CURATIO INTERNATIONAL FOUNDATION

HIV risk and prevention behaviors among People Who Inject Drugs in seven cities of Georgia

Bio-Behavioral Surveillance Survey in seven cities of Georgia

Study Report

Prepared By:

Curatio International Foundation

Bemoni Public Union

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BEMONI PUBLIC UNION

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Acronyms

AIDS	Acquired Immune Deficiency Syndrome
AOR	Adjusted Odds Ratio
Bio-BBS	Behavioral Surveillance Survey with Biomarker component
BPU	Bemoni Public Union
CI	Confidence Interval
CIF	Curatio International Foundation
CNS	Central Neural System
FSU	Former Soviet Union
FSW	Female Sex Worker
GARPR	Global AIDS Response Progress Report
GFATM	The Global Fund to fight AIDS, Tuberculosis and Malaria
HCT	HIV Counseling and Testing
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
IDP	Internally Displaced Person
IDU	Injecting Drug User
KP	Key Population
NCDCPH	National Center for Disease Control and Public Health
NGO	Non-Governmental Organization
OR	Odds Ratio
PWIDs	People Who Inject Drugs
RDS	Respondent-Driven Sampling
RDSAT	Respondent-Driven Sampling Analyses Tool
SHIP	STI/HIV Prevention
SPSS	Statistical Package for the Social Sciences
STI	Sexually Transmitted Infection
TPHA	Treponema Pallidum Hemagglutination Assay
USAID	United States Agency for International Development
WHO	World Health Organization

Executive summary

Introduction

The estimated HIV prevalence in Georgia is 0.3% (0.2% - 0.4%) among the adult population (15 - 49 years of age). The latest spectrum estimates 6,500 (5,200 – 8,200) people ages of 15 and up are living with HIV (PLHIV).

Injecting drug use was considered to be a leading route of HIV transmission in the early stages of the HIV epidemic in Georgia. Since 2012, however, heterosexual intercourse has become the major route of transmission (44% in 2012, 49% in 2013 and 45% in 2014). HIV infections acquired through injecting drug use accounts for 35.7% of cases.

HIV surveillance in Georgia has primarily focused on Key Population (KP) surveillance using Bio-Behavioral Surveillance (Bio-BBS) among these groups.

The current study describes the most recent wave of Bio-BBS surveys among PWIDs in Georgia (Bio-BBS surveys among PWIDs have been undertaken since 2002).

This study aims to:

- Measure HIV prevalence among PWIDs
- Provide measurements of key HIV risk behaviors among PWIDs
- Generate evidence for advocacy and policy-making

Methods

The study used a cross-sectional study design. A sample of 2037 injecting drug users 18 years and older were recruited using respondent-driven sampling (RDS) in seven major cities of Georgia: Tbilisi, Gori, Telavi, Zugdidi, Batumi, Kutaisi and Rustavi. Face-to-face interviews with participants were completed and blood samples were taken to evaluate risk-related behavior and to measure HIV prevalence among PWIDs in Georgia. Inclusion criteria for participation in the study included the following: being 18 years and older, injecting drugs in the month prior to the survey, being a resident of the selected city, and ability to complete the interview.

Data analysis in Respondent-Driven Analysis Tool generated weighted population based estimates for each city. A combined sample from all seven cities was also analyzed in SPSS to derive Georgia estimates, in addition bivariate and multivariate regressions of specific indicators were done.

Results

Socio-demographic characteristics

- No significant differences were found in socio-demographic characteristics of the PWIDs recruited in 2009, 2012 and 2015 studies. Study findings still show that PWIDs generally have a low socio-economic status. The vast majority of participants reported being unemployed, and 51% of PWIDs mentioned having a monthly income of less than 300 GEL.
- The median age of initiating non-injection drug consumption and injection drug use has not changed since 2012 and equals 15-16 years and 18-20 years, respectively.

Drug Scene and other contextual factors

- Non-injecting drugs consumption did not demonstrate major changes since 2012. CNS depressants and hallucinogens were reported as the most popular drugs for consumption with a slight decrease observed since 2012. About a quarter of young PWID who reported non-injection drug use mentioned use of new psychoactive drugs.
- Injected drug scene has significantly changed during last years. Heroin is the most misused substance among drug users in Georgia followed by buprenorphine. Heroin use dropped in 2012 and then increased to the same level in 2015 (58.1%). Buprenorphine use also dropped in 2012 and increased up to 26% in 2014-2015. Alternatively, lower proportion of PWID reported use of homemade opioid-type drugs like Desomorphine and Ephedrone compared to 2012. Forty percent of the survey participants are opioid-dependent.
- Diversity has been shown in drug use in different cities. As for the most commonly used drugs, heroin injection varies from 45.1% in Rustavi to 67.6% in Batumi, while buprenorphine injection ranges between 13.4% in Gori to 44% in Batumi. High rates of heroin injection in Zugdidi and Batumi could be associated to geographic locations of these cities (border cities), where drugs are easily accessible, compared to the other cities.
- Injection in other countries has dramatically grown across all survey locations and this trend is notable since 2009. Almost every second user has experienced injection abroad during the previous year prior to the survey. Turkey, followed by Ukraine and Russia, was the most common county where PWIDs injected drugs. HIV risk behaviors increase while abroad, as exhibited by the four-fold increase in rates of sharing injection equipment in other countries compared to Georgia.

HIV knowledge and HIV testing practice

- Knowledge of HIV/AIDS among PWID remains relatively good. The majority is aware of primary transmission risks associated with injection and sexual behavior. Misconceptions, however, still exist. Among all cities Telavi had the smallest proportion of respondents (72%) indicating that they were aware that HIV cannot be transmitted by consuming food or drink containing someone else's saliva.
- There is significant increase in proportion of PWID who were tested during last 12 months and know their results. Increase is observed across all cities. In general one in four injecting drug user has been recently tested on HIV with variation from 15.4% (Telavi) to 29.9% (Gori). As for knowledge of HIV testing possibilities there is decrease since 2012 that is observed in all cities.
- PWIDs who exhibited unsafe sharing practice last month also had significantly lower odds of being tested for HIV compared to PWIDs with safe injection behavior last month.

Drug use behavior

- The vast majority of respondents consider themselves to be drug addicts. Frequency of injection during the last month is quite divergent in different survey locations. Kutaisi and Tbilisi are the leading areas where injecting drugs several times a day was most frequently reported.
- There is association between types of drugs and frequency of injections. Injection of Ephedrone - "Vint", Methamphetamine – "Jef", Desomorphine – "Krokodil" was higher among those who reported having injections several times a week and more.
- The majority of PWIDs (ranging from 45.8% in Batumi to 67% in Telavi) are members of a regular injecting group composed of about 4 people, similar to that found in 2009 and 2012. Frequency of drug injection has changed since 2012, namely, proportion of frequent injectors (those who injected several times a week and more frequent) has decreased.
- The proportion of survey participants practicing safe injection varies from 69.4% in Telavi to 86.5% in Kutaisi.
- There was sharp reduction in sharing injecting equipment and other paraphernalia (bottle, spoon, boiling pan/glass/container, cotton/filter or water) from 2009 to 2012. Reduction trends continue, although a small proportion (from 2% to 5%) still shares paraphernalia.
- Factors determining unsafe infections are frequency of injections, city of residence, education level, HIV testing practice last year, and awareness of their results. Those who reported injecting drugs several times a month or less, those higher education, who were tested on HIV during last month were less likely to practice unsafe injections.

Sexual behavior

- High risk sexual behavior remains one of the major problems among PWIDs. Condom use at last intercourse varies from 20.8% (Zugdidi) to 45.9% (Telavi). A relatively small proportion of respondents in all cities reported using condoms with regular partners.
- More than 36.1% (Kutaisi) of PWIDs reported having occasional sex partners across cities, with the highest proportion of 53.9% in Telavi. Condom use at last sexual intercourse with occasional partner varies from 39.6% (Kutaisi) to 72.5% (Zugdidi). With paid partners, condom use is significantly higher.
- The analysis revealed that the proportion of married PWIDs who reported having paid sex partners in the past year varied from 10.5% in Rustavi to 22.3% in Gori. It was more frequent for married PWIDs across all survey sites to have occasional sex partners over the last year, ranging between 25.9% in Tbilisi to 62.2% in Batumi.
- More drug injectors have safe sexual contacts with occasional partners than in previous years, but in Kutaisi, Batumi and Rustavi, however, protective behavior remains at alarmingly low levels and needs special attention.

Access to and coverage of treatment and harm reduction interventions

- The majority of PWIDs have never accessed drug treatment facilities. The proportion of respondents who have never been treated for drug addiction ranges from 63.3% (Batumi) to 85.6% (Gori). Only 6% underwent or was still under any kind of treatment.
- Coverage of preventive programs (minimal coverage) defined as knowing where to get an HIV test and receiving at least one of the following program commodities: sterile injecting equipment, condom, brochure/leaflet/booklet on HIV/AIDS, and qualified information on HIV has increased from 24% to 32.4% since 2012. Program full coverage varies between 8% (Telavi) to 30.9% (Gori).
- While awareness about syringe exchange programs has improved in Telavi, Batumi, and Zugdidi, in general, knowledge about the program remains low and needs to be improved. Substitution therapy programs are much more well-known among PWID.

HIV and HICV prevalence

- The combined dataset analysis of all seven cities shows that HIV prevalence is 2.2% (95% CI 1.53-2.99) with no change since 2012 when HIV prevalence was 3.0 (95% CI 2.20-4.04). An estimate for PWID living with HIV varies from the lowest 0.9% (95%CI, 0%-4.3%) in Rustavi to the highest

4.8% in Zugdidi (95%CI, 0.2%-11%). Batumi and Zugdidi remain the cities with highest HIV prevalence rates.

- The study revealed alarmingly high HCV prevalence (66.2% - in all seven cities). Across the cities highest rates are in Tbilisi, Kutaisi, Zugdidi and Batumi. High HCV prevalence also found in previous BBS studies is a demonstration of unsafe injecting behavior of PWID in their early injecting career.

Recommendations

The following recommendations are proposed to address the weaknesses and gaps revealed through the current study:

Increasing IDU coverage and strengthening outreach programs and NGOs that work on drug demand reduction.

The survey identified substantial need for increasing coverage and quality of preventive, treatment, and harm reduction services.

- Increase coverage of HCT services through increasing level of awareness among PWIDs and expanding field outreach activities.
- Increase coverage and improve quality of prevention services though delivering comprehensive and standardized interventions. Strengthen and expand peer education activities.
- Consider targeting young PWIDs. Design specific programs including a comprehensive package with involvement of young peer educators.
- Use of a competence-enhancement approach to drug abuse prevention in schools. Contrary to the traditional antidrug education methods, this approach proved to be effective in behavior change among youth.
- In prevention messages, emphasize risks associated with injection practices abroad (sharing of injecting equipment with individuals from other networks).
- Design and implement drug-specific interventions primarily for self-made amphetamine-type stimulants and opiate users. Reemphasize dangers associated with psychoactive drugs consumption and desomorphine injection.
- Given the prevalence of sexual risk among PWIDs, continue to promote condom distribution and emphasize the necessity of consistent condom use with any sex partner. 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 PWIDs and family focused interventions.

- Strengthen and expand comprehensive drug prevention and treatment interventions that can reduce drug consumption as well as injection-related risky behaviors.
- Increase availability and affordability of rehabilitation and detoxification centers to PWID.
- Intensify preventive interventions in Batumi, Zugdidi, Kutaisi and where high HIV prevalence and risk behaviors create ground for further spread of infection.

Continue with the surveillance

- The next surveys among PWID using RDS should be carried out in these cities within the next 2 years.
- Investigate environmental risks and enabling factors that influence behavior and thus provide insight into HIV prevention.

Summary of main findings and core indicators

Table 1: Summary of core indicators – Georgia (all seven cities), Tbilisi, Batumi, Zugdidi

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Key indicators	SPSS %	N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
HIV testing during the last year								
Received HIV test last year and know their results	25.7	2037	24.4(18.6-30.6)	91/357	23.4 (16.8-30.8)	83/277	18.9(12.3-24.5)	76/288
≤ 24	17.2	163	0 (0-0)	0/24	11.8 (0-33.7)	4/15	23.7(2.3-51.8)	4/16
≥ 25	26.4	1874	24.8 (18.9-31.1)	91/333	24.6 (18.1-32.9)	79/262	18.6(12-24.2)	72/272
Infringement of the law due to drug use during last 12 months	20.5	2037	14 (9.8-18.2)	63/ 357	33.2(25.4-41.5)	89/277	20.5(14.8-26.7)	64/288
≤ 24	22.1	163	10.3 (0-31.1)	2/24	34.7 (5.1-67.1)	5/15	11.3(0-34.5)	2/16
≥ 25	20.4	1874	14.5 (10.2-19.1)	61/333	33.1 (26.3-42.9)	84/262	21(14.9-27.8)	62/272
Used sterile needle/syringe/ other injecting equipment at last injection								
Yes	87.2	2037	92.5(88.5-95.4)	319/357	78.6 (70-86.1)	233/277	88.3(83.7-92.6)	247/288
≤ 24	86.5	163	90.2(68.7-100)	23/24	77.4 (39.3-100)	13/15	84.9(60-100)	13/16
≥ 25	87.2	1874	92.8 (88.8-95.8)	296/333	79 (70.7-86.5)	220/262	88.6(83.6-92.9)	234/278
Safe injecting practice at last injection								

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Key indicators	SPSS %	N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
IDUs with safe injection practice at last injection[1]	74.3	2037	77.4 (71.2-83)	267/357	70.9 (61.7-78.2)	209/277	79.4(73.6-85.2)	220/288
≤ 24	62	163	72.8 (46.4-82.3)	15 /24	53.2 (14.7-87.1)	10/15	59.4(28.9-90.6)	10/16
≥ 25	75.4	1874	77.6 (71.6-83.6)	252 /333	72.1 (64.1-79.9)	199/262	80.7(74.8-86.1)	210/272
Condom use at last intercourse								
Used condom at last intercourse	35.6	1905	30.3 (25.3-37.7)	120/342	31.9 (24.1-39.4)	82/267	32.8(26.2-41.1)	93/265
≤ 24	59.6	161	42.9 (18-64.3)	10/24	58.2 (23.3-90.6)	9/15	74.3(44.2-94.3)	9/15
≥ 25	33.4	1744	28.1 (24-36.6)	110/318	29.5 (21.8-37.3)	73/252	30.1(23.1-38.8)	84/250
Regular sex partner last 12 months								
Used condom at last intercourse	24.4	1594	26.3 (21.6-35.9)	78/300	21 (14.7-28.2)	50/223	20.8(14.2-29.3)	45/212
≤ 24	42	112	56.5 (18.4-89.6)	8/18	47.3 (8.7-94.4)	5/9	64.6(0-96.6)	5/10
≥ 25	23.1	1482	24.4 (20.1-34.3)	70/282	18.9 (12.7-25.8)	45/214	18(11.4-26.5)	40/202
Occasional sex partner (s) last 12 months								
Used condom at last intercourse	60.4	964	64 (45-72.5)	110/159	53.4 (39.8-74.2)	73/130	72.5(55.7-81.3)	95/140
≤ 24	66.9	124	73.3 (37.5-96.1)	13/20	51.7 (0.0-100)	10/15	61(0-100)	7/12
≥ 25	59.4	840	63.4 (42-72.4)	97/139	55.8 (40.9-75)	63/115	74.2(58.7-85.6)	88/128

[1] not usage of needle/syringe previously used by somebody else or him/herself, not usage of needle/syringe left at a place of gathering, not usage of syringe prefilled by somebody else without his presence, not usage of syringe filled from previously used syringe, not usage of possibly contaminated shared equipment (container, cotton, filter, water), not usage of drug solution from shared container prepared without his presence.

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Key indicators	SPSS %	N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
Paid sex partner(s) last 12 months								
Used condom at last intercourse	85.9	489	88.6 (64.3-100)	59/66	51 (--)	47/59	87.3(60.3-98.4)	74/88
≤ 24	92.6	68	41.4 (50-50)	5/5	25.3(50-50)	5/6	100(100-100)	9/9
≥ 25	84.8	421	88.9 (64.3-100)	54/61	62.1(59.6-99.4)	42/53	83.3(52.4-98.1)	65/79
HIV/AIDS awareness								
IDUs correctly identifying ways of preventing and transmission of HIV (Answers 5 GARPR indictor questions correctly)[2]	43.5	2037	43.8 (37.5–50.9)	156/357	43(34.3-50.4)	134/277	44.4(37.4-51.7)	127/288
≤ 24	25.2	163	22.5 (3.5–46.2)	4/24	19.4 (0.0-49.4)	4/15	27.5(0-57.8)	4/16
≥ 25	45.1	1874	44.6 (38.2–52)	152 /333	45.1 (36.9-53.4)	130/262	45.9(38.8-53.8)	123/272
IDUs correctly identifying ways of prevention and transmission of HIV (Answers 7 national indictor questions correctly)[3]	86.4	2037	91.4 (88–94.6)	312/357	85.2 (74.1-91.5)	245/277	93.7(90.3-96.9)	260/288
≤ 24	80.4	163	84.2 (58.6–97.5)	19/24	66.1 (31.6-100)	13/15	84.5(59.8-100)	13/16
≥ 25	86.9	1874	91 (87.1–94.2)	293/333	86.2 (76.8-92.5)	232/262	94(90.6-97.2)	247/272

[2] One may protect oneself from HIV/AIDS by having one uninfected and reliable sexual partner; Can reduce the HIV risk if one properly uses condoms during every sexual contact; healthy looking person can be infected with HIV; no one can get HIV as a result of a mosquito's bite; no one can get HIV by taking food or drink with infected person .

[3] One may protect oneself from HIV/AIDS by having one uninfected and reliable sexual partner; Can reduce the HIV risk if one properly uses condoms during every sexual contact; healthy looking person can be infected with HIV; one may be infected with HIV/AIDS by using a needle already used by someone else; one may be infected with HIV/AIDS by using bottle, spoon, boiling pan/glass, container, cotton/filter or water where might been touched needle already used by someone else; one may be infected with HIV/AIDS by taking solution from the shared container; drug users may protect themselves from HIV/AIDS by switching to non-injection drugs.

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Key indicators	SPSS %	N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
Kind of medical treatment and assistance taken last 12 months								
Apply to a medical facility to get a special treatment because he/she is a drug user during last 12 months	6.2	2037	2.6 (0.8-4.5)	18/357	14.7 (9.3-20.8)	50/277	4.7(2-7.9)	18/288
≤ 24	3.1	163	0 (0-0)	0/24	8.5(0-30.8)	1/15	0	0/16
≥ 25	6.5	1874	2.9 (1-4.9)	18/333	15.2 (9.2-21.3)	49/262	4.9(2-8.4)	17/272
Survived "extreme need" with somebody else's help last 12 months	5.4	2037	2.6 (0.9-4.4)	18/357	12.8 (7.5-19)	45/277	4.6(1.9-7.8)	17/288
≤ 24	1.2	163	0 (0-0)	0/24	0	0/15	0	0/17
≥ 25	5.8	1874	2.9 (1-5)	18/333	13.9 (8-20.4)	45/262	4.9(2.1-8.3)	17/272
IDUs reached with prevention programs								
Aware about HIV testing possibilities and received sterile injecting equipment and condom last 12 months	19.7	2037	11.1 (7.3-15.2)	45/357	13.2 (9.1-19)	54/277	17.6(13-23.1)	68/288
≤ 24	12.9	163	0 (0-0)	0/24	5 (0-19.6)	2/15	15.9(2-39.6)	4/16
≥ 25	20.3	1874	12.6 (8.7-17.4)	45/333	14 (9.7-20.1)	52/262	17.6(13-23.2)	64/272
Program minimal coverage[4]	32.4	2037	22.9 (17.5-28.6)	92/357	22.8(16.5-30.2)	85/277	29.4(23.7-36.5)	99/288

[4] Aware about HIV testing possibilities and received sterile injecting equipment **or** condom **or** brochures/ pamphlets/ booklet **or** qualified educational information last 12 months

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Key indicators	SPSS %	N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
≤ 24	30.1	163	7.2 (0-24.8)	1/24	11.2(0-30.6)	3/15	38.4(12.1-73.8)	7/16
≥ 25	32.6	1874	24.6 (19-31)	91/333	24.2(17.7-32.2)	82/262	28.7(22.8-35.8)	92/272
Program full coverage[5]	17.1	2037	9.9 (6.6-13.8)	39/357	11.2(7.1-16.6)	48/277	14.3(10.5-19.2)	60/288
≤ 24	9.8	163	0 (0-0)	0/24	4.7(0-19.2)	2/15	17 (2.4-43)	4/16
≥ 25	17.8	1874	11.4(8-15.9)	39/333	11.7(7.6-17.6)	46/262	14.1(10.2-19)	56/272
Received sterile injecting equipment last 12 months	25	2037	13.2(8.8-17.6)	56/357	18.3(13-24.8)	68/277	21.5(16.4-27.5)	78/288
≤ 24	17.8	163	1.4(0-11.3)	0/24	11.2(0-31)	3/15	26.9(5.2-57.9)	5/16
≥ 25	25.7	1874	14.8 (10.5-20)	56/333	19.3(13.8-26)	65/262	21(15.8-27.4)	73/272
Received condoms last 12 months	24.2	2037	13.8 (9.6-18.2)	61/357	16.2(11.3-22.2)	64/277	18.2(13.8-23.9)	71/288
≤ 24	25.8	163	7.5 (0-24.6)	1/24	11.2(0-32)	3/15	25.2(4.5-55)	6/16
≥ 25	24.1	1874	15.1 (11-20.3)	60/333	17(11.9-23.5)	61/262	17.5(13-23.2)	65/272
Received brochures/ pamphlets/ booklet on HIV/AIDS last 12 months	29.2	2037	22 (16.1-27.6)	86/357	21.3(15.4-28.5)	80/277	29(22.8-35.7)	99/288
≤ 24	25.2	163	4.1 (0-12.8)	1/24	16.8(1.9-42.4)	4/15	42.2(11.1-74.3)	7/16
≥ 25	29.6	1874	24.0 (18.4 -30.5)	85/333	21.9(15.7-29.7)	76/262	27.7(21.5-34.1)	92/272
Received qualified information on HIV/AIDS last 12 months	26.8	2037	20.5(15.6-26.2)	76/357	18.6(12.3-24.7)	75/277	21.5(16.8-27.7)	80/288
≤ 24	23.3	163	7.5 (0-25)	1/24	11.1(0-30.7)	3/15	39.7(13.5-75.5)	7/16
≥ 25	27.1	1874	22.2 (17.1-28.4)	75/333	19.6(13-26.1)	72/262	20.2(15.3-26.4)	73/272

[5] Aware about HIV testing possibilities **and** received sterile injecting equipment **and** condom and brochures/ pamphlets/ booklet **and** qualified educational information last 12 months

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Key indicators	SPSS %	N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
HIV infection								
HIV prevalence	2.2	2022	2 (0-4.6)	5/357	4.4(1.8-7.8)	13/277	4.8(0.2-11)	6/286
≤ 24	0.6	162	2.5(0-12.9)	0/24	0	0/15	20(0-48.1)	1/15
≥ 25	2.3	1860	2.4 (0-5.2)	5/333	4.7(1.9-8.3)	13/262	3.1(0.1-6.6)	5/271
HCV								
HCV prevalence	66.2	2024	73.7(66-80.7)	277/357	79.8(74.2-85.6)	217/277	73.3(66.1-79.5)	203/286
≤ 24	11.7	162	25.8(9.4-42.5)	4/24	25.3(0-66.5)	3/15	16(0-43.8)	2/15
≥ 25	70.9	1862	76.8(69.4-83.7)	273/333	84.2(78.5-89.1)	214/262	77.2(70.2-82.9)	201/271

Table 1: (Continued) Summary of core indicators – Gori, Telavi, Kutaisi, Rustavi

	GORI		TELAVI		KUTAISI		RUSTAVI	
Key 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
HIV testing during the last year								
Received HIV test last year and know their results	29.9 (22.3-36.3)	103/290	15.4(10.1-21.6)	45/289	26.5(20.2-33)	74/289	17.4 (11.6-23.3)	51/247
≤ 24	23.7 (8.1-37)	8/29	15.4(3.9-28.6)	5/38	21.2(0-56.4)	2/12	19 (3.5-25.7)	5/29
≥ 25	30.9 (22.6-37.5)	95/261	15.4(9.7-22.6)	40/251	26.2(19.7-32.5)	72/277	18.4 (12.6-25.9)	46/218
Infringement of the law due to drug use during last 12 months	11.3 (7.5-15.8)	39/290	15.6(11-20.8)	53/289	19.7(13.6-26.7)	56/289	20.7 (14.7-27.3)	54/247
≤ 24	21.4 (5.4-42.7)	6/29	27.1(10.6-44.9)	11/38	15.2(0-44)	3/12	15.3 (4.9-32.7)	7/29
≥ 25	9.5 (5.9-13.9)	33/261	13.7(9.1-19.4)	42/251	20.4(14.2-27.5)	53/277	22.4 (15.8-29.8)	47/218
Used sterile needle/syringe/ other injecting equipment								

Key indicators	GORI		TELAVI		KUTAISI		RUSTAVI	
	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
at last injection								
Yes	88.4 (83.2-92.9)	247/290	89.8(85.7-94)	259/289	90.5(86.96-94)	243/289	94.3 (91.1-97.3)	228/247
≤ 24	80.3 (62.7-95.2)	24/29	79.7(62.9-94.1)	31/38	86.8(57.4-100)	9/12	99.1 (96.3-100)	28/29
≥ 25	89.6(83.7-94.1)	223/261	90.4(85.7-94.9)	228/251	90(85.4-93.3)	234/277	93.9 (89.8-97.3)	200/218
Safe injecting practice at last injection								
IDUs with safe injection practice at last injection[6]	77.8 (71.3-84.1)	212/290	69.4(63.1-76.1)	201/289	86.5(82.2-90.8)	230/289	75.4 (68.3-82.3)	178/247
≤ 24	78.1 (57.8-94.2)	21/29	46.7(28.8-64.7)	18/38	87.7(60.2-100)	9/12	74 (60.2-90.8)	18/29
≥ 25	77.7 (70-84.3)	191/261	72.3(65.7-79.6)	183/251	85.7(80.2-89.9)	221/277	74.3 (67-82.7)	160/218
Condom use at last intercourse								
Used condom at last intercourse	38.7 (31.4-47.6)	105/273	45.9(38.3-54.5)	120/270	30.9(22.8-37.5)	87/261	35.6 (28.1-44.6)	72/227
≤ 24	44.6 (22.9-70.5)	12/29	75.6(57.4-90.2)	28/37	43.8(8.8-81.3)	7/12	67.2 (44.4-88.9)	21/29
≥ 25	38.6 (30.1-47.1)	93/244	40.8(33.4-49.8)	141/233	31.5(23.9-38.5)	80/249	29.7(21.9-38.9)	51/198
Regular sex partner last 12 months								
Used condom at last intercourse	24.5 (16.2-32.7)	61/236	34.5(24.2-43.1)	60/210	23.3(14.9-30.1)	46/216	28.3 (22.4-39.3)	49/197
≤ 24	16.9 (0-41.5)	7/24	53.4(24.6-85.5)	11/25	14.6(0-71.6)	2/8	100(100-100)	9/18

[6] not usage of needle/syringe previously used by somebody else or him/herself, not usage of needle/syringe left at a place of gathering, not usage of syringe prefilled by somebody else without his presence, not usage of syringe filled from previously used syringe, not usage of possibly contaminated shared equipment (container, cotton, filter, water), not usage of drug solution from shared container prepared without his presence.

Key indicators	GORI		TELAVI		KUTAISI		RUSTAVI	
	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
≥ 25	26.3 (17-34.6)	54/212	32.7(22.3-41.6)	49/185	23.6(14.9-30.4)	44/208	29.1(50-50)	40/179
Occasional sex partner (s) last 12 months								
Used condom at last intercourse	60.9 (50.2-79.1)	85/137	67.2(56.1-79.5)	100/163	39.6(23.2-62)	63/120	42.1(20.6-54.7)	56/115
≤ 24	69.5 (10.7-100)	11/18	70.3(44-87.7)	21/31	100(50-100)	7/9	71(16.3-100)	14/19
≥ 25	59.1 (45.8-78.6)	74/119	65.6(52.3-81.6)	79/132	37.2(23.8-61)	56/111	44.2(14.7-58.1)	42/96
Paid sex partner(s) last 12 months								
Used condom at last intercourse	88.2 (73.9-98.6)	68/77	88.5(77.5-100)	79/91	100(--)	53/65	100(--)	40/43
≤ 24	100 (50-100)	10/11	91.9(65.2-100)	20/22	95.(50-50)	3/4	79.5(31.5-100)	11/11
≥ 25	85.4 (70.6-98.5)	58/66	70.7(0-100)	59/69	0(0-0)	50/51	90.7(40-100)	29/32
HIV/AIDS awareness								
IDUs correctly identifying ways of prevention and transmission of HIV infection (Answers 5 GARPR indictor questions correctly)[7]	52.4 (43.8-60.3)	158/290	31.9(24.4-39.9)	96/289	46.7(40-55.1)	122/289	35.6(28.5-43.6)	93/247
≤ 24	53 (29.4-69.3)	12/29	13.7(2.5-28)	6/38	46.8(10.7-80.6)	4/12	29.1(17.2-47.7)	7/29
≥ 25	52.5 (43.1-60.8)	146/261	35.1(27.2-43.6)	90/251	45.9(38.5-54.2)	118/277	35.9(28.8-45.4)	86/218

[7] One may protect oneself from HIV/AIDS by having one uninfected and reliable sexual partner; Can reduce the HIV risk if one properly uses condoms during every sexual contact; healthy looking person can be infected with HIV; no one can get HIV as a result of a mosquito's bite; no one can get HIV by taking food or drink with infected person .

