

**Bio-behavioral surveillance surveys among  
injecting drug users in Georgia  
(Tbilisi, Batumi, Zugdidi, Telavi, Gori, 2008 - 2009 )**

**Study report**

**Prepared by:**

**Curatio International Foundation**

**Public Union Bemoni**

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## Acronyms

|       |   |
|-------|---|
| AIDS  | Acquired Immune Deficiency Syndrome                     |
| BSS   | Behavioral Surveillance Survey                          |
| CIF   | Curatio International Foundation                        |
| CNS   | Central Neural System                                   |
| GFATM | The Global Fund to Fight AIDS, Tuberculosis and Malaria |
| HIV   | Human Immunodeficiency Virus                            |
| IDP   | Internally Displaced Person                             |
| IDU   | Injecting Drug User                                     |
| FSU   | Former Soviet Union                                     |
| FSW   | Female Sex Workers                                      |
| NGO   | Non-Government Organization                             |
| RDS   | Respondent Driven Sampling                              |
| RDSAT | Respondent Driven Sampling Analysis tool                |
| SHIP  | STI/HIV Prevention                                      |
| SPSS  | Statistical Package for the Social Sciences             |
| STI   | Sexually Transmitted Infection                          |
| TPHA  | Treponema Pallidum Hemagglutination Assay               |
| VCT   | Voluntary Counseling and Testing                        |
| USAID | United States Agency for International development      |
| WHO   | World Health Organization                               |

## Definitions

**High-risk behavior** – Any behavior that puts an individual or individuals at increased risk of contracting STIs/HIV or transmitting STIs/HIV to another individual (e.g., having multiple sex partners without using condoms consistently; sharing used non-sterile needles, syringes or other devices used to prepare the drug among IDUs).

**CNS Depressant** - a category of drugs that affect the central nervous system by slowing down the activity of certain chemicals in the brain, which slows down the functioning of the body.

**CNS Stimulant** - any of several drugs that affect the central nervous system and speeds up the messages going from the brain to the body, produces excitation, alertness and wakefulness.

**Hallucinogen** - chemical substance which can distort perceptions to induce delusions or hallucinations.

**Narcotic drug** - a drug having the power to produce a state of sleep or drowsiness and to relieve pain with the potential of being dependence producing.

**Withdrawal** - Withdrawal describes a set of symptoms that can occur when a user cuts down, or stops the use of a particular drug. Withdrawal symptoms can range from mild to severe, and are different depending upon the drug from which the user is withdrawing.

**Detoxification** - the process by which a person who is dependent on a psychoactive substance ceases use, in such a way that minimizes the symptoms of withdrawal and risk of harm.

**Extreme need” with/without help** – this is a form of self-treatment used in Georgia among IDUs that is similar to the practice referred to as “cold turkey”<sup>1</sup> in the US; that is, a complete self-termination of drug use. “Extreme need with help” is when a family member or friend assists the IDU with the complete self-termination of drug use.

**Gathering place** – a setting where a group of IDUs meet to inject drugs that may or may not involve the sharing of needle/syringes or injecting equipment. Also, this setting may change periodically.

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<sup>1</sup> “Cold turkey”: term used when quitting drugs on one’s own with no medical help. One of the symptoms of withdrawal is “goose flesh” (horripilation) and looks like a cold turkey

**Sharing needles and/or injecting equipment** – Reusing needles, syringes or other injecting equipment with other IDUs without properly sterilizing the equipment.

**“Switched drugs”** – this refers to the substitution of one drug for another. More often, drug substitution occurs when the usual drug injected is not available, or the IDU cannot afford it.

**Consistent condom use** – Use of condoms every time during sexual relations with individuals in high-risk situations (e.g., using condoms every time with casual sexual partners; with sex workers; or, with their regular sexual partner, if condom user has HIV or other STI, either is involved in high risk behavior.

**Consistent condom use** – Use of condoms every time during sexual intercourse during a specified period of time

**Non-regular (occasional) sex partner** – A sex partner for less than one year who is not a spouse, live-in partner, or sex worker.

**Regular (permanent) sex partner** – A spouse, live-in partner or sex partner for one year or more.

## **Executive Summary**

### **Introduction**

Georgia is among the countries with low HIV/AIDS prevalence but high potential for developing a widespread epidemic. Over the last several years transmission through intravenous drug use is still the prevailing route for HIV spread.

Current studies represent the subsequent waves of Bio-Behavioral Surveys (Bio-BSS) undertaken among Injecting Drug Users (IDUs) during 2002-2007 with the similar sampling technique.

Objective of the 2008-2009 Bio-BSS in Georgia was to measure prevalence of HIV and Syphilis among IDUs, provide measurements of key HIV risk behaviors and generate evidence for advocacy and policy-making. The studies were implemented within the GFATM funded project on the HIV/AIDS surveillance system strengthening implemented by Curatio International Foundation (CIF) and partner organizations.

### **Methods**

The IDUs were studied in five different locations of Georgia: Tbilisi, Gori, Telavi, Zugdidi and Batumi during 2008 - 2009. Respondent-driven sampling methodology (RDS) was applied. Inclusion criteria for participation in the studies included the following: 1) age 18 years or older, 2) drug injection in the month prior the survey, 3) being resident of a selected location. Recruitment started with seeds and desired sample sizes were reached in all five locations. The study protocol and questionnaires were approved by the Ethics Review Committee. Face-to-face individual anonymous interviews were conducted by the trained interviewers. Biomarker component involved the analyses of blood specimens for HIV and Syphilis.

Overall 1,127 eligible IDUs including seeds participated in the Bio-BSS studies in Tbilisi, Batumi, Zugdidi, Telavi and Gori. Data were analyzed in Respondent Driven Sampling Analyses Tool version 6.0 to produce adjusted population-based estimates with 95% CI. Combined samples from all five studies were analyzed in the SPSS for specific indicators.

### **Results**

The median age of IDUs varies from 32 to 40 across all survey locations. Vast majority of respondents are male Georgians and almost half are married. Highest proportion of Tbilisi respondents has higher education.

Median age for starting any type of drug use is 16-17 years. The biggest proportion of IDUs in Tbilisi, Batumi and Zugdidi first injected in their late teens (15-19 years).

The majority of IDUs are members of regular injecting groups composed of about 4-5 people.

The most popular drugs for non-injecting consumption are tranquillizers, codeine, marijuana and barbiturates.

The most frequently injected drugs are Narcotic Drugs and especially heroine. Subutex (buprenorphine) is injected by majority of Tbilisi IDUs. Self-made Amphetamine type stimulants Ephedrone and Methcathinone (known as Jeff and Vint) is used by almost half of Gori IDUs and by slightly less in other sites. Morphine which is generally not frequently used drug among IDUs is outstandingly high in Gori.

Needle-sharing practice at the last injection varies from 3.4% to 12.7% with the highest proportion among Telavi IDUs.

Needle-sharing practice at last injection varying from 3.4% to 12.7% with the highest proportion among Telavi IDUs. Combined sample from all five studies was analyzed to find association with the young age and sharing practice. Although not statistically significant ( $p=0.1$ ) young IDUs (less than 25 years) have higher prevalence of needle/syringe sharing (16.2%) compared to their older counterparts (9.2%).

Safe injecting behavior at last injection was estimated by combination of different indicators such as: not usage of previously used needle/syringe, not usage of needle/syringe left at a place of gathering by somebody else, not usage of syringe filled by somebody else, not usage of shared equipment, not usage of drug solution from shared container, not usage of liquid diluted with somebody else's blood. 65.7% of Tbilisi IDUs reported above mentioned safe injecting practice, with decreasing rate in other locations and reaching low level in Gori (36.7%).

Sharing of injection paraphernalia is quite common among IDUs. It is associated with type of drug used, specifically sharing of injecting equipment other than needles and syringes is highest among ephedrone users, followed by heroine and subutex users.

Substantial proportion of Batumi IDUs injected drug outside the country. This combined with a changing behavior associated with contextual factors increases risk of cross border transfer of HIV infection.

Almost all respondents could get new unused needle/syringes when needed.

All IDUs across all 5 survey locations have heard about HIV/AIDS and almost half know the person who has been infected, ill or died of AIDS.

At least one third of IDUs correctly identify ways of preventing the transmission of HIV and reject major misconceptions.

Despite relatively good access to voluntary HIV testing reported by IDUs use of VCT services is very low. Not more than one-third of IDUs had a voluntary HIV test in the past, and very few were tested during last year period and know their result (from 2.9% to 8.4%). HIV testing experience was studied by type of drug injected during last month and age groups, it was found out that ephedrone users and those aged less than 25 years showed the worth utilization of VCT services.

The studies found high risk sexual behaviors among IDUs. Occasional sexual relationship is similarly common among unmarried and married DUs. Although majority understand that condoms provide best protection against HIV there is very low HIV risk perception attributed to occasional sex partners. On average every second who have occasional sex partners practice unprotected sex with them. Such behavior is particularly conscious in light of unacceptably low condom use with the regular sex partners.

At least one-tenth of married IDUs purchased sex during last year, reaching highest rate among Batumi respondents. Although unprotected sex with paid sex partner is relatively low, Batumi IDUs are outstanding: every six who purchased sex during last year has never used condom.

Access to drug treatment services is very low. Majority of IDUs rely on self or help of others rather than on health care system. Coverage with preventive interventions is low and problems exist with a quality of services as well - very few were targeted with full preventive package (condoms, IEC materials, qualified information of HIV/AIDS).

There is various awareness level about syringe exchange program, from 14.9% in Tbilisi to 49.5% in Gori and significantly less proportion actually benefited from this program.

HIV prevalence ranged from Gori (0%), Telavi (1.5 %, 95% CI 0 - 3.5), Zugdidi (2.2%, 95% CI 0 - 3.5), followed by Tbilisi (2.5%, 95% CI 0.3 - 5.4) and the highest prevalence found among Batumi IDUs (4.5%, 95% CI 1.5 - 8.0).

As for syphilis, the prevalence ranges as follows: Gori (3.9%, 95% CI 1.1 - 7.3), Telavi (5.5% 95% CI 2.5 - 8.5), Tbilisi (6.3%, 95% CI 3.7 - 9.3), Zugdidi (6.9%, 95% CI 3.5 - 11) and Batumi (7.6%, 95% CI 4.0 – 12.0). Syphilis prevalence may indicate past infection as well. However, when analyzed by age groups 2.1% prevalence rate in under-25 age group most likely reflects a new infection and unsafe sexual behavior among young IDUs.

### **Recommendations**

Following recommendations are proposed to affectively address the problems, weaknesses and gaps reveled through the current studies:

#### ***Increasing IDU coverage and Strengthening outreach programmes and NGOs that work on harm reduction***

The surveys identified substantial need for increasing coverage and quality of preventive and harm reduction services.

- Testing of IDUs who unaware of their status will be the most effective intervention in preventing further spread of infection, therefore there is an extreme need to increase uptake of the VCT services. More research is needed to understand the reasons of poor utilization of VCT services by IDU.
- Preventive programs should improve quality of services though delivering comprehensive and standardizes interventions.
- Comprehensive preventive programs focusing on harm of drug use, HIV/AIDS and sex education should target school children in high classes, college students and youth.
- Harm reduction messages should specifically focus on the risk of using shared paraphernalia. IDUs who are not able to quit their injecting behaviors should be given knowledge about proper cleaning of used needles in order to minimize the spread of infection among the injectors.
- Drug-specific interventions should be designed and implemented primary against self-made amphetamine-type stimulants (ephedrone/ methcathinone) users, who are characterized with higher risk behaviors.
- There is a need to reemphasize the necessity of consistent condom use with any sex partner. More in-depth research should be undertaken to explore the barriers to

inconsistent condom use. Condom distribution must be supplemented with other risk reduction education, including building motivation and skills to use condoms, promoting HIV testing, and preventing drug use. There is a need to strengthen the sexual health services offered to IDUs and family focused interventions.

- Strengthening of peer education is of great importance. Educated IDUs would communicate and negotiate safe practices to the peers leading to their behavior change.
- Comprehensive drug prevention and treatment interventions that can reduce drug consumption as well as injection-related risky behaviors need to be strengthened and expanded.
- Rehabilitation and detoxification centers should be further extended and supported for providing necessary services to IDUs in order to increase the availability of treatment.
- Interventions should especially be intensified in Batumi and Gori where high HIV prevalence and risk behaviors create ground for further spread of infection.

***Continue with surveillance***

- The next surveys among IDUs using RDS should be carried out in these cities in the next 2-3 years and possibly also in other cities where BSS is not yet conducted.
- Additional research is needed to explore the extent of drug use among females and the ways they can be enrolled in preventive programs.

**Table 1: Summary of Core Indicators**

|   | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|---|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
| Core indicators   | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| HIV testing in most-at-risk populations   |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Received an HIV test in the last 12 months and know their results   | 4.8 (2.7 – 7.3)                      | 16/307  | 4.2 (1.5 – 7.5)                      | 12/206  | 5.2 (2.5 – 8.0)                      | 10/204  | 2.9 (0.5 – 5.6)                      | 7/205   | 8.4 (4.5 – 12.5)                     | 19/205  |
| ≤ 24  | --                                   | 1/21    | 4.1 (0 – 15.4)                       | 1/25    | 3.1 (0 – 11.6)                       | 1/27    | 0.7 (-- --)                          | 0/34    | 3.5 (0 – 10.3)                       | 4/35    |
| ≥ 25  | 5.0 (2.8 – 7.6)                      | 15/286  | 4.6 (1.6 – 8.6)                      | 11/181  | 5.2 (2.3 – 8.5)                      | 9/177   | 3.6 (1.2 – 7.8)                      | 7/171   | 12.1 (6.5 – 19.1)                    | 15/170  |
| Exposure to Prevention Programs   |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| IDUs reached with prevention programs (HIV testing in community and given condoms last year)                                | 8.3 (4.7 – 12.3)                     | 25/307  | 23.1 (15.5 – 31.5)                   | 52/206  | 12.4 (8.0 – 17.2)                    | 26/204  | 3.9 (1.5 – 7.0)                      | 10/205  | 18.3 (12.5 – 24.5)                   | 44/205  |
| ≤ 24  | 1.4 (0 – 2.3)                        | 3/21    | 4.2 (1.5 – 7.5)                      | 10/25   | 4.2 (1.5 – 7.0)                      | 7/27    | 0.5 (0.5 – 2.0)                      | 2/34    | 7.8 (4.0 – 12.0)                     | 12/35   |
| ≥ 25  | 7.7 (4.7 – 10.3)                     | 22/286  | 18.9 (13.5 – 24.9)                   | 42/181  | 8.5 (5.0 – 12.5)                     | 19/177  | 3.4 (1.0 – 6.5)                      | 8/171   | 15.2 (10.5 – 20.5)                   | 32/170  |
| Knowledge of where HIV testing is available in the community  | 92.6 (89.7 – 95.3)                   | 284/307 | 87.4 (83.5 – 91.5)                   | 179/206 | 77.4 (71.0 – 83.0)                   | 160/204 | 65.8 (59.0 – 72.5)                   | 134/205 | 80.7 (74.5 – 86.5)                   | 166/205 |
| Given condoms in the last 12 months by outreach workers   | 8.9 (6.0 – 12.0)                     | 27/307  | 25.6 (19.5 – 32)                     | 57/206  | 16.1 (11.5 – 21.0)                   | 33/204  | 6.0 (3.0 – 9.5)                      | 14/205  | 20.3 (14.5 – 26.5)                   | 47/205  |
| Given sterile syringes in the last 12 months  | 4.0 (1.7 – 6.6)                      | 12/307  | 8.1 (4.0 – 12.5)                     | 21/206  | 1.1 (0 – 2.6)                        | 2/204   | 3.3 (1.0 – 6.5)                      | 9/205   | 18.3 (12.0 – 25.0)                   | 44/205  |
| Knowledge about HIV prevention  |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission | 48.4 (42.3 – 54.3)                   | 153/307 | 31.0 (25.0 – 37.5)                   | 66/206  | 39.2 (32.0 – 46.5)                   | 79/204  | 27.9 (21.0 – 35.0)                   | 58/205  | 32.6 (26.0 – 39.5)                   | 67/205  |
| ≤ 24  | 20.7 (5.6 – 42.1)                    | 6/21    | 13.0 (0 – 26.2)                      | 4/25    | 36.5 (15.4 – 55.6)                   | 10/27   | 21.6 (68.0 – 39.3)                   | 7/34    | 51.2 (41.8 – 61.8)                   | 16/35   |
| ≥ 25  | 50.1 (44.1 – 55.9)                   | 147/286 | 33.8 (26.5 – 41.3)                   | 62/181  | 39.9 (32.3 – 47.6)                   | 69/177  | 29.4 (22.2 – 36.6)                   | 51/171  | 32.0 (24.2 – 40.3)                   | 51/170  |
| Condom use  |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |

| Core indicators   | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |        | TELAVI                               |        | GORI                                 |        |
|---|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|--------|--------------------------------------|--------|--------------------------------------|--------|
|   | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N    | RDS population estimates, % (95% CI) | n/N    | RDS population estimates, % (95% CI) | n/N    |
| Used condom at last intercourse with regular sex partner    | 27.7 (21.8 – 34.0)                   | 70/249  | 15.7 (10.2 – 21.7)                   | 24/160  | 19.1 (11.8 – 26.9)                   | 28/151 | 20.4 (11.9 – 30.3)                   | 25/151 | 20.0 (12.5–28.6)                     | 35/159 |
| Used condom at last intercourse with occasional sex partner | 52.4 (42.2 – 62.5)                   | 58/108  | 45.3 (36.5 – 55.4)                   | 53/113  | 48.8 (38.2 – 60.0)                   | 52/103 | 43.7 (33.3 – 54.1)                   | 60/131 | 47.7 (32.4–61.9)                     | 44/95  |
| Used condom at last intercourse with paid-for sex partner   | 87.7 (76.6 – 94.7)                   | 57/65   | 69.4 (57.6 – 79.6)                   | 59/85   | 85.0 (72.7 – 93.1)                   | 51/60  | 69.2 (53.9 – 81.9)                   | 36/52  | 79.6 (65.6 – 89.7)                   | 43/54  |
| Safe injecting practices                                    |                                      |         |                                      |         |                                      |        |                                      |        |                                      |        |
| Reported safe injecting practice during the last injection  | 65.7 (58.7 – 72.2)                   | 192/307 | 51.6 (40.3 – 61.9)                   | 100/206 | 41.3 (31.1 – 50.6)                   | 95/204 | 39.3 (30.6 – 48.4)                   | 82/205 | 36.7 (28.6 – 45.4)                   | 73/205 |
| ≤ 24  | 83.9 (63.3 – 96.6)                   | 15/21   | 28.8 (6.6 – 51.6)                    | 9/25    | 21.9 (7.4 – 48.7)                    | 14/27  | 29.7 (11.3 – 49.8)                   | 10/34  | 50.1 (44.2 – 68.5)                   | 13/35  |
| ≥ 25  | 64.7 (58.0 – 72.2)                   | 177/286 | 83.8 (42.1 – 64.1)                   | 91/181  | 42.4 (32.3 – 52.8)                   | 81/177 | 42.3 (35.5 – 49.1)                   | 72/171 | 35.4 (24.1 – 44.2)                   | 60/170 |
| Biomarker   |                                      |         |                                      |         |                                      |        |                                      |        |                                      |        |
| Positive for HIV  | 2.5 (0.3 – 5.4)                      | 7/306   | 4.5 (1.5 – 8.0)                      | 9/206   | 2.2 (0 – 3.5)                        | 3/204  | 1.5 (0 – 3.5)                        | 3/205  | 0                                    | 0/187  |
| Positive for Syphilis                                       | 6.3 (3.7 – 9.3)                      | 19/306  | 7.6 (4.0 – 12.0)                     | 15/206  | 6.9 (3.5 – 11.0)                     | 14/204 | 5.5 (2.5 – 8.5)                      | 11/205 | 3.9 (1.1 – 7.3)                      | 7/187  |

## Introduction

Georgia is among the countries with low HIV/AIDS prevalence but high potential for developing a widespread epidemic. In its early stage HIV epidemics in Georgia showed similarities with the epidemics in most Eastern European countries with injecting drug use being the major transmission mode. However, over the last several years while transmission through intravenous drug use is still the prevailing route for HIV spread, the role of heterosexual transmission is increasing.

As of October, 2009, injecting drug users (IDUs) represented 58% of all cases with a known route of transmission followed by 38 % of the HIV-positive population infected through heterosexual contacts<sup>2</sup>. However the epidemiological data requires further analysis and available information through routine reporting is not sufficient to draw explicit conclusions. In-depth studies, such as bio-behavioral surveys (BBS) among risk groups are necessary to understand the infection spread among groups at risk as well as link the infection rates with the behavior factors. Also better epidemiology is needed to draw conclusions about changing epidemics.

In years 2002-2007 Save the Children Georgia Country Office under the USAID funded STI/HIV Prevention (SHIP) project had introduced second generation surveillance studies in the country and conducted BSSs among various most-at-risk populations (MARPs) in three major cities of Georgia – Tbilisi, the capital city, Batumi (Adjara Autonomous Republic) and Kutaisi (Imereti region).

Current studies represent the subsequent waves of behavioral and biological surveillance studies (Bio-BSS) undertaken among IDUs during 2002-2007 with the same sampling techniques.

Objective of the 2008-2009 (Bio-BSS) in Georgia was to measure prevalence of HIV and Syphilis among IDUs, provide measurements of key HIV risk behaviors and generate evidence for advocacy and policy-making. The studies were implemented within the GFATM funded project on the HIV/AIDS surveillance system strengthening implemented by Curatio International Foundation (CIF) and partner organizations.

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<sup>2</sup> National Center for Diseases Control and Public Health

## Methods

### Study design

IDUs were studied in five different locations of Georgia: Tbilisi, Gori, Telavi, Zugdidi and Batumi during November, 2008 - April, 2009. The studies employed a cross-sectional design and a respondent-driven sampling methodology (RDS).

The key indicator for sample size calculation was use of previously used needle/syringe at last injection. On the basis of earlier survey (2006 BSS) a baseline value of the indicator was 27% in Tbilisi. The current surveys aimed to detect 15% decrease of the proportion at 95% significance level and the power of 90%. Design effect was estimated to be 2.0 based on the RDS design.

The Table 2 below presents the samples sizes for target population in different locations as suggested by the calculations.

**Table 2: Sample sizes of the target population (IDU)**

| Area    | Sample size |
|---------|-------------|
| Tbilisi | 300         |
| Gori    | 200         |
| Telavi  | 200         |
| Zugdidi | 200         |
| Batumi  | 200         |

Formative research was conducted prior to the surveys to identify seeds, their network sizes and amount of incentives.

### Sampling procedure

In the last two decades a variety of sampling methods have been used to recruit drug users in order to collect risk behavior data. These include venue-based time and space sampling, targeted sampling and snowball sampling, which have a number of limitations.<sup>3</sup> A recently developed sampling methodology, (RDS) was designed to overcome these limitations. RDS combines a modified form of chain-referral or snowball sampling with a mathematical system for weighting the sample to compensate for not having been drawn randomly. RDS is based on the premise that peers are better able than outreach workers and researchers to locate and

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<sup>3</sup> Abdul-Quader, A. Heckathorn, DD. Effectiveness of Respondent-Driven Sampling for Recruiting Drug Users in New York City: Findings from a pilot study. Journal of Urban Health 2006

recruit other members of a hidden population. It differs from traditional snowball sampling in three respects: the subjects are asked to recruit their peers into the study, recruitment quotas (e.g., three recruits only), and a dual incentive system – the reward for being interviewed and a reward for recruiting others into the study.<sup>4, 5</sup>

RDS was used to recruit IDUs in the five cities of Georgia. Inclusion criteria for participation in the studies included the following: 1) age 18 years or older, 2) drug injection in the month prior the survey, 3) being resident of a selected location.

The first step was to recruit initial respondents, so-called “seed” participants. A diverse group of seeds (heterogeneous in age, gender, injection group affiliation and area of residence in a given location) were identified by the partner organization Public Union “Bemoni” which is a trusted and well-respected organization with long experience of working with the target population. Following eligibility assessment and provision of informed consent the seeds underwent behavioral (interviewing) and biological (blood withdrawal) components of the study. After completion they were given three uniquely coded non-replicable coupons to recruit three additional peers to participate in the study. Seeds were instructed how to refer other eligible IDUs. Each coupon was printed with a serial number, study location and information on the monetary incentive. Those who came to the study site with a recruitment coupon and met the inclusion criteria were interviewed. These participants in turn received three coupons to recruit their peers in the study. Each participant was offered a financial incentive of 20 Gel (12.5 USD) and an additional incentive of 7 Gel (4.4 USD) for each eligible person they recruited. The level of monetary incentives was not regarded as high.

The data on the coupons given to participants were managed by the MS Excel based software specifically developed for the coupon tracking.<sup>6</sup>

To ensure that participants met the eligibility criteria, a verification procedure was followed in all study sites. The verification procedure conducted by an experienced addictionologist included a preliminary informal discussion regarding street names of drugs and prices,

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<sup>4</sup> Heckathorn, DD. Respondent driven sampling: A new approach to the study of hidden populations”. Soc Probl. 1997;44:174-199 ; Heckathorn, DD. Respondent driven sampling, II. Deriving population estimate from chain referral samples of hidden populations. Soc probl. 2002;49:11-34

<sup>5</sup> Salaam Semaan, Jennifer Lauby and Jon Liebman. Street and Network Sampling in Evaluation Studies of HIV Risk Reduction Interventions. AIDS Rev 2002;4:213-223

<sup>6</sup> Author Hrvoje Fuchek, Iskorak, Zagreb, Croatia

familiarity with drug preparation and injection techniques and a visual inspection for recent track marks.

Eligible respondents were assigned unique identification number and to overcome subject duplication other physical characteristics such as height, weight, scars, tattoos and some biometric measures were noted.

All eligible respondents were asked six questions about the network size, specifically: “How many IDUs do you know in your (city/region)?”, “Among those, how many do you know personally (you know them by name and they know yours)?”, “How many of those are above 18 years?”, “How many of those have injected drugs during last 1 month?”, “How many of those have you seen during last 1 month” and “How many of those (who are above 18 years, are IDUs, have injected drugs during last 1 month) would you consider to recruit for the study?”.

Respondents who returned to receive incentive for recruitment were additionally asked about whether anyone refused to accept coupons and their characteristics.

### Recruitment results for IDUs

The recruitment started with seven seeds in Tbilisi, six seeds in Batumi, five in Gori and Telavi and four in Zugdidi. The seeds were carefully selected to represent the demographic profile and socially and geographically diverse injecting networks of IDUs in all five survey sites. Basic demographic characteristics are presented in theTable 3 below:

**Table 3: Basic demographic characteristics of the seeds**

| Basic Demographic characteristics of seeds | Tbilisi | Gori | Telavi | Zugdidi | Batumi |
|--|---------|------|--------|---------|--------|
| <b>Age groups</b>                          |         |      |        |         |        |
| 18-24                                      | 1       | 0    | 1      | 0       | 1      |
| 25-30                                      | 1       | 0    | 1      | 1       | 2      |
| 31-40                                      | 2       | 1    | 3      | 0       | 2      |
| 41-50                                      | 2       | 4    | 0      | 0       | 1      |
| 50+  | 1       | 0    | 0      | 3       | 0      |
| <b>Ethnicity</b>                           |         |      |        |         |        |
| Georgian                                   | 7       | 4    | 5      | 4       | 6      |
| Other                                      | 0       | 1    | 0      | 0       | 0      |
| <b>Gender</b>                              |         |      |        |         |        |
| Male                                       | 6       | 5    | 5      | 4       | 5      |

|                                     |          |          |          |          |          |
|-------------------------------------|----------|----------|----------|----------|----------|
| Female                              | 1        | 0        | 0        | 0        | 1        |
| <b>Level of Education completed</b> |          |          |          |          |          |
| Secondary or vocational school      | 1        | 3        | 4        | 3        | 2        |
| Incomplete Higher                   | 0        | 1        | 0        | 0        | 1        |
| Higher                              | 6        | 1        | 1        | 1        | 3        |
| <b>Marital status</b>               |          |          |          |          |          |
| Married                             | 3        | 2        | 2        | 3        | 1        |
| Divorced/Separated for ever         | 1        | 1        | 0        | 0        | 2        |
| Widower                             | 0        | 1        | 0        | 0        | 0        |
| Has never been married              | 3        | 1        | 3        | 1        | 3        |
| <b>Total</b>                        | <b>7</b> | <b>5</b> | <b>5</b> | <b>4</b> | <b>6</b> |

The desired sample sizes were reached in all five locations. The coupons were distributed until the sample size closely reached the desired level. In majority of locations the coupon distribution was stopped one day prior to the end of the field work.

Following verification procedure a number of potential participants were defined as non eligible for the studies.

**Table 4: Recruitment information**

| Area    | Number of waves | Total number of released coupons | Returned coupons | Eligible IDUs recruited by seeds (no of seeds) | Ineligible potential participants | Refusals |
|---------|-----------------|----------------------------------|------------------|--|-----------------------------------|----------|
| Tbilisi | 11              | 865                              | 326              | 300 (7)  | 25                                | 1        |
| Gori    | 8               | 561                              | 205              | 200 (5)  | 5                                 | 0        |
| Telavi  | 9               | 615                              | 213              | 200 (5)  | 13                                | 0        |
| Zugdidi | 9               | 510                              | 208              | 200 (4)  | 7                                 | 1        |
| Batumi  | 9               | 513                              | 209              | 200 (6)  | 9                                 | 0        |

All seeds in all survey locations accomplished waves from shortest three ( in Tbilisi, Telavi, Batumi) to longest eleven (Tbilisi).

Upon return to the study sites to collect secondary incentives the respondents were additionally questioned concerning recruitment experience. Of interviewed IDUs in Tbilisi, Gori, Telavi, Zugdidi and Batumi, 40 (32%), 28 (35%), 28 (32%), 19 (23%) and 7 (8%) respectively mentioned that at least one peer refused to accept coupon. The refusal rates in the survey sites were as

follows: Tbilisi -18.6% (77/415), Gori,- 25.4%(70/276), Telavi -24.6% (71/289), Zugdidi -17.1% (46/269) and Batumi - 4.5%(11/247). Main reasons for refusals were lack of interest, fear of being identified as IDU and lack of time.

## **Measurements**

The survey instrument used in the studies was a standardized behavior questionnaire for IDUs provided in the manual, Behavior Surveillance Surveys: Guidelines for Repeated Behavior Surveys in Populations at Risk for HIV, published by Family Health International. The questionnaire with a slight modification had been applied in the previous six BSS studies undertaken in Georgia during 2002-2007 on bi-annual bases. For the given BSS few additional revisions were made to the questionnaire in order to make sure that all UNGASS indicators are captured by the study instrument. Georgian versions of male and female questionnaires were pre-tested.

Bemoni staff was selected as interviewers based on the following criteria: familiarity with the target population and previous experience in the similar studies. Interviewers training were provided before the field implementation which included also orientation about RDS procedures.

Biomarker component involved the analyses of blood specimens for HIV and Syphilis at the laboratory of Infectious Disease, AIDS and Clinical immunology Research Center in Tbilisi. The Genscreen Ultra HIV rapid test was used for HIV screening. HIV positive samples were tested with Western Blot (HIV Blot 2.2, Genelabs Diagnostics) confirmatory test. For Syphilis the samples were tested using Treponema Pallidum Hemagglutination Assay (IMMUTREP-TPHA OD081, Omega Diagnostics) test system.

The study protocol and questionnaires were approved by the Ethical Committee of the HIV/AIDS Patients Support Foundation. During the study design and field implementation the following ethical issues were taken into consideration:

- Participation in the surveys was strictly voluntary. Participants were free to withdraw at any time and were informed that refusal or withdrawal would not affect services they would normally receive.
- Complete anonymity was ensured. No names or personal identifiers were recorded; all documentation was labeled only by a study number.

- The staff engaged in the study was trained in discussing sensitive issues and protecting participants' confidentiality and human rights.
- Individuals identified as positive on HIV or Syphilis test were offered counseling and referred to designated facility for treatment.

### **Data collection**

Data collection period in all five locations was from November 2008 to April 2009. Data collection in each location took approximately two-three weeks. Interviews were provided at the fixed sites located in the center of each city. Tbilisi site was housed within Bemoni office, local syringe-exchange program offices served as study sites in Gori and Telavi, while Tanadgoma (local NGO providing supporting services to high-risk population) offices were used for the study purposes in Zugdidi and Batumi.

After registration the participants were brought to interviews rooms to maintain privacy. Face-to-face individual interviews were conducted in Georgian by the trained interviewers. Each interview lasted on average 30 minutes. Following completion of the behavioral component participants were asked to voluntarily provide a blood sample for the HIV and syphilis testing. If a participant agreed a pre-test counseling was provided and 5 ml of blood was collected on site by a trained nurse. Blood samples were transported to the laboratory of Infectious Disease, AIDS and Clinical Immunology Center in Tbilisi. If transportation was not done the same day the samples were centrifuged and sera refrigerated at 4 to 80C. The blood tests in all studies were anonymous-linked. Each IDU that volunteered to provide a blood specimen was given an identification number, which was recorded on the blood tube and the questionnaire. In addition the participant was given a card with the identification number and with the organization's telephone number and address. The testing results were reported back to study site within two weeks. The participants were asked to return with their identification card to receive their results. Post-test counseling was provided on site.

Internal quality control of the fieldwork was provided by Bemoni staff and external control – by CIF staff. Filled out questionnaires were checked for consistency and any identified problems were followed up with the interviewers.

### **Data processing and analyses**

Data entry and analyses took place at the CIF office. Data were entered into SPSS software (version 13.0). Any discrepancies were resolved by examining frequencies and cross-tabs and

checking logic of all variables in the datasets. Hard copies of the completed questionnaires were kept at the CIF office.

Respondent Driven Sampling Analyses Tool version 6.0.1 (RDSAT, Cornell University, 2004) software was used for analyses of RDS population estimates.

Frequencies, cross-tabulations, prevalence estimates were performed in the RDSAT. For some variables where the RDSAT was unable to produce valid population estimates analysis was done in the SPSS. Similarly means and median were calculated by the SPSS as RDSAT does not produce such estimates. Combined samples from all five studies were analyzed in the SPSS for specific indicators. Pearson's chi-squared test was used to check for the associations between categorical variables.

The RDSAT makes it possible to estimate characteristics of a broader network of IDU, based on a network data collected from the study sample. In our results tables (see Annex 1) the data are presented in two columns, the left column presents population estimates of a larger IDU network in a given location with 95% confidence intervals; the right column presents actual proportion of the sample. Frequencies calculated in the SPSS are marked with asterisk.

Network structures and recruitment patterns were analyzed by using a network visualization program NetDraw 2.081.

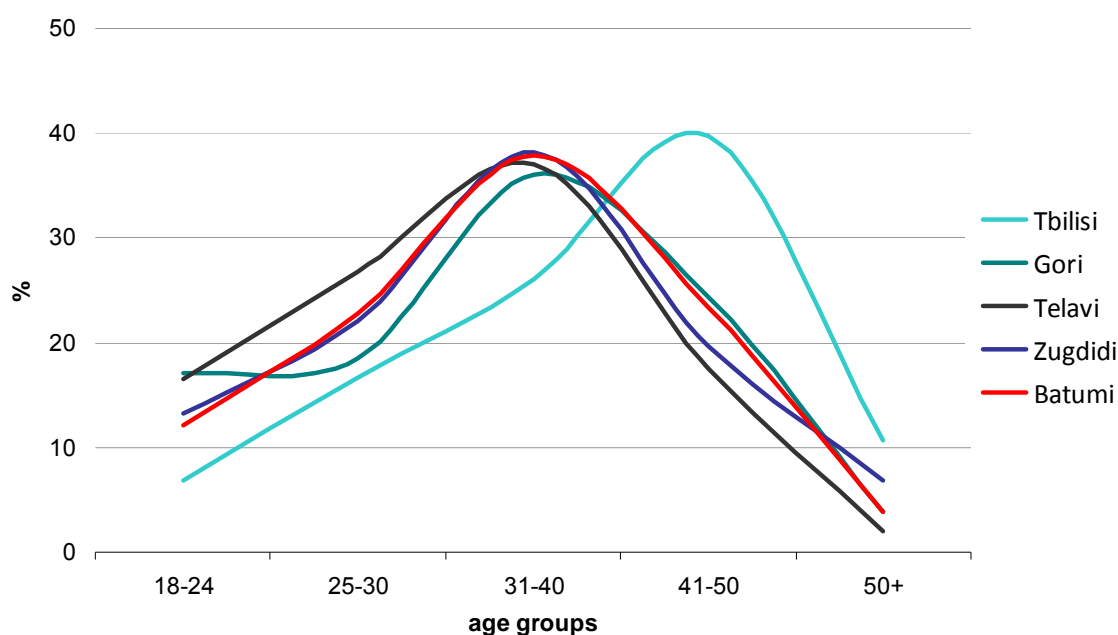
## Results

### Socio-Demographic Characteristics

#### Age Distribution

The median age of IDUs varies from 32 to 40 across all survey locations, with the highest proportion of respondents being in the 31-40 age group; Exception is Tbilisi, where the significant proportion (38.8%) of IDUs represents the 41-50 age-group. Only 7.6 % are less than 25 years of age in Tbilisi, while this age group varies from 12.5% to 23.1% in other survey locations (with the highest proportion in Gori).

