying and non-paying sex partners.

Figure 4.7 Number of sex partners (paying and non-paying) in last one week, Irkutsk, %.



Sex with paying partners

During the last working day preceding the survey, CSWs had a median of 3.1 commercial sex partners, with 86.1% having had 1-5 partners and 10.9% having had 6-10 paying partners. Earnings for CSWs in Irkutsk per sexual contact with a paying client varied; 48.8% earned 100-300 rubles, 24.4% earned 301-500 rubles, 8.3% earned 501-700, 18.7% earned more than 700 rubles.

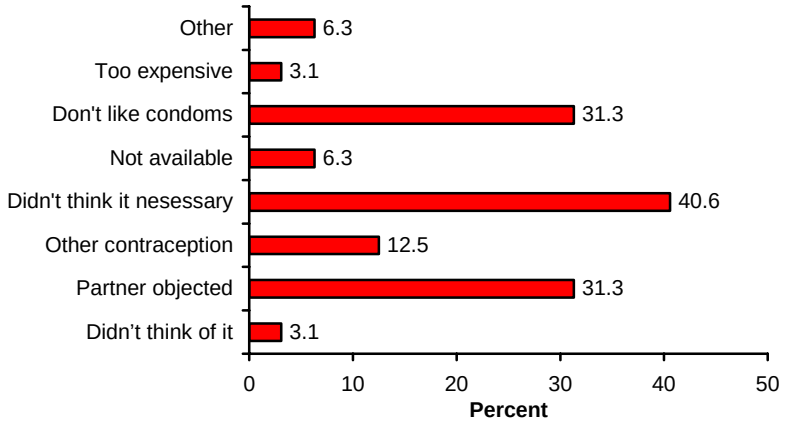
Sex with non-paying partners

Approximately one-quarter (27.8%) of CSWs also reported having sex with non-paying partners; most of them had sex with non-paying partners 1-5 times (42.1%), 6-10 times (22.8%), 11-20 times (8.7%) or 21 or more times (8.8%) in the last 30 days.

Condom use

Condom use during last sex with a paying partner was found to be high (99.5%), while use with non-paying partners was much lower (43.9%). Similarly, over the last 30 days consistent condom use (using condoms every time they had sex) was much higher with paying partners (82.9%), than with non-paying partners (26.3%). The main reasons cited for not using condoms with non-paying partners were not thinking it was necessary, objection by partner, and not liking condoms.

Figure 4.8 Reasons for not using condoms at last sex with last non-paying partner, Irkutsk, %.



Sexual violence

A high proportion (41.5%) of CSWs reported having suffered from sexual violence (forced to have sex by use or threat of force) in the last 12 months. Sexual violence refers to the use or threat of force for sex.

4. STI Knowledge and Symptoms

Ninety-nine percent of respondents had heard of diseases transmitted sexually. When asked to identify female STI symptoms, the most common responses given were genital discharge, itching, and genital ulcers or sores. When asked about male STI symptoms, the most frequent responses were genital discharge, burning pain upon urination, and genital ulcers and sores.

Table 4.13 Knowledge of female and male STI symptoms, Irkutsk, %.

	Irkutsk (N=205) %
Has heard of STI	99.0
Female STI symptoms	
Genital discharge	69.6
Burning pain on urination	33.8
Foul smelling discharge	48.5
Genital ulcers/sores	37.3
Abdominal pain	19.1
Swelling in groin area	8.3
Itching	39.2
Others	3.4
No response	2.5
Male STI symptoms	
Genital discharge	68.6
Burning pain on urination	43.6
Genital ulcers/sores	27.9
Swelling in groin area	8.3
Others	5.4
No response	2.0

During the last year, 5.9% (n=12) of respondents reported experiencing STI symptoms: 5.4% of whom had abnormal genital discharge and 1.0% had genital ulcers or sores. Upon

discovery of the symptoms, 66.7% sought care first at a government clinic/hospital, while 16.7% first sought care either from a private pharmacy or by taking medicine from home. Half of CSWs waited one month or more after recognition of the symptom to get medical care for the STI symptom.

Table 4.14 Places CSWs first sought medical care for STI symptoms in the last 12 months, Irkutsk, %.

Type of places where medical care was FIRST sought for STI symptoms in the last 12 months	**Irkutsk** (N=205) %
Workplace clinic/hospital	0.0
Government clinics/hospitals	66.7
Church or charity-run clinics/hospitals	0.0
Private clinic/hospital	0.0
Private pharmacy	16.7
Traditional healer	0.0
Took medicine from home	16.7

Among those who experienced an STI symptom in the past year, only 8.3% indicated that they stopped having sex during time of STI symptom, 58.3% used a condom when having sex, and only 8.3% told their sex partner about the STI/discharge.

5. HIV Knowledge and Testing Behaviors

Almost all of the CSWs (99.5%) had heard of HIV/AIDS. A considerable proportion of CSWs (82.4%) knew someone who was HIV positive and/or had died of AIDS, of whom 63.7% stated that they had a close friend or a relative with HIV or died of AIDS.

The CSWs interviewed during the study showed fairly high levels of knowledge on the routes of HIV transmission and its prevention. The majority indicated that using condoms correctly during every sexual intercourse can prevent HIV infection (87.3%) and that one can be infected with HIV through sharing a needle for injection (98.5%). Knowledge of mother-to-child transmission was fairly high with 87.7% correctly answering that an HIV positive mother can transmit the virus to her newborn child through breast milk and 94.1% answering that an HIV infected pregnant woman can transmit the virus to her fetus. Knowledge regarding antiretroviral drugs was lower with only 45.3% knowing that an HIV infected pregnant woman can reduce the risk of HIV transmission to her unborn child by taking ARVs.

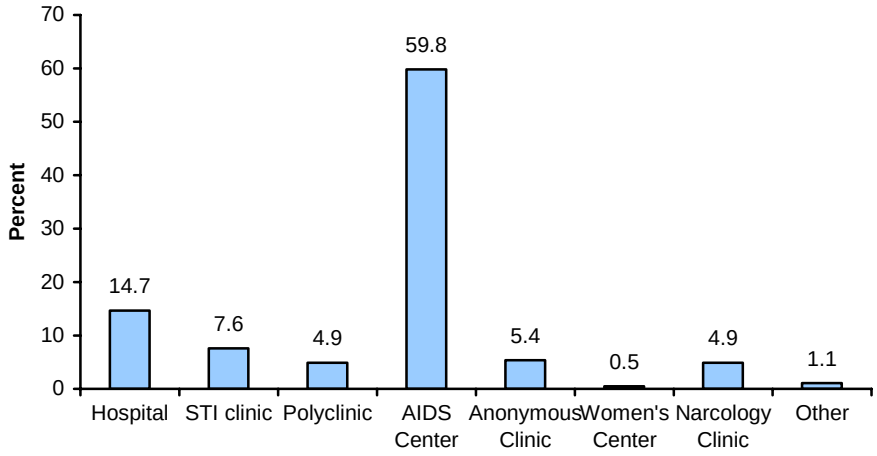
About two-thirds of the interviewed CSWs (69.8%) did not have misconceptions about the routes of the HIV transmission.[21] In total, 82.4% of the CSWs agreed that one cannot contract HIV through sharing a meal with an HIV positive person, 93.1% knew that a healthy looking person can be HIV infected, and 78.9% of the CSWs knew that one cannot get HIV from a mosquito bite.

Awareness of the availability of anonymous HIV testing in the city is very high (95.6%), and is consistent with a relatively high level (90.2%) of CSWs who have undergone HIV testing. Among HIV tested respondents, 90.2% voluntarily took the HIV test and received test results

[21] Absence of wrong representations about a HIV includes knowledge that the HIV is not transferred with the sting of a mosquito, during the joint acceptance of food with a HIV-infected, and knowledge that the person who looks healthy, can be a HIV-infected.

and three-quarters (61.4%) had taken an HIV test within the past 12 months. The most common places where respondents had tested for HIV included the AIDS Center and hospitals.

Figure 4.9 Places of last HIV test among CSWs, Irkutsk, %.



6. Stigma and Discrimination

About a quarter of CSWs (25.5%) would not be willing to share a meal with an HIV infected person and about 6% would refuse to provide care for an HIV positive relative in the household. In addition, 14.7% claimed that an HIV-infected teacher should stop teaching even if he/she was not sick, and 7.8% thought that an HIV positive student should stop attending classes even if he/she was not sick. Less than one out of five of the CSWs (16.2%) would not buy food from an HIV positive shopkeeper or food seller. The majority of CSWs (90.7%) would conceal from friends and acquaintances the fact that a member of their family was infected with HIV.

7. Exposure to HIV prevention programs

The most commonly used media among respondents were radio and television. The majority of CSWs indicated they listened to the radio (83.4%), watched television (89.2%), and read magazines or newspapers (57.1%) at least once a week in the last 4 weeks. CSWs reported seeing HIV programs or messages on television (85.8%), in printed materials (73.0%), and on the radio (61.3%) in the last 12 months. Internet use was not common among CSWs with only 10.2% having used the internet in the last four weeks.

Over a third (39.5%) of respondents were aware of STI/HIV prevention programs for women in sex work in the city, primarily because they have taken part in these programs (93.8%). Services and products received from STI/HIV prevention programs included condoms, counseling by an outreach worker (90.8%), and receiving informational leaflets (75.0%). In the last 12 months, CSWs reported receiving services from HIV/STI prevention programs about once a month (38.2%) or about once a week (26.3%).

Table 4.15 Services received from HIV/STI prevention programs, Irkutsk, %.

Services received from STI/HIV prevention program in the city for women in sex work	Irkutsk (N=205) %
Counseling with social worker	90.8
Received condoms	94.7
Received lubricants	3.9
Received informational leaflets	75.0
Was referred for anonymous HIV test	51.3
Was referred for anonymous hepatitis test	19.7
Was referred for anonymous STI test	0.0
Was referred for medical examination	2.6
Received medical consultation	11.8
Needle exchange	73.7
Other	0.0

In the last 12 months, the most commonly sought services by respondents in Irkutsk included condoms, needle exchange program, free HIV tests, and information leaflets.

Table 4.16 Services sought from HIV/STI prevention programs in last 12 months, Irkutsk, %.

Services sought in the last 12 months	Irkutsk (N=205) %
Free STI test	9.3
Free STI treatment	3.4
Free HIV test	42.9
Informational leaflets on STI and HIV/AIDS	35.6
Support groups for HIV positives	2.0
Medical help for HIV/AIDS infected people	7.8
Needle exchange	46.8
Free services for drug abuse	4.4
Rehabilitation for drug users	3.9
Receive condoms	55.6
Support groups for drug users	0.5
Help with recovering official documents (passport. medical insurance)	3.4
Free legal consultation	4.4
Free psychological help	2.4

V. MEN WHO HAVE SEX WITH MEN

St. Petersburg

1. Sociodemographic Characteristics

The mean age of the 692 men who have sex with men (MSM) surveyed was 24.2 years (**Table 5.1**). MSM in St. Petersburg are a highly educated group, with 22.8% having completed 3-4 years of university and 39.0% having completed 5-6 years of university. The majority of respondents were permanent residents of St. Petersburg (89.4% reported having a permanent registration). Slightly more than half (59.8%) reported being single and living alone, however, 17.0% reported being married and living with their spouse. A quarter (23.1%) of all MSM reported living with another man.

Table 5.1 Socio-demographic Characteristics of MSM, St. Petersburg

Characteristics	TOTAL (N=692) %
Mean age	24.2
Education Level Completed	
Primary School	1.7
Secondary School	16.1
Vocational School	4.8
Special College	15.7
University, 3-4 yrs	22.8
University, 5-6 yrs	39.0
Years Living in City	
0-10 years	26.3
11-20 years	26.9
21-30 years	38.3
31 years or more	8.5
Registered in City	
Permanent resident	89.4
Temporary resident	7.5
Non-registered	3.0
Current Marital Status	
Married and living with partner	17.0
Married but living with someone else	4.5
Married but living alone	12.5
Not married but living with partner	6.3
Not Married and living alone	59.8
Currently living with a man	23.1

2. Alcohol and Drug Use

Alcohol Use

One out of five respondents reported consuming alcohol almost daily (19.8%), half (49.9%) reported consuming alcohol a few times a week, and 25.4% consumed alcohol once a week. Only 4.8% of MSM did not drink any alcohol within the last month.

Drug Use

Over one third (38.5%) of respondents reported having used some kind of illicit drug in their lifetime. Of these, one-third (33.3%) have used drugs for at least 6 years, 44.3% for 1-5 years and 20.8% for less than one year. The most common illicit drug used by MSM is cannabis (hashish), with 90.2% having ever used it. Other drugs used by MSM include stimulants (42.5%), cocaine (19.5%), and hallucinogens (19.9%). Injection drug use was not common among MSM; only 4.5% reported injection drug use in the last 12 months.

3. Sexual Behaviors and Condom Use

Oral sex

The majority (97.0%) of MSM practiced oral sex within the last 6 months prior to the survey. Half (55.1%) of the respondents reported having oral sex with 1-5 partners in the last 6 months, 18.8% with 6-10 partners, and 26.1% with at least 11 partners. Condom use for oral sex was not common among MSM. Only 14.8% of MSM reported to have used a condom the last time they had oral sex; 72% said they never used a condom for oral sex in the last six months.

Anal sex

The majority of MSM, (87.3%) had anal sex in the last 6 months. Two-thirds (63.1%) had 1-5 receptive anal sex partners, and 20.7% reported having at least six receptive anal sex partners. Similarly, about one-third (60.1%) reported having 1-5 penetrating anal sex partners and 16.9% had at least 6 penetrating anal sex partners in the last 6 months. The majority of MSM (83.4%) reported having anal sex with non-commercial sex partners (**Table 5.2**). Of these, almost half (49.7%) had 1-5 partners in the last 6 months. Fewer, approximately one out of ten (11.6%), reported having anal sex with commercial sex partners in the last six months. The majority of them (93.5%) had 1-5 commercial sex partners.

Table 5.2 Sexual Behaviors and Types of Sex Partners of MSM, St. Petersburg

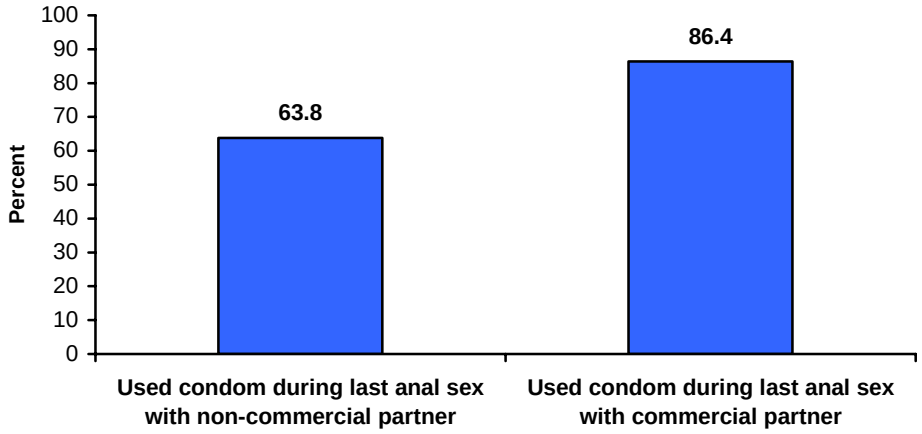
CHARACTERISTIC	TOTAL (N=692) %
Anal Sex with Non-Commercial Partners	
Had anal sex with non-commercial sex partner in last 6 months	83.4
Number of non-commercial sex partners in last 6 months	
1 to 5	49.7
6 to 10	19.9
11 or more	30.4
Anal Sex with Commercial Partners	
Had anal sex with commercial sex partner in last 6 months	11.6
Number of commercial sex partners in last 6 months	
1 to 5	93.5
6 to 10	2.6
11 or more	3.9
Sexual Intercourse with Female Partners	
Ever had sexual intercourse with a woman	66.2
Had a female partner in last 6 months	29.0
Number of female sex partners in last 6 months	
1 to 5	40.3
6 or more	59.7

Condom use

Condom use varied by type of sex partner, with condom used occurring more often during anal sex with commercial sex partners (**Figure 5.1**). Approximately two-thirds, (63.8%) of

MSM reported using a condom during the last anal sexual contact with a noncommercial partner and 41.6% used condoms every time they had sex with noncommercial sex partners in the past year. With commercial partners, 86.4% reported using a condom during the last anal sex and 71.6% used a condom every time they had sex with a commercial sex partner . The most common reasons given for not using condoms with non-commercial partners were trust between partners (76.7%) and dislike of condoms (12.9%). Similarly, the most common reasons for not using condoms with commercial partners were dislike of condoms (28.6%) and trust between partners (28.6%).

Figure 5.1 Condom use during last sex with different types of sexual partners, St. Petersburg, %.



All MSM have heard of male condoms. The majority knew they could obtain condoms from pharmacies (96.5%), stores (51.7%), friends (33.4%), bars and nightclubs (24.4%), hospitals (22.8%), and health clinics (23.3%). Almost two-thirds (70.6%) indicated that it takes less than 10 minutes to get a male condom.

The majority of participants reported using a lubricant for anal sex in the last six months (24.6% almost every time and 58.7% every time).

Sex with female partners

Two-thirds (66.2%) of respondents indicated that they have had sexual intercourse with a female partner. Almost one-third (29.0%) had sexual contact with a female partner within the last 6 months, 40.3% of whom had 1-5 female partners and 59.7% had 6 and more female partners. Condom use was low with female sex partners with 59.7% using a condom during last sexual contact and 40.3% reporting using condoms every time during sexual contact with a female partner in the last six months.

Sexual violence

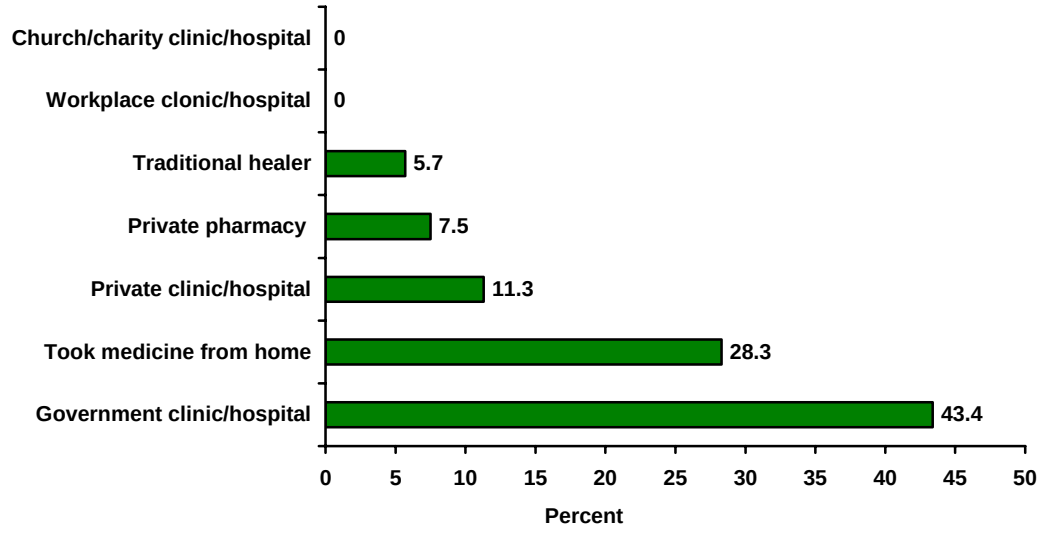
Almost 3% of MSM reported having experienced sexual violence (forced to have sex by use or threat of force) over the last year.