Key indicators	GORI		TELAVI		KUTAISI		RUSTAVI	
	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 correctly identifying ways of prevention and transmission of HIV infection (Answers 7 national indicator questions correctly)[8]	89.6 (85.1-94.4)	256/290	77.8(70.7-84.4)	229/289	89.7(84.7-93.9)	254/289	83.3(77.4-88.6)	203/247
≤ 24	98.7 (85.3-100)	27/29	68.9(52-85-8)	26/38	95.8(66.6-100)	10/12	74.6(54.1-92.7)	23/29
≥ 25	87.8 (81.9-93.1)	229/261	79.2(71.9-85.9)	203/251	88.7(82.2-92.7)	24/277	85.6(79-90.6)	180/218
Kind of medical treatment and assistance taken last 12 months								
Apply to a medical facility to get a special treatment because he/she is a drug user during last 12 months	2.8 (1-5.2)	11/290	3.6(1.6-6)	12/289	7.2(3.6-11.5)	14/289	1.7(0.2-3.6)	4/247
≤ 24	4.2(0-13.2)	2/29	4.9(0-16.3)	1/38	5(0-20.5)	1/11	0(0-0)	0/29
≥ 25	2.5 (0.6-4.9)	9/261	3.7(1.5-6.3)	11/251	7.1(3.4-11.3)	13/277	1.8(0-4.2)	4/218
Survived "extreme need" with somebody else's help last 12 months	1.7 (0.3-3.4)	7/290	3.2(1.3-5.5)	11/289	4.2(1.4-8)	8/289	1.7(0.2-3.6)	4/247
≤ 24	2.8(0-10.9)	1/29	4.9(0-16.6)	1/38	0 (0-0)	0/12	0 (0-0)	0/29

[8] One may protect oneself from HIV/AIDS by having one uninfected and reliable sexual partner; Can reduce the HIV risk if one properly uses condoms during every sexual contact; healthy looking person can be infected with HIV; one may be infected with HIV/AIDS by using a needle already used by someone else; one may be infected with HIV/AIDS by using bottle, spoon, boiling pan/glass, container, cotton/filter or water where might been touched needle already used by someone else; one may be infected with HIV/AIDS by taking solution from the shared container; drug users may protect themselves from HIV/AIDS by switching to non-injection drugs.

Key indicators	GORI		TELAVI		KUTAISI		RUSTAVI	
	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
≥ 25	1.5 (0.1-3.3)	6/261	3.3(1.3-5.7)	10/251	4.3(14-80)	8/277	1.8(0.2-4.2)	4/218
IDUs reached with prevention programs								
Aware about HIV testing possibilities and received sterile injecting equipment and condom last 12 months	30.9 (24.2-38.3)	120/290	8(4.7-12.1)	31/289	12(7.4-17.1)	45/289	13.5(7.7-20.4)	39/247
≤ 24	17.7 (2.9-38.6)	8/29	7.3(0-20.4)	1/38	16.1(0-47.7)	1/12	20.5(3.4-30.7)	5/29
≥ 25	33.2 (26-41.1)	112/261	8.6(5-13.1)	30/251	11.5(6.8-16.2)	44/277	13.8(7.1-21)	34/218
Program minimal coverage[4]	32.1(24.3-40.3)	140/290	22.9(18.3-28.9)	75/289	25.1(17.6-31.8)	82/289	31.8(24.5-39.6)	87/247
≤ 24	26.8 (9.8-47.2)	11/29	41(23.6-58.1)	14/38	25.4(0-64.5)	3/12	32.1(10.6-48.4)	10/29
≥ 25	33.5 (25.8-42.5)	129/261	20(15.1-26.3)	61/251	24.3(16.6-30.4)	79/277	30(23.3-39.3)	77/218
Program full coverage[5]	26.4 (20.8-34.3)	101/290	7.4(4.2-11.3)	29/289	10.2(6.1-15.3)	40/289	9.3(5.2-14.5)	31/247
≤ 24	7.6 (0-20.7)	4/29	7.3(0-20.3)	1/38	16.2(0-46.8)	1/12	14.4(1.9-22.2)	4/29
≥ 25	28.9 (23.1-37.9)	97/261	7.9(4.5-12.2)	28/251	9.7(5.5-14.3)	39/277	9.9(5-15.5)	27/218
Received sterile injecting equipment last 12 months	30.1 (21.8-37.8)	129/290	14.3(10.1-19.4)	50/289	15.8(10.2-21.9)	56/289	25.7(18.6-33.2)	73/247
≤ 24	19.9 (4.2-37.5)	9/29	9(0-19.5)	3/38	16.1(0-47.7)	1/12	20.8(4.3-38.5)	8/29
≥ 25	32.6 (24.5-41.6)	120/261	15.3(10.8-21.2)	47/251	15.3(9.4-21.3)	55/277	24.5(17.6-33.1)	65/218
Received condoms last 12 months	30.7 (24-38.4)	123/290	17.8(13.6-23.3)	59/289	13.5(8.6-18.6)	54/289	21.5(14.8-29.2)	61/247
≤ 24	17.9 (3.2-36.2)	8/29	38(20.3-55.3)	13/38	21.1(0-55.8)	3/12	21.7(5.2-40.3)	8/29
≥ 25	33.1 (26.4-41.7)	115/261	14.4(10.1-20)	46/251	12.6(7.9-17.4)	51/277	20.1(13.2-28.5)	53/218
Received brochures/ pamphlets/ booklet on HIV/AIDS last 12 months	30.8 (24.6-39.7)	124/290	22.5(17.6-28.5)	72/289	19.4(13.7-25.5)	71/289	22.3(16.2-28.9)	63/247
≤ 24	27.6 (9.5-48.5)	8/29	37.7(20.1-55.3)	12/38	14(0-48.3)	2/12	18.2(4.3-35.4)	7/29
≥ 25	31.5 (25.3-41.2)	116/261	20.1(14.7-26.4)	60/251	19.1(12.9-24.7)	69/277	21.1(15.2-29.1)	56/218

Key indicators	GORI		TELAVI		KUTAISI		RUSTAVI	
	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
Received qualified information on HIV/AIDS last 12 months	29.1 (22.2-37.3)	119/290	19.5(14.8-25.2)	65/289	19.9(14.1-26.8)	69/289	22.1(16.4-28.9)	61/247
≤ 24	20.4 (5.9-37.7)	8/29	35(17.4-52.9)	11/38	13.1(0-48.3)	2/12	11.1(0.9-26.1)	6/29
≥ 25	30.1 (23.4-39.3)	111/261	17.1(12.3-22.7)	54/251	19.7(13.5-26.1)	67/277	21.7(15.9-29.8)	55/218
HIV infection								
HIV prevalence	2.4 (0.4-5)	5/287	1.2(0-2.9)	5/285	2.6(0.5-5.3)	8/284	0.9(0-4.6)	2/246
≤ 24	0	0/29	0	0/38	0 (0-0)	0/12	4.8(0-17.2)	0/29
≥ 25	2.9 (0.5-5.8)	5/258	1.4(0-3.4)	5/247	2.7(0.5-5.3)	8/272	1.8(0-5)	2/217
HCV								
HCV prevalence	57.1(49.6-65.7)	168/287	41.6(34.3-49)	119/287	74.6(66.3-81.8)	216/284	50(40.5-57.5)	139/246
≤ 24	8.2(0-24.1)	2/29	4.4(0-13.9)	2/38	35.7(0-72.7)	4/12	3.2(0-11.2)	2/29
≥ 25	62.8(55-71.3)	166/258	47.3(39.8-55)	117/287	75.3(66.8-82)	212/272	57.7(49.5-67)	137/217

Introduction

Background

The estimated HIV prevalence in Georgia is 0.3% (0.2% - 0.4%) among adult population (15 - 49 years of age) and according to the latest spectrum estimates 6,500 (5,200 – 8,200) people between the ages of 15 and up are living with HIV (PLHIV).[1] Since HIV reporting began in Georgia in 1989 total 5,105 cases were reported to the national HIV surveillance system by July 23, 2015. In total 2935 persons have developed AIDS and 981 have died.[2] The estimates suggest that about 40% of PLHIV are unaware of their infection. The majority (74%) of people diagnosed with HIV are men. Injecting drug use was considered to be a leading route of HIV transmission in the early stages of HIV epidemic in Georgia. But since 2012 heterosexual contacts became the major route of transmission (44% in 2012, 49% in 2013 and 45.1 in 2014). HIV infections acquired through injecting drug use accounted for 35.7% (0.7% higher than in 2013). Number of newly diagnosed HIV cases show upward trend with more than 500 cases per year.[1]

HIV surveillance in Georgia has primarily focused on Key Population (KP) surveillance using Bio-Behavioral Surveillance (Bio-BBS) among these groups. Bio-BBS surveys among PWIDs have been undertaken since 2002 in Georgia. The latest Bio-BBS study conducted in six cities of Georgia, in 2012 suggests that HIV prevalence among this KP equals to 3.0% through the country, and it varies from 0.4% to 9.1% depending on the geographic location.[3]

Research objectives

The current study represents next wave of Bio-BBS surveys among PWIDs in Georgia. It has the following objectives:

- To measure HIV prevalence among PWIDs,
- Provide measurements of key HIV risk behaviors among PWIDs,
- Generate evidence for advocacy and policy-making.

Methods

Study Design

We used cross-sectional study design in order to carry out Bio-BBS survey among PWIDs in seven major cities of Georgia: Tbilisi, Gori, Telavi, Zugdidi, Batumi, Kutaisi and Rustavi. Field work started in November, 2014 and ended up in May, 2015. The study employed Respondent-Driven Sampling (RDS) methodology to gather survey respondents as injecting drug use is illegal in Georgia; therefore, surveying PWIDs poses distinct challenges RDS was thought to be the best sampling method. For more information about RDS, see subtitle Respondent-Driven Sampling.

Respondent-Driven Sampling

There have been various sampling methods tested and used worldwide to recruit key populations at high risk for HIV, including PWIDs, for the last two decades. As it is suggested by scientific literature, RDS is the method that has the best potential to recruit study participants as close to a representative sample as possible. RDS is designed for situations where a sampling frame is not available. Unlike snowball sampling, RDS uses a mathematical model for weighting the data collected in order to get a representative sample.[4]

RDS is initiated by a set of non-randomly selected study participants – so called "seeds" – who refer their peers to participate in the study. These peers refer their peers as well, and the process continues until the sample size is achieved. RDS is based on the premise that peers are better than outreach workers and researchers at locating and recruiting other members of a hidden population. It differs from traditional snowball sampling in the following respects: 1) the subjects are asked to recruit their peers into the study recruitment quotas (e.g., three recruits only), 2) there is a dual incentive system – a reward for being interviewed and a reward for recruiting others into the study.

In this study, 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, Bemoni Public Union (BPU), which is a trusted and well-respected organization with extensive experience in working with the target population. Following eligibility assessment and provision of informed consent, the seeds underwent the 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 PWIDs. 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 25 GEL (10.99 USD) and an additional incentive of 7 GEL (3.08 USD) for each eligible person they recruited. The level of monetary incentives was not regarded as high.

The coupons were numbered to allow the researchers to link the recruiter with their recruits, and this information was recorded in a coupon management spreadsheet. The data on the coupons given to participants were managed by the MS Excel based software specifically developed for the coupon tracking. 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, familiarity with drug preparation and injection techniques and a visual inspection for recent track marks. Eligible respondents were assigned unique identification number. To avoid subject duplication, other physical characteristics such as height, weight, scars, tattoos and some biometric measures were noted.

Using RDS makes it is possible to collect additional information about participant's network size. This information is very important because it provides the basis of the weighting that is used. All eligible study participants were asked six questions about the network size, specifically:

1. How many PWIDs do you know in your (city/region)?
2. Among those, how many do you know personally (you know them by name and they know yours)?
3. How many of those are above 18 years?
4. How many of those have injected drugs during last month?
5. How many of those have you seen during last 1 month?
6. How many of those (who are above 18 years, are PWIDs, 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. Coupon rejection forms were used to record this data.

Sample Size

The sample size for each city was calculated to detect differences of 15% in key behavior indicators (e.g. safe injection at last injection) at 95% significance level and the power of 90% and to provide reliable estimates for each variable at city and state-levels. The last bio-BBS survey among PWIDs carried out in 2012, for example, indicated baseline values of safe injection at last injection were at 64.7% (Tbilisi), 62.2% (Batumi), 66.9% (Zugdidi), 68.8% (Telavi), 75.8% (Gori), and 76.6% (Kutaisi) of the population. Design effect was estimated to be 2.0 as recommended in RDS studies.[4]

Table 2 shows the final sample sizes achieved in this study for target population in different locations as suggested by the calculations.

Table 2: Sample sizes of the target population (PWIDs)

Area	Sample size
Tbilisi	**357**
Gori	**290**
Telavi	**289**
Zugdidi	**288**
Batumi	**277**
Kutaisi	**289**
Rustavi	**247**

Prior to the survey, formative research was conducted and qualitative data from that survey was attained in order to identify seeds, their network sizes and amount of incentives.

Study Subject Criteria

Eligibility Criteria:

Inclusion criteria for participation in the study include the following:

- Age 18 years or older
- Drug injection in the month prior to participation in the survey
- Resident of a selected location
- Ability to understand and communicate in Georgian

Exclusionary Criteria:

- Unable to provide informed consent
- Under the influence of alcohol
- A duplicate recruit that has already participated in the study
- Does not have a valid coupon

Recruitment results for PWIDs

The recruitment started with non-randomly selected seeds in each of the seven cities. They were classified with different characteristics to provide a representative sample of PWIDs. The seeds were carefully selected with demographic profiles that represent socially and geographically diverse injection networks of PWIDs in all seven survey sites. For the basic demographic characteristics of the seeds see the Table 3 below:

Table 3: Basic demographic characteristics of the seeds

Basic characteristics of seeds	Tbilisi	Gori	Telavi	Zugdidi	Batumi	Kutaisi	Rustavi
Age groups							
18-24		1		1			
25-30	1	3		1			
31-40	1	4	2	1	4	3	2
41+	5	1	7	5	3	6	5
Gender							
Male	7	9	9	7	7	7	5
Female				1		2	2
Level of Education completed							
Secondary or vocational school	3	7	5	2	3	7	3
Incomplete Higher				3			1
Higher	4	2	4	3	4	2	3
Marital status							
Married	3	4	6	5	3	4	1
Divorced/Separated for ever	1	1	2		3	4	2
Never been married	3	4	1	3	1	1	4
Total	**7**	**9**	**9**	**8**	**7**	**9**	**7**

The recruitment process occurred more rapidly than expected and desired sample size was achieved quickly. Coupons were distributed until the sample size reached just under the desired level. The number of waves accomplished by all seeds varied from shortest 6 (Gori) to the longest 9 (Batumi) in all survey sites.

Verification procedure revealed a number of non-eligible participants for the survey who had a strong desire to participate in this study.

Table 4: Recruitment information

Area	Max number of waves	Total number of released coupons	Returned coupons	Eligible PWIDs recruited by seeds (no of seeds)	Ineligible potential participants	Refusals
Tbilisi	8	864	368	350 (7)	11	
Gori	6	729	295	281 (9)	5	
Telavi	8	819	303	280 (9)	14	
Zugdidi	7	825	295	280 (8)	7	1

Area	Max number of waves	Total number of released coupons	Returned coupons	Eligible PWIDs recruited by seeds (no of seeds)	Ineligible potential participants	Refusals
Batumi	9	696	286	270 (7)	9	
Kutaisi	7	756	294	280 (9)	5	
Rustavi	**8**	**618**	**257**	**240 (7)**	**10**	

Study Instrument and Measurements

We utilized a standardized BBS questionnaire for PWIDs in accordance with Family Health International's Guidelines for Repeated Behavioral Surveys in Populations at Risk for HIV with slight modifications for the purposes of this study.[5] In 2010, the study instrument for BBS among key populations at risk for HIV was tailored and standardized by the help of experts to assess the unique needs of this population in Georgia. At that time, the methodology was updated by adjusting the list of main and composite indicators with the pack of passports, standardized tools, and data analysis tables.[6] Prior to initiating field work, the questionnaire was reviewed again and questions were added/revised in accordance with the population size estimation module. Population size estimation was conducted in conjunction with the BBS study.

The updated electronic version of the questionnaire was developed in Microsoft Access 2010.

Interviewers were selected from BPU as they have previous experience in similar studies and appropriate skills to communicate with the target population. The questionnaire was implemented through structured face-to-face interviews with trained interviewers. A refresher training was provided to the interviewers prior to field implementation.

The biomarker component involved the analysis of blood specimens for HIV and HCV at the Infectious Diseases, AIDS & Clinical Immunology Research Center. Genscreen Ultra HIV (BIO-RAD, France) test system was used for HIV screening. HIV positive samples were tested with Western Blot (Western Blot HIV Blot 2.2, MP Biomedicals) confirmatory test. Immunopherment analysis was carried out to test blood samples on HCV.

Data were collected on the following characteristics: socio-demographic patterns, duration of injecting drug use and substance abuse, sharing of injecting equipment with each other, number and types of sexual partners and contacts, use of condoms and lubricants, self-reported STI symptoms, health seeking behavior, HIV and AIDS knowledge and testing, and exposure to HIV interventions.

Ethical Issues

The study protocol and questionnaires were approved by the Ethical Committee of the HIV/AIDS Patients Support Foundation (certificate 762/863 of 31.10.2014). During the study design and field implementation, the following ethical issues were taken into consideration:

- Participation in the survey 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.

Study respondents identified as positive for HIV/HCV were offered counseling services and referred to designated facility for treatment. HIV/HCV positive individuals were also counseled and referred to further diagnostic and treatment service.

Quality control

Study personnel (the interviewers from BPU) were trained how to use electronic version of study questionnaire by the representatives of CIF prior to fieldwork. In this training exercise, each question was reviewed and every possible answer discussed. Further quality control was implemented during fieldwork. During fieldwork, internal quality control was provided by BPU staff and external control was provided by CIF staff. CIF staff members visited every city where surveys were conducted and attended randomly selected interviews. At the end of the day important details seen during the interview by members of CIF were discussed with the interviewers and fieldwork supervisor and relevant feedback was provided.

Data Management and Analysis

The data collection period in all seven cities took place from November 2014 to May 2015. In each city this process did not take more than 3 weeks. Interviews were held at fixed sites located in the center of each city. Study sites where the interviews took place belonged either to BPU, a local syringe-exchange program office, or NGO Tanadgoma, where preventive services to high-risk population of HIV are provided.

Face-to-face interviewer-administered interviews were conducted using an electronic version of the study questionnaire in Georgian by the trained interviewers. Each interview lasted on average 30 minutes. A small number of hard copies of the questionnaire were printed out in case of a technological issue. A small number of RDS paper-based forms were filled in, including the Network Size, Recruiter,

and Coupon Rejection forms. After the completion of the behavioral component, each respondent was asked to provide a blood sample for the biomarker component of the study. Following the informed consent form and agreement on the HIV testing, pre-test counseling was provided. A blood sample was then taken by a trained nurse.

Blood samples were transported to the AIDC center laboratory in Tbilisi with comprehensive cold chain management for the packaging, labeling, storage and distribution of temperature sensitive products. If transportation was not done the same day the samples were centrifuged and sera refrigerated at 4 to 8^0C. Each IDU that volunteered to provide a blood specimen was given an identification number which was recorded on the blood tube and the questionnaire. The identification number allows for the preservation of participant anonymity. 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. Participants were asked to return with their identification card to receive their results. They were notified that test results would not be given via the telephone. Post-test counseling was provided on site.

Data entry and analysis took place at the CIF office. Data was exported from the Microsoft Access program into Excel and then into SPSS (version 18.0). Any discrepancies were resolved by examining frequencies and cross-tabs and checking logic of all variables in the datasets. Flash drives with the completed questionnaires were kept at the CIF office.

Respondent Driven Sampling Analysis Tool version 7.1.46 (RDSAT, Cornell University, 2004) was used for analysis of RDS population estimates. Frequencies, cross-tabulations, prevalence estimates were performed in RDSAT. For some variables in which RDSAT was unable to produce valid population estimates, analysis was done in SPSS. Similarly means and medians were calculated by SPSS, as RDSAT does not produce such estimates. In addition, a combined sample of all seven cities was analyzed in SPSS and frequencies were calculated for all indicators. For specific indicators bivariate and multivariate analysis was performed to find out associations between exposure and outcome. Statistically significant associations (95% confidence intervals not crossing the value 1.00) were presented. Comparison of selected indicators was done using 2009, 2012 and 2014-2015 datasets.

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 SPSS are marked with asterisk. Network structures and recruitment patterns were analyzed by using a network visualization program NetDraw 2.081.

Results

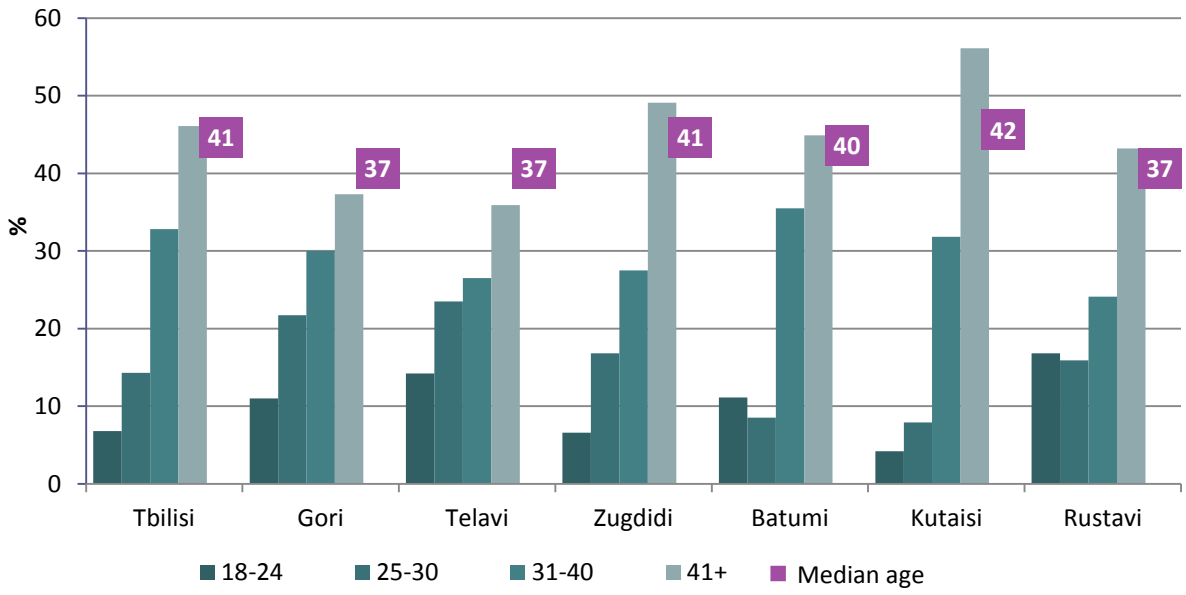
In this section the finding of bio-BBS study are presented in the following subsections: Socio-demographic characteristics; Drug Use History; Drug Use Risk Behavior; Knowledge of HIV/AIDs, Testing Practice and Self-Risk Assessment; Sexual Behavior; Exposure to Drug and HIV Prevention Programs and Social Influence; Prevalence of HIV; and Recruitment Pattern by Risk Injection and HIV Status. In addition to the results presented in all abovementioned subsections, detailed characteristics of PWIDs and behavioral data can be found in the appendix.

Socio-Demographic Characteristics

Age Distribution

The median age of PWIDs varies from 37 to 42 across all survey locations, with the highest proportion of respondents being in the 41+ age group. Respondents between the ages of 18 and 24 account for the lowest proportion compared to the other age groups. The proportion of respondents in this age group ranges from 4.2% (the lowest level in Kutaisi) to 16.8% (the highest proportion in Rustavi) across all seven cities. Batumi and Rustavi are the exception as the lowest proportion of PWIDs in these areas is represented by the 31-40 age groups.

Figure 1: Distribution of PWIDs by age groups and median age



Gender

More than 96% of respondents represent male PWIDs across all seven survey sites. Of all 2037 PWIDs, only 41 were females (2% of all survey participants). Among female PWIDs, the majority (11 participants) were recruited in Tbilisi. Only one female was represented in the Batumi sample.

Disproportional gender representation could be explained by small number of female seeds and/or poor recruitment of female PWIDs due to low male/female interaction in the network. Female FWIDs may also be a more hidden population compared to males.

Education Level

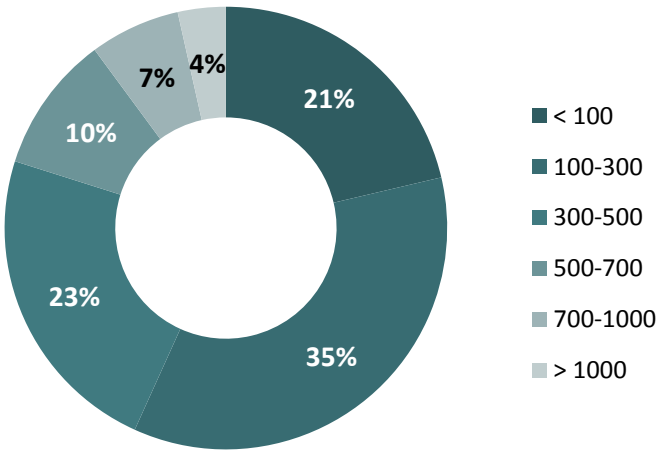
The Tbilisi sample had the largest proportion of respondents with higher education (59.5%), followed by Batumi and Telavi, where this group represented 35.2% and 34.5% of the sample, respectively. In all survey sites (except Tbilisi) the majority of respondents reported having secondary or vocational education with the lowest estimate of 59.2% in Telavi and the highest proportion of 67.9% in Gori. Only two participants reported no education and only one reported having a primary level of education.

Employment and Income

The vast majority of study participants are unemployed which varies from 51.3% in Gori to 73.2% in Kutaisi. Of the entire sample (2037 participants), 247 PWIDs reported having a permanent job, with the lowest proportion of 5.6% and the highest of 18,7% in Zugdidi and Telavi, respectively. The highest proportion of students was found in Tbilisi (1.2%).

Every third participant mentioned having an average monthly income of 100-300 GEL across all seven survey sites. Every fifth respondent has an income of less than 100 GEL and the same proportion has a monthly income higher than 500 GEL (21%) in the combined sample.

Figure 2: Monthly income in GEL (combined sample)



Marital Status

Proportion of PWIDs who are currently married varies from 33.6% to 56.5% throughout survey locations. Divorced PWIDs account for the highest proportion in Tbilisi (27.8%). The highest proportion of PWIDs (39.4%) in Telavi reported that they have never been married. Almost half of the PWIDs are currently living with their spouse, with the exception of Telavi where the majority of study participants (39.4%) mentioned that they live with their relatives/parents. The proportion of PWIDs who live with a partner other than their spouse does not exceed 4% across all seven cities.

Contact with Criminal Justice Settings

The study revealed that the proportion of PWIDs imprisoned because of their drug use in the past 12 months has reached the highest estimate in Batumi (33.2%), where the proportion of participants detained accounted for 26.6% of the sample - the highest proportion across all seven cities. No more than 12.5% (Batumi) of PWIDs were imprisoned before the trial because of drug consumption. The proportion of PWIDs who were imprisoned ranged from 1.9% (Kutaisi) to 11% (Gori) throughout the seven cities.

Alcohol Consumption

Daily alcohol consumption was reported among less than 6% of participants across all cities, with the highest proportion in Telavi (5.8%). The proportion of PWIDs who mentioned alcohol consumption once a week varied from 7.1% (Tbilisi) to 16.3% (Kutaisi).

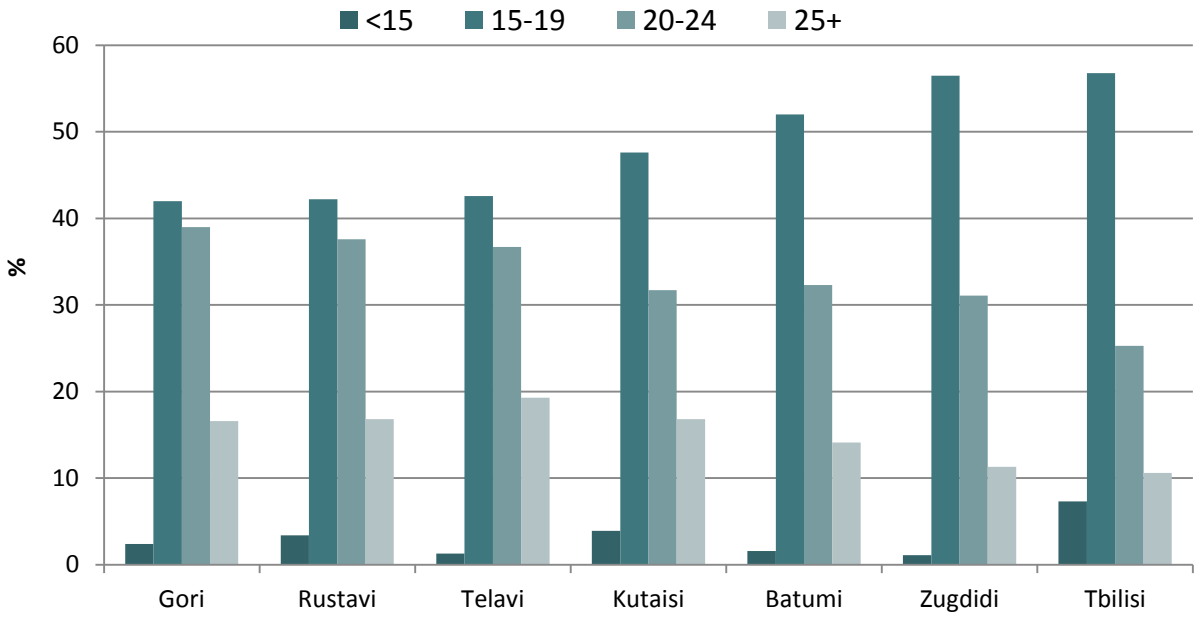
Drug Use History

The study revealed that on average any type of drug use (swallowing, smoking and/or injecting) starts in the teen years. In all survey locations, the majority of survey participants (42.2% - 56.8%) reported using drugs (non-injection drug use) for the first time between ages 15-19 years. The median age for starting drug use is 16 years for the national and city-level estimations, except Tbilisi. In Tbilisi the median age for first time drug use is 15 and the proportion of those who started drug use under the age of 15 is highest compared to other survey sites.