**Figure 1: Distribution of IDUs by age groups**



Small proportion of young participants recruited in Tbilisi sample may indicate that older and younger IDUs do not network extensively between each other, and young IDUs are more hidden compared to their older peers.

#### Gender

Vast majority of IDUs are male (more than 97%) and Georgians (more than 90%) across all five survey locations. Disproportional gender representation could be explained by small number of female seeds and/or poor recruitment of female IDUs due to low male/female interaction in the network or more hidden nature of female IDUs.

## **Education Level**

The studies show that the highest proportion of Tbilisi respondents has higher education; in other locations majority of IDUs have secondary education. Very limited number of IDUs reported having primary education at the time of the survey (only three IDUs out of entire sample of 1100 IDUs).

## **Marital Status**

Almost half of IDUs are married. About half of the interviewed respondents live with a spouse, while another half lives alone. Surveys revealed a very limited number of IDUs living with a partner other than spouse (no more than 3%). Proportion of divorced IDUs reaches to 21% in Tbilisi, while in other sites this proportion is much lower.

As mentioned above very few females participated in the study. Those who participated have different marital status. Four out of five female IDUs in Gori are married, In Batumi out of six participants only one is currently married, while others are divorced, widower or never been married.

## **Place of residence**

Vast majority of IDUs are city residents with less than 13.0% living in surrounding villages. Besides, percentage of IDUs who spent more than a month out of place of permanent residence within last 12 months ranges from 13% in Tbilisi to 42.4% in Gori.

Study found no more than 20 IDPs from the entire sample, out of which 18 are from Zugdidi (the city bordering the conflict zone).

## **Contact with criminal justice settings**

Almost half of the surveyed IDUs in Tbilisi and Batumi were detained in administrative sentence because of their drug use at least once in the past. This percentage is relatively low in the rest of the survey locations (not exceeding 34.0%). No more than 38.0% of interviewed IDUs were imprisoned before the trial because of drug consumption and significantly lower proportion (no more than 12.3% in 4 out of 5 survey locations) were imprisoned. Different picture is observed in Batumi, where 21.0% of respondents were imprisoned.

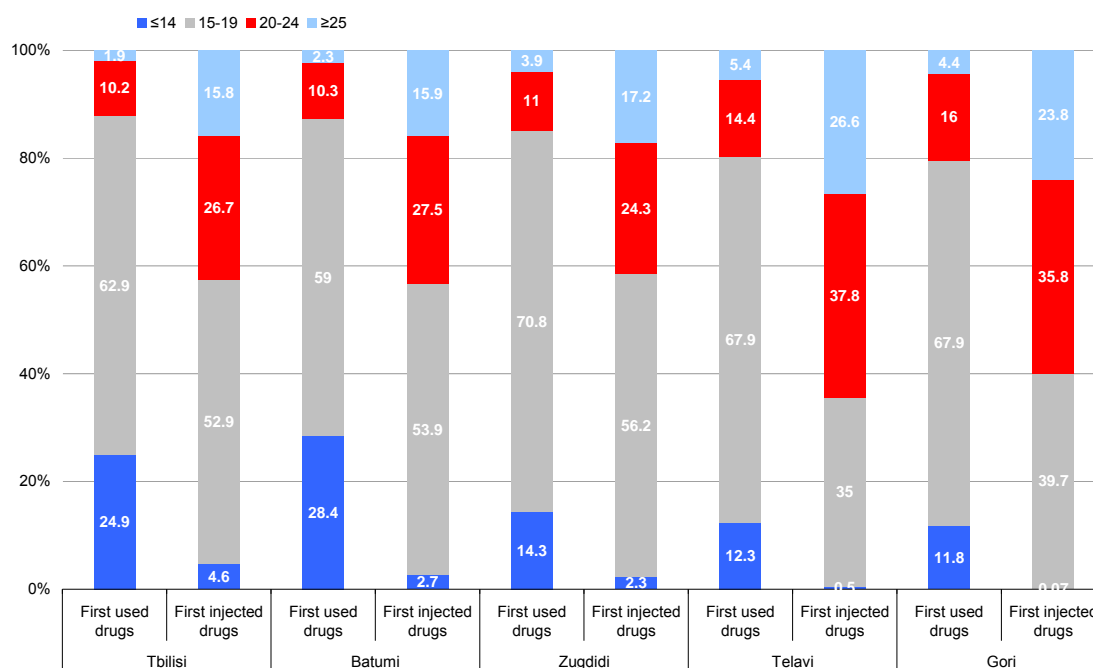
## **Drug Use History**

Median age for starting any type of drug use (swallowing, smoking and/or injecting) is 16-17. It is notable that proportion of those, who started drug use in earlier ages, is about twice greater

in Tbilisi and Batumi (24.9% and 28.4% respectively) compared to other locations, where this proportion does not exceed 14.3%.

As for drug injection experience, the median age ranges between 18 to 20 years. More than half of IDUs in Tbilisi, Batumi and Zugdidi first injected in their late teens age (15-19 years). Small proportion started injection before 15 years of age (varying from 0.07% in Gori to 2.7% in Batumi). This trend is common to all survey locations, with exception of Tbilisi, where this proportion is twice bigger and reaches 4.6%.

**Figure 2: Age when first used or injected drugs (N = the sample sizes)**

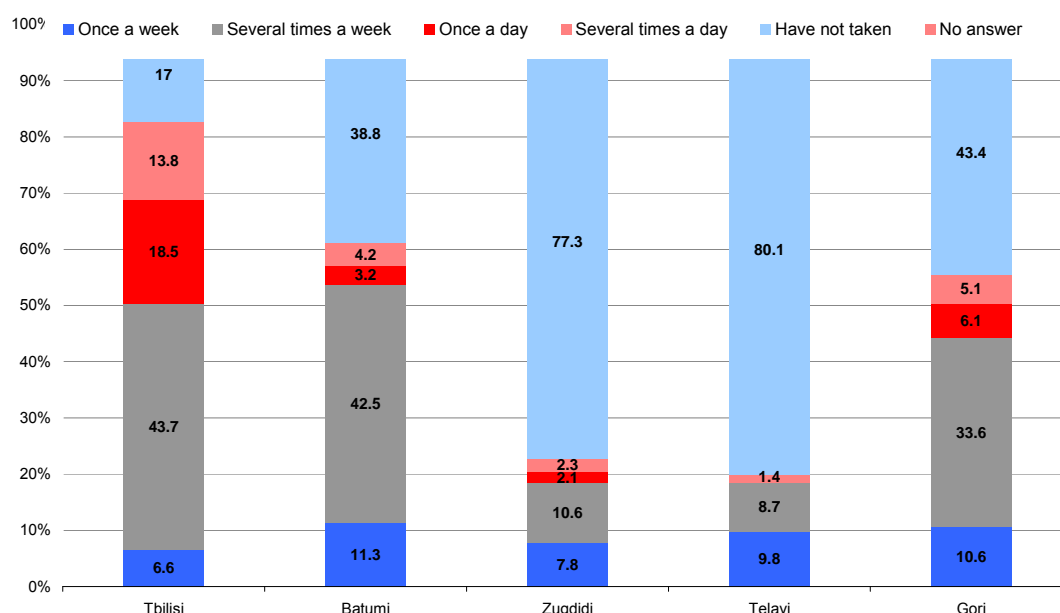


Median duration of drug injection ranges between 5 and 7 years in the cities other than capital, where it equals 10 years. This could be explained by a bigger representation of older age group in Tbilisi.

Injecting drug use over the last week was reported by majority of Tbilisi IDUs (82.9%), while significantly less proportion reported the same in Zugdidi and Telavi (21.2% and 19% respectively). Worth to mention that main reason for not having injected during last week is „lack of money“(54.4% in Zugdidi and 70.1% in Telavi) followed by “difficulty to get drug” (35.6% in Zugdidi and 29.3% in Telavi). Every second IDU injected drug over the last week prior to interview in Batumi and Gori. Frequency of injection over the last week is presented in Figure 3 showing diverse practice in different survey sites. It is important to note that Tbilisi is leading

among those who reported injecting drug several times a day (13.8%), while in other sites this proportion does not exceed 5.1%. No significant association was found between drug type and injection frequency.

**Figure 3: Frequency of drug injection last week (N = the sample sizes)**



The majority of IDUs (ranging from 60.1% in Batumi to 81.3% in Tbilisi) are members of regular injecting groups composed of 4-5 people.

The studies investigated types of drugs consumed and/or injected by IDUs during last week. The most popular drugs for non-injecting consumption are tranquillizers, codeine, marijuana and barbiturates. Most frequently injected drugs among all IDUs are Narcotic Drugs, among which heroine is the mostly used. Heroine injection varies from 19.3% in Gori to 42.0% in Telavi and reaches highest level (93.4%) in Batumi. Subutex<sup>7</sup> (solely and/or in combination with other substances) is injected by majority of Tbilisi IDUs (almost 75.0%). Amphetamine type stimulants Ephedrone and Methcathinone (known as Jeff and Vint) are used by almost half of Gori IDUs and by slightly less in other sites. Morphine injection, proportion of which, is quite low (no more

<sup>7</sup> Subutex (Buprenorphine) is used for treatment of opioid addiction. It is increasingly considered to be an alternative to methadone in the substitution programs for heroin eddicts, and also in the treatment of cocaine addiction. These sublingual (under-the-tongue) buprenorphine tablets are crushed and injected

than 0.8% in Tbilisi and 2.3% in Zugdidi), is outstandingly high among Gori IDUs (11.4%). Tbilisi IDUs also favor so called combination of different drugs<sup>8</sup> (41.9%).

Less than 1% reported switching drugs (from injection to oral consumption) in the last month in 4 out of 5 survey locations. Exception is Tbilisi, where the same proportion is significantly higher compared to others and amounts to the 9.4%.

There was little difference in the average number of drug types injected in the last week, ranging from 1.1 drugs in Batumi to 1.46 drugs in Tbilisi.

### **Drug use risk behavior**

The majority of IDUs in Batumi, Zugdidi, Telavi and Gori shared used needles and/or syringes in their lifetime at least once, with the highest proportion in Batumi (71.3%). In Tbilisi almost equal proportion reported sharing (48.7%) vs. not sharing needles/syringes (49.9%).

Needle-sharing practice lowers significantly when it comes to the last injection varying from 3.4% to 12.7% with the highest proportion among Telavi IDUs. Very few (not more than 5.6%) IDUs reported usage of syringe that was filled by somebody else at last injection. Combined sample from all five studies was analyzed to find association with the age and sharing practice. Although not statistically significant difference was found ( $p=0.1$ ) IDUs younger than 25 years of age have higher prevalence of needle/syringe sharing (16.2%) compared to their older counterparts (9.2%).

The studies found that sharing of injection paraphernalia (bottle, spoon, boiling pan/glass/container, cotton/filter or water) is quite common among IDUs. About similar proportion of IDUs reported risky and not-risky behavior with this regard in Batumi, Zugdidi and Telavi at last injection. The majority of Tbilisi IDUs did not share equipment, while opposite picture was found among Gori IDUs.

Gori respondents are leading among those who used drug solution from the shared container at last injection (33.5%), which was practiced by less than a quarter of interviewed IDUs in other sites.

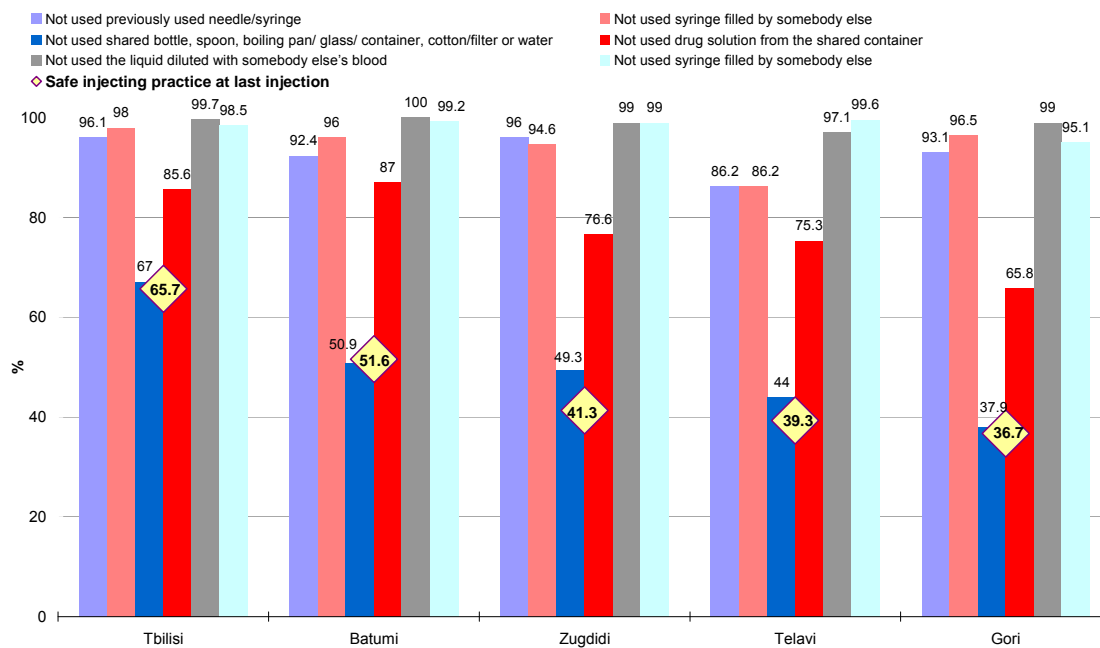
Almost 100% of IDUs are reluctant to use the liquid diluted with somebody else's blood.

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<sup>8</sup> Combination: (Subutex+Pipolphen), (Subutex + Antihistamine), (Subutex + Relanium), (Heroin + Antihistamine), (Subutex+Methadone), (Heroin+Pipolphen), (Opium + Antihistamine), (Relanium +Pipolphen), (Ephedrone+Pipolphen), (Poppy + Antihistamine), (Methadone +Pipolphen)

Safe injecting behavior at last injection was measured by combination of different indicators such as: not usage of previously used needle/syringe, not usage of needle/syringe left at a place of gathering by somebody else, not usage of syringe filled by somebody else, not usage of shared equipment, not usage of drug solution from shared container, not usage of liquid diluted with somebody else's blood. 65.7% of Tbilisi IDUs reported above mentioned safe injecting practice, with decreasing rate in other locations and reaching lowest level in Gori (36.7%), see Figure 4 below.

**Figure 4: Safe injection practices at last injection (N = the sample sizes)**



Risky injection behaviors were investigated for last week recall period. Of those IDUs who injected in the week preceding the survey majority have never used previously used needle/syringe or given the used needle/syringes to others during last week. In Telavi among those who injected last week (n=38) one third consistently or at least once used a shared syringe. A syringe/needle is shared among drug-related friends and the mean number of needle sharing partners varies from 1.75 in Batumi to 2.25 in Telavi.

Respondents were asked whether they injected with syringe already filled with drug without their presence in the week preceding the survey. Majority of the respondents reported not using pre-filled syringe. Results are presented in the Figure 5 below.

**Figure 5: Usage of pre-filled syringe last week (N for Tbilisi = 250, Batumi = 122, Zugdidi = 44, Telavi = 38, Gori = 114)**

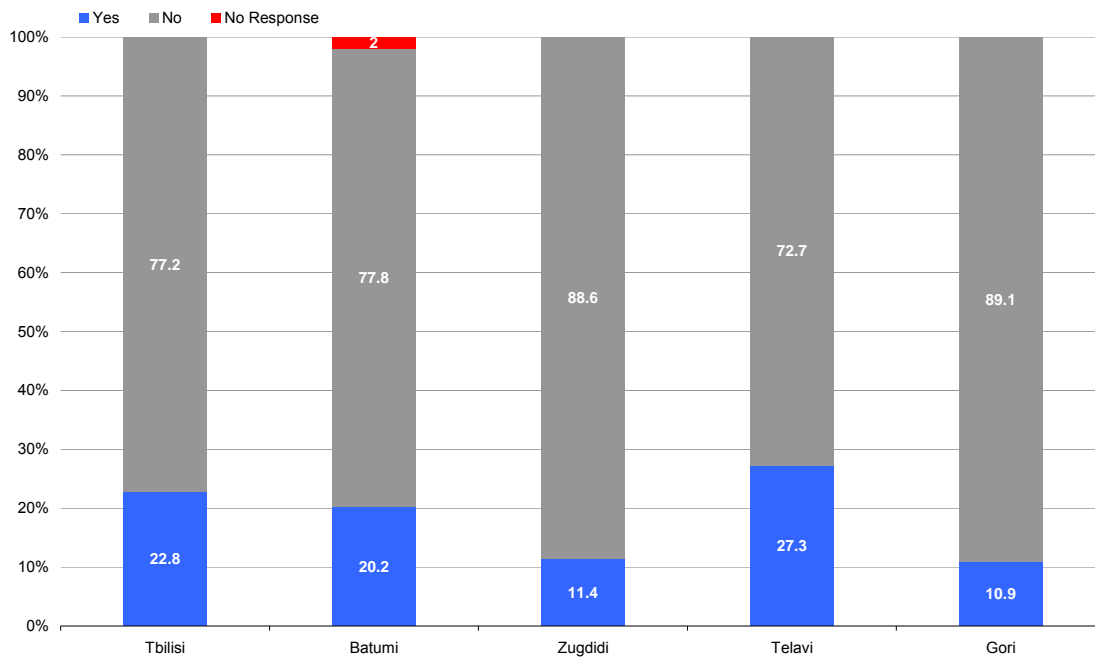
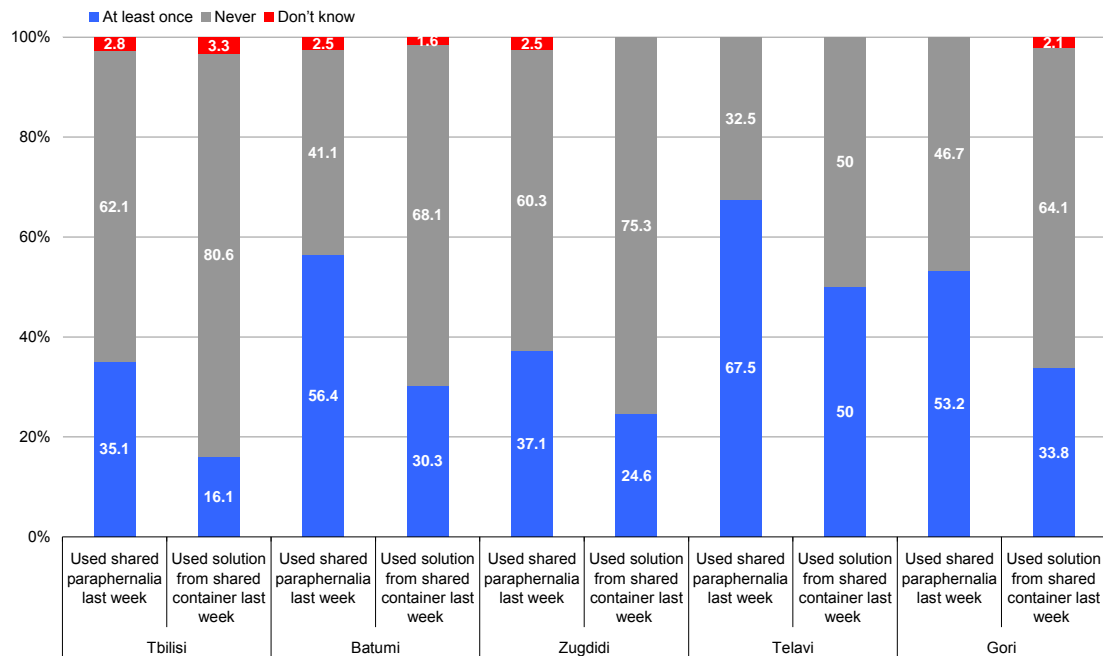


Figure 6 below presents sharing of other injection paraphernalia (bottle, spoon, boiling pan/glass/container, cotton/filter/water) and shared drug solution during last week. In general sharing of other equipment rather than needle/syringe is more frequent than usage of drug solution from shared container. Majority of Tbilisi and Zugdidi respondents reported not sharing practice, while worst picture is observed among Telavi, Batumi and Gori IDUs.

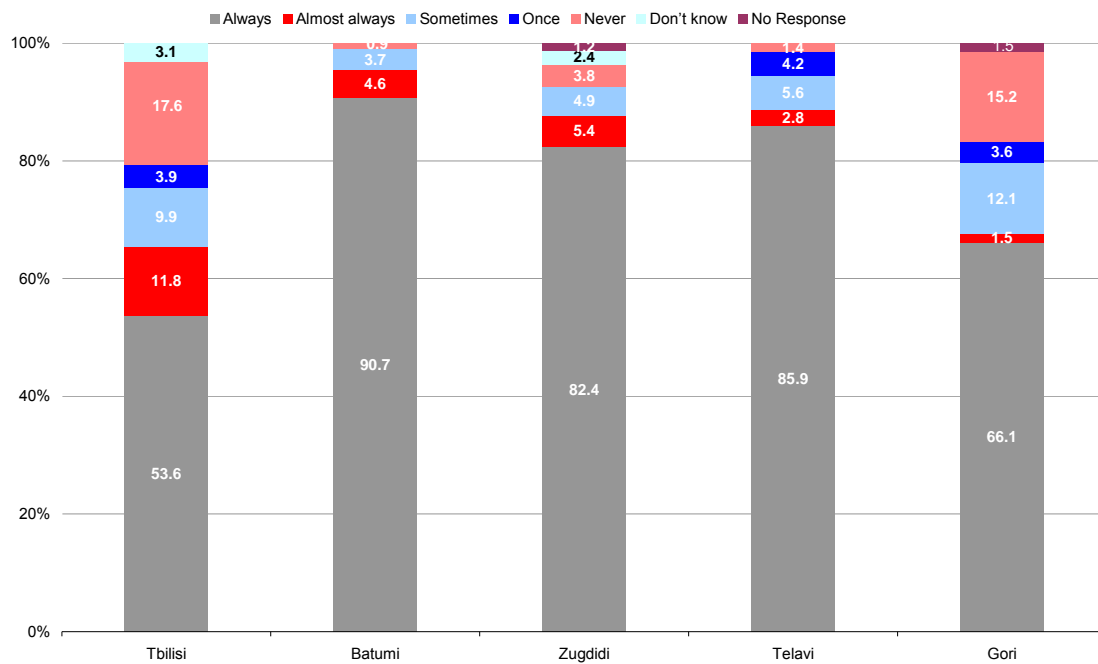
**Figure 6: Usage of a) shared paraphernalia and b) drug solution from shared container last week (N for Tbilisi = 250, Batumi = 122, Zugdidi = 44, Telavi = 38, Gori = 114)**



Sharing of other injection paraphernalia at last injection was analyzed by type of drug injected during last month. In order to link particular drug with this risky behavior, we analyzed cases where only one type of drug was injected by combining the data of all five samples. The following distinct categories were created based on the drug(s) injected in the past thirty days: self-made amphetamine-type stimulants users only (9.1%), subutex users only (17.7%), heroine users only (33.8%), morphine users only (1.7%), other mono drug users (1.5%), multiple drug users (36.2%). If different substances were added to the drug to prolong its desired effect or minimize adverse effects (e.g. antihistamines) the person was attributed to the category according to the basic drug. The results suggest, as expected, that sharing of injecting equipment other than needles and syringes is highest among ephedrone and methcathinone (so-called "Vint"/"Jeff") users (76.5%) due to the specifics of preparation of this home-made amphetamine-type stimulant. Heroine and subutex users shared paraphernalia in 54.6% and 26.5% respectively, and multiple drug users used shared equipment in 43.9% of cases. This difference was found to be statistically significant (Pearson chi-Square 109.002, p-value <0.005).

Majority of those who ever used shared needle/syringe reported cleaning them before injection (Figure 7 below).

**Figure 7: Cleaning needles/syringes before usage (N for Tbilisi = 167, Batumi = 151, Zugdidi = 131, Telavi = 116, Gori = 128)**



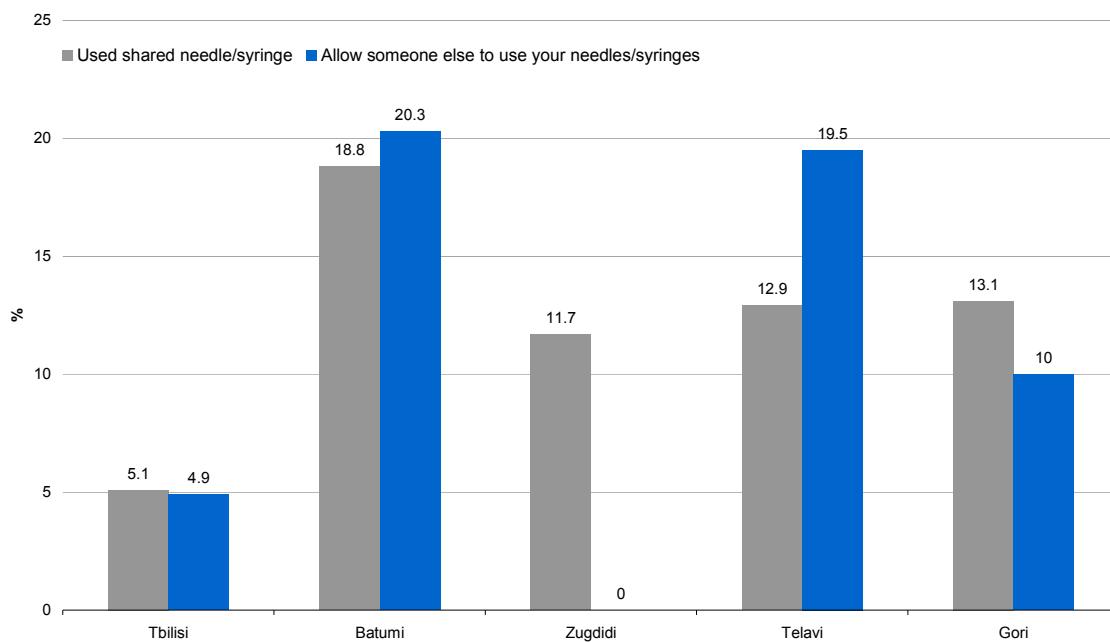
However, when it comes to cleaning boiled or non-boiled water is mostly used method for cleaning the needle/syringe (ranged between 75.3% in Tbilisi to 92.5% in Telavi). Highest proportion (16.5%) of boiling needle/syringe before usage was reported by Tbilisi IDUs.

Almost all respondents (more than 91%) reported they can get new unused needle/syringes when needed. Almost 100% mentioned drug stores and about one third - other IDUs as a source for getting syringes. Syringe exchange program was named by a small proportion of respondents in Tbilisi (4.6%), Zugdidi (3.9%) and Telavi (2.8%) with a higher rate in Batumi (12.3%) and Gori (18.7%).

In general, proportion of IDUs who injected drug outside the place of their permanent residence over the last 12 months, ranges between 43.0% in Tbilisi to 66.1% in Zugdidi. More IDUs reported drug injection in other cities in Georgia compared to other countries (including countries of FSU and other foreign countries). The proportion of those who injected drugs in other cities of Georgia over the last year varies from 37.2% in Tbilisi to 64.7% in Batumi. In addition, proportion of IDUs who reported injecting drug outside the country, is significantly high in Batumi (34.2%) explained by close proximity and easy entry to Turkey and contributing to cross border transfer of HIV infection.

It was found that injection risky behavior increases outside the place of residence. Every fifth among Batumi IDUs who injected in other locations reported needle/syringe sharing practice (Figure 8 below). Similarly 20.3% of Batumi IDUs reported allowing others to share their needle/syringe in other locations with a lower proportion found in Tbilisi. Combined sample was analyzed to investigate whether sharing behavior changes when injection takes place in other locations. 15.8% of those who reported not sharing of needle/syringe at last injection did use previously used needle/syringe in another country or city, while 60.9% of those reporting risky practice at last injection did not share needle/syringe ( $p$  –value <0.05). Above may indicate that sharing is much influenced by a given contextual factors.

**Figure 8: a) Used shared needle/syringes and b) allowed someone else to use own needle/syringe in other locations (N for Tbilisi = 130, Batumi = 122, Zugdidi = 134, Telavi = 126, Gori = 118)**



About quarter of Batumi and Tbilisi respondents reported overdose experience over the period of previous 12 months. Such experience that put IDUs at risk of dying was less frequent in other sites.

Majority of IDUs from all survey sites inject at home and less than 18.0 % inject on the street.

Most prevalent practice of getting rid of the used needle/syringe, is throwing in the garbage with cap. This proportion is ranging from 41.7% to 62.2%. Respondents also mentioned breaking needle before throwing and burning in the stove.

## **Knowledge of HIV/AIDS and self-risk assessment**

All IDUs across all 5 survey locations have heard about HIV/AIDS and almost half in Tbilisi, Batumi and Zugdidi know the person who has been infected, ill or died of AIDS, this proportion is relatively low in Telavi and Gori (27.0% and 37.2% respectively).

Misconceptions about HIV transmission are still prevalent. At least one third of IDUs still believe that one can get HIV as a result of mosquito bite and this proportion is the highest in Telavi (almost half). Less than fifths of respondents think HIV can be transmitted by taking food or drink containing someone else's saliva.

Abstinence from sexual contacts as a way of preventing HIV/AIDS was mentioned by the majority of IDUs although one fifth of Batumi IDUs disagree with this statement.

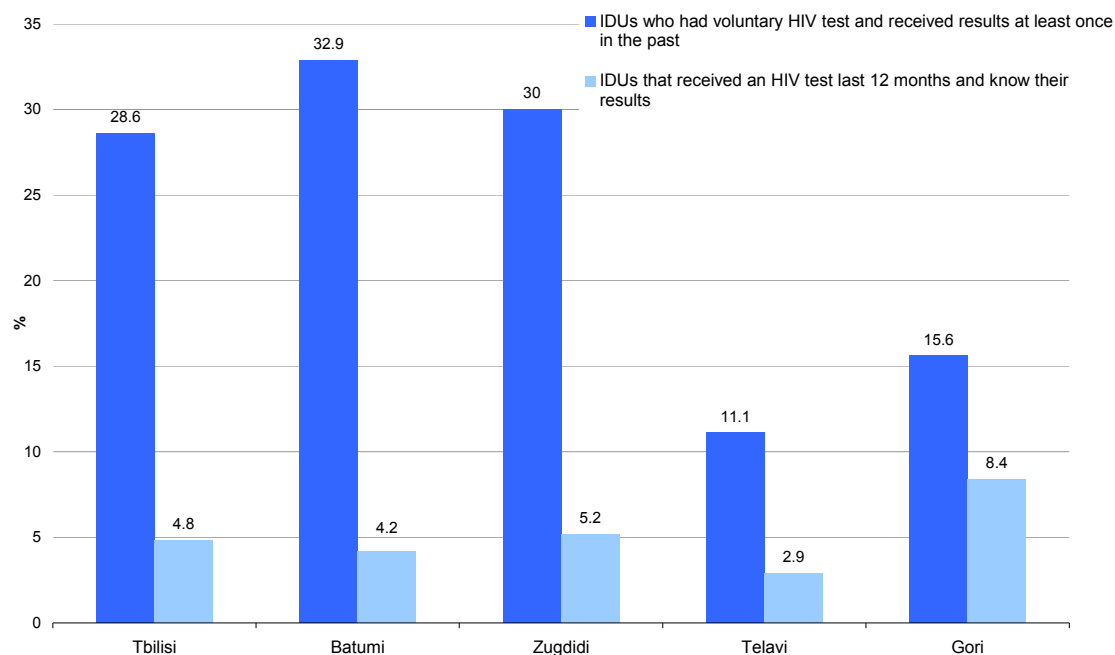
The vast majority of IDUs (more than 95%) in Tbilisi, Zugdidi, Telavi and Gori think that one can prevent HIV/AIDS by having one uninfected and reliable partner; however 18.6% among Batumi IDUs think differently.

More than 80% of IDUs are correctly aware that a healthy looking person can have an HIV infection (varying from 80.2% in Gori to 94.5% in Zugdidi).

Overall, the surveys found that only one third of IDUs both correctly identify ways of preventing the transmission of HIV and reject major misconceptions. The knowledge is higher among Tbilisi participants. Statistically significant difference was found among knowledge level between different age groups in Tbilisi. Older (25 years and above) are more knowledgeable compared to young IDUs (51.4% v.s. 28.6%,  $p$ -value 0.04). Although not statistically significant in Gori young IDUs have higher knowledge (45.7%) rather than 25 years and older participants.

Access to HIV testing is relatively good - more than 65% of IDUs (92.6% in Tbilisi) are aware that they could get confidential HIV testing in their location. However, use of voluntary HIV testing is still low. Only third of IDUs reported ever been tested in the past and knowing their result (see Figure 9 below). When time interval shortens to last 12 months the rate decreases further. Only 2.9%-8.4% of IDUs are tested and know their results.

**Figure 9: IDUs a) who had voluntary HIV test and received results at least once in the past and b) who have received an HIV test in the last 12 months and know their results (N= sample sizes)**



HIV testing practice was analyzed by type of drug injected during the last month and by age groups using the combined sample from all five studies. Statistically significant difference was found between different drug users. Only ephedrone/ methcathinone user IDUs showed the worth utilization of VCT services with an increasing level among only subutex, heroine and morphine users.

**Table 5: HIV testing practice by drug type \***

|                     | Eph / Meth | Subutex | Heroine | Morphine | Multiple drug | p value |
|---------------------|------------|---------|---------|----------|---------------|---------|
| Never tested on HIV | 82.4%      | 79.5%   | 64.3%   | 57.9%    | 71.3%         | <0.001  |

Among different age group categories young IDUs (18-24 years old) have the largest proportion of never tested peers.

**Table 6: HIV testing practice by age groups \***

|                     | 18-24 | 25-30 | 31-40 | 41-50 | 50 +  | p value |
|---------------------|-------|-------|-------|-------|-------|---------|
| Never tested on HIV | 84.5% | 71.6% | 67.1% | 68.2% | 76.1% | 0.001   |

\* Analyses done in SPSS

The vast majority of IDUs (more than 90%) throughout all 5 survey locations reported they will inform their sex and IDU partners if they are infected with HIV. About 5.0% either will not inform sex partners or are not certain about it.

### **Sexual behavior**

The section presents findings on IDUs sexual behaviors. Regular sexual partners were defined as spouse or live-in partner or a permanent partner with whom relation continues more than one year; Occasional sexual partners were defined as sex partner who is not a spouse, live-in partner or sex worker, Paid sex partners were defined as those whom the respondent had sex in exchange for money or drugs.

Median age at the first sexual contact is 16 years across all 5 survey locations. The majority of IDUs (more than 90%) had sex in the last year.