4. STI Knowledge and Symptoms

The level of knowledge of STI symptoms was greater for male symptoms than for female symptoms. More than half (52.4%) of the respondents were familiar with male genital discharge as an STI symptom. Two out of five (42.0%) knew about burning pain upon urination and one-third (33.1%) knew of genital soars. A smaller proportion was familiar with any female STI symptoms. Genital discharge (25.3%) and foul-smelling discharge (22.3%) were most commonly identified by MSM as symptoms of STIs in women.

During the previous one year, 7.7% of MSM reported having had an STI symptom, with 6.9% having experienced abnormal genital discharge and 3.6% with genital ulcers or sores. Among MSM who reported having had an STI symptom in the past year, they first sought medical care from a government clinic or hospital (43.4%) or took medicine from home (28.3%) (**Figure 5.2**). Half of them (50.0%) sought care within one week or less.

Figure 5.2 Places where MSM first sought medical care for STI symptoms in the last 12 months, St. Petersburg, %.



Among those who experienced an STI symptom in the past year, 62.3% indicated that they stopped having sex during time of STI symptom, 39.6% used a condom when having sex, and 58.5% told their sex partner about the STI/discharge.

5. HIV Knowledge and Testing Behaviors

Almost all respondents (99.7%) reported having heard of HIV/AIDS. Half (54.0%) reported having an acquaintance infected with HIV or who have died of AIDS and 32.5% have close friends or relatives infected with HIV or who have died of AIDS.

The level of knowledge regarding HIV prevention through unsafe sexual behavior was fairly modest. Only 65.2% indicated that abstinence can prevent HIV infection, 55.5% indicated having one faithful uninfected partner can prevent HIV infection, and 77.4% agreed that using condoms correctly during every sexual intercourse can prevent HIV infection. However, the majority (95.1%) of MSM know that HIV can be transmitted through injection with a used needle, and 84.5 % know that HIV can be transmitted from a mother to her child during pregnancy. A smaller proportion reported knowing that HIV can be transferred from a mother to her child through breast milk (52.6%) and that taking medication (antiretroviral drugs) can reduce the risk of HIV transmission from mother to her unborn child (23.7%).

The proportion of MSM who held no misconceptions about HIV transmission[22] was low (6.1%). Overall, three-quarters (73.6%) knew that HIV cannot be transmitted by a mosquito, 85.1% knew that sharing a meal with an infected person cannot transmit HIV, and 93.2% knew that a healthy looking person can be HIV-infected.

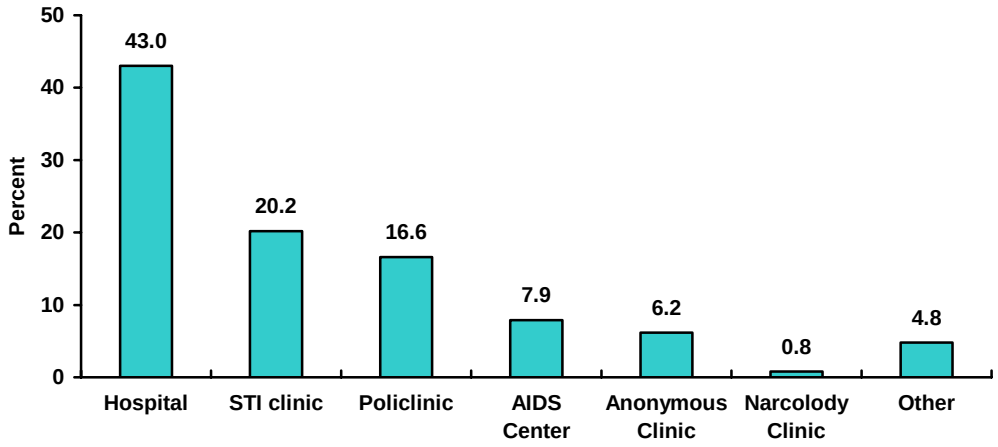
The majority (83.9%) of MSM knew about the availability of anonymous HIV testing in the city, however, only 51.6% of all MSM surveyed had ever had an HIV test (**Table 5.3**). Among those who reported having tested, the majority voluntarily took the HIV test and found out their test results (96.2%).

Table 5.3 HIV Counseling and testing among MSM, St. Petersburg

Characteristic	Total (N=692) %
Knowledge about availability of anonymous HIV Testing in the city	83.9
Respondents who have ever had an HIV test	n =356 (51.6)
Voluntarily took HIV test	96.3
Required to take HIV test	3.7
Always found out HIV test results	95.5
Respondents who voluntarily received HIV test AND found out their test results	96.2
Time of last HIV test	
Within past 12 months	61.2
1-2 years ago	26.7
More than 2 years ago. but < 4 years ago	10.7
More than 4 years ago	1.4

Of those who ever had an HIV test, 61.2% took the test within the past 12 months (Table 3). In addition, 43.0% took the test at a hospital, 20.2% at an STI clinic, and 16.6% took the test at a polyclinic (**Figure 5.3**).

Figure 5.3 Place where MSM reported having last HIV test, St. Petersburg, %.



[22] Absence of wrong representations about a HIV includes knowledge that the HIV is not transferred with the sting of a mosquito, during the joint acceptance of food with a HIV-infected, and knowledge that the person who looks healthy, can be a HIV-infected.

6. *Stigma and Discrimination*

Stigma and discrimination towards people living with HIV/AIDS appear to be fairly modest among MSM. One-third (32.2%) indicated they would not share a meal with an HIV positive person, 26.7% would not be willing to buy food from an HIV positive shopkeeper, 21.3% indicated that an HIV-infected teacher should not be allowed to continue teaching activity if she/he is sick, and 20.7% indicated that an HIV-infected student should not be allowed to attend school. The majority of MSM also reported they would want to keep the HIV infection status of a family member a secret (77.2%). Only a small proportion, however, indicated that they would not take care of an HIV-infected relative in the household (approximately 17%).

7. *Exposure to media and interventions*

A high proportion of MSM reported listening to the radio (84.6%), watching television (84.5%), and using the internet (79.5%) at least once a week in the last 4 weeks. The internet also seemed to be a place for many to find sex partners, with 83.7% of all MSM surveyed having sought sex partners on the internet in the last 12 months almost every day (34.5%) or 2-3 times a month (28.7%) (**Table 5.4**). When internet users were asked about their interest in a social worker communicating with website visitors in a chat room about health, three-quarters (72.6%) indicated they would be interested. Additionally, half (50.1%) responded that they would click on a banner on the internet referring to a website about sexual health and a third (36.7%) said they would click on a banner referring to a website about HIV and STIs.

Table 5.4 Use of internet among MSM, St. Petersburg

CHARACTERISTIC	TOTAL (N=692) %
Used internet to seek for sex partners in last 12 months	83.7
Frequency of using internet to find sex partner	
Almost every week	34.5
2-3 times a month	28.7
Once a month	19.1
Less than once a month	1.4
Would be interested in chatting with social worker in a chat room about health	72.6
Level of interest if social worker addresses respondent in a chat room about health	
Most likely be interested	36.3
Probably be interested	34.1
Not interested	27.3
Would click on a banner on the internet referring to a website about HIV/STI	36.7
Would click on a banner on the internet referring to a website about sexual health	50.1

8. Comparison of MSM exposed and not exposed to HIV prevention programs for MSM

Respondents were asked a number of questions regarding their exposure to specific HIV prevention interventions targeted at MSM. Exposure was defined as having received HIV prevention educational materials and condoms at MSM nightclubs in the last one year in St. Petersburg. Among the 692 MSM surveyed, 82 (11.8%) reported having been exposed to the specific HIV prevention interventions; 88.2% were not exposed. The following results compares those exposed to these specific prevention activities and those not exposed.

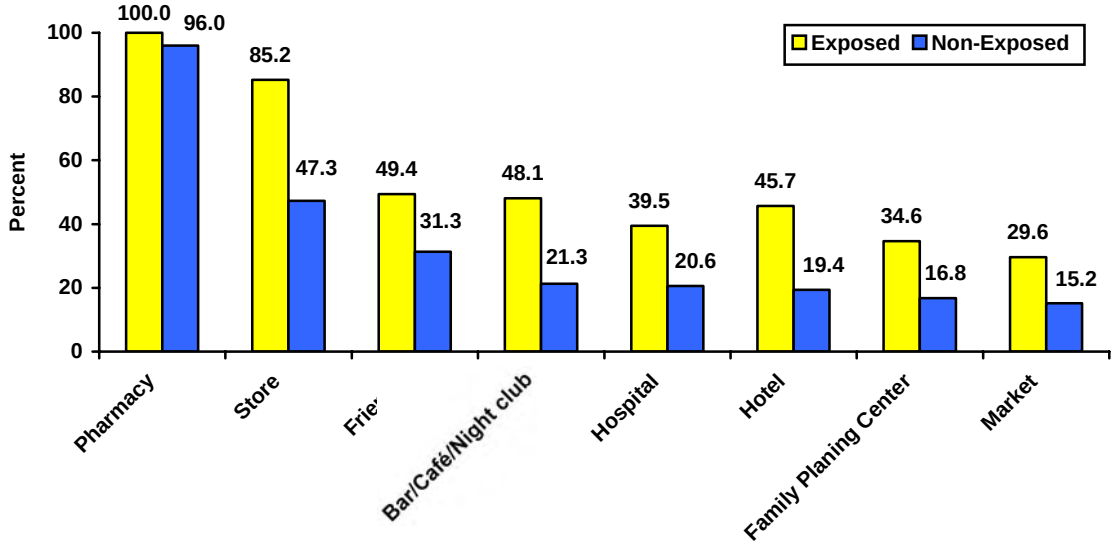
Socio-demographic characteristics did not differ significantly between MSM exposed to the prevention programs and those not exposed with the exception of age and the length of time of living in St. Petersburg. Exposed MSM were slightly younger (23.2 years) compared to those not exposed to the programs (25.1 years) and have lived in the city for a slightly longer time than those not exposed.

While there is no statistically significant difference in the proportion that reported using any illicit drugs, the duration of illicit drug use differed significantly between those exposed and not exposed to HIV prevention programs. Those who are exposed to HIV prevention are more likely to have used illicit drugs for a longer period of time than those not exposed to HIV programs.

Sexual risk behaviors were similar between MSM exposed and not exposed to interventions with the exception of a few sexual activities. Those exposed were more likely to have had anal sex with non-commercial sex partners (92.7% versus 82.1%) but less likely to have had anal sex with commercial sex partners (4.9% versus 12.5%) in the last 6 months compared to those not exposed to HIV prevention interventions. Although exposed and non-exposed MSM were equally likely to have had oral sex (over 95%) and use condoms at last oral sex (approximately 13-15%) in the last 6 months, those exposed to interventions reported fewer men with whom they had oral sex. For example, while only 3.7% of exposed MSM reported having 26 or more partners with whom they had oral sex, 15.1% of non-exposed MSM reported 26 or more partners. Condom use for anal sex with non-commercial sex partners did not differ significantly between exposed and non-exposed MSM. Additionally, exposed persons were more likely to have discussed HIV/AIDS or STIs with their non-commercial sex partners – while 82.9% of exposed MSM discussed HIV/AIDS and STIs with all or some of their non-commercial sex partners, only 63.3% of non-exposed MSM did so.

Knowledge about where one can obtain male condoms was significantly greater among exposed persons than non-exposed persons **(Figure 5.4)**. Exposed MSM were also significantly more likely to use lubricant every time they have anal sex in the last 6 months (73.4% versus 56.7%).

Figure 5.4 Knowledge about where one can obtain male condoms by exposure status, St. Petersburg.

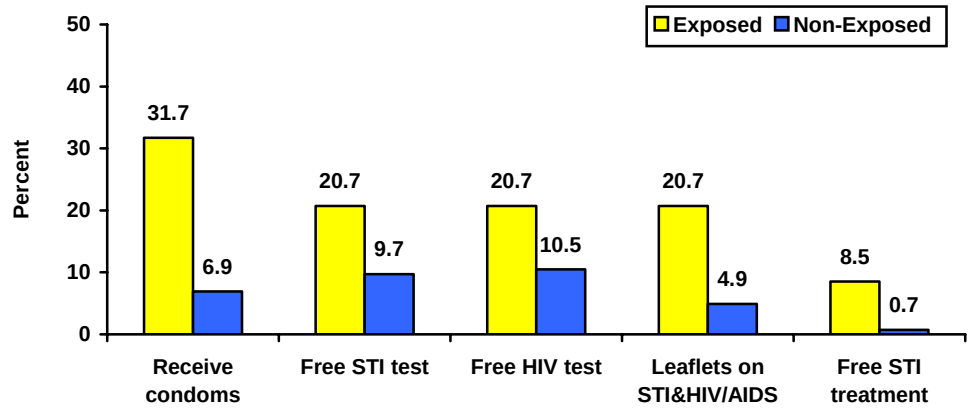


Those exposed to HIV prevention programs indicated significantly greater familiarity with male STI symptoms. For example, exposed MSM identified genital discharge (62.5% versus 51.1%) and burning pain upon urination (45.0% versus 41.7%) more often than those not exposed to interventions. There were no statistically significant differences in history of STI symptoms in the past 12 months nor knowledge about HIV prevention methods between exposed and non-exposed persons. However, exposed MSM were significantly more likely to know about the availability of anonymous HIV testing in the city (96.3% versus 82.2%). Although exposed MSM were more likely to have ever had an HIV test compared to non-exposed MSM (63.4% versus 50.0%), this difference was not statistically significant.

Stigma and discrimination towards people living with HIV/AIDS was expressed significantly more in the group of MSM who were exposed to the prevention programs. In particular, a higher proportion of those exposed indicated they would not share a meal with HIV positive persons (40.2% versus 31.1%) and would not be willing to care for an HIV positive female relative in the household (26.8% versus 15.8%) compared to those not exposed. With other stigma and discrimination indicators, exposed persons were more likely to hold stigmatizing and discriminatory views compared to non-exposed persons, however, the differences were not statistically significant.

Those exposed to HIV prevention interventions were significantly more likely to have used many medical and social services in the city in the past 12 months compared to those not exposed (**Figure 5.5**), including free STI treatment (20.7% versus 9.7%), free HIV test (20.7% versus 10.5%), informational leaflets about STI and HIV/AIDS (20.7% versus 4.9%), and free condoms (31.7% versus 6.9%).

Figure 5.5 Services sought in last 12 months by MSM, by exposure status, St. Petersburg.



Lastly, in addition to being exposed to the specific HIV prevention programs, exposed MSM were also significantly more likely to have seen HIV programs on the television (70.7% versus 53.9%) or in printed materials (69.5% versus 49.4%) or on the internet (63.4% versus 45.0%) in the last 12 months.

VI. YOUTH IN TRANSITORY CENTERS

St. Petersburg

1. Sociodemographic Characteristics

In total, 114 youth in transitory centers (YTC) participated in the BMS in St. Petersburg. The median age of these participants was 17 years. A quarter (26.5%) had completed primary school and 70.8% had completed secondary education. Only one out of five persons had lived in the city for less than 10 years. Almost half of the youth (49.1 %) were living in a boarding school and 37.7% were living in a hostel or dormitory. Almost one out of five (17.5%) were employed at the time of the survey, most often in trade (35.0%) and some kind of supplementary unofficial work (30.0%), such as temporary work cleaning and carrying goods.

Table 6.1 Demographic characteristics of YTC, St. Petersburg.

Characteristics	Male (N=64) %	Female (N=50) %	Total (N=114) %
Age			
Median age (IQR)	17,0 (4)	17,2 (2)	17,0 (2)
Age Distribution			
15-17	59,4	64,0	61,4
18-20	35,9	36,0	36,0
21-25	4,7	0,0	2,6
Education Level Completed			
Primary School	35,9	14,3	26,5*
Secondary School	62,5	81,6	70,8
Vocational School	0,0	0,0	0,0
Special College	1,6	4,1	2,7
University, 3-4 yrs	0,0	0,0	0,0
University, 5-6 yrs	0,0	0,0	0,0
Years Living in City			
0-10 years	15,6	24,0	19,3
11-20 years	79,7	76,0	78,1
More than 20 years	4,7	0,0	2,6
Income Activity			
Earn income currently	20,3	14,0	17,5
Type of work to earn income			
Selling	30,8	42,9	35,0
Cleaning	0,0	28,6	10,0*
Security (informal)	15,4	0,0	10,0
Auxiliary unofficial work	30,8	28,6	30,0
Car washing	15,4	0,0	10,0
Sex work	0,0	0,0	0,0
Drug dealing	0,0	0,0	0,0
Manual labor	0,0	0,0	0,0
Picking up recycling materials	15,4	0,0	10,0
Begging	0,0	0,0	0,0
Current Type of Residence			
Boarding school	57,8	38,0	49,1
Hostel/Dormitory	31,3	46,0	37,7
At parent's residence	6,3	10,0	7,9
At relative's residence	1,6	0,0	0,9
At sex partner's residence	0,0	2,0	0,9
On my own	3,1	4,0	3,5

2. Alcohol and Drug Use

Alcohol use

About one-third of the youth consumed alcohol on a regular basis; 10.5% reported drinking alcohol almost everyday and 25.4% reported drinking alcohol a few times a week in the past four weeks.

Drug use

The majority of all youth in the sample have used some kind of illicit drug; 85.7% have used marijuana (85.7%), 49.0% have used inhalants, 38.8% have used stimulants, and 36.7% have used hallucinogens. About one out of ten (12.2%) youth in transitory centers reported having injected drugs during the last year.

3. Sexual Behaviors, Condom Knowledge, and Use

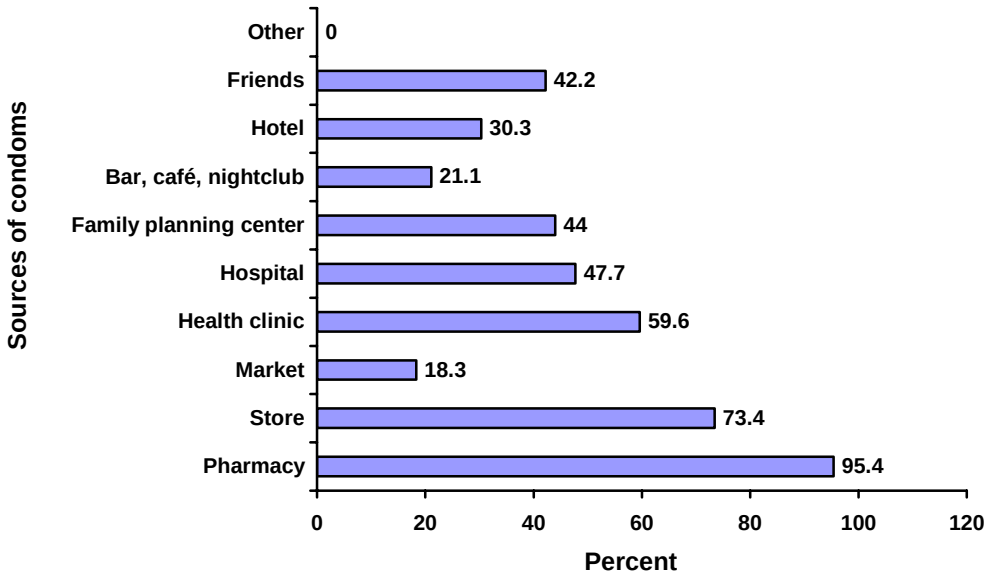
Sexual behavior

Three out of five (60.5%) of the YTC have had sex (defined as vaginal or anal intercourse). The proportion reporting ever having sex was similar between males and females. The median age at first sexual contact was 15 years. About half (45.6%) reported having had sex in the last 12 months, 98.1% of whom reported having more than one sex partner in the last 12 months (median = 2). All those who reported having had sex in the last 12 months had sex with only non-commercial sex partners.