As

Figure 3 supports, the median age when participants report first injecting drugs ranges between 18 to 20 years. Teen ages are attributed to the highest proportion of PWIDs in all cities, who indicated that had first injected drugs in their lives (variance ranges between 42% in Gori and 56.8% in Tbilisi).

Figure 3: Age when first injected drugs



Proportion of PWIDs who consider themselves drug addicts varies from 79.6% in Telavi to 96.5% in Kutaisi. Table 5 indicates that median years of drug addiction ranges between 11.5 and 18 years .

Table 5: Prevalence and median years of drug addiction

City	Thinks that is drug addicted (%)	Median years of drug addiction
Tbilisi	90.5	17
Gori	85.5	11.5
Telavi	79.6	15
Zugdidi	94.1	18
Batumi	96.0	15
Kutaisi	96.5	17
Rustavi	90.3	12

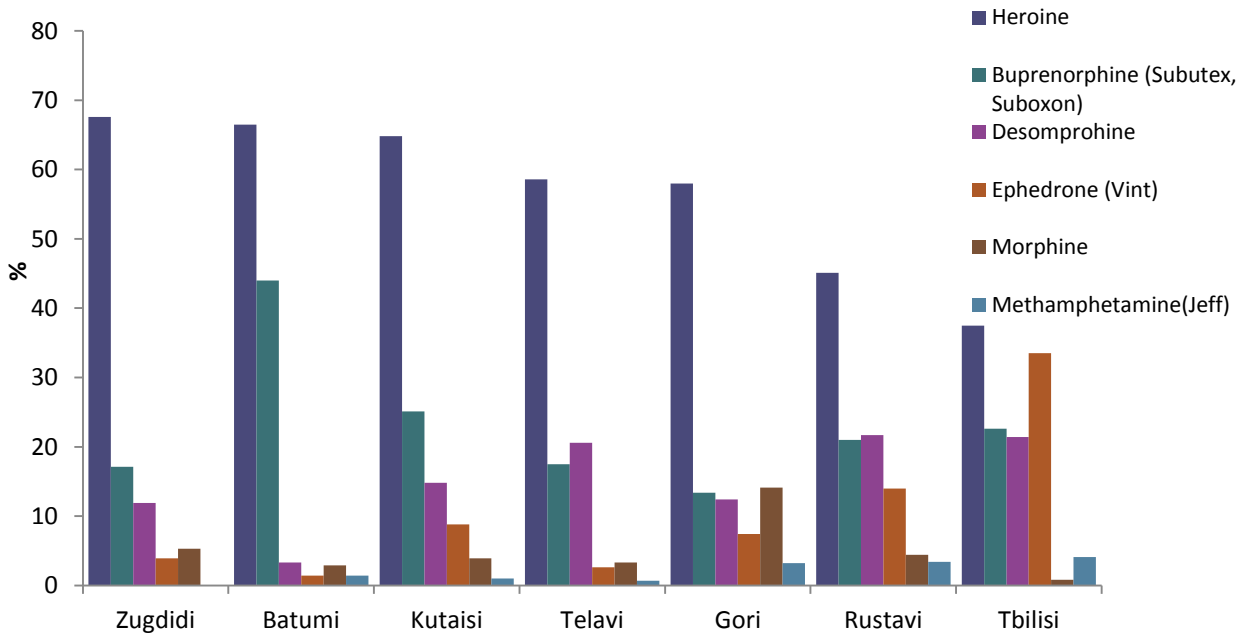
Frequency of injection during the last month is quite divergent in different survey locations. PWIDs living in Kutaisi and Tbilisi are the leading among those who reported injecting drugs several times a day (3.7% in Kutaisi and 3.6% in Tbilisi). The majority of PWIDs (ranging from 45.8% in Batumi to 67% in Telavi) are members of a regular injecting group composed of about 4 people. Mean number of people in the regular group varies from 3.46 in Batumi to 3.81 in Tbilisi.

The study indicated various types of drugs consumed and/or injected by PWIDs during the month preceding the survey. In the combined sample, it was found that 72.5% (1476) had consumed drugs by a

non-injection route of consumption during the previous month. CNS depressants and hallucinogens were reported as the most popular drugs for non-injection. CNS depressants like Baclophen,[9] Gabapentin,[10] Pregabalin[11] and others were consumed by 69% of those who had taken drugs by non-injecting route. Hallucinogens were reported by more than half of this subsample. About 10% of non-injection drug users mentioned consumption of new psychoactive drugs known with the names "bio cannabis"[12], "crystal" or "bath sault".[13] Use of these drugs was more prevalent among young age group (<25 years) compared to their elder peers (23.6% vs. 8.5%).

As for injected drugs, heroin reported as the mostly commonly used drugs during the last month, followed by buprenorphine (Subutex, Suboxon). The other commonly used injected drug reported by survey participants were Desomorphine ("krokodil") - a homemade opium-type synthetic drug (17.3% in the combined sample). Heroin injection varies from 45.1% in Rustavi to 67.6% in Batumi, while buprenorphine injection ranges between 13.4% in Gori to 44% in Batumi. The highest levels of amphetamine type stimulants Ephedrone (known as "Vint") and Methamphetamine ("Jef") were reported in Tbilisi at 33.5% and 4.1%, respectively. In other cities this type of drug was injected by a lower proportion of PWID. Morphine injection reached the highest proportion in Gori (14.1%).

Figure 4: Types of drugs injected during the last month



[9] Baclophen – Miorelaxant, used in the management of severe muscle spasticity
[10] Gabapentin – Anti-epileptic, anticonvulsant normothymic drug
[11] Pregabalin – Anti-epileptic, anticonvulsant drug
[12] Synthetic cannabinoids that are usually smoked by users
[13] Synthetic cathinones – an amphetamine like stimulants usually smoked by users

Approximately 40% of survey participants reported about the periods of regular injection of Opioids for several days resulted in withdrawal syndrome during the last year.

An additional analysis was done to better evaluate the association between injection of different types of drugs and frequency of injections in the combined sample. A significant association was found between several types of drugs and frequency of injections. In the combined sample analysis injection of the following drugs - Heroin (63.7% - p value <0.01), Ephedrone - "Vint" (18.1% - p value <0.01), Methamphetamine – "Jef" (3.2% - p value <0.05), Desomorphine – "Krokodil" (22.7 - p value <0.01) was higher among those who reported having injections several times a week and more.

Drug Use Risk Behavior

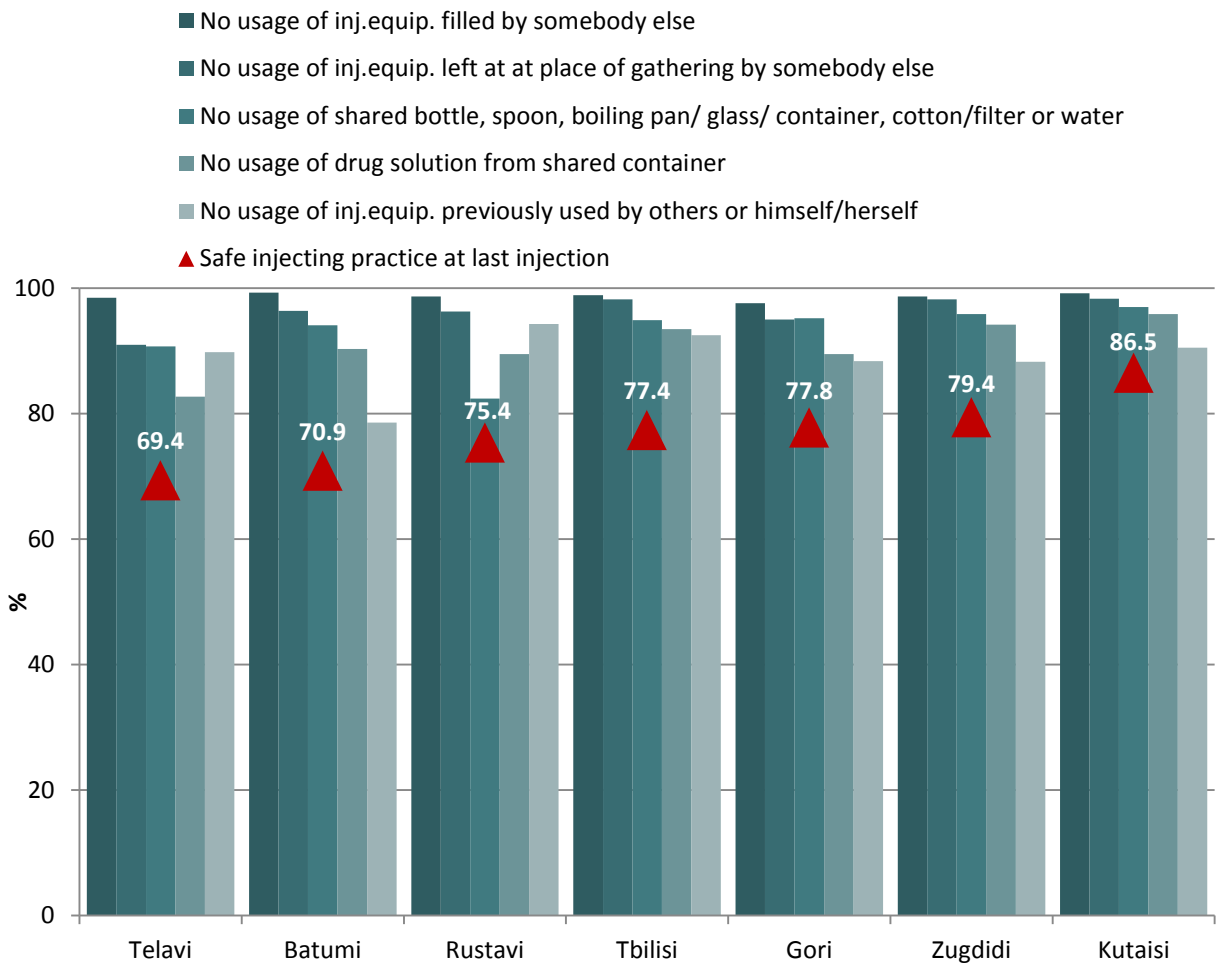
The study shows that more than half of the PWIDs in all cities shared needles, syringes and/or other equipment at least once during their lifetime In Zugdidi, the proportion estimated is as high as 63.4%. The picture is significantly different for the needle-sharing practice at last injection. At last injection the proportion of PWIDs who report sharing needles, syringes, and/or other equipment varies from 1.2% in Rustavi to 6.1% in Batumi (the highest proportion). The proportion of PWIDs who re-used their needle and/or syringes by themselves is quite higher in all survey sites, but does not exceed 16.8% (the highest proportion in Batumi). Meanwhile, sterile injecting equipment usage among PWIDs ranges between 78.6% in Batumi and 94.3% in Rustavi.

Evidence from this study suggests that sharing of injection paraphernalia (bottle, spoon, boiling pan/glass/container, cotton/filter or water) at last injection ranges between 2.1% in Kutaisi to 12.9 in Rustavi. The highest proportion of respondents who reported usage of solution from the shared container at last injection was in Telavi at 17.3%. Proportion of PWIDs who mentioned re-usage of injecting equipment left at a place of gathering does not exceed 5.2% (Telavi).

In order to measure safe injecting behavior at last injection, a combination of the following different indicators were used: no usage of previously used injecting equipment by somebody else or him/herself, no usage of injecting equipment left at a place of gathering by somebody else, no usage of prefilled syringe by somebody else without his/her presence, no usage of shared equipment, and no usage of drug solution from shared container. As

Figure 5 below shows, the proportion of survey participants practicing safe injection varies from 69.4% in Telavi to 86.5% in Kutaisi.

Figure 5: Safe injection practices at last injection



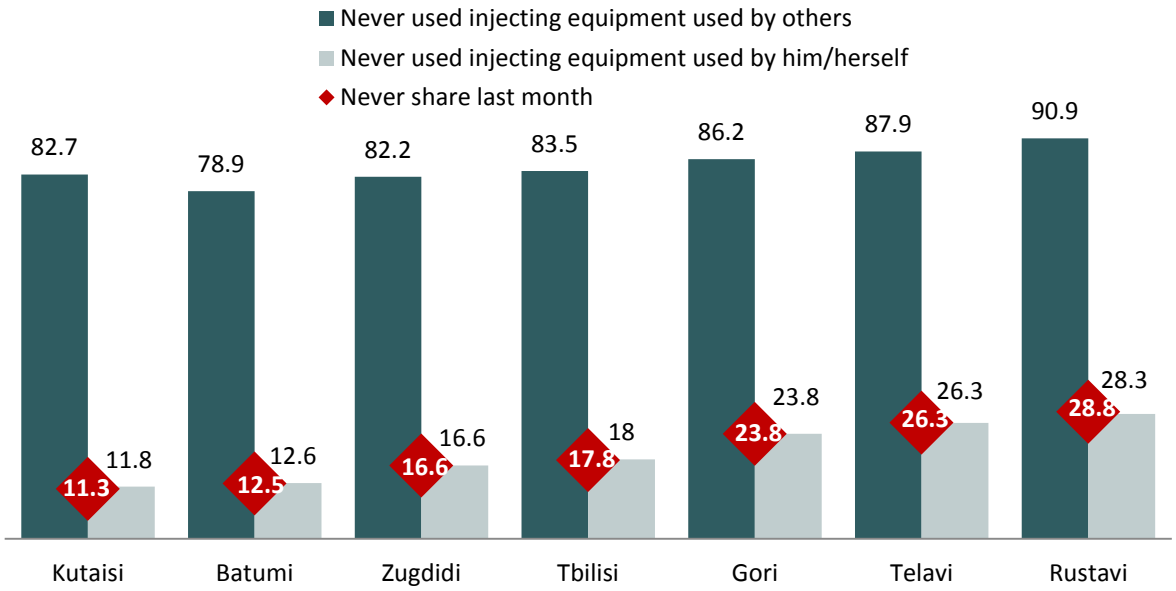
In addition to the safe injection practices at last injection, injection related risk behaviors were analyzed for the last month period preceding the survey as well.

A significant association was found between sharing practices during the last month and frequency of injections. Those who reported injecting drugs several times a week or more had three times higher likelihood of practicing unsafe injections last month compared to those reported injections several times a month or less.

The proportion of PWIDs who responded that they did not use previously used injecting equipment by somebody else in the last month varies between 78.9% (Batumi) to 90.9% (Rustavi). A much smaller proportion mentioned that they did not use needle/syringe used by him or herself. The proportion of those who practice safe injection behavior decreases when the recall period is reduced to the month prior to survey.

Figure 6 below describes sharing practice during last month injection:

Figure 6: Sharing practice during last month injection



The mean number of injecting equipment sharing partners (with whom PWIDs share injecting equipment) who shared during the last month ranges between 0.28 (Tbilisi) to 1.44 (Gori). Approximately one in five respondents reported cleaning the needle/syringe before usage with boiled or not boiled water.

The majority of respondents (range between 92.3% in Batumi to 97.9% in Tbilisi and Telavi) mentioned that they could get or buy new sterile needles/syringes when needed. Almost all participants (lowest 85.2% in Gori) indicated drug stores as a main source of getting needles/syringes. Syringe exchange programs are also a common place to obtain new needles/syringes with 12.5% in Kutaisi (the lowest level) and 37.1% in Gori (the highest proportion) of those surveyed indicating syringe exchange programs as their source of clean needles/syringes.

Bi- and multivariate analysis were done to reveal determinants of unsafe injection[14] during last month. Some factors that had significant impact on unsafe injection in bivariate analysis lost their significance in multivariate analysis. A multivariate analysis showed a significant association between unsafe injection last month and city of residence, education level, HIV testing practice last year and awareness of their results only. According to this analysis, PWID residents of Telavi (OR 0.41, $p<0.01$) and Rustavi (OR 0.34, $p<0.01$) had lower sharing practices compared to the residents of Tbilisi. PWIDs with higher or incomplete higher education were less likely (OR 0.56, $p<0.01$) to share needles/syringes previously used by others than PWIDs with lower level of education. Also PWIDs who had received HIV test during

[14] Sharing of needles/syringes previously used by somebody else during last month

last year and know their result had lower odds (OR 0.64, p<0.01) for unsafe injection, compared to those who did not receive HIV test last year and did not know test result.

Table 6: Determinants for unsafe injection during last month, multivariate logistic regression

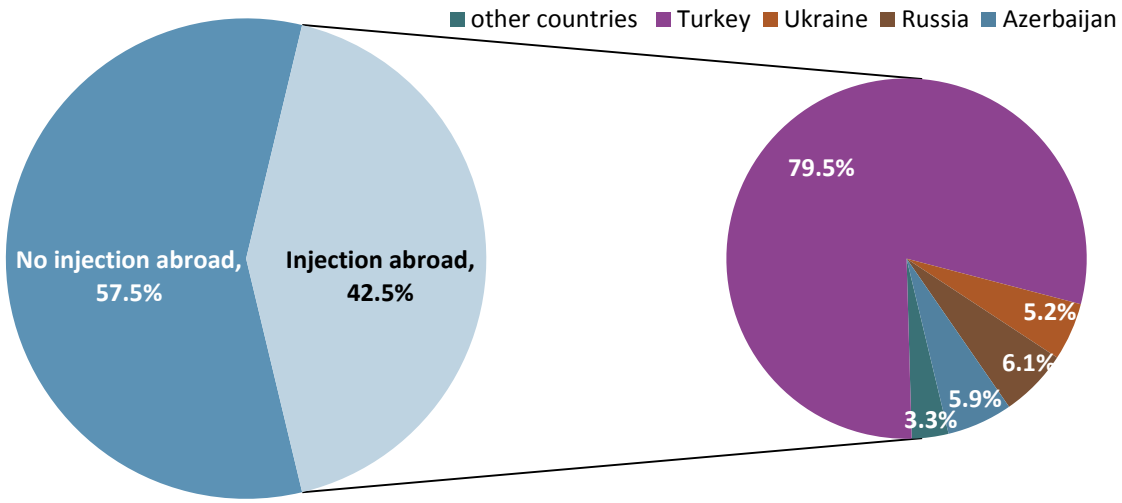
Factors		Odds	95% CI for Odds
City of residence (Tbilisi =reference)	Gori	0.98	0.66:1.46
	Telavi	**0.41*** **	**0.26:0.65**
	Zugdidi	0.84	0.56:1.24
	Batumi	0.74	0.49:1.11
	Kutaisi	0.93	0.63:1.37
	Rustavi	**0.34*** **	**0.2:0.56**
Program minimal coverage[4] (No=reference)	Yes	0.86	0.63:1.19
Received HIV test last year and know their results (No=reference)	**Yes**	**0.64*** **	**0.44:0.91**
Age (=<24= reference)	=>25	0.84	0.66:1.08
HIV status (positive=reference)	HIV Negative	0.64	0.31:1.31
Education level (None or Primary 1-4 class or Secondary or vocational school= reference)	**Higher or incomplete higher**	**0.56*** **	**0.43:0.73**
HIV knowledge (UNGASS indicator[26]) (No=reference)	Yes	1.45	0.91:2.32

*** *Significant association between comparison and reference group*

This study revealed that more than half of the respondents (from the combined sample) had injected drugs outside of their permanent residence during the last 12 months. Injection abroad over the last year was reported in 42.5% among the combined sample and ranging from 29.4% in Tbilisi to 62.1% in Batumi. Among all cases who reported injection outside of their county, Turkey was the most common (79.5%) followed by Ukraine, Russia and Azerbaijan (please see

Figure 7 below):

Figure 7: Countries of injection abroad during last 12 months (combined sample)



An important difference was found between survey locations of PWIDs who had experienced overdoses during last 12 months, with the lowest proportion (5.6%) in Rustavi and the highest (11.8%) in Kutaisi.

Majority of PWIDs (the lowest proportion of 72% in Rustavi) reported that their apartment was the usual place of gathering to take drugs.

Most frequently used method for discarding used needles/syringes mentioned was throwing it in the garbage bin with the cap.

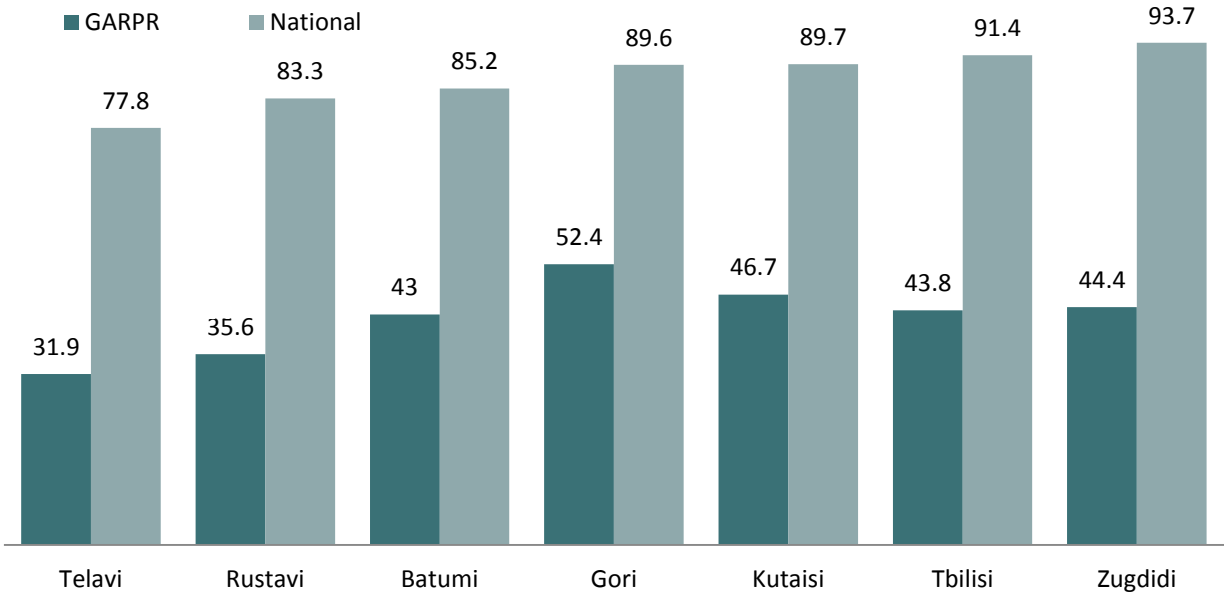
Knowledge of HIV/AIDs, Testing Practice and Self-Risk Assessment

Almost all participants had heard about HIV/AIDS, only three PWIDs from Batumi (1) and Telavi (2) did not know about this virus. Knowledge of those who are HIV infected, ill or died of AIDS varied from the lowest proportion of 26.7% in Rustavi to the highest of 67.4% in Batumi. There were large variations in answers to specific question relating to knowledge of HIV. Approximately one third of respondents were misinformed that mosquito bites transmit the virus (36.4% in Telavi).

Global AIDS Response Progress Report (former UNGASS) indicator measures knowledge of HIV prevention, understanding of HIV transmission, and ability to reject major misconceptions. In this study, the proportion of participants able to answer at least 5 questions correctly ranges from 31.9% (Telavi) to 52.4% (Gori). Awareness about HIV transmission routs (except from Tbilisi figures, where proportion of PWIDs with the knowledge of mother-to-child transmission does not exceed to 58.9%) and preventive measures is high among PWIDs in all survey sites. Relatively more are aware that the HIV cannot be transmitted by taking food or drink containing someone else's saliva with the smallest proportion in Telavi (72%). In other cities knowledge about this postulate is quite higher.

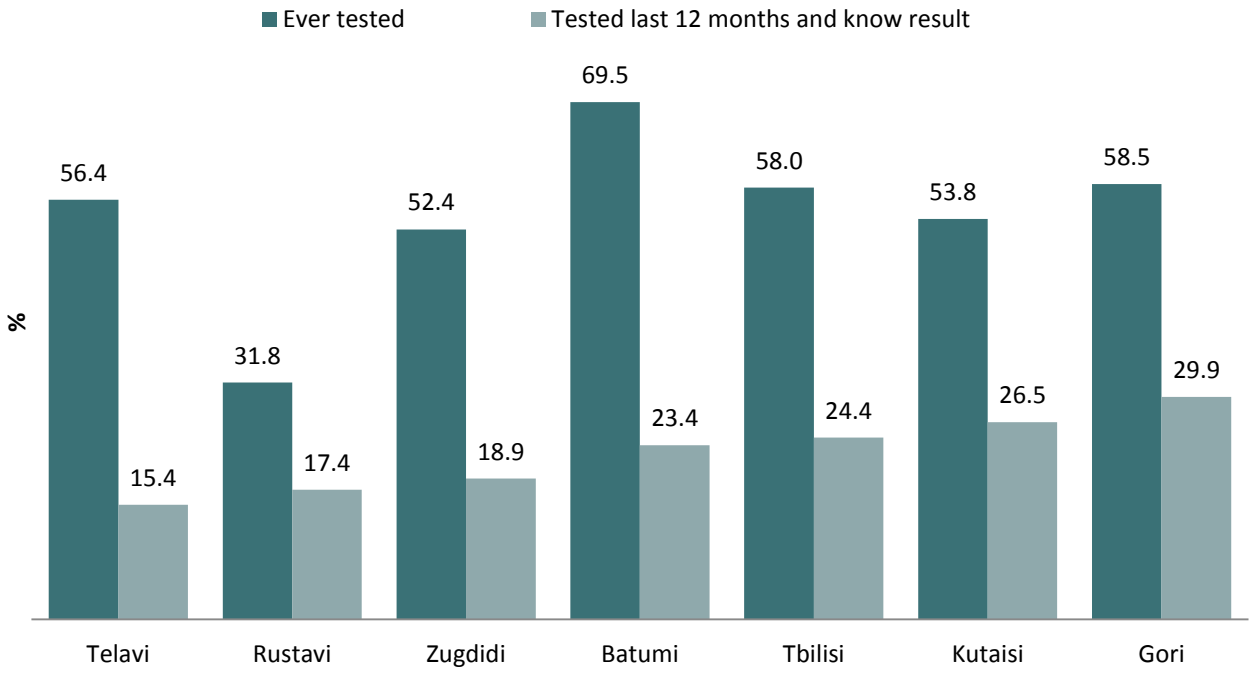
The National indicator on HIV prevention and transmission consists of the following true or false questions: One may protect oneself from HIV/AIDS by having one uninfected and reliable sexual partner; One can reduce HIV risk if one properly uses condoms during every sexual contact; A healthy looking person can be infected with HIV; One may be infected with HIV/AIDS by using a needle already used by someone else; One may be infected with HIV/AIDS by using bottle, spoon, boiling pan/glass, container, cotton/filter or water that might have been touched by a needle already used by someone else; One may be infected with HIV/AIDS by taking solution from a shared container; Drug users may protect themselves from HIV/AIDS by switching to non-injection drugs. The proportion of participants who were able to answer at least 7 questions correctly ranges between 77.8% (Telavi) to 93.7% (Zugdidi).

Figure 8: Knowledge of HIV prevention and transmission and rejection of major misconceptions according to GARPR and National indicators



At least 42.5% (Rustavi) of respondents knew where to obtain a confidential HIV test in his/her city. Over half had ever had an HIV test (except in Rustavi, where this proportion is 31.8%). As time interval shortens to last 12 months the rate decreases further. HIV testing during last year and know result varies from the lowest proportion of 15.4% (Telavi) to the highest of 29.9% (Gori) (for the detailed information please see Figure 9 below):

Figure 9: Proportion of PWIDs who had voluntary HIV test at least once in the past and who have received an HIV test in the last 12 months and know their results



In all survey locations the huge proportion of PWIDs (more than 80.2%) reported that they will inform their sex and IDU partners in case they were infected with HIV.

Bi- and multivariate analysis was also done for the determinants of HIV testing during last year. All the factors mentioned in the Table 7 had a significant influence on HIV testing in bivariate analysis, but in a multivariate logistic regression some of them lose their significance. The logistic regression revealed that PWIDs who were covered with the program's minimal package had more than 20 times higher odds of being tested for HIV last year. PWID residents of Telavi (OR 0.38, p<0.01) and Rustavi (OR 0.43, p<0.01) compared to Tbilisi residents had a lower odds of HIV testing last year. PWIDs who exhibited unsafe sharing practice last month also had significantly lower odds of being tested for HIV last year (OR 0.63, p=0.01) compared to PWIDs with safe injection behavior last month.