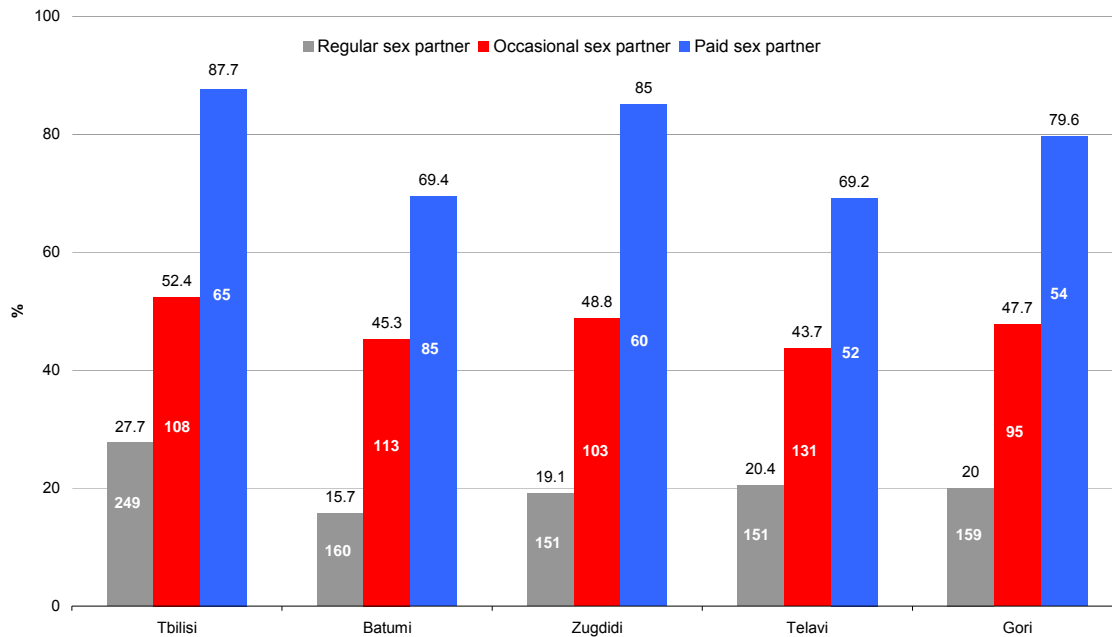
Majority of the respondents (about 75%) reported having regular sex partners (most of them had one regular partner). The studies found that level of condom use is low with regular sex partners, as less than a third used condom at last intercourse (Figure 10).

Having occasional sex partners are reported by one-third in Tbilisi, around half of Batumi, Gori and Zugdidi respondents and majority of Telavi IDUs (63%). Mean number of occasional sex partners for all interviewed IDUs ranges between 1.73 in Tbilisi to 4.13 in Telavi for the last 12 months period. Unsatisfactory is condom use behavior with occasional partners: only half of interviewed IDUs used condom with occasional sex partner during last intercourse.

Respondents were asked about reasons for not using condoms. Most frequently mentioned reasons are: a) not thinking it is necessary (varying from 27.1% in Batumi to 64.7% in Gori, b) dislike it (varying from 17.6% in Gori to 55.9% in Batumi) and c) not having it (proportion varying from 7% in Telavi to 20.8% in Tbilisi). Also, more than 4% reported they are not thinking about it at all. The findings demonstrate a gap between knowledge and safe behavior. Vast majority of those who think that condom use was not necessary in a given occasion at the same time believe that consistent condom use can protect them against HIV transmission. This may indicate that occasional partners are not perceived to be at risk for HIV transmission.

Around a quarter of the respondents purchased sex during last year with a higher rate found in Batumi (41.3%). Similarly to the occasional sex partners, mean number of paid sex partners is the lowest in Tbilisi (0.9) reaching almost 3 in Zugdidi. Condom use with the paid sex partners is more frequent and ranges from 69.2% in Batumi and Telavi to 87.7% in Tbilisi.

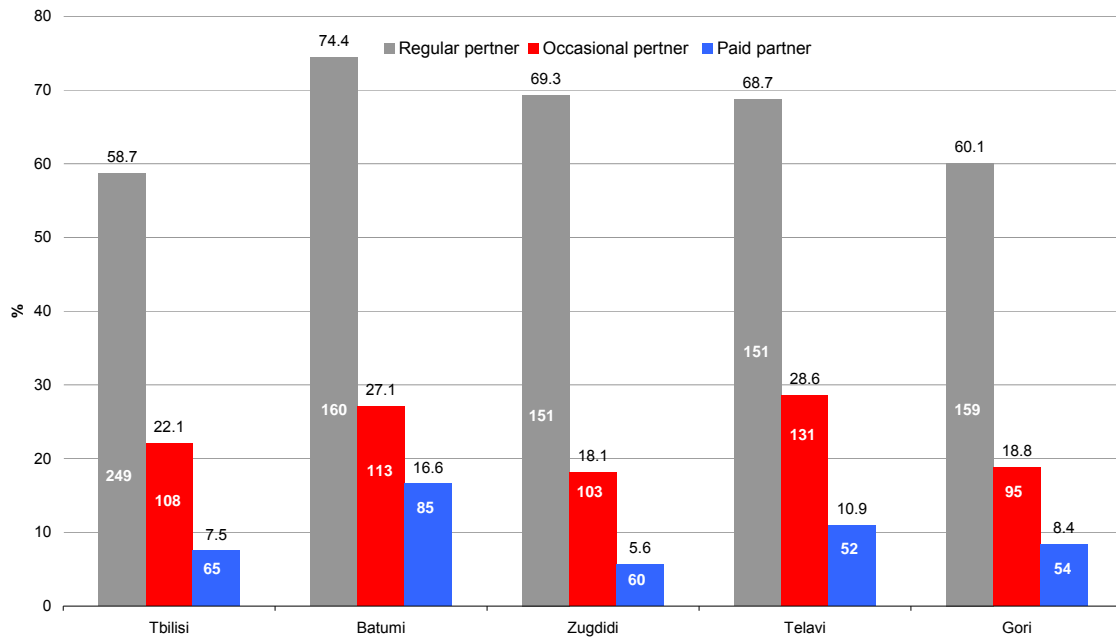
**Figure 10: Condom use with different types of partners during last sexual intercourse (N are indicated on the bars)<sup>9</sup>**



Similar pattern was observed when respondents were asked about condom use with different partners during last year. More than half of respondents never used condoms with regular sex partners. Unprotected sex is high with occasional partners and still occurs during purchased sex, however to a less extent (see Figure 11 below).

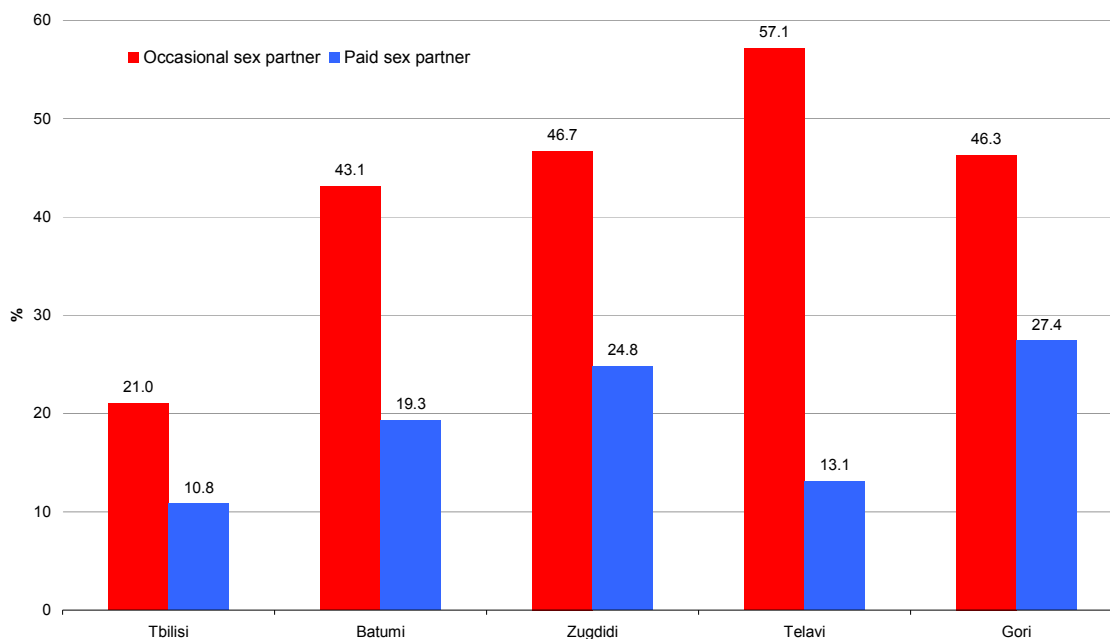
<sup>9</sup> Data on paid sex partners analyzed in SPSS

**Figure 11: Never used condom with different types of partners last year (N are indicated on the bars)**



Sexual behavior was analyzed by marital status, which demonstrated that concurrent sexual partnerships are quite common. Proportion of married IDUs who reported having paid for sex in the past year varies from 10.8% in Tbilisi to 27.4% in Batumi. About twice more married IDUs reported having sexual contact with an occasional partner over the last 12 months (varying from 21.0% in Tbilisi to 57.1% in Telavi).

**Figure 12: Married IDUs having paid and occasional partners during last year (N for Tbilisi = 167, Batumi = 95, Zugdidi = 105, Telavi = 84, Gori = 109)<sup>10</sup>**



Condom use with occasional partners is not a common practice among married IDUs. From 8.4% of married IDUs in Tbilisi to 27% in Batumi had unprotected sex with occasional partners, thus creating risk of HIV transmission through sexual contacts.

Furthermore, having IDU sex partner is slightly higher among paid sex partners (4.0-8,5%) compared to the regular sex partners (3.0-6.4%), however IDUs among occasional sex partners reach higher levels (4.0-14%). All this coupled with unprotected sex further increases risk of HIV infection spread among bridging and high risk population.

The study found very limited number of male IDUs who reported ever having sex with male partner (in total 18 out of 1100 interviewed ones). Proportion reaches 3% in Batumi, Zugdidi and Telavi, and less than 1% in Tbilisi and Gori. Only one reported having sex with male partner during last year.

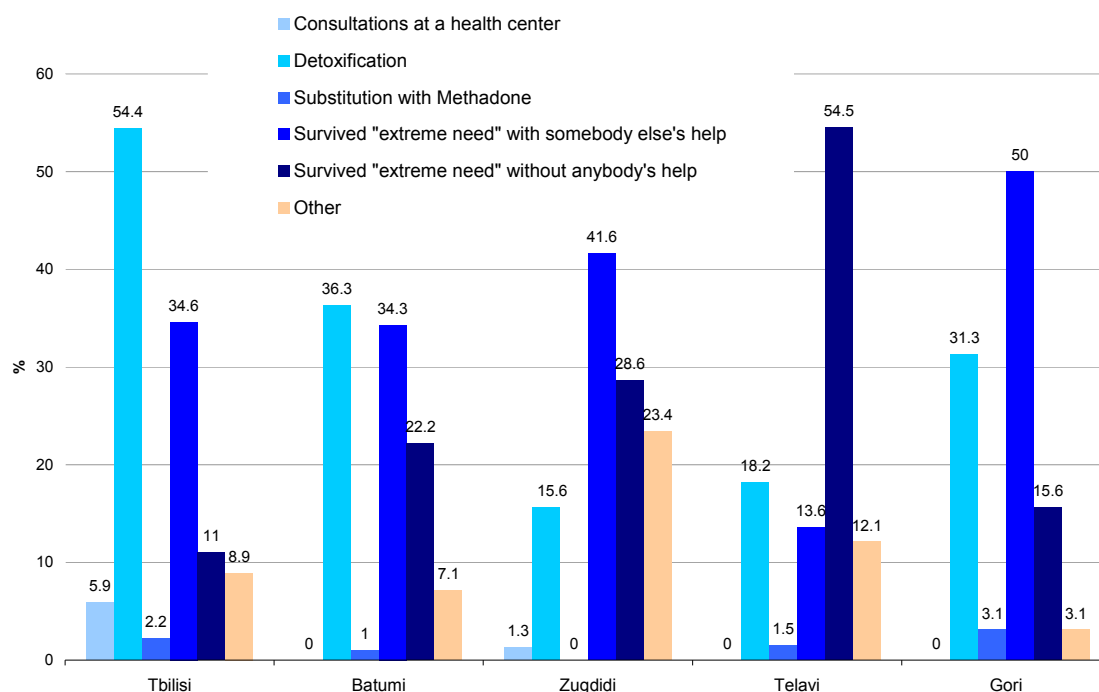
### **Exposure to drug treatment and HIV prevention programs, and social influence**

The majority of respondents never have been treated (varies from 51.6% in Batumi to 84.8% in Gori). About one third used to take medical treatment.

<sup>10</sup> Analyzed in the SPSS

Access to drug treatment services is very low. Majority of IDUs rely on self or help of others but the health care system.

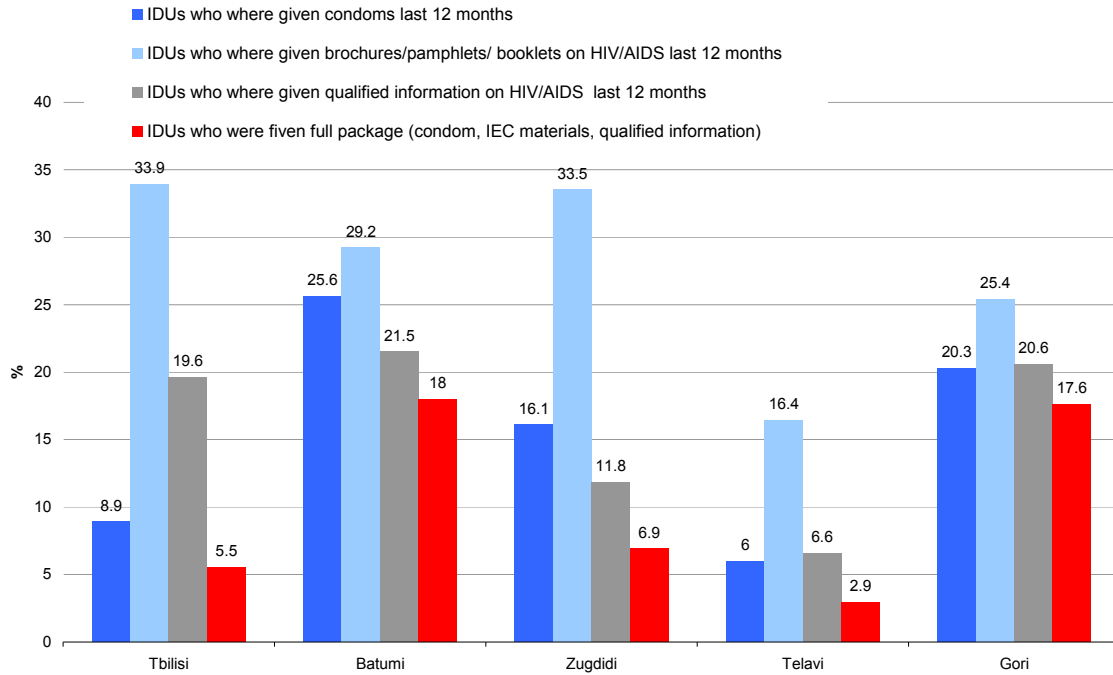
**Figure 13: Kind of medical treatment and an assistance taken (N = the sample sizes)**



Coverage by IEC activities seems very low as only third of IDUs received any informational brochure/pamphlet/ booklet on HIV/AIDS in the last 12 months. Much less were accessed with qualified information on HIV/AIDS and /or were given condoms in the last 12 months (see Figure 14 below).

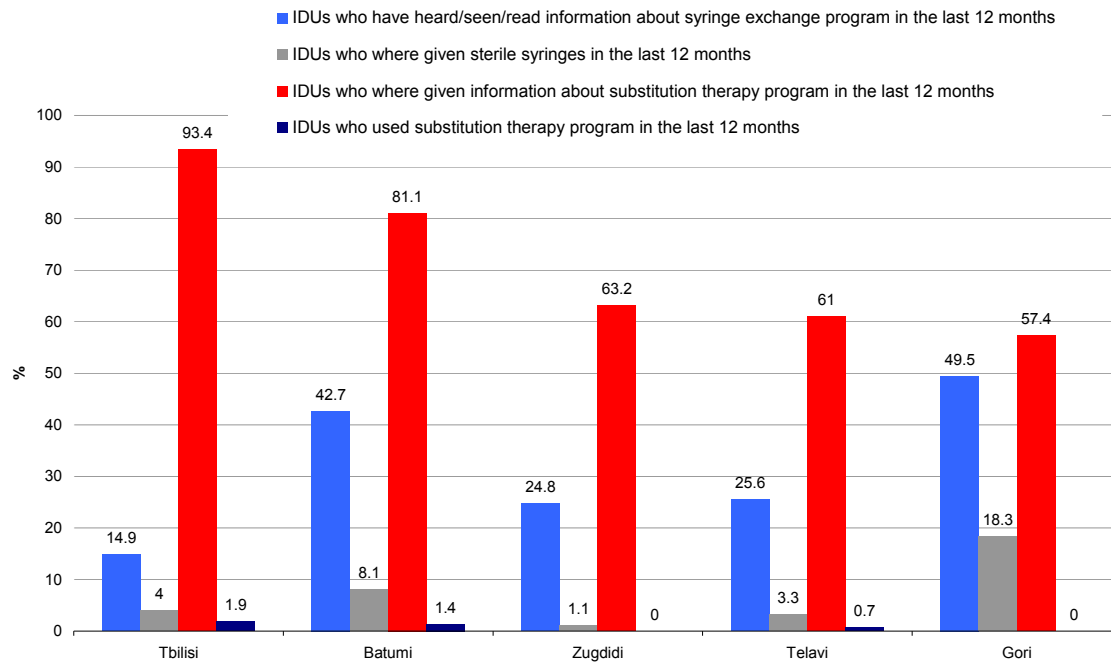
Proportion of those who received full package including condom, IEC material and qualified information on HIV/AIDS is much lower (from 2.9% in Telavi to 18% in Batumi), indicating that there problems exist to only with the coverage, but with a quality of services as well. Preventive program strategies are not standardized, and programs that had reached IDUs have missed opportunities to deliver full preventive package.

**Figure 14: IDUs who were given condoms, IEC materials and/or qualified information on HIV/AIDS last 12 months (N = the sample sizes)**



Proportion of IDUs who have heard/seen/read information about syringe exchange program in the last 12 month varies from 14.9% in Tbilisi to 49.5% in Gori and significantly less proportion actually benefited from this program, with the higher rate found among Gori respondents (18%). Substitution therapy program is relatively well known among IDUs. As predicted a limited number of respondents reported usage of this program in the last 12 month, as far as those successfully enrolled in the program should refrain from the intravenous drug usage (see Figure 15 below).

**Figure 15: Awareness and participation in syringe exchange and methadone substitution program last 12 months (N = the sample sizes)**



More than three-fourth of respondents reported they have no social influence to continue drug injection and proportion of such IDUs varies from 76.2% in Tbilisi to 85.9% in Gori. However, from those who responded positively, needle partners were mentioned mostly (by 12.7%-21.2% of respondents).

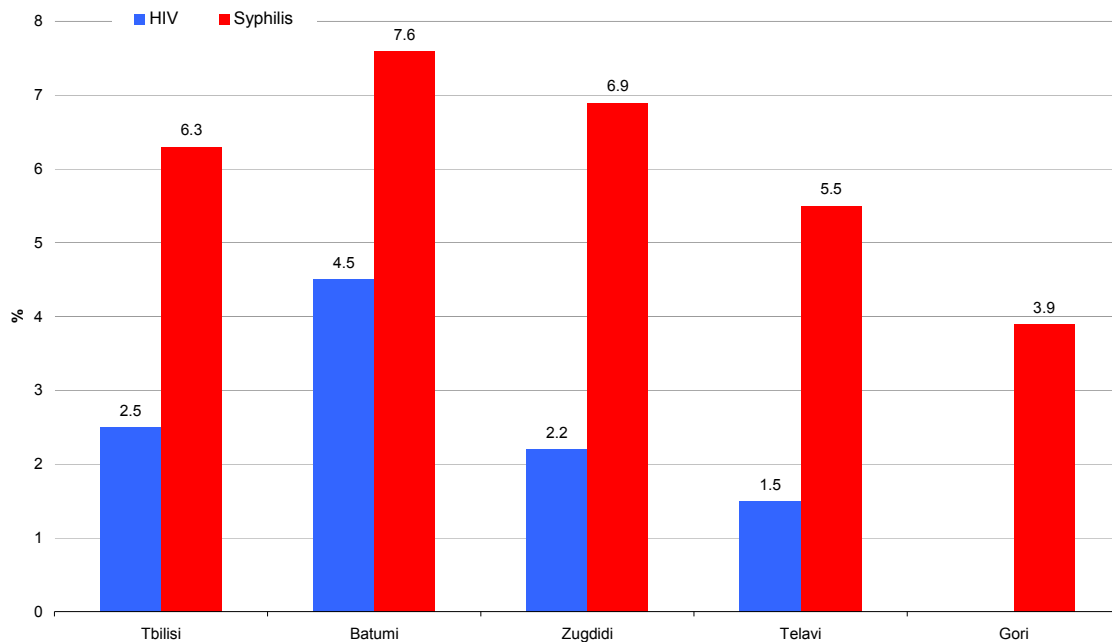
Analysis shows that major impact on IDUs in terms of quitting the using of drugs have friends (26.7%-57.1%), parents (13.2%-31.1%) and spouse/sex partner (14.6%-29.6%)

### **Prevalence of HIV and Syphilis**

None of HIV positive IDUs were found in Gori. For the rest of the survey sites the prevalence ranges as follows: Telavi (1.5 %, 95% CI 0 - 3.5, n=3/205), Zugdidi (2.2%, 95% CI 0 - 3.5, n=3/204), followed by Tbilisi (2.5%, 95% CI 0.3 - 5.4, n=7/306) and the highest prevalence found among Batumi IDUs (4.5%, 95% CI 1.5 - 8.0, n=9/206).

As for syphilis, the prevalence ranges as follows: Gori (3.9%, 95% CI 1.1 - 7.3, n=7/187), Telavi (5.5% 95% CI 2.5 - 8.5, n=11/205), Tbilisi (6.3%, 95% CI 3.7 - 9.3, n=19/306), Zugdidi (6.9%, 95% CI 3.5 - 11, n=14/204) and Batumi (7.6%, 95% CI 4.0 – 12.0, n=19/206).

**Figure 16: Prevalence of HIV and syphilis**



No correlation was found between Syphilis and HIV positive IDUs. Only one co-infection was found.

All five study samples were analyzed to find out prevalence rates among different age groups.

**Table 7: HIV and Syphilis prevalence by age groups (N=1,107 and 1,108 respectively)\***

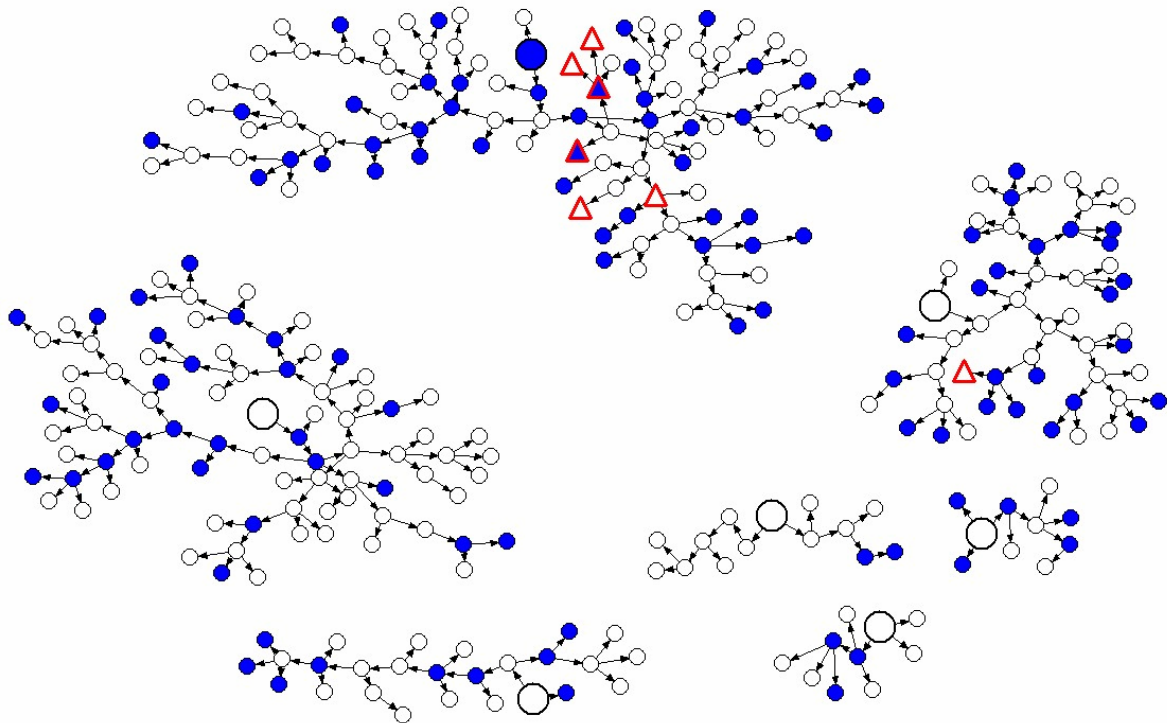
| Biomarker | 18-24 | 25-30 | 31-40 | 41-50 | 50 + | p value |
|-----------|-------|-------|-------|-------|------|---------|
| HIV       | 0%    | 0.4%  | 2.6%  | 3.4%  | 1.5% | 0.07    |
| Syphilis  | 2.1%  | 2.6%  | 6.1%  | 9.7%  | 9.2% | 0.006   |

HIV prevalence is higher among 41-50 years age group. Higher Syphilis rates in older age groups may be an indication of the lifetime experience with the infection given that the TPHA test system does not allow distinguishing between acute or past infection. However, 2.1% syphilis prevalence rate in young age group most likely indicates a new infection.

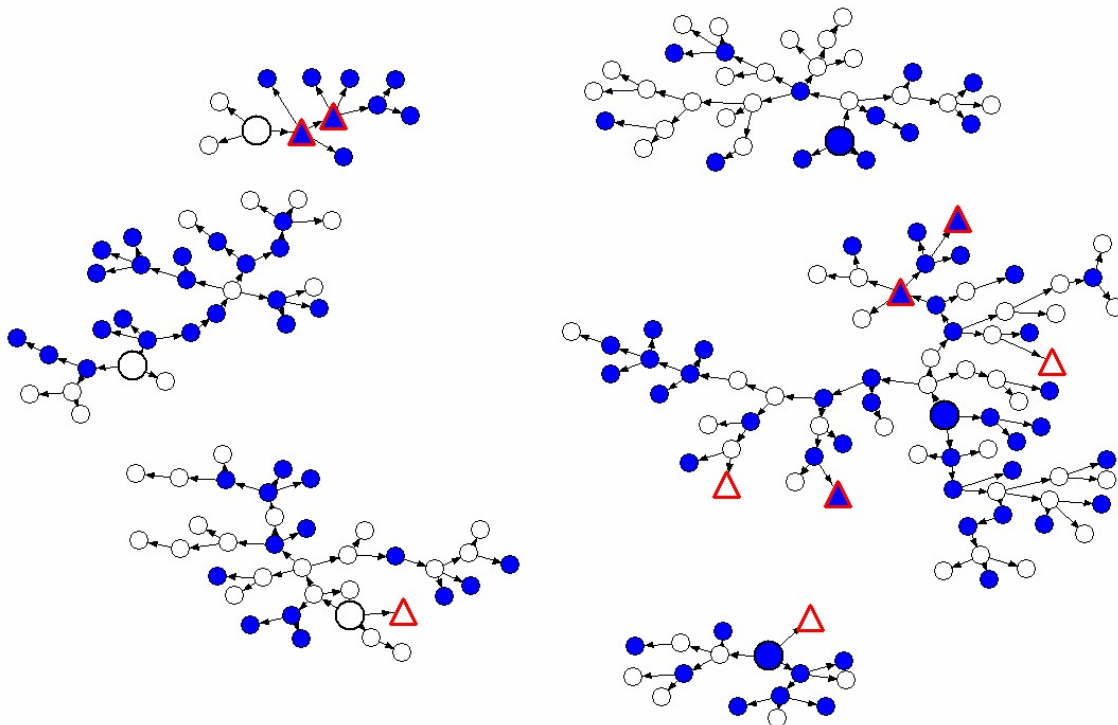
### **Recruitment pattern by safe/unsafe injection practice and HIV status**

The figure below represents recruitment patterns of IDUs by reporting safe and unsafe injection practice at last injections and their HIV status.





**Figure 17: Recruitment chain of Tbilisi IDUs by reporting safe/unsafe injection practice and HIV status**



**Figure 18: Recruitment chain of Batumi IDUs by reporting safe/unsafe injection practice and HIV status**



Larger symbols represent seeds and smaller symbols represent subsequent recruits.

-  HIV negative with safe injection practice at last injection
-  HIV negative with unsafe injection practice at last injection
-  HIV positive with safe injection practice at last injection
-  HIV positive with unsafe injection practice at last injection

The figures illustrate that IDUs practicing safe and unsafe behavior have network with each other. Such mixed pattern can create good ground for peer education. Those with safe practice after proper education could motivate their peers towards safer behavior.

In Tbilisi sample one biggest chain accumulates almost all HIV cases located in close proximity. Some of them still practice unsafe behavior thus creating risk to their peers.

More clustering is observed in Batumi sample. Two chains result in small clusters of IDUs with unsafe behavior and HIV cases.

## Study Limitations

The findings of the survey should be interpreted in the light of certain limitations:

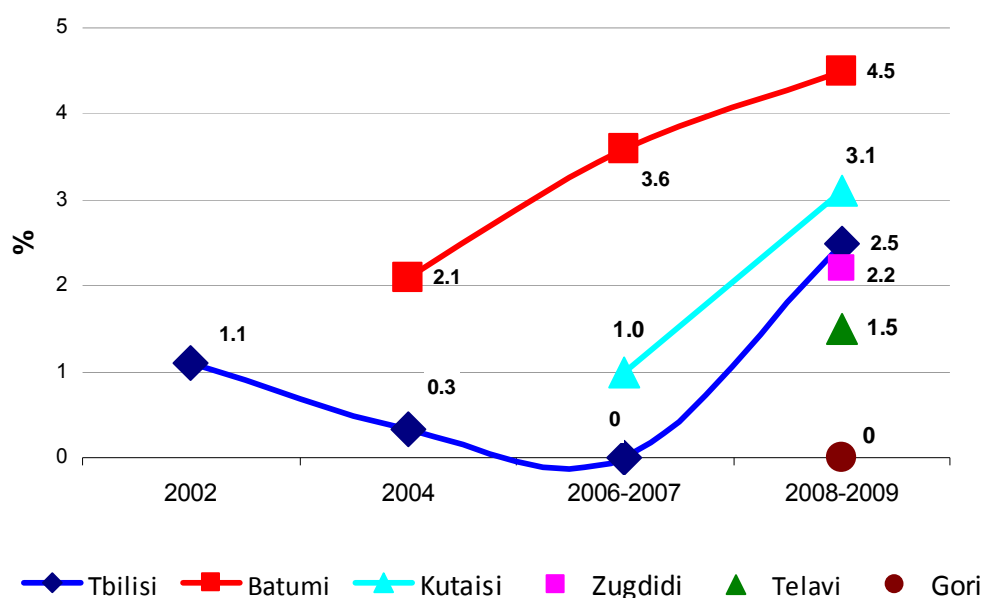
- **Sampling bias.** One advantage of the RDS method is that it is based on recruiting people from their networks, as it is impossible to make sampling frames of high-risk groups. However, there are several potential sources of error and bias in RDS. These include the influence of non-response bias, selection of seeds, and others. Although our original seeds were not as diverse as we intended them to be, a comparison of the seeds versus the final sample shows that RDS resulted in different characteristics of the final samples. For instance, in terms of demographic characteristics such as age groups Tbilisi seeds represent all sub-groups, however IDUs less than 25 years of age formed only 7.6 % of the final sample; therefore, the small proportion of under -25 years age group in Tbilisi sample should be treated with caution.
- **Inclusion criteria.** Another study limitation is related to the inclusion criteria adopted. Due to the need of parental consent for enrollment of 15-17 years old individuals, this age group was not represented in the sample, especially in light of the fact that 52.9% of Tbilisi sample started injecting drugs at age 15-19.
- **Reporting bias.** As in any interview-based surveys, it is possible that respondents may not have accurately answered some of the sensitive questions, or may have had difficulties in recalling information. Due to social stigma, some behaviors, such as condom use, drug injection or needle sharing, having same gender sex may be under-reported by respondents. Since all interviews were conducted in private places, the survey was anonymous and personal identification details were not collected, it is expected that this might minimize reporting bias.
- **Limited gender distribution.** Disaggregated analysis by gender was not possible since there were only few female IDUs recruited. The small numbers of women participating in the studies may indicate that they are difficult to reach.

## Discussion

Overall, the Bio-BSS findings provide valuable data regarding the presence of HIV and risk behaviors among IDU population at increased risk of exposure to and transmission of HIV in Georgia. Comparative analyses with the previous Bio-BSS studies undertaken since 2002<sup>11</sup>, allows measuring changes over the years and gives directions for future focus of preventive strategies.

2008-2009 HIV prevalence in Batumi, Tbilisi and Kutaisi was higher than that in other study years, with Batumi maintaining leading place among other cities (Figure 19). Although there is no statistically significant change among Batumi IDUs prevalence rates across the years. Similarly, no statistically significant difference was detected between 2002 and 2008 Tbilisi data, however, the increase from 2004 (0.3%) to 2008 (2.5%) was found to be statistically significant.

**Figure 19: Prevalence of HIV by years (Bio-BSS studies)**



The IDU population size estimation study undertaken in 2009 in five cities of Georgia in conjunction with the current Bio-BSS<sup>12</sup> estimated that around 82% of IDUs reside in above

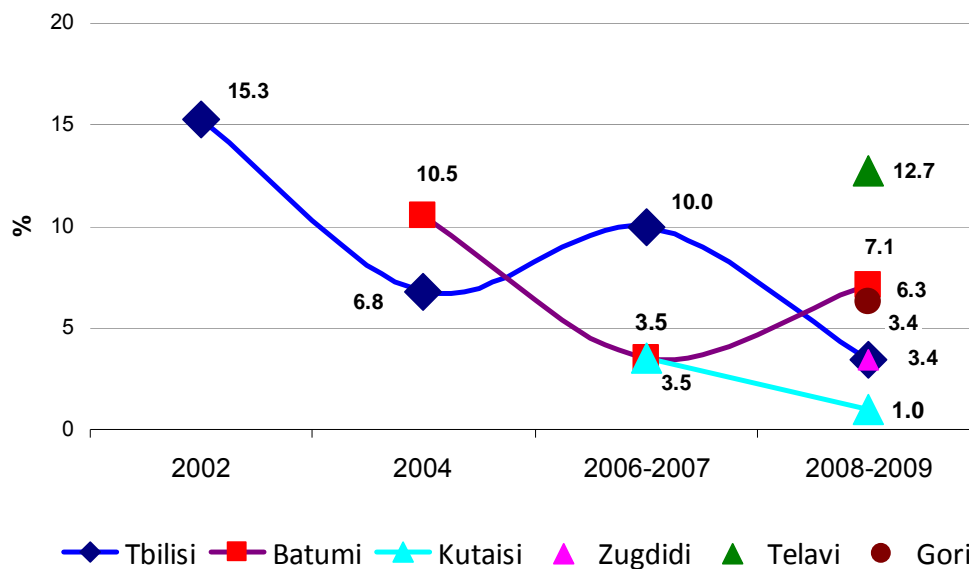
<sup>11</sup> Reports of the Behavioral Surveillance Surveys with a Biomarker component for the SHIP project. 2002-2006 Tbilisi, 2004-2007 Batumi, 2009 Kutaisi. The data are analyzed in SPSS and do not represent population estimates as generated by RDSAT.

<sup>12</sup> Estimating the prevalence of Injection Drug Use in Five Cities of Georgia, 2009. (SCAD-5 Programme)

mentioned cities: Tbilisi, Batumi, Zugdidi, Telavi, Gori and Kutaisi. Combined data analyses indicate that HIV prevalence rate in these cities amount to 2.1% with 95% CI (1.38 – 3.19).