Knowledge about condoms and condom use

Almost all (99.1%) YTC had heard of male condoms and the majority (95.6%) knew where to obtain condoms. Most respondents indicated that they knew they can buy condoms at the pharmacy (95.4%), the store (73.4%), the hospital (47.7%), and a family planning center (44.0%). Fifty-nine percent of YTC indicated that they could obtain condoms in less than 10 minutes.

Figure 6.1 Places where YTC knew they could obtain condoms, St. Petersburg.



Condoms were used at the first sexual intercourse by 63.8% of those who reported ever having sex. A condom was used during the most recent sexual encounter by 59.6% of those who reported having sex in the last 12 months. Among those who did not use a condom during the most recent sexual encounter, the main reasons for not using a condom was that it was not available (33.3%) or that they did not like condoms (33.3%). Consistent condom use with non-commercial sex partners (using a condom every time with each sex partner) in the last 12 months was reported by only 19.2% of respondents. There were no significant differences in condom use between male and female YTC. None of the males reported having sex with other male sex partners in the last 12 months.

Sexual violence

None of the males reported having experienced sexual violence (use or threat of force for sex); however, 4.2% of the females reported having experienced sexual violence in the last 12 months.

4. STI Knowledge and Symptoms

STI knowledge

The majority (91.2%) of respondents had heard of STIs. However, familiarity with both female and male STI symptoms was very low (less than 20%). Female YTC were significantly more likely than male YTC to be able to name some of the common female STI symptoms (burning pain upon urination: 30.4% versus 6.9%; genital discharge: 26.1% versus 6.9%; foul smelling discharge: 17.4% versus 5.2%; and genital ulcers or sores: 15.5% versus 3.4%). Both males and females had equally low knowledge about male STI symptoms.

Table 6.2 Knowledge of sexually transmitted infections among YTC, St. Petersburg

Characteristics	Male (N=64) %	Female (N=50) %	Total (N=114) %
Has heard of STI	90,6	92,0	91,2
Knowledge of female STI symptoms			
Genital discharge	6,9	26,1	15,4**
Burning pain on urination	6,9	30,4	17,3**
Foul smelling discharge	5,2	17,4	10,6*
Genital ulcers/sores	3,4	15,5	8,7*
Abdominal pain	1,7	8,7	4,8
Swelling in groin area	1,7	0,0	1,0
Itching	0,0	6,5	2,9
Others	15,5	6,5	11,5
Knowledge of male STI symptoms			
Genital discharge	15,5	13,0	14,4
Burning pain on urination	10,3	15,2	12,5
Genital ulcers/sores	5,2	2,2	3,8
Swelling in groin area	3,4	0,0	1,9
Others	19,0	8,7	14,4
No response	0,0	0,0	0,0

* $p<0.05$ (comparing male and female)
** $p<0.01$ (comparing male and female)

STI symptoms

Of the 114 respondents, 6.1% (n=7) reported having experienced STI symptoms in the last 12 months, with 4.4% reporting abnormal genital discharge and 1.8% reporting genital ulcers or sores. Those experiencing STI symptoms reported seeking care for their STI symptom first at

a government clinic or hospital or a church or charity-run hospital. Less than half (n=3) sought care within one week.

Among those who experienced STI symptoms in the last 12 months, all the females reported stopping sex while none of the males stopped having sex during the time of the STI symptom. Five reported using a condom when having sex and only one told his/her sex partner about the STI/discharge.

5. HIV Knowledge and Testing Behaviors

All respondents have heard about HIV/AIDS. Two out of five (40.4%) have known a person infected with a HIV or who died of AIDS and half (50.0%) have a close friend or relative with HIV or who died of AIDS.

Knowledge about HIV prevention among YTC was fairly low. While the majority (90.4%) of YTC correctly agreed that injections with a used needle can transmit HIV, only half agreed that abstinence can prevent HIV infection (54.4%), 57.0% agreed that having one faithful uninfected partner can prevent HIV infection, and two-thirds (66.7%) agreed that using condoms correctly during all sexual intercourse can prevent HIV infection. Approximately one-third (35.9%) could name all three 'ABC' (abstinence, being faithful, and consistent condom use) as HIV prevention methods; males were significantly more knowledgeable than females about these three methods (44.4% versus 23.7%). Males were also significantly more likely to know about mother to child transmission with 87.5% of males agreeing that an HIV-infected woman can transmit HIV to her unborn child while 78.0% of the females agreed with the statement. Half (50.0%) of all respondents agreed that an HIV-infected mother can transmit HIV to a newly-born baby through breast milk. Few (21.7%) knew that taking medications (antiretroviral drugs) could reduce the risk of HIV transmission from mother to unborn child.

Table 6.3 Knowledge of HIV prevention among YTC, St. Petersburg.

Characteristics	Male (N=64) %	Female (N=50) %	Total (N=114) %
Abstinence can prevent HIV infection	64,1	42,0	54,4
Having one faithful uninfected partner can prevent HIV infection	57,8	56,0	57,0
Using condoms correctly during every sexual intercourse can prevent HIV infection	71,9	60,0	66,7
Knew the 3 'ABC'[1] methods of HIV prevention (Abstinence, Being faithful, Consistent Condom use)	44,4	23,7	35,9*
Injections with a used needle can transmit HIV	89,1	92,0	90,4
An HIV-infected woman can transmit HIV to her unborn child	87,5	78,0	83,3*
Taking medication (ARVs) can reduce risk of transmission from mother to unborn child	32,1	20,0	21,7
An HIV-infected mother can transmit HIV to newly-born baby through breast milk	45,3	56,0	50,0

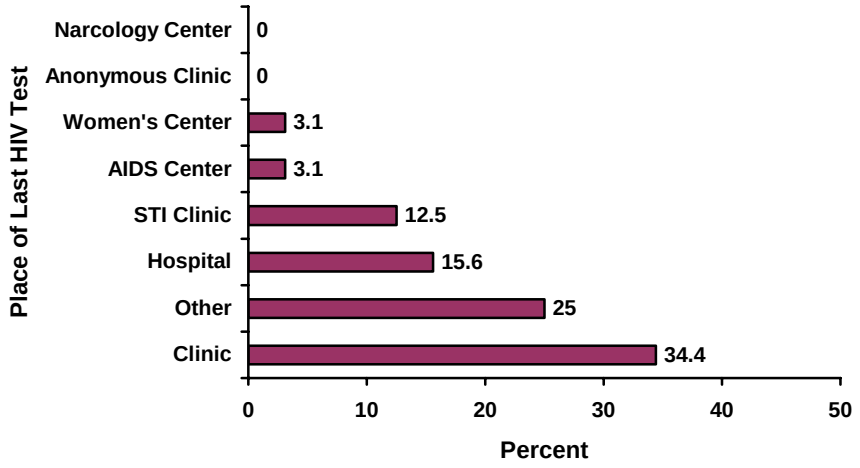
[1] ***'ABC' methods of HIV prevention*** refers to A = Abstaining from sexual intercourse, B = Being faithful to one uninfected faithful sex partner, and C = Using a condom correctly every time they have sexual intercourse.

HIV testing

The majority of respondents (74.6%) reported knowing about the availability of anonymous HIV testing in the city. However, HIV testing rates were extremely low with only 28.1% (n=32) having ever tested for HIV. Only 19.3% of all respondents voluntarily underwent the test and found out their test results. Among those who had taken the HIV test, 62.5% had

taken it within the past 12 months. One-third (34.3%) reported taking the HIV test at a polyclinic (an outpatient health clinic), 15.6% at a hospital, and 12.5% at an STI clinic.

Figure 6.2 Places where YTC had last HIV test, St. Petersburg.



6. Stigma and Discrimination

Stigma and discrimination towards people living with HIV/AIDS was very common among a high proportion of YTC. About two-thirds (69.3%) said they would not be willing to share a meal with an HIV positive person; 59.6% would not be willing to buy food from an HIV infected shopkeeper or food vendor; 55.3% think that an HIV positive teacher who is not sick should not be allowed to continue teaching in school; 33.3%-42.1% would not to take care of an HIV-infected relative in their household; and 40.4% felt that an HIV-positive student should not be allowed to continue attending school. The majority of YTC (75.4%) indicated that they would want to keep it a secret if a family member became infected with HIV. There were no statistically significant differences between male and female YTC with regard to stigma and discrimination sentiments.

Table 6.4 Stigma and discrimination towards people living with HIV/AIDS among YTC, St. Petersburg

	Male (N=64) %	**Female** (N=50) %	**Total** (N=114) %
Willingness to share a meal with HIV positive person (No)	71,9	66,0	69,3
Willingness to care for HIV positive male relative in the household (No)	42,0	42,0	42,1
Willingness to care for HIV positive female relative in the household (No)	28,1	40,0	33,3
HIV positive teacher should be allowed to continue teaching in school if she/he is not sick (No)	57,8	52,0	55,3
HIV positive student should be allowed to continue attending school (No)	45,3	34,0	40,4
Willingness to buy food from HIV positive shopkeeper or food seller (No)	56,3	64,0	59,6
Want to keep it a secret if family member became HIV infected (Yes)	71,9	80,0	75,4

7. Exposure to Media and HIV Prevention Programs

About two-thirds of YTC reported listening to the radio (79.9%), watching television (90.4%), and reading magazines or newspapers (58.8%) either everyday or about once a week in the last four weeks. The internet was not commonly used; 80.7% reported never using the internet in the last four weeks. About two out of five (40.4%) reported having participated in HIV/AIDS activities conducted in or out of school; these activities include meetings, discussions, and other educational programs about HIV/AIDS.

A fair proportion have seen HIV programs or messages on television or printed materials in the last 12 months (58.8% and 60.5%, respectively). When respondents were asked who they would rather go to when they urgently need to receive some information on HIV/AIDS, they preferred to get information from physicians and nurses (58.8%), television programs (52.6%), newspaper or magazine articles (50.9%), youth centers (49.1%), and psychological centers (48.2%) (**Table.6.5**). Among the most common sources which respondents indicated they would never go to for necessary information on HIV/AIDS were parents or relatives (28.1%), peers of the opposite sex (23.7%), and peers of the same sex (16.7%).

Table 6.5 Sources YTC would go to for information on HIV/AIDS, St. Petersburg.

When you urgently need to receive some information on HIV/AIDS, you'd rather go to	Male (N=64) %	Female (N=50) %	Total (N=114) %
Peers of same sex	39,1	44,0	41,2
Peers of opposite sex	43,8	38,9	41,2
Parents or relatives	46,9	42,0	44,7
Teachers	37,5	46,0	41,2
Physician or nurses	62,5	54,0	58,8
TV programs	50,0	56,0	52,6
Articles in newspapers or magazines	49,6	56,0	50,9
Special literature	35,9	46,0	40,4
Psychological centers	42,2	56,0	48,2
Youth centers	45,3	54,0	49,1
Anonymous services	25,0	30,0	27,2
Internet	23,4	12,0	18,4

Orenburg

1. Sociodemographic Characteristics

In total, 45 YTC completed interviews in Orenburg. The median age of these youth was 15 years. Over half (59.5%) had completed primary school and 37.8% had completed secondary education. The majority (86.8%) had lived in the city for 11-20 years. Almost half of the youth (44.7%) were living in a boarding school and 36.8% were living at their parent's home. About one third (34.2%) were employed at the time of the survey, most often doing auxiliary unofficial work such as temporary manual labor, cleaning, or selling goods.

Table 6.6 Demographic characteristics of YTC, Orenburg.

Characteristics	Male (N=25) %	Female (N=21) %	Total (N=46) %
Age			
Median age (IQR)	15,0 (1)	15,0 (1)	15,0 (1)
Age Distribution			
15-17	100,0	100,0	100,0
18-20	0,0	0,0	0,0
21-25	0,0	0,0	0,0
Education Level Completed			
Primary School	58,8	60,0	59,5
Secondary School	35,3	40,0	37,8
Vocational School	5,9	0,0	2,7
Special College	0,0	0,0	0,0
University, 3-4 yrs	0,0	0,0	0,0
University, 5-6 yrs	0,0	0,0	0,0
Years Living in City			
0-10 years	16,7	10,0	13,2
11-20 years	83,3	90,0	86,8
More than 20 years	0,0	0,0	0,0
Income Activity			
Earn income currently	33,3	35,0	34,2
Type of work to earn income			
Selling	0,0	42,9	23,1
Cleaning	33,3	42,9	38,5
Security (informal)	16,7	0,0	7,7
Auxiliary unofficial work	66,7	28,6	42,6
Car washing	0,0	0,0	0,0
Sex work	0,0	0,0	0,0
Drug dealing	0,0	0,0	0,0
Manual labor	16,7	0,0	7,7
Picking up recycling materials	0,0	0,0	0,0
Begging	0,0	0,0	0,0
Current Type of Residence			
Boarding school	44,4	45,0	44,7
Hostel/Dormitory	0,0	0,0	0,0
At parent's residence	33,3	40,0	36,8
At relative's residence	11,1	5,0	7,9
At sex partner's residence	0,0	0,0	0,0
On my own	5,6	0,0	2,6

2. Alcohol and Drug Use

Alcohol use

About one-third of the youth consumed alcohol on a regular basis; 5.3% reported drinking alcohol almost everyday and 28.9% reported drinking alcohol a few times a week in the past four weeks.

Drug use

The majority of all youth in the sample had used some kind of illicit drug; 83.3% of all YTC interviewed had used marijuana, 33.3% had inhalants, and 22.2% had stimulants. Almost one out of five (16.7%) youth in transitory centers reported having injected drugs during the last year.

3. Sexual Behavior and Condom Use

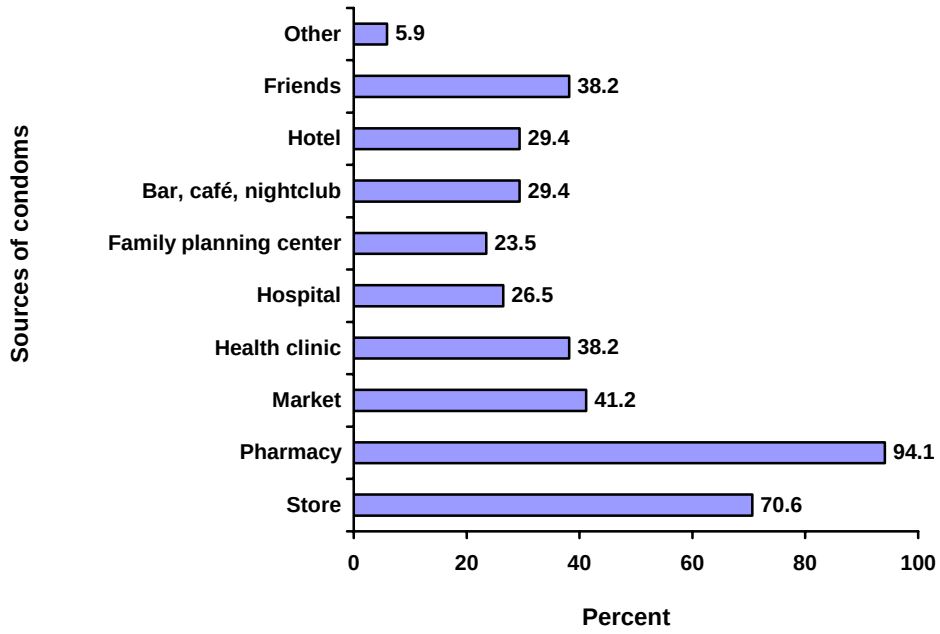
Sexual behavior

About two-thirds (65.8%, n=25) of the YTC have had sex (defined as vaginal or anal intercourse). The proportion reporting ever having sex was similar between males and females. The median age at first sexual contact was 14 years. About three out of five YTC (60.5%) reported having had sex in the last 12 months, 95.8% of whom reported having more than one sex partner in the last 12 months (median = 2). Almost 16% (n=6) reported having had sex in the last 12 months with a commercial sex partner.

Knowledge about condoms

All respondents had heard of male condoms and the majority (84.2%) knew where to obtain condoms. Most people indicated that they knew they could buy condoms at the pharmacy (94.1%), the store (70.6%), the market (41.2%), health clinic (38.2%), or friends (38.2%). Only 41.2% indicated that they could obtain condoms in less than 10 minutes.

Figure 6.3 Places where YTC knew they could obtain condoms, Orenburg.



Condom use

Condoms were used during the first sexual intercourse by only 32.0% of those who reported ever having sex. A condom was used during the most recent non-commercial sexual intercourse by 45.8% of those who reported having sex in the last 12 months and 66.7% at the most recent sexual encounter with a commercial sex partner. Among those who did not use a condom during the most recent sexual encounter, the main reasons for not using a condom were that it was not available (33.3%) or that condoms were too expensive (25.0%). Consistent condom use with non-commercial sex partners (using a condom every time with each sex partner) in the last 12 months was reported by only 16.7% of respondents. Consistent condom use in the last 12 months with a commercial sex partner was low (33.3%). There were no significant differences in condom use between male and female YTC. Also none of the males reported having sex with other male sex partners in the last 12 months.

Sexual violence

One out of five (20.8%) youth in transitory centers reported having experienced sexual violence (use or threat of force for sex) in the last 12 months.

4. STI Knowledge and Symptoms

The majority (84.2%) of respondents had heard of STIs. However, familiarity with both female and male STI symptoms was very low (less than 25%). For female STI symptoms, approximately one out of five respondents knew about burning pain upon urination (21.9%), genital discharge (18.8%), and foul smelling discharge (18.8%). Very few respondents knew about male STI symptoms: genital ulcers or sores (25.0%), and burning pain upon urination (12.5%). The sample size was too small to make any distinctions in knowledge of STIs between males and females.

Table 6.7 Knowledge of STIs among YTC, Orenburg.