Table 7: Determinants of HIV testing behavior during last year, multivariate analysis

Factors		Odds	95% CI for Odds
Duration of drug injection (continuous)		1	0.98:1.01
Age (=<24= reference)			
	=>25	1.49	0.87:2.55
Education level (None or primary (1-4 class) or secondary or vocational school= reference)			
	Higher or incomplete higher	1.23	0.95:1.6
Condom use at last intercourse (No=reference)			
	Yes	1.82	0.90:1.56
	didn't have sex	1.31	0.78:2.2
Sharing last month[14] (Never shared= reference)			
	unsafe-shared	**0.63*** **	**0.44:0.89**
Program minimal coverage[4] (No=reference)			
	Yes	**21.3*** **	**16.4:27.7**
City of residence (Tbilisi =reference)			
	Gori	0.86	0.55:1.34
	Telavi	**0.38*** **	**0.23:0.63**
	Zugdidi	0.78	0.49:1.22
	Batumi	1.15	0.73:1.82
	Kutaisi	0.95	0.6:1.5
	Rustavi	**0.43*** **	**0.26:0.7**

*** *Significant association between comparison and reference group*

Sexual Behavior

In this section PWIDs sexual behavior with different types of partners are described. At first sexual partners were defined to the respondents with the following definitions:

- Regular sexual partners were defined as spouse or live-in partner or sex partner the respondent does not live with but have regular sexual contact. Regular sexual contact was defined as relationship that lasts longer than one year, or less than one year with an intention to continue it.
- Occasional sexual partners were defined as sex partner who is not a regular or paid partner.
- 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 in all survey locations, except for Tbilisi, where the median is 15 years. More than 87.4% (Kutaisi) of PWIDs reported having sexual contact in the past 12 months.

Condom use at last intercourse varied from 20.8% (Zugdidi) to 45.9% (Telavi).

Having regular sex partners was mentioned by more than 71.9% (the lowest proportion in Telavi) of PWIDs throughout all survey locations. Most of them had one regular partner during last year. A relatively small proportion of respondents in all cities, ranging from 20.8% in Zugdidi to 34.5% in Telavi, report using condoms with regular partners (see

Figure 10).

More than 36.1% (Kutaisi) of PWIDs reported having occasional sex partners across cities, with the highest proportion of 53.9% in Telavi. The mean number of occasional sex partners among those who had such partners in the last 12 months ranges between 4.43% in Tbilisi to 6.03% in Telavi. Condom use at last sexual intercourse with occasional partner varies from 39.6% (Kutaisi) to 72.5% (Zugdidi) (see

Figure 10).

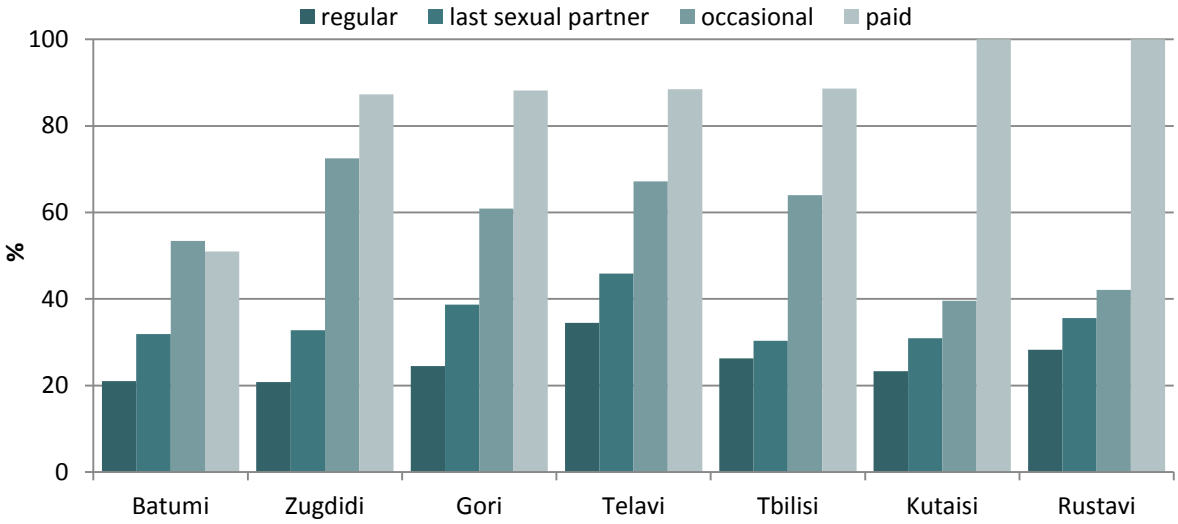
Respondents were asked about the reasons for not using condoms with occasional sex partners, and the majority of PWIDs in all cities reported that they did not think it was necessary (24.4% in Rustavi and 75.2% in Batumi). There seems to be a gap between knowledge and safe behavior as most of PWIDs who think that condom use was not necessary in a given occasion also understand that consistent condom use can protect themselves from HIV acquisition. This misconception may be due to the perception that occasional sex partners are not at risk for HIV.

The lowest proportion of PWIDs who reported purchasing sex during last year was found in Tbilisi at 11.9%, while the highest proportion was seen in Telavi at 29.3%. The mean number of paid sex partners

during last sexual contact ranges from 3.51% in Batumi to 6.51% in Telavi during the 12 months prior to the survey. Condom use with paid sex partners is significantly frequent with more than 51% of the sample in Batumi and 100% of the sample in Kutaisi and Rustavi using condoms with paid sex partners (

Figure 10).

Figure 10: Condom use with last and different types of partners during last sexual intercourse



As for the consistency of condom use with different partners during last 12 months, similar patterns were found among the majority of respondents. More than half of the participants (50.9%) in Telavi never used condoms with regular sex partners, while majority did so in Batumi (66.3%).

Unprotected sex is high with occasional partners, as well. For example more than one third (37.7%) of Rustavi PWIDs never used condoms with occasional partner. Condomless sex with paid sex partners still exists, with the highest rates found in Tbilisi (13.8%), Telavi, and Batumi (12.3% in both cities).

Sexual behavior was analyzed by marital status. The analysis revealed that the proportion of married PWIDs who reported having paid sex partners in the past 12 months varied from 10.5% in Rustavi to 22.3% in Gori. It was more frequent for married PWIDs across all survey sites to have occasional sex partners over last year, ranging between 25.9% in Tbilisi to 62.2% in Batumi.

Among regular sex partners, 1.1% (Gori) to 6.7% (Rustavi) are injected drug users. A higher proportion of injecting drugs was found among occasional sex partners with the highest proportion in Kutaisi (7.2%).

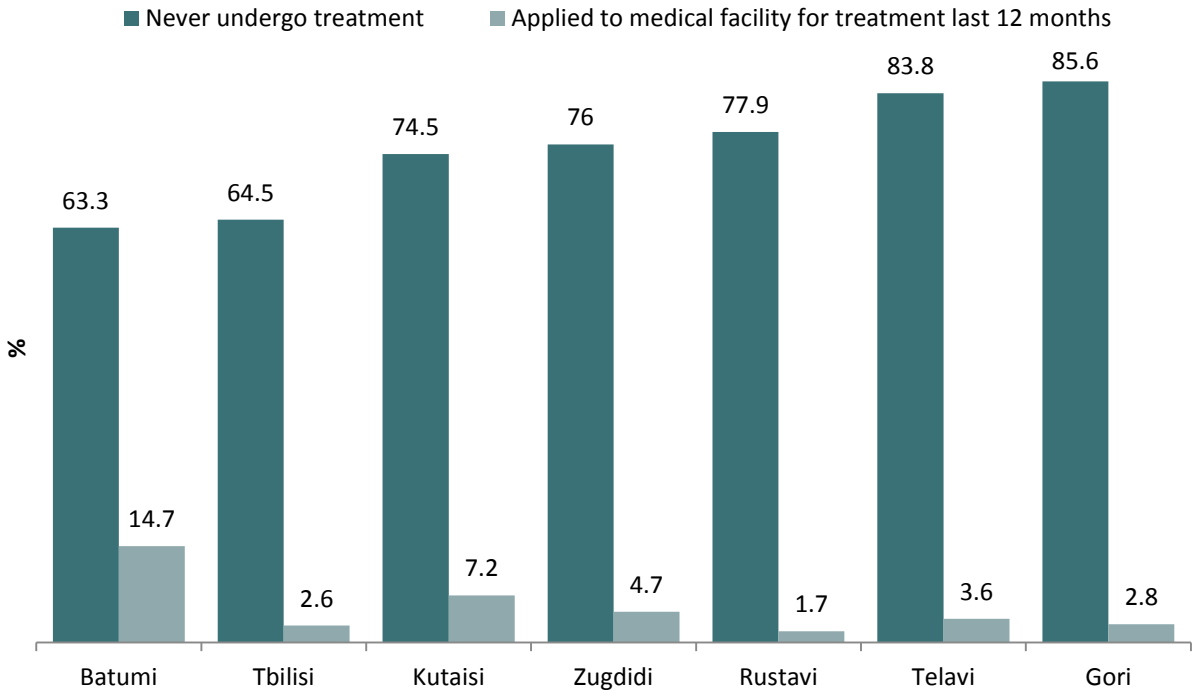
The survey revealed that very limited number of PWIDs who reported ever having sex with a male partner varies from 0.5% in Gori to 6.9% in Kutaisi.

Exposure to Drug and HIV Prevention Programs and Social Influence

The proportion of respondents who have never been treated for drug addiction ranges from 63.3% (Batumi) to 85.6% (Gori). Of those who reported seeking treatment, the majority went to a medical facility for drug dependence treatment during the last 12 months, with the highest proportion across survey sites found in Batumi (14.7%) (see

Figure 11).

Figure 11: Use of drug dependence treatment at medical facility/specialized center

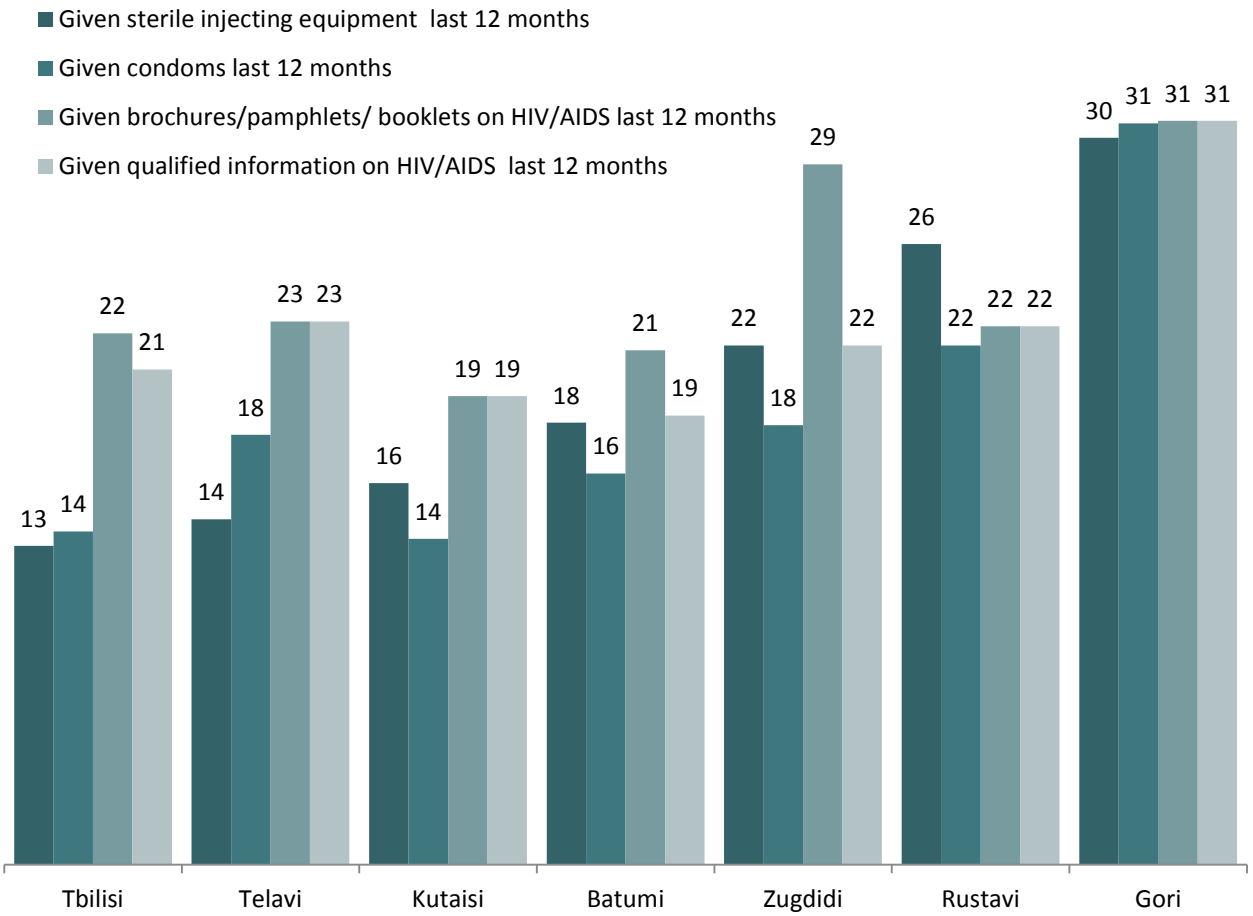


The number of PWIDs who survives “extreme need” without anybody else’s help was at least in every fourth respondent throughout the cities.

Preventive program coverage varies by survey sites. PWIDs are provided with different interventions by harm reduction programs, including free HIV testing, distribution of injecting equipment, condoms, information materials, and risk-reduction counseling services. Different packages are distributed according to different programs. Results from this study showed that sterile injecting equipment was received by a small proportions of PWIDs in all cities, except Gori. In Gori, approximately one third of the respondents (30.1%) mentioned that he/she was given a sterile needle/syringe during the last year. While prevention packages are quite diverse across cities, Gori is in the leading city with regard to coverage rates of all components (see

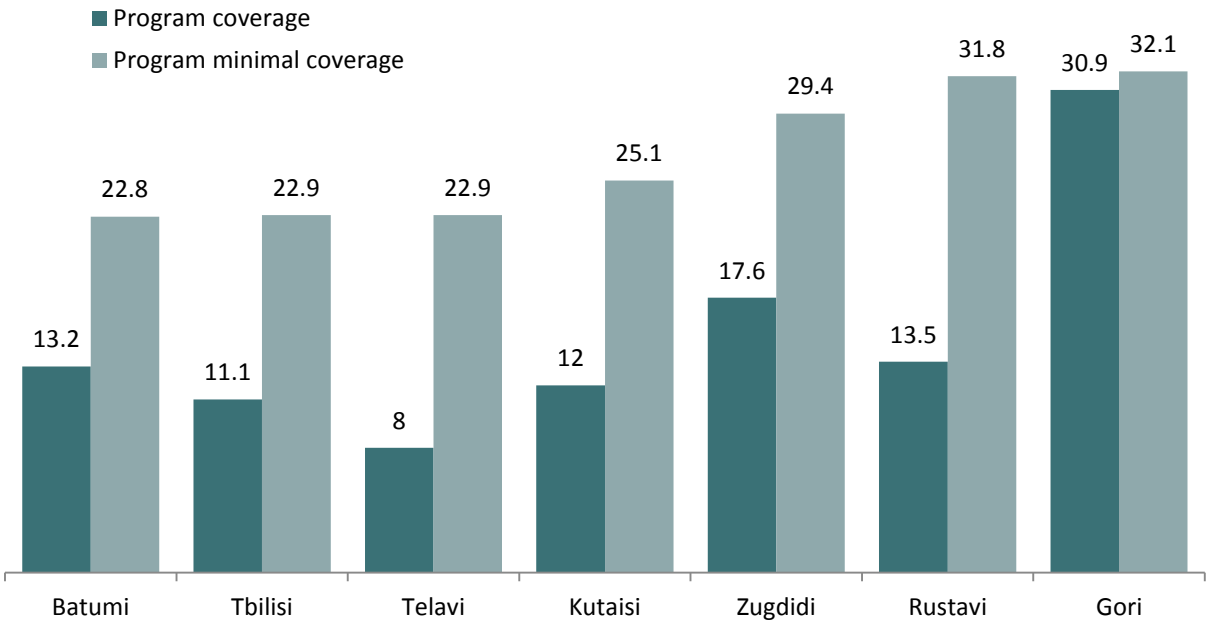
Figure 12).

Figure 12: PWIDs who were given sterile injecting equipment, condoms, IEC materials and qualified information on HIV/AIDS last 12 months



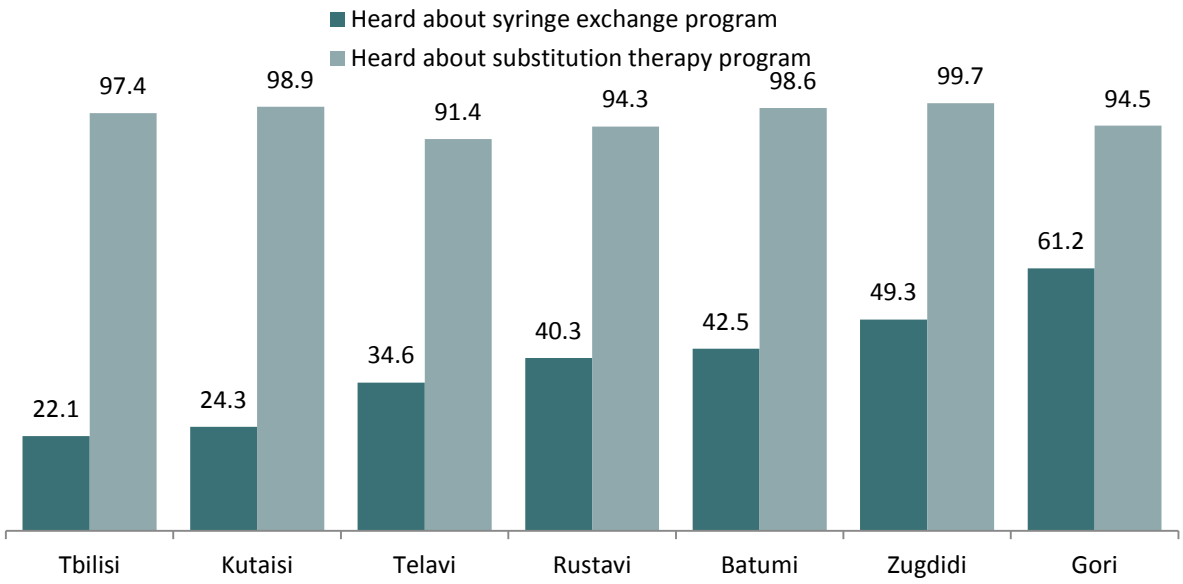
Coverage of preventive programs measured by awareness of HIV testing possibilities and reception of sterile injecting equipment and condoms during last 12 months is significantly lower (except for Telavi) compared to the program minimal coverage which is defined as receiving at least one of the following program commodities: sterile injecting equipment, condom, brochure/leaflet/booklet on HIV/AIDS and qualified information on HIV with the combination of awareness of HIV testing possibilities (see = Program full coverage varies between 8% (Telavi) to 30.9% (Gori) (see Figure 13).

Figure 13: Preventive program coverage



At least one fifth (22.1% in Tbilisi) of the respondents mention they have heard information about syringe exchange programs during the last month across all cities. Awareness about substitution therapy programs is high among survey respondents and varies between 91.4% (Telavi) to 99.7% (Zugdidi).

Figure 14: Awareness about syringe exchange and methadone substitution programs last 12 months

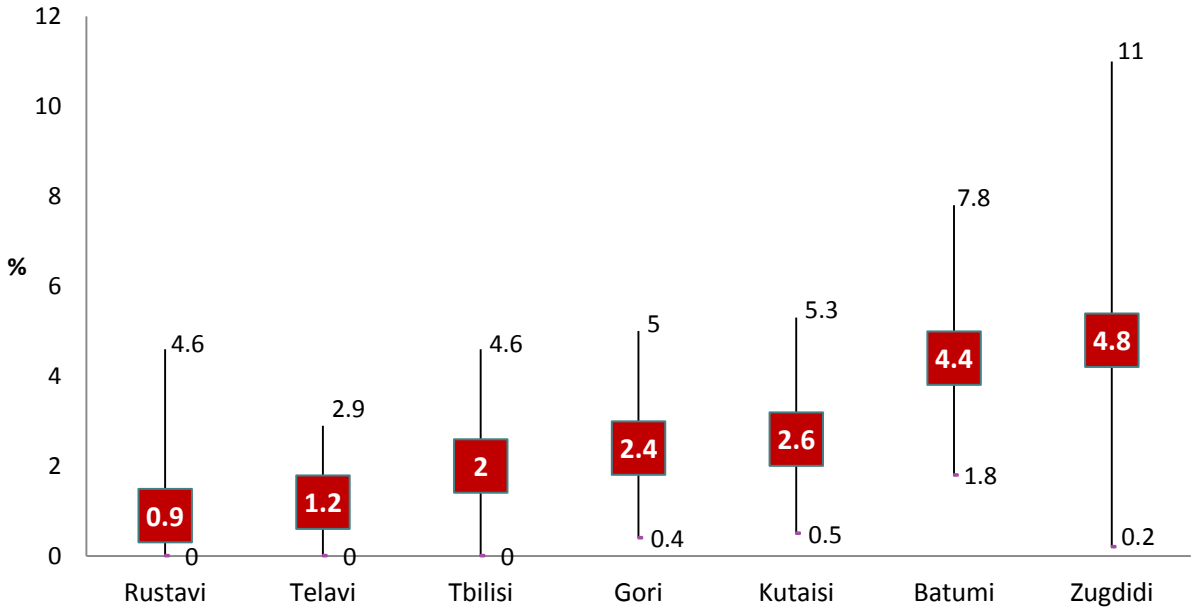


Vast majority of PWIDs mentioned no specific person(s) who influence him/her to continue drug injection. More than 4.7% (Telavi) reported needle partners as being the persons who contribute to continued drug injection (the highest proportion found in Gori at 19.6%). Correspondingly, friends were found to have major impact on quitting drug use.

Prevalence of HIV and HCV

Prevalence of HIV across all cities ranges between the lowest 0.9% in Rustavi to the highest 4.8% in Zugdidi but with large confidence intervals (95%CI, 0.2%-11%) (see Figure 15).

Figure 15: Prevalence of HIV



In order to see prevalence rates among different age groups, aggregated sample of all seven cities were analyzed. The analysis shows that PWIDs above 40 years old have a higher HIV prevalence compared to the other age groups.

Table 8: HIV prevalence by age groups (combined sample analysis)

Age groups	%	n/N
18-24	0.6	1/162
25-30	1.3	4/302
31-40	1.7	11/642
≥41	3.1	28/916
All ages	**2.2**	**44/2022**

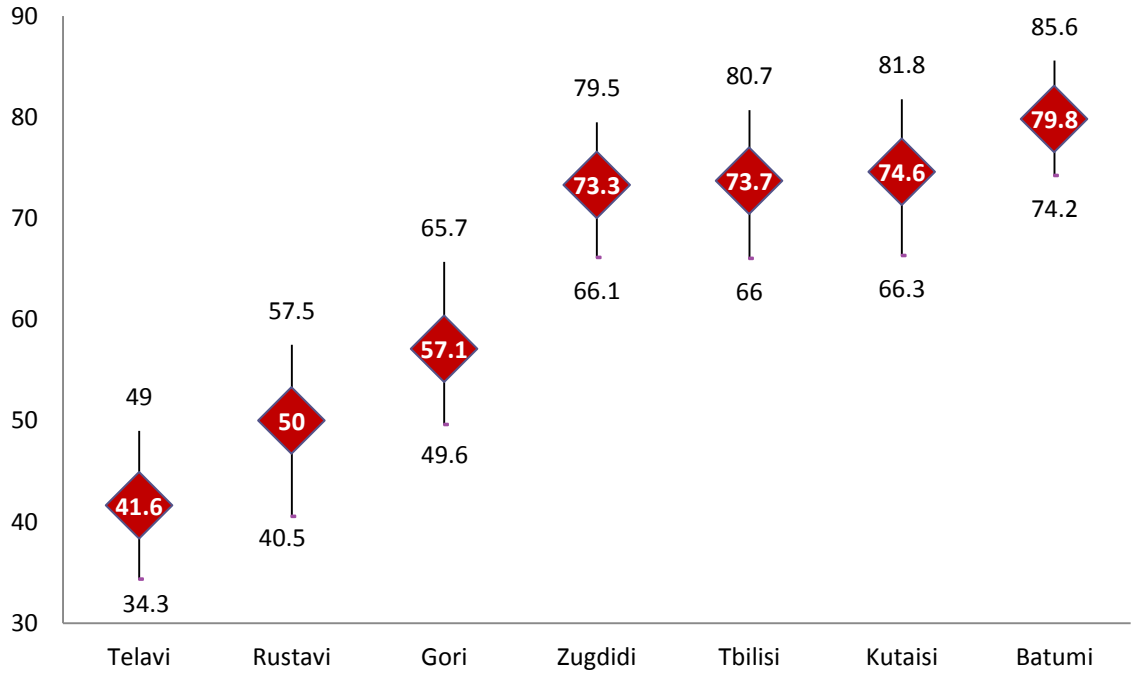
Among the infected individuals, risk injection, sexual behavior, and testing practices were analyzed and found that every third HIV infected respondent did not use condoms with last sexual partner at last intercourse. Every fifth had never been tested for HIV in their lifetime.

Table 9: Risk behavior among HIV positive PWIDs (combined sample analysis)

Risk behavior	%	n/N
Injected with used injecting equipment last month	25	11/44
Injected with used injecting equipment at last injection	13.6	6/44
Did not use condom with last sex partner at last intercourse	31.6	12/38
Did not use condom with regular sex partner at last intercourse	39.3	11/28
Never tested	22.7	10/44

Prevalence of Hepatitis C infection (HCV) is high among PWID reaching 66.2% in all seven cities. The highest rates were reported in Batumi and lowest in Telavi.