The gap between knowledge and adoption of positive behaviors is evident. In spite of knowing that sharing of needle/syringes may transmit HIV, needle sharing is still practiced. The studies results showed positive changes with this regard since 2002. The decreasing trend in Tbilisi from 15.3% (2002) to 3.4% (2008) appeared to be statistically significant. However Batumi data comparison showed no statistically significant change from 10.5% (2004) to 7.1% (2008). Nevertheless Batumi data comparison showed no statistically significant change from 10.5% (2004) to 7.1% (2008).

**Figure 20: Sharing of needle/syringe at last injection by years (Bio-BSS studies)**



The current studies show that IDUs may change their behavior when injection takes place outside their regular environment (other country, city). This indicates that sharing behavior is situation-related and may change towards risky or safer way depending on a given environment. It is worth to mention that needle/syringe sharing could be considered by IDUs as a socially unacceptable behavior that result in response bias leading to under-reporting of needle and syringe sharing comparing to other equipment sharing behavior.

Particularly common practice is sharing of injecting paraphernalia reaching high levels in the sites outside the capital city. The results could indicate that IDUs do not perceive sharing of equipment and solution as risky for HIV transmission as sharing of needle/syringe. As current studies show such risky behavior is linked to the type of drug injected (higher risks associated

with self-made amphetamine-type stimulants use that is explained by drug solution preparation techniques).

Noteworthy is increase of ephedrone / methcathinone injection over the years in Tbilisi and Batumi. More IDUs injected this type of drug in 2008 (15.6%) during the week prior to survey compared to 2006 (7.5%) in Tbilisi ( $p<0.005$ ). Similarly more IDUs injected this drug in 2008 (11.5%) than two years before (1.0%) in Batumi ( $p<0.005$ ). This trend is alarming considering unsafe injection behavior associates with its consumption.

Overall injecting risk behaviors are observed among IDUs of all survey locations, however the highest prevalence is attributed to Gori IDUs.

Preventive strategies should consider early initiation of drug injection practice. Majority of IDUs living in large cities inject first time in their late teens (15-19 years), while first drug use occurs even earlier (<14 years).

Knowledge concerning HIV transmission is relatively good. Most are aware that the main transmission risks are unsafe injection practices as well as unprotected sex with an infected person. On the other hand, there are some misconceptions about HIV transmission that may contribute to the stigmatization and discrimination of people living with HIV and AIDS. In general older IDUs are more knowledgeable compared to their young counterparts, making this group more vulnerable for HIV transmission.

The studies found high risk sexual behaviors among IDUs. Alarming findings are with regard to concurrent sexual partnerships, which are considered to be an important risk factor in the HIV sexual transmission.<sup>13</sup> Occasional sexual relationship is similarly common among unmarried and married IDUs. Although majority understand that condoms provide best protection against HIV there is very low HIV risk perception attributed to occasional sex partners. On average every second who have occasional sex partners practice unprotected sex with them. Such behavior is particularly conscious in light of unacceptably low condom use with the regular sex partners.

At least one-tenth of married IDUs purchased sex during last year, reaching highest rate among Batumi respondents. Although unprotected sex with paid sex partner is relatively low, Batumi IDUs are outstanding: every six who purchased sex during last year has never used condom.

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<sup>13</sup> Malaba et al., 1994; Wawer et al., 1994; McFarland, Mvere & Katzenshtein, 1997; Chen et al., 2007; Mishra et al., 2007

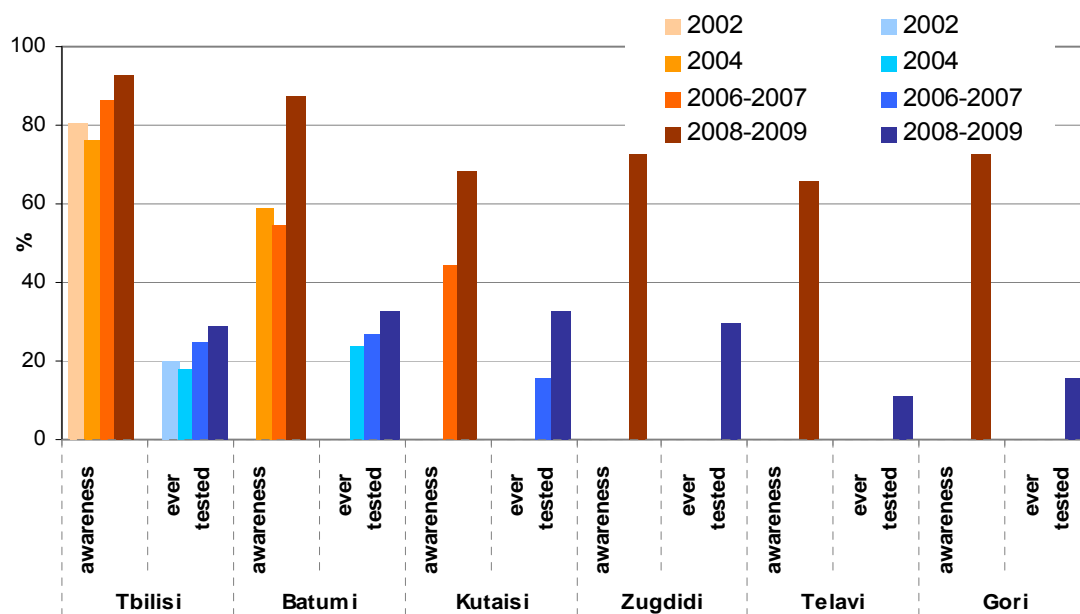
Comparison with the previous year Bio-BSS study findings indicate that there are no significant change with the sexual risk behaviors, with exception of Tbilisi IDUs, among which significantly less used condom with occasional partners since 2006.

High risk sexual behavior could also be proved by relatively high syphilis prevalence, although it may be indicative of the lifetime infection as well. However, prevalence rate (2.1%) among 18-24 years age group most likely indicates a new infection and their current unprotected sex behavior.

The studies reveal low coverage of IDUs with preventive programs including needle exchange that underline the need to strengthen these services and make them more accessible to IDUs.

Despite high accessibility to confidential HIV testing small proportion of IDUs has ever been tested and even fewer has been tested within last 12 months. The worst HIV testing experience was observed among ephedrone users and those aged 18-24 years. There is small increase in testing practice since 2002.

**Figure 21: Awareness on voluntary HIV testing in community and ever tested experience by years (Bio-BSS studies)**



Low uptake of VCT services indicates that large proportion of IDUs is unaware of their HIV status, which leads to high risk behaviors. Untested HIV positive individuals may unknowingly transmit infection to their sex partners or drug injection friends. More research is needed to

understand the reasons of poor acceptance of VCT and outreach services in the settings where such services are available.

IDUs as a priority groups have been targeted by various preventive programs, however the study findings indicate that coverage and quality of these activities have been modest at best. Very small proportion of IDUs is accessed by comprehensive interventions including educational materials, condoms and qualified information on HIV/AIDS.

Treatment services are not accessible to IDUs. When needed majority rely on self or help of others, rather than on medical system.

The findings clearly indicate the critical need to intensify efforts among IDU population, especially in the regions. HIV epidemic is well-established in Batumi, and remains at a relatively lower level in other cities. Alarming situation with regard to risky behaviors exist in Gori as well as in Batumi. Even though no HIV-positive cases were detected in Gori, there is substantial potential for its rapid spread. Although declining but still prevalent high risk injection behaviors make IDUs vulnerable to HIV /AIDS. On the other hand high risk sexual behaviors increase bridging role of IDU population in possibility of HIV transmission to their sex partners.

## Recommendations

Following recommendations are proposed to affectively address the problems, weaknesses and gaps reveled through the current studies:

### ***Increasing IDU coverage and Strengthening outreach programmes and NGOs that work on harm reduction***

The surveys identified substantial need for increasing coverage and quality of preventive and harm reduction services.

- Testing of IDUs who unaware of their status will be the most effective intervention in preventing further spread of infection, therefore there is an extreme need to increase uptake of the VCT services. More research is needed to understand the reasons of poor utilization of VCT services by IDU.
- Preventive programs should improve quality of services though delivering comprehensive and standardizes interventions.
- Comprehensive preventive programs focusing on harm of drug use, HIV/AIDS and sex education should target school children in high classes, college students and youth.
- Harm reduction messages should specifically focus on the risk of using shared paraphernalia. IDUs who are not able to quit their injecting behaviors should be given knowledge about proper cleaning of used needles in order to minimize the spread of infection among the injectors.
- Drug-specific interventions should be designed and implemented primary against self-made amphetamine-type stimulants (ephedrone/ methcathinone) users, who are characterized with higher risk behaviors.
- There is a need to reemphasize the necessity of consistent condom use with any sex partner. More in-depth research should be undertaken to explore the barriers to inconsistent condom use. Condom distribution must be supplemented with other risk reduction education, including building motivation and skills to use condoms, promoting HIV testing, and preventing drug use. There is a need to strengthen the sexual health services offered to IDUs and family focused interventions.

- Strengthening of peer education is of great importance. Educated IDUs would communicate and negotiate safe practices to the peers leading to their behavior change.
- Comprehensive drug prevention and treatment interventions that can reduce drug consumption as well as injection-related risky behaviors need to be strengthened and expanded.
- Rehabilitation and detoxification centers should be further extended and supported for providing necessary services to IDUs in order to increase the availability of treatment.
- Interventions should especially be intensified in Batumi and Gori where high HIV prevalence and risk behaviors create ground for further spread of infection.

***Continue with surveillance***

- The next surveys among IDUs using RDS should be carried out in these cities in the next 2-3 years and possibly also in other cities where BSS is not yet conducted.
- Additional research is needed to explore the extent of drug use among females and the ways they can be enrolled in preventive programs.

## Annex 1: Data tables - Tbilisi, Batumi, Zugdidi, Telavi, and Gori

**Table 8: Socio - Demographic Characteristics**

|                          | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|--------------------------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
| Characteristics          | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| Age                      |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| 18 - 24                  | 7.6 (4.0 - 12.0)                     | 21/307  | 12.5 (7.0 - 18.8)                    | 25/206  | 15.4 (9.4 - 22.1)                    | 27/204  | 18.3 (12.5 - 24.5)                   | 34/205  | 23.1 (14.1 - 33)                     | 35/205  |
| 25 - 30                  | 16.8 (12.3 - 21.4)                   | 51/307  | 24.6 (17.0 - 33.2)                   | 47/206  | 22.6 (16.9 - 29.0)                   | 45/204  | 29.5 (22.3 - 37.2)                   | 55/205  | 20.0 (14.5 - 25.9)                   | 38/205  |
| 31 - 40                  | 26.5 (21.3 - 31.7)                   | 80/307  | 37.5 (30.0 - 45.2)                   | 78/206  | 37.9 (31.0 - 45.0)                   | 78/204  | 35.8 (28.5 - 43.2)                   | 76/205  | 33.6 (26.6 - 41.0)                   | 74/205  |
| 41 - 50                  | 38.8 (32.0 - 46.0)                   | 122/307 | 22.1 (15.9 - 28.5)                   | 48/206  | 18.0 (12.4 - 24.0)                   | 40/204  | 14.9 (9.0 - 21.6)                    | 36/205  | 18.4 (11.9 - 25.6)                   | 50/205  |
| 50+                      | 10.3 (7.0 - 14.0)                    | 33/307  | 3.3 (1.0 - 6.0)                      | 8/206   | 6.1 (3.0 - 9.6)                      | 14/204  | 1.5 (0 - 4.0)                        | 4/205   | 4.9 (2.0 - 8.4)                      | 8/205   |
| Mean (minimum - maximum) | 38.4 (20 - 60)                       |         | 35.07 (19 - 63)                      |         | 34.8 (19 - 59)                       |         | 33.0 (18 - 58)                       |         | 34.57 (18 - 60)                      |         |
| Median                   | 40                                   |         | 35                                   |         | 35                                   |         | 32                                   |         | 34                                   |         |
| Gender                   |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Male                     | 99.3 (98.1 - 99.7)                   | 304/307 | 98.1 (95.5 - 100)                    | 200/206 | 99.5 (98.5 - 100)                    | 203/204 | 100                                  | 205/205 | 97.7 (95.0 - 99.5)                   | 200/205 |
| Female                   | 0.7 (0.3 - 1.7)                      | 3/307   | 1.9 (0 - 4.5)                        | 6/206   | 0.5 (0 - 1.5)                        | 1/204   | 0                                    | 0/205   | 2.3 (0.5 - 5.0)                      | 5/205   |
| Educational status       |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Primary                  | 0                                    | 0/307   | 0                                    | 0/206   | 0                                    | 0/204   | 1.9 (-- --)                          | 1/205   | 0.9 (0 - 2.5)                        | 2/205   |
| Secondary                | 27.1 (22.0 - 32.7)                   | 82/307  | 70.2 (63.0 - 77.0)                   | 142/206 | 57.4 (49.6 - 64.5)                   | 118/204 | 64.4 (60.5 - 75.0)                   | 138/205 | 67.1 (59.5 - 74.5)                   | 136/205 |
| Incomplete higher        | 5.3 (3.0 - 8.0)                      | 16/307  | 7.0 (3.5 - 10.9)                     | 15/206  | 6.0 (3.0 - 9.5)                      | 12/204  | 3.8 (0.5 - 4.5)                      | 5/205   | 3.0 (1.0 - 5.5)                      | 7/205   |
| Higher                   | 67.6 (62.0 - 73.0)                   | 209/307 | 22.8 (16.5 - 29.5)                   | 49/206  | 36.6 (30.0 - 43.5)                   | 74/204  | 30.0 (22.0 - 36.5)                   | 61/205  | 28.9 (22.1 - 36.0)                   | 60/205  |
| Ethnicity                |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Georgian                 | 94.7 (92.0 - 97.0)                   | 291/307 | 90.8 (86.5 - 95.0)                   | 188/206 | 99.5 (98.5 - 100)                    | 203/204 | 96.6 (94.0 - 99.0)                   | 198/205 | 95.0 (92.0 - 97.5)                   | 194/205 |
| Other                    | 5.3 (3.0 - 8.0)                      | 16/307  | 9.2 (5.0 - 13.5)                     | 18/206  | 0.5 (0 - 1.5)                        | 1/204   | 3.4 (1.0 - 6.0)                      | 7/205   | 5 (2.5 - 8.0)                        | 11/205  |
| Marital status           |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Married                  | 53.6 (47.0 - 60.3)                   | 167/307 | 47.2 (39.5 - 54.7)                   | 95/206  | 49.5 (43.0 - 57.5)                   | 105/204 | 41.0 (33.5 - 49.6)                   | 84/205  | 54.1 (47.5 - 61.0)                   | 109/205 |
| Divorced/Separated       | 21.0 (16.3 - 25.7)                   | 62/307  | 12.4 (7.5 - 17.6)                    | 27/206  | 4.6 (1.5 - 8.3)                      | 8/204   | 10.4 (6.0 - 15.0)                    | 21/205  | 9.2 (5.5 - 13.5)                     | 20/205  |
| Widower                  | 0                                    | 0/307   | 1.9 (0.5 - 4.0)                      | 4/206   | 0.8 (0 - 1.5)                        | 1/204   | 0.7 (0 - 1.5)                        | 1/205   | 0.5 (0 - 1.5)                        | 2/205   |
| Never been married       | 25.4 (20.3 - 31.0)                   | 78/307  | 38.5 (31.0 - 46.0)                   | 80/206  | 45.2 (38.5 - 51.5)                   | 90/204  | 47.9 (39.5 - 56.0)                   | 99/205  | 36.2 (30.0 - 42.5)                   | 74/205  |
| Living arrangements      |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |

| Characteristics   | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|---|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
|   | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| With spouse   | 53.4 (47.3 - 59.6)                   | 163/307 | 46.7 (39.4 - 54.5)                   | 95/206  | 49.7 (43.2 - 57.5)                   | 103/204 | 40.4 (32.5 - 48.5)                   | 83/205  | 53.6 (46.6 - 60.5)                   | 109/205 |
| With partner  | 2.8 (1.0 - 4.7)                      | 8/307   | 3.0 (1.0 - 5.5)                      | 7/206   | 0.8 (0 - 2.0)                        | 1/204   | 1.0 (0 - 2.5)                        | 2/205   | 1.5 (0 - 3.5)                        | 3/205   |
| Single  | 43.8 (38.0 - 49.7)                   | 136/307 | 50.2 (42.1 - 57.9)                   | 104/206 | 48.7 (41.5 - 55.5)                   | 99/204  | 58.6 (50.5 - 66.6)                   | 120/205 | 45.0 (38 - 52)                       | 93/205  |
| Refused to Answer   | 0                                    | 0/307   | 0                                    | 0/206   | 0.8 (0 - 2.0)                        | 1/204   | 0                                    | 0/205   | 0                                    | 0/205   |
| Place of residence*   |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| City  |                                      |         | 87.4 (81.5 - 91.9)                   | 180/206 | 83.3 (76.9 - 88.6)                   | 170/204 | 85.9 (79.8 - 90.7)                   | 176/205 | 94.2 (91.5 - 97.5)                   | 194/205 |
| Village   |                                      |         | 12.1 (7.7 - 17.9)                    | 25/206  | 13.7 (9.0 - 19.8)                    | 28/204  | 11.2 (7.0 - 16.8)                    | 23/205  | 5.1 (2.0 - 8.0)                      | 10/205  |
| Refusal   |                                      |         | 0.5 (0 - 2.6)                        | 1/206   | 2.9 (1.1 - 6.5)                      | 6/204   | 2.9 (1.1 - 6.5)                      | 6/205   | 0.07 (0 - 1.5)                       | 1/205   |
| Tbilisi Vake - Saburtalo district                           | 63.8 (57.6 - 69.8)                   | 196/307 |                                      |         |                                      |         |                                      |         |                                      |         |
| Tbilisi Mtastminda - Krtsanisi district                     | 7.5 (4.6 - 11.4)                     | 23/307  |                                      |         |                                      |         |                                      |         |                                      |         |
| Tbilisi Didube - Chugureti district                         | 12.7 (8.9 - 17.4)                    | 39/307  |                                      |         |                                      |         |                                      |         |                                      |         |
| Tbilisi Gldani - Nadzaladevi district                       | 10.4 (7 - 14.8)                      | 32/307  |                                      |         |                                      |         |                                      |         |                                      |         |
| Tbilisi Isani - Samgori district                            | 5.5 (3.1 - 9.0)                      | 17/307  |                                      |         |                                      |         |                                      |         |                                      |         |
| Spent more than a month out of place of permanent residence |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes   | 13.0 (9.0 - 17.3)                    | 39/307  | 36.8 (30.0 - 44.0)                   | 75/206  | 35.6 (28.5 - 42.9)                   | 73/204  | 39.0 (32.1 - 46.0)                   | 80/205  | 42.4 (35.4 - 49.5)                   | 85/205  |
| No  | 87.0 (82.7 - 91)                     | 268/307 | 63.2 (56.0 - 70.0)                   | 131/206 | 64.4 (57.2 - 71.5)                   | 131/204 | 61.0 (54.0 - 68.0)                   | 125/205 | 57.6 (50.5 - 64.6)                   | 120/205 |
| IDP status  |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes   | 0.7 (0 - 1.0)                        | 1/307   | 0                                    | 0/206   | 8.5 (5.0 - 12.0)                     | 18/204  | 0                                    | 0/205   | 1.0 (0.05 - 2.5)                     | 2/205   |
| No  | 99.3 (99.0 - 100)                    | 306/307 | 100                                  | 206/206 | 91.5 (88.0 - 95.0)                   | 186/204 | 100                                  | 205/205 | 99.0 (97.5 - 99.5)                   | 203/205 |
| Police and prison experience                                |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Detained in administrative sentence                         | 50.9 (44.6 - 57.3)                   | 160/307 | 50.9 (43.5 - 58.0)                   | 106/206 | 33.5 (27.0 - 40.0)                   | 69/204  | 30.4 (24.5 - 36.5)                   | 63/205  | 27.5 (21.5 - 33.5)                   | 57/205  |
| Imprisoned before trial                                     | 30.5 (25.6 - 35.7)                   | 94/307  | 37.9 (30.5 - 45.9)                   | 79/206  | 37.8 (31.0 - 44.5)                   | 77/204  | 35.7 (29.5 - 42.0)                   | 73/205  | 27.0 (21.0 - 33.5)                   | 58/205  |
| Imprisoned  | 12.3 (8.7 - 16.0)                    | 38/307  | 20.8 (15.0 - 27.0)                   | 42/206  | 11.7 (7.5 - 16.5)                    | 23/204  | 7.4 (4.0 - 11.0)                     | 16/205  | 6.2 (3.0 - 10.3)                     | 15/205  |

**Table 9: Drug use history**

|   | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|---|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
| Drug using behavior                       | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| Age when first used drug:                 |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| <15                                       | 24.9 (20.0 - 30.3)                   | 76/307  | 28.4 (21.6 - 5.5)                    | 59/206  | 14.3 (9.9 - 19)                      | 29/204  | 12.3 (7.5 - 17.5)                    | 26/205  | 11.8 (7.5 - 16.4)                    | 24/205  |
| 15 - 19                                   | 62.9 ( 57.0 - 68.7)                  | 192/307 | 59.0 (52.0 - 66.0)                   | 120/206 | 70.8 (65 - 76.5)                     | 142/204 | 67.9 (61.5 - 74.1)                   | 139/205 | 67.9 (61.0 - 74.9)                   | 140/205 |
| 20 - 24                                   | 10.2 (7.0 - 13.7)                    | 33/307  | 10.3 (6.0 - 14.9)                    | 22/206  | 11 (6.5 - 15.9)                      | 25/204  | 14.4 (1.0 - 19.0)                    | 29/205  | 16.0 (11.0 - 21.5)                   | 31/205  |
| 25+                                       | 1.9 (0.7 - 3.7)                      | 6/307   | 2.3 (0.5 - 4.5)                      | 5/206   | 3.9 (1.5 - 6.5)                      | 8/204   | 5.4 (2.5 - 8.5)                      | 11/205  | 4.4 (2.0 - 7.1)                      | 10/205  |
| Mean (minimum - maximum)                  | 16.33 ( 9 - 35)                      |         | 16.2 (9 - 30)                        |         | 16.8 (11 - 29)                       |         | 17.5 (13 - 40)                       |         | 17.57 (12 - 39)                      |         |
| Median                                    | 16                                   |         | 16                                   |         | 16                                   |         | 17                                   |         | 17                                   |         |
| Age when first injected drug              |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| <15                                       | 4.6 (2.3 – 7.0)                      | 14/307  | 2.7 (1.0 - 5.0)                      | 6/206   | 2.3 (0.5 - 4.5)                      | 5/204   | 0.5 (0 - 1.5)                        | 1/205   | 0.07 (0.05 - 3.5)                    | 2/205   |
| 15 - 19                                   | 52.9 (46.7 - 59.0)                   | 163/307 | 53.9 (46.0 - 62.0)                   | 110/206 | 56.2 (48.5 – 64.0)                   | 110/204 | 35 (29.5 - 40.6)                     | 74/205  | 39.7 (32.5 - 7.5)                    | 84/205  |
| 20 - 24                                   | 26.7 (21.0 - 32.4)                   | 83/307  | 27.5 (21.0 - 34.5)                   | 57/206  | 24.3 (18.0 - 30.6)                   | 51/204  | 37.8 (32.1 - 43.5)                   | 77/205  | 35.8 (29.0 – 42.0)                   | 72/205  |
| 25+                                       | 15.8 ( 11.3 - 20.7)                  | 4/307   | 15.9 (10.5 - 22.0)                   | 33/206  | 17.2 (12.0 - 22.5)                   | 38/204  | 26.6 (20.9 - 32.5)                   | 53/205  | 23.8 (17.5 – 30.0)                   | 47/205  |
| Mean (minimum - maximum)                  | 19.81 (13 - 35)                      |         | 19.8 (13 - 34)                       |         | 20 (14 - 40)                         |         | 21.9 (14 - 42)                       |         | 21.96 (14 - 53)                      |         |
| Median                                    | 19                                   |         | 19                                   |         | 18                                   |         | 20                                   |         | 20                                   |         |
| Duration of injecting drug use in years   |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Mean (minimum - maximum)                  | 11.93 (0.4 - 37)                     |         | 9.9 (0.5 - 40)                       |         | 9.8 (0.5 - 30)                       |         | 8.2 (0.5 - 30)                       |         | 7.42 (0.2 - 39)                      |         |
| Median                                    | 10                                   |         | 7                                    |         | 8                                    |         | 6                                    |         | 5                                    |         |
| Frequency of injecting drug use last week |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Once a week                               | 6.6 (3.7 - 9.7)                      | 20/307  | 11.3 (7.0 - 15.5)                    | 23/206  | 7.8 (4.0 - 11.0)                     | 17/204  | 9.8 (6.0 - 13.5)                     | 19/205  | 10.6 ( 6.0 - 15.4)                   | 22/205  |
| Several times a week                      | 43.7 (38.0 - 49.4)                   | 130/307 | 42.5 (33.8 - 1.5)                    | 82/206  | 10.6 (6.0 - 15.1)                    | 19/204  | 8.7 (4.5 - 13.0)                     | 17/205  | 33.6 (28.5 - 0.4)                    | 67/205  |
| Once a day                                | 18.5 (14.3 - 22.7)                   | 57/307  | 3.2 (1.0 - 5.6)                      | 7/206   | 2.1 (0 - 3.5)                        | 2/204   | 0                                    | 0/205   | 6.1 (3.0 - 9.0)                      | 12/205  |
| Several times a day                       | 13.8 (9.7 - 17.7)                    | 42/307  | 4.2 (1.5 - 7.5)                      | 10/206  | 2.3 (0.5 - 4.0)                      | 4/204   | 1.4 (0 - 2.5)                        | 2/205   | 5.1 (2.5 - 8.0)                      | 11/205  |
| Have not taken                            | 17.0 (13.0 - 22.0)                   | 57/307  | 38.8 (30.7 - 47)                     | 84/206  | 77.3 (73.0 - 84.4)                   | 162/204 | 80.1 (75.4 - 87.0)                   | 167/205 | 43.4 (36.0 - 50.9)                   | 91/205  |
| No answer                                 | 0.4 (0 - 1.3)                        | 1/307   | 0                                    | 0/206   | 0                                    | 0/204   | 0                                    | 0/205   | 1.1 (0 - 2.5)                        | 2/205   |
| Member of regular injecting group         |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |

| Drug using behavior                        | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|--|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
|  | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| Yes  | 81.3 (75.3 - 86.7)                   | 253/307 | 60.1 (53.0 - 67.0)                   | 124/206 | 64.0 (57.5 - 70.5)                   | 132/204 | 67.0 (60.5 - 73.5)                   | 136/205 | 75.6 (69.0 - 81.9)                   | 151/205 |
| No   | 18.7 (13.3 - 24.7)                   | 54/307  | 39.9 (33.0 - 47.0)                   | 82/206  | 36.0 (29.5 - 42.5)                   | 72/204  | 33.0 (26.5 - 39.5)                   | 69/205  | 24.4 (18.1 - 31.0)                   | 54/205  |
| Mean number of injecting group members     | 4.67 (2 - 15)                        |         | 3.8 (2 - 10)                         |         | 4.6 (2 - 15)                         |         | 4.5 (2 - 10)                         |         | 4.62 (2 - 15)                        |         |
| Last week drug consumption                 |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| IDUs consumed drug(s) last week            | 51.6 (47.0 - 56.3)                   | 161/307 | 23.9 (18.0 - 30.1)                   | 49/206  | 8.0 (4.5 - 12.0)                     | 16/204  | 11.5 (7.0 - 16.5)                    | 24/205  | 16.6 (11.5 - 22.0)                   | 33/205  |
| Consumed drugs last week (drug groups)     |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| CNS depressants                            | 47.5 (39.3 - 55.4)                   | 76/161  | 34.0 (20.0 - 48.9)                   | 16/49   | 8.7 (0 - 21.1)                       | 1/16    | 13 (0 - 27.5)                        | 3/24    | 51.7 (31.0 - 72.4)                   | 17/33   |
| CNS stimulant                              | 0                                    | 0/161   | 6.1 (0 - 11.5)                       | 2/49    | 0                                    | 0/16    | 0                                    | 0/24    | 0                                    | 0/33    |
| Narcotic drugs                             | 41.5 (33.3 - 49.7)                   | 67/161  | 29.5 (16.2 - 43.5)                   | 15/49   | 0                                    | 0/16    | 6.2 (0 - 14.8)                       | 1/24    | 4.1 (0 - 10.0)                       | 1/33    |
| Hallucinogens                              | 45.1 (36.8 - 53.5)                   | 73/161  | 47.8 (33.3 - 62.3)                   | 23/49   | 75.0 (50.0 - 94.4)                   | 12/16   | 87.0 (72.0 - 100)                    | 21/24   | 51.7 (31.6 - 72.2)                   | 17/33   |
| Other psychoactive substances              | 3.8 (1.3 - 6.9)                      | 7/161   | 4.1 (0 - 10.2)                       | 2/49    | 18.6 (0 - 41.7)                      | 3/16    | 0                                    | 0/24    | 11.8 (0 - 20.0)                      | 3/33    |
| Mean # of drugs used                       | 1.66 (1 - 5)                         |         | 1.3 (1 - 3)                          |         | 1 (1 - 1)                            |         | 1.1 (1 - 2)                          |         | 1.27 (1 - 3)                         |         |
| Last week injection                        |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| IDUs injected drug(s) last week            | 82.9 (78.3 - 87.3)                   | 250/307 | 61.1 (52.9 - 69.0)                   | 122/206 | 21.2 (16.0 - 26.5)                   | 44/204  | 19.0 (13.0 - 25.0)                   | 38/205  | 55.1 (48.0 - 62.5)                   | 114/205 |
| Last week injection (drug groups)          |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| CNS depressants                            | 2.6 (0.8 - 5.2)                      | 7/250   | 0.9 (0 - 2.9)                        | 1/122   | 0                                    | 0/44    | 0                                    | 0/38    | 0                                    | 0/114   |
| CNS stimulants                             | 15.7 (10.8 - 20.9)                   | 39/250  | 13.0 (6.5 - 20.2)                    | 16/122  | 23.6 (11.8 - 35.9)                   | 10/44   | 36.4 (17.9 - 53.1)                   | 14/38   | 45.6 (35.9 - 55.4)                   | 51/114  |
| Narcotic drugs                             | 61.7 (55.2 - 68.1)                   | 154/250 | 91.4 (85.7 - 96.4)                   | 112/122 | 62.0 (46.2 - 78)                     | 28/44   | 58.4 (42.5 - 75.9)                   | 22/38   | 47.2 (36.4 - 57.9)                   | 55/114  |
| Other psychoactive substances              | 7.9 (4.7 - 11.5)                     | 20/250  | 0                                    | 0/122   | 15.9 (2.6 - 22.2)                    | 5/44    | 5.3 (0 - 13.9)                       | 2/38    | 2.7 (0.9 - 6.1)                      | 3/114   |
| Combination                                | 41.9 (35.4 - 48.5)                   | 104/250 | 4.2 (0.9 - 7.8)                      | 5/122   | 18.1 (6.1 - 31.9)                    | 8/44    | 10.8 (2.5 - 20.8)                    | 4/38    | 15.7 (8.1 - 24.5)                    | 17/114  |
| Mean # of drugs used                       | 1.46 (1 - 4)                         |         | 1.1 (1 - 4)                          |         | 1.2 (1 - 2)                          |         | 1.2 (1 - 3)                          |         | 1.17 (1 - 4)                         |         |
| Injected drugs last week (selected drugs)* |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Heroin                                     | 38.0 (31.3 - 45.0)                   | 95/250  | 93.4 (87.1 - 97.2)                   | 114/122 | 36.4 (21.7 - 53.2)                   | 16/44   | 42.1 (25.6 - 60.1)                   | 16/38   | 19.3 (12.1 - 28.5)                   | 22/114  |
| Buprenorphine (Subutex)                    | 74.4 (67.9 - 80.2)                   | 186/250 | 3.3 (0.9 - 8.4)                      | 4/122   | 36.4 (21.7 - 53.2)                   | 16/44   | 31.6 (17.0 - 49.6)                   | 12/38   | 38.6 (28.9 - 49.0)                   | 44/114  |
| Ephedrone                                  | 15.6 (11.0 - 21.2)                   | 39/250  | 11.5 (6.2 - 19.1)                    | 14/122  | 22.7 (11.1 - 38.7)                   | 10/44   | 36.8 (21.2 - 54.9)                   | 14/38   | 44.7 (34.6 - 55.2)                   | 51/114  |

| Drug using behavior   | TBILISI                              |        | BATUMI                               |       | ZUGDIDI                              |       | TELAVI                               |       | GORI                                 |        |
|---|--------------------------------------|--------|--------------------------------------|-------|--------------------------------------|-------|--------------------------------------|-------|--------------------------------------|--------|
|   | RDS population estimates, % (95% CI) | n/N    | RDS population estimates, % (95% CI) | n/N   | RDS population estimates, % (95% CI) | n/N   | RDS population estimates, % (95% CI) | n/N   | RDS population estimates, % (95% CI) | n/N    |
| Morphine  | 0.8 (0.1 - 2.9)                      | 2/250  | 0 (0 - 2.5)                          | 0/122 | 2.3 (0.2 - 11.7)                     | 1/44  | 0 (0 - 7.8)                          | 0/38  | 11.4 (6.0 - 19.3)                    | 13/114 |
| Switched from injection to consumption last month             |                                      |        |                                      |       |                                      |       |                                      |       |                                      |        |
| IDUs switched from injection to consumption during last month | 9.4 (6.0 - 13.3)                     | 32/307 | 1.0 (0 - 1.5)                        | 1/206 | 0.5 (0 - 1.5)                        | 1/204 | 0                                    | 0/205 | 0                                    | 0/205  |