Characteristics	Male (N=18) %	Female (N=20) %	Total (N=38) %
Has heard of STI	83,3	85,0	84,2
Knowledge of female STI symptoms			
Genital discharge	13,3	23,5	18,8
Burning pain on urination	6,7	35,3	21,9
Foul smelling discharge	6,7	29,4	18,8
Genital ulcers/sores	7,6	17,6	12,5
Abdominal pain	0,0	5,9	3,1
Swelling in groin area	0,0	0,0	0,0
Itching	13,3	17,6	15,6
Others	0,0	11,8	6,3
No response	6,7	0,0	3,7
Knowledge of male STI symptoms			
Genital discharge	13,3	5,9	9,4
Burning pain on urination	13,3	11,8	12,5
Genital ulcers/sores	20,0	29,4	25,0
Swelling in groin area	6,7	5,9	6,3
Others	0,0	5,9	3,1
No response	6,7	0,0	3,1

STI symptoms

Of the 38 YTC respondents in Orenburg, only female respondents reported experiencing STI symptoms in the last 12 months, with a quarter (25.0%, n=5) having had abnormal genital discharge and one having had genital ulcers or sores in the last 12 months. Those experiencing STI symptoms reported seeking care for their STI symptom first from a traditional healer, a government clinic or hospital, a private pharmacy or took medicine from home. All respondents who experienced STI symptoms did not seek medical care until after a month after recognition of the STI symptom.

Among those who experienced STI symptoms in the last 12 months, only one reported using a condom when having sex during the STI symptom. None stopped having sex and none told his/her sex partner about the STI/discharge.

5. HIV Knowledge and Testing Behaviors

All respondents in Orenburg have heard about HIV/AIDS. About a quarter (28.9%) have known a person infected with HIV or who died of AIDS, and almost half (45.5%) have a close friend or relative with HIV or who died of AIDS.

Knowledge about HIV prevention among YTC was fairly low. While the majority (97.4%) of YTC correctly agreed that injections with a used needle can transmit HIV, knowledge about sexual transmission was fairly low. About two-thirds (65.8%) agreed that abstinence can prevent HIV infection, 44.7% agreed that having one faithful uninfected partner can prevent HIV infection, and two-thirds (65.8%) agreed that using condoms correctly for every sexual intercourse can prevent HIV infection. Approximately two out of five (41.7%) could name all three 'ABC' (abstinence, being faithful, and consistent condom use) as HIV prevention methods. About three-quarters (73.7%) knew that an HIV-infected woman can transmit HIV to her unborn child and 60.5% of respondents knew that an HIV-infected mother can transmit HIV to a newly-born baby through her breast milk. About a third (35.7%) knew that taking medications (antiretroviral drugs) could reduce the risk of HIV transmission from mother to unborn child.

Table 6.8 Knowledge of HIV prevention among YTC, Orenburg.

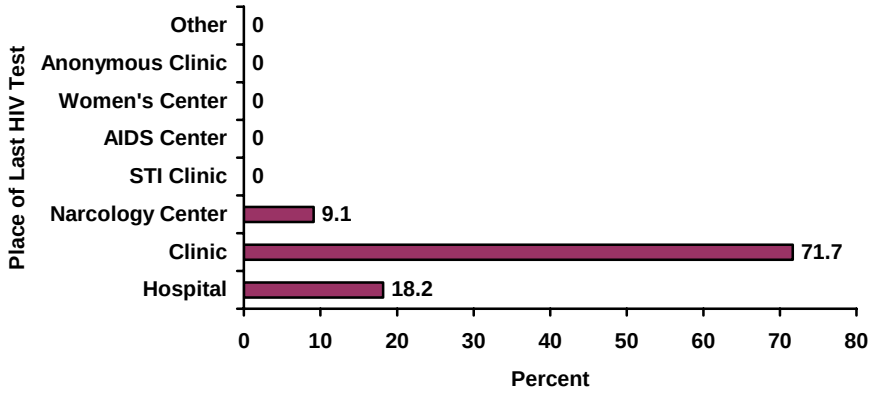
Characteristics	Male (N=18) %	Female (N=20) %	Total (N=38) %
Abstinence can prevent HIV infection	50,0	80,0	65,8
Having one faithful uninfected partner can prevent HIV infection	44,5	45,0	44,7
Using condoms correctly during every sexual intercourse can prevent HIV infection	72,2	60,0	65,8
Knew the 3 'ABC'† methods of HIV prevention (Abstinence, Being faithful, Consistent Condom use)	41,7	41,7	41,7
Injections with a used needle can transmit HIV	94,4	100,0	97,4
An HIV-infected woman can transmit HIV to her unborn child	50,0	95,0	73,7
Taking medication (ARVs) can reduce risk of transmission from mother to unborn child	33,3	36,8	35,7
An HIV-infected mother can transmit HIV to newly-born baby through breast milk	50,0	70,0	60,5

† ***'ABC' methods of HIV prevention*** refers to A = Abstaining from sexual intercourse, B = Being faithful to one uninfected faithful sex partner, and C = Using a condom correctly every time they have sexual intercourse.

HIV testing

Less than half (42.1%) of YTC in Orenburg reported knowing about the availability of anonymous HIV testing in the city and only 28.9% reported having ever tested for HIV. A high proportion (72.7%) of those who had taken the test indicated that they were required to take the HIV test, however, only 45.5% of those who took the test found out their test results. Only one respondent voluntarily underwent the test and learned their test results. Among those who had taken the HIV test, 63.6% had taken it within the past 12 months. Almost three-quarters (71.7%) reported taking the HIV test at a polyclinic (an outpatient health clinic), 18.2% at a hospital, and 9.1% at a Narcology Center.

Figure 6.4 Places where YTC had last HIV test, Orenburg.



6. Stigma and Discrimination

Stigma and discrimination towards people living with HIV/AIDS was very common among a high proportion of YTC. The majority (84.2%) said they would not be willing to share a meal with an HIV positive person; 52.6% would not be willing to buy food from an HIV infected shopkeeper or food vendor; 47.4% think that an HIV positive teacher who is not sick should not be allowed to continue teaching in school; about a quarter would not take care of an HIV-infected male or female relative in their household (21.1%-23.7%); and 39.5% felt that an HIV-positive student should not be allowed to continue attending school. The majority of YTC (84.2%) indicated that they would want to keep it a secret if a family member became infected with HIV.

Table 6.9 Stigma and discrimination towards people living with HIV/AIDS among YTC, Orenburg

	Male (N=18) %	**Female** (N=20) %	**Total** (N=38) %
Willingness to share a meal with HIV positive person (No)	**88,9**	**80,0**	84,2
Willingness to care for HIV positive male relative in the household (No)	**27,8**	**15,0**	21,1
Willingness to care for HIV positive female relative in the household (No)	**27,8**	**20,0**	23,7
HIV positive teacher should be allowed to continue teaching in school if she/he is not sick (No)	**44,4**	**50,0**	47,4
HIV positive student should be allowed to continue attending school (No)	**50,0**	**30,0**	39,5
Willingness to buy food from HIV positive shopkeeper or food seller (No)	**55,6**	**50,0**	52,6
Want to keep it a secret if family member became HIV infected (Yes)	**77,8**	**90,0**	84,2

7. Exposure to HIV prevention programs

About three out five YTC respondents in Orenburg watched television (63.1%), half listened to the radio (47.4%), and 13.1% read a magazines or newspapers either everyday or about once a week in the 4 weeks before the survey. Only 45% reported using the internet during that time frame. Slightly more than one-third (34.2%) had participated in HIV/AIDS activities conducted in or out of school; including meetings, discussions, and other educational programs about HIV/AIDS.

About half of YTC had seen HIV programs or messages on television in the last 12 months (55.3%). A smaller proportion had seen HIV programs or messages in printed materials (36.8%) or on the radio (31.6%). When respondents were asked to whom they would rather go when they urgently need to receive some information on HIV/AIDS, the most often reported source was peers of the same sex (63.2%), followed by television programs (34.2%) and physicians or nurses (31.6%) (**Table 6.10**). Among the most common sources which respondents indicated they would never go to for necessary information on HIV/AIDS were teachers (34.3%) and parents or relatives (20.0%).

Table 6.10 Sources YTC would go to for information on HIV/AIDS, Orenburg.

When you urgently need to receive some information on HIV/AIDS, you'd rather go to	**Male** (N=64) %	**Female** (N=50) %	**Total** (N=114) %
Peers of same sex	50,0	75,0	63,2
Peers of opposite sex	16,7	25,0	21,1
Parents or relatives	22,2	25,0	23,7
Teachers	22,2	20,0	21,1
Physician or nurses	22,2	40,0	31,6
TV programs	44,4	25,0	34,2
Articles in newspapers or magazines	16,7	25,0	21,1
Special literature	16,7	10,0	13,2
Psychological centers	22,2	20,0	21,1
Youth centers	16,7	10,0	13,2
Anonymous services	11,1	15,0	13,2
Internet	11,1	5,0	7,9

Irkutsk

1. Sociodemographic Characteristics

In total, 46 YTC participated in Irkutsk (25 males and 21 females). The median age of these youth was 15 years. The majority had completed primary school (91.3%), had lived in the city for 11-20 years (89.1%), and were living in a boarding school (97.8%). About one-quarter (23.9%) were employed at the time of the survey, most often doing auxiliary unofficial work (45.5%) such as temporary manual labor.

Table 6.11 Demographic characteristics of YTC, Irkutsk.

Characteristics	Male (N=25) %	Female (N=21) %	Total (N=46) %
Age			
Median age (IQR)	15,0 (1)	15,0 (1)	15,0 (1)
Age Distribution			
15-17	100,0	100,0	100,0
18-20	0,0	0,0	0,0
21-25	0,0	0,0	0,0
Education Level Completed			
Primary School	84,0	100,0	91,3
Secondary School	16,0	0,0	8,7
Vocational School	0,0	0,0	0,0
Special College	0,0	0,0	0,0
University, 3-4 yrs	0,0	0,0	0,0
University, 5-6 yrs	0,0	0,0	0,0
Years Living in City			
0-10 years	16,0	4,8	10,9
11-20 years	84,0	95,0	89,1
More than 20 years	0,0	0,0	0,0
Income Activity			
Earn income currently	28,0	19,0	23,9
Type of work to earn income			
Selling	0,0	0,0	0,0
Cleaning	14,3	0,0	9,1
Security (informal)	0,0	0,0	0,0
Auxiliary unofficial work	57,1	25,0	45,5
Car washing	14,3	0,0	9,1
Sex work	0,0	25,0	9,1
Drug dealing	0,0	0,0	0,0
Manual labor	0,0	0,0	0,0
Picking up recycling materials	0,0	0,0	0,0
Begging	0,0	25,0	9,1
Current Type of Residence			
Boarding school	96,0	100,0	97,8
Hostel/Dormitory	4,0	0,0	2,2

2. Alcohol and Drug Use

Alcohol use

Alcohol consumption was not common among YTC in Irkutsk with 71.7% reporting that they have not had any alcohol in the 4 weeks before the survey.

Drug use

All of the youth in the sample had used some kind of illicit drug; all YTC interviewed had used marijuana. The next most common drug was atropine group substances (benadryl, cyclodolum, etc.) (40.9%). A fairly small proportion (9.1%) reported injecting drugs during the last year.

3. Sexual Behaviors and Condom Use

Sexual behavior

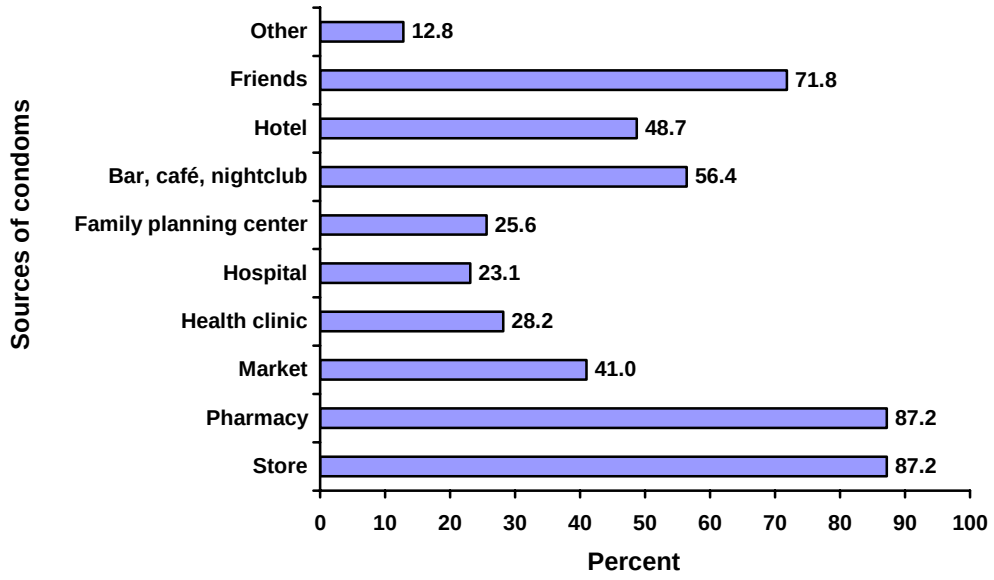
Three out of five (47.8%) respondents have had sex (defined as vaginal or anal intercourse). The proportion who have had sex was similar between males and females. The

median age at first sexual contact was 14 years. A small proportion (13.0%; n=6) reported having had sex in the last 12 months, all of whom reported having more than one sex partner during that time (median = 2.5). Only one person reported having had sex in the last 12 months with a commercial sex partners.

Knowledge about condoms and condom use

The majority (89.1%) YTC had heard of male condoms (89.1%), of whom 95% knew where to obtain them. Most respondents knew they could buy condoms at the pharmacy, the store, from friends, and from bars, cafes and nightclubs. 56.4% indicated that they could obtain condoms in less than 10 minutes (**Figure 6.5**).

Figure 6.5 Places where YTC knew they could obtain condoms, Irkutsk.



Condoms were used during the first sexual intercourse by 31.8% of those who reported ever having sex. A condom was used during the most recent sexual encounter by 66.7% (n=4) of those who reported having sex in the last 12 months. Only two respondents reported using condoms consistently with non-commercial sex partners in the last 12 months. None of the males reported having sex with other male sex partners in the last 12 months.

Sexual violence

None of the respondents reported having experienced sexual violence (use or threat of force for sex) in the last 12 months.

4. STI Knowledge and Symptoms

About three-quarters (76.1%) of the respondents had heard of STIs. However, almost no one (less than 6%) knew any of the symptoms; only 5.7% could name swelling in groin area as a female STI symptoms and 5.7% could name burning pain upon urination as a male STI symptom.

Table 6.12 Knowledge of STIs among YTC, Irkutsk.

Characteristics	**Male** (N=25) %	**Female** (N=21) %	**Total** (N=46) %
Has heard of STI	80,0	71,4	76,1
Knowledge of female STI symptoms			
Genital discharge	5,0	0,0	2,9
Burning pain on urination	5,0	0,0	2,9
Foul smelling discharge	0,0	6,7	2,9
Genital ulcers/sores	0,0	6,7	2,9
Abdominal pain	0,0	0,0	0,0
Swelling in groin area	0,0	13,3	5,7
Itching	0,0	6,7	2,9
Others	0,0	0,0	0,0
No response	15,0	0,0	8,6
Knowledge of male STI symptoms			
Genital discharge	0,0	0,0	0,0
Burning pain on urination	5,0	6,7	5,7
Genital ulcers/sores	0,0	6,7	2,9
Swelling in groin area	0,0	6,7	2,9
Others	5,0	0,0	2,9
No response	20,0	0,0	11,4

STI symptoms

Of the 46 YTC respondents in Irkutsk, only five female respondents reported experiencing STI symptoms in the last 12 months, with almost a quarter (23.8%) having had abnormal genital discharge and 4.8% having had genital ulcers or sores. All respondents who reported experiencing STI symptoms reported seeking care for their STI symptom first from a government clinic or hospital. Almost all respondents who experienced STI symptoms sought medical care within one week or less after recognition of the STI symptom.

Among those who experienced STI symptoms in the last 12 months, none reported that they stopped having sex, used a condom or told his/her sex partner about the STI/discharge.

5. HIV Knowledge and Testing Behaviors

Seventy-six percent of YTC reported they had heard of HIV/AIDS. About one-third (34.3%) have known a person infected with HIV or who has died of AIDS and a quarter (25.0%) knew a close friend or relative with HIV or who has died of AIDS.

Knowledge about HIV prevention among YTC remains fairly low. While all respondents of YTC correctly agreed that injections with a used needle could transmit HIV, knowledge about sexual transmission was moderately low. About two-thirds (65.7%) agreed that abstinence can prevent HIV infection, 54.3% agreed that having one faithful uninfected partner can prevent HIV infection, however, the majority (82.9%) agreed that using condoms correctly during all sexual intercourse can prevent HIV infection. Approximately two-thirds (63.6%) could name all three 'ABC' (abstinence, being faithful, and consistent condom use) as HIV prevention methods. The majority (94.3%) knew that an HIV-infected woman can transmit HIV to her unborn child and 57.1% of respondents knew that an HIV-infected mother could transmit HIV to a newly born baby through her breast milk. Only 6.1% knew that taking medications (antiretroviral drugs) could reduce the risk of HIV transmission from mother to unborn child.

Table 6.13 Knowledge of HIV prevention among YTC, Irkutsk.

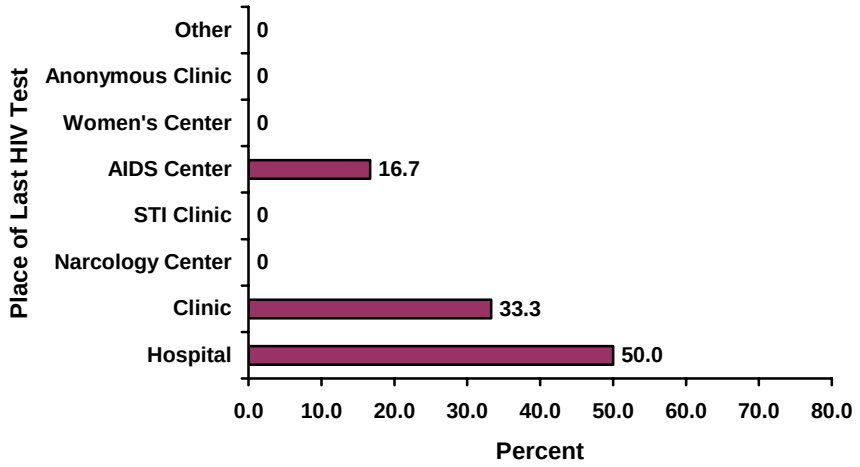
Characteristics	Male (N=25) %	Female (N=21) %	Total (N=46) %
Abstinence can prevent HIV infection	59,1	76,9	65,7
Having one faithful uninfected partner can prevent HIV infection	54,5	53,8	54,3
Using condoms correctly during every sexual intercourse can prevent HIV infection	90,9	69,2	82,9
Knew the 3 'ABC'† methods of HIV prevention (Abstinence, Being faithful, Consistent Condom use)	53,3	85,7	63,6
Injections with a used needle can transmit HIV	100,0	100,0	100,0
An HIV-infected woman can transmit HIV to her unborn child	100,0	84,6	94,3
Taking medication (ARVs) can reduce risk of transmission from mother to unborn child	9,1	0,0	6,1
An HIV-infected mother can transmit HIV to newly-born baby through breast milk	50,0	69,2	57,1

† ***'ABC' methods of HIV prevention*** refers to A = Abstaining from sexual intercourse, B = Being faithful to one uninfected faithful sex partner, and C = Using a condom correctly every time they have sexual intercourse.