Figure 16: Prevalence of HCV



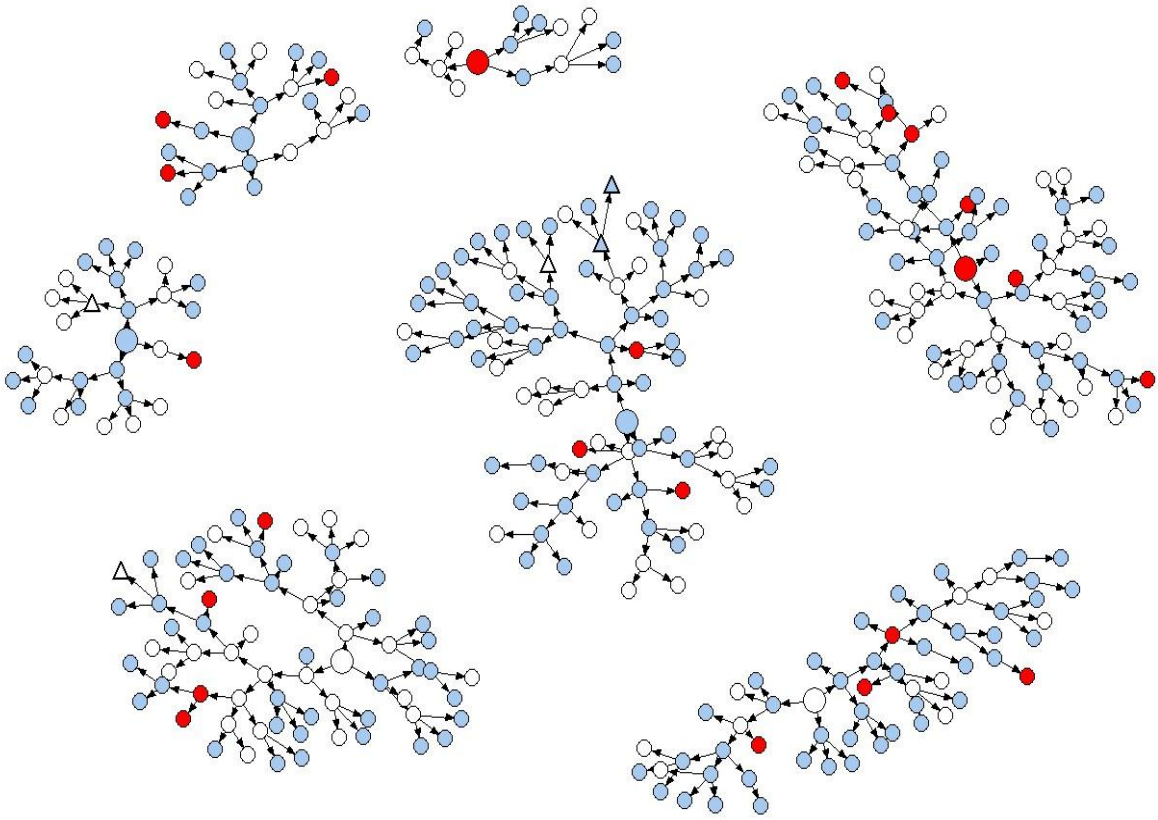
Recruitment Patterns by Risk Injection and HIV Status

Using NetDraw, the recruitment by seeds was mapped illustrating the waves in all survey locations. As shown in the figures below, some seeds produced long referral chains and others did not. The figures below represent recruitment patterns of PWIDs by risk injection and sexual behavior and their HIV status. Double risk behavior was defined as those IDU engaging in risk injection at last drug injection (sharing of injecting equipment, paraphernalia or drug solution) and not using condoms with the last sexual partner. Single risk behavior was defined as IDUs practicing only one of the two risk behaviors. In

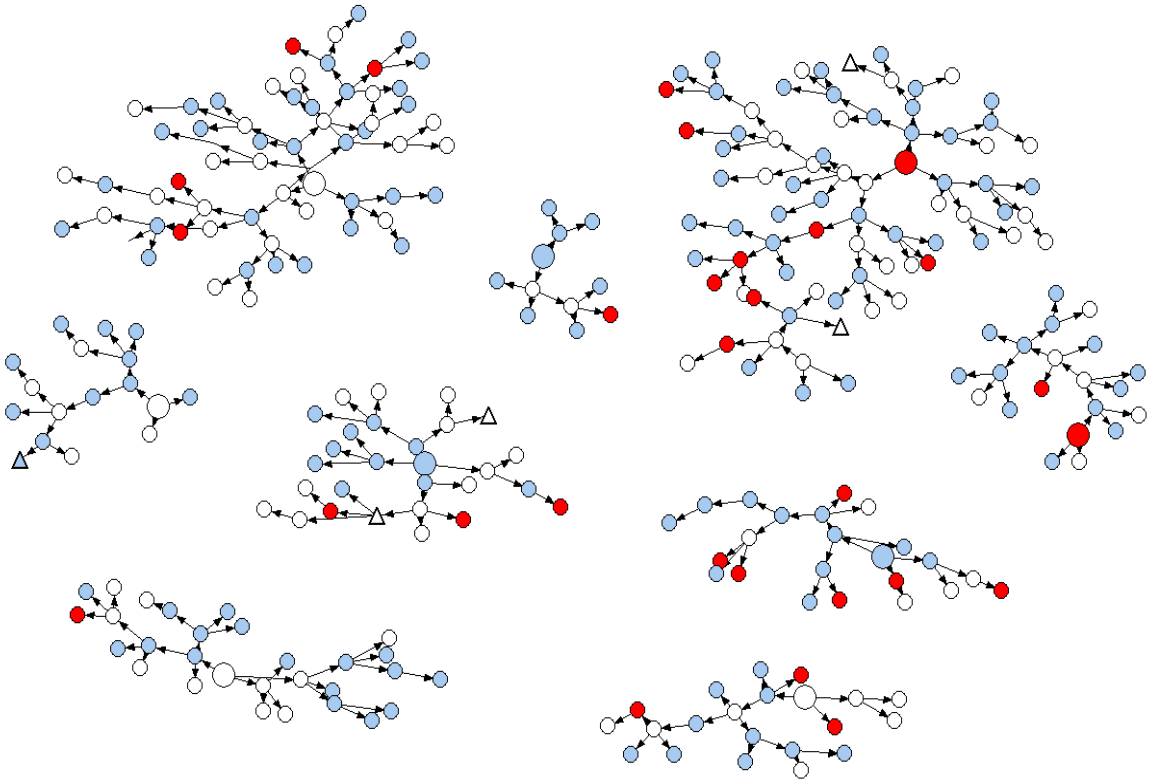
the pictures below, larger symbols represent seeds and smaller symbols represent subsequent recruited PWIDs:

- HIV negative with safe injection and sex behavior
- HIV negative with double risk behavior
- HIV negative with single risk behavior
- HIV positive with safe injection and sex behavior
- HIV positive with double risk behavior
- HIV positive with single risk behavior

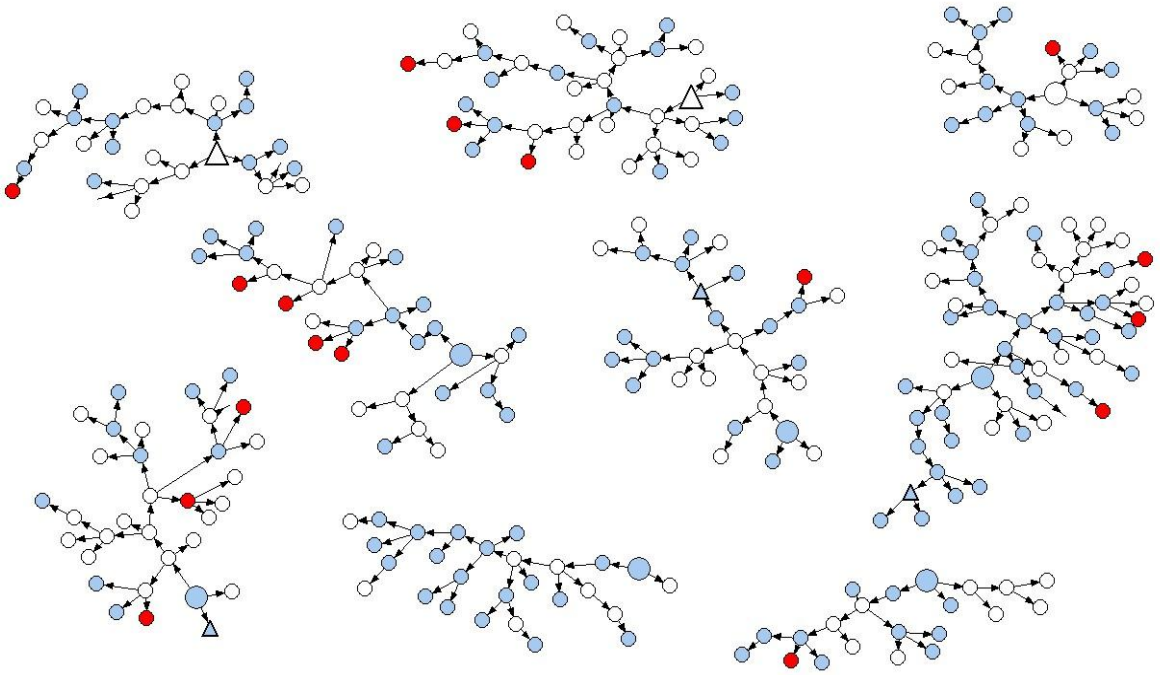
Picture 1: Recruitment chain of Tbilisi PWIDs by risk injection and sexual behavior and HIV status



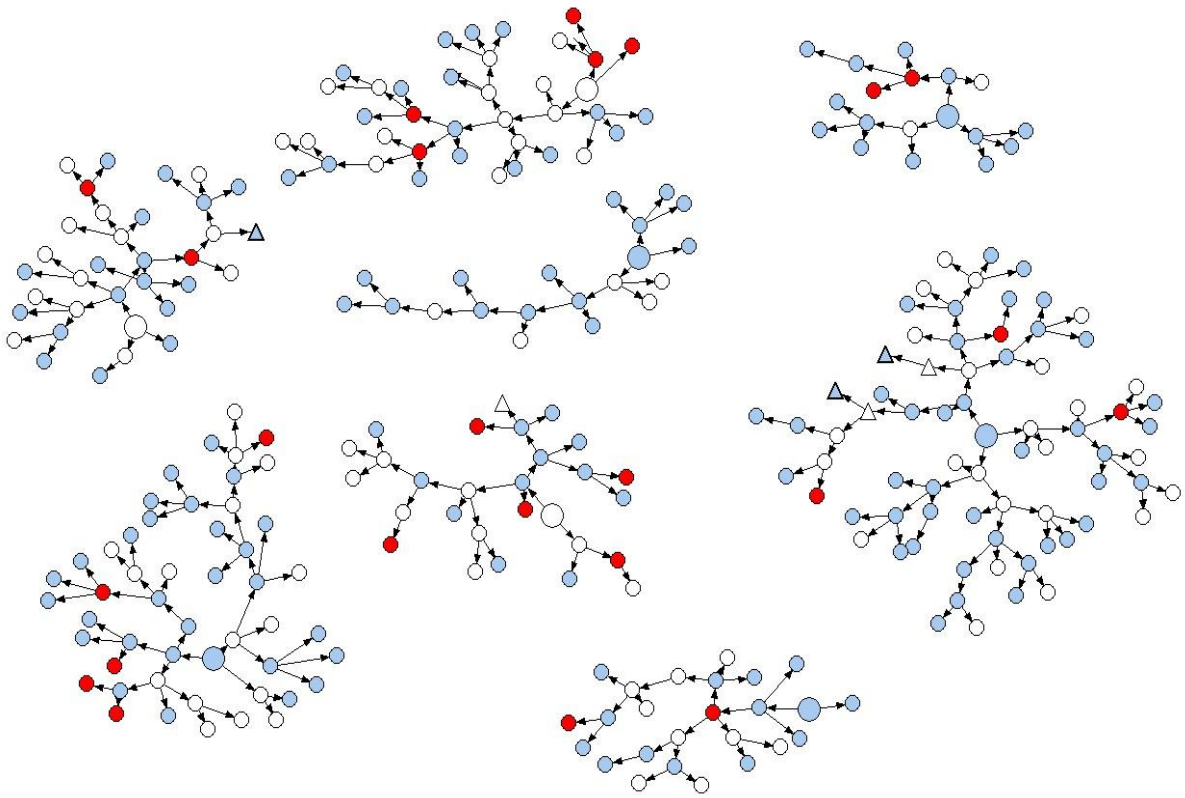
Picture 2: Recruitment chain of Gori PWIDs by risk injection and sexual behavior and HIV status



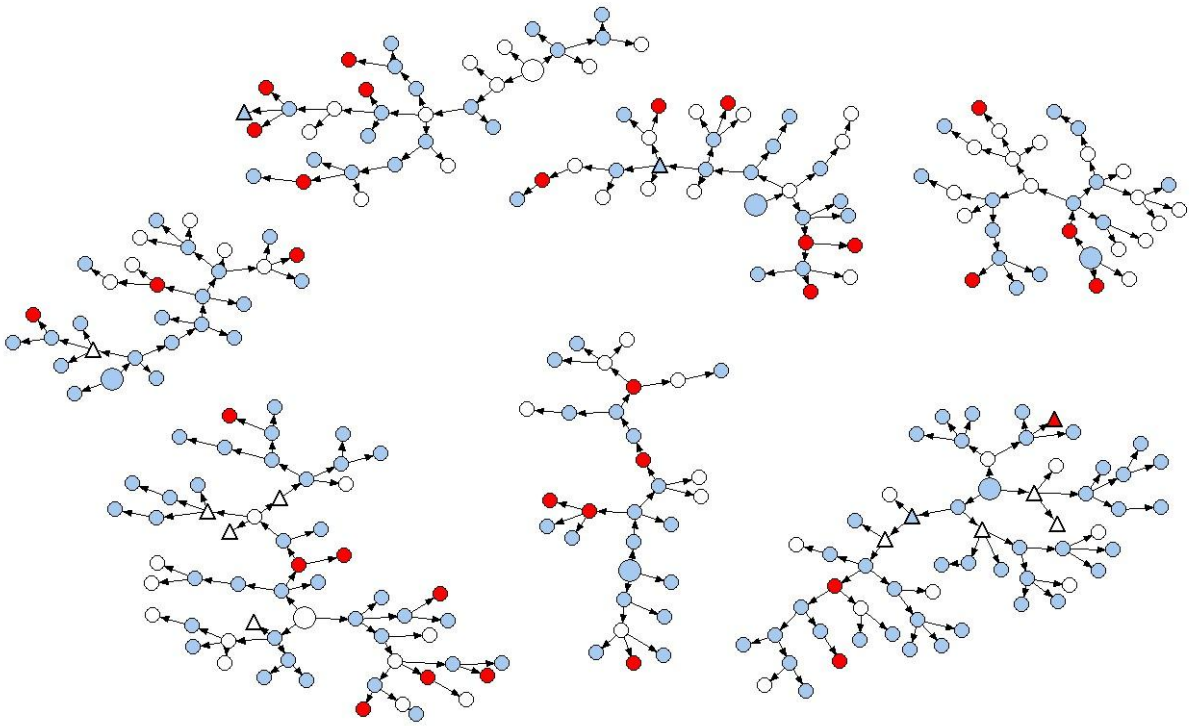
Picture 3: Recruitment chain of Telavi PWIDs by risk injection and sexual behavior and HIV status



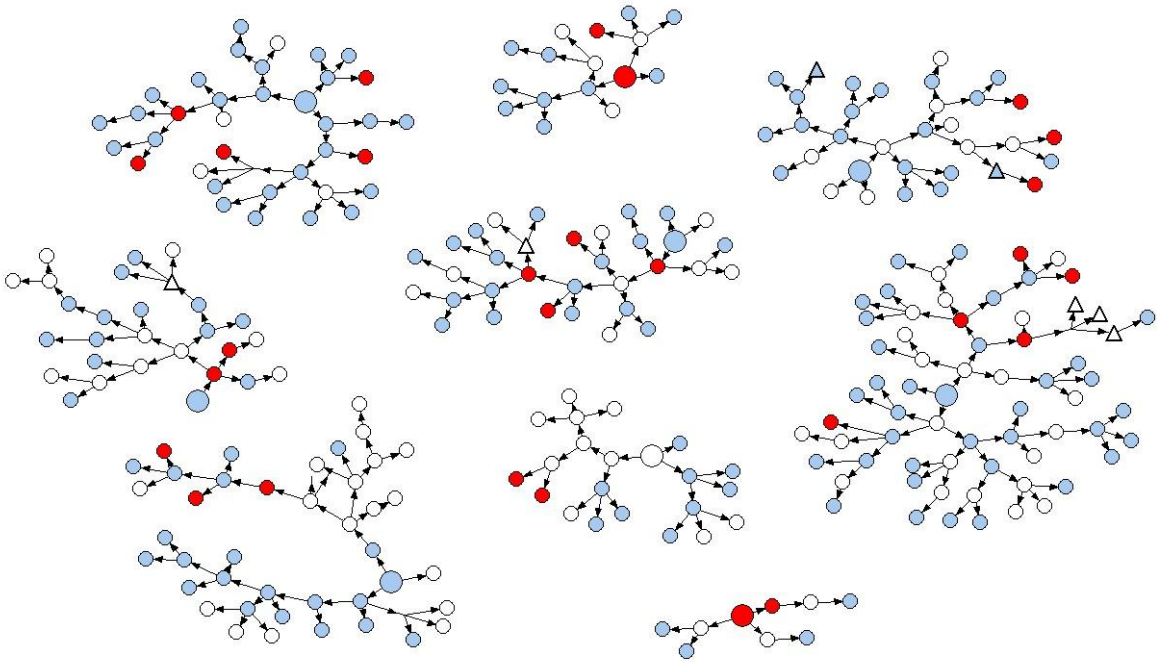
Picture 4: Recruitment chain of Zugdidi PWIDs by risk injection and sexual behavior and HIV status



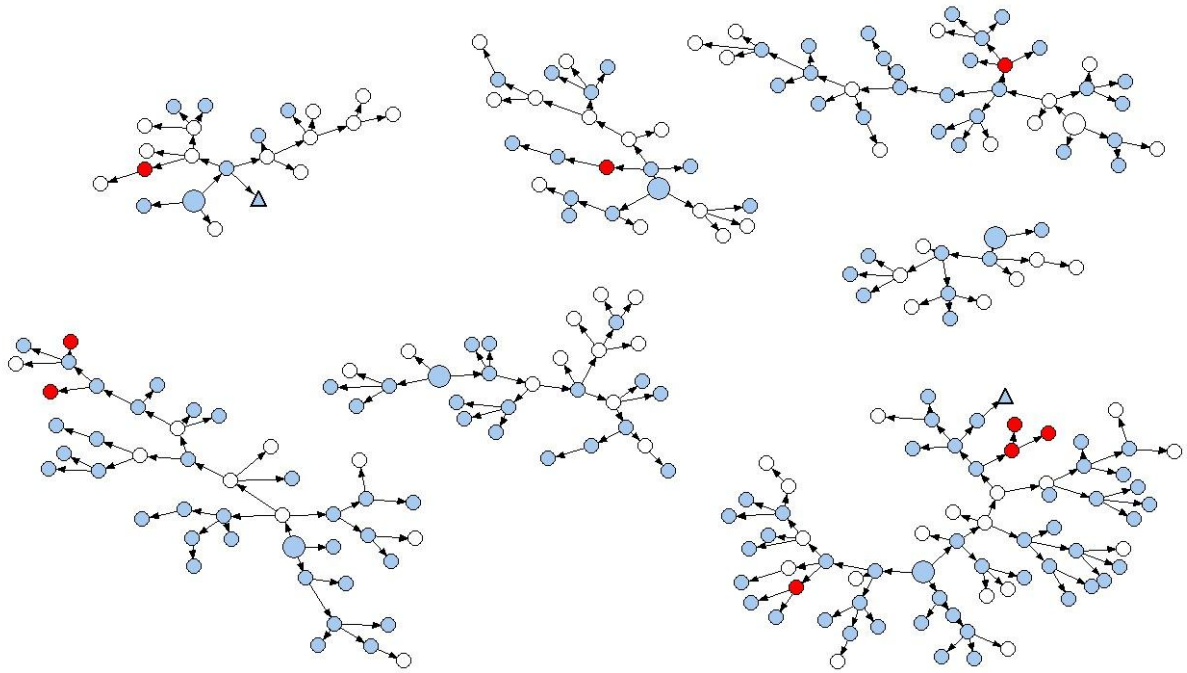
Picture 5: Recruitment chain of Batumi PWIDs by risk injection and sexual behavior and HIV status



Picture 6: Recruitment chain of Kutaisi PWIDs by risk injection and sexual behavior and HIV status



Picture 7: Recruitment chain of Rustavi PWIDs by risk injection and sexual behavior and HIV status



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 PWIDs less than 25 years of age formed only 8 % of the final sample;
- Study managed to recruit PWIDs mainly from the lower socio-economic ladder. Majority of the study participants had small monthly income, therefore the study incentives were attractive to them. On the other hand PWIDs who's position on the socio-economic ladder is high are not well represented in the survey.
- It is also possible that those PWIDs who knew their positive HIV status were less likely to participate in the survey.

Population estimates. RDS along with sampling implies a statistical inference to generate population estimates produced by the RDSAT software. There is much disagreement and confusion about ability of this software to generate representative data. There is concern that current inference methods do not reduce the RDS sample biases. Therefore, caution is required when interpreting findings based on the RDS method.

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 the light of the fact that one third of PWIDs started injecting drugs at the age under 18 years.

Reporting bias. As in any interview-based survey, 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 PWIDs recruited. The small numbers of women participating in the study may indicate that they are more hidden and difficult to reach.

Discussion

Surveillance of the HIV prevalence and risk behavior among PWID started in Georgia in 2002 when the first round of the Bio-BSS was carried out in Tbilisi. This was followed by subsequent rounds in 2004, 2006, 2007, 2008-09, 2012[15] and 2014-15 with growing coverage of cities. Comparative analysis across the years allows measuring changes and provides directions to sustain the gain and focus future preventive strategies.

There is slight increase in PWID median age since 2009 across all cities. First drug consumption and first drug injection age is slightly less or the same compared to 2009 and 2012. In all cities young people at age of 15-16 years consume their first non-injection drug and inject at age of 18-20.

Table 10: PWIDs median age and median age of first drug consumption and injection by years, 2009-2015

Median age	Year	Tbilisi	Gori	Telavi	Zugdidi	Batumi	Kutaisi	Rustavi
Age	2009	40	34	32	34	35	35	
	2012	39	36	35	38	35	38	
	2015	41	37	37	41	40	42	37
First non-injection drug consumption age	2009	16	17	17	16	16	17	
	2012	16	16	16	16	15	16	
	2015	15	16	16	16	16	16	16
First drug injection age	2009	19	20	20	18	19	20	
	2012	19	20	19	18	18	19	
	2015	18	20	20	19	19	19	20

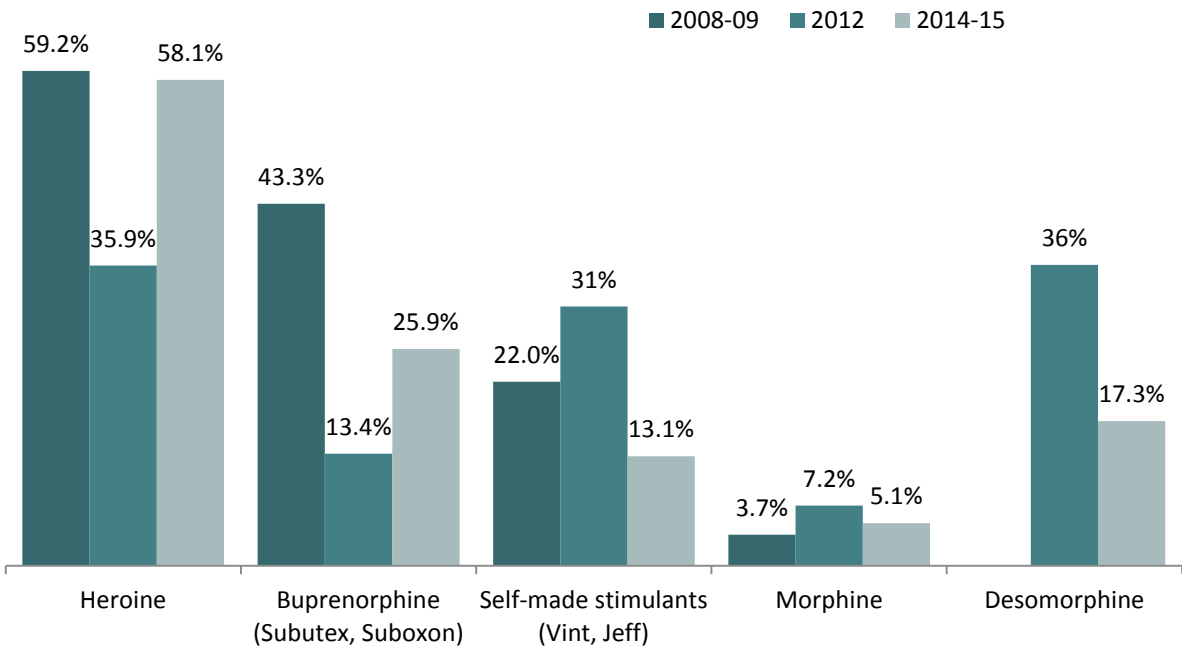
Non-injecting drugs consumption did not demonstrate major changes since 2012. CNS depressants remain as the most frequently used drugs by non-injection route, which were decreased from 74.8% in 2012 to 69% in 2015. New psychoactive drugs[12,13] were first captured by the 2015 study. Consumption rate of these drugs among young drug users is three fold higher than among their elder peers.

There is significant change in injecting drug scene during the last five years. Heroin is the most misused substance among problem drug users in Georgia that is different what was seen two-three years earlier. Heroin use was reported in more than half of PWID in 2009 that dropped in 2012 to 36% and increased to the same level in 2015. Buprenorphine is the second most frequently injected drug. Illegal use of this

[15] Bio-BSS Reports of the SHIP project (2002-2006 Tbilisi, 2004-2006 Batumi, 2007- 2009 Kutaisi) and GF project (2009 Tbilisi, Batumi, Gori, Telavi, Zugdidi; 2012 Tbilisi, Batumi, Gori, Telavi, Zugdidi, Kutaisi).

substance also dropped in 2012 and increased up to 26% in 2014. Alternatively Ephedrone and Desomorphine use has been reported by a lower proportion of PWID compared to 2012. Desomorphine was first captured by BBS studies in 2012. This drug known under the name "krokodil" is a homemade opiate based drug, ingredients of which was easily obtained at a regular pharmacy at a low cost (3.5-6 USD) per person. This drug is used as a cheaper alternative to Heroin and shows a high potential to cause dependence. "Krokodil" is now widely spread in Russia, Ukraine and presence of this drug is seen in European countries and USA.[7, 8] In Georgia there was mass shift to "krokodil" due to restrictions of Heroin trafficking from Afghanistan, however latest changes indicate that Heroin became more and more accessible to the drug injectors in the country as well in neighboring countries. Morphine use remains at the same low levels during last years.

Figure 17: Type of drugs injected during last month by years, 2009-2012-2015 [16]

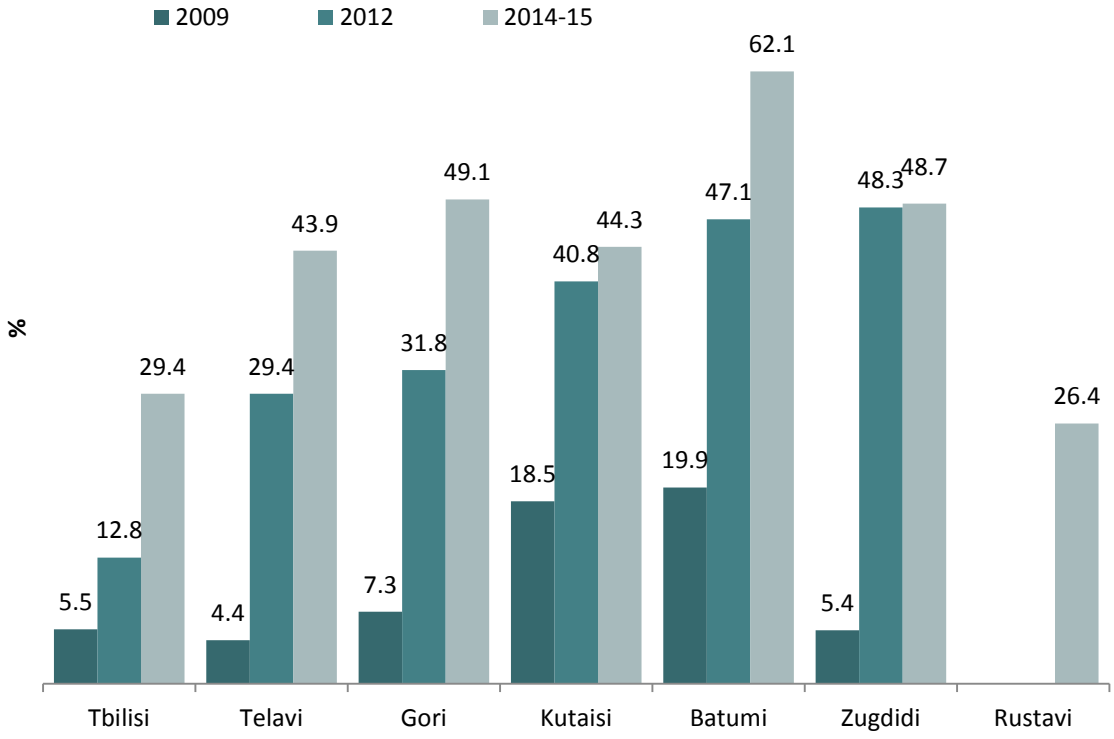


Specific drug misuse is associated with injection abroad. Specifically among those who reported injection in other countries during last 12 months Heroin use was significantly higher compared to those who did not inject abroad (69.9% vs. 49.3%). Buprenorphine use is the same in both groups at a level of 25-26%, while Vint and Desomorphine use was more frequently mentioned among those who has injected only in Georgia.

16 Combined sample, unweighted data

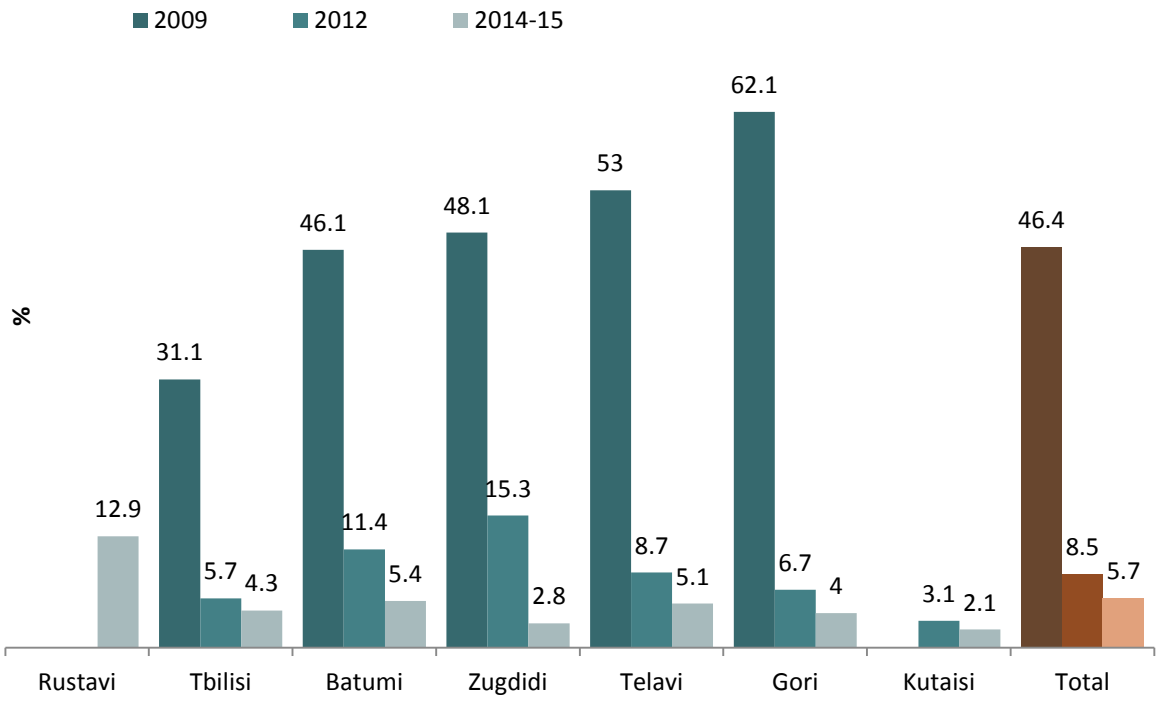
Injection in other countries has been growing across almost all cities. Nearly every second injecting drug user has injected abroad during last 12 months. Highest proportion was demonstrated among Batumi PWID and lowest among Tbilisi and Telavi residents. Turkey remains the most frequently visited country for injection purposes. Due to close proximity to this country, easy access to drugs, as based on anecdotal evidence, more PWID tend to take this opportunity. Among the type of drugs injected abroad is leading heroin, followed by buprenorphine, and desomorphine at a third place. HIV risk behavior could increase while traveling that is explained by exposure to different social norms and unfamiliarity to injection supply sources. Difficulties in access to sterile injecting equipment prompt PWID to share equipment with unknown users.[9,10] A similar picture is observed in our case - among all PWID only 3.1% reported sharing of injecting equipment at last injection, while among those who injected abroad this risk increases four fold – among the sample 14.3% reported sharing of injecting equipment while injecting abroad.