**Table 10: Drug use risk behavior**

|  | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|--|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
| Injection and needle sharing practices   | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| Ever shared used needle/syringes   |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes  | 48.7 ( 42.3 - 54.7)                  | 152/307 | 71.3 (65.0 - 77.5)                   | 147/206 | 61.3 (54.5 - 67.5)                   | 125/204 | 55.3 (48.5 - 62.0)                   | 115/205 | 59.9 (52.5 - 68.0)                   | 127/205 |
| No   | 49.9 ( 44.0 - 55.7)                  | 151/307 | 26.8 (20.5 - 33.0)                   | 55/206  | 36.1 (29.5 - 43.0)                   | 74/204  | 42.6 (36.0 - 49.5)                   | 86/205  | 39.4 (31.5 - 47.0)                   | 77/205  |
| Don't know   | 1.3 ( 0.3 - 2.7)                     | 4/307   | 1.9 (0.5 - 4)                        | 4/206   | 2.6 (0.5 - 5.5)                      | 5/204   | 2.1 (0.5 - 4.0)                      | 4/205   | 0.7 (0 - 1.5)                        | 1/205   |
| Used previously used needle/syringe at last injection  |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes  | 3.4 ( 1.3 - 5.7)                     | 10/307  | 7.1 (4.0 - 10.5)                     | 15/206  | 3.4 (1.0 - 6.0)                      | 7/204   | 12.7 (7.4 - 18.0)                    | 24/205  | 6.3 (4.5 - 18.0)                     | 12/205  |
| No   | 96.1 ( 94.0 - 98.3)                  | 296/307 | 92.4 (89.0 - 95.5)                   | 189/206 | 96.0 (93.1 - 98.5)                   | 196/204 | 86.2 (81.0 - 92.0)                   | 179/205 | 93.1 (89.0 - 96.5)                   | 192/205 |
| Don't know   | 0.5 ( 0 - 1)                         | 1/307   | 0.5 (0 - 1.5)                        | 2/206   | 0.6 (0 - 2)                          | 1/204   | 1.1 (0 - 2.5)                        | 2/205   | 0.6 (0.5 - 2.0)                      | 1/205   |
| Used needle/syringe left at a place of gathering by somebody else at last injection                |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes  | 1.5 (0 - 2.3)                        | 3/307   | 0.7 (0 - 1.5)                        | 1/206   | 0.5 (0 - 1.5)                        | 1/204   | 1.3 (0 - 1.5)                        | 1/205   | 3.5 (0.5 - 4.0)                      | 4/205   |
| No   | 98.5 (97.7 - 100)                    | 304/307 | 99.2 (98.5 - 100)                    | 1/206   | 99 (97.5 - 100)                      | 202/204 | 96.3 (96.5 - 100)                    | 202/205 | 95.1 (95.5 - 99.5)                   | 200/205 |
| Don't know   | 0                                    | 0/307   | 0.2 (-- --)                          | 204/206 | 0.5 (0 - 1.5)                        | 1/204   | 1.2 (0 - 1.5)                        | 1/205   | 1.7 (-- --)                          | 1/205   |
| No response  | 0                                    | 0/307   | 0                                    | 0/206   | 0                                    | 0/204   | 1.2 (0 - 1.5)                        | 1/205   | 0                                    | 0/205   |
| Used pre - filled syringe at last injection  |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes  | 0.7 (0 - 1.7)                        | 2/307   | 3.0 (1.0 - 5.5)                      | 6/206   | 4.9 (2.5 - 8.0)                      | 10/204  | 5.6 (-- --)                          | 5/205   | 2.0 (0.5 - 4.0)                      | 4/205   |
| No   | 98.0 ( 96.3 - 99.3)                  | 301/307 | 96.0 (93.5 - 98.5)                   | 198/206 | 94.6 (91.5 - 97.5)                   | 193/204 | 86.2 (-- --)                         | 197/205 | 96.5 (94.0 - 98.5)                   | 198/205 |
| Don't know   | 1.3 ( 0.3 - 2.7)                     | 4/307   | 1.0 (0 - 2.5)                        | 2/206   | 0.5 (0 - 1.5)                        | 1/204   | 4.3 (-- --)                          | 2/205   | 1.5 (0.5 - 3.5)                      | 3/205   |
| No Response  | 0                                    | 0/307   | 0                                    | 0/206   | 0                                    | 0/204   | 3.9 (-- --)                          | 1/205   | 0                                    | 0/205   |
| Used shared bottle, spoon, boiling pan/ glass/ container, cotton/filter or water at last injection |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes  | 31.1 ( 25.7 - 35.7)                  | 94/307  | 46.1 (38.4 - 54.0)                   | 93/206  | 48.2 (40.4 - 56.0)                   | 99/204  | 53.0 (46.0 - 59.5)                   | 111/205 | 62.1 (55.0 - 59.0)                   | 126/205 |
| No   | 67.0 ( 63.0 - 73.0)                  | 209/307 | 50.9 (43.0 - 59.0)                   | 105/206 | 49.3 (41.5 - 57.0)                   | 100/204 | 44.0 (39.0 - 51.9)                   | 91/205  | 37.9 (31.0 - 45.0)                   | 79/205  |
| Don't know   | 2.0 ( 0.3 - 2.7)                     | 4/307   | 3.1 (0.5 - 6.0)                      | 8/206   | 2.5 (0.5 - 5.0)                      | 5/204   | 1.8 (0 - 2.5)                        | 2/205   | 0                                    | 0/205   |

| Injection and needle sharing practices                               | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|--|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
|  | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| No Response  | 0                                    | 0/307   | 0                                    | 0/206   | 0                                    | 0/204   | 1.3 (0 - 2)                          | 1/205   | 0                                    | 0/205   |
| Used solution from the shared container at last injection            |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes  | 11.4 ( 8.0 - 15.0)                   | 32/307  | 17.5 (13.0 - 22.5)                   | 37/206  | 22.0 (15.5 - 29.0)                   | 43/204  | 20.1 (13.0 - 25.5)                   | 41/205  | 33.5 (27.5 - 40.5)                   | 69/205  |
| No   | 85.6 ( 81.0 - 90.0)                  | 266/307 | 80.7 (75.5 - 86.0)                   | 166/206 | 76.6 (69.8 - 83.0)                   | 158/204 | 75.3 (72.1 - 84.5)                   | 159/205 | 65.8 (59 - 72.5)                     | 135/205 |
| Don't know   | 3.0 ( 1.3 - 5.0)                     | 9/307   | 1.7 (0 - 3.5)                        | 3/206   | 1.4 (0 - 3.0)                        | 3/204   | 3.0 (0.5 - 4.0)                      | 4/205   | 0.8 (0 - 1.5)                        | 1/205   |
| No Response  | 0                                    | 0/307   | 0                                    | 0/206   | 0                                    | 0/204   | 1.6 ( -- -- )                        | 1/205   | 0                                    | 0/205   |
| Used the liquid diluted with somebody else's blood at last injection |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes  | 0                                    | 0/307   | 0                                    | 0/206   | 1 (0 - 1.5)                          | 1/204   | 0                                    | 0/205   | 0.5 (0.5 - 2.0)                      | 1/205   |
| No   | 99.7 (99.0 - 100)                    | 306/307 | 100                                  | 206/206 | 99.0 (98.5 - 100)                    | 203/204 | 97.1 ( -- -- )                       | 203/205 | 99.0 (97.0 - 99.0)                   | 203/205 |
| Don't know   | 0.3 ( 0 - 1.0)                       | 1/307   | 0                                    | 0/206   | 0                                    | 0/204   | 1.5 (0 - 1.5)                        | 1/205   | 0.5 (0.05 - 2.0)                     | 1/205   |
| No Response  | 0                                    | 0/307   | 0                                    | 0/206   | 0                                    | 0/204   | 1.5 (0 - 1.5)                        | 1/205   | 0                                    | 0/205   |
| Safe injecting practice at last injection                            |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| IDUs with safe injection practice at last injection                  | 65.7 (58.7 - 72.2)                   | 192/307 | 51.6 (40.3 - 61.9)                   | 100/206 | 41.3 (31.1 - 50.6)                   | 95/204  | 39.3 (30.6 - 48.4)                   | 82/205  | 36.7 (28.6 - 45.4)                   | 73/205  |
| ≤ 24   | 83.9 (63.3 - 96.6)                   | 15/21   | 28.8 (6.6 - 51.6)                    | 9/25    | 21.9 (7.4 - 48.7)                    | 14/27   | 29.7 (11.3 - 49.8)                   | 10/34   | 50.1 (44.2 - 68.5)                   | 13/35   |
| ≥ 25   | 64.7 (58.0 - 72.2)                   | 177/286 | 83.8 (42.1 - 64.1)                   | 91/181  | 42.4 (32.3 - 52.8)                   | 81/177  | 42.3 (35.5 - 49.1)                   | 72/171  | 35.4 (24.1 - 44.2)                   | 60/170  |
| Used previously used needle/syringe last week                        |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Always   | 1.3 ( 0 - 2.5)                       | 1/250   | 0                                    | 0/122   | 2.7 (0 - 7.9)                        | 1/44    | 0                                    | 0/38    | 1.8 (0 - 4.2)                        | 1/114   |
| Almost always  | 0                                    | 0/250   | 1.9 (0 - 4.1)                        | 2/122   | 2.7 (0 - 7.5)                        | 1/44    | 15.0 (0 - 25.0)                      | 1/38    | 0.5 ( -- -- )                        | 1/114   |
| Sometimes  | 3.6 ( 1.0 - 6.0)                     | 10/250  | 4.7 (0 - 9.3)                        | 7/122   | 0                                    | 0/44    | 5.0 (0 - 5.0)                        | 1/38    | 1.8 ( 0 - 4.2)                       | 3/114   |
| Once   | 3.1 ( 1.0 - 5.0)                     | 10/250  | 6.9 (1.3 - 12.0)                     | 10/122  | 7.9 (0 - 16.2)                       | 3/44    | 20 (0 - 35.3)                        | 7/38    | 6.0 (1.4 - 11.3)                     | 9/114   |
| Never  | 90.7 ( 87.4 - 96.0)                  | 227/250 | 84.3 (77.3 - 94.7)                   | 101/122 | 84.1 (74.4 - 5.1)                    | 38/44   | 60.0 (47.1 - 100)                    | 29/38   | 89.9 (85.7 - 97.2)                   | 100/114 |
| Don't know   | 1.2 ( 0 - 2.5)                       | 2/250   | 2.3 (0 - 5.3)                        | 2/122   | 2.7 (0 - 7.9)                        | 1/44    | 0                                    | 0/38    | 0                                    | 0/114   |
| Last week needle/syringe shared with *                               |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Usual sexual partner   | 0                                    | 0/23    | 0                                    | 0/21    | 0                                    | 0/6     | 0                                    | 0/9     | 7.1 (0.5 - 32.6)                     | 1/14    |

| Injection and needle sharing practices                      | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |        | GORI                                 |         |
|---|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|--------|--------------------------------------|---------|
|   | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N    | RDS population estimates, % (95% CI) | n/N     |
| Sexual partner you didn't know before                       | 0                                    | 0/23    | 0                                    | 0/21    | 0                                    | 0/6     | 0                                    | 0/9    | 0                                    | 0/14    |
| Drug - related friend                                       | 78.3 (55.7 - 92.5)                   | 18/23   | 95.2 (77.0 - 99.7)                   | 20/21   | 83.3 (38.7 - 98.1)                   | 5/6     | 66.7 (30.7 - 91.7)                   | 6/9    | 57.1 (28.7 - 82.3)                   | 8/14    |
| Drug trafficker   | 0                                    | 0/23    | 0                                    | 0/21    | 0                                    | 0/6     | 0                                    | 0/9    | 0                                    | 0/14    |
| Stranger  | 4.3 (0.3 - 21.2)                     | 1/23    | 0                                    | 0/21    | 16.7 (1.2 - 61.3)                    | 1/6     | 0                                    | 0/9    | 14.3 (2.3 - 42.4)                    | 2/14    |
| Friend  | 21.7 (7.5 - 44.3)                    | 5/23    | 9.5 (1.5 - 30.2)                     | 2/21    | 16.7 (1.2 - 61.3)                    | 1/6     | 33.3 (8.3 - 69.3)                    | 3/9    | 21.4 (5.1 - 50.7)                    | 3/14    |
| Other   | 0                                    | 0/23    | 0                                    | 0/21    | 0                                    | 0/6     | 0                                    | 0/9    | 7.1 (0.5 - 32.6)                     | 1/14    |
| Don't know  | 4.3 (0.3 - 21.2)                     | 1/23    | 0                                    | 0/21    | 0                                    | 0/6     | 0                                    | 0/9    | 0                                    | 0/14    |
| Number of needle/syringe sharing partners last week         |                                      |         |                                      |         |                                      |         |                                      |        |                                      |         |
| mean # of needle sharing partners                           | 1.95 ( 1 - 4)                        |         | 1.75 (1 - 4)                         |         | 1.67 (1 - 3)                         |         | 2.25 (1 - 6)                         |        | 2.23 (1 - 9)                         |         |
| Cleaning the needle/syringe before usage                    |                                      |         |                                      |         |                                      |         |                                      |        |                                      |         |
| Always  | 53.6 ( 48.5 - 8.8)                   | 98/167  | 90.7 (85.7 - 95.5)                   | 139/151 | 82.4 (75.3 - 0.9)                    | 106/131 | 85.9 (76.8 - 4.2)                    | 96/116 | 66.1 (55.8 - 79 - 8)                 | 93/128  |
| Almost always   | 11.8 ( 5.4 - 17.2)                   | 19/167  | 4.6 (1.3 - 8.9)                      | 5/151   | 5.4 (1.3 - 11.1)                     | 6/131   | 2.8 (0 - 7.2)                        | 3/116  | 1.5 (0 - 3.4)                        | 3/128   |
| Sometimes   | 9.9 ( 3.2 - 15.3)                    | 21/167  | 3.7 (0.9 - 7.1)                      | 4/151   | 4.9 (1.3 - 9.2)                      | 6/131   | 5.6 (1.4 - 11.4)                     | 6/116  | 12.1 (5.1 - 19.1)                    | 16/128  |
| Once  | 3.9 ( 0 - 6.5)                       | 4/167   | 0                                    | 0/151   | 0                                    | 0/131   | 4.2 (0 - 8.7)                        | 2/116  | 3.6 (0 - 6.8)                        | 3/128   |
| Never   | 17.6 ( 8.6 - 26.2)                   | 23/167  | 0.9 (0 - 2.7)                        | 3/151   | 3.8 (0 - 7.8)                        | 8/131   | 1.4 (0 - 4.3)                        | 9/116  | 15.2 (4.7 - 27)                      | 12/128  |
| Don't know  | 3.1 ( 0 - 5.4)                       | 2/167   | 0                                    | 0/151   | 2.4 (0 - 5.3)                        | 3/131   | 0                                    | 0/116  | 0                                    | 0/128   |
| No Response   | 0                                    | 0/167   | 0                                    | 0/151   | 1.2 (0 - 3.8)                        | 2/131   | 0                                    | 0/116  | 1.5 (0 - 3.4)                        | 1/128   |
| Methods used to clean the used needle/syringe               |                                      |         |                                      |         |                                      |         |                                      |        |                                      |         |
| Water (boiled and non - boiled)                             | 75.3 (64.8 - 84.7)                   | 114/144 | 91.1 (84.5 - 96.1)                   | 137/148 | 83.3 (76.5 - 2.6)                    | 105/123 | 92.5 (85.4 - 96.8) *                 | 99/107 | 85.6 (80.8 - 94.9)                   | 101/116 |
| Disinfecting solution and chlorine                          | 0                                    | 1/144   | 3.7 (0 - 4.9)                        | 2/148   | 8.0 (1.5 - 13.0)                     | 7/123   | 0                                    | 0/107  | 0                                    | 0/116   |
| Boiling the needles/syringes                                | 16.5 ( 8.3 - 26.7)                   | 23/144  | 7.5 (1.0 - 17.5)                     | 7/148   | 6.4 (1.5 - 11.8)                     | 7/123   | 0                                    | 0/107  | 3.8 (0 - 6.4)                        | 2/116   |
| Other   | 12.3 (5.6 - 19.4)                    | 13/144  | 4.9 (1.0 - 10.7)                     | 7/148   | 0.7 ( -- -- )                        | 3/123   | 8.0 (1.5 - 16.7)                     | 9/107  | 8.7 (2.6 - 14.1)                     | 12/116  |
| Don't know  | 2.8 (0 - 7.0)                        | 2/144   | 0                                    | 0/148   | 0                                    | 0/123   | 1.5 (0 - 4.5)                        | 1/107  | 0                                    | 0/116   |
| Frequency of giving the used needle/ syringe to others last |                                      |         |                                      |         |                                      |         |                                      |        |                                      |         |

| Injection and needle sharing practices               | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|--|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
|  | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| week   |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Always   | 0                                    | 0/250   | 0                                    | 0/122   | 3.2 (0 - 7.9)                        | 1/44    | 0                                    | 0/38    | 1.9 (0.0 - 4.3)                      | 1/114   |
| Almost always  | 0                                    | 0/250   | 1.4 (0 - 4.1)                        | 2/122   | 3.2 (0 - 7.7)                        | 1/44    | 0                                    | 0/38    | 0.4 ( -- - --)                       | 2/114   |
| Sometimes  | 1.5 ( 0.5 - 3.5)                     | 4/250   | 6.8 (1.3 - 14.7)                     | 9/122   | 0                                    | 0/44    | 9.4 (0 - 20.0)                       | 2/38    | 3.3 ( 0 - 7.0)                       | 5/114   |
| Once   | 4.7 ( 2 - 7.5)                       | 12/250  | 8.1 (2.7 - 14.4)                     | 11/122  | 3.2 (0 - 8.1)                        | 1/44    | 12.5 (0 - 27.3)                      | 4/38    | 4.8 ( 0 - 9.9)                       | 9/114   |
| Never  | 93.9 ( 90.0 - 97.0)                  | 234/250 | 83.7 (73.2 - 93.3)                   | 99/122  | 82.7 (74.4 - 5.5)                    | 38/44   | 75.0 (60.0 - 100)                    | 31/38   | 87.7 (83.1 - 95.8)                   | 94/114  |
| Don't Know   | 0                                    | 0/250   | 0                                    | 1/122   | 7.6 (0 - 15.9)                       | 3/44    | 3.1 (0 - 7.1)                        | 1/38    | 1.9 ( 0 - 4.3)                       | 3/114   |
| Getting of new and unused needle/syringe when needed |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes  | 99.0 ( 97.7 - 99.7)                  | 304/307 | 95.9 (92.5 - 98.5)                   | 198/206 | 98.0 (97.5 - 100)                    | 202/204 | 91.3 (86.6 - 95.0)                   | 187/205 | 98.5 (96.5 - 99.5)                   | 202/205 |
| No   | 1.0 ( 0.3 - 2.3)                     | 3/307   | 4.1 (1.5 - 7.5)                      | 8/206   | 2.0 (0 - 2.5)                        | 2/204   | 8.7 (5.0 - 13.4)                     | 18/205  | 1.5 (0.5 - 3.5)                      | 3/205   |
| Place of getting/buying new (unused) needle/syringe  |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Drug store   | 99.0 (97.7 - 99.7)                   | 301/304 | 98.1 (95.7 - 100)                    | 192/198 | 99.5 (98.5 - 100)                    | 201/202 | 98.9 (96.9 - 100)                    | 184/187 | 94.3 (91.2 - 97.4)                   | 191/202 |
| Shop   | 0                                    | 0/304   | 0                                    | 0/198   | 0                                    | 0/202   | 0                                    | 0/187   | 2.0 (0 - 2.6)                        | 2/202   |
| Hospital   | 0.7 (0 - 1.0)                        | 1/304   | 0                                    | 0/198   | 0                                    | 0/202   | 0                                    | 0/187   | 2.2 (0.5 - 4.1)                      | 5/202   |
| Wholesale drug store/salesperson                     | 0.3 (0 - 1.0)                        | 2/304   | 0                                    | 0/198   | 0                                    | 0/202   | 0                                    | 0/187   | 1.6 (0 - 3.6)                        | 4/202   |
| Family/Relatives                                     | 5.1 (2.7 - 7.5)                      | 15/304  | 3.8 (1.1 - 7.5)                      | 7/198   | 7.7 (4 - 12.1)                       | 15/202  | 9.1 (4.9 - 13.7)                     | 17/187  | 4.6 (2.1 - 7.7)                      | 11/202  |
| Sex partner  | 0                                    | 0/304   | 0                                    | 0/198   | 0.5 (0 - 1.5)                        | 1/202   | 0                                    | 0/187   | 0.5 (0 - 1.5)                        | 1/202   |
| Friends  | 2.4 (0.7 - 4.1)                      | 7/304   | 3.2 (0 - 8.1)                        | 4/198   | 4.5 (1.5 - 7.6)                      | 10/202  | 3.7 (1.2 - 6.8)                      | 6/187   | 8.8 (5.2 - 12.9)                     | 18/202  |
| Other injection drug user                            | 39.7 (34.3 - 45.2)                   | 120/304 | 60.9 (52.7 - 68.8)                   | 122/198 | 38.9 (31.3 - 47)                     | 82/202  | 46 (37.7 - 54.3)                     | 85/187  | 35.2 (27.7 - 43.3)                   | 70/202  |
| Drug trafficker                                      | 1.0 (0 - 2.4)                        | 3/304   | 0.5 (0 - 1.6)                        | 1/198   | 0                                    | 0/202   | 0                                    | 0/187   | 5.3 (2.1 - 9.3)                      | 10/202  |
| Syringe exchange program                             | 4.6 (1.7 - 8.2)                      | 13/304  | 12.3 (7.0 - 48.8)                    | 34/198  | 3.9 (0.5 - 4.0)                      | 4/202   | 2.8 (0.6 - 5.6)                      | 7/187   | 18.7 (12.4 - 25.8)                   | 45/202  |
| Used of pre - filled syringe last week               |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes  | 22.8 ( 17.5 - 8.5)                   | 55/250  | 20.2 (10.7 - 29.3)                   | 28/122  | 11.4 (2.6 - 21.3)                    | 5/44    | 27.3(10.0 - 44.4)                    | 9/38    | 10.9 (4.2 - 19.7)                    | 15/114  |
| No   | 77.2 ( 71.5 - 82.6)                  | 195/250 | 77.8 (69.3 - 88)                     | 93/122  | 88.6 (78.7 - 7.4)                    | 39/44   | 72.7 (55.6 - 90.0)                   | 29/38   | 89.1 (80.3 - 95.8)                   | 99/114  |
| No Response  | 0                                    | 0/250   | 2 (0 - 4.1)                          | 1/122   | 0                                    | 0/44    | 0                                    | 0/38    | 0                                    | 0/114   |
| Used shared bottle, spoon,                           |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |

|  | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|--|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
| Injection and needle sharing practices                           | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| boiling pan/ glass/ container, cotton/filter or water last week  |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Always   | 17.2 ( 11 - 23.3)                    | 46/250  | 28.6 (18.6 - 39.4)                   | 33/122  | 12.5 (2.5 - 24.4)                    | 6/44    | 12.5 (0 - 25.0)                      | 5/38    | 24.0 (15.3 - 33.6)                   | 29/114  |
| Almost always  | 9.2 ( 5.5 - 12.5)                    | 19/250  | 3.5 (0 - 8.0)                        | 8/122   | 19.6 (3.7 - 35.9)                    | 6/44    | 40.0 (12.5 - 75)                     | 6/38    | 14.5 (7.3 - 21.2)                    | 14/114  |
| Sometimes  | 5.5 ( 2.5 - 8.1)                     | 17/250  | 17.4 (10.7 - 24.2)                   | 20/122  | 2.5 (0 - 7.0)                        | 1/44    | 12.5 (0 - 25)                        | 6/38    | 12.7 (4.3 - 21.3)                    | 17/114  |
| Once   | 3.2 ( 1 - 5)                         | 6/250   | 6.9 (2.6 - 12.1)                     | 12/122  | 2.5 (0 - 7.0)                        | 1/44    | 2.5 (0 - 3.0)                        | 4/38    | 2.0 (1.4 - 5.7)                      | 6/114   |
| Never  | 62.1 ( 57.7 - 70)                    | 157/250 | 41.1 (29.9 - 52.2)                   | 46/122  | 60.3 (47.7 - 8.9)                    | 29/44   | 32.5 (12.5 - 75)                     | 17/38   | 46.7 (36.6 - 56.4)                   | 48/114  |
| Don't know   | 2.8 ( 0.5 - 4.5)                     | 5/250   | 2.5 (0 - 6.7)                        | 3/122   | 2.5 (0 - 7.0)                        | 1/44    | 0                                    | 0/38    | 0                                    | 0/114   |
| Used solution from the shared container last week                |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Always   | 6.2 ( 2.5 - 8.5)                     | 17/250  | 18.2 (10.5 - 26.7)                   | 20/122  | 10.5 (0 - 15.6)                      | 3/44    | 8.3 ( -- - --)                       | 3/38    | 16.5 (8.5 - 25.4)                    | 20/114  |
| Almost always  | 4.2 ( 1.0 - 6.0)                     | 8/250   | 1.6 (0 - 4.0)                        | 3/122   | 5.1 (0 - 7.9)                        | 1/44    | 13.9 (0 - 27.3)                      | 1/38    | 2.1 (0 - 5.6)                        | 2/114   |
| Sometimes  | 3.3 ( 0.5 - 4.5)                     | 8/250   | 5.9 (1.3 - 10.7)                     | 6/122   | 0                                    | 0/44    | 13.9 (0 - 27.3)                      | 3/38    | 9.7 (4.2 - 20.8)                     | 13/114  |
| Once   | 2.4 ( 0 - 3.0)                       | 3/250   | 4.6 (0 - 8.4)                        | 4/122   | 9 (0 - 15.4)                         | 3/44    | 13.9 (0 - 27.3)                      | 1/38    | 5.5 (1.4 - 11)                       | 4/114   |
| Never  | 80.6 ( 80.4 - 90.0)                  | 208/250 | 68.1 (60.0 - 80.0)                   | 88/122  | 75.3 (70.0 - 95)                     | 37/44   | 50.0 ( -- - --)                      | 30/38   | 64.1 (53.5 - 73.5)                   | 74/114  |
| Don't know   | 3.3 ( 0.5 - 4.5)                     | 6/250   | 1.6 (0 - 4.0)                        | 1/122   | 0                                    | 0/44    | 0                                    | 0/38    | 2.1 ( 0 - 5.5)                       | 1/114   |
| Injected in other locations in previous 12 months                |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| All other locations  | 43.0 (37.0 - 49.0)                   | 130/307 | 58.9 (52.0 - 65.5)                   | 122/206 | 66.1 (59.0 - 73.0)                   | 134/204 | 61.6 (54.1 - 69)                     | 126/205 | 56.5 (48.1 - 64.8)                   | 118/205 |
| Other cities in Georgia  | 37.2 (31.4 - 43)                     | 113/307 | 64.7 (50.2 - 78.1)                   | 86/206  | 53.1 (45.0 - 61.0)                   | 106/204 | 52.1 (45 - 59)                       | 106/205 | 47.9 (40.0 - 56.0)                   | 101/205 |
| Countries of FSU   | 5.4 (3.0 - 8.0)                      | 17/307  | 11.8 (4.7 - 18.8)                    | 14/206  | 15.0 (10.4 - 20.0)                   | 31/204  | 7.9 (4.0 - 12.5)                     | 17/205  | 4.4 (1.5 - 8.4)                      | 10/205  |
| Other than Georgia and FSU countries                             | 5.8 (3.0 - 9.0)                      | 17/307  | 34.2 (21.9 - 46.9)                   | 41/206  | 5.8 (2.5 - 9.9)                      | 11/204  | 3.9 (1.5 - 7.0)                      | 9/205   | 7.0 (3.0 - 11.5)                     | 15/205  |
| Used shared needle/syringe in other locations                    |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes  | 5.1 ( 0.9 - 8.8)                     | 6/130   | 18.8 (10.9 - 26.6)                   | 20/122  | 11.7 (5.9 - 18.1)                    | 15/134  | 12.9 (7.1 - 19.3)                    | 17/126  | 13.1 (7.2 - 19.9)                    | 16/118  |
| No   | 92.8 (89.1 - 97.7)                   | 122/130 | 81.2 (73.4 - 89 - 1)                 | 101/122 | 86.5 (78.9 - 93.2)                   | 117/134 | 84.1 (77.6 - 90.1)                   | 105/126 | 86.1 (79.3 - 92.1)                   | 101/118 |
| Don't remember   | 2.1 ( 0 - 4.2)                       | 2/130   | 0                                    | 1/122   | 1.8 (0 - 4.5)                        | 2/134   | 3.0 (0.7 - 6.2)                      | 4/126   | 0.8 (0 - 2.7)                        | 1/118   |
| Allow someone else to use your needle/syringe in other locations |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |

| Injection and needle sharing practices           | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|--|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
|  | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| Yes  | 4.9 (0.8 - 8.7)                      | 6/130   | 20.3 (10.9 - 29.8)                   | 22/122  | 0                                    | 10/134  | 19.5 (12.9 - 21.8)                   | 25/126  | 10.0 (4.3 - 16.5)                    | 12/118  |
| No   | 92.9 ( 89.2 - 7.8)                   | 122/130 | 76.8 (66.2 - 86.2)                   | 98/122  | 0.2 (0 - 0)                          | 121/134 | 76.7 (69.3 - 83.6)                   | 96/126  | 88.1 (80.9 - 94.5)                   | 102/118 |
| Don't remember                                   | 2.1 ( 0 - 4.1)                       | 2/130   | 3.0 (0 - 7.8)                        | 2/122   | 99.8 (100 - 100)                     | 3/134   | 3.8 (0.8 - 7.4)                      | 5/126   | 1.9 (0 - 4.7)                        | 4/118   |
| Overdoses experience last year                   |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes  | 23.3 ( 18.3 -28.3)                   | 72/307  | 29.5 (22.5 - 37.2)                   | 60/206  | 16.0 (11.5 - 21.1)                   | 33/204  | 10.4 (6.0 - 15.0)                    | 21/205  | 15.3 (11.0 - 20.5)                   | 33/205  |
| No   | 76.7 ( 71.7 - 1.7)                   | 235/307 | 70.5 (62.8 - 77.5)                   | 146/206 | 84.0 (78.9 - 88.5)                   | 171/204 | 89.6 (85.0 - 94.0)                   | 184/205 | 83.9 (78.9 - 88.5)                   | 171/205 |
| Don't remember                                   | 0                                    | 0/307   | 0                                    | 0/206   | 0                                    | 0/204   | 0                                    | 0/205   | 0.8 (0 - 1.5)                        | 1/205   |
| Usual place of gathering to take drugs*          |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Street   | 15.3 (11.1 - 20.3)                   | 47/307  | 15.5 (10.5 - 21.8)                   | 32/206  | 17.6 (12.3 - 4.2)                    | 36/204  | 14.6 (9.7 - 20.8)                    | 30/205  | 12.7 (8.1 - 18.5)                    | 26/205  |
| Home   | 84.7 (79.7 - 88.9)                   | 260/307 | 74.8 (67.6 - 81.1)                   | 154/206 | 74.5 (67.3 - 0.9)                    | 152/204 | 74.6 (67.4 - 81)                     | 153/205 | 84.9 (78.7 - 89.6)                   | 174/205 |
| Car  | 9.8 (6.5 - 14.1)                     | 30/307  | 10.2 (6.2 - 15.6)                    | 21/206  | 15.2 (10.2 - 1.4)                    | 31/204  | 22.9 (16.9 - 30.0)                   | 47/205  | 14.2 (9.3 - 20.2)                    | 29/205  |
| Non - living areas                               | 12.7 (8.9 - 17.4)                    | 39/307  | 16.1 (10.9 - 22.3)                   | 33/206  | 12.2 (7.8 - 18.1)                    | 25/204  | 16.6 (11.4 - 23.0)                   | 34/205  | 1.0 (0.2 - 3.5)                      | 2/205   |
| Other  | 1.3 (0.4 - 3.4)                      | 4/307   | 0                                    | 0/206   | 0                                    | 0/204   | 1.5 (0.3 - 4.3)                      | 3/205   | 1.5 (0.3 - 4.3)                      | 3/205   |
| Method of throwing away used needle              |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Threw the needle in the garbage without cap      | 8.7 (5.7 - 12.3)                     | 27/307  | 12.1 (7.5 - 17.0)                    | 24/206  | 6.2 (3.5 - 9.5)                      | 12/204  | 9.6 (5.5 - 13.5)                     | 20/205  | 10.5 (6.5 - 14.6)                    | 22/205  |
| Threw the needle in the garbage with cap         | 42.4 (37.0 - 48.3)                   | 132/307 | 62.2 (55.1 - 69.4)                   | 124/206 | 41.7 (34 - 49.5)                     | 85/204  | 44.2 (38.1 - 50.0)                   | 87/205  | 44.1 (36.4 - 52.0)                   | 89/205  |
| Put into a bottle/can/boiling pan and left there | 1.4 (0.3 - 2.7)                      | 4/307   | 0                                    | 0/206   | 1.1 (0 - 2.9)                        | 2/204   | 4 (1.5 - 6.5)                        | 8/205   | 0.8 (0 - 2.0)                        | 2/205   |
| Dropped on the ground                            | 6.0 (3.3 - 9.0)                      | 19/307  | 9.9 (5.9 - 14.5)                     | 21/206  | 9.8 (6.0 - 14.0)                     | 23/204  | 13.7 (9.0 - 18.6)                    | 33/205  | 7.4 (4.0 - 11.0)                     | 15/205  |
| Broke the needle and threw it in the garbage bin | 38.5 (33.0 - 44.0)                   | 116/307 | 5.9 (2.5 - 10.0)                     | 16/206  | 10.7 (6.0 - 16.0)                    | 23/204  | 1.1(0 - 2.1)                         | 2/205   | 14.8 (10.0 - 20.5)                   | 33/205  |
| Burnt in the stove                               | 0                                    | 0/307   | 5.4 (2.5 - 8.5)                      | 11/206  | 23.1 (17.9 - 28.5)                   | 45/204  | 13.9 (10.6 - 19.1)                   | 28/205  | 15.1 (10.0 - 20.5)                   | 29/205  |
| Other  | 2.6 (1.0 - 4.3)                      | 8/307   | 4.4 (1.5 - 7.5)                      | 10/206  | 7.3 (3.5 - 11.6)                     | 14/204  | 12.8 (8.8 - 16.9)                    | 26/205  | 6.8 (3.5 - 10.9)                     | 14/205  |
| No response                                      | 0.4 (0 - 0.1)                        | 1/307   | 0                                    | 0/206   | 0                                    | 0/204   | 0.8 (0 - 2)                          | 1/205   | 0.4 (0 - 1.5)                        | 1/205   |