HIV testing

Four out of five (80.0%) of YTC in Irkutsk reported knowing about the availability of anonymous HIV testing in the city, however, only 17.6% (n=8) of respondents reported having ever tested for HIV. About one-third (33.3%) of those who had ever taken the test indicated that they were required to take the HIV test. Only 6.5% of all respondents voluntarily underwent the test and found out their test results. Among those who had taken the HIV test, 66.7% had taken it within the past 12 months. Half had taken their last HIV test at a hospital (50.0%), 33.3% took the test at a polyclinic (an outpatient health clinic), and 16.7% at the AIDS Center.

Figure 6.6 Places where YTC had last HIV test, Irkutsk.



6. Stigma and Discrimination

Stigma and discrimination towards people living with HIV/AIDS was very common among a high proportion of YTC. The majority (82.6%) said they would not be willing to share a meal with an HIV positive person; 73.9% would not be willing to buy food from an HIV infected shopkeeper or food vendor; 67.4% think that an HIV positive teacher who is not sick

should not be allowed to continue teaching in school; about a quarter would not to take care of an HIV-infected male or female relative in their household (26.1%-23.9%); and 56.5% felt that an HIV-positive student should not be allowed to continue attending school. The majority of YTC (80.4%) indicated that they would want to keep it a secret if a family member became infected with HIV.

Table 6.14 Stigma and discrimination towards people living with HIV/AIDS among YTC, Irkutsk.

	Male (N=25) %	**Female** (N=21) %	**Total** (N=46) %
Willingness to share a meal with HIV positive person (No)	80,5	85,7	**82,6**
Willingness to care for HIV positive male relative in the household (No)	24,0	28,6	**26,1**
Willingness to care for HIV positive female relative in the household (No)	24,0	23,8	**23,9**
HIV positive teacher should be allowed to continue teaching in school is she/he is not sick (No)	76,0	57,1	**67,4**
HIV positive student should be allowed to continue attending school (No)	64,0	47,6	**56,5**
Willingness to buy food from HIV positive shopkeeper or food seller (No)	72,0	76,2	**73,9**
Want to keep it a secret if family member became HIV infected (Yes)	72,0	90,5	**80,4**

7. Exposure to HIV prevention programs

Television is the most widely-used form of media among YTC in Irkutsk, with 89.1% reporting daily use in the past 4 weeks. The internet was not commonly used; 80.4% reported never using the internet in the last four weeks. About one-third (32.6%) reported having participated in HIV/AIDS activities in or out of school; these activities include meetings, discussions, and other educational programs about HIV/AIDS.

Seventy-one percent of YTC reported seeing HIV programs or messages on television in the last 12 months. A much smaller proportion had seen HIV programs or messages in printed materials (40.0%) or on the radio (37.1%). When respondents were asked to whom they would prefer to go when they urgently need to receive some information on HIV/AIDS, the most often reported source were teachers (65.7%), physicians or nurses (57.1%), and television programs (57.1%). **(Table 6.15)** Among the most common sources which respondents indicated they would never go to for necessary information on HIV/AIDS were peers of the same sex (19.4%).

Table 6.15 Sources YTC would go to for information on HIV/AIDS, Irkutsk.

When you urgently need to receive some information on HIV/AIDS, you'd rather go to	Male (N=64) %	Female (N=50) %	Total (N=114) %
Peers of same sex	50,0	30,8	42,9
Peers of opposite sex	9,1	15,4	11,4
Parents or relatives	27,3	30,8	28,6
Teachers	77,3	46,2	65,7
Physician or nurses	40,9	84,6	57,1
TV programs	68,2	38,5	57,1
Articles in newspapers or magazines	**36,4**	**38,5**	**37,1**
Special literature	**18,2**	**30,8**	**22,9**
Psychological centers	**27,3**	**38,5**	**31,4**
Youth centers	**27,3**	**38,5**	**31,4**
Anonymous services	**27,3**	**46,5**	**34,3**
Internet	**13,6**	**15,4**	**14,3**

VII. INSTITUTION-BASED YOUTH

St. Petersburg

1. Sociodemographic Characteristics

A total of 866 institution-based youth (IBY) participated in the BMS in St. Petersburg. The median age of IBY participants was 16 years. One out of five (20.6%) had completed primary school, 74.4% had completed secondary education and 88.2% had lived in the city for 11-20 years. The majority of the youth (85.2 %) were living at their parent's residence. Almost one out of five (17.3%) were employed at the time of the survey, most often in selling goods (21.4% of males and 51.5% of females) or some kind of auxiliary unofficial work (29.8% of the males and 10.6% of females), such as temporary work cleaning or types of manual labor.

Table 7.1 Demographic characteristics of IBY, St. Petersburg.

Characteristics	Male (N=464) %	Female (N=402) %	Total (N=866) %
Age			
Median age (IQR)	16,0(1)	16,0(1)	16,0 (1)
Age Distribution			
15-17	90,1	81,3	86,0***
18-20	8,8	17,7	12,9
21-25	1,1	1,0	1,0
Education Level Completed			
Primary School	19,8	21,4	20,6
Secondary School	76,1	72,4	74,4
Vocational School	1,1	1,0	1,0
Special College	1,9	4,7	3,2
University, 3-4 yrs	1,1	0,5	0,8
University, 5-6 yrs	0,0	0,0	0,0
Years Living in City			
0-10 years	12,3	9,2	10,9
11-20 years	86,6	90,0	88,2
More than 20 years	1,1	0,7	0,9
Income Activity			
Earn income currently	18,1	16,4	17,3
Type of work to earn income			
Selling goods	21,4	51,5	34,7***
Cleaning	2,7	7,6	4,7
Security (informal)	3,6	0,0	2,0
Auxiliary unofficial work	29,8	10,6	21,3*
Car washing	3,6	0,0	2,0
Sex work	0,0	0,0	0,0
Drug dealing	0,0	0,0	0,0
Stealing	0,0	0,0	0,0
Picking up recycling materials	0,0	0,0	0,0
Begging	0,0	0,0	0,0
Current Type of Residence			
Boarding school	12,1	2,5	7,6***
Hostel/Dormitory	1,1	1,7	1,4
At parent's residence	82,2	88,1	85,2
At relative's residence	2,6	2,5	2,5
At sex partner's residence	0,6	1,7	1,2
On my own	0,9	3,2	2,0

* $p<0.05$ (comparing male and female); ** $p<0.001$; *** $p<0.0001$

2. Alcohol and Drug Use

Alcohol use

Alcohol consumption was moderately low among IBY in St. Petersburg. About one-third of the youth reported never having consumed alcohol and 44.1% reported having drunk alcohol less than once a week in the past four weeks.

Drug use

The majority of all youth in the sample had used some kind of illicit drug; 95.2% had used marijuana and 31.9% had used stimulants. Very few (1.0%) reported having injected drugs during the last year.

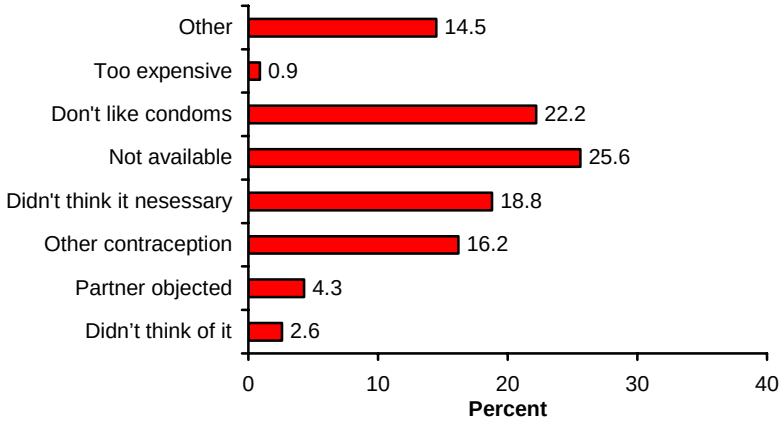
3. Sexual Behaviors, Condom Knowledge, and Use

Over half (56.5%) of the IBY have had sex (defined as vaginal or anal intercourse). The proportion reporting ever having sex was similar between males and females. The median age at first sexual contact was 15 years. About half (48.4%) reported having had sex in the last 12 months, with females (51.5%) being significantly more likely to have had sex than males (45.7%). In terms of partners, 48.2% reported having had sex with non-commercial partners and 1.3% reported having had sex with a commercial partner in the last 12 months. About half of sexually active participants (55.0%) had more than one sex partner in the last 12 months. Males had significantly more sex partners in the last 12 months than the female youth (median: 3 versus 1, respectively). None of the males reported having sex with other male sex partners in the last 12 months.

Condom use

Condoms were used during the first sexual intercourse by 73.4% of those who reported ever having sex. A condom was used during the most recent sexual encounter with a non-commercial partner by 71.0% of those who reported having sex in the last 12 months. Among those who did not use a condom during the most recent sexual encounter with a non-commercial partner, the main reasons were that condoms were not available (25.6%), that they did not like condoms (22.2%), or they did not think it was necessary (18.8%). Consistent condom use with non-commercial sex partners (using a condom every time with each sex partner) in the last 12 months was reported by 43.9% of respondents. There were no significant differences in condom use between male and female IBY.

Figure 7.1 Reasons for not using condoms at last sex with last non-commercial partner, St. Petersburg, %.



Sexual violence

Ten IBY (1.2%) reported having experienced sexual violence (forced to have sex by use or threat of force) in the last 12 months.

4. STI Knowledge and Symptoms

The majority (97.6%) of IBY had heard of STIs. However, familiarity with both female and male STI symptoms was very low (less than 15%). Female IBY were significantly more likely than male IBY to be able to name some of the common female STI symptoms (burning pain upon urination: 21.5% versus 6.0%; genital discharge: 17.2% versus 7.3%; and foul smelling discharge: 14.4% versus 6.9%). Both males and females had equally low knowledge about male STI symptoms.

Table 7.2 Knowledge of sexually transmitted infections among IBY, St. Petersburg

Characteristics	Male (N=464) %	Female (N=402) %	Total (N=866) %
Has heard of STI	97,0	98,3	97,6
Knowledge of female STI symptoms			
Genital discharge	7,3	17,2	13,0***
Burning pain on urination	6,0	21,5	13,3***
Foul smelling discharge	6,9	14,4	10,4***
Genital ulcers/sores	3,3	8,6	5,8***
Abdominal pain	5,3	10,9	7,9**
Swelling in groin area	0,7	2,5	1,5*
Itching	2,9	12,2	7,2***
Others	3,8	10,9	7,1***
Knowledge of male STI symptoms			
Genital discharge	12,4	13,4	12,9
Burning pain on urination	10,7	9,1	9,9
Genital ulcers/sores	9,6	7,6	8,6
Swelling in groin area	2,4	2,3	2,4
Others	9,8	6,1	9,0*
No response	0,0	1,8	0,8**

* $p<0.05$ (comparing male and female); ** $p<0.001$; *** $p<0.0001$

STI symptoms

Of the 866 respondents, 1.3% (n=11) reported having experienced STI symptoms in the last 12 months, with 10 reporting abnormal genital discharge and 7 reporting genital ulcers or sores. About half (45.5%) of those experiencing STI symptoms reported seeking care for their STI symptom first at a government clinic or hospital. The majority reported delay in seeking medical care with 42.9% seeking care after one month of STI symptom onset and 28.6% waiting between 1 week and 1 month.

Among those who experienced STI symptoms in the last 12 months, about half (45.5%) reported stopping sex during the time of the STI symptom and half (45.5%) told his/her sex partner about the STI/discharge. Only 18.2% reported using a condom when having sex.

5. HIV Knowledge and Testing Behaviors

Almost all (99.2%) respondents have heard about HIV/AIDS. About one out of five (17.0%) have known a person infected with a HIV or who died of AIDS and half (52.8%) have a close friend or relative with HIV or who died of AIDS.

Knowledge about HIV prevention among youth in institutions was fairly high. While the majority (95.5%) of IBY correctly agreed that injections with a used needle can transmit HIV, knowledge about sexual transmission was lower. About three-quarters (70.0%) agreed that abstinence can prevent HIV infection, 67.8% agreed that having one faithful uninfected partner can prevent HIV infection, but the majority (82.9%) agreed that using condoms correctly for every sexual intercourse can prevent HIV infection. Approximately half (49.9%) could name all three 'ABC' (abstinence, being faithful, and consistent condom use) as HIV prevention methods. Females were more likely to know about mother-to-child transmission with 89.9% of females agreeing that an HIV-infected woman can transmit HIV to her unborn child while 83.5% of the males agreed with the statement. Females were significantly more likely than males to know that an HIV-infected mother can transmit HIV to a newly-born baby through breast milk (61.7% versus 43.2%) and that taking medications (antiretroviral drugs) could reduce the risk of HIV transmission from mother to unborn child (21.8% versus 12.7%).

Table 7.3 Knowledge of HIV prevention among IBY, St. Petersburg.

Characteristics	Male (N=464) %	Female (N=402) %	Total (N=866) %
Abstinence can prevent HIV infection	70,5	71,6	70,0
Having one faithful uninfected partner can prevent HIV infection	68,3	67,1	67,8
Using condoms correctly during every sexual intercourse can prevent HIV infection	85,7	79,6	82,9
Knew the 3 'ABC'[1] methods of HIV prevention (Abstinence, Being faithful, Consistent Condom use)	52,7	46,7	49,9
Injections with a used needle can transmit HIV	94,1	97,0	95,5
An HIV-infected woman can transmit HIV to her unborn child	83,5	89,9	86,5*
Taking medication (ARVs) can reduce risk of transmission from mother to unborn child	12,7	21,8	17,1**
An HIV-infected mother can transmit HIV to newly-born baby through breast milk	43,2	61,7	54,2***

[1] ***'ABC' methods of HIV prevention*** refers to A = Abstaining from sexual intercourse, B = Being faithful to one uninfected faithful sex partner, and C = Using a condom correctly every time they have sexual intercourse.
* $p<0.05$ (comparing male and female); ** $p<0.001$; *** $p<0.0001$

Knowledge about condoms

Almost all (99.4%) IBY had heard of male condoms and the majority (99.2%) knew where to obtain condoms. Most people indicated that they knew they could buy condoms at the pharmacy (98.2%), the store (62.9%), and the health clinic (61.5%). Males were significantly more likely than females to report being able to obtain condoms from bars, cafes, and night clubs (22.9% versus 12.9%), hotels (29.2% versus 19.5%), and friends (34.9% versus 27.8%). About three-quarters (71.7%) indicated that they could obtain condoms in less than 10 minutes.

Table 7.4 Places where IBY knew they could obtain condoms, St. Petersburg.

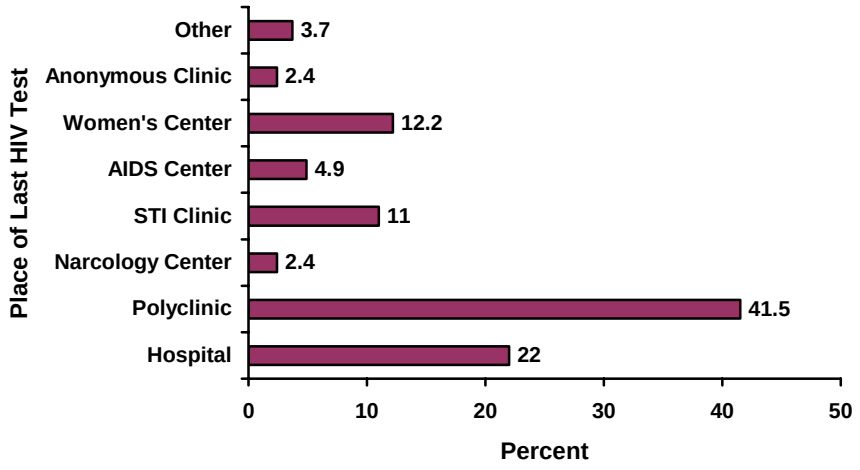
Places	Male (N=464) %	Female (N=402) %	Total (N=866) %
Store	67,3	57,7	62,9**
Pharmacy	98,7	97,7	98,2
Market	17,2	14,7	16,0
Health clinic	64,1	58,5	61,5
Hospital	53,4	50,4	52,0
Family planning center	44,2	44,8	44,5
Bar, café, night club	22,9	12,9	18,3***
Hotel	29,2	19,5	24,7***
Friends	34,9	27,8	31,6*
Other	0,0	0,0	0,0

* p<0.05 (comparing male and female); ** p<0.001; ***p<0.0001

HIV testing

The majority of respondents (82.0%) reported knowing about the availability of anonymous HIV testing in the city. However, HIV testing rates were low with only 9.5% having ever tested for HIV. Only 6.8% of all respondents have ever voluntarily taken an HIV test and found out their test results. Among those who had ever taken the HIV test, 69.5% had taken it within the past 12 months. Almost half (41.5%) reported taking the HIV test at a polyclinic (an outpatient health clinic) and 22.0% at a hospital.

Figure 7.2 Places where IBY had last HIV test, St. Petersburg.



6. Stigma and Discrimination

About two-thirds (67.0%) of IBY youth said they would not be willing to share a meal with an HIV positive person; 60.0% would not be willing to buy food from an HIV infected shopkeeper or food vendor; 39.1% did not think that a teacher should not be allowed to continue teaching in a school if he/she was not sick; 21.1%-20.6% would not take care of an HIV-infected relative in their household; and 31.6% felt that an HIV-positive student should not be allowed to continue attending school. The majority of IBY (86.4%) indicated that they would keep secret if a member of the family were the HIV-infected. There were no statistically

significant differences between male and female IBY with regard to stigma and discrimination sentiments.

Table 7.5 Stigma and discrimination towards people living with HIV/AIDS among IBY, St. Petersburg

	Male (N=464) %	**Female** (N=402) %	**Total** (N=866) %
Willingness to share a meal with HIV positive person (No)	64,0	70,0	67,0
Willingness to care for HIV positive male relative in the household (No)	21,8	20,4	21,1
Willingness to care for HIV positive female relative in the household (No)	**21,3**	**19,7**	**20,6**
HIV positive teacher should be allowed to continue teaching in school is she/he is not sick (No)	**37,9**	**40,5**	**39,1**
HIV positive student should be allowed to continue attending school (No)	**31,0**	**32,3**	**31,6**
Willingness to buy food from HIV positive shopkeeper or food seller (No)	**56,7**	**63,9**	**60,0**
Want to keep it a secret if family member became HIV infected (Yes)	**87,1**	**85,6**	**86,4**

7. Exposure to Media and HIV Prevention Programs

Television and radio were the most commonly used form of media among youth in institutions. About one-half (52.9%) of IBY reported listening to the radio and 67.1% reported watching television (67.1%) everyday. The internet was not commonly used; 53.6% reported never using the internet in the last four weeks. About one-third (32.6%) reported having participated in HIV/AIDS activities in or out of school; these activities include meetings, discussions, and other educational programs about HIV/AIDS.