Figure 18: Injection abroad by years, 2009-2012-2015



PWID who engage in unsafe injections are at increased risk of acquiring HIV. One-time use of sterile injecting equipment and not sharing of paraphernalia is the most effective way to limit HIV transmission. There was sharp reduction in sharing of injecting equipment and other paraphernalia from 2009 to 2012. Reduction trend continues, although a small proportion (from 2% to 5%) still shares paraphernalia.

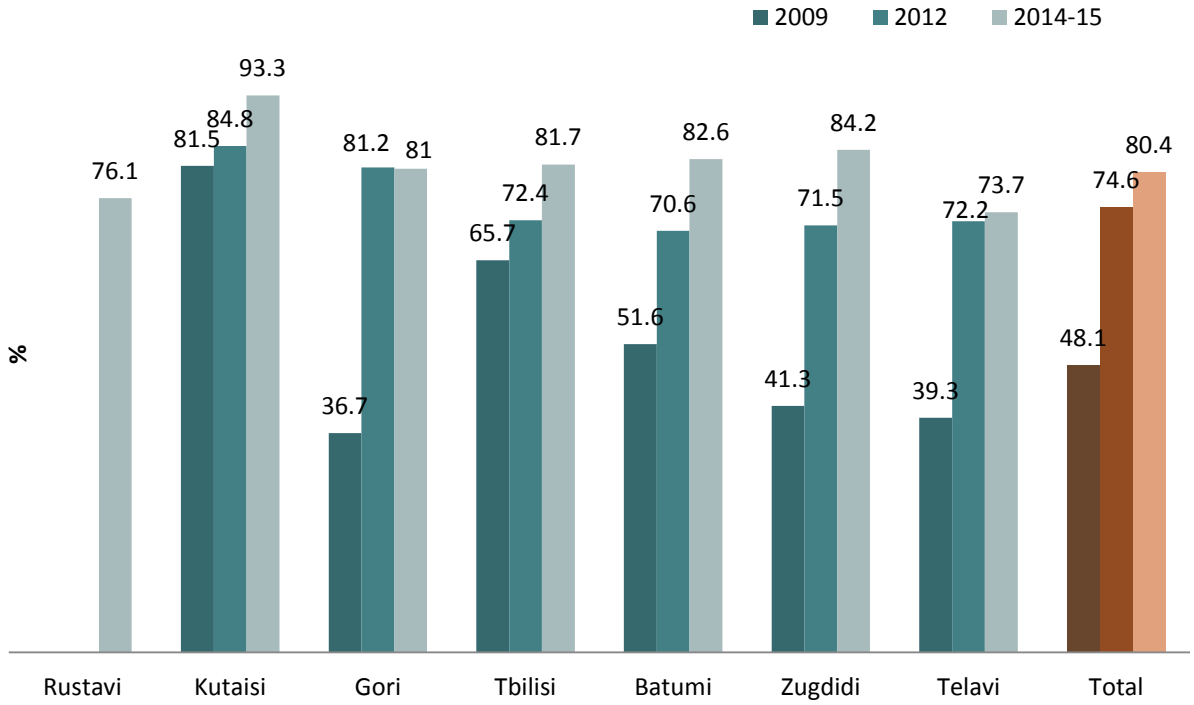
Figure 19: Share paraphernalia at last injection by years, 2009-2012-2015 [17]



Safe injection practice improves in all cities. An indicator "safe injection at last injection" is composed of the following indicators: not usage of previously used injecting equipment by somebody else or him/herself, not usage of injecting equipment left at a place of gathering by somebody else, not usage of prefilled syringe by somebody else without his/her presence, not usage of shared equipment, not usage of drug solution from shared container. With aim to make it comparable across the years an indicator- previously self-used injecting equipment - is removed from the analysis. In almost all cities PWID showed increase of safe injection practice since 2012. We analyzed determinants of risky injection practice. PWID from Telavi and Rustavi have lower odds of engaging in risky injection behavior, similarly those with higher education, or those who have been tested during last year and received results are less likely to share equipment.

[17] City figures: weighted population estimates; Total: unweighted frequency from combined sample

Figure 20: Safe injection at last injection by years, 2009-2012-2015[18]



Safe injection practice differs among those who inject several times a week or more often and those whose injection less frequently (once a week or less). Unsafe injection is three fold higher among frequent injectors (38.9% vs. 11.2%, $p < 0.001$). Injection frequency is also associated with the drug types. Namely, injection of the homemade amphetamines (Vint, Jeff) is twofold high among frequent injectors followed by desomprhine users, heroin use is slightly high among this subgroup, and no difference was found in buprenorphine users.

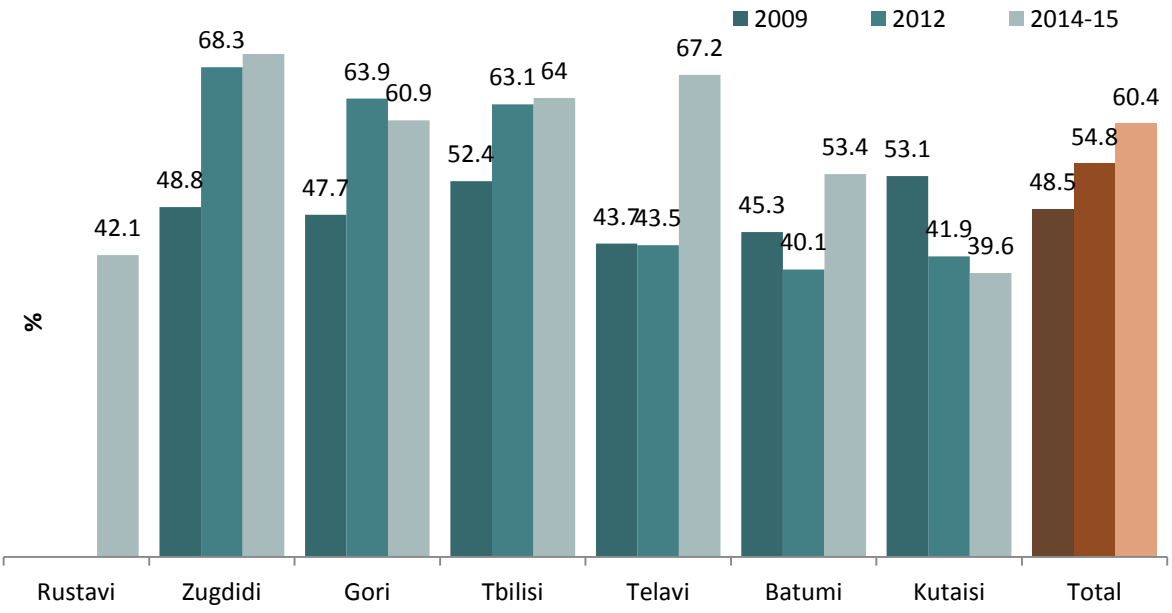
Knowledge on HIV/AIDS among PWID remains relatively good. Majority is aware about main transmission risks associated with injection and sexual behavior. However misconceptions still exist, e.g. about 17% still believes that meal sharing is associated with HIV transmission.

Although exposure to HIV through injection practices is primary concern, sexual risk factors play important role in transmission of infection. Almost every second injecting drug user reported having occasional sexual partner with median number of three partners during last 12 months. Condom use with such partners has slightly increased from 54.8% to 60.4% since 2012. Four cities demonstrated increase in protective sex with occasional partners, while Kutaisi PWID reported worsening of condom use behavior. Kutaisi followed by Rustavi shows lowest rates of protective sexual practice with

[18] City figures: weighted population estimates; Total: unweighted frequency from combined sample

occasional partners across the cities. This indicates that occasional partners are still not perceived to be a potential source of HIV infection. Among 17 HIV positive individuals three did not use condoms with their occasional partners at last intercourse. Male to male sex remains very low in all BBS rounds.

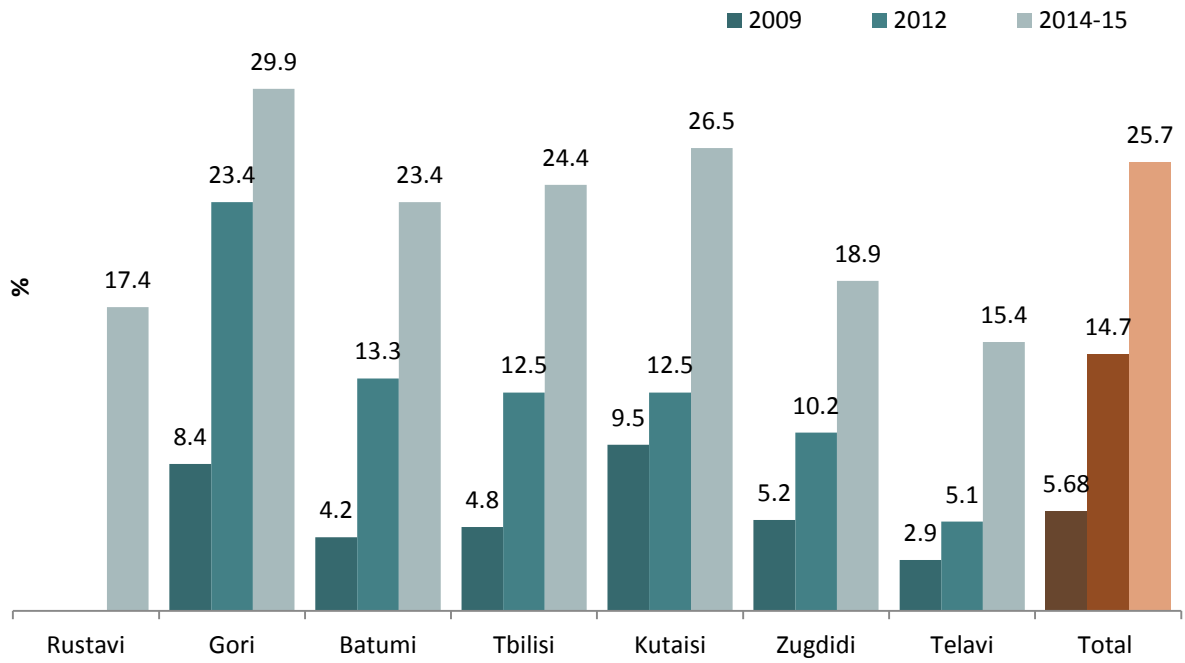
Figure 21: Condom use with occasional partners at last intercourse, 2009-2012-2015[19]



Awareness of HIV status is key in infection transmission reduction strategy by linking positive individuals to services and behavior change that is associated with knowing of personal HIV status. [11] There is significant increase in proportion of PWID who were tested during last 12 months and know their results. Increase is observed across all cities with highest rates found in Gori and lowest in Telavi. In general one in four injecting drug user has been recently tested on HIV. Analysis of determinants associated with testing showed that those who engage in risky injection behavior are less likely to be tested, residents of Telavi and Rustavi have lower chances to be tested, while those who were reached by preventive programs have 21 fold higher odds of being tested on HIV. Age, education or condom use practice was not associated with testing behavior. Only 52.3% of PWID know where HIV testing could be done in their communities and this proportion is lower than that found in 2012 (69.5%). Reduction is observed in all cities indicating need of intensifying awareness campaigns.

[19] City figures: weighted population estimates; Total: unweighted frequency from combined sample

Figure 22: Tested on HIV last year and know results, 2009-2012-2015[20]

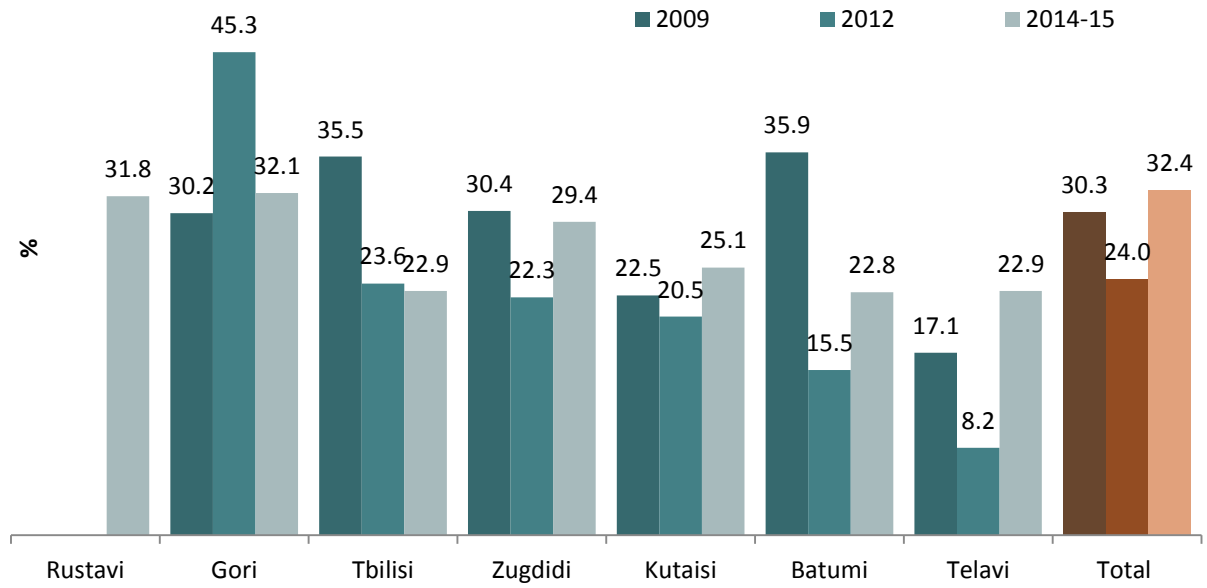


Coverage with preventive programs increased from 24% in 2012 to 32.4% in 2015. Increase is observed in all cities, with exception of Gori, although Gori demonstrates highest proportion among other cities. Comparison with 2009 data shows reduction in coverage in Tbilisi, Zugdidi and Batumi. Reach with various preventive program elements such as injecting equipment, condom, informational material or qualified information differ in the cities. Gori showed almost equal reach with all program benefits, while other cities show uneven distribution, indicating that different packages are offered to program beneficiaries.

Awareness about syringe exchange program has improved in Telavi, Batumi and Zugdidi, however in general knowledge about the program remains low and needs to be improved. Substitution therapy program is much well-known among PWID. Treatment services are not widely accessible to PWID. Only 6% underwent any kind of treatment or was still under treatment. OST sites for opiate dependent drug users are growing. In majority of cases drug users rely self on help of peers rather than on medical assistance.

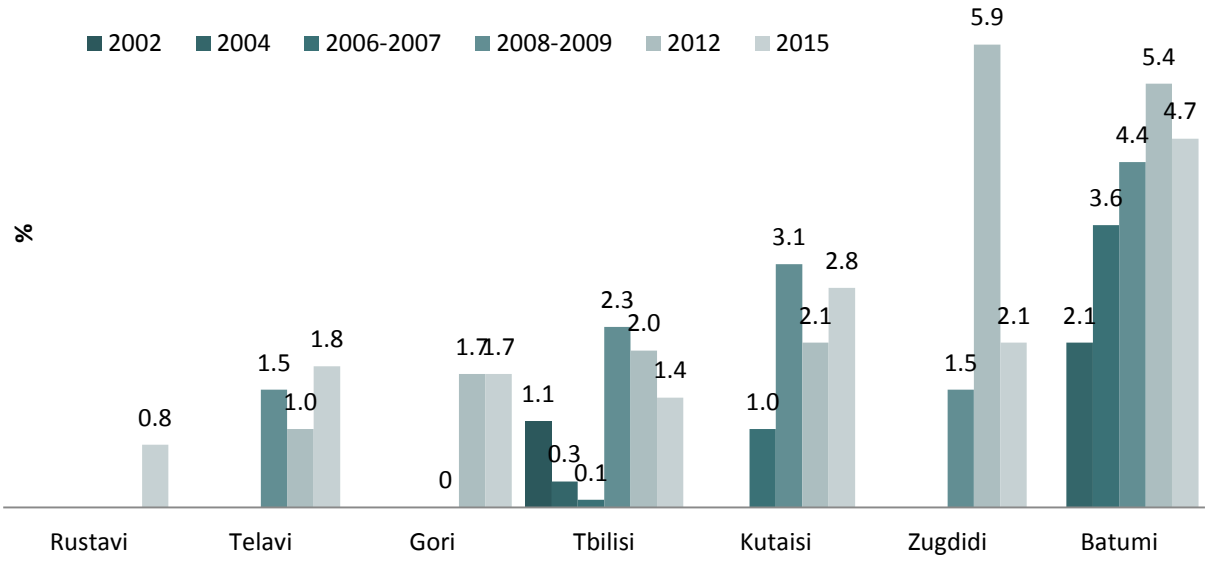
[20] City figures: weighted population estimates; Total: unweighted frequency from combined sample

Figure 23: Program minimal coverage[4] 2009-2012-2015[21]



The combined dataset analysis shows that HIV prevalence is 2.2% (95% CI 1.53-2.99) with no change since 2012 when HIV prevalence was 3.0 (95% CI 2.20-4.04). Across the cities Batumi shows highest prevalence rate of 4.7% with slight (not statistically significant) reduction since 2012. Significant reduction was observed in Zugdidi (from 5.9% to 2.1%). Anecdotal evidence suggests that number of HIV positive PWID in Zugdidi died over the course of last two-three years.

Figure 24: Prevalence of HIV, 2002-2012-2015[22]



[21] City figures: weighted population estimates; Total: unweighted frequency from combined sample
[22] Nonweighted data

The study revealed alarmingly high HCV prevalence across the cities, specifically in Tbilisi, Kutaisi, Zugdidi and Batumi. High HCV prevalence was found also by BBS studies in Tbilisi and Batumi in 2006 (73.5% and 61% respectively).[12,13] The alarmingly high HCV rates among PWID in Georgia is an indicator of unsafe injecting behavior which they have practiced during their injecting career. Luckily low prevalence of HIV infection among PWID decade ago and earlier prevented wide spread of HIV infection among this key population.

The findings reemphasize the critical need to continue preventive interventions among PWID and intensify targeted efforts among specific subgroups. HIV epidemic is well-established in Zugdidi and Batumi while remains at a relatively lower level in other cities and among young PWID. Unsafe injection behavior is declining however engagement in risky practice while injecting specific drugs, among heavy drug users and changing behavior while injecting abroad makes PWIDs vulnerable to HIV infection. Risky sexual behaviors increase bridging role of this population in possibility of HIV transmission to their sex partners. More drug injectors have safe sexual contacts with occasional partners, however in Kutaisi, Batumi and Rustavi such risky behavior remains at alarmingly low levels that needs special attention. Growing preventive program coverage and HIV testing is a demonstration of intensive work undertaken by preventive programs. The work should continue across all geographic areas to sustain the gain already achieved and reach higher levels.

Recommendations

Following recommendations are proposed to address the weaknesses and gaps revealed through the current study:

Increasing IDU coverage and Strengthening outreach programs and NGOs that work on drug demand reduction

The survey identified substantial need for increasing coverage and quality of preventive, treatment and harm reduction services.

- Increase coverage of the HCT services, through increasing level of awareness among PWIDs and expanding field outreach activities.
- Increase coverage and Improve quality of preventive program services though delivering comprehensive and standardized interventions. Strengthen and expand peer education activities.
- Consider targeting young PWIDs. Design specific programs with comprehensive package with involvement of young peer educators.
- Use of competence-enhancement approach to drug abuse prevention in schools. Contrary to the traditional antidrug education methods this approach proved to be effective in behavior change among youth.
- In preventive messages reemphasize risks associated with injection practices abroad (sharing of injecting equipment with individuals from other network).
- Design and implement drug-specific interventions primarily for self-made amphetamine-type stimulants and opiate users. Reemphasize dangers associated with psychoactive drug consumption and desomorphine injection.
- Given the prevalence of sexual risk among PWIDs continue to promote condom distribution and reemphasize the necessity of consistent condom use with any sex partner. 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 PWIDs and family focused interventions.
- Strengthen and expand comprehensive drug prevention and treatment interventions that can reduce drug consumption as well as injection-related risky behaviors.
- Increase availability and affordability of rehabilitation and detoxification centers to PWID.

- Intensify preventive interventions in Batumi, Zugdidi, Kutaisi and where high HIV prevalence and risk behaviors create ground for further spread of infection.

Continue with surveillance

- The next surveys among PWID using RDS should be carried out in these cities within next 2 years.
- Investigate environmental risk and enabling factors that influence behavior and thus provide insight into HIV prevention.

Annex 1: Data tables - Georgia (all seven cities), Tbilisi, Batumi, Zugdidi

Table 11: Socio - Demographic Characteristics

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Socio - Demographic Characteristics	%	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	8.0	2037	6.8 (3.6- 10.2)	24/357	11.1(5.4-17.3)	15/277	6.6(3.2-10.7)	16/288
25 - 30	14.9	2037	14.3(9- 20.2)	37/357	8.5(5.1-12.8)	30/277	16.8(11.1-22.6)	46/288
31 - 40	31.8	2037	32.8 (25- 39.7)	115/357	35.5(28.2-44)	104/277	27.5(21-34.6)	81/288
41 +	45.3	2037	46.1 (38.6- 55.1)	181/357	44.9(35.4-53.8)	128/277	49.1(41.3-57.2)	145/288
Mean (min - max)*	39.52(18-68)		40.90 (19- 66)		40.31 (20-65)		40.03 (18-66)	
Median*	39.00		41.00		40.00		41.00	
Gender								
Male	98.0	2037	96.5 (94-98.7)	346/357	99.4 (98.2-100)	276/277	99.4(98-100)	286/288
Female	2.0	2037	3.5 (1.3-6)	11/357	0.6 (0-1.8)	1/277	0.6(0-2)	2/288
Educational status								
None	0.05	2037	--	0/357	0.5(0-1.8)	1/277	0.3(0-1.4)	1/288
Primary (1-4 class)	0.1	2037	--	0/357	--	0/277	--	0/288
Secondary or vocational school	59.5	2037	34(27.5-40.3)	130/357	63.1(55-71.5)	180/277	59.6(51.7-66)	184/288
Incomplete Higher	4.8	2037	6.5(3-10.7)	18/357	1.2(0-3.3)	3/277	12.6(7.3-18.8)	26/288
Higher	35.5	2037	59.5(52.8-66.6)	209/357	35.2(26.8-43)	93/277	27.6(21.5-34.9)	77/288
Ethnicity								
Georgian	95.5	2037	95.8(92.9-98)	345/357	90.4(84.6--95.2)	256/277	99.8(99.4-100)	286/288
Other	4.5	2037	4.1(1.9-6.8)	11/357	9.6(4.8-15.4)	21/277	0.2(0-0.6)	2/288
No response	0.05	2037	0(0-1)	1/357	--	0/277	--	0/288
IDP status								
Yes	4.5	2037	3.4(0.8-6.2)	6/357	1.9(0-4.5)	6/277	17.5(10.9-24.5)	39 /288
No	95.4	2037	95.8(92.2-99)	350/357	98.1(95.5-100)	271/277	82.5(75.5-89.1)	249/288

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Socio - Demographic Characteristics	%	N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
No response	0.1	2037	0.8(0-1.9)	1/357	--	0/277	--	0/288
Employment								
Pupil/student	0.6	2037	1.2(0.1-2.7)	5/357	0.6(0-1.8)	1/277	0.6 (0-1.8)	2/288
Have a permanent job	8.9	2037	9.1(5.6-13.5)	35/357	6.7(3.1-11.2)	14/277	5.6(3-8.8)	16/288
Have a temporary job	18.9	2037	15(10.4-20.4)	50/357	19(12-26.3)	43/277	20.8(15-27.2)	44/288
Retired/disabled	2.6	2037	2.4(1-4.2)	12/357	17(0.3-3.7)	6/277	2(0.2-4.1)	6/288
Unemployed	69.0	2037	72.2(6.56-78)	255/357	72(64.4-79.5)	213/277	71.1(63.9-77.6)	220/288
Monthly income (Gel)								
Less than 100 Gel	21.3	2037	20.2(14.6-25.5)	76/357	17.3(11.9-22.6)	58/277	14.4(10.2-20.1)	62/288
From 100 up to 300	35.4	2037	34.4(28.2-41)	135/357	3(23.9-38.2)	97/277	40.5(33.1-47.6)	112/288
From 300 up to 500	23.1	2037	24.8(19-30)	79/357	30.4(22.4-37.4)	68/277	21.1(14.9-27.5)	61/288
From 500 up to 700	10.0	2037	7.5(4.4-10.9)	23/357	8.9(4.2-14.7)	23/277	8.8(4.6-13.1)	20/288
From 700 up to 1000	6.6	2037	8.7(5.2-13.3)	28/357	12(7-17.6)	25/277	10(5.6-13.9)	20/288
1000 Gel and more	3.5	2037	4.5(2.1-7.8)	15/357	1.4(0.1-3.3)	6/277	5.3(2.2-10.2)	13/288
No response	0.1	2037	0.1(0-0.7)	1/357	--	0/277	--	0/288
Marital status								
Married	45.3	2037	41.5 (36.4-49.2)	149/357	56.5(47.7-64.4)	143/277	42.6 (34.6-50.6)	132/288
Divorced/Separated	21.2	2037	27.8 (22.2-33.5)	101/357	21.4(14.4-29.5)	66/277	9.5(5.5-13.7)	31/288
Widower/widow	1.3	2037	1.9 (0.3-3.9)	5/357	0.2(0-1.4)	1/277	1.3(0-3.6)	5/288
Never been married	32.2	2037	28.7(21.8-33.5)	102/357	22(16.3-28.2)	67/277	46.6(39.3-54.4)	120/288
Living arrangements								
With spouse	45.0	2037	41.3 (35-47.8)	149/357	56(47.5-64.1)	143/277	42(34.5-50.5)	132/288
With partner	1.4	2037	3 (0.7-5.6)	7/357	4(1.2-8.8)	9/277	1.6(0-4)	2/288
Single	12.5	2037	16.6 (11.8-21.6)	58/357	11.5(7.4-16.1)	36/277	7.2(3.2-11.4)	20/288
Live with relative/parents	40.4	2037	37.6 (31-44.2)	139/357	28.1(21.2-34.7)	88/277	49.2(40.3-57.9)	134/288
Other	0.4	2037	1.6 (0.3-3.5)	4/357	0.4(0-1.7)	1/277	--	0/288
Refused to answer	0.3	2037	--	0/357	--	0/277	--	0/288

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Socio - Demographic Characteristics	%	N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
Police and prison experience last 12 months								
Infringement of the law due to drug use during last 12 months*	20.5	2037	14 (9.8-18.2)	63/ 357	33.2(25.4-41.5)	89/277	20.5(14.8-26.7)	64/288
≤ 24 years old	22.0	2037	10.3 (0-31.1)	2/24	34.7 (5.1-67.1)	5/15	11.3(0-34.5)	2/16
≥ 25 years old	20.0	2037	14.5 (10.2-19.1)	61/333	33.1 (26.3-42.9)	84/262	21(14.9-27.8)	62/272
Detained in administrative sentence	15.9	2037	10.2 (6.7-13.8)	49/357	26.6(18.9-32.3)	73/277	13.3(8.3-19.2)	47/288
Imprisoned before trial	9.4	2037	4.6(2.3-7.3)	26/357	12.5(7.8-17.6)	34/277	11.4(7.1-16.1)	33/288
Imprisoned	3.7	2037	3.8 (1.4-6.4)	12/357	4(0.7-8.8)	9/277	4.9(2.4-8.1)	14/288
Alcohol consumption during the last month								
Every day	4.8	2037	1.6(0.6-2.7)	14/357	4.5(2.6-9.4)	20/277	3.3(0.8-5.9)	10/288
More than once a week	27.7	2037	17.6(13.3-22.5)	84/357	34.4(25.5-41.4)	75/277	22.4(16.6-29.3)	79/288
Once a week	13.2	2037	7.1(4-10.2)	34/357	11.7(6.5-15.4)	31/277	13.2(9-18.5)	36/288
Less than once a week	31.5	2037	43(36.2-50.2)	129/357	27.5(22.5-36)	80/277	28.1(20.9-34.8)	88/288
Never	22.7	2037	30.6(24.4-36.9)	96/357	21.8(13.5-29.9)	71/277	33(26.4-39.9)	75/288
Refused to answer	0.1	2037	--	0/357	--	0/277	--	0/288

Table 12: Drug use history

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Drug using behavior	**%**	**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 drugs								
<15	22.8	2037	38.2(31.8-45.5)	126/357	20.2(14.8-27)	79/277	17.1(12.6-23.2)	48/288
15 – 19	64.6	2037	51.4(43.5-57.8)	199/357	66.5(58.7-73.2)	164/277	72.3(64.2-78.4)	213/288
20 – 24	10.1	2037	6.9 (3.8-11.1)	24/357	10.6(6.1-16.1)	29/277	10(5.8-15.1)	25/288
25+	2.6	2037	3.6(1.2-6.6)	8/357	2.6(0.5-5.3)	5/277	0.6(0-1.6)	2/288
Mean (min - max)*	16.52(9-35)		15.84 (10-30)		16.19 (9-30)		16.52 (9-30)	
Median*	16.00		15.00		16.00		16.00	
Age when first injected drugs								
<15	2.8	2037	7.3(3.8-10.2)	19/357	1.6(0.4-3.2)	9/277	1.1(0-3.4)	4/288
15 - 19	51.8	2037	56.8(51.3-64.1)	212/357	52(44.3-59.6)	152/277	56.5(48.6-63.3)	167/288
20 - 24	32.4	2037	25.3(19.4-30.7)	94/357	32.3(25.1-39.8)	84/277	31.1(24.5-37.6)	91/288
25+	13.0	2037	10.6(6.2-15.3)	32/357	14.1(9.1-19.7)	32/277	11.3(6.7-17.3)	26/288
Mean (min - max)*	19.90(12-45)		18.98 (13-36)		19.52 (12-42)		19.27(14-30)	
Median*	19.00		18.00		19.00		19.00	
Duration of injecting drugs from first injection in years								
Mean (min - max)*	19.62(0-51)		21.92 (1-47)		20.79 (1-45)		20.75 (1-48)	
Median*	20.00		22.00		21.00		21.00	
Thinks he/she is addicted to drug								
I'm addicted	90.3	2037	89(83.7-93.7)	323/357	95.3(92.2-97.9)	266/277	91.4(86.8-95.5)	271/288
I'm not addicted/don't think I'm depending	9.7	2037	11(6.3-16.3)	34/357	4.7(2.1-7.8)	11/277	8.6(4.5-13.2)	17/288
Duration of drug addiction in years								
Mean (min - max)*	16.01(1-46)		17.60 (1-46)		16.13(1-40)		17.48(1-45)	
Median*	15.00		17.00		15.00		18.00	