**Table 11: Knowledge of HIV/AIDS and risk assessment**

|   | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|---|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
| Knowledge of HIV/AIDS   | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| HIV/AIDS awareness  |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes   | 100                                  | 307/307 | 100                                  | 206/206 | 100                                  | 204/204 | 100                                  | 205/205 | 100                                  | 205/205 |
| Knowledge of HIV infected, ill or died of AIDS  |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes   | 42.5 (36.6 - 48.3)                   | 131/307 | 48.3 (40.0 - 56.7)                   | 99/206  | 56.6 (49.5 - 63.5)                   | 115/204 | 27.0 (20.5 - 34.0)                   | 54/205  | 37.2 (30.0 - 44.6)                   | 80/205  |
| No  | 57.5 (51.7 - 63.4)                   | 176/307 | 51.7 (43.3 - 60.0)                   | 107/206 | 43.4 (36.5 - 50.5)                   | 89/204  | 73.0 (66.0 - 79.5)                   | 151/205 | 62.8 (55.4 - 70.0)                   | 125/205 |
| HIV knowledge: healthy - looking person can have HIV  |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes   | 90.3 (86.7 - 93.7)                   | 278/307 | 89.9 (85.0 - 94.0)                   | 186/206 | 94.5 (91.5 - 97.5)                   | 193/204 | 89.8 (85.0 - 94.0)                   | 184/205 | 80.2 (74.5 - 85.5)                   | 165/205 |
| No  | 4.2 (2.0 - 6.7)                      | 13/307  | 2.5 (0.5 - 5.0)                      | 5/206   | 2.0 (0.5 - 4.0)                      | 4/204   | 1.9 (0.5 - 4.0)                      | 4/205   | 2.0 (0.5 - 4.0)                      | 4/205   |
| Don't know  | 5.5 (3.0 - 8.3)                      | 16/307  | 7.6 (4.0 - 11.5)                     | 15/206  | 3.5 (1.5 - 6.0)                      | 7/204   | 8.2 (4.5 - 13.0)                     | 17/205  | 17.8 (12.5 - 23.9)                   | 36/205  |
| HIV knowledge: one can reduce HIV risk if one properly uses condoms during every sexual contact |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes   | 95.0 (92.0 - 97.7)                   | 293/307 | 96.9 (94.5 - 99.0)                   | 199/206 | 95.6 (94.0 - 98.5)                   | 196/204 | 96.3 (93.0 - 99.0)                   | 197/205 | 95.2 (94.5 - 99.0)                   | 199/205 |
| No  | 2.6 (1.0 - 4.4)                      | 8/307   | 1.5 (0 - 3.5)                        | 4/206   | 2.9 (0.5 - 5.0)                      | 6/204   | 1.4 (0 - 3.0)                        | 3/205   | 2.9 (0.5 - 4.0)                      | 4/205   |
| Don't know  | 2.4 (1.0 - 4.2)                      | 6/307   | 1.5 (0 - 3.5)                        | 3/206   | 1.5 (0 - 2.5)                        | 2/204   | 2.4 (0.5 - 5.0)                      | 5/205   | 1.9 (0 - 2.5)                        | 2/205   |
| HIV knowledge: One can get HIV as a result of a mosquito bite                                   |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes   | 28.5 (23.3 - 34)                     | 85/307  | 25.4 (19.0 - 32.0)                   | 52/206  | 35.4 (29.4 - 41.9)                   | 73/204  | 46.2 (38.2 - 54.3)                   | 90/205  | 38 (31.5 - 44.9)                     | 78/205  |
| No  | 55.4 (49.0 - 61.7)                   | 175/307 | 51.7 (44.5 - 59.0)                   | 109/206 | 45.1 (38.4 - 52.0)                   | 91/204  | 36.1(29.0 - 43.4)                    | 77/205  | 42.2 (35.0 - 49.5)                   | 87/205  |
| Don't know  | 16.1 (12.0 - 20.4)                   | 47/307  | 22.9 (16.6 - 29.5)                   | 45/206  | 19.5 (14.0 - 25.0)                   | 40/204  | 17.7 (11.5 - 24.3)                   | 38/205  | 19.8 (14.5 - 25.5)                   | 40/205  |
| HIV knowledge: One may protect oneself from HIV by having one uninfected and reliable partner   |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes   | 96.1 (94.7 - 98.3)                   | 296/307 | 78.3 (73.0 - 83.5)                   | 162/206 | 95.5 (92.5 - 98.0)                   | 194/204 | 95.6 (92.5 - 98)                     | 196/205 | 96.5 (93.0 - 98.5)                   | 198/205 |
| No  | 2.9 (1.0 - 4.7)                      | 9/307   | 18.6 (14.0 - 23.9)                   | 38/206  | 2 (0.5 - 4.0)                        | 5/204   | 1.5 (0 - 3.5)                        | 3/205   | 1.5 (0.5 - 4.5)                      | 3/205   |
| Don't know  | 1.0 (0 - 1.7)                        | 2/307   | 3.1 (1.0 - 5.5)                      | 6/206   | 2.5 (0.5 - 5.0)                      | 5/204   | 3.0 (1.0 - 5.5)                      | 6/205   | 2.0 (0.5 - 4.0)                      | 4/205   |

| Knowledge of HIV/AIDS  | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|--|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
|  | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| HIV knowledge: One can protect oneself from HIV by keeping away from sexual contact                                |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes  | 83.3 (79.0 - 87.3)                   | 254/307 | 70.5 (64.0 - 77.0)                   | 145/206 | 87.9 (83.0 - 92.0)                   | 180/204 | 88.1 (83.0 - 92.6)                   | 182/205 | 85.5 (80.5 - 90.0)                   | 176/205 |
| No   | 12.6 (9.0 - 16.7)                    | 41/307  | 26.5 (20.5 - 33.0)                   | 55/206  | 8.2 (4.5 - 12.5)                     | 16/204  | 8.5 (5.0 - 12.5)                     | 16/205  | 13.0 (8.4 - 18.0)                    | 26/205  |
| Don't know   | 3.3 (1.3 - 5.3)                      | 10/307  | 3.0 (1.0 - 5.5)                      | 6/206   | 4.0 (1.5 - 7.0)                      | 8/204   | 3.4 (1.0 - 6.0)                      | 7/205   | 1.5 (0.5 - 3.5)                      | 3/205   |
| No response  | 0.7 (0.3 - 2.0)                      | 2/307   | 0                                    | 0/206   | 0                                    | 0/204   | 0                                    | 0/205   | 0                                    | 0/205   |
| HIV knowledge: One can get HIV by taking food or drink that contains someone else's saliva                         |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes  | 15.3 (11.3 - 19.3)                   | 48/307  | 18.8 (13.5 - 25)                     | 39/206  | 17.7 (13.0 - 23.0)                   | 38/204  | 25.5 (2.0 - 31.0)                    | 51/205  | 19.0 (14.0 - 24.5)                   | 41/205  |
| No   | 80.7 (76.0 - 85.0)                   | 248/307 | 70 (62.6 - 76.5)                     | 145/206 | 73.2 (67.0 - 79.0)                   | 148/204 | 59.4 (52.5 - 66.0)                   | 122/205 | 68.9 (62.6 - 75.0)                   | 140/205 |
| Don't know   | 4.0 (1.7 - 6.7)                      | 11/307  | 11.3 (7.0 - 16.1)                    | 22/206  | 9.1 (5.0 - 13.5)                     | 18/204  | 15.1 (10.5 - 2.0)                    | 32/205  | 12.1 (8.0 - 16.5)                    | 24/205  |
| IDUs correctly identifying ways of preventing HIV infection and rejecting major misconceptions of HIV transmission |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| All respondents  | 48.4 (42.3 - 54.3)                   | 153/307 | 31.0 (25.0 - 37.5)                   | 66/206  | 39.2 (32.0 - 46.5)                   | 79/204  | 27.9 (21.0 - 35.0)                   | 58/205  | 32.6 (26.0 - 39.5)                   | 67/205  |
| 18 - 24  | 17.7 (4.8 - 36.9)                    | 6/21    | 14.7 (0 - 27.9)                      | 4/25    | 36.7 (16.7 - 55.3)                   | 10/27   | 21.6 (74.0 - 38.2)                   | 7/34    | 52.4 (43.1 - 63.7)                   | 16/206  |
| 25 - 30  | 29.5 (16.1 - 44.5)                   | 19/51   | 29.5 (15.4 - 45.9)                   | 14/47   | 47.8 (33.7 - 61.2)                   | 19/45   | 40.1 (29.2 - 50.9)                   | 22/55   | 21.7 (8.1 - 36.4)                    | 7/205   |
| 31 - 40  | 49.7 (38.7 - 60.6)                   | 42/80   | 41.7 (31.3 - 52.0)                   | 35/78   | 38.4 (26.9 - 50.1)                   | 31/78   | 24.6 (13.6 - 36.1)                   | 20/76   | 44.4 (31.1 - 58)                     | 27/205  |
| 41 - 50  | 55.8 (45.2 - 66.4)                   | 68/122  | 23.8 (10.4 - 38.4)                   | 11/48   | 34.2 (19.0 - 51.5)                   | 14/40   | 18.1 (42.0 - 33.3)                   | 7/36    | 23.5 (8.1 - 41.4)                    | 15/205  |
| 50+  | 51.3 (34.6 - 68)                     | 18/33   | 26.5 (0 - 66.7)                      | 2/8     | 45.8 (17.0 - 75.2)                   | 5/14    | 39.6 (0 - 100)                       | 2/4     | 29.0 (1.0 - 57.7)                    | 2/205   |
| ≤ 24   | 20.7 (5.6 - 42.1)                    | 6/21    | 13.0 (0 - 26.2)                      | 4/25    | 36.5 (15.4 - 55.6)                   | 10/27   | 21.6 (68.0 - 39.3)                   | 7/34    | 51.2 (41.8 - 61.8)                   | 16/35   |
| ≥ 25   | 50.1 (44.1 - 55.9)                   | 147/286 | 33.8 (26.5 - 41.3)                   | 62/181  | 39.9 (32.3 - 47.6)                   | 69/177  | 29.4 (22.2 - 36.6)                   | 51/171  | 32.0 (24.2 - 40.3)                   | 51/170  |
| More HIV/AIDS knowledge  |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| One may be infected with HIV by using a needle/syringe already used by someone else                                | 99.3 (99.0 - 100)                    | 306/307 | 99.0 (98.5 - 100)                    | 205/206 | 98.0 (96.5 - 100)                    | 201/204 | 100                                  | 205/205 | 99.5 (98.0 - 99.5)                   | 203/205 |
| Drug users may protect themselves by switching to non  | 98.2 (96.3 - 99.3)                   | 300/307 | 78.0 (72.0 - 84.0)                   | 162/206 | 94.2 (92.5 - 98.0)                   | 195/204 | 98.0 (96.0 - 99.5)                   | 201/205 | 95.3 (92.5 - 97.5)                   | 196/205 |

| Knowledge of HIV/AIDS   | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|---|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
|   | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| - injection drugs   |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| HIV/AIDS infected woman can transfer the virus to her fetus           | 53.0 (47.3 - 58.7)                   | 160/307 | 67.2 (60.6 - 73.5)                   | 136/206 | 58.2 (52.1 - 64.4)                   | 121/204 | 63.6 (57.5 - 70.0)                   | 131/205 | 42.4 (35.0 - 49.5)                   | 89/205  |
| A mother can transfer the HIV/AIDS virus to her baby by breastfeeding | 28.4 (23.3 - 33.6)                   | 88/307  | 45.5 (38.5 - 52.5)                   | 95/206  | 36.2 (29.5 - 43.0)                   | 73/204  | 40.3 (33.0 - 47.5)                   | 81/205  | 21.1 (15.4 - 27.0)                   | 45/205  |
| Possibility of confidential HIV testing in community                  |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes   | 92.6 (89.7 - 95.3)                   | 284/307 | 87.4 (83.5 - 91.5)                   | 179/206 | 77.4 (71.0 - 83.0)                   | 160/204 | 65.8 (59.0 - 72.5)                   | 134/205 | 80.7 (74.5 - 86.5)                   | 166/205 |
| No  | 1.7 (0.3 - 3.3)                      | 5/307   | 4.7 (2.0 - 7.5)                      | 10/206  | 7.2 (4.0 - 11.0)                     | 14/204  | 5.8 (2.5 - 9.5)                      | 12/205  | 3.9 (1.5 - 7.0)                      | 8/205   |
| Don't know  | 5.7 (3.3 - 8.3)                      | 18/307  | 7.9 (4.5 - 11.5)                     | 17/206  | 15.4 (10.4 - 21.0)                   | 30/204  | 28.4 (22.0 - 34.5)                   | 59/205  | 15.3 (10.0 - 21.0)                   | 31/205  |
| No response   | 0                                    | 0/307   | 0                                    | 0/206   | 0                                    | 0/204   | 0                                    | 0/205   | 0                                    | 0/205   |
| Voluntary HIV testing   |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Ever had voluntary HIV test and received results                      | 28.6 (22.8 - 34.7)                   | 87/307  | 32.9 (26.0 - 40.1)                   | 73/206  | 30.0 (23.1 - 37.1)                   | 61/204  | 11.1 (7.0 - 15.5)                    | 24/205  | 15.6 (10.5 - 21.5)                   | 39/205  |
| Received HIV test last year and know their results                    | 4.8 (2.7 - 7.3)                      | 16/307  | 4.2 (1.5 - 7.5)                      | 12/206  | 5.2 (2.5 - 8.0)                      | 10/204  | 2.9 (0.5 - 5.6)                      | 7/205   | 8.4 (4.5 - 12.5)                     | 19/205  |
| ≤ 24  | --                                   | 1/21    | 4.1 (0 - 15.4)                       | 1/25    | 3.1 (0 - 11.6)                       | 1/27    | 0.7 (---)                            | 0/34    | 3.5 (0 - 10.3)                       | 4/35    |
| ≥ 25  | 5.0 (2.8 - 7.6)                      | 15/286  | 4.6 (1.6 - 8.6)                      | 11/181  | 5.2 (2.3 - 8.5)                      | 9/177   | 3.6 (1.2 - 7.8)                      | 7/171   | 12.1 (6.5 - 19.1)                    | 15/170  |
| Informing sex partner on HIV positive status                          |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes   | 95.6 (93.0 - 97.3)                   | 294/307 | 94.4 (92.0 - 97.5)                   | 195/206 | 95.5 (92.5 - 98)                     | 195/204 | 91.8 (88.5 - 96.0)                   | 189/205 | 90.5 (86.5 - 95.0)                   | 187/205 |
| No  | 1.4 (0.3 - 2.7)                      | 4/307   | 2.2 (0.5 - 4.0)                      | 5/206   | 2.5 (0.5 - 5.0)                      | 5/204   | 4.5 (1.5 - 7.5)                      | 9/205   | 4.1 (1.5 - 7.5)                      | 8/205   |
| Don't know  | 2.7 (1.0 - 4.7)                      | 8/307   | 2.7 (0.5 - 5.0)                      | 5/206   | 2.0 (0.5 - 4.0)                      | 4/204   | 3.0 (1.0 - 5.0)                      | 6/205   | 4.7 (2.0 - 7.5)                      | 9/205   |
| No response   | 0.3 (0.3 - 1.3)                      | 1/307   | 0.7 (0 - 1.5)                        | 1/206   | 0                                    | 0/204   | 0.7 (0 - 1.5)                        | 1/205   | 0.7 (0 - 1.5)                        | 1/205   |
| Informing IDU partner on HIV positive status                          |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes   | 93.0 ( 91.0 - 96.3)                  | 287/307 | 95.0 (91.5 - 98.0)                   | 196/206 | 96.9 (94.5 - 99.0)                   | 198/204 | 90.4 (89.5 - 96.5)                   | 191/205 | 94.5 (92.0 - 97.5)                   | 195/205 |
| No  | 2.1 ( 0.7 - 3.7)                     | 7/307   | 3.5 (1.5 - 6.0)                      | 7/206   | 2.0 (0.5 - 4.0)                      | 4/204   | 5.7 (2.0 - 8.4)                      | 10/205  | 1.7 ( 0 - 3.5)                       | 3/205   |
| Don't know  | 3.9 ( 1.7 - 6.0)                     | 11/307  | 1.5 (0 - 3.5)                        | 3/206   | 1.0 (0 - 2.5)                        | 2/204   | 2.4 (0 - 3.5)                        | 3/205   | 3.2 (1.0 - 5.5)                      | 6/205   |
| No response   | 0.9 ( 0 - 1.7)                       | 2/307   | 0                                    | 0/206   | 0                                    | 0/204   | 1.5 (0 - 1.5)                        | 1/205   | 0.7 (0 - 1.5)                        | 1/205   |

**Table 12: Sexual behavior**

|  | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|--|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
| Sexual history                           | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| Sexual behavior                          |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Median age at first sexual contact       | 16                                   |         | 16                                   |         | 16                                   |         | 16                                   |         | 16                                   |         |
| Had sex in the last year                 | 90.4 (86.5 - 93.7)                   | 278/307 | 93.7 (90.5 - 96.5)                   | 192/206 | 90.0 (85.5 - 94.0)                   | 184/204 | 96.9 (94.0 - 99.0)                   | 198/205 | 89.3 (84.5 - 93.5)                   | 183/205 |
| Regular sex partner last year            |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Had regular sex partner last year        | 80.7 (76.0 - 85.0)                   | 249/307 | 78.1 (71.5 - 84.5)                   | 160/206 | 74.2 (68.5 - 79.6)                   | 151/204 | 74.2 (67.5 - 80.5)                   | 151/205 | 77.5 (71.5 - 83.0)                   | 159/205 |
| Number of regular sex partners last year |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Mean                                     | 1.14 (0 - 4)                         |         | 1.04 (0 - 5)                         |         | 1.11 (0 - 5)                         |         | 1.02 (0 - 5)                         |         | 1.31 (0 - 10)                        |         |
| Median                                   | 1                                    |         | 1                                    |         | 1                                    |         | 1                                    |         | 1                                    |         |
| Used condom at last intercourse          | 27.7 (21.8 - 34.0)                   | 70/249  | 15.7 (10.2 - 21.7)                   | 24/160  | 19.1 (11.8 - 26.9)                   | 28/151  | 20.4 (11.9 - 30.3)                   | 25/151  | 20.0 (12.5 - 28.6)                   | 35/159  |
| Occasional sex partner last year         |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Had occasional sex partner last year     | 34.9 (29.1 - 40.7)                   | 108/307 | 54.5 (47.5 - 61.5)                   | 113/206 | 50.6 (42.5 - 58.6)                   | 103/204 | 62.7 (55.5 - 70.0)                   | 131/205 | 47.8 (40.0 - 55.5)                   | 95/205  |
| Number of occasional sex partners        |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Mean                                     | 1.73 (0 - 49)                        |         | 2.36 (0 - 19)                        |         | 3.53 (0 - 46)                        |         | 4.13 (0 - 60)                        |         | 2.72 (0 - 30)                        |         |
| Median                                   | 0                                    |         | 1                                    |         | 1                                    |         | 2                                    |         | 1                                    |         |
| Used condom at last intercourse          | 52.4 (42.2 - 62.5)                   | 58/108  | 45.3 (36.5 - 55.4)                   | 53/113  | 48.8 (38.2 - 60.0)                   | 52/103  | 43.7 (33.3 - 54.1)                   | 60/131  | 47.7 (32.4 - 61.9)                   | 44/95   |
| Paid sex partner last year               |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Had paid sex partner last year           | 21.5 (16.7 - 26.7)                   | 65/307  | 41.3 (34.2 - 48.5)                   | 85/203  | 29.7 (23.5 - 36.4)                   | 60/204  | 25.1 (19.5 - 31.0)                   | 52/205  | 26.0 (20.5 - 32.0)                   | 55/150  |
| Number of paid sex partners              |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Mean                                     | 0.88 (0 - 20)                        |         | 1.99 (0 - 50)                        |         | 2.57 (0 - 100)                       |         | 1.35 (0 - 50)                        |         | 1.39 (0 - 30)                        |         |
| Median                                   | 0                                    |         | 0                                    |         | 0                                    |         | 0                                    |         | 1                                    |         |
| Used condom at last intercourse*         | 87.7 (76.6 - 94.7)                   | 57/65   | 69.4 (57.6 - 79.6)                   | 59/85   | 85.0 (72.7 - 93.1)                   | 51/60   | 69.2 (53.9 - 81.9)                   | 36/52   | 79.6 (65.6 - 89.7)                   | 43/54   |
| Married IDUs sex partners last           |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |

| Sexual history   | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |        |
|--|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|--------|
|  | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N    |
| year*  |                                      |         |                                      |         |                                      |         |                                      |         |                                      |        |
| Had occasional sex partners last year                                      | 21.0 (14.6 - 28.6)                   | 35/167  | 46.3 (35.2 - 57.7)                   | 44/95   | 46.7 (36.0 - 57.5)                   | 49/105  | 57.1 (44.9 - 68.7)                   | 48/84   | 43.1 (32.9 - 53.8)                   | 47/109 |
| Had paid sex partners last year  | 10.8 (6.3 - 17.0)                    | 18/167  | 27.4 (18.1 - 38.3)                   | 26/95   | 24.8 (16.3 - 35.0)                   | 26/105  | 13.1 (6.5 - 22.9)                    | 11/84   | 19.3 (11.9 - 28.7)                   | 21/109 |
| Man had male sex partner   |                                      |         |                                      |         |                                      |         |                                      |         |                                      |        |
| Ever had male sex partner  | 0.3 (0 - 1.8)                        | 1/304   | 2.5 (0.8 - 6.0)                      | 5/198   | 2.5 (0.8 - 5.8)                      | 5/203   | 2.9 (1.1 - 6.5)                      | 6/205   | 1                                    | 2/200  |
| Had male sex partner last year   | 0                                    | 0/304   | 0                                    | 0/198   | 0.5 (0 - 2.6)                        | 1/203   | 0                                    | 0/205   | 0                                    | 0/200  |
| Number of paid male sex partners last year                                 |                                      |         |                                      |         |                                      |         |                                      |         |                                      |        |
| Mean   | --                                   |         | --                                   |         | 5                                    |         | --                                   |         | --                                   |        |
| Median   | --                                   |         | --                                   |         | 5                                    |         | --                                   |         | --                                   |        |
| Reasons for not using condom at last intercourse with occasional partner * |                                      |         |                                      |         |                                      |         |                                      |         |                                      |        |
| Did not have it  | 20.8 (10.1 - 35.8)                   | 10/48   | 15.3 (7.0 - 27.7)                    | 9/59    | 13.7 (5.6 - 26.9)                    | 7/51    | 7.0 (2.3 - 16.1)                     | 5/71    | 7.8 (2.2 - 19.2)                     | 4/51   |
| Too expensive  | 0                                    | 0/48    | 0                                    | 0/59    | 0                                    | 0/51    | 0                                    | 0/71    | 0                                    | 0/51   |
| Partner refusal  | 0                                    | 0/48    | 0                                    | 0/59    | 0                                    | 0/51    | 0                                    | 0/71    | 0                                    | 0/51   |
| Don't like it  | 39.6 (25.0 - 55.7)                   | 19/48   | 55.9 (41.4 - 69.7)                   | 33/59   | 33.3 (20.1 - 48.9)                   | 17/51   | 36.6 (24.7 - 49.9)                   | 26/71   | 17.6 (8.1 - 31.6)                    | 9/51   |
| Use other contraceptives   | 0                                    | 0/48    | 0                                    | 0/59    | 0                                    | 0/51    | 0                                    | 0/71    | 0                                    | 0/51   |
| Didn't think necessary   | 33.3 (19.7 - 49.4)                   | 16/48   | 27.1 (15.8 - 41.2)                   | 16/59   | 54.9 (39.4 - 69.7)                   | 28/51   | 60.6 (47.3 - 72.8)                   | 43/71   | 64.7 (49.1 - 78.3)                   | 33/51  |
| Didn't think of it   | 6.3 (1.4 - 17.4)                     | 3/48    | 5.1 (1.1 - 14.4)                     | 3/59    | 3.9 (0.6 - 13.5)                     | 2/51    | 4.2 (1.0 - 12.0)                     | 3/71    | 9.8 (3.2 - 21.9)                     | 5/51   |
| Other  | 0                                    | 0/48    | 3.4 (0.5 - 11.7)                     | 2/59    | 2 (0.1 - 10.1)                       | 1/51    | 0                                    | 0/71    | 0                                    | 0/51   |
| Don't know   | 4.2 (0.7 - 14.2)                     | 2/48    | 0                                    | 0/59    | 0                                    | 0/51    | 0                                    | 0/71    | 3.9 (0.6 - 13.5)                     | 2/51   |
| Frequency of using condom with regular partner last year                   |                                      |         |                                      |         |                                      |         |                                      |         |                                      |        |
| Always   | 14.4 (9.7 - 19.3)                    | 38/249  | 7.4 (3.7 - 11.5)                     | 11/160  | 6.3 (2.8 - 10.4)                     | 10/151  | 7 (3.3 - 11.2)                       | 10/151  | 13.4 (7.9 - 19.7)                    | 20/159 |
| Almost always  | 8.7 (5.3 - 12.3)                     | 21/249  | 3.3 (0.7 - 6.3)                      | 5/160   | 6.4 (2.7 - 10.9)                     | 10/151  | 7.8 (4.0 - 12.1)                     | 11/151  | 6.8 (3.2 - 11.1)                     | 10/159 |
| Sometimes  | 18.2 (13.7 - 23.0)                   | 44/249  | 14.9 (9.8 - 20.3)                    | 24/160  | 17.9 (12.2 - 23.9)                   | 27/151  | 16.5 (10.9 - 22.7)                   | 27/151  | 19.7 (14.3 - 25.3)                   | 33/159 |
| Never  | 58.7 (52.5 - 65.0)                   | 146/249 | 74.4 (67.6 - 81.1)                   | 120/160 | 69.3 (62.3 - 76.2)                   | 104/151 | 68.7 (61.0 - 76.2)                   | 103/151 | 60.1 (51.7 - 68.2)                   | 96/159 |
| Frequency of using condom  |                                      |         |                                      |         |                                      |         |                                      |         |                                      |        |

| Sexual history  | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|---|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
|   | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| with occasional partner last year                             |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Always  | 38.1 (28.5 - 48.0)                   | 43/108  | 26.0 (18.5 - 34.1)                   | 31/113  | 27.2 (19.7 - 35.4)                   | 29/103  | 22.8 (15.6 - 30.5)                   | 29/131  | 33.6 (24.0 - 43.4)                   | 31/95   |
| Almost always   | 17.4 (10.6 - 24.7)                   | 16/108  | 13.5 (7.8 - 19.6)                    | 15/113  | 18.7 (11.6 - 26.0)                   | 19/103  | 20.5 (13.4 - 28.1)                   | 26/131  | 9.9 (4.5 - 16.0)                     | 10/95   |
| Sometimes   | 22.4 (15.4 - 29.6)                   | 25/108  | 32.5 (25.2 - 39.8)                   | 36/113  | 36.0 (26.9 - 45.5)                   | 36/103  | 28.2 (20.3 - 36.3)                   | 38/131  | 37.7 (27.7 - 48.3)                   | 36/95   |
| Never   | 22.1 (14.6 - 30.1)                   | 24/108  | 27.1 (19.4 - 35.5)                   | 30/113  | 18.1 (11.4 - 25.2)                   | 19/103  | 28.6 (20.7 - 36.8)                   | 38/131  | 18.8 (11.5 - 26.4)                   | 18/95   |
| Don't Know  | 0                                    | 0/108   | 0.8 (0 - 2.8)                        | 1/113   | 0                                    | 0/130   | 0                                    | 0/131   | 0                                    | 0/95    |
| Frequency of using condom with paid for sex partner last year |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Always  | 72.5 (66.7 - 88.7)                   | 51/65   | 47.6 (35.5 - 60.9)                   | 43/85   | 67.6 (57.9 - 77.4)                   | 43/60   | 53.4 (40.0 - 66.7)                   | 26/52   | 74.7 (64.2 - 88.1)                   | 39/54   |
| Almost always   | 7.5 (1.3 - 13.0)                     | 4/65    | 6.0 (1.3 - 10.9)                     | 5/85    | 12.7 (5.0 - 21.4)                    | 7/60    | 16.2 (5.8 - 28.6)                    | 10/52   | 3.8 (0 - 8.0)                        | 2/54    |
| Sometimes   | 9.1 (1.7 - 15.3)                     | 5/65    | 28.4 (19.1 - 38.3)                   | 23/85   | 14.0 (6.3 - 22.2)                    | 7/60    | 19.5 (9.1 - 31.3)                    | 10/52   | 13.0 (3.9 - 22.5)                    | 8/54    |
| Never   | 7.5 (1.3 - 13.0)                     | 4/65    | 16.6 (7.9 - 25.9)                    | 13/85   | 5.6 (0 - 11.9)                       | 3/60    | 10.9 (3.6 - 19.5)                    | 6/52    | 8.4 (1.6 - 16.0)                     | 5/54    |
| Don't know  | 3.4 (0 - 5.3)                        | 1/65    | 1.4 (0 - 4.0)                        | 1/85    | 0                                    | 0/60    | 0                                    | 0/52    | 0                                    | 0/54    |
| Regular sex partner is an injecting drug user                 |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes   | 5.9 (3.3 - 8.9)                      | 15/249  | 6.4 (2.7 - 10.8)                     | 10/160  | 3.2 (0.7 - 6.3)                      | 4/151   | 3.0 (0 - 4.4)                        | 3/151   | 3.9 (1.3 - 7.0)                      | 6/159   |
| No  | 94.1 (91.1 - 96.7)                   | 234/249 | 93.6 (89.2 - 97.3)                   | 150/160 | 96.8 (93.7 - 99.3)                   | 147/151 | 97.0 (95.6 - 100)                    | 148/151 | 96.1 (93.0 - 98.7)                   | 153/159 |
| Paid for sex partner is an injecting drug user                |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes   | 5.9 (1.3 - 12.9)                     | 4/65    | 8.5 (2.8 - 14.9)                     | 7/85    | 5.0 (0 - 9.4)                        | 2/60    | 3.9 (0 - 10.0)                       | 2/52    | 4.0 (0 - 7.8)                        | 2/54    |
| No  | 14.2 (6.3 - 23.4)                    | 9/65    | 16.3 (6.2 - 28.4)                    | 11/85   | 18.7 (7.9 - 29.9)                    | 11/60   | 30.8 (18.0 - 44.7)                   | 16/52   | 20.4 (9.3 - 31.4)                    | 13/54   |
| Don't know  | 79.9 (69.0 - 89.4)                   | 52/65   | 75.3 (63.0 - 86.3)                   | 67/85   | 76.3 (66 - 88.7)                     | 47/60   | 65.3 (50.9 - 79.0)                   | 34/52   | 75.7 (65.4 - 88.2)                   | 39/54   |
| Occasional sex partner is an injecting drug user              |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Yes   | 10.2 (4.6 - 16.4)                    | 11/108  | 14.3 (7.7 - 20.8)                    | 16/113  | 3.8 (0 - 6.2)                        | 3/103   | 4.7 (1.5 - 8.7)                      | 6/131   | 9.4 (4.0 - 15.7)                     | 10/95   |
| No  | 74.0 (64.4 - 83.0)                   | 78/108  | 48.9 (39.5 - 57.8)                   | 54/113  | 74.9 (68.9 - 84.4)                   | 78/103  | 75 (66.8 - 82.2)                     | 99/131  | 60.2 (50.9 - 69.5)                   | 57/95   |
| Don't know  | 15.9 (8.4 - 24.2)                    | 19/108  | 35.6 (27.4 - 45.8)                   | 42/113  | 21.4 (13.2 - 28.1)                   | 22/103  | 20.3 (13.4 - 27.9)                   | 26/131  | 30.4 (20.9 - 40.2)                   | 28/95   |
| No Response   | 0                                    | 0/108   | 1.3 (0 - 3.2)                        | 1/113   | 0                                    | 0/103   | 0                                    | 0/131   | 0                                    | 0/95    |

**Table 13: Drug treatment and social influence**

|  | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|--|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
| Drug treatment and prevention  | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| Drug treatment   |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Currently taking medical treatment.  | 3.2 (1.3 - 5.3)                      | 12/307  | 4.5 (2.0 - 7.5)                      | 9/206   | 0.7 (0 - 1.5)                        | 1/204   | 0                                    | 0/205   | 0                                    | 0/205   |
| Used to take medical treatment but quit  | 39.4 (34.0 - 46.3)                   | 124/307 | 43.9 (36.5 - 51.5)                   | 90/206  | 37.5 (31.0 - 44.5)                   | 76/204  | 29.5 (21.7 - 37.8)                   | 66/205  | 15.2 (10.4 - 20.5)                   | 33/205  |
| Never have been treated  | 57.3 (50.5 - 64.2)                   | 171/307 | 51.6 (44 - 59.1)                     | 107/206 | 61.8 (55.5 - 68.6)                   | 127/204 | 70.5 (62.2 - 78.4)                   | 139/205 | 84.8 (79.5 - 89.6)                   | 172/205 |
| Kind of medical treatment or assistance taken *  |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Consultations at a health center   | 5.9 (2.5 - 11.6)                     | 8/136   | 0                                    | 0/99    | 1.3 (0.1 - 6.8)                      | 1/77    | 0                                    | 0/66    | 0                                    | 0/32    |
| Self - treatment groups  | 0                                    | 0/136   | 0                                    | 0/99    | 0                                    | 0/77    | 0                                    | 0/66    | 0                                    | 0/32    |
| Detoxification with Methadone  | 0.7 (0.5 - 3.9)                      | 1/136   | 1 (0.1 - 5.4)                        | 1/99    | 1.3 (0.1 - 6.8)                      | 1/77    | 3 (0.5 - 10.5)                       | 2/66    | 0                                    | 0/32    |
| Substitution with Methadone  | 2.2 (0.5 - 6.4)                      | 3/136   | 1 (0.1 - 5.4)                        | 1/99    | 0                                    | 0/77    | 1.5 (0.1 - 7.9)                      | 1/66    | 3.1 (0.2 - 15.7)                     | 1/32    |
| Detoxification with other drugs  | 3.7 (1.2 - 8.6)                      | 5/136   | 3 (0.7 - 8.7)                        | 3/99    | 1.3 (0.1 - 6.8)                      | 1/77    | 0                                    | 0/66    | 0                                    | 0/32    |
| Detoxification without drugs   | 50.0 (40.5 - 59.5)                   | 68/136  | 32.3 (22.6 - 43.4)                   | 32/99   | 13 (6.2 - 23.2)                      | 10/77   | 15.2 (7.3 - 26.8)                    | 10/66   | 31.3 (15.7 - 50.9)                   | 10/32   |
| Psycho - social rehabilitation center  | 1.5 (0.2 - 5.2)                      | 2/136   | 0                                    | 0/99    | 0                                    | 0/77    | 0                                    | 0/66    | 3.1 (0.2 - 15.7)                     | 1/32    |
| Survived "extreme need" with somebody else's help  | 34.6 (25.9 - 44.0)                   | 47/136  | 34.3 (24.4 - 45.5)                   | 34/99   | 41.6 (29.6 - 54.3)                   | 32/77   | 13.6 (6.2 - 25.0)                    | 9/66    | 50.0 (31.1 - 68.9)                   | 16/32   |
| Survived "extreme need" without anybody's help   | 11.0 (6.1 - 18.1)                    | 15/136  | 22.2 (14.0 - 32.5)                   | 22/99   | 28.6 (18.2 - 40.9)                   | 22/77   | 54.5 (40.9 - 67.7)                   | 36/66   | 15.6 (5.3 - 33.4)                    | 5/32    |
| Other (self - treatment, monastery, working therapy, homeopathy)                             | 7.4 (3.5 - 13.5)                     | 10/136  | 7.1 (2.8 - 14.4)                     | 7/99    | 23.4 (14.0 - 35.3)                   | 18/77   | 12.1 (5.2 - 23.1)                    | 8/66    | 0                                    | 0/32    |
| IDUs reached with prevention programs  |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| IDUs reached with prevention programs (HIV testing in community and given condoms last year) | 8.3 (4.7 - 12.3)                     | 25/307  | 23.1 (15.5 - 31.5)                   | 52/206  | 12.4 (8.0 - 17.2)                    | 26/204  | 3.9 (1.5 - 7.0)                      | 10/205  | 18.3 (12.5 - 24.5)                   | 44/205  |
| ≤ 24   | 1.4 (0 - 2.3)                        | 3/21    | 4.2 (1.5 - 7.5)                      | 10/25   | 4.2 (1.5 - 7.0)                      | 7/27    | 0.5 (0.5 - 2.0)                      | 2/34    | 7.8 (4.0 - 12.0)                     | 12/35   |
| ≥ 25   | 7.7 (4.7 - 10.3)                     | 22/286  | 18.9 (13.5 - 24.9)                   | 42/181  | 8.5 (5.0 - 12.5)                     | 19/177  | 3.4 (1.0 - 6.5)                      | 8/171   | 15.2 (10.5 - 20.5)                   | 32/170  |

| Drug treatment and prevention  | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|--|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
|  | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| IDUs given condoms last year   | 8.9 (6.0 - 12.0)                     | 27/307  | 25.6 (19.5 - 32.0)                   | 57/206  | 16.1 (11.5 - 21.0)                   | 33/204  | 6.0 (3.0 - 9.5)                      | 14/205  | 20.3 (14.5 - 26.5)                   | 47/205  |
| IDUs given brochures/pamphlets/booklets on HIV/AIDS last year                  | 33.9 (29.0 - 39.0)                   | 107/307 | 29.2 (22.5 - 36.0)                   | 67/206  | 33.5 (27.3 - 40.0)                   | 69/204  | 16.4 (11.0 - 22.0)                   | 36/205  | 25.4 (18.5 - 32.5)                   | 59/205  |
| IDUs given qualified information on HIV/AIDS last year                         | 19.6 (15.3 - 24.0)                   | 63/307  | 21.5 (16.0 - 27.5)                   | 48/206  | 11.8 (7.0 - 17.0)                    | 24/204  | 6.6 (3.0 - 11.0)                     | 18/205  | 20.6 (14.0 - 27.5)                   | 48/205  |
| IDUs have heard/seen/read information about syringe exchange program last year | 14.9 (11.0 - 18.7)                   | 46/307  | 42.7 (35.0 - 50.5)                   | 91/206  | 24.8 (18.0 - 32.0)                   | 50/204  | 25.6 (19 - 32.4)                     | 58/205  | 49.5 (42.4 - 57)                     | 105/205 |
| IDUs given sterile syringes last year  | 4.0 (1.7 - 6.6)                      | 12/307  | 8.1 (4.0 - 12.5)                     | 21/206  | 1.1 (0 - 2.6)                        | 2/204   | 3.3 (1.0 - 6.5)                      | 9/205   | 18.3 (12.0 - 25.0)                   | 44/205  |
| IDUs given information about substitution therapy program last year            | 93.4 (89.7 - 96.7)                   | 285/307 | 81.1 (75.5 - 86.5)                   | 168/206 | 63.2 (55.6 - 70.5)                   | 130/204 | 61.0 (53.5 - 68.0)                   | 128/205 | 57.4 (50.5 - 64.5)                   | 120/205 |
| IDUs used substitution therapy program last year                               | 1.9 (0.3 - 3.7)                      | 6/307   | 1.4 (0 - 2.5)                        | 2/206   | 0                                    | 0/204   | 0.7 (0 - 1.5)                        | 1/205   | 0                                    | 0/205   |
| Two persons with major influence on continuing drug use*                       |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Nobody   | 76.2 (70.5 - 81.3)                   | 234/307 | 79.6 (72.8 - 85.3)                   | 164/206 | 80.9 (74.2 - 86.5)                   | 165/204 | 78.5 (71.6 - 84.4)                   | 161/205 | 85.9 (79.8 - 90.6)                   | 176/205 |
| Needle partner   | 21.2 (16.3 - 26.7)                   | 65/307  | 19.4 (13.8 - 26.1)                   | 40/206  | 17.6 (12.3 - 24.2)                   | 36/204  | 19.0 (13.5 - 25.7)                   | 39/205  | 12.7 (8.1 - 18.5)                    | 26/205  |
| Spouse/sex partner   | 0.3 (0 - 1.8)                        | 1/307   | 0                                    | 0/206   | 0                                    | 0/204   | 0                                    | 0/205   | 1.0 (0.2 - 3.5)                      | 2/205   |
| Friend   | 2.6 (1.1 - 5.2)                      | 8/307   | 1.5 (0.3 - 4.3)                      | 3/206   | 2.0 (0.5 - 5.1)                      | 4/204   | 2.0 (0.5 - 5.0)                      | 4/205   | 1.0 (0.2 - 3.5)                      | 2/205   |
| Drug trafficker  | 0.7 (0.1 - 2.4)                      | 2/307   | 0                                    | 0/206   | 0                                    | 0/204   | 1.0 (0.1 - 3.5)                      | 2/205   | 0                                    | 0/205   |
| Siblings   | 0                                    | 0/307   | 0.5 (0 - 2.6)                        | 1/206   | 0                                    | 0/204   | 0                                    | 0/205   | 0                                    | 0/205   |
| Two persons with major influence on quitting drug use*                         |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Nobody   | 33.9 (28.0 - 40.1)                   | 104/307 | 18.9 (13.4 - 25.6)                   | 39/206  | 30.4 (23.6 - 37.9)                   | 62/204  | 18 (12.6 - 24.6)                     | 37/205  | 35.1 (28 - 42.8)                     | 72/205  |
| My children  | 11.7 (8.1 - 16.3)                    | 36/307  | 5.8 (2.9 - 10.3)                     | 12/206  | 4.4 (2.0 - 8.5)                      | 9/204   | 4.4 (2.0 - 8.4)                      | 9/205   | 9.3 (5.4 - 14.5)                     | 19/205  |
| Spouse/sex partner   | 29.6 (24.1 - 35.7)                   | 91/307  | 25.2 (18.9 - 32.4)                   | 52/206  | 20.6 (14.8 - 27.4)                   | 42/204  | 18.5 (13.0 - 25.1)                   | 38/205  | 14.6 (9.7 - 20.8)                    | 30/205  |
| Friend   | 26.7 (21.4 - 32.6)                   | 82/307  | 55.3 (47.5 - 63.0)                   | 114/206 | 39.7 (32.3 - 47.5)                   | 81/204  | 57.1 (49.3 - 64.6)                   | 117/205 | 39.5 (32.1 - 47.3)                   | 81/205  |
| Parents  | 21.8 (16.9 - 27.4)                   | 67/307  | 31.1 (24.2 - 38.6)                   | 64/206  | 22.1 (16.1 - 29)                     | 45/204  | 18.5 (13.0 - 25.1)                   | 38/205  | 13.2 (8.5 - 19.1)                    | 27/205  |

| Drug treatment and prevention | TBILISI                              |        | BATUMI                               |        | ZUGDIDI                              |        | TELAVI                               |        | GORI                                 |        |
|-------------------------------|--------------------------------------|--------|--------------------------------------|--------|--------------------------------------|--------|--------------------------------------|--------|--------------------------------------|--------|
|                               | RDS population estimates, % (95% CI) | n/N    | RDS population estimates, % (95% CI) | n/N    | RDS population estimates, % (95% CI) | n/N    | RDS population estimates, % (95% CI) | n/N    | RDS population estimates, % (95% CI) | n/N    |
| Siblings                      | 15.6 (11.4 - 20.7)                   | 48/307 | 20.4 (14.7 - 27.2)                   | 42/206 | 12.3 (7.8 - 18.1)                    | 25/204 | 12.7 (8.1 - 18.5)                    | 26/205 | 7.8 (4.3 - 12.8)                     | 16/205 |
| Needle partner                | 0.3 (0 - 1.8)                        | 1/307  | 2.4 (0.8 - 5.7)                      | 5/206  | 0                                    | 0/204  | 1.5 (0.3 - 4.3)                      | 3/205  | 1.0 (0.2 - 3.5)                      | 2/205  |