A fair proportion have seen HIV programs or messages on television or printed materials in the last 12 months (69.6% and 64.4%, respectively). When respondents were asked who they would rather go to when they urgently need to receive some information on HIV/AIDS, the preferred sources included television programs (58.2%), physicians and nurses (55.3%), newspaper or magazine articles (54.5%), and peers of the same sex (53.7%). Among the most common sources which respondents indicated they would never go to for necessary information on HIV/AIDS were parents or relatives (21.3%), teachers (17.7%), and peers of the same sex (17.6%).

Table 7.6 Sources IBY would go to for information on HIV/AIDS, St. Petersburg.

When you urgently need to receive some information on HIV/AIDS, you'd rather go to	Male (N=464) %	Female (N=402) %	Total (N=866) %
Peers of same sex	55,7	51,3	53,7
Peers of opposite sex	41,0	39,4	40,3
Parents or relatives	50,1	53,8	51,8
Teachers	50,3	41,0	46,0**
Physician or nurses	55,3	55,3	55,3
TV programs	55,1	61,8	58,2*
Articles in newspapers or magazines	49,9	59,8	54,5**
Special literature	39,3	45,2	42,0
Psychological centers	34,7	37,9	36,2
Youth centers	38,4	46,0	41,9*
Anonymous services	36,4	35,4	36,0
Internet	30,8	24,6	27,9*

Orenburg

1. Sociodemographic Characteristics

The median age of IBY in Orenburg was 15 years. The majority (94.1%) had completed secondary education and most (90.2%) had lived in the city for 11-20 years. About two-thirds of the youth (66.9%) were living at their parent's home. About one third (31.3%) were employed at the time of the survey; males (42.0%) were significantly more likely to be earning income than females (21.8%). While female IBY (32.7%) were significantly more likely to be involved in selling goods than male IBY (11.9%), male IBY (42.5%) were more likely to be doing some form of auxiliary unofficial work, such as temporary manual labor, than female IBY 19.5%).

Table 7.7 Demographic characteristics of IBY, Orenburg.

Characteristics	Male (N=638) %	Female (N=728) %	Total (N=1366) %
Age			
Median age (IQR)	15,0(2)	15,0(2)	15,0(2)
Age Distribution			
15-17	63,3	58,2	60,6
18-20	35,3	40,5	38,1
21-25	1,4	1,2	1,3
Education Level Completed			
Primary School	0,8	0,1	0,4***
Secondary School	91,8	96,0	94,1
Vocational School	6,9	1,9	4,2
Special College	0,5	1,6	1,1
University, 3-4 yrs	0,0	0,3	0,1
University, 5-6 yrs	0,0	0,0	0,0
Years Living in City			
0-10 years	8,8	8,9	8,9
11-20 years	90,3	90,1	90,2
More than 20 years	0,9	1,0	1,0
Income Activity			
Earn income currently	42,0	21,8	31,3***
Type of work to earn income			
Selling goods	11,9	32,7	19,7***
Cleaning	4,5	11,3	7,0**
Security (informal)	6,0	1,9	4,4*
Auxiliary unofficial work	42,5	19,5	34,0***
Car washing	2,2	0,6	1,6
Sex work	0,4	0,0	0,2
Drug dealing	0,4	0,0	0,2
Stealing	1,1	0,0	0,7
Picking up recycling materials	2,2	0,0	1,4
Begging	0,0	0,0	0,0
Current Type of Residence			
Boarding school	3,8	2,5	3,1***
Hostel/Dormitory	5,5	13,1	9,0
At parent's residence	74,9	59,9	66,9
At relative's residence	7,1	10,4	8,9
At sex partner's residence	0,2	0,5	0,4
On my own	8,3	14,1	11,4

* $p<0.05$ (comparing male and female); ** $p<0.001$; ***$p<0.0001$

2. Alcohol and Drug Use

Alcohol use

Alcohol consumption was moderately low among IBY in Orenburg. About one-quarter (27.5%) of the youth reported never having consumed alcohol and 46.7% reported having drunk alcohol less than once a week in the past four weeks.

Drug use

The majority of all youth in the sample reported having used some kind of illicit drug at some time in their life. Almost all (95.5%) of the youth had used marijuana before. Other drugs were not common. Only 3.7% reported having injected drugs during the last year.

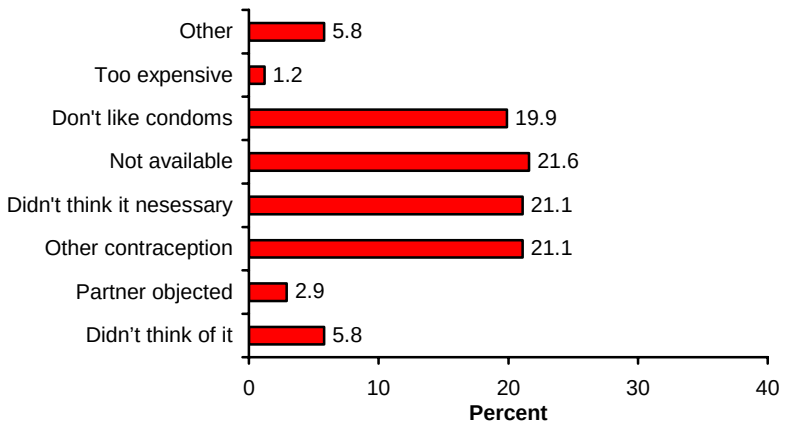
3. Sexual Behaviors and Condom Use

Over half (56.7%) of the IBY have had sex (defined as vaginal or anal intercourse), with significantly higher proportion of males (70.7%) reporting having had sex than females (44.5%). The median age at first sexual contact was 16 years. About half (48.3%) reported having had sex in the last 12 months, with 47.8% having had sex with non-commercial partners and 3.5% having had sex with a commercial partner in the last 12 months. About half (48.9%) reported having more than one sex partner in the last 12 months. Males had significantly more sex partners in the last 12 months than the female youth (median: 2 versus 1, respectively). Only 1 percent (1.3%) of the males reported having sex with other male sex partners in the last 12 months.

Condom use

Condoms were used during the first sexual intercourse by 71.2% of those who reported ever having sex. Among those who reported having sex in the last 12 months, a condom was used during the most recent sexual encounter with a non-commercial partner significantly more often by males (80.4%) than by females (62.7%). Among those who did not use a condom during the most recent sexual encounter with a non-commercial partner, the most common reasons were that condoms were not available (21.6%), they used other contraception (21.1%), they did not think it was necessary (21.1%) or that they did not like condoms (19.9%). Consistent condom use with non-commercial sex partners (using a condom every time with each sex partner) in the last 12 months was reported significantly more often by males (50.1%) than by females (34.8%). The number of females engaging in sex with commercial partners were too few to make any comment on condom use (n=7), however, among the 41 (6.4%) males who engaged in sex with commercial partners, the majority reported using a condom during the most recent sexual encounter with a commercial partner and 79.1% reported using condoms consistently with commercial partners in the last 12 months.

Figure 7.3 Reasons for not using condoms at last sex with last non-commercial partner, Orenburg, %.



Sexual violence

About 3% of females reported having experienced sexual violence (forced to have sex by use or threat of force) in the last 12 months. This percentage was significantly greater than the percentage of males who reported sexual violence (1.3%).

4. STI Knowledge and Symptoms

The majority (96.9%) of IBY had heard of STIs. However, familiarity with both female and male STI symptoms was very low. Among those who had heard of STIs, female IBY were significantly more likely than male IBY to be able to name some of the common female STI symptoms (burning pain upon urination: 36.4% versus 15.8%; abdominal pain: 24.4% versus 10.6%; and foul smelling discharge: 25.4% versus 9.2%). Males were significantly more likely than females to be able to name some of the common male STI symptoms (genital discharge: 32.4% versus 24.4%; and burning pain upon urination: 27.6% versus 19.6%).

Table 7.8 Knowledge of STIs among IBY, Orenburg.

Characteristics	Male (N=638) %	Female (N=728) %	Total (N=1366) %
Has heard of STI	96,7	97,1	96,9
Knowledge of female STI symptoms			
Genital discharge	8,1	22,6	15,8***
Burning pain on urination	15,8	36,4	26,8***
Foul smelling discharge	9,2	25,4	17,8***
Genital ulcers/sores	8,2	18,9	13,9***
Abdominal pain	10,6	24,4	18,0***
Swelling in groin area	3,4	8,9	6,3***
Itching	7,4	23,8	16,2***
Others	4,7	9,6	7,3***
No response	6,8	3,1	4,8**
Knowledge of male STI symptoms			
Genital discharge	32,4	24,4	28,1***
Burning pain on urination	27,6	19,6	23,3***
Genital ulcers/sores	23,5	20,6	22,0
Swelling in groin area	13,9	9,4	11,5*
Others	10,3	8,0	9,1
No response	6,1	5,6	5,9

* p<0.05 (comparing male and female); ** p<0.001; ***p<0.0001

STI symptoms

Few males (1.1%) reported having experienced STI symptoms in the last 12 months, however, 5.5% of females reported experiencing STI symptoms in the last 12 months, with 4.9% reporting abnormal genital discharge and 1.1% reporting genital ulcers or sores. Among these females, about half (57.5%) reported seeking care for their STI symptom first at a government clinic or hospital. About half (48.5%) of the females with STI symptoms reported seeking medical care within one week or less after STI symptom onset, however, 18.2% waited one month or more.

Among the females who experienced STI symptoms in the last 12 months, only one-third (35.0%) reported stopping sex during the time of the STI symptom and a quarter (27.5%) told her sex partner about the STI/discharge and only 22.5% reported using a condom when having sex.

5. HIV Knowledge and Testing Behaviors

Almost all (99.9%) respondents have heard about HIV/AIDS. About one-quarter (23.1%) knew a person infected with a HIV or who died of AIDS and a quarter (26.4%) reported having a close friend or relative with HIV or who died of AIDS.

Knowledge about HIV prevention among youth in institutions was fairly high. While the majority (97.9%) of IBY correctly agreed that injections with a used needle can transmit HIV, knowledge about sexual transmission was lower. About two-thirds (66.0%) agreed that abstinence can prevent HIV infection, 65.7% agreed that having one faithful uninfected partner can prevent HIV infection, and the majority (80.5%) agreed that using condoms correctly for every sexual intercourse can prevent HIV infection. Approximately half (48.7%) could name all three 'ABC' as HIV prevention methods. Females were significantly more likely to know about mother to child transmission with 94.2% of females agreeing that an HIV-infected woman can transmit HIV to her unborn child while 88.7% of the males agreed with the statement. Females were significantly more likely than males to know that an HIV-infected mother can transmit HIV to a newly-born baby through breast milk (72.4% versus 60.4%) and that taking medications (antiretroviral drugs) could reduce the risk of HIV transmission from mother to unborn child (40.6% versus 32.0%).

Table 7.9 Knowledge of HIV prevention among IBY, Orenburg.

Characteristics			
Abstinence can prevent HIV infection	64,6	67,2	66,0
Having one faithful uninfected partner can prevent HIV infection	67,5	64,1	65,7
Using condoms correctly during every sexual intercourse can prevent HIV infection	81,4	79,7	80,5
Knew the 3 'ABC'[1] methods of HIV prevention (Abstinence, Being faithful, Consistent Condom use)	49,3	48,1	48,7
Injections with a used needle can transmit HIV	97,5	98,4	97,9
An HIV-infected woman can transmit HIV to her unborn child	88,7	94,2	91,6**
Taking medication (ARVs) can reduce risk of transmission from mother to unborn child	32,0	40,6	36,7**
An HIV-infected mother can transmit HIV to newly-born baby through breast milk	60,4	72,4	66,8***

[1] ***'ABC' methods of HIV prevention*** refers to A = Abstaining from sexual intercourse, B = Being faithful to one uninfected faithful sex partner, and C = Using a condom correctly every time they have sexual intercourse.
* $p<0.05$ (comparing male and female); ** $p<0.001$; *** $p<0.0001$

Knowledge about condoms

Almost all (99.9%) IBY had heard of male condoms and the majority (98.0%) knew where to obtain condoms. Most people indicated that they knew they could buy condoms at the pharmacy (96.6%). Other places include the store (57.3%), and the health clinic (48.7%). Males were significantly more likely than females to report being able to obtain condoms from bars, cafes, and night clubs (21.4% versus 13.4%), hotels (21.8% versus 15.7%), and friends (31.0% versus 20.8%). Only one-third (36.3%) indicated that they could obtain condoms in less than 10 minutes.

Table 7.10 Places where IBY knew they could obtain condoms, Orenburg.

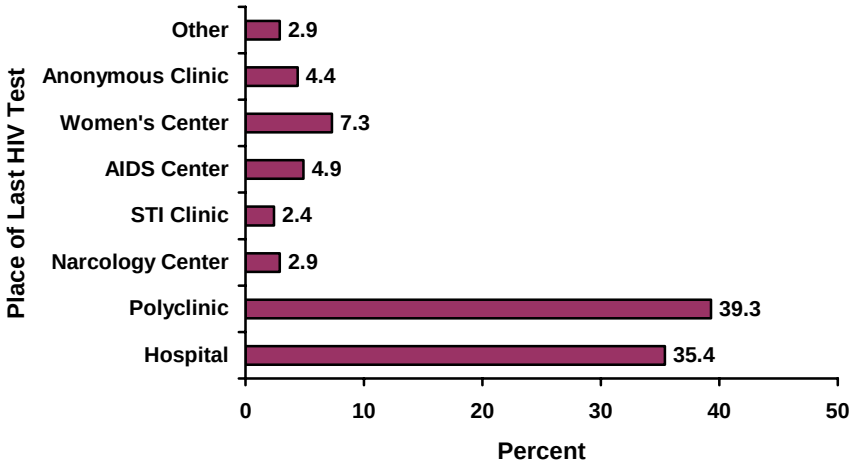
Places	Male (N=638) %	Female (N=728) %	Total (N=1366) %
Store	63,1	52,1	57,3***
Pharmacy	96,2	96,9	96,6
Market	28,2	16,9	22,2***
Health clinic	52,1	45,8	48,7*
Hospital	41,8	38,7	40,1
Family planning center	37,7	42,4	40,1
Bar, café, night club	21,4	13,4	17,2***
Hotel	21,8	15,7	18,6**
Friends	31,0	20,8	25,6***
Other	0,0	0,0	0,0

* p<0.05 (comparing male and female); ** p<0.001; ***p<0.0001

HIV testing

A fairly high proportion of respondents (77.2%) reported knowing about the availability of anonymous HIV testing in the city. Only 15.0% of all respondents, though, have ever tested for HIV and only 6.8% of all respondents have ever voluntarily taken an HIV test and found out their test results. Among those who had ever taken the HIV test, 64.1% had taken it within the past 12 months. About one-third (39.3%) reported taking the last HIV test at a polyclinic (an outpatient health clinic) and 35.4% at a hospital.

Figure 7.4 Places where IBY had last HIV test, Orenburg.



6. Stigma and Discrimination

Stigma and discrimination towards people living with HIV/AIDS was common among a fair proportion of youth in institutions in Orenburg. About three-quarters (75.9%) said they would not be willing to share a meal with an HIV positive person; 62.6% would not be willing to buy food from an HIV infected shopkeeper or food vendor; 49.0% did not think that a teacher should not be allowed to continue teaching in a school if he/she was not sick; one out of five (18.9%-21.3%) would not take care of an HIV-infected relative in their household; and 34.5% felt that an HIV-positive student should not be allowed to continue attending school. The

majority of IBY (85.3%) indicated that they would keep secret if the member of the family were the HIV-infected.

Table 7.11 Stigma and discrimination towards people living with HIV/AIDS among IBY, Orenburg, %.

	Male (N=638) %	**Female** (N=728) %	**Total** (N=1366) %
Willingness to share a meal with HIV positive person (No)	77,7	74,6	75,9
Willingness to care for HIV positive male relative in the household (No)	17,8	24,3	21,3***
Willingness to care for HIV positive female relative in the household (No)	16,8	20,7	18,9***
HIV positive teacher should be allowed to continue teaching in school is she/he is not sick (No)	48,3	49,6	49,0
HIV positive student should be allowed to continue attending school (No)	36,3	32,8	34,5**
Willingness to buy food from HIV positive shopkeeper or food seller (No)	59,9	65,0	62,6**
Want to keep it a secret if family member became HIV infected (Yes)	84,4	86,1	85,3

7. Exposure to HIV prevention programs

Television and radio were the most commonly used form of media among youth in institutions. More than half (61.7%) of IBY reported listening to the radio and 73.2% reported watching television everyday in the last four weeks. The internet was not commonly used; 66.3% reported never using the internet in the last four weeks.

More than half of all IBY youth have seen HIV programs or messages on television, radio or printed materials in the last 12 months (79.3%, 54.5%, and 68.9%, respectively). When respondents were asked to whom they would rather go when they urgently need to receive some information on HIV/AIDS, the preferred sources included television programs (62.6%), newspaper or magazine articles (55.8%), peers of the same sex (52.5%), and physicians and nurses (50.2%). Among the most common sources which respondents indicated they would never go to for necessary information on HIV/AIDS were teachers (23.5%), and peers of the same sex (18.5%). Almost half (44.4%) reported having participated in HIV/AIDS activities in or out of school, however, females were significantly more likely to do so than males (52.9% versus 34.8, respectively); these activities include meetings, discussions, and other educational programs about HIV/AIDS.

Table 7.12 Sources IBY would go to for information on HIV/AIDS, Orenburg.

When you urgently need to receive some information on HIV/AIDS, you'd rather go to	Male (N=638) %	Female (N=728) %	Total (N=1366) %
Peers of same sex	52,5	52,5	52,5
Peers of opposite sex	30,3	27,2	28,7
Parents or relatives	34,3	46,3	40,7***
Teachers	37,1	45,7	41,7***
Physician or nurses	45,4	54,4	50,2***
TV programs	59,1	65,7	62,6*
Articles in newspapers or magazines	49,4	61,4	55,8***
Special literature	27,7	33,2	30,6*
Psychological centers	15,0	14,6	14,8
Youth centers	12,6	16,2	14,5
Anonymous services	18,2	17,6	17,9
Internet	15,3	13,6	14,4

Irkutsk

1. Sociodemographic Characteristics

The median age of youth in institutions (IBY) in Irkutsk was 17 years. About three-quarters (76.4%) had completed secondary education and 15.8% had completed primary school. The majority (92.5%) had lived in the city for 11-20 years. About two-thirds of the youth (64.7%) were living at their parent's home and a quarter (25.5%) was employed at the time of the survey. Among those earning some income, female IBY were primarily involved in selling goods (32.3%) or cleaning (22.5%) and male IBY were involved in some kind of auxiliary unofficial work (27.9%) such as temporary manual labor.

Table 7.13 Demographic characteristics of IBY, Irkutsk.