Table 13: Drug use risk behavior

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Drug using behavior	%	N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
Frequency of injecting drug use last month								
Once a month	13.5	2037	10.3(6.5-14)	39/357	15.8(1-21.2)	37/277	16.2(11-22)	31/288
Several times a month	53.9	2037	51(43.9-58.6)	157/357	58.6(50.2-66.8)	151/277	51.2(44.5-58.1)	160/288
Once a week	7.7	2037	10.2(6.5-13.6)	33/357	8.1(4-13.5)	22/277	13.2(8.9-18.3)	30/288
Several times a week	22.0	2037	21.8(16.4-28)	104/357	14.4(9.1-21)	58/277	17.7(11.7-23.3)	61/288
Once a day	1.0	2037	3.2(1.2-5.7)	11/357	17(0.3-3.7)	5/277	0.2(0-0.6)	1/288
Several times a day	1.9	2037	3.6(1.4-5.9)	13/357	1.3(0.2-2.6)	4/277	1.5(0.2-3.2)	5/288
Member of regular injecting group								
Yes	58.3	2037	66.3 (59.5- 72.5)	246/357	45.8(37.8-54)	141/277	58.9(51.5-66.9)	168/288
Mean # of injecting group members*	3.68(1-20)		3.81 (1-20)		3.46 (1-15)		3.60 (1-7)	
Consumed drugs last month (drug groups)								
CNS depressants	69.0	1476	83.6 (78.7-88.4)	237/298	76.5(66.9-84.5)	143/195	77.7(64.5-85.7)	146/197
CNS stimulant	1.6	1476	3(0.3-8.4)	8/298	2.8(0.2-6)	4/195	0.3(0-0.7)	2/197
Narcotic analgetics	11.1	1476	11.7(6.9-18.2)	41/298	24.3(16.7-34.3)	46/195	7.7(1.9-12.2)	21/197
Hallucinogens	54.5	1476	48.4(41-59.1)	148/298	32.3(22.4-42.3)	62/195	41.6(34.1-54.9)	100/197
New psychoactive substances	9.8	1476	17(10.5-23.8)	47/298	5.7(1.8-10.7)	13/195	3.2(0.1-7.9)	8/197
Other psychoactive substances	1.9	1476	2.6(0.2-8.4)	7/298	1.3(0-3.5)	2/195	1.4(0-4.6)	1/197
Combination	1.4	1476	2.9(0.7-3.9)	13/298	--	0/195	--	0/197
Mean # of drugs used*	1.48(1-5)		1.64 (1-4)		1.38(1-4)		1.41 (1-4)	
Injected drugs last month (drug groups)								
CNS depressants	10.0	2037	8.1(4.4-11.9)	29/357	20.4(14.8-26.6)	61/277	9.5(4.6-14.4)	42/288
CNS stimulant	14.1	2037	37(30.1-43.5)	144/357	4.2(1.3-8.5)	12/277	5.5(2.1-9.3)	12/288
Narcotic analgetics	92.2	2037	78.6(72.7-84)	292/357	97(94.4-99)	268/277	97(94.2-99.4)	283/288
New psychoactive substances	0.3	2037	0.9(0-2.3)	3/357	--	0/277	0.6(0-4.4)	3/288

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Drug using behavior	**%**	**N**	**RDS population estimates, % (95% CI)**	**n/N**	**RDS population estimates, % (95% CI)**	**n/N**	**RDS population estimates, % (95% CI)**	**n/N**
Other psychoactive substances	4.3	2037	5.2(2.6-8.1)	17/357	2.4(0.5-4.9)	9/277	5.3(0.6-9.3)	4/288
Combination	5.2	2037	1.9(0.5-3.5)	11/357	7.7(3.8-12.6)	26/277	5.3(2.5-8.6)	33/288
Mean # of drugs injected	1.21(1-4)		1.36 (1-4)		1.26 (1-3)		1.19 (1-3)	
Injected drugs last month (selected drugs)								
Heroin	58.1	2037	37.5 (30.3-45)	123/357	66.5(58.8-73.9)	190/277	67.6(61.4-74.2)	208/288
Buprenorphine (Subutex, Suboxon)	25.9	2037	22.6(16.9-28.7)	108/357	44(35.9-52.2)	125/277	17.1(11.2-23.3)	49/288
Ephedrone (Vint)	11.2	2037	33.5(26.7-40.5)	130/357	1.4(0.4-2.7)	7/277	3.9(1-7.2)	8/288
Metamphetamine (Jef)	1.9	2037	4.1(1.1-7.9)	15/357	1.4(0-5.1)	2/277	--	0/288
Morphine	5.1	2037	0.8(0-1.9)	4/357	2.9(1.1-5.3)	11/277	5.3(2.3-9.3)	16/288
Desomorphine	17.3	2037	21.4(16.3-26.9)	85/357	3.3(1.1-6.3)	15/277	11.9(7.8-16.2)	43/288
Injecting frequency of narcotic analgetics during last 12 months								
One month and more	18.7	1879	16.5(12.1-23.9)	62/292	15.9(10.7-21.8)	50/268	21.2(15.6-27.3)	72/283
More than one week and several times in the year	22	1879	14.4(9.5-20.6)	59/292	18.4(12.1-26)	58/268	11.3(7-15.7)	60/283
Withdrawals caused by easing narcotic analgetics usage or dosage reduction								
I haven't stopped	2.3	766	19.3(3.2-29.3)	10/121	0(0-0)	1/108	5.3(0-9.9)	5/132
yes	92.0	766	77.4(65.3-94)	106/121	83.3(60.8-97.2)	98/108	93.4(83.7-100)	125/132
no	5.6	766	3.3(0-14.5)	5/121	16.7(2.7-39.2)	9/108	1.3(0-9.9)	2/132
Ever shared used needle/syringe/other injecting equipment								
Yes	59.1	2037	57.2(50.4-64.4)	209/357	57.5 (48.6-66.4)	162/277	63.4 (56.2-70.6)	182/288
No	38.2	2037	39.6 (32.6-46.2)	139/357	40.2 (31.4-49.2)	108/277	33.3 (26.4-40.3)	89/288
Don’t know	2.7	2037	3.2 (1-6)	9/357	2.3 (0.7-4)	7/277	3.3 (1.3-5.7)	17/288

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Drug using behavior	%	N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
Used sterile needle/syringe/ other injecting equipment at last injection								
Yes	87.2	2037	92.5(88.5-95.4)	319/357	78.6 (70-86.1)	233/277	88.3(83.7-92.6)	247/288
No	12.8	2037	7.5 (4.6-11.5)	38/357	21.4(13.9-30)	44/277	11.7(7.4-16.3)	41/288
Used previously used by others needle/syringe/ other injecting equipment at last injection								
Yes	3.1	2037	1.4 (0.4-2.7)	7/357	6.1 (1.6-11.8)	10/277	3.6 (1.2-6.5)	12/288
No	96.0	2037	98.2 (96.1-99.4)	348/357	93.9 (88.2- 98.4)	267/277	95.4 (92.4-97.9)	271/288
Don't know	0.9	2037	0.4 (0-2)	2/357	--	0/277	1 (0.2-2.1)	5/288
Used previously used by him/herself needle/syringe/ other injecting equipment at last injection								
Yes	9.3	2037	6.7 (3.7-10.6)	30/357	16.8 (10.2-25.1)	35/277	7.5 (3.8-11.5)	25/288
No	90.4	2037	93.1 (88.9-96.1)	326/357	83.2 (74.9-89.9)	242/277	91.7 (87.2-95.5)	261/288
Don't know	0.3	2037	0.2 (0-1.3)	1/357	0	0/277	0.8(0-2.9)	2/288
Used needle/syringe / other injecting equipment left at a place of gathering by somebody else at last injection								
Yes	1.8	2037	1 (0-2.4)	4/357	3.1 (0-6.6)	3/277	1.1 (0.1-2.8)	4/288
No	97.1	2037	98.2 (96.2-99.6)	350/357	96.4 (92.6-99.6)	273/277	98.2 (96.5-99.5)	279/288
Don't know	0.6	2037	0.2 (0-1.1)	1/357	0.5 (0-2.2)	1/277	0.6(0.1-1.4)	5/288
No Response	0.5	2037	0.6(0-1.6)	2/357	--	--	--	--
Used pre - filled syringe at last injection								
Yes	0.6	2037	0.5 (0-2.2)	3/357	--	--	1 (0-2.5)	3/288
No	98.7	2037	98.9 (96.7-99.8)	352/357	99.3 (96.7-100)	276/277	98.7 (96.5-99.9)	284/288

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Drug using behavior	%	N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
Don't know	0.7	2037	0.7 (0-1.6)	2/357	0.7 (0-3.3)	1/277	0.3 (0-1.7)	1/288
Used shared bottle, spoon, boiling pan/ glass/ container, cotton/filter or water at last injection								
Yes	5.7	2037	4.3 (2 -7.1)	21/357	5.4 (1.4-10.5)	8/277	2.8 (0.8-5.3)	8/288
No	92.3	2037	94.9 (92-97.3)	331/357	94.1 (88.6-98.4)	268/277	95.9 (93.1-98.2)	272/288
Don't know	2.0	2037	0.8 (0.1-1.7)	5/357	0.5 (0-2.2)	1/277	1.3 (0.3-2.8)	8/288
Used solution from the shared container at last injection								
Yes	9.0	2037	6 (3.4-8.9)	29/357	9.7 (5.1-15.3)	22/277	5.8 (2.6-9.4)	16/288
No	90.8	2037	93.5 (90.5-96.3)	327/357	90.3(84.7-94.9)	255/277	94.2 (90.6-97.4)	272/288
Don't know	0.2	2037	0.4 (0-1.8)	1/357	0	0	--	--
Safe injecting practice at last injection								
IDUs with safe injection practice at last injection[23]	74.3	2037	77.4 (71.2-83)	267/357	70.9 (61.7-78.2)	209/277	79.4(73.6-85.2)	220/288
≤ 24 years old	62	163	72.8 (46.4-82.3)	15 /24	53.2 (14.7-87.1)	10/15	59.4(28.9-90.6)	10/16
≥ 25 years old	75.4	1874	77.6 (71.6-83.6)	252 /333	72.1 (64.1-79.9)	199/262	80.7(74.8-86.1)	210/272
IDUs with safe injection practice at last injection_2 (excludes self-used syringe use)[24]	80.4	2037	81.7(75.9-87)	282/357	82.6(73.7-88.8)	237/277	84.2(79.3-89.4)	237/288

[23] No usage of needle/syringe previously used by somebody else or him/herself, no usage of needle/syringe left at a place of gathering, not usage of syringe prefilled by somebody else without his presence, not usage of syringe filled from previously used syringe, no usage of possibly contaminated shared equipment (container, cotton, filter, water), no usage of drug solution from shared container prepared without his/her presence.

[24] No usage of needle/syringe previously used by somebody else, no usage of needle/syringe left at a place of gathering, no usage of syringe prefilled by somebody else without his presence, no usage of shared equipment, no usage of drug solution from shared container prepared without his/her presence.

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Drug using behavior	**%**	**N**	**RDS population estimates, % (95% CI)**	**n/N**	**RDS population estimates, % (95% CI)**	**n/N**	**RDS population estimates, % (95% CI)**	**n/N**
≤ 24 years old	66.3	163	81.1(56-85.6)	16/24	53.8(17-87.6)	10/15	66.9(35.7-100)	12/16
≥ 25 years old	81.6	1874	81.5(76-87.2)	266/333	84.6(76.7-90.5)	227/262	85.4(80.5-90.1)	225/272
Last month sterile injecting equipment use								
Never used previously used injecting equipment by others or him/herself	18.5	2037	17.8(12.5-23.7)	64/357	12.5(8-17.6)	35/377	16.6(11.3-22.7)	41/288
Never used injecting equipment used by others	81.9	2037	83.5 (78.5-87.8)	283/357	78.9 (72.7-86.5)	226/277	82.2 (76.6-87.4)	230/288
Never used injecting equipment used by him/herself	18.5	2037	18 (12.7-23.7)	64/357	12.6 (8-17.7)	35/277	16.6 (11.5-22.7)	41/288
Last month injecting equipment shared with								
Regular sexual partner	1.1	369	0(0-0)	4/74	--	0/51	--	0/58
Sex partner who you didn't know before	1.1	369	0(0-0)	3/74	--	0/51	--	0/58
Drug related friend	18.4	369	12.9(0-100)	12/74	41.4(0-100)	8/51	33.5(0-87.1)	12/58
Drug trafficker	0.8	369	0(0-0)	3/74	--	0/51	--	0/58
Stranger	2.2	369	0(0-0)	3/74	0(--)	1/51	0(0-0)	1/58
Friend	6.5	369	12.2(0-100)	7/74	0(--)	3/51	0(0-0)	3/58
Number of injecting partners last month								
Mean # of needle sharing partners among all*[25]	0.37 (0-10)	721	0.15(0-4)	140	0.44(0-5)	84	0.42(0-5)	95

[25] Don't know and no response regarded as missing cases and not included in the analysis.

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Drug using behavior	**%**	**N**	**RDS population estimates, % (95% CI)**	**n/N**	**RDS population estimates, % (95% CI)**	**n/N**	**RDS population estimates, % (95% CI)**	**n/N**
Mean # of needle sharing partners among those who shared last month*	0.71(0-10)	345	0.28(0-4)	76	0.76 (0-5)	49	0.74(0-5)	54
Cleaning the needle/syringe before usage								
Always	20.4	1661	16.5 (10.7-21.9)	62/293	26 (15.9-35.1)	51/242	23.4 (17.7-32.4)	57/247
Almost always	0.5	1661	0.5 (0-2.4)	1/293	2.1(0-5.1)	2/242	0(0-0.6)	1/247
Sometimes	0.7	1661	1.1 (0-3.2)	2/293	0.9 (0-2)	1/242	0.1 (0-1)	1/247
Once	0.4	1661	--	0/293	0.2(0-3.4)	1/242	1.1(0-3.5)	1/247
Never	3.0	1661	2.9 (0.6-4.9)	12/293	1.2 (0-4.3)	3/242	1.6 (0.4-3.8)	8/247
Don't know	0.2	1661	0.5 (0-2.5)	1/293	--	--	0.1(0-0.3)	1/247
No Response	74.9	1661	78.6 (71.9-85)	215/293	69.7 (59.1-79)	184/242	73.7 (64.2-79.6)	178/247
Methods used to clean the used needle/syringe								
Water (boiled and non - boiled)	94	365	100 (100-100)	63/65	94.8 (0-100)	51/55	100(SPSS)	60/60
Disinfecting solution and chlorine	0.3	365	--	0/65	--	0 /55	--	0/60
Boiling the needles/syringes	0.8	365	0(0-0)	1/65	--	0/55	--	0/60
Other	8.2	365	13.1 (0-100)	3/65	5.2 (0-100)	4/55	0 (0-0)	1/60
Frequency of giving the used needle/ syringe to others last month								
Always	0.2	2037	1.6(0.1-3.7)	3/357	--	--	--	0/288
Almost always	0.2	2037	0	0/357	--	--	0.1(0-0.3)	1/288
Sometimes	2.7	2037	1.2 (0.3-2.3)	7/357	2.9 (0.3-7)	6/277	2.3(0.8-4.9)	9/288

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Drug using behavior	%	N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
Once	3.3	2037	1.4 (0.1-3.4)	5/357	3.7 (0.3-8.2)	5/277	3.5 (1.1-6.6)	12/288
Never	93.2	2037	95.8 (92.4-98.2)	341/357	92.7 (86-98.1)	265/277	93.9 (89.7-96.7)	265/288
Don't know	0.3	2037	0 (0-0.1)	1/357	0.8(0-2.6)	1/277	0.2 (0-1.3)	1/288
Getting of new and unused needle/syringe when needed								
Yes	96.8	2037	97.8 (95.7-99.5)	350/357	92.3 (86.8-96.6)	262/277	95.2 (91.7-98.2)	279/288
Place to get/buy new (unused) needle/syringe								
Drug store	92.7	1972	97.9 (96.1-99.4)	340/350	95.2 (91.8-97.9)	249/262	97.7 (95.8-99.1)	261/279
Shop	0.1	1972	0.4(0-2.3)	1/350	--	0/262	--	0/279
Hospital	0.7	1972	1(0-2.3)	4/350	--	0/262	1.9(0-5.2)	1/279
Family/Relatives	3.9	1972	3.6 (1.6-6.4)	18/350	1.6 (0.3-3.4)	7/262	2.3 (0.5-4.5)	12/279
Sex partner	0.3	1972	0.2 (0-0.5)	2/350	0.6(0-2)	1/262	--	0/279
Friends	7.1	1972	4.5 (1.8-7.6)	19/350	3.4 (1.2-6.3)	8/262	10.2 (6-15.2)	23/279
Other injection drug user	25.6	1972	21.1 (16.2-26.8)	89/350	16.8 (11.9-22.6)	53/262	31.8 (24.7-39.9)	93/279
Drug trafficker	1.6	1972	1.6 (0.4-3.2)	7/350	1.8 (0.4-3.7)	6/262	2.5 (0.6-5.1)	4/279
Syringe exchange program	24.5	1972	7.6 (4.1-11)	37/350	25 (18.5-32.9)	78/262	24.3 (18.5-30.7)	84/279
Other	1.6	1972	0.5(0-1.6)	2/350	0.6(0-2)	1/262	1.4(0-4.9)	2/279
Injected in other locations in last 12 months								
Other cities in Georgia	50.9	2037	28.4 (22.8-33.8)	121/357	33.3 (26.8-40.8)	119/277	55.4 (48-63.4)	171/288
Other countries outside of Georgia	42.5	2037	29.4 (22.8-35.8)	92/357	62.1(53.8-70.4)	165/277	48.7(41.5-56.2)	142/288
Used shared injecting equipment in other locations								
Other cities in Georgia	4.8	1037	0 (--)	5/121	2(0-2.4)	3/119	5.1(0.7-9)	12/171
Other countries outside of Georgia	14.3	865	4.9 (0-54.8)	2/92	24.1(6.6-44.4)	21/165	16.6(10-32.1)	29/142
Other locations (cities or	10.7	1458	2.7 (0-9.4)	7/179	18.6(7.8-34.5)	4/206	11.3(7.7-18.9)	36/227

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Drug using behavior	%	N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
counties)								
Both (cities and counties)	4.3	1458	2.2(0-5.6)	5/179	3(0.4-6.4)	6/206	5.3(2.2-9.7)	15/227
Overdoses experience last year								
Yes	10	2037	6.3 (3.7-9.3)	30/357	8.1(4.5-12.2)	31/277	9.7(5.3-15)	33/288
Usual place of gathering to take drugs								
(flat)	83.1	2037	86.8(82.1-91)	315/357	90.8(86.1-94.8)	245/277	75.8(68.8-82.2)	221/288
Method of throwing away used needle								
(garbage bin)	50.5	2037	55 (48.9-61.6)	193/357	51.8 (43.5-59)	120/277	43.5 (36.4-50.7)	108/288

Table 14: Sexual behavior

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Sexual history	**%**	**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*	16.00	2029	15.00	356	16.00	277	16.00	287
Had sex in the last 12 months	93.5	2037	95.1(91.9-97.9)	342/357	96.3(93.5-98.5)	267/277	91.8(87-96.2)	265/288
Condom use at last intercourse								
Used condom at last intercourse	35.6	1905	30.3 (25.3-37.7)	120/342	31.9 (24.1-39.4)	82/267	32.8(26.2-41.1)	93/265
≤ 24 years old	59.6	161	42.9 (18-64.3)	10/24	58.2 (23.3-90.6)	9/15	74.3(44.2-94.3)	9/15
≥ 25 years old	33.4	1744	28.1 (24-36.6)	110/318	29.5 (21.8-37.3)	73/252	30.1(23.1-38.8)	84/250
Regular sex partner last 12 months								
Had regular sex partner	78.3	2037	85 (79.7-89.7)	300/357	81.6(75.3-87.2)	223/277	73.1(66.4-80.4)	212/288
Mean (min – max)	1.31 (1-10)	1594	1.34 (1-10)	300	1.23 (1-5)	223	1.26 (1-3)	212
Median	1.00		1.00		1.00		1.00	
Used condom at last intercourse	24.4	1594	26.3 (21.6-35.9)	78/300	21 (14.7-28.2)	50/223	20.8(14.2-29.3)	45/212
≤ 24 years old	42	112	56.5 (18.4-89.6)	8/18	47.3 (8.7-94.4)	5/9	64.6(0-96.6)	5/10
≥ 25 years old	23.1	1482	24.4 (20.1-34.3)	70/282	18.9 (12.7-25.8)	45/214	18(11.4-26.5)	40/202
Occasional sex partner(s) last 12 months								
Had occasional sex partner last year	47.3	2037	37.9(31.6-44)	159/357	47.2(38.9-55.3)	130/277	46(38.1-53.9)	140/288
Mean (min – max)*	5.08 (1-35)	963	4.43 (1-35)	159	6.03 (1-35)	130	4.64 (1-35)	140
Median*	3.00		2.00		4.00		3.00	

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Sexual history	**%**	**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	60.4	964	64 (45-72.5)	110/159	53.4 (39.8-74.2)	73/130	72.5(55.7-81.3)	95/140
≤ 24 years old	66.9	124	73.3 (37.5-96.1)	13/20	51.7 (0.0-100)	10/15	61(0-100)	7/12
≥ 25 years old	59.4	840	63.4 (42-72.4)	97/139	55.8 (40.9-75)	63/115	74.2(58.7-85.6)	88/128
Paid sex partner(s) last 12 months								
Had paid sex partner last year	24	2037	11.9(8.5-15.6)	66/357	20.4(14.1-27)	59/277	28.1(21.1-35)	88/288
Mean (min – max)*	4.81(1-50)	489	4.15 (1-20)	66	3.51 (1-15)	59	5.58 (1-50)	88
Median*	3.00		2.00		2.00		3.00	
Used condom at last intercourse	85.9	489	88.6 (64.3-100)	59/66	51 (--)	47/59	87.3(60.3-98.4)	74/88
≤ 24 years old	92.6	68	41.4 (50-50)	5/5	25.3(50-50)	5/6	100(100-100)	9/9
≥ 25 years old	84.8	421	88.9 (64.3-100)	54/61	62.1(59.6-99.4)	42/53	83.3(52.4-98.1)	65/79
Married IDUs paid/occasional sex partners last 12 months								
Had occasional sex partners last year	37.4	923	25.9(15.2-43.4)	54/149	62.2(34.6-70.1)	47/143	34.5(22.3-46.6)	48/132
Had paid sex partners last year	16.4	923	5.3(1-13.6)	17/149	15.8(5.6-33.2)	19/143	14.3(7.9-26.7)	26/132
Man had male sex partner								
Ever had male sex partner	1.9	1996	1.1(0-2.5)	4/346	2.1(0.1-6)	4/276	2.4(0.7-4.7)	7/288
Had male sex partner last year	0.4	1996	1.3(0-4)	2/346	--	0/276	--	0/288
Used condom with male partners at last intercourse	85.7	7	50	1/2	--	0	--	0

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Sexual history	**%**	**N**	**RDS population estimates, % (95% CI)**	**n/N**	**RDS population estimates, % (95% CI)**	**n/N**	**RDS population estimates, % (95% CI)**	**n/N**
Reasons for not using condom at last intercourse with occasional partner								
Don't like it	31.8	380	0(--)	19/48	21.2(0-48.8)	13/57	30.7(0-69)	8/45
Didn't think necessary	56.3	380	68.2(50-88)	26/48	75.2(48.4-96)	36/57	57(--)	30/45
Frequency of using condom with regular partner last year								
Always	10.4	1594	9.5(5.8-15.1)	37/300	4.7(1.7-7.3)	14/223	7.4(2.2-13.2)	20/212
Never	62.4	1594	58.3(49-63.5)	176/300	66.3(55.9-74.3)	151/223	65.8(55.4-74.8)	141/212
Frequency of using condom with occasional partner last year								
Always	42.2	964	43.6(30.5-58)	82/159	43.3(29.6-63.1)	54/130	51.9(37.3-67.9)	65/140
Never	18	964	17.7(7.6-36.2)	21/159	15.4(5.3-21.3)	29/130	9(2.8-24.7)	16/140
Frequency of using condom with paid for sex partner last year								
Always	74.8	489	60.2(15.4-89.9)	52/66	42.9(7.6-98.5)	39/59	68.3(31.9-84.4)	66/88
Never	6.1	489	13.8(0-32.3)	5/66	12.3(0-32.6)	6/59	10.9(0.9-42.2)	7/88
Anal sex last 12 months								
Anal intercourse with any sexual partner last 12 months (yes)	6.8	2037	6.6(3.9-9.8)	30/357	9.2(4-13)	23/277	3.5(1-6.4)	8/288
Condom use during anal intercourse (yes)	53.6	138	0 (--)	15/30	0(--)	10/23	50(SPSS)	4/8

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Sexual history	**%**	**N**	**RDS population estimates, % (95% CI)**	**n/N**	**RDS population estimates, % (95% CI)**	**n/N**	**RDS population estimates, % (95% CI)**	**n/N**
Sex partner is IDU								
Regular sex partner is an injecting drug user (yes)	4	1594	5.6(2.5-9.4)	18/300	2.9(0.3-6.2)	5/223	5.4(0-15.6)	5/212
Occasional sex partner is an injecting drug user (yes)	6.1	964	2.9(0-4.7)	13/159	7(2.1-18.6)	12/130	1.2(0-7.3)	5/140
Paid sex partner is an injecting drug user (yes)	3.3	489	0(--)	5/6	22.5(0-74.4)	2/59	4.3(0-12.1)	1/88

Table 15: Knowledge of HIV/AIDS and risk assessment

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Knowledge of HIV/AIDS	**%**	**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	99.7	2037	100 (SPSS)	357/357	99.4 (98.2-100)	276/277	100 (SPSS)	288/288
Knowledge of someone who is HIV infected, ill, or died of AIDS (yes)	50.5	2034	48.1 (39.6-55.8)	177/357	67.4(61.2-75.4)	197/276	55.4 (47.2-63.1)	177/288
One may reduce HIV risk by having one uninfected and reliable partner (yes)	98.2	2037	98.1(95.7-99.7)	352/357	99.4(98.2-100)	276/277	97.3 (93.6-100)	285/288
One can reduce HIV risk if one properly uses condoms during every sexual contact (yes)	97.7	2037	99.(97.6-100)	353/357	98.4(96.4-99.9)	273/277	97.9(94.7-100)	286/288
A healthy looking person can	92.6	2037	96.7(94.8-98.3)	334/357	92.3(84.8-96.7)	257/277	95.9(93.2-98.3)	265/288

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Knowledge of HIV/AIDS	%	N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
have HIV (yes)								
One can get HIV as a result of a mosquito bite (no)	47.9	2037	49.8(43.3-56.6)	179/357	48(39.7-55.6)	145/277	48.1(40.7-55.7)	139/288
One can get HIV by sharing meal with someone who is infected (no)	82.2	2037	83.3(77.2-88.5)	296/357	80.2(73.2-86.3)	225/277	87.9(83.4-92.8)	248/288
One may be infected with HIV by using a needle/syringe already used by someone else (yes)	99.4	2037	100(98.2-100)	356/357	99.4 (98.2-100)	276/277	100(SPSS)	288/288
One may be infected with HIV by using a shared bottle, spoon, boiling pan/glass/container, cotton/filter or water (yes)	96.8	2037	96.6(94-98.6)	344/357	95.3(90.2-99.3)	271/277	99(96.9-100)	286/288
One may be infected with HIV by using solution from the shared container which was prepared without his/her presence (yes)	97.4	2037	98.1(96.3-99.7)	351/357	95.1(88.7-99.4)	270/277	99.3(96.8-100)	287/288
Drug users may protect themselves by switching to non-injection drugs (yes)	97.4	2037	98.9(97.5-99.9)	351/357	97.7(94.6-99.4)	270/277	100(SPSS)	288/288
HIV/AIDS infected woman can transfer the virus to her fetus or baby (yes)	71.3	2037	58.9(51.8-65.3)	220/357	70.6(63.3-77)	201/277	74(67.4-80.2)	222/288

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Knowledge of HIV/AIDS	%	N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
IDUs correctly identifying ways of preventing and transmitting HIV (Answers 5 UNGASS indictor questions correctly)[26]	43.5	2037	43.8 (37.5–50.9)	156/357	43(34.3-50.4)	134/277	44.4(37.4-51.7)	127/288
≤ 24 years old	25.2	163	22.5 (3.5–46.2)	4/24	19.4 (0.0-49.4)	4/15	27.5(0-57.8)	4/16
≥ 25 years old	45.1	1874	44.6 (38.2–52)	152 /333	45.1 (36.9-53.4)	130/262	45.9(38.8-53.8)	123/272
IDUs correctly identifying ways of preventing and transmitting HIV (Answers 7 National indictor questions correctly)[27]	86.4	2037	91.4 (88–94.6)	312/357	85.2 (74.1-91.5)	245/277	93.7(90.3-96.9)	260/288
≤ 24 years old	80.4	163	84.2 (58.6–97.5)	19/24	66.1 (31.6-100)	13/15	84.5(59.8-100)	13/16
≥ 25 years old	86.9	1874	91 (87.1–94.2)	293/333	86.2 (76.8-92.5)	232/262	94(90.6-97.2)	247/272
Knows possibility of confidential HIV testing in his/her city								
Yes	61.6	2037	71.1(65.9-77.2)	257/357	71.7(65.8-78.3)	197/277	55.4(46.9-63.2)	171/288
No	38.4	2037	28.8(22.8-34.1)	100/357	28.3(21.7-34.2)	80/277	44.6(36.8-53.1)	117/288

[26] One may protect oneself from HIV/AIDS by having one uninfected and reliable sexual partner; Can reduce the HIV risk if one properly uses condoms during every sexual contact; A healthy looking person can be infected with HIV; No one can get HIV as a result of a mosquito bite; No one can get HIV by taking food or drink with an infected person.