**Table 14: Prevalence of HIV and sexually transmitted infections**

| Biomarker             | TBILISI                              |        | BATUMI                               |        | ZUGDIDI                              |        | TELAVI                               |        | GORI                                 |       |
|-----------------------|--------------------------------------|--------|--------------------------------------|--------|--------------------------------------|--------|--------------------------------------|--------|--------------------------------------|-------|
|                       | RDS population estimates, % (95% CI) | n/N    | RDS population estimates, % (95% CI) | n/N    | RDS population estimates, % (95% CI) | n/N    | RDS population estimates, % (95% CI) | n/N    | RDS population estimates, % (95% CI) | n/N   |
| Positive for HIV      | 2.5 (0.3 - 5.4)                      | 7/306  | 4.5 (1.5 - 8.0)                      | 9/206  | 2.2 (0 - 3.5)                        | 3/204  | 1.5 (0 - 3.5)                        | 3/205  | 0                                    | 0/187 |
| Positive for Syphilis | 6.3 (3.7 - 9.3)                      | 19/306 | 7.6 (4.0 - 12.0)                     | 15/206 | 6.9 (3.5 - 11.0)                     | 14/204 | 5.5 (2.5 - 8.5)                      | 11/205 | 3.9 (1.1 - 7.3)                      | 7/187 |

**Table 15: Network recruitment**

| Network recruitment                     | TBILISI                              |         | BATUMI                               |         | ZUGDIDI                              |         | TELAVI                               |         | GORI                                 |         |
|---|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
|   | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     | RDS population estimates, % (95% CI) | n/N     |
| Reason for participation*               |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Financial incentive                     | 60.6 (54.2 - 66.7)                   | 186/307 | 42.7 (35.2 - 50.5)                   | 88/206  | 27.5 (20.9 - 34.8)                   | 56/204  | 34.1 (27.1 - 41.8)                   | 70/205  | 59.0 (51.2 - 66.5)                   | 121/205 |
| Laboratory testing                      | 83.4 (78.2 - 87.7)                   | 256/307 | 93.7 (89.1 - 96.7)                   | 193/206 | 97.5 (94.2 - 99.2)                   | 199/204 | 94.1 (89.7 - 97.1)                   | 193/205 | 86.8 (80.9 - 91.4)                   | 178/205 |
| Peer influence                          | 31.0 (25.3 - 37.1)                   | 95/307  | 31.6 (24.7 - 39.1)                   | 65/206  | 23.0 (17.0 - 30.1)                   | 47/204  | 27.3 (20.8 - 34.7)                   | 56/205  | 27.3 (20.8 - 34.6)                   | 56/205  |
| Study seems to be interesting           | 33.6 (27.7 - 39.8)                   | 103/307 | 18.9 (13.4 - 25.6)                   | 39/206  | 18.1 (12.7 - 24.7)                   | 37/204  | 19.0 (13.5 - 25.7)                   | 39/205  | 25.9 (19.5 - 33.1)                   | 53/205  |
| Had free time                           | 25.8 (20.5 - 31.6)                   | 74/307  | 9.7 (5.8 - 15.0)                     | 20/206  | 11.8 (7.4 - 17.5)                    | 24/204  | 4.4 (2.8 - 8.4)                      | 9/205   | 17.6 (12.2 - 24.1)                   | 36/205  |
| Other                                   | 2.93 (1.3 - 5.7)                     | 9/307   | 0                                    | 0/206   | 2.5 (0.8 - 5.8)                      | 5/204   | 1.5 (0.3 - 4.3)                      | 3/205   | 2.4 (1.1 - 6.4)                      | 5/205   |
| Respondent's behavior during interview* |                                      |         |                                      |         |                                      |         |                                      |         |                                      |         |
| Interested                              | 58.0 (51.6 - 64.2)                   | 178/307 | 34 (26.9 - 41.6)                     | 70/206  | 57.8 (50.0 - 65.4)                   | 118/204 | 49.8 (42.0 - 57.8)                   | 102/205 | 74.1 (66.9 - 80.5)                   | 152/205 |
| Indifferent                             | 12.4 (8.6 - 17.0)                    | 38/307  | 2.9 (1.1 - 6.4)                      | 6/206   | 4.4 (2.0 - 8.5)                      | 9/204   | 2.9 (1.1 - 6.5)                      | 6/205   | 5.9 (2.9 - 10.3)                     | 12/205  |
| Irritated                               | 1.0 (0.2 - 2.9)                      | 3/307   | 0.5 (0 - 2.6)                        | 1/206   | 0.5 (0 - 2.6)                        | 1/204   | 0.5 (0 - 2.6)                        | 1/205   | 0                                    | 0/205   |
| Calm                                    | 60.9 (54.6 - 67.0)                   | 187/307 | 91.3 (86.1 - 94.9)                   | 188/206 | 90.2 (84.8 - 94.1)                   | 184/204 | 84.9 (78.7 - 89.8)                   | 174/205 | 85.4 (79.2 - 90.3)                   | 175/205 |
| Agitated                                | 7.5 (4.6 - 11.3)                     | 23/307  | 2.9 (1.1 - 6.4)                      | 6/206   | 2.0 (0.5 - 5.1)                      | 4/204   | 1.0 (0.1 - 3.5)                      | 2/205   | 2.9 (1.1 - 6.4)                      | 6/205   |

\* Estimations could not be done in the RDSAT, were done in SPSS with 95% confidence interval

## Annex 2: RDS Study Forms

Questionnaire identification number: \_\_\_\_\_

Coupon number: \_\_\_\_/\_\_\_\_/\_\_\_\_/\_\_\_\_/\_\_\_\_/\_\_\_\_/\_\_\_\_/\_\_\_\_/\_\_\_\_/\_\_\_\_/\_\_\_\_

### Questions About Your Recruiter (Do not ask seeds)

| Questions  | Responses   |
|--|---|
| 1. How would you describe your relationship to the person who referred you to this study, that is, the person who gave you this coupon? (check all that apply) | 1. ____ Drug Friend<br>2. ____ Friend<br>3. ____ Husband/wife<br>4. ____ Sex partner<br>5. ____ Parent (mother/father)<br>6. ____ Sibling (brother/sister)<br>7. ____ Offspring (daughter/son)<br>8. ____ Neighbor<br>9. ____ Person from the same district<br>10. ____ Co-worker<br>11. ____ Relative<br>12. ____ Stranger<br>13. ____ Other |
| 2. How do you know the person who referred you to this study? (check all that apply)   | 1. ____ Person I have sex with often, my main sex partner<br>2. ____ Person I have sex with occasionally<br>3. ____ Person I use drugs with<br>4. ____ Person I buy drugs with<br>5. ____ Person I buy drugs from<br>6. ____ Person I share needles with<br>7. ____ Person I know through other drug user<br>8. ____ Other                    |
| 3. Not including the time you received your coupon, how many times have you seen your recruiter during the last four weeks?                                    | ____  |
| 4. How old is your recruiter? (Probe:) What would be your best guess?  | _____ years   |
| 5. About how long have you known your recruiter?   | _____ years<br><br>or<br>_____ months   |
| 6. How close are you to your recruiter?  | 1. ____ Very close<br>2. ____ Somewhat close<br>3. ____ Not very close  |
| 7. How often do you see your recruiter?  | 1. ____ Every day<br>2. ____ Once a week<br>3. ____ Once a month<br>4. ____ Less than once a month  |

# Client Checklist Form

To be filled out by authorized personnel

|  |  |  |  |  |  |  |  |  |  |                              |  |           |
|--|--|--|--|--|--|--|--|--|--|------------------------------|--|-----------|
| Date:  |  |  |  |  |  |  |  |  |  |                              |  |           |
| Coupon number:                                   | <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> </div> |  |  |  |  |  |  |  |  |                              |  |           |
| Questionnaire number:                            | <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> </div> |  |  |  |  |  |  |  |  |                              |  |           |
|  |  |  |  |  |  |  |  |  |  |                              |  |           |
|  |  |  |  |  |  |  |  |  |  |                              |  | Signature |
| The participant can join the study.              |  |  |  |  |  |  |  |  |  | <input type="checkbox"/> Yes | <input type="checkbox"/> No <sup>1</sup> |           |
| Informed consent has been signed.                |  |  |  |  |  |  |  |  |  | <input type="checkbox"/> Yes | <input type="checkbox"/> No <sup>2</sup> |           |
| The participant has completed the questionnaire. |  |  |  |  |  |  |  |  |  | <input type="checkbox"/> Yes | <input type="checkbox"/> No              |           |
| Counselor has completed the network size form.   |  |  |  |  |  |  |  |  |  | <input type="checkbox"/> Yes | <input type="checkbox"/> No              |           |
| Counselor has counseled participant.             |  |  |  |  |  |  |  |  |  | <input type="checkbox"/> Yes | <input type="checkbox"/> No              |           |
| Blood sample taken.                              |  |  |  |  |  |  |  |  |  | <input type="checkbox"/> Yes | <input type="checkbox"/> No              |           |
| Recruitment coupons released.                    |  |  |  |  |  |  |  |  |  | <input type="checkbox"/> Yes | <input type="checkbox"/> No              |           |
| Primary incentive paid.                          |  |  |  |  |  |  |  |  |  | <input type="checkbox"/> Yes | <input type="checkbox"/> No              |           |
| Secondary incentive paid.                        |  |  |  |  |  |  |  |  |  |                              |  |           |
| 1. First   |  |  |  |  |  |  |  |  |  | <input type="checkbox"/> Yes | <input type="checkbox"/> No              |           |
| 2. Second  |  |  |  |  |  |  |  |  |  | <input type="checkbox"/> Yes | <input type="checkbox"/> No              |           |
| Notes:   |  |  |  |  |  |  |  |  |  |                              |  |           |

1 – Please fill non eligibility criteria form

2 – Please fill refusal form

**Form has been entered into Database** 

## Ineligibility Form

(To be completed by the screener)

**Instructions:** Please complete a row on this form for each person you contact who does NOT meet the inclusion criteria to participate in the study.

| Ineligibility Codes |   |                |                              |                 |
|---------------------|---|----------------|------------------------------|-----------------|
| 1                   | 2   | 3              | 4                            | 5               |
| Is not an IDU       | Is an IDU, but has not injected drugs during the last month | Under 18 years | Not from the geographic area | Other, specify: |

| #   | Coupon Number<br>(Take away the coupon and write the number in this column) | Date | Reason for Non-Eligibility<br>(Write the code in this column) | If Other, Specify | Signature of the Screener |
|-----|---|------|---|-------------------|---------------------------|
| 1.  |   |      |   |                   |                           |
| 2.  |   |      |   |                   |                           |
| 3.  |   |      |   |                   |                           |
| 4.  |   |      |   |                   |                           |
| 5.  |   |      |   |                   |                           |
| 6.  |   |      |   |                   |                           |
| 7.  |   |      |   |                   |                           |
| 8.  |   |      |   |                   |                           |
| 9.  |   |      |   |                   |                           |
| 10. |   |      |   |                   |                           |
| 11. |   |      |   |                   |                           |
| 12. |   |      |   |                   |                           |
| 13. |   |      |   |                   |                           |
| 14. |   |      |   |                   |                           |
| 15. |   |      |   |                   |                           |

## Refusal Form

To be completed by the screener.

**Instructions:** Please complete a row on this form for each person who meets the inclusion criteria but refuses to participate in the study.

| Refusal Codes               |                                 |                          |          |                            |                 |
|-----------------------------|---------------------------------|--------------------------|----------|----------------------------|-----------------|
| 1                           | 2                               | 3                        | 4        | 5                          | 6               |
| Didn't want to sign consent | Didn't want to answer questions | Fear of being identified | No time* | Did not want to give blood | Other, specify: |

| #   | Coupon Number<br>(Take away the coupon and write the number in this column) | Date | Reason for Refusal<br>(Write the code in this column) | If Other, Specify | Signature of the Screener |
|-----|---|------|---|-------------------|---------------------------|
| 1.  |   |      |   |                   |                           |
| 2.  |   |      |   |                   |                           |
| 3.  |   |      |   |                   |                           |
| 4.  |   |      |   |                   |                           |
| 5.  |   |      |   |                   |                           |
| 6.  |   |      |   |                   |                           |
| 7.  |   |      |   |                   |                           |
| 8.  |   |      |   |                   |                           |
| 9.  |   |      |   |                   |                           |
| 10. |   |      |   |                   |                           |

*\* Probe whether or not the person willing to come back in later time. If yes, hold his/her coupon, put it in an envelope, and try to make an appointment with him/her for the interview.*

## Sample RDS Network Questionnaire

Questionnaire identification number: \_\_\_\_\_

Coupon number:   /  /  /  /  /  /  /  /  /  

| #  | Question   | Answer   |
|----|--|--|
| 1. | How many people in your city/region do you know who are IDUs (specify research city/region)?   |  |
| 2. | Among them how many people do you know personally (you know their name and they know yours)?   |  |
| 3. | How many of those who are 18 years old or more?  |  |
| 4. | How many of those have injected drugs during the last month?   |  |
| 5. | How many of those did you see in the last 30 days?   |  |
| 6. | Would you have recruited the same person who recruited you (gave you a coupon) if he/she had not already participated in the study?                      | <input type="checkbox"/> yes <input type="checkbox"/> No |
| 7. | How many of those (who are 18 or more years of age and IDU and have injected drugs during the last month) would you consider recruiting into this study? |  |
| 8. | Why did you accept the coupon and come into this study?  | <i>(Check all that apply)</i>                            |
|    | a. For incentive   |  |
|    | b. For clinical exam   |  |
|    | c. Peer influence  |  |
|    | d. The study seems to be interesting/useful  |  |
|    | e. Had time to spend   |  |
|    | f. Others (Specify): _____   |  |

## Financial Reporting Form

**Instructions:** Coupon manager must complete this form each day for each seed. The date primary incentive was given (first column) is the same date the participant was interviewed.

Seed number: \_\_\_\_\_

Date: \_\_\_\_\_

[illegible]

## Coupon Tracking Form

**Instructions:** The coupon tracking form must be completed for each seed each day by the screener.

**Seed number:** \_\_\_\_\_

| Serial<br>number | Referral Coupon Numbers         |             |                          |                 |                 |                 |
|------------------|---------------------------------|-------------|--------------------------|-----------------|-----------------|-----------------|
|                  | <i>Questionnaire<br/>number</i> | <i>Date</i> | <i>Coupon<br/>Number</i> | <i>Coupon 1</i> | <i>Coupon 2</i> | <i>Coupon 3</i> |
| 1.               |                                 |             |                          |                 |                 |                 |
| 2.               |                                 |             |                          |                 |                 |                 |
| 3.               |                                 |             |                          |                 |                 |                 |
| 4.               |                                 |             |                          |                 |                 |                 |
| 5.               |                                 |             |                          |                 |                 |                 |
| 6.               |                                 |             |                          |                 |                 |                 |
| 7.               |                                 |             |                          |                 |                 |                 |
| 8.               |                                 |             |                          |                 |                 |                 |
| 9.               |                                 |             |                          |                 |                 |                 |
| 10.              |                                 |             |                          |                 |                 |                 |
| 11.              |                                 |             |                          |                 |                 |                 |
| 12.              |                                 |             |                          |                 |                 |                 |
| 13.              |                                 |             |                          |                 |                 |                 |
| 14.              |                                 |             |                          |                 |                 |                 |
| 15.              |                                 |             |                          |                 |                 |                 |
| 16.              |                                 |             |                          |                 |                 |                 |
| 17.              |                                 |             |                          |                 |                 |                 |
| 18.              |                                 |             |                          |                 |                 |                 |
| 19.              |                                 |             |                          |                 |                 |                 |
| 20.              |                                 |             |                          |                 |                 |                 |

## Coupon Rejecter Questionnaire

Questionnaire identification #: \_\_\_\_\_ Coupon #: \_\_\_\_\_

**Instructions:** Collect this information face-to-face from returning recruiters *each* time they come to collect their compensation.

Name of Interviewer: \_\_\_\_\_

Date of Interview: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ /

1. Is this the first time you have been here to collect compensation?  
☐ Yes *If yes, continue.*  
☐ No *If no, answer questions for the period of time between when the participant was last here and filled out this same questionnaire and now.*
2. How many coupons did you give out? \_\_\_\_\_ (*Between the last time you came here to receive compensation and now. If > zero, complete coupon rejecter questionnaire.*)
3. How many people refused to accept coupons? \_\_\_\_\_ (*If zero, do not complete the rest of this questionnaire. If > zero, continue.*)

**Ask These Questions for Each Individual Who Refused to Accept a Coupon**

|    | <b>Question</b>  | <b>Responses to question</b>   | <b>Responses for each person who refused to accept a coupon</b>  |
|----|--|--|--|
| 1. | What is your relationship to this person? <i>(Check only one)</i>  | 1. A stranger, someone you met for the first time<br>2. Someone you knew, but not closely<br>3. A close friend, someone you knew very well<br>4. A sexual partner<br>5. A family member/relation<br>6. A dealer<br>7. Other  | Person 1 _____<br>Person 2 _____<br>Person 3 _____<br>Person 4 _____<br>Person 5 _____<br>Person 6 _____ |
| 2. | How long have you known this person?   | 1. Less than 6 months<br>2. 6 months to 1 year<br>3. 1-2 years<br>4. 3-6 years<br>5. More than 6 years   | Person 1 _____<br>Person 2 _____<br>Person 3 _____<br>Person 4 _____<br>Person 5 _____<br>Person 6 _____ |
| 3. | Why do you think this person refused to accept a coupon? <i>(Do not read. Ask for each individual who refused to accept the coupon.)</i> | 1. Too busy<br>2. Already had a coupon/already participated in the study<br>3. Not a sex worker/IDU<br>4. Younger than 18 years<br>5. Did not sell sex/inject drugs in past month<br>6. Fear of being identified as sex worker/IDU<br>7. Site is too far away<br>8. Not interested<br>9. Incentive is not worth the time | Person 1 _____<br>Person 2 _____<br>Person 3 _____<br>Person 4 _____<br>Person 5 _____<br>Person 6 _____ |

### Annex 3: Survey Questionnaire

Questionnaire Identification Number:

Questionnaire is Coded as:

Questionnaire is Word Processed by:

#### Behavior and Biomarker Study Among Male Injecting Drug Users (Male-IDUs) in Georgia, 2008

Partner Organization:

**Introduction:** "My name is \_\_\_\_\_. Curatio International Foundation and Bemoni Public Union implement a joint project titled "Establishment of evidence based base for HIV/AIDS National Programme, by strengthening surveillance system", funded by Global Fund. This survey is aimed at exploring the existing situation. The questionnaire has been designed by partner organizations. Has anybody taken an interview over the last five weeks for this study? If somebody has already taken an interview from the person you are talking to over the BSS period, don't take another one. Tell him/her, that you cannot re-interview him/her. Thank the person and finish conversation. If nobody has taken an interview from the person in question, continue as follows:

Confidentiality and consent: "I am planning to ask you several questions that are hard to answer by some people. Your responses will be kept confidential. The questionnaire will not show your name and will never be referred to in connection with the information that you will share with us. You are not obliged to answer all my questions, and whenever you wish you may refuse to answer my questions. You may finish the interview at any time per you desire. However, we would love to note that your answers would help us better understand what people think, say and do in view of certain types of behavior. We would highly appreciate your input to this study.

**Interviewer's Code:** \_\_\_\_\_

(Interviewer's signature certifying that the respondent has verbally agreed to the interview)

|             | Respondent 1 | Respondent 2 | Respondent 3 |
|-------------|--------------|--------------|--------------|
| Date        |              |              |              |
| Interviewer |              |              |              |
| Result      |              |              |              |

**Result Codes:** 1. Completed; 2. Partially Completed; 3. Interview Withheld; 4. other \_\_\_\_\_ (please specify)

Date and time of interview: /\_\_\_\_\_/date/\_\_\_\_/hour/\_\_\_\_/minute/

Signature: \_\_\_\_\_ Date \_\_\_\_\_

**Q1. City:** 1. Tbilisi

**Q2. Respondent**

|  |  |  |
|--|--|--|
|  |  |  |
|--|--|--|

**ID #**

**Q3. How did you establish a contact with the respondent?**

1. He is a patient of the counterpart organization
2. He has been hospitalized and I visited him/her there
3. He has been picked out on a snowball basis
- Other \_\_\_\_\_ (please specify)

**Q4. Place of the interview:**

1. At office

**Q5. How many times have you participated in the BSS?**

|             |    |                  |
|-------------|----|------------------|
| _____ times | 1  | <i>Continue</i>  |
| None        | 2  | <i>Go to A1.</i> |
| No response | 99 |                  |

**Q6. Did you return to find out the results of your test?**

|             |    |                  |
|-------------|----|------------------|
| Yes         | 1  | <i>Go to A1.</i> |
| No          | 2  | <i>Continue</i>  |
| No response | 99 |                  |

**Q7. Why not?**

1. He has forgot
2. He did not interest the results
3. He was afraid of the positive result
4. He could not manage to go back
5. From his point of view, the testing was not necessary at all (he was healthy – did not have any symptoms)
88. Don't know
- Other \_\_\_\_\_ (please specify)
99. No response

**A. Respondent's Personal Data**

**A1. Where do you live presently?**

1. Tbilisi

Other \_\_\_\_\_ (please indicate)

Neighborhood \_\_\_\_\_ (please indicate)

**A2. How long have you been living in this place?**

(Please write down only the number of years, or months, or both; e.g. 2 years and 6 months)

1.1 / \_\_\_\_\_ /years/ 1.2 / \_\_\_\_\_ /months/

2. Always (since birth)

Other (please indicate) \_\_\_\_\_

**A3. Are you an IDP or refugee?**

1. Yes

2. No

99. No response

**A4. Within the last 12 months have you left the city or the current place of residence for more than a month?**

1. Yes

88. Don't know

2. No

99. No response

**A5. How old are you?**

/ \_\_\_\_ / \_\_\_\_ / years old

**A6. Level of Education completed? (Please read out the options)**

1. None

2. Primary (1- 4 classes)

3. Secondary (school, technical school, vocational school)

4. Incomplete Higher

5. Higher

99. No response

**A7. Which ethnic group do you belong to?**

1. Georgian

2. Russian

3. Armenian

4. Jewish

5. Azeri

6. Ukrainian

7. Quirt

8. Osetian

9. Greek

Other \_\_\_\_\_ (please indicate)

99. No response

**A8. What is your marital status? (Please read out the options)**

1. Married
  2. Divorced/Separated for ever
  3. Widower
  4. Has never been married (**go to the question A10**)
- Other (please indicate) \_\_\_\_\_

**A9. How old were you when you got married for the first time?**

Please indicate the exact age: \_\_\_\_\_

**A10. With whom do you live now?**

(Interviewer: do not read out the options loud; choose the option below relevant to the response)

1. With a spouse
  2. With spouse and parents
  3. Married, but live with another female partner
  4. Widower, but live with a female partner
  5. Not married, live with a female partner
  6. Widower, don't have a female partner
  7. Married, don't live with my wife or a partner
  8. Single
  9. Not married, live with my family (parents)
  99. Refused to answer
- Other: \_\_\_\_\_ (Please indicate)

**A11. 1) Have you ever been detained in administrative sentence because of your drug use?**

**2) Have you ever been imprisoned before trial because of your drug use?**

**3) Have you ever been imprisoned because of your drug use?**

(Please read out the options and match the responses with the relevant options in the table below)

|                            | Yes | No | No response |
|----------------------------|-----|----|-------------|
| 1. Administrative sentence | 1   | 2  | 99          |
| 2. Imprisoned before trial | 1   | 2  | 99          |
| 3. Imprisoned              | 1   | 2  | 99          |

**A12. Within the last month how often have you consumed alcoholic beverages, such as beer, wine, vodka, other?**

(please read out the options)

1. Every day
2. More than once a week
3. Less than once a week
4. Never (don't read out loud)

Other \_\_\_\_\_ (please indicate)

99. No response

## **B. Drug Usage**

### **B1. How old were you when you start using drugs?**

I only mean any kind of drugs used for non-medical purposes, including those to be swallowed, smoked and/or injected

\_\_\_\_\_ years old (please indicate an exact age)

### **B2. How long have you been systematically injecting drugs?**

No matter whether you do it yourself or somebody else makes injections for you.

(Please indicate only number of years, or months, or both)

1.1 / \_\_\_\_\_ years/ 1.2 \_\_\_\_\_ months/

Other \_\_\_\_\_ (please indicate)

### **B3. How old were you when you took the first drug injection?**

\_\_\_\_\_ years old (please indicate an exact age)

### **B4. Within the last 6 months, when you inject drugs, do you inject repeatedly with many of the IDUs, that is, you are a regular injecting group?**

|             |    |                  |
|-------------|----|------------------|
| Yes         | 1  | <i>Continue</i>  |
| No          | 2  | <i>Go to B5.</i> |
| Don't know  | 88 |                  |
| No response | 99 |                  |

#### **B4.1 How many IDUs are members of your regular injecting group?**

\_\_\_\_\_ (please indicate an exact number)

#### **B5. How many IDUs do you know in your town?**

\_\_\_\_\_ (please indicate an exact number)

### **B6. Which drugs have you used within the last week and which one did you inject?**

(Do not read out the options loud; choose the option below relevant to the response; several responses can be acceptable)

|                 | Consumed Last Week |    | Injected Last Week |    |
|-----------------|--------------------|----|--------------------|----|
|                 | Yes                | No | Yes                | No |
| 1. Barbiturates | 1                  | 2  | 1                  | 2  |
| 2. Tranquilizes | 1                  | 2  | 1                  | 2  |
| 3. Inhalants    | 1                  | 2  | 1                  | 2  |
| 4. Codeine      | 1                  | 2  | 1                  | 2  |
| 5. Heroin       | 1                  | 2  | 1                  | 2  |
| 6. Opium        | 1                  | 2  | 1                  | 2  |
| 7. Poppy        | 1                  | 2  | 1                  | 2  |
| 8. Methadone    | 1                  | 2  | 1                  | 2  |
| 9. Morphine     | 1                  | 2  | 1                  | 2  |

|  |    |   |    |   |
|--|----|---|----|---|
| 10. Tramadol                           | 1  | 2 | 1  | 2 |
| 11. Other Opiates<br>(please define)   | 1  | 2 | 1  | 2 |
| 12. Cocaine                            | 1  | 2 | 1  | 2 |
| 13. Amphetamine                        | 1  | 2 | 1  | 2 |
| 14. Caffeine                           | 1  | 2 | 1  | 2 |
| 15. Valium                             | 1  | 2 | 1  | 2 |
| 16. LSD                                | 1  | 2 | 1  | 2 |
| 17. Ephedrone (Vinti)                  | 1  | 2 | 1  | 2 |
| 18. Marijuana                          | 1  | 2 | 1  | 2 |
| 19. Cyclodol                           | 1  | 2 | 1  | 2 |
| 20. Ecstasies                          | 1  | 2 | 1  | 2 |
| 21. Subutex (buprenorphine)            | 1  | 2 | 1  | 2 |
| 22. Poppy Seeds                        | 1  | 2 | 1  | 2 |
| 23. Antihistaminum<br>(please specify) | 1  | 2 | 1  | 2 |
| 24. Combination<br>(please specify)    | 1  | 2 | 1  | 2 |
| 25. Other<br>(please specify)          | 1  | 2 | 1  | 2 |
| Don't know/don't remember              | 88 |   | 88 |   |
| No response                            | 99 |   | 99 |   |

**B7. Which drugs have you used within the last month and which one did you inject?**

(Do not read out the options loud; choose the option below relevant to the response; several responses can be acceptable)

|                                      | Consumed Last Week |    | Injected Last Week |    |
|--------------------------------------|--------------------|----|--------------------|----|
|                                      | Yes                | No | Yes                | No |
| 1. Barbiturates                      | 1                  | 2  | 1                  | 2  |
| 2. Tranquilizers                     | 1                  | 2  | 1                  | 2  |
| 3. Inhalants                         | 1                  | 2  | 1                  | 2  |
| 4. Codeine                           | 1                  | 2  | 1                  | 2  |
| 5. Heroin                            | 1                  | 2  | 1                  | 2  |
| 6. Opium                             | 1                  | 2  | 1                  | 2  |
| 7. Poppy                             | 1                  | 2  | 1                  | 2  |
| 8. Methadone                         | 1                  | 2  | 1                  | 2  |
| 9. Morphine                          | 1                  | 2  | 1                  | 2  |
| 10. Tramadol                         | 1                  | 2  | 1                  | 2  |
| 11. Other Opiates<br>(please define) | 1                  | 2  | 1                  | 2  |
| 12. Cocaine                          | 1                  | 2  | 1                  | 2  |
| 13. Amphetamine                      | 1                  | 2  | 1                  | 2  |
| 14. Cofein                           | 1                  | 2  | 1                  | 2  |
| 15. Valium                           | 1                  | 2  | 1                  | 2  |
| 16. LSD                              | 1                  | 2  | 1                  | 2  |
| 17. Ephedrone (Vinti)                | 1                  | 2  | 1                  | 2  |
| 18. Marijuana                        | 1                  | 2  | 1                  | 2  |
| 19. Cyclodol                         | 1                  | 2  | 1                  | 2  |
| 20. Ecstasies                        | 1                  | 2  | 1                  | 2  |

|  |    |   |    |   |
|--|----|---|----|---|
| 21. Subutex (buprenorphine)                  | 1  | 2 | 1  | 2 |
| 22. Poppy Seeds                              | 1  | 2 | 1  | 2 |
| 23. Antihistaminum<br>_____ (please specify) | 1  | 2 | 1  | 2 |
| 24. Combination<br>_____ (please specify)    | 1  | 2 | 1  | 2 |
| 25. Other<br>_____ (please specify)          | 1  | 2 | 1  | 2 |
| Don't know/don't remember                    | 88 |   | 88 |   |
| No response                                  | 99 |   | 99 |   |

**B8. Within the last month did you switch from one drug to another? By switch, I mean if you permanently switched from injecting drug to non-injecting drug.**

|     |   |                   |
|-----|---|-------------------|
| Yes | 1 | Continue          |
| No  | 2 | Go to question B9 |

**B8.1 If yes, from which \_\_\_\_\_ to which? \_\_\_\_\_** (please indicate)

**B8.2 Why? \_\_\_\_\_** (please indicate)

**B9. When did you inject drugs last?**

1. \_\_\_\_\_ months ago
2. \_\_\_\_\_ days ago
- Other \_\_\_\_\_
88. Don't remember (go to B11)
99. Refused to answer (go to B11)

**B10. How many times did you take drugs that day?**

1. \_\_\_\_\_ times
88. Don't remember
99. Refused to answer

**B11. (If you did not take the last shot today or yesterday) Can you tell me why didn't you take drugs today or yesterday?** (please read out the options below and match them with the responses) **Maybe you had several reasons; if it is so, please indicate all.** After the answer, please ask once more **Besides these reasons, were there any other reasons?** (Several responses are acceptable)

1. Had no money
2. Had no desire
3. Couldn't get drugs
4. I'm receiving treatment
- Other \_\_\_\_\_ (please indicate)
99. No response (don't read out)

**B12.** (Ask only those respondents who indicate drug use for the last week in the question B9) **Within the last week how often did you inject drugs?** (please read out the options loud)

1. Once a week
2. Two to three times a week
3. Four to six times a week
4. Once a day
5. Two to three times a day
6. Four or more times a day
7. Have not taken (don't read out)
88. Don't know (don't read out)
99. No response (don't read out)

**C. Needle Sharing Habit**

**C1. Have you ever used a needle/syringe that was used by somebody else before?**

|             |    |                 |
|-------------|----|-----------------|
| Yes         | 1  | <i>Continue</i> |
| No          | 2  | <i>Go to C4</i> |
| Don't know  | 88 | <i>Continue</i> |
| No response | 99 |                 |

**C2. When you last injected did you use a needle/syringe that was used by somebody else before or not?**

|             |    |                   |
|-------------|----|-------------------|
| Yes         | 1  | <i>Continue</i>   |
| No          | 2  | <i>Go to C3.2</i> |
| Don't know  | 88 | <i>Continue</i>   |
| No response | 99 |                   |

**C3.1. When you last injected the drugs, did you use a needle/syringe that was left at a place of gathering by somebody else (e.g. where the drugs were prepared, the dedicated flat, or elsewhere)?**

1. Yes
2. No
88. Don't know
99. No response

**C3.2 If many people were there, how do you think, how many people used the shared needle?**

\_\_\_\_\_ (please specify the number)

77. I was alone
88. Don't know
99. No response

**C3.3 In the instance before the last usage, did you use a needle/syringe that had been used by anybody else before?**

|     |   |                   |
|-----|---|-------------------|
| Yes | 1 | <i>Continue</i>   |
| No  | 2 | <i>Go to C3.5</i> |

|             |    |          |
|-------------|----|----------|
| Don't know  | 88 | Continue |
| No response | 99 |          |

**C3.4 Did you then use a needle/syringe that was left at the place of gathering by somebody else (of drug preparing, or some other place)?**

- 1. Yes
- 2. No
- 88. Don't know
- 99. No response

**C3.5 If several people were there at that time, how do you think, how many people could have used the shared needle?**

\_\_\_\_\_ (please specify the number)

- 77. I was alone
- 88. Don't know
- 99. No response

**C4. In the past, when you injected drugs, have you ever used needles/syringes that had been left at the place of gathering?**

- 1. Always
- 2. Nearly always
- 3. Sometimes
- 4. Once
- 5. Never
- 88. Don't know
- 99. No response

**C5. In the past, when you injected drugs with a used needle/syringe, how many times did you clean them before usage? (please read out the options)**

|               |    |                 |
|---------------|----|-----------------|
| Always        | 1  | <i>Continue</i> |
| Almost always | 2  |                 |
| Sometimes     | 3  |                 |
| Once          | 4  |                 |
| Never         | 5  | <i>Go to C6</i> |
| Don't know    | 88 | <i>Continue</i> |
| No response   | 99 |                 |

**C5.1 If you cleaned the needle/syringe, how did you do it? (please read out the options; several responses are acceptable)**

- 1. With non-boiled water
- 2. Disinfecting sol.
- 3. Saliva
- 4. Boiled water
- 5. Chlorine
- 6. Put on match/liter fire
- 7. Other \_\_\_\_\_ (indicate)
- 88. No response
- 99. Don't know

Compare **question B9**, if the respondent did not use drugs for the last week, go to **C12**

**C6. Please recall all instances of injecting that took place over the last week. How often did you use the same needle/syringe that had been used by others?**

|               |    |                 |
|---------------|----|-----------------|
| Always        | 1  | <b>Continue</b> |
| Almost always | 2  |                 |
| Sometimes     | 3  |                 |
| Once          | 4  |                 |
| Never         | 5  | <b>Go to C9</b> |
| Don't know    | 88 |                 |
| No response   | 99 |                 |

**C7. Over the last week, did you use a needle/syringe that had been used by any of the following people?** (please read out the list loud; several responses are acceptable)

|  | Y | N | DK | NR |
|--|---|---|----|----|
| Your usual partner in sex (girl-friend)                      | 1 | 2 | 88 | 99 |
| Partner in sex whom you didn't know before                   | 1 | 2 | 88 | 99 |
| Someone from the drug-addict community (drug-related friend) | 1 | 2 | 88 | 99 |
| Drug trafficker  | 1 | 2 | 88 | 99 |
| Stranger   | 1 | 2 | 88 | 99 |
| General friend   | 1 | 2 | 88 | 99 |
| Other (please specify): _____                                | 1 | 2 | 88 | 99 |

**C8. With how many different drug user partners did you share a needle/syringe last week? (Count all those people with whom you shared a needle/syringe)**

Number of Partners: \_\_\_\_\_

88. Don't know

99. No response

**C9. During the last week how often have you used a needle/syringe that nobody had used before?** (please read out the options)

1. Always

2. Almost always

3. Sometimes

4. Never

88. Don't know

99. No response

**C10. During the last week how many times did you give the used needle/syringe to others?** (please read out the options)

|               |   |                 |
|---------------|---|-----------------|
| Always        | 1 | <b>Continue</b> |
| Almost always | 2 |                 |

|             |    |                  |
|-------------|----|------------------|
| Sometimes   | 3  |                  |
| Once        | 4  |                  |
| Never       | 5  | <b>Go to C12</b> |
| Don't know  | 88 |                  |
| No response | 99 |                  |

**C11. When you gave a used needle/syringe to others for using , did you or they , whom did you give, clean them before usage?** (please read out the options)

|               |    |                  |
|---------------|----|------------------|
| Always        | 1  | <b>Continue</b>  |
| Almost always | 2  |                  |
| Sometimes     | 3  |                  |
| Once          | 4  |                  |
| Never         | 5  | <b>Go to C12</b> |
| Don't know    | 88 |                  |
| No response   | 99 |                  |

**C11.1 If you or they, whom did you give, cleaned the needle/syringe, how did you do it?** (please read out the options; several responses are acceptable)

1. With non-boiled water
2. Disinfecting sol.
3. Saliva
4. Boiled water
5. Chlorine
6. Put on match/liter fire
- Other \_\_\_\_\_ (indicate)
88. No response
99. Don't know

**C12. When you last threw away the used needle, how did you do that?** (do not read out the options. Match the responses with the options below. If the respondent's answer is different from the below presented options, take note of the full answer).