Characteristics	Male (N=668) %	Female (N=682) %	Total (N=1350) %
Age			
Median age (IQR)	17,0(2)	17,0(2)	17,0(2)
Age Distribution			
15-17	73,7	62,5	68,0***
18-20	24,3	32,8	28,6
21-25	2,1	4,7	3,4
Education Level Completed			
Primary School	17,2	14,5	15,8
Secondary School	74,8	78,0	76,4
Vocational School	0,9	1,2	1,0
Special College	7,1	6,2	6,6
University, 3-4 yrs	0,0	0,1	0,1
University, 5-6 yrs	0,0	0,0	0,0
Years Living in City			
0-10 years	5,2	3,5	4,4**
11-20 years	93,0	92,1	92,5
More than 20 years	1,8	4,4	3,1
Income Activity			
Earn income currently	27,4	23,6	25,5
Type of work to earn income			
Selling goods	11,5	32,3	21,2***
Cleaning	5,5	22,5	14,8***
Security (informal)	6,0	0,0	3,2**
Auxiliary unofficial work	27,9	11,2	20,1***
Car washing	13,7	3,7	9,0**
Sex work	0,0	0,0	0,0
Drug dealing	0,0	0,6	0,3
Stealing	1,1	0,6	0,9
Picking up recycling materials	2,7	1,9	2,3
Begging	0,0	0,0	0,0
Current Type of Residence			
Boarding school	12,3	10,7	11,5
Hostel/Dormitory	7,8	10,7	9,3
At parent's residence	65,4	64,1	64,7
At relative's residence	10,3	10,0	10,1
At sex partner's residence	0,1	1,0	0,6
On my own	3,9	3,5	3,7

* $p<0.05$ (comparing male and female); ** $p<0.001$; ***$p<0.0001$

2. Alcohol and Drug Use

Alcohol use

Alcohol consumption was moderately low among IBY in Irkutsk. Most of the youth reported never (39.6%) having consumed alcohol or having drunk alcohol less than once a week (48.6%) in the past 4 weeks.

Drug use

The majority of all youth in the sample reported having used some kind of illicit drug at some time in their life. Almost all (97.8%) of the youth had used marijuana before. Other drugs were not common. Around 5% reported having injected drugs during the last year.

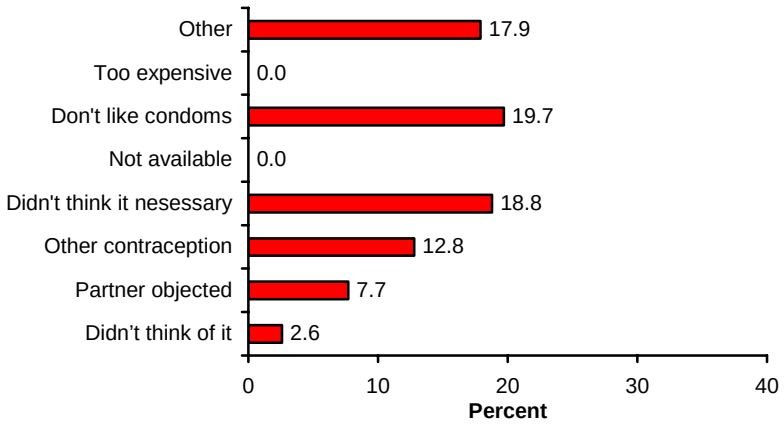
3. Sexual Behaviors and Condom Use

Over half (55.3%) of the IBY have had sex (defined as vaginal or anal intercourse), with significantly higher proportion of males (62.6%) reporting having had sex than females (48.2%). The median age at first sexual contact was 15 years. Two out of five (40.0%) reported having had sex in the last 12 months. Specifically, 39.4% reported having had sex with non-commercial partners and 3.4% reported having had sex with a commercial partner in the last 12 months. Males (5.8%) were significantly more likely to report having had sex with a commercial partner in the last 12 months than females (1.0%). About half of IBY (49.2) reported having more than one sex partner in the last 12 months. Males had significantly more sex partners in the last 12 months than the female youth (median: 2 versus 1, respectively). Less than 1% (0.3%) of the males reported having sex with other male sex partners in the last 12 months.

Condom use

Condoms were used during the first sexual intercourse by 79.9% of those who reported ever having sex. Among those who reported having sex in the last 12 months, a condom was used during the most recent sexual encounter with a non-commercial partner significantly more often by males (82.9%) than by females (70.7%). Among those who did not use a condom during the most recent sexual encounter with a non-commercial partner, the most common reasons were that they did not like condoms (19.7%), not thinking it was necessary (27.7% of males and 12.9% of females), or that they used other contraception (12.8%). Consistent condom use with non-commercial sex partners (using a condom every time with each sex partner) in the last 12 months was reported significantly more often by males (61.5%) than by females (50.0%). The number of females engaging in sex with commercial partners were too few to make any comment on condom use, however, among the 39 (5.8%) males who engaged in sex with commercial partners, the majority (89.7%) reported using a condom at last sex with a commercial partner and 82.1% reported using condoms consistently with commercial partners in the last 12 months.

Figure 7.5 Reasons for not using condoms at last sex with last non-commercial partner, Irkutsk, %.



Sexual violence

Almost 2% of IBY (1.9%) reported having experienced sexual violence (forced to have sex by use or threat of force) in the last 12 months.

4. STI Knowledge and Symptoms

The majority (93.2%) of IBY had heard of STIs. However, familiarity with both female and male STI symptoms was very low. Among those who had heard of STIs, female IBY were significantly more likely than male IBY to be able to name some of the common female STI symptoms (burning pain upon urination: 18.9% versus 6.1%; genital discharge: 12.3% versus 4.8%; and itching: 13.8% versus 2.4%; and foul smelling discharge: 11.8% versus 3.9%). Males and females had equally low knowledge of male STI symptoms.

Table 7.14 Knowledge of STIs among IBY, Irkutsk, %.

Characteristics	Male (N=668) %	Female (N=682) %	Total (N=1350) %
Has heard of STI	92,4	94,0	93,2
Knowledge of female STI symptoms			
Genital discharge	4,8	12,3	9,1***
Burning pain on urination	6,1	18,9	12,7***
Foul smelling discharge	3,9	11,8	7,9***
Genital ulcers/sores	2,7	9,2	6,0***
Abdominal pain	2,9	7,1	5,1***
Swelling in groin area	1,3	3,6	2,5**
Itching	2,4	13,8	8,2***
Others	3,1	6,2	4,7**
No response	12,0	7,8	9,8*
Knowledge of male STI symptoms			
Genital discharge	17,3	13,2	15,2*
Burning pain on urination	12,8	9,6	11,2
Genital ulcers/sores	7,4	4,8	6,1
Swelling in groin area	5,0	3,6	4,3
Others	5,5	3,9	4,7
No response	10,2	10,1	10,1

* p<0.05 (comparing male and female); ** p<0.001; ***p<0.0001

STI symptoms

Few males (1.8%) reported having experienced STI symptoms in the last 12 months, however, 3.5% of females reported experiencing STI symptoms in the last 12 months, with 3.7% reporting abnormal genital discharge and 0.3% reporting genital ulcers or sores. Among these females, about half (58.3%) reported seeking care for their STI symptom first at a government clinic or hospital. About half (53.3%) of the females with STI symptoms reported delaying seeking medical care until one month or more after STI symptom onset; only 20.0% sought medical care within one week of the STI symptom onset.

Among the females who experienced STI symptoms in the last 12 months, only one-third (33.3%) reported stopping sex during the time of the STI symptom and a quarter (25.0%) told her sex partner about the STI/discharge and only 25.0% reported using a condom when having sex.

5. HIV Knowledge and Testing Behaviors

Almost all (97.2%) respondents have heard about HIV/AIDS. About one out of five (19.5%) knew a person infected with a HIV or who died of AIDS and about one-third (37.1%) had a close friend or relative with HIV or who died of AIDS.

Knowledge about HIV prevention among youth in institutions was fairly high. While the majority (97.9%) of IBY correctly agreed that injections with a used needle can transmit HIV, knowledge about sexual transmission was lower. Less than three-quarters (68.9%) agreed that abstinence can prevent HIV infection, 68.1% agreed that having one faithful uninfected partner can prevent HIV infection, but the majority (80.6%) agreed that using condoms correctly for every sexual intercourse can prevent HIV infection. Approximately half (52.8%) could name all three 'ABC' (abstinence, being faithful, and consistent condom use) as HIV prevention methods. The majority of respondents knew about mother-to-child transmission with 90.4% agreeing that an HIV-infected woman can transmit HIV to her unborn child. However, females were significantly more likely than males to know that an HIV-infected mother can transmit HIV to a newly-born baby through breast milk (75.9% versus 56.8%). Few (13.3%) knew that taking medications (antiretroviral drugs) could reduce the risk of HIV transmission from mother to unborn child.

Table 7.15 Knowledge of HIV prevention among IBY, Irkutsk, %.

Characteristics	Male (N=668) %	Female (N=682) %	Total (N=1350) %
Abstinence can prevent HIV infection	69,4	68,3	68,9
Having one faithful uninfected partner can prevent HIV infection	69,0	67,3	68,1
Using condoms correctly during every sexual intercourse can prevent HIV infection	84,5	76,8	80,6**
Knew the 3 'ABC'[1] methods of HIV prevention (Abstinence, Being faithful, Consistent Condom use)	54,8	50,9	52,8
Injections with a used needle can transmit HIV	98,3	97,4	97,9
An HIV-infected woman can transmit HIV to her unborn child	88,2	92,6	90,4
Taking medication (ARVs) can reduce risk of transmission from mother to unborn child	11,5	15,0	13,3
An HIV-infected mother can transmit HIV to newly-born baby through breast milk	56,8	75,9	66,4***

[1] ***'ABC' methods of HIV prevention*** refers to A = Abstaining from sexual intercourse, B = Being faithful to one uninfected faithful sex partner, and C = Using a condom correctly every time they have sexual intercourse.
* $p<0.05$ (comparing male and female); ** $p<0.001$; *** $p<0.0001$

Knowledge about condoms

Almost all (99.2%) IBY had heard of male condoms and the majority (98.1%) knew where to obtain condoms. Most people indicated that they knew they could buy condoms at the pharmacy (94.7%), the store (66.7%), and the health clinic (41.0%). About half (51.1%) indicated that they could obtain condoms in less than 10 minutes.

Table 7.16 Places where IBY knew they could obtain condoms, Irkutsk, %.

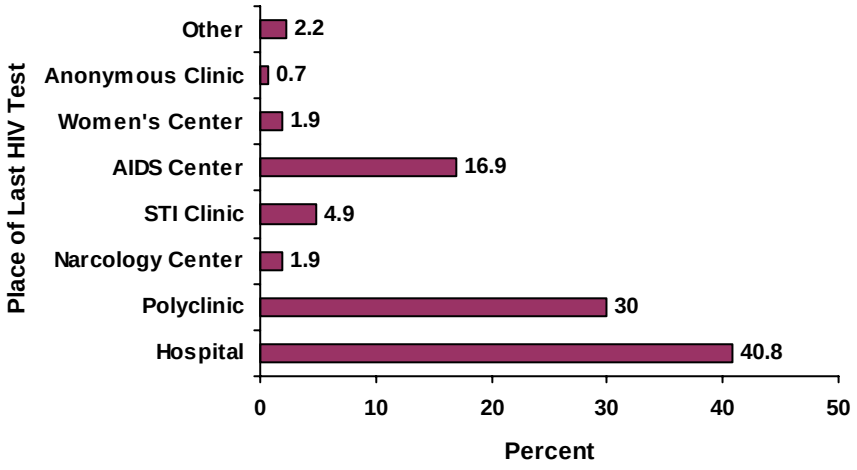
Places	Male (N=668) %	Female (N=682) %	Total (N=1350) %
Store	67,5	65,9	66,7
Pharmacy	94,8	94,7	94,7
Market	24,0	24,4	24,2
Health clinic	40,6	41,4	41,0
Hospital	25,3	32,0	28,7**
Family planning center	13,1	19,3	16,2**
Bar, café, night club	22,4	18,8	20,6
Hotel	20,5	21,9	21,2
Friends	27,2	18,8	23,0***
Other	5,8	6,7	6,2

* p<0.05 (comparing male and female); ** p<0.001; ***p<0.0001

HIV testing

About three-quarters of respondents (77.5%) reported knowing about the availability of anonymous HIV testing in the city. However, HIV testing rates were moderately low with only 20.3% having ever tested for HIV and 12.7% of all respondents have ever voluntarily taken an HIV test and found out their test results. Among those who had ever taken the HIV test, 65.5% had taken it within the past 12 months. Most of those who had taken an HIV test reported taking the last HIV test at a hospital (40.8%) or a polyclinic (30.0%).

Figure 7.6 Places where IBY had last HIV test, Irkutsk, %.



6. Stigma and Discrimination

Stigma and discrimination towards people living with HIV/AIDS was common among a fair proportion of youth in institutions in Irkutsk. About three-quarters (77.1%) said they would not be willing to share a meal with an HIV positive person; 62.2% would not be willing to buy food from an HIV infected shopkeeper or food vendor; 48.7% did not think that a teacher should not be allowed to continue teaching in a school if he/she was not sick; one out of five (20.7%-22.1%) would not take care of an HIV-infected relative in their household; and 37.8%

felt that an HIV-positive student should not be allowed to continue attending school. The majority of IBY (85.7%) indicated that they would keep secret if the member of the family were the HIV-infected.

Table 7.17 Stigma and discrimination towards people living with HIV/AIDS among IBY, Irkutsk, %.

	Male (N=668) %	Female (N=682) %	**Total** (N=1350) %
Willingness to share a meal with HIV positive person (No)	75,6	78,6	77,1
Willingness to care for HIV positive male relative in the household (No)	20,8	23,5	22,1
Willingness to care for HIV positive female relative in the household (No)	19,9	21,6	20,7
HIV positive teacher should be allowed to continue teaching in school is she/he is not sick (No)	47,2	50,1	48,7
HIV positive student should be allowed to continue attending school (No)	36,2	39,3	37,8
Willingness to buy food from HIV positive shopkeeper or food seller (No)	57,0	67,3	62,2***
Want to keep it a secret if family member became HIV infected (Yes)	85,0	86,4	85,7

***p<0.0001 (comparing male and female)

7. Exposure to HIV prevention programs

Television and radio were the most commonly used form of media among youth in institutions. About half (49.4%) of IBY reported listening to the radio and 82.4% reported watching television everyday in the last four weeks. The internet was not commonly used; 72.8% reported never using the internet in the last four weeks.

A fair proportion has seen HIV programs or messages on television, radio or printed materials in the last 12 months (83.3%, 36.9%, and 69.8%, respectively). When respondents were asked to whom they would rather go when they urgently need to receive some information on HIV/AIDS, the preferred sources included television programs (56.4%), physicians and nurses (54.2%), and peers of the same sex (51.4%). Among the most common sources which respondents indicated they would never go to for necessary information on HIV/AIDS were teachers (23.6%), peers of the same sex (13.9%), and parents or relatives (12.2%). Almost half (36.1%) reported having participated in HIV/AIDS activities in or out of school; these activities include meetings, discussions, and other educational programs about HIV/AIDS.

Table 7.18 Sources IBY would go to for information on HIV/AIDS, Irkutsk, %.

When you urgently need to receive some information on HIV/AIDS, you'd rather go to	**Male** (N=668) %	Female (N=682) %	**Total** (N=1350) %
Peers of same sex	51,1	51,7	51,4
Peers of opposite sex	30,6	29,0	29,8
Parents or relatives	47,7	51,0	49,4
Teachers	38,5	41,2	39,8
Physician or nurses	50,0	58,2	54,2**
TV programs	54,9	57,8	56,4
Articles in newspapers or magazines	46,5	50,5	48,5
Special literature	23,8	30,0	27,0*
Psychological centers	15,8	20,1	18,0*
Youth centers	14,9	17,9	16,5
Anonymous services	18,6	22,0	20,3
Internet	12,6	11,0	11,8

* $p<0.05$ (comparing male and female); ** $p<0.001$

VIII. DISCUSSION

Injection Drug Users

Across the three cities, IDUs were predominately male, unmarried, between the ages of 23 to 32, and have injected drugs for 6 years or more. More than 60% of IDUs in each city started injecting drugs before the age of 22 with a substantial proportion starting before the age of 18. The most common drug injected during the month preceding the BMS survey was heroin. Other drugs commonly injected varied across cities, including ephedrine in St. Petersburg, stimulants and home-made opiates in Orenburg and soporific (relanium) in Irkutsk. None of the IDUs in Orenburg, and very few in St. Petersburg (2.3%) and Irkutsk (1.8%) were currently under treatment for drug use.

In terms of injecting behaviors, few IDUs borrowed a needle at last injection, and the majority across cities never borrowed or lent needles in the previous one month. While a quarter of IDUs in St. Petersburg and Orenburg, and 15% in Irkutsk, did borrow needles in the past month, none of them reported cleaning those needles with bleach. Other risky injection behaviors varied across the study sites. For instance, the majority of IDU in St. Petersburg and Orenburg shared injection equipment and drew drugs from communal containers in the previous month. The use of pre-filled syringes and backloading, frontloading or splitting were only frequently reported in Orenburg. While almost all IDU felt that it was possible to obtain new, unused needles, only 1.2% of IDU in St. Petersburg, compared to 69% in Orenburg and 37% in Irkutsk, cited needle exchange programs as a source of unused needles. This may be an indication of greater effectiveness and coverage of harm reduction programs in certain cities.

In addition to risky injection behaviors, there are indications of high-risk sexual behaviors. The age for first sexual intercourse was young for the majority of IDUs, with about 90% having had their first sexual contact under the age of 18. Multiple partnerships were also reported with an estimated two out of every five IDU in St. Petersburg and Orenburg having had more than one non-regular partner in the previous 12 months. Consistent condom use was also low among IDUs with regular and non-regular sex partners, although high with commercial sex partners.

IDUs in Orenburg appeared to be the most exposed to HIV programs targeted for IDUs. For example, in the last 12 months, IDUs in Orenburg were more likely to have sought HIV prevention services, including needle exchange (59.4% versus 28.2% in St. Petersburg and 7.5% in Irkutsk), receiving informational material on HIV and STI (52.1% versus 7.8% in St. Petersburg and 1.5% in Irkutsk), and free HIV test (44.8% versus 21.2% in St. Petersburg and 6.3% in Irkutsk). This suggests the need to broaden coverage for IDUs in St. Petersburg and Irkutsk. Overall, more than 70% of IDUs in each city have taken an HIV test. While the AIDS Center was the most common place where IDUs in Orenburg and Irkutsk had their HIV test, IDUs in St. Petersburg tended to test at a Polyclinic or hospital.

Commercial Sex Workers

Overall, CSWs across the three cities were in their mid twenties, unmarried and living alone. CSWs in St. Petersburg tended to be 23 years of age or older while a major proportion from Orenburg and Irkutsk were 22 years or younger (59.2% and 31.3% respectively).

In terms of alcohol use, a large proportion of CSWs reported consuming alcohol almost every day in the past 4 weeks (62% in St. Petersburg, 26% in Orenburg and 20% in Irkutsk). One of the most distinctive differences between commercial sex workers in the three cities, though,

was their involvement in injection drug use. In St. Petersburg and Irkutsk, sex work and injection drug use behaviors overlapped. It is likely that CSWs who injected drugs engaged in sex work to support their drug habit given that over half are long-term injectors (over 6-10 years) and many were frequent injectors. While the majority of respondents knew where to obtain clean needles, actual use of clean unused needles and syringes was fairly low in all three cities; only a half to about two-thirds reported using clean needles every time they injected in the last one month. It was interesting to note that 40% percent of CSWs in St. Petersburg knew unused needles could be obtained from a needle exchange program compared to 90% in Orenburg and 60% in Irkutsk.

The majority of CSWs in all three cities had heard of HIV/AIDS. Knowledge about HIV risk though sharing of drug injection needles and equipment among CSWs was almost universal in all three cities; however, a smaller proportion knew of the risk of HIV from inconsistent condom use, particularly in Orenburg where only two-thirds knew this particular risk. This is not surprising given that Orenburg CSWs reported the least frequency of having received HIV/STI prevention services. Despite the relatively lower level of knowledge about HIV risk with unprotected sex, CSWs in Orenburg were more likely to have had condoms on them during the time of the interview and more likely to use condoms with their non-paying partners. It may be possible that they are using condoms not for the purpose of HIV prevention, but rather as a pregnancy protection. In fact, in Orenburg, one of the top three reasons for not using a condom with non-paying partners was that they had some other form of contraception.

Knowledge of both male and female STI symptoms, while fairly low in all three cities, was the lowest in Orenburg, which also had the highest rate of reported STI symptoms experienced in the last 12 months. Given that STIs in women are highly asymptomatic, the higher levels of STIs reportedly experienced by CSWs in Orenburg may be due to greater testing and detection of STIs. In fact, there was a higher rate of referrals to anonymous STI services among CSWs in Orenburg, compared to CSWs in the other two cities. CSWs in both Orenburg (as with CSWs in St. Petersburg) did report having received free STI testing services the last 12 months. The low levels of reported STI symptoms in Irkutsk, however, may not be indicative of the true STI rates among CSWs in Irkutsk, given the asymptomatic nature of STIs in females, that none of the CSWs were referred for STI services, and that a very small percentage (less than 10%) sought STI testing in the last 12 months. In fact, more than half of the CSWs in Irkutsk did not even know where to test for STIs. Although CSWs in Orenburg had higher rates of reported STI symptoms and more often sought STI testing compared to the other two cities, they had the least amount of knowledge about STI symptoms. This finding may be an indication of insufficient STI prevention education that goes along with STI testing in Orenburg.

Condom use with paying partners was high in all 3 cities with over 80% of CSWs reporting consistent condom use in the last one month. However, condom use was lower with non-paying partners. CSWs in Orenburg were slightly more likely to use condoms with non-paying partners compared to CSWs in the other two cities. Additionally, a higher proportion of CSWs in Orenburg had more condoms on them at the time of the interview. Perhaps condom distribution and education has been more effective in Orenburg. Of particular note among CSWs in all three cities was the high level of sexual violence experienced by CSWs, from 23% among those in Orenburg to as high as 43% in Irkutsk.

Prevention services for CSWs appear to have had the greatest reach in St. Petersburg compared to Irkutsk and Orenburg. In Irkutsk, prevention activities related to HIV have primarily focused on injection-related HIV risk, as opposed to HIV risk through sexual transmission. In comparing CSWs exposed and not exposed to HIV prevention programs in St.

Petersburg, there were slight differences in their demographic and risk profile. It should be noted that exposure status was not randomly assigned, therefore, the results are based solely on an observation study rather than an experimental study. The only major difference between the two groups with regard to socio-demographic status was that the exposed CSWs were slightly older. With regard to the risk behaviors, CSWs who were exposed to HIV prevention programs were more likely to inject drugs than those not exposed. This is likely an indication of the fact that HIV prevention programs in St. Petersburg have been targeting female IDUs knowing that many of the IDUs are engaging in commercial sex work. The exposed CSWs also exhibited higher injection risk behaviors compared to non-exposed CSWs; they were more likely to use pre-filled syringes, engage in backloading, frontloading, share injection equipment, and use drugs from a communal container. However, exposed CSWs did indicate that they were more likely to be able to obtain clean unused needles more often that those not exposed. The main difference in their ability to obtain clean unused needles was their access to needles from a needle exchange program.

There were no differences in condom use, HIV prevention knowledge and experiences of STI symptoms comparing exposed to non exposed CSWs. There was, however, a difference in their attitude towards people living with HIV and AIDS; exposed CSWs had slightly less stigma and discriminatory attitudes than those not exposed.

Men who have Sex with Men (St. Petersburg)

The majority of the MSM respondents in St. Petersburg had lived in the city for 11 or more years, were highly educated, and were between the ages of 18 and 27 years. At the time of the interview more than one third of MSM were married.

MSM HIV-risk behaviors were related to sex rather than the injection of drugs. Multiple partnerships was frequent with a third of MSM having more than 10 non-commercial male sex partners in the last six months. Condom use, however, was low, with only 64% having used condoms during their last act of anal sex. In addition, 30% of MSM also had female sex partners in the last six months, more than half of whom had more than 5 female sex partners during that time period. Of particular concern is the low rate of condom use with these female sex partners; only 60% reported using a condom at last sex with a female partner.

Although MSM respondents knew about the availability of anonymous HIV testing, only about one-half had tested for HIV. This issue may be due to lack of knowledge of where exactly the HIV test can be received; only 43% cited a location where they could receive an HIV test. It is also likely that even if health services exist where MSM can test for HIV, many may not feel comfortable going to these services given the highly stigmatized nature of their lifestyles and behaviors. Even when HIV programs for MSM exist, referral for HIV testing was low. Among MSM who were exposed to HIV programs, only 18% reported being referred for HIV testing. Referral for HIV testing must be an integral part of any HIV prevention program targeted at the MSM population.

Although HIV prevention programs for MSM have existed in St. Petersburg since 2004, coverage has been low; only 12% of the MSM group had been exposed to HIV prevention programs for MSM. These HIV programs include outreach at gay nightclubs, primarily consisting of provision of free condoms and lubrication, and HIV/STI prevention education materials. Indeed, upwards of three-quarters of those exposed to some kind of HIV prevention program indicated they had received condoms and lubricants, informational leaflets and counseling by an outreach worker. Very few indicated having received other services such as referrals for STI, hepatitis, and HIV testing and other medical services. Although coverage by

these programs was low, it is encouraging that those who were reached by HIV programs were more likely than those not exposed to the HIV programs to know where in the city one could get services such as HIV and STI testing, were more likely to be familiar with male STI symptoms, and to have been tested for HIV. This is an indication that with greater coverage, there is potential for increased access to services.

Among the entire group of MSM surveyed, of note is the high use of the internet; about 80% indicated they used the internet at least once per week and 84% of all MSM surveyed indicated they used the internet to find sex partners in the last 12 months. The internet may be a good mode to reach this high-risk marginalized population with HIV prevention messages. When asked if they would be interested in interacting with a social worker in a chat room about health, about 70% of the internet users indicated they would probably or most likely be interested. The internet should be considered as a means to reach MSM with target prevention activities.

Youth in Transitory Centers

It should first be noted that the small sample size for YTC in Orenburg and Irkutsk is not a reflection of the lack of such a group. In fact, there is a large population of YTC in these two cities; in 2002, there were over 21,000 youth officially registered with the Department of Social Services as children without the care of parents or from families deemed to be socially risky (i.e., due to abuse, neglect, alcoholism). In Orenburg and Irkutsk, this number was approximately 29,000 in 2004. Despite the high number of such youth who are in need of social rehabilitation, there are only 3 centers with 90 slots at a time in Orenburg and 4 centers with 250 available slots at a given time in Irkutsk. Therefore, the small sample sizes in Orenburg and Irkutsk is more a reflection of the small number of the target population that was served during the time of the survey.

The majority of youth in transitory centers were under the age of 20 in St. Petersburg and all were 17 or younger in Irkutsk and Orenburg. It is a very stable population with the majority of them having lived in the respective cities for 11-20 years. A minority (18-34%) were earning some income, mainly through selling goods, cleaning, or unofficial menial labor. In St. Petersburg and Irkutsk, most of the YTC were residing in a boarding school or a hostel/dormitory. In Orenburg, while about 45% were residing in boarding schools, about one-third (37%) were residing at their parent's home. The high number of people residing in boarding schools or hostels/dormitories is likely due to the fact that they ran away from these institutions and are currently under the care of the respective transitory centers until they are deemed ready to return (typically within one year).

There is a fairly high level of alcohol use among YTC, with the exception of those in Irkutsk. However, in St. Petersburg and Orenburg, about one-third indicated consuming alcohol at least a few times a week. A smaller percentage (9-17%) indicated having injected drugs in the last 12 months.

Of particular concern among YTC is the high level of sexual activity with low condom use. In St. Petersburg and Orenburg, about a half to two-thirds had sex, with a median of two non-commercial partners in the last 12 months. Among them, less than 20% used condoms consistently in the last 12 months. In St. Petersburg, none of the YTC engaged in sex with commercial partner. In Orenburg and Irkutsk, the number of YTC surveyed is too small to report findings about commercial sex activity. However, it should be noted that in Irkutsk, a much smaller percentage of YTC (13%) had sex with non-commercial partners in the last 12 months. One of the important findings in this survey among YTC is the high level of sexual

violence experienced by girls in Orenburg (23%). Transitory centers in Orenburg must address this issue as part of their services.

Although the sample sizes were small, about a quarter of the female YTC in Orenburg and Irkutsk had experience some kind of STI symptom. Although the majority of YTC in all three cities have heard of STIs, fewer than 20% knew about common male and female STI symptoms, particularly in Irkutsk. Knowledge about HIV prevention was also extremely low among YTC. It is alarming that only one-half to two-thirds agreed that abstinence or that having one faithful uninfected partner can prevent HIV. A slightly higher proportion (66-83%) agreed that consistent condom use could prevent HIV infection. Interestingly, the majority of those surveyed agreed that injections with a used needle could transmit HIV. This is likely reflective of the fact that the HIV epidemic has been fueled by injection drug use and that prevention efforts have focused on injection risk and less so on sexual risk. Although knowledge about vertical HIV transmission was high (74-94%), transmission specifically through breastfeeding was low (50-60%).

Only 18-29% had tested for HIV. Interestingly, in Orenburg, most of the YTC who have taken an HIV test were required to do so, unlike the other two cities. It is possible that boarding schools and transitory centers routinely test youth.

With regard to receiving messages about HIV and AIDS, physicians and nurses, TV programs, and articles in newspapers or magazines appear to be the most respected sources of information. Therefore, programs should utilize these modes of information delivery to target HIV prevention messages to YTC.

Institution-based Youth

The majority of IBY were under the age of 20 years. With the exception of those in St. Petersburg, one major difference between youth in institutions and those in transitory centers was the level of education. A greater proportion of IBY had completed secondary schooling compared to YTC. IBY were similarly stable as the YTC, with the majority having lived in their respective cities for 11-20 years. A similar proportion of IBY were currently earning some income (17-31%). However, unlike the YTC, it was common for IBY to be residing at their parent's home (65-85%). A fair proportion (11%) of IBY in Orenburg reported residing on their own despite the fact that this was a slightly younger group than IBY in St. Petersburg and Irkutsk. Special attention should be given to youth who are living on their own in Orenburg, as they may need more social, legal, medical, and financial support.

In terms of drug use, less than 5% have injected drugs in the last 12 months. Sexual activity among this group, however, was more common. Almost half of IBY had sex with non-commercial partners in the last 12 months; sex with commercial partners was not common. Of particular concern is that among sexually active youth consistent condom use was low (43% in St. Petersburg and Orenburg and 56% in Irkutsk), despite the fact that over 80% of those survey agreed that consistent condom use could prevent HIV infection. Slightly lower proportion (less than 70%) agreed that abstinence or having one faithful uninfected partner could prevent HIV. Again, as with other risk groups, the majority knew that injections with a used needle could prevent HIV infection, a reflection of the fact that HIV prevention programs have primarily focused on drug use prevention and injection-related risks.

History of STI symptoms in the past 12 months was infrequent; less than 4% in all three cities reported experiencing an STI symptom. However, knowledge about STI symptoms were very low. In St. Petersburg and Irkutsk, less than 15% could name some of the common female and male STI symptoms. IBY in Orenburg were slightly more familiar with the common STI symptoms; about a quarter could name genital discharge and burning pain upon urination. While

knowledge of the availability of HIV testing was fairly high (over 75%), few had actually been tested for HIV (as low as 10% in St. Petersburg and up to 15% in Orenburg and 20% in Irkutsk). HIV testing rates were higher in Orenburg and Irkutsk possibly due to testing requirements. It is particularly worrisome that only about 10% of all those who tested actually received their HIV test results, a finding that warrants further investigation into how testing is being conducted and may be improved.

The survey revealed that IBY, like their YTC counterparts, considered physicians/nurses, TV programs, and articles in newspapers or magazines as sources they would turn to for HIV prevention information. These sources must be considered when developing strategies to deliver HIV prevention messages to young people in this group.

IX. LIMITATIONS & PROGRAM IMPLICATIONS

Study Limitations

Study limitations should be considered when discussing the program and policy implications of the survey. First, due to methodology and sampling strategies, these results are not generalizable to all respective target groups in Russia, given the geographic, demographic, economic and cultural diversity of Russia. The findings from the survey conducted in St. Petersburg, Orenburg, and Irkutsk reflect such variations in populations across locations.

Further, while much effort was made to ensure that the survey captured a representative sample of CSW, MSM and youth, it is possible that some sections of these groups were not included. This issue is particularly true among CSWs where sites had to be mapped prior to data collection and locations in large cities like St. Petersburg may have been missed. While mapping was less of an issue with the MSM populations, since there are few MSM nightclubs in St. Petersburg, it should be noted that the findings from this survey are not generalizable to MSM who do not attend nightclubs.

Lastly, the findings are based on self-reported risk behavior, which may be biased. However, the use of a standardized instrument that has been tested in similar populations helps to reduce this bias. Further, interviewers were trained to be non-judgmental, reducing respondents inclination to give socially desirable answers.

Despite these limitations, these BMS findings from data collected in a systematic and standardized way are crucial for steering HIV/STI prevention programs and policies. This data not only will strengthen and inform program development but also provide baseline measures against which HIV prevention efforts may be evaluated in these cities among these populations.

Program Implications

The survey data clarifies the types of risks confronting members of five study populations. This information is vital for developing, implementing and testing HIV prevention and care efforts. The data also reveals the importance of examining issues in different settings and contexts, as the risk behaviors of these vulnerable groups often varied among the three cities. Program implications across study groups are presented below, followed by implications of the BMS data for each sub-study population.

Program implications across study groups

- Develop innovative behavior change strategies for all groups that go beyond creating awareness and increasing knowledge
- Develop interventions for changing behavioral practices that address socio-political and environmental barriers that limit access to prevention materials including condoms and clean needles,
- Voluntary HIV counseling and testing services should be promoted more widely
- All HIV prevention programs must address the high level of alcohol use
- Create a supportive environment for HIV risk reduction with supportive policies and regulations

- Conduct qualitative assessments to better understand motivations for positive behavior change related to sexual and injection risk behaviors in order to develop effective behavior change interventions

Program implications by study group

Injection Drug Users

- Strengthen comprehensive HIV/AIDS prevention programs using innovative behavior change strategies that go beyond increasing knowledge about safe injection behaviors.
- Conduct educational campaigns and advocacy with local law enforcement groups and other local authorities to ensure their support for service delivery to IDU.
- Expand interventions for IDUs to include safe sexual practices; interventions should take the opportunity to reach partners of IDUs, given that a high proportion of IDUs live with their sex partners.
- Ensure that HIV prevention programs are targeted for the level of drug use; appropriate messages for the regular drug users should be different from the occasional (or more recently initiated) drug users
- Interventions should take the opportunity reach partners of IDUs, given that a high proportion of IDUs live with their sex partners
- Given the success of the peer-recruitment sampling technique used to recruit IDU in all three cities, peer education should be utilized to increase coverage of programs and change social norms
- Programs should be located in or around areas where IDUs congregate (i.e., drug markets) given the relative success of IDU participation in the survey in such areas
- A comprehensive drug abuse treatment program from IDUs should include: clinical examination by narcologists to identify people with clinical drug addiction; provision of effective drug addiction treatment at narcology clinics; rehabilitation at rehabilitation centers after receiving drug addiction treatment; social assistance for drug abuse treatment patients by hospital staff and social workers.

Commercial Sex Workers

- Due to the high level of sexual violence experienced by this group, there is a great need for interventions aimed at sexual violence prevention as well as interventions to help CSWs deal with sexual abuse. Psychological services are greatly needed in all three cities to help CSWs cope with the consequences of sexual abuse. Additionally, law enforcement agencies and legal advocacy organizations must work together to protect these women from the violence.
- Strengthen drug rehabilitation, risk reduction, and substance abuse treatment programs in St. Petersburg and Irkutsk given the high level of drug use among CSWs; this should include the provision of a comprehensive drug abuse treatment program at the city's narcology clinic that includes drug abuse treatment and rehabilitation and provision of social services.
- Interventions for CSWs should not solely focus sexual risk behaviors; the interventions must also include reducing their risk through comprehensive HIV/AIDS prevention programs including CT, education on risk reduction in drug use and other sexual health problems.
- STI diagnosis and treatment must be strengthened, particularly in Irkutsk. This includes making referrals for STI testing and treatment for CSWs. However, STI services must

go beyond testing and treatment and include education on STI symptom recognition and prevention.
- Given the high proportion of CSWs not registered in the city in Orenburg and Irkutsk, alternative means of accessing healthcare and social services is necessary for this sub-group among CSWs.

Men who have sex with men

- In developing and implementing targeted HIV and STI prevention programs for the MSM population, it is important to take into account that this is a well-educated sub-population, particularly when compared to other risk groups.
- Promote HIV counseling and testing as a prevention strategy
- Provide access to condoms and water based lubricants
- Develop prevention interventions that address safer sexual practices with both men and women, including commercial sex partners
- Conduct anti-drug use activities that address the high use of 'soft' drugs such as marijuana
- Conduct HIV and STI prevention activities through the internet given its high usage by this group; use techniques such as internet banners and communications with a social worker in internet forums and chat rooms
- Expand prevention activities beyond MSM night clubs

Institution-based Youth

- Develop interventions that include drug use and alcohol prevention
- Provide youth friendly STI education and testing at dermatovenerologic hospitals
- Stigma reduction campaigns must be an integral part of any HIV educational program targeted at this group
- Develop innovative strategies to promote safer sexual behaviors, particularly delayed sexual debut and consistent condom use

Youth in Transitory Centers

- Develop interventions that include drug use and alcohol prevention
- Ensure the protection of YTC again sexual violence in Orenburg given the high prevalence of victims of sexual violence; protective measures for YTC should include psychological services at transitory centers for victims of sexual violence and strengthening of law enforcement agencies and legal advocacy organizations
- Provide youth friendly STI education and testing at dermatovenerologic hospitals
- Develop innovative strategies to promote safer sexual behaviors, particularly delayed sexual debut and consistent condom use
- Stigma reduction campaigns must be an integral part of any HIV educational program targeted at this group