1. Threw the needle into the garbage bin without a cap
2. Threw the needle into the garbage bin with a cap
3. Put into a bottle/can/boiling pan and left there
4. Dropped on the ground
- Other \_\_\_\_\_
- 99.No response

**C13. Can you actually get new and unused needles and syringes whenever you need them?**

|            |    |                  |
|------------|----|------------------|
| Yes        | 1  | <b>Continue</b>  |
| No         | 2  | <b>Go to C15</b> |
| Don't know | 88 |                  |

|             |    |  |
|-------------|----|--|
| No response | 99 |  |
|-------------|----|--|

**C14. Where do you get/buy new needles/syringes?** (please read out all options and mark the selected one)

|   | Y | N |
|---|---|---|
| 1. Drug store   | 1 | 2 |
| 2. Shop   | 1 | 2 |
| 3. Medical staff                                      | 1 | 2 |
| 4. Hospital   | 1 | 2 |
| 5. Wholesale drug store/salesperson                   | 1 | 2 |
| 6. Family/Relatives                                   | 1 | 2 |
| 7. Partner in sex                                     | 1 | 2 |
| 8. Friends  | 1 | 2 |
| 9. Other injection drug user                          | 1 | 2 |
| 10. Drug trafficker                                   | 1 | 2 |
| 11. Syringe exchange programme                        | 1 | 2 |
| 12. Stolen from a legal source (hospital, drug store) | 1 | 2 |
| 13. Bought in the street                              | 1 | 2 |
| Other (please specify) _____                          | 1 | 2 |

Compare **question B9**, if the respondent did not use drugs for the last week, go to **C20**

**C15. During the last week have you used a syringe that had already been filled with drugs without your presence?**

- 1. Yes
- 2. No
- 88. Don't know
- 99. No response

**C16. During the last week how many times did you take drugs after it had been filled with solution from a syringe that had been used by somebody else?** (Whether it was filled from the “front” or the “back”) (Please explain to the respondent the filling technique from the front and the back ends. Make sure he understands what the question is about.)

- 1. Always
- 2. Nearly always
- 3. Sometimes
- 4. Once
- 5. Never
- 88. Don't know
- 99. No response

**C17. During the last week when you injected drugs, how many times did you use shared syringe with left drug in it?** (please read out the options)

- 1. Always
- 2. Nearly always

- 3. Sometimes
- 4. Once
- 5. Never
- 88. Don't know
- 99. No response

**C18. During the last week when you injected drugs, how many times did you use shared bottle, spoon, boiling pan/glass/container, cotton/filter or water?** (please read out the options)

- 1. Always
- 2. Nearly always
- 3. Sometimes
- 4. Once
- 5. Never
- 88. Don't know
- 99. No response

**C19. During the last week how many times did you take solution from the shared container?** (please read out the options)

- 1. Always
- 2. Nearly always
- 3. Sometimes
- 4. Once
- 5. Never
- 88. Don't know
- 99. No response

**C20. Please recall the last instance of your taking drugs and tell me** (read out all options and mark the chosen one)

|  | Yes | No | DK | NR |
|--|-----|----|----|----|
| 1. Did you use a syringe after it was filled by somebody else from his/her used syringe?     | 1   | 2  | 88 | 99 |
| 2. Did you use a shared bottle, spoon, boiling pan/glass, container, cotton/filter or water? | 1   | 2  | 88 | 99 |
| 3. Did you take solution from the shared container?  | 1   | 2  | 88 | 99 |
| 4. Did you use the liquid that was diluted with somebody else's blood (for filtration)?      | 1   | 2  | 88 | 99 |

**C21. Over the last year have you injected drugs in another country/city/town?**

|     |   |                  |
|-----|---|------------------|
| Yes | 1 | <i>Continue</i>  |
| No  | 2 | <i>Go to C22</i> |

|                |    |  |
|----------------|----|--|
| Don't remember | 88 |  |
| No response    | 99 |  |

**C21.1 If yes, in which other countries/cities/towns did you inject drugs?** (Make sure that cities and countries match each other if the place in question is outside Georgia)

|            | 1 <sup>st</sup> Case | 2 <sup>nd</sup> Case | 3 <sup>rd</sup> Case | 4 <sup>th</sup> Case | 5 <sup>th</sup> Case |
|------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 1. City    |                      |                      |                      |                      |                      |
| 2. Country |                      |                      |                      |                      |                      |

**C21.2 When you injected drugs in any other country/city/town did you use somebody else's needle/syringe?**

- |        |                 |
|--------|-----------------|
| 1. Yes | 88. Don't know  |
| 2. No  | 99. No response |

**C21.3 When you injected drugs in another country/city/town did you allow somebody else to use your used needle/syringe?**

- |        |                 |
|--------|-----------------|
| 1. Yes | 88. Don't know  |
| 2. No  | 99. No response |

**C22. Did you experience overdoses in the last year?**

|                |    |                   |
|----------------|----|-------------------|
| Yes            | 1  | <i>Continue</i>   |
| No             | 2  | <i>Go to C23.</i> |
| Don't remember | 88 |                   |
| No response    | 99 |                   |

**C22.1 What kind of help did you get?**

1. Emergency aid
  2. Hospital treatment
- Other \_\_\_\_\_ (please specify)

**C23. Do you currently get any medical treatment (or assistance), or have you ever taken such a treatment (or assistance) because you are a drug user?** (Please read out the options below)

|   |    |                 |
|---|----|-----------------|
| Currently taking a medical treatment                | 1  | <i>Continue</i> |
| Used to take a medical treatment, but later quit it | 2  |                 |
| Have been taking a medical treatment                | 3  |                 |
| Never have been treated                             | 4  | <i>Go to D1</i> |
| No response   | 99 |                 |

**C24. How many years ago did you take medical treatment or assistance because you were a drug user?**

- \_\_\_\_\_ years \_\_\_\_\_ months (please indicate)
88. Don't know
99. No response

**C25. What kind of medical treatment or assistance have you taken?**

(Do not read out the options. Ask also this: "What other treatments have you taken?

Several responses are acceptable)

|  | Y  | N |
|--|----|---|
| 1. Consultations at a health center                  | 1  | 2 |
| 2. Self-treatment groups                             | 1  | 2 |
| 3. Detoxification with Methadone                     | 1  | 2 |
| 4. Substitution with Methadone                       | 1  | 2 |
| 5. Detoxification with other drugs                   | 1  | 2 |
| 6. Detoxification without drugs                      | 1  | 2 |
| 7. Psycho-social rehabilitation center               | 1  | 2 |
| 8. Survived "extreme need" with somebody else's help | 1  | 2 |
| 9. Survived "extreme need" without anybody's help    | 1  | 2 |
| Other (please write down)                            | 1  | 2 |
| 88. Don't know                                       | 88 |   |
| 99. No response                                      | 99 |   |

**C26. Can you tell me in which country/city did you take medical treatment?**

1. \_\_\_\_\_ (please indicate)

**D. Sexual Life Record****D1. How old were you when you had the first sexual contact in your life notwithstanding the form of it?**

1. \_\_\_\_\_ years old (please indicate the exact age)

77. Never had it (go to G1)

88. Don't know

99. No response

**D2. Have you had sex during the last month?**

1. Yes

2. No

99. No response

**D2.1 Have you had sex during the last 12 months?**

|             |    |                 |
|-------------|----|-----------------|
| Yes         | 1  | <i>Continue</i> |
| No          | 2  | <i>Go to D4</i> |
| No response | 99 |                 |

**D3. In total with how many female sexual partners have you had sex over the last 12 months?**

1. \_\_\_\_\_ (please specify the exact number)

88. Don't know

99. No response

**D3.1 How many of those were “regular sexual partners” (i.e. spouse or permanent sexual partner)?**

- 1. \_\_\_\_\_ (number)
- 88. Don't know
- 99. No response

**D3.1. 2 Does your regular sexual partner/spouse have another sexual partner?**

- 1. Yes
- 2. No
- 88. Don't know
- 99. No response

**D3.2 How many of your female sexual partners were “paid” ones? (i.e. those ones with who you had a sexual contact in exchange for money or drugs)**

- 1. \_\_\_\_\_ number
- 88. Don't know
- 99. No response

**D3.3 How many of those sexual partners were “occasional” ones? (i.e. those ones that you are not married to, never have lived together, and never have paid money in exchange for sex)**

- 1. \_\_\_\_\_ number
- 88. Don't know
- 99. No response

**D4. We talked about your female partners. Have you ever had a male sexual partner?**

|             |    |                 |
|-------------|----|-----------------|
| Yes         | 1  | <i>Continue</i> |
| No          | 2  | <i>Go to E1</i> |
| No response | 99 |                 |

**D4.1 If yes, have you ever had anal sex (passive intercourse) with your male partner during the last 12 months?**

|             |    |                 |
|-------------|----|-----------------|
| Yes         | 1  | <i>Continue</i> |
| No          | 2  | <i>Go to E1</i> |
| No response | 99 |                 |

**D4.2 With how many male partners have you had anal sex (passive intercourse) over the last 12 months?**

- 1. \_\_\_\_\_ number
- 88. Don't know
- 99. No response

## E. Number and Types of Partners

The following questions I will ask you about your regular sexual partner. A regular sexual partner is someone who is your spouse or who you consider your permanent sexual partner.

### E1. Have you had sex with your regular sexual partner over the last 12 months?

*(Compare with question D3.1 and circle the response for the question E1)*

|     |   |                 |
|-----|---|-----------------|
| Yes | 1 | <i>Continue</i> |
| No  | 2 | <i>Go to E2</i> |

### E1.1 How many times did you have sex with your regular sexual partner over the last month?

- 1. \_\_\_\_\_ times
- 88. Don't know
- 99. No response

### E1.2 When you had last sexual contact with your regular sexual partner did you use a condom?

|             |    |                   |
|-------------|----|-------------------|
| Yes         | 1  | <i>Continue</i>   |
| No          | 2  | <i>Go to E1.4</i> |
| Don't know  | 88 |                   |
| No response | 99 |                   |

### E1.3 Who offered to use condoms at that time, you or your regular sexual partner's?

- 1. I did
- 2. Partner
- 3. Both
- 88. Don't know
- 99. Refused to answer

Go to E1.5

### E1.4 Why didn't you and your regular sexual partner use a condom at that time?

*(Don't read out the options. Match the response up to the options below. Several responses are acceptable)*

|                                      | Y  | N |
|--------------------------------------|----|---|
| 1. Was not available/Did not have it | 1  | 2 |
| 2. Too expensive                     | 1  | 2 |
| 3. Partner refused                   | 1  | 2 |
| 4. Don't like it                     | 1  | 2 |
| 5. Use other contraceptives          | 1  | 2 |
| 6. Didn't think necessary            | 1  | 2 |
| 7. Didn't think of it                | 1  | 2 |
| Other (please indicate) _____        | 1  | 2 |
| Don't know                           | 88 |   |
| No response                          | 99 |   |

**E1.5 How often have you used condoms with your regular sexual partner within the last year?** (please read out the options below)

- 1. Always
- 2. Almost always
- 3. Sometimes
- 4. Never
- 88. Don't know
- 99. No response

**E1.6 Does your regular sexual partner inject drugs?**

- 1. Yes
- 2. No
- 88. Don't know
- 99. No response

**E1.7 Have you had anal sex with your regular sexual partner?**

- 1. Yes
- 2. No
- 88. Don't know
- 99. No response

The following questions I will ask you about your paid-for sexual partner. A paid-for sexual partner is someone who you have sexual contact in exchange for money or drugs.

**E2. Did you have a paid-for sexual partner over the last 12 months?** (Compare the question with D3.2 and circle response to E2)

|     |   |                 |
|-----|---|-----------------|
| Yes | 1 | <i>Continue</i> |
| No  | 2 | <i>Go to E3</i> |

**E2.1 Please recall all your paid-for sexual partners from whom you get money or drugs in exchange for sex. How many of those did you have over the last month?**

- 1. \_\_\_\_\_
- 88. Don't know
- 99. No response

**E2.1.1 Please recall all the paid-for sexual partners to whom you paid money or drugs in exchange for sex over the last month. How many of those did you have in total?**

- \_\_\_\_\_ (please indicate an exact number)
- 88. Don't know (**go to E3**)
- 99. No response (**go to E3**)

**E2.2 Please recall your last paid-for sexual partner? How many times did you have sex with her over the last month?**

- 1. \_\_\_\_\_ times
- 88. Don't know
- 99. No response

**E2.3 Last time when you had sex with your paid-for sexual partner, did you use a condom?**

|             |    |                   |
|-------------|----|-------------------|
| Yes         | 1  | <i>Continue</i>   |
| No          | 2  | <i>Go to E2.5</i> |
| Don't know  | 88 | <i>Go to E2.6</i> |
| No response | 99 |                   |

**E2.4 Whose initiative was to use condoms at that time (you or your paid-for sexual partner's)?**

|                       |            |
|-----------------------|------------|
| 1. Mine               | Go to E2.6 |
| 2. Partner's          |            |
| 3. Mutual             |            |
| 88. Don't know        |            |
| 99. Refused to answer |            |

**E2.5 Why didn't you and your paid-for sexual partner use condoms at that time?**

(Don't read out the options. Several responses can be accepted)

|                                      | Y  | N |
|--------------------------------------|----|---|
| 1. Was not available/Did not have it | 1  | 2 |
| 2. Too expensive                     | 1  | 2 |
| 3. Partner refused                   | 1  | 2 |
| 4. Don't like it                     | 1  | 2 |
| 5. Use other contraceptives          | 1  | 2 |
| 6. Didn't think necessary            | 1  | 2 |
| 7. Didn't think of it                | 1  | 2 |
| Other (please indicate) _____        | 1  | 2 |
| Don't know                           | 88 |   |
| No response                          | 99 |   |

**E2.6 Last year how many times did you use condoms with your paid-for sexual partners? (Read out the options)**

- 1. Always
- 2. Almost always
- 3. Sometimes
- 4. Never
- 88. Don't know
- 99. No response

**E2.7 Does your paid-for sexual partner inject drugs?**

- 1. Yes
- 88. Don't know
- 2. No
- 99. No response

**E2.8 Have you had anal sex with your paid-for sexual partners?**

- 1. Yes
- 88. Don't know
- 2. No
- 99. No response

The following questions I will ask you about your occasional sexual partners. An occasional sexual partner is someone who you are not married to, never lived together, and have never paid money or exchanged drugs for sex.

**E3. Did you have a sexual contact with an occasional sexual partner over the last 12 months?** (Compare with the question D3.3 and circle the response to E3)

|     |   |                 |
|-----|---|-----------------|
| Yes | 1 | <i>Continue</i> |
| No  | 2 | <i>Go to F1</i> |

**E3.1 Please recall your very last occasional sexual partner. How many times did you have sexual contacts with her within the last month?**

1. \_\_\_\_\_ times
88. Don't know
99. No response

**E3.2 Last time when you had a sexual contact with your occasional sexual partner, did you use condoms?**

|             |    |                   |
|-------------|----|-------------------|
| Yes         | 1  | <i>Continue</i>   |
| No          | 2  | <i>Go to E3.4</i> |
| Don't know  | 88 | <i>Go to E3.5</i> |
| No response | 99 |                   |

**E3.3 Whose initiative was then to use condoms?**

- |   |            |
|---|------------|
| <ol style="list-style-type: none"> <li>1. Mine</li> <li>2. Partner's</li> <li>3. Mutual</li> <li>88. Don't know</li> <li>99. Refused to answer</li> </ol> | Go to E3.5 |
|---|------------|

**E3.4 Why didn't you and your occasional sexual partner use condoms then?** (Don't read out the options. Several responses can be accepted.)

|                                      | Y  | N |
|--------------------------------------|----|---|
| 1. Was not available/Did not have it | 1  | 2 |
| 2. Too expensive                     | 1  | 2 |
| 3. Partner refused                   | 1  | 2 |
| 4. Don't like it                     | 1  | 2 |
| 5. Use other contraceptives          | 1  | 2 |
| 6. Didn't think necessary            | 1  | 2 |
| 7. Didn't think of it                | 1  | 2 |
| Other (please indicate) _____        | 1  | 2 |
| Don't know                           | 88 |   |
| No response                          | 99 |   |

**E3.5 How often have you used condoms with your occasional sexual partner over the last year?**

1. Always

- 2. Almost always
- 3. Sometimes
- 4. Never
- 88. Don't know
- 99. No response

**E3.6 Do you know whether your occasional sexual partner inject drugs?**

- 1. Yes
- 2. No
- 88. Don't know
- 99. No response

**E3.7 Have you had anal sex with your occasional sexual partners?**

- 1. Yes
- 2. No
- 88. Don't know
- 99. No response

**F. Use of Condoms**

(Do not ask Q F1. Compare the responses to questions: E1.2, E1.5, E2.3, E2.6, E3.2, E3.5 and mark respectfully)

**F1. Have you ever used condoms?**

|     |   |                 |
|-----|---|-----------------|
| Yes | 1 | <i>Continue</i> |
| No  | 2 | <i>Go to G1</i> |

**F2. In the last month, have you had any difficulties in getting a condom when you need one?**

|             |    |                 |
|-------------|----|-----------------|
| Yes         | 1  | <i>Continue</i> |
| No          | 2  | <i>Go to G1</i> |
| Don't know  | 88 |                 |
| No response | 99 |                 |

**F2.1 If yes, what was a reason for that? (please indicate)**

- 1. \_\_\_\_\_

**G. Sexually Transmitted Diseases**

**G1. Have you heard of diseases that are transmitted sexually?**

|             |    |                 |
|-------------|----|-----------------|
| Yes         | 1  | <i>Continue</i> |
| No          | 2  | <i>Go to G4</i> |
| No response | 99 |                 |

**G2. Can you describe STD symptoms that are observed among women?**

(Don't read out the options. Multiple answers are acceptable)

|                            | Y | N |
|----------------------------|---|---|
| 1.Stomach (abdominal) ache | 1 | 2 |
| 2.Vaginal release          | 1 | 2 |
| 3.Odororous release        | 1 | 2 |

|                                   |    |   |
|-----------------------------------|----|---|
| 4. Burning pain while urinating   | 1  | 2 |
| 5. Vaginal ulcer                  | 1  | 2 |
| 6. Swollen vulva                  | 1  | 2 |
| 7. Itching                        | 1  | 2 |
| Other: (a) _____ (please specify) | 1  | 2 |
| Other: (b) _____ (please specify) | 1  | 2 |
| Other: (c) _____ (please specify) | 1  | 2 |
| Don't know                        | 88 |   |
| No response                       | 99 |   |

**G3. Can you describe STD symptoms that are observed among men?**

(Don't read out the options. Multiple responses are acceptable)

|                                   | Y  | N |
|-----------------------------------|----|---|
| 1. Genital release                | 1  | 2 |
| 2. Burning while urinating        | 1  | 2 |
| 3. Genital ulcer                  | 1  | 2 |
| 4. Swollen lower abdomen          | 1  | 2 |
| Other: (a) _____ (please specify) | 1  | 2 |
| Other: (b) _____ (please specify) | 1  | 2 |
| Other: (c) _____ (please specify) | 1  | 2 |
| Don't know                        | 88 |   |
| No response                       | 99 |   |

**G4. Have you observed genital release or burning pain while urinating during the last 12 months?**

- |        |                 |
|--------|-----------------|
| 1. Yes | 88. Don't know  |
| 2. No  | 99. No response |

**G5. Have you observed genital ulcer/rash over the last 12 months?**

- |        |                 |
|--------|-----------------|
| 1. Yes | 88. Don't know  |
| 2. No  | 99. No response |

*(Interviewer: If there is no "Yes" to G4 and G5, go to H1)*

**G6. Whom did you apply for medical treatment?** (Please read out the options; multiple answers are acceptable)

|                        | Yes | No |
|------------------------|-----|----|
| 1. STD Institution     | 1   | 2  |
| 2. Private doctor      | 1   | 2  |
| 3. Drugstore           | 1   | 2  |
| 4. Self-treatment      | 1   | 2  |
| 5. Nobody              | 1   | 2  |
| Other (please specify) | 1   | 2  |
| Don't know             | 88  |    |
| No response            | 99  |    |

## H. Knowledge, Opinion and Attitude

### H1. Have you heard of HIV or AIDS?

- 1. Yes
- 88. Don't know
- 2. No
- 99. No response

*(Please explain that HIV is a human immunodeficiency virus which causes AIDS.)*

### H2. Do you know any person around you who has been infected, ill with, or has died of AIDS?

|             |    |                 |
|-------------|----|-----------------|
| Yes         | 1  | <i>Continue</i> |
| No          | 2  | <i>Go to H4</i> |
| Don't know  | 88 |                 |
| No response | 99 |                 |

### H3. Do you have a close relative or friend who has been infected, ill with, or has died of AIDS?

- 1. Yes, a close relative
- 2. Yes, a close friend
- 3. No
- 4. Other (please indicate) \_\_\_\_\_
- 88. Don't know
- 99. No response

### H4. How do you think, can a healthy looking person have an HIV, that causes AIDS?

- 1. Yes
- 88. Don't know
- 2. No
- 99. No response

### H5. Please give me your opinion regarding the following:

*(Please read out all options and mark the relevant answer.)*

| Assertions   | Yes | No | DK | NR |
|--|-----|----|----|----|
| 1. Can one reduce the HIV risk if one properly uses condoms during every sexual contact?                           | 1   | 2  | 88 | 99 |
| 2. Can one get HIV as a result of a mosquito's bite?   | 1   | 2  | 88 | 99 |
| 3. Do you believe that one may protect oneself from HIV/AIDS by having one uninfected and reliable sexual partner? | 1   | 2  | 88 | 99 |
| 4. Do you believe that one can protect oneself from HIV/AIDS by keeping away from (avoiding) sexual contact?       | 1   | 2  | 88 | 99 |
| 5. Do you believe that one can get HIV/AIDS by taking food or drink that contains someone else's saliva?           | 1   | 2  | 88 | 99 |
| 6. Do you believe that one may be infected with HIV/AIDS by using a needle/syringe already used by someone else?   | 1   | 2  | 88 | 99 |
| 7. Do you believe that drug users may protect themselves from HIV/AIDS by switching to non-injection drugs?        | 1   | 2  | 88 | 99 |

**H6. Do you believe that an HIV/AIDS-infected pregnant woman can transfer virus to her fetus?**

|             |    |                 |
|-------------|----|-----------------|
| Yes         | 1  | <i>Continue</i> |
| No          | 2  | <i>Go to H8</i> |
| Don't know  | 88 |                 |
| No response | 99 |                 |

**H7. What do you believe a pregnant woman might do reduce the risk of transferring the infection to her fetus?**

(Don't read out the options to the respondent. Multiple answers are acceptable)

|                                   |    |
|-----------------------------------|----|
| Take medication (antiretrovirals) | 1  |
| Other _____ please specify        |    |
| Don't know                        | 88 |
| No response                       | 99 |

**H8. Can a mother transfer the HIV/AIDS to her baby through breastfeeding?**

|        |                 |
|--------|-----------------|
| 1. Yes | 88. Don't know  |
| 2. No  | 99. No response |

**H9. Is it possible in your neighborhood/town that one take confidential HIV/AIDS test to see if one is infected?** "Confidential" means that nobody will know about the test results without one's permission.

|        |                 |
|--------|-----------------|
| 1. Yes | 88. Don't know  |
| 2. No  | 99. No response |

**H10. I don't want to know about the test results but have you ever taken an HIV test?**

|             |    |                  |
|-------------|----|------------------|
| Yes         | 1  | <i>Continue</i>  |
| No          | 2  | <i>Go to H14</i> |
| No response | 99 |                  |

**H11. When did you take the last HIV test?**

|                                |
|--------------------------------|
| 1. Last year                   |
| 2. About one or two years ago  |
| 3. About two or four years ago |
| 4. Four or more years ago      |
| 88. Don't know                 |
| 99. No response                |

**H12. 1) Was it your initiative to take the HIV/AIDS test or you had to?**

**2) Did you have to take the HIV/AIDS test?**

|                  | Yes | No | No response |
|------------------|-----|----|-------------|
| 1. My initiative | 1   | 2  | 99          |
| 2. I had to      | 1   | 2  | 99          |

**H13. Don't tell me the test result, but do you know it?**

- 1. Yes
- 2. No
- 99. No response

**H14. If you are HIV positive will you inform your sex partners?**

- 1. Yes
- 2. No
- 88. Don't know
- 99. No response

**H15. If you are HIV positive will you inform your IDU partners?**

- 1. Yes
- 2. No
- 88. Don't know
- 99. No response

**H16. How many times have you used the following health services in the last year?**

(Please read out the options. Multiple answers are acceptable. Use 0 for not used).

If all answers are 0, go to H16.2

|                               | Times used |
|-------------------------------|------------|
| 1. Narcology Institute        |            |
| 2. AIDS Center                |            |
| 3. Bemoni                     |            |
| Other <i>(please specify)</i> |            |

**H16.1. Please assess their services by a 5-grade system, whereby 1 is the lowest and 5 is the highest grade. So the organization...** *(Name the institution that was given first by the respondent for the previous question and write down the name of this organization within first empty graph. If there is another institution named, read the name of the next one and write down the name of that organization within the next empty graph and so on.. Rate each of the institution according to marks given by the respondent. If the respondent says "I don't know", write down 88; if he/she has no answer, right down 99.)*

| Write down the name of an organization with its code | Code Name | Code Name | Code Name | Code Name | Other Name |
|--|-----------|-----------|-----------|-----------|------------|
| 1. Empathic Service                                  |           |           |           |           |            |
| 2. Staff Quality                                     |           |           |           |           |            |
| 3. Consultation Quality                              |           |           |           |           |            |
| 4. Problem Solving                                   |           |           |           |           |            |

**H16.2 Are you going to use the services of that institution(s)/ other institution(s) in the future?**

- 1. Yes/maybe
- 2. No/probably not

**H16.3 Can you tell me why do you think so? Note full answer here:**

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## **I. Awareness of AIDS**

***(Questions for those respondents who answered positively to Q H1)***

**I1. Out of the below listed information sources which one was used by you as a source of information about AIDS?** (Read out the following possible responses. Several answers are acceptable)

|                                   | Y | N |
|-----------------------------------|---|---|
| 1. Radio                          | 1 | 2 |
| 2. TV                             | 1 | 2 |
| 3. Magazines/Journals             | 1 | 2 |
| 4. Booklets, Posters              | 1 | 2 |
| 5. Healthcare system staff        | 1 | 2 |
| 6. Schools/Teachers               | 1 | 2 |
| 7. Friends/Relatives              | 1 | 2 |
| 8. Work Place                     | 1 | 2 |
| 9. NGO representatives            | 1 | 2 |
| 10. Training Programs             | 1 | 2 |
| 11. Billboards/Street Advertising | 1 | 2 |
| 12. Social Workers                | 1 | 2 |
| Other (please specify)            | 1 | 2 |

**I2. Did anybody supply you with the following items and/or information about those last year?** (Multiple answers are acceptable)

|   | Y | N |
|---|---|---|
| 1. Condoms                              | 1 | 2 |
| 2. Brochures/pamphlets/booklets on AIDS | 1 | 2 |
| 3. Qualified information on AIDS        | 1 | 2 |
| Other (please specify)                  | 1 | 2 |

**I2.1 Please, recall who did supply you with the following items and/or information?**

1. Friend/Neighbor
2. Sexual partner
3. Needle partners / other drug users
4. Programme Representative/ Social Workers
- 4.1 Please, indicate the programme (name/organization)

5. Other (please specify) \_\_\_\_\_

**J. Encouraging to Use Condoms**

**J1. Over the last year have you seen, read or heard any advertisement on condoms from any of the following sources? (Multiple answers are acceptable)**

|                                 | Y | N |
|---------------------------------|---|---|
| 1. Radio                        | 1 | 2 |
| 2. TV                           | 1 | 2 |
| 3. Drugstore                    | 1 | 2 |
| 4. Health Center                | 1 | 2 |
| 5. Hospital                     | 1 | 2 |
| 6. Medical personnel/Volunteers | 1 | 2 |
| 7. Friends/Neighbors            | 1 | 2 |
| 8. NGOs                         | 1 | 2 |
| 9. Magazines/Journals           | 1 | 2 |
| 10. Video Shops                 | 1 | 2 |
| 11. Street Stands               | 1 | 2 |
| 12. Trainings                   | 1 | 2 |
| 13. Booklets                    | 1 | 2 |
| 14. Social Workers              | 1 | 2 |
| Other (Please specify)          | 1 | 2 |

**J2. Have you heard/seen or read any information about the syringe exchange program over the last year?**

|     |   |                        |
|-----|---|------------------------|
| Yes | 1 | <b><i>Continue</i></b> |
| No  | 2 | <b><i>Go to J3</i></b> |

**J2.1 Did you get a sterile syringes from this program over the last year?**

1. Yes
2. No

**J3. Have you heard/seen or read any information about the substitution therapy program over the last year?**

|     |   |                        |
|-----|---|------------------------|
| Yes | 1 | <b><i>Continue</i></b> |
| No  | 2 | <b><i>Go to J4</i></b> |

**J3.1 Did you use this program?**

1. Yes
2. No

**J4. Have you heard/seen or read any information or material about any other similar program?**

|     |   |                        |
|-----|---|------------------------|
| Yes | 1 | <b><i>Continue</i></b> |
| No  | 2 | <b><i>Go to J5</i></b> |

**J4.1 If yes, what is it?**

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**J5. Where do you normally gather to inject drugs?**

\_\_\_\_\_ (please specify)

**J6. Do not tell me their names, but please specify two persons who have the major impact on you in terms of continuing the using of drugs.**

|                        | Person One | Person two |
|------------------------|------------|------------|
| Parents                | 1          | 1          |
| Siblings               | 2          | 2          |
| Spouse/ sexual partner | 3          | 3          |
| My children            | 4          | 4          |
| Friend(s)              | 5          | 5          |
| Needle partners        | 6          | 6          |
| Nobody                 | 99         |            |

**J7. Do not tell me their names, but please specify two persons who have the major impact on you in terms of quitting the using of drugs.**

|                 | Person One | Person two |
|-----------------|------------|------------|
| Parents         | 1          | 1          |
| Siblings        | 2          | 2          |
| Spouse          | 3          | 3          |
| My children     | 4          | 4          |
| Friend(s)       | 5          | 5          |
| Needle partners | 6          | 6          |
| Nobody          | 99         |            |

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**Q8. You have been very helpful. After generalization and statistical analysis of the present study our organization will plan projects that will be beneficial for all. If in several months I need to take another interview from you, would you make yourself available?**

1. Yes
2. No
88. Don't know (we'll see)

Interviewer, thank the respondent for cooperation and say good bye. After the interview make sure you have taken down the respondent's identification data so that the same person is used in the following panels of the study.

**Q9. During the interview the respondent was:**

1. Interested
2. Indifferent
3. Irritated
4. Calm
5. Agitated

Time when interview was concluded \_\_\_\_\_

The questionnaire is kept till completion of the project.

**Q10. Quality control on the interview was carried out by** \_\_\_\_\_

Position \_\_\_\_\_

Organization \_\_\_\_\_

Quality control group member has used (completed) quality control card \_\_\_\_\_

**Signature** \_\_\_\_\_