[27] One may protect oneself from HIV/AIDS by having one uninfected and reliable sexual partner; Can reduce the HIV risk if one properly uses condoms during every sexual contact; A healthy looking person can be infected with HIV; One may be infected with HIV/AIDS by using a needle already used by someone else; One may be infected with HIV/AIDS by using bottle, spoon, boiling pan/glass, container, cotton/filter or water where might been touched needle already used by someone else; One may be infected with HIV/AIDS by taking solution from the shared container; Drug users may protect themselves from HIV/AIDS by switching to non-injection drugs.

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Knowledge of HIV/AIDS	**%**	**N**	**RDS population estimates, % (95% CI)**	**n/N**	**RDS population estimates, % (95% CI)**	**n/N**	**RDS population estimates, % (95% CI)**	**n/N**
Knows where HIV testing can be done								
Yes	52.3	2037	57.4(49.2-63.5)	195/357	49.2(41.2-57.8)	160/277	55.6(48.1-63.9)	169/288
No	47.7	2037	42.6(36.5-50.8)	162/357	50.8(42.2-58.8)	117/277	44.4(36.1-51.9)	119/288
Voluntary HIV testing								
During the last year	26	2037	23.3(17.6-29.4)	92/357	24.1(18-32.2)	83/277	20.1(13.2-25.7)	78/288
From one to two years period	6.3	2037	8.1(4.7-11.2)	31/357	6.4(3.3-9.7)	18/277	7.3(4.4-11.8)	24/288
Two years ago	25.5	2037	25.4(19.3-3.1)	94/357	36.7(27.7-44.4)	86/277	24.5(17.7-31.2)	62/288
Never been tested	41.8	2037	42.2(35.3-50.7)	139/357	30.8(23.7-38.4)	86/277	48.1(40.3-57.2)	124/288
Do not remember	0.4	2037	0.9(0-2.4)	1/357	2.1(0.5-4.3)	4/277	--	0/288
HIV testing during the last year								
Received HIV test last year and know their results	25.7	2037	24.4(18.6-30.6)	91/357	23.4 (16.8-30.8)	83/277	18.9(12.3-24.5)	76/288
≤ 24 years old	17.2	163	0 (0-0)	0/24	11.8 (0-33.7)	4/15	23.7(2.3-51.8)	4/16
≥ 25 years old	26.4	1874	24.8 (18.9-31.1)	91/333	24.6 (18.1-32.9)	79/262	18.6(12-24.2)	72/272
Informing others of HIV positive status								
Informing sex partner on HIV positive status (yes)	92.9	2037	94.9 (92.1-97.5)	337/357	96(93.2-98.6)	270/277	89.1(84-93.7)	267/288
Informing IDU partner on HIV positive status (yes)	93.4	2037	94.7(91.8-97.3)	336/357	97(94.6-99.2)	271/277	89(83.9-93.6)	268/288

Table 16: Drug treatment and social influence

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Drug treatment and HIV/AID prevention	**%**	**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 under medical treatment	0.8	2037	0.2 (0-0.7)	4/357	1(0.1-1.6)	7/277	0(0-1.1)	1/288
Used to take a medical treatment during last 12 months, but now isn't treating	5.2	2037	2.3(0.8-4.2)	14/357	13.3(8.2-19.2)	42/277	3.9(1.5-7.1)	14/288
Never been treated	73.9	2037	64.5(57.7-71.4)	221/357	63.3(54.1-70.3)	167/277	76(69.5-82.3)	217/288
Kind of medical treatment and assistance taken last 12 months								
Apply to a medical facility to get a special treatment because he/she is a drug user during last 12 months	6.2	2037	2.6 (0.8-4.5)	18/357	14.7 (9.3-20.8)	50/277	4.7(2-7.9)	18/288
≤ 24 years old	3.1	163	0 (0-0)	0/24	8.5(0-30.8)	1/15	0	0/16
≥ 25 years old	6.5	1874	2.9 (1-4.9)	18/333	15.2 (9.2-21.3)	49/262	4.9(2-8.4)	17/272
Consultations at a health centers	9.8	123	0.4(0-100)	7/18	--	0/49	0(SPSS)	0/17
Self-treatment groups	1.6	123	1.6(0-100)	1/18	--	0/49	0(SPSS)	0/17
Detoxification with Methadone	0.8	123	--	0/18	--	0/49	0(SPSS)	0/17
Substitution with Methadone	64.2	123	0(--)	7/18	100(--)	43/49	100(--)	15/17
Detoxification with other drugs	3.3	123	25.8(0-100)	2/18	--	0/49	0(SPSS)	0/17
Detoxification without drugs	19.5	123	0.2(--)	6/18	0(--)	4/49	0(--)	2/17
Psycho-social rehabilitation center	2.4	123	--	0/18	--	0/49	0(SPSS)	0/17
At home	7.3	123	97.9(0-100)	4/18	0(--)	1/49	0(SPSS)	0/17
Other	3.3	123	--	0/18	0(--)	2/49	0(SPSS)	0/17

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Drug treatment and HIV/AID prevention	**%**	**N**	**RDS population estimates, % (95% CI)**	**n/N**	**RDS population estimates, % (95% CI)**	**n/N**	**RDS population estimates, % (95% CI)**	**n/N**
Survived "extreme need" with somebody else's help last 12 months	5.4	2037	2.6 (0.9-4.4)	18/357	12.8 (7.5-19)	45/277	4.6(1.9-7.8)	17/288
≤ 24 years old	1.2	163	0 (0-0)	0/24	0	0/15	0	0/17
≥ 25 years old	5.8	1874	2.9 (1-5)	18/333	13.9 (8-20.4)	45/262	4.9(2.1-8.3)	17/272
Survived "extreme need" without anybody's help last 12 months	40.5	2037	25.8(20.5-32.5)	124/357	35.7(28.6-43.4)	113/277	33.3(26.8-39.9)	132/288
IDUs reached with prevention programs								
Aware about HIV testing possibilities and received sterile injecting equipment and condom last 12 months*	19.7	2037	11.1 (7.3-15.2)	45/357	13.2 (9.1-19)	54/277	17.6(13-23.1)	68/288
≤ 24 years old	12.9	163	0 (0-0)	0/24	5 (0-19.6)	2/15	15.9(2-39.6)	4/16
≥ 25 years old	20.3	1874	12.6 (8.7-17.4)	45/333	14 (9.7-20.1)	52/262	17.6(13-23.2)	64/272
Program minimal coverage[4]	32.4	2037	22.9 (17.5-28.6)	92/357	22.8(16.5-30.2)	85/277	29.4(23.7-36.5)	99/288
≤ 24 years old	30.1	163	7.2 (0-24.8)	1/24	11.2(0-30.6)	3/15	38.4(12.1-73.8)	7/16
≥ 25 years old	32.6	1874	24.6 (19-31)	91/333	24.2(17.7-32.2)	82/262	28.7(22.8-35.8)	92/272
Program full coverage[5]	17.1	2037	9.9 (6.6-13.8)	39/357	11.2(7.1-16.6)	48/277	14.3(10.5-19.2)	60/288
≤ 24 years old	9.8	163	0 (0-0)	0/24	4.7(0-19.2)	2/15	17 (2.4-43)	4/16
≥ 25 years old	17.8	1874	11.4(8-15.9)	39/333	11.7(7.6-17.6)	46/262	14.1(10.2-19)	56/272
Received sterile injecting equipment last 12 months	25	2037	13.2(8.8-17.6)	56/357	18.3(13-24.8)	68/277	21.5(16.4-27.5)	78/288
≤ 24 years old	17.8	163	1.4(0-11.3)	0/24	11.2(0-31)	3/15	26.9(5.2-57.9)	5/16
≥ 25 years old	25.7	1874	14.8 (10.5-20)	56/333	19.3(13.8-26)	65/262	21(15.8-27.4)	73/272

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Drug treatment and HIV/AID prevention	**%**	**N**	**RDS population estimates, % (95% CI)**	**n/N**	**RDS population estimates, % (95% CI)**	**n/N**	**RDS population estimates, % (95% CI)**	**n/N**
Received condoms last 12 months	24.2	2037	13.8 (9.6-18.2)	61/357	16.2(11.3-22.2)	64/277	18.2(13.8-23.9)	71/288
≤ 24 years old	25.8	163	7.5 (0-24.6)	1/24	11.2(0-32)	3/15	25.2(4.5-55)	6/16
≥ 25 years old	24.1	1874	15.1 (11-20.3)	60/333	17(11.9-23.5)	61/262	17.5(13-23.2)	65/272
Received brochures/pamphlets/ booklet on HIV/AIDS last 12 months	29.2	2037	22 (16.1-27.6)	86/357	21.3(15.4-28.5)	80/277	29(22.8-35.7)	99/288
≤ 24 years old	25.2	163	4.1 (0-12.8)	1/24	16.8(1.9-42.4)	4/15	42.2(11.1-74.3)	7/16
≥ 25 years old	29.6	1874	24.0 (18.4 -30.5)	85/333	21.9(15.7-29.7)	76/262	27.7(21.5-34.1)	92/272
Received qualified information on HIV/AIDS last 12 months	26.8	2037	20.5(15.6-26.2)	76/357	18.6(12.3-24.7)	75/277	21.5(16.8-27.7)	80/288
≤ 24 years old	23.3	163	7.5 (0-25)	1/24	11.1(0-30.7)	3/15	39.7(13.5-75.5)	7/16
≥ 25 year old	27.1	1874	22.2 (17.1-28.4)	75/333	19.6(13-26.1)	72/262	20.2(15.3-26.4)	73/272
Heard information about syringe exchange program	44	2037	22.1 (16.2-28)	92/357	42.5(33.8-50.9)	143/277	49.3(42.4-56.6)	150/288
Received sterile syringes from the program during the last 12 months	56.9	897	59.5(37-79.5)	56/92	47.1(35.5-59.7)	68/143	50.4(39.1-65.2)	78/150
Heard about substitution therapy program	97	2037	97.4(92.9-100)	354/357	98.6(96.7-99.9)	273/277	99.7(99.3-100)	286/288
Top two persons with major influence on continuing drug use								
No one	84.1	2037	80.8(75.7-85.8)	280/357	84.6(78.5-89.6)	237/277	83.2(77.1-88.3)	247/288
Needle partner	13.3	2037	17.8(12.9-22.8)	67/357	6.3(2.4-10.9)	11/277	11.5(7.4-16.4)	30/288
Top two persons with major influence on quitting drug use								
No one	39.2	2037	41.3(36-47.9)	121/357	30.3(22.8-37)	79/277	50.6(42.9-57.4)	130/288

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Drug treatment and HIV/AID prevention	%	N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
Friend	23.6	2037	24.5(18.7-30.7)	97/357	20.8(14.9-26.9)	58/277	22(15.7-29.2)	50/288

Table 17: Prevalence of HIV and HCV among PWIDs

	GEORGIA		TBILISI		BATUMI		ZUGDIDI	
Biomarker	%	N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
HIV								
HIV prevalence	2.2	2022	2 (0-4.6)	5/357	4.4(1.8-7.8)	13/277	4.8(0.2-11)	6/286
≤ 24 years old	0.6	162	2.5(0-12.9)	0/24	0	0/15	20(0-48.1)	1/15
≥ 25 years old	2.3	1860	2.4 (0-5.2)	5/333	4.7(1.9-8.3)	13/262	3.1(0.1-6.6)	5/271
HCV								
HCV prevalence	66.2	2024	73.7(66-80.7)	277/357	79.8(74.2-85.6)	217/277	73.3(66.1-79.5)	203/286
≤ 24 years old	11.7	162	25.8(9.4-42.5)	4/24	25.3(0-66.5)	3/15	16(0-43.8)	2/15
≥ 25 years old	70.9	1862	76.8(69.4-83.7)	273/333	84.2(78.5-89.1)	214/262	77.2(70.2-82.9)	201/271

Annex 2: Data tables (continued) - Gori, Telavi, Kutaisi, Rustavi

Table 11: Socio-Demographic Characteristics (Continued)

	GORI		TELAVI		KUTAISI		RUSTAVI	
Socio - Demographic Characteristics	RDS population estimates, % (95%	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95%	n/N	RDS population estimates, %	n/N
Age								
18 - 24	11(6.4-15.7)	29/290	14.2(9.8-20)	38/289	4.2(1.6-6.9)	12/289	16.8(10.3-23.1)	29/247
25 - 30	21.7(15.2-29.2)	62/290	23.5(16.9-29.3)	60/289	7.9(4.3-11.9)	28/289	15.9(11.2-22.7)	41/247
31 - 40	30(23.2-37.4)	103/290	26.5(20.6-34.3)	78/289	31.8(26-40.5)	93/289	24.1(18.1-33.6)	73/247
41 +	37.3(28.4-46.6)	96/290	35.9(27.6-43)	113/289	56.1(46.3-63.9)	156/289	43.2(32.2-50.8)	104/247
Mean (min - max)*	36.72(20-61)		37.22 (18- 67)		42.40 (20-68)		38.62 (18-63)	
Median*	37.00		37.00		42.00		37.00	
Gender								
Male	98.7(97.2-99.9)	285/290	97.6(95-99.5)	283/289	98(95.6-99.9)	281/289	98.7(96.2-100)	239/247
Female	1.3(0.1-2.8)	5/290	2.4(0.5-5)	6/289	2(0.1-4.4)	8/289	1.3(0-3.8)	8/247
Educational status								
None	--	0/290	--	0/289	--	0/289	--	0/247
Primary (1-4 class)	--	0/290	--	0/289	--	0/289	0.2(0-0.5)	1/247
Secondary or vocational school	67.9(60.2-75.6)	202/290	59.2(52.5-66.1)	177/289	64.1(55.8-71.8)	187/289	64.6(57.2-71.5)	153/247
Incomplete Higher	2.7(1-5)	10/290	6.2(3.2-9.7)	17/289	7(3.4-11)	14/289	3.6(1.1-6.96)	10/247
Higher	29.4(21.7-36.9)	78/290	34.5(27.6-41.5)	95/289	28.9(22.1-36.4)	88/289	31.6(24.6-39)	83/247
Ethnicity								
Georgian	93.4(89.7-96.3)	268/290	97.1(94.9-98.9)	279/289	97.5(93.5-100)	286/289	91(85.3-96.1)	225/247
Other	6.6(3.7-10.3)	22/290	2.9(1.1-5.1)	10/289	2.5(0-6.5)	3/289	9(3.9-14.7)	22/247
No response	--	0/290	--	0/289	--	0/289	--	0/247
IDP status								

	GORI		TELAVI		KUTAISI		RUSTAVI	
Socio - Demographic Characteristics	RDS population estimates, % (95%	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95%	n/N	RDS population estimates, %	n/N
Yes	2(0.7-4)	9/290	1.7(0.4-3.7)	4/289	5.7(2.3-9)	16/289	4.8(2.1-8.1)	11/247
No	97.4(95.1-99.1)	280/290	98.3(96.3-99.6)	285/289	94.3(91.1-97.7)	273/289	95.2(91.9-97.9)	236/247
No response	0.6(0-1.8)	1/290	--	0/289	--	0/289	--	0/247
Employment								
Pupil/student	0.2(0-1.2)	1/290	0.4(0-1.2)	1/289	--	0/289	0.9(0-2.3)	2/247
Have a permanent job	8.8(5.6-13.4)	26/290	18.7(12.5-25)	45/289	7.4(4.2-11.4)	23/289	7.6(3.6-11.8)	22/247
Have a temporary job	38(31-44.6)	108/290	21(15.5-27.3)	61/289	12.6(7.9-18.2)	28/289	22.8(17.1-29)	52/247
Retired/disabled	1.7(0.3-3.8)	4/290	3.2(1.1-5.9)	8/289	6.8(3.1-10.9)	12/289	2.1(0.5-4.5)	5/247
Unemployed	51.3(43.4-58.3)	151/290	56.7(49.4-63.9)	174/289	73.2(65.9-79.8)	226/289	66.6(59.5-73.7)	166/247
Monthly income (Gel)								
Less than 100 Gel	20.1(13.1-25.7)	63/290	15.8(10.4-21.6)	50/289	21.8(15.9-28.1)	95/289	11.8(7.2-16.6)	30/247
From 100 up to 300	36.2(29.1-44.6)	104/290	29.5(23.7-35.6)	92/289	37.1(29.3-44.3)	95/289	35.8(29.5-42.6)	86/247
From 300 up to 500	25.6(19.1-32.2)	71/290	23.8(18-30.5)	64/289	20.9(15.5-27.1)	52/289	29.5(23.1-36.4)	76/247
From 500 up to 700	11.4(7.8-16.3)	35/290	17.7(12-23.4)	48/289	12(7.4-17.3)	30/289	10.5(6.3-15)	25/247
From 700 up to 1000	4.7(2.1-8.1)	10/290	7.3(3.5-12.2)	20/289	5.7(2.4-9.4)	11/289	6.4(3.3-9.3)	20/247
1000 Gel and more	2.1(0.6-4)	7/290	5.9(2.1-10.3)	15/289	2.6(0.7-)5.6	6/289	5.7(2.1-10.6)	9/247
No response	--	0/290	--	0/289	--	0/289	0.3(0-1.5)	1/247
Marital status								
Married	46(37.9-54.1)	130/290	33.6(26.7-40.4)	108/289	55.6(47.5-63.2)	149/289	45.7(38.5-53.4)	112/247
Divorced/Separated	20.6(15.2-26.8)	56/290	25.8(19.4-32.8)	67/289	24.6(17-32)	65/289	19.2(13-24.8)	45/247
Widower/widow	1(0.1-2.4)	4/290	1.2(0-2.9)	3/289	1.7(0.3-3.6)	6/289	0.9(0-2.2)	3/247
Never been married	32.3(25-39.5)	100/290	39.4(32.6-46.3)	111/289	18.2(13.3-24.5)	69/289	34.1(27.4-41.8)	87/247
Living arrangements								
With spouse	45.1(36.7-53)	127/290	34.1(27.3-41.1)	105/289	56.1(47.4-63.2)	149/289	44.3(36.7-51.8)	111/247
With partner	0.3(0-0.9)	1/290	1.1(0-2.7)	3/289	1.8(0-4)	3/289	2.2(0.5-4.5)	4/247

	GORI		TELAVI		KUTAISI		RUSTAVI	
Socio - Demographic 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
Single	15.8(10.5-21.3)	40/290	15.1(9.7-21)	42/289	13.8(8.1-20.8)	33/289	8.9(5.2-13.3)	26/247
Live with relative/parents	38(30.3-46)	119/290	49.2(42.6-56.4)	135/289	28.3(22.1-36.7)	104/289	42.4(35.1-49.9)	103/247
Other	--	0/290	0.3(0-1.4)	1/289	--	0/289	1.2(0-3.3)	2/247
Refused to answer	0.8(0-2.8)	3/290	0.2(0-0.4)	3/289	--	0/289	0.9(0-2.8)	1/247
Police and prison experience last 12 months								
Infringement of the law due to drug use during last 12 months	11.3 (7.5-15.8)	39/290	15.6(11-20.8)	53/289	19.7(13.6-26.7)	56/289	20.7 (14.7-27.3)	54/247
≤ 24 years old	21.4 (5.4-42.7)	6/29	27.1(10.6-44.9)	11/38	15.2(0-44)	3/12	15.3 (4.9-32.7)	7/29
≥ 25 years old	9.5 (5.9-13.9)	33/261	13.7(9.1-19.4)	42/251	20.4(14.2-27.5)	53/277	22.4 (15.8-29.8)	47/218
Detained in administrative sentence	9(5.8-13.4)	30/290	11.7(7.5-16.3)	41/289	14.1(8.9-20.2)	46/289	13.9(8.6-19.9)	38/247
Imprisoned before trial	5.2(2.6-8.5)	24/290	8.8(4.9-13.2)	27/289	11.8(6.7-18.4)	27/289	7.9(4.2-11.9)	21/247
Imprisoned	11(0.1-2.6)	5/290	4.7(1.7-8.6)	11/289	1.9(0.2-4.2)	6/289	6.7(3.1-10.8)	18/247
Alcohol consumption during the last month								
Every day	2.7(1.3-5.6)	10/290	5.8(2.9-8.9)	20/289	4.8(1.8-8.2)	13/289	2.3(0.9-4)	10/247
More than once a week	27.1(19.4-34.6)	76/290	27(19.7-34.1)	82/289	25.9(20.4-33.2)	97/289	28.1(21.2-35.2)	72/247
Once a week	14.7(9.6-19.3)	55/290	12.3(7.6-18)	37/289	16.3(9.9-22.8)	46/289	9.6(5.5-13.9)	30/247
Less than once a week	36.8(29.6-44.6)	91/290	29.8(22.5-37.1)	82/289	34.3(26.1-41.2)	81/289	42.3(35-50.1)	91/247
Never	18.3(13-24.2)	56/290	25.2(19.3-32.1)	68/289	18.7(13.6-25.3)	52/289	17.7(11.8-24.2)	44/247
Refused to answer	0.4(0-1.7)	2/290	--	0/289	--	0/289S	--	0/247

Table 12: Drug use history (Continued)

	GORI		TELAVI		KUTAISI		RUSTAVI	
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
Age when first used drugs								
<15	18.5(13.4-25.2)	57/290	14.7(11-19.4)	48/289	20.9(14.6-26.8)	55/289	21.3(15.3-27.8)	51/247
15 – 19	60.1(52.2-67.8)	180/290	66.4(59.5-72)	196/289	64.9(58.1-72.7)	204/289	62.5(55.1-69.9)	160/247
20 – 24	16.9(11.1-22.2)	44/290	13.2(8.4-18.5)	34/289	10.3(5.7-16.3)	24/289	11.3(5.8-16.9)	25/247
25+	4.5(1.3-8.8)	9/290	5.7(2.5-10.1)	11/289	3.9(0.5-7.6)	6/289	5(1.9-9.7)	11/247
Mean (min - max)*	16.81(10-30)		17.10 (12-35)		16.54 (12-30)		16.82 (12-35)	
Median*	16.00		16.00		16.00		16.00	
Age when first injected drugs								
<15	2.4(0.7-4.7)	7/290	1.3(0.1-2.9)	4/289	3.9(1.1-7.2)	10/289	3.4(0.5-8)	5/247
15 - 19	42(35.5-49.3)	135/290	42.6(35.5-49.8)	134/289	47.6(39.6-54.9)	143/289	42.2(34.3-49.9)	112/247
20 - 24	39(31.7-46.4)	110/290	36.7(30.1-44)	96/289	31.7(25.2-38.6)	96/289	37.6(30.7-44.4)	89/247
25+	16.6(10.6-22.5)	38/290	19.3(13.6-25.2)	55/289	16.8(10.6-24.5)	40/289	16.8(113.8-22.4)	41/247
Mean (min - max)*	19.98(13-35)		21.04 (13-45)		19.94 (13-45)		20.88(12-42)	
Median*	20.00		20.00		19.00		20.00	
Duration of injecting drugs from first injection in years								
Mean (min - max)*	16.74(0-44)		16.18 (0-48)		22.46 (1-51)		17.74 (1-47)	
Median*	17.00		16.00		23.00		16.00	
Thinks he/she is addicted to drug								
I'm addicted	81.4(74.6-87.2)	248/290	76.4(70.2-81.8)	230/289	94.8(90.7-98.1)	279/289	88.4(82.6-93.1)	223/247
I'm not addicted/don't think I'm depending	18.6(12.8-25.4)	42/290	23.6(18.2-29.8)	59/289	5.2(1.9-9.3)	10/289	11.6(63.9-17.4)	24/247
Duration of drug addiction in years								
Mean (min - max)*	13.17(1-40)		14.47 (1-45)		17.59(1-42)		14.51(1-40)	
Median*	11.50		15.00		17.00		12.00	

Table 13: Drug use risk behavior (Continued)

	GORI		TELAVI		KUTAISI		RUSTAVI	
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
Frequency of injecting drug use last month								
Once a month	15.8(7.8-20.3)	23/290	29.5(23.4-36.9)	72/289	18.6(12.8-25.5)	31/289	23.6(15.9-32)	43/247
Several times a month	60.1(52.8-68.9)	169/290	50.5(43.6-56.4)	160/289	57.1(48.4-64.5)	177/289	52.4(44.9-60.4)	124/247
Once a week	2.9(1.3-5)	15/290	5.6(2-8.8)	12/289	4.2(1.7-7.2)	20/289	9(4.9-13.2)	24/247
Several times a week	21.1(16.6-28.2)	81/290	13.2(8.7-19.6)	42/289	16.4(11.6-22.7)	52/289	14.1(9.2-19.4)	50/247
Once a day	--	0/290	0.1(0-0.5)	1/289	0.1(0-0.2)	1/289	0.3(0-0.8)	2/247
Several times a day	0.1(0-0.2)	2/290	1.1(0-2.9)	2/289	3.7(1-6.6)	8/289	0.6(0-15)	4/247
Member of regular injecting group								
Yes	57.1(49.4-64.4)	157/290	67(59.9-73.3)	185/289	49.9(42-58.2)	143/289	60.2(52.5-67.1)	148/247
Mean # of injecting group members*	3.72(1-15)		3.71 (1-10)		3.74 (1-10)		3.61 (1-15)	
Consumed drugs last month (drug groups)								
CNS depressants	63.5(51.2-73.1)	123/209	70.2(58.9-78.7)	141/215	59.2(44.1-71.5)	119/186	63(50.6-74)	110/176
CNS stimulant	1.3(0-6.6)	2/209	2.2(0-5.3)	5/215	0.4(0-7.8)	2/186	0(--)	1/176
Narcotic analgetics	2.4(0.4-2.7)	12/209	4.8(0.9-9.1)	14/215	14.9(7.1-24.4)	22/186	4.5(1.3-9.3)	8/176
Hallucinogens	64.6(54.3-75.4)	145/209	5.1(40.6-63.5)	122/215	58.5(48.2-72.3)	113/186	64.3(54-76.2)	115/176
New psychoactive substances	5.4(2.2-9.7)	18/209	5.9(1.7-9.6)	12/215	9.5(2.5-15.5)	14/186	16.7(9-25.9)	32/176
Other psychoactive substances	0.5(0-1.3)	2/209	6.8(3.2-12.1)	12/215	0.5(0-1.8)	1/186	0.9(0-1.8)	3/176
Combination	0.6(0-4.6)	2/209	0.2(0-0.5)	1/215	--	0/186	1.6(0.2-3.6)	4/176
Mean # of drugs used*	1.44(1-4)		1.42 (1-4)		1.46 (1-4)		1.53 (1-4)	
Injected drugs last month (drug groups)								
CNS depressants	8.8(5.2-13.2)	33/290	4.5(2.1-7.1)	22/289	4.3(2-7.2)	19/289	2.4(0.6-4.7)	7/247

	GORI		TELAVI		KUTAISI		RUSTAVI	
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
CNS stimulant	11.5(6.7-16.9)	34/290	4.6(2.3-7.1)	18/289	11.8(7.4-17)	29/289	18.9(11.7-25.8)	39/247
Narcotic analgetics	91.8(87-96.2)	272/290	93.6(89.5-97.2)	274/289	91.2(86.6-95.4)	271/289	84(78-91.1)	219/247
New psychoactive substances	--	0/290	--	0/289	--	0/289	--	0/247
Other psychoactive substances	7.1(3.8-9.63)	14/290	5.3(2.1-9.3)	19/289	5.2(1.9-9.3)	9/289	6.7(2.8-11.1)	16/247
Combination	1.1(0.28)	4/290	1.6(0.3-3.2)	11/289	3(1.2-5.4)	16/289	0.7(0-1.6)	4/247
Mean # of drugs injected	1.22(1-4)		1.15(1-4)		1.13 (1-3)		1.14(1-2)	
Injected drugs last month (selected drugs)								
Heroin	58(50.1-65.1)	177/290	58.6(50.6-66.3)	161/289	64.8(57.3-72.1)	195/289	45.1(38.3-52.6)	129/247
Buprenorphine (Subutex, Suboxon)	13.4(8.8-19.3)	50/290	17.5(11.9-23.1)	59/289	25.1(18.4-31.4)	85/289	21(14.8-27.5)	51/247
Ephedrone (Vint)	7.4(2.9-12.6)	20/290	2.6(0.9-4.7)	9/289	8.8(4.7-13.6)	22/289	14(8.4-20.3)	33/247
Metamphetamine (Jef)	3.2(1.1-5.8)	11/290	0.7(0-1.9)	3/289	1(0-2.7)	3/289	3.4(0.6-7.4)	5/247
Morphine	14.1(8.7-20.5)	36/290	3.3(1.3-5.7)	12/289	3.9(1.2-7.8)	15/289	4.4(1.3-8.3)	10/247
Desomorphine	12.4(6.7-18.2)	44/290	20.6(14.7-26.7)	64/289	14.8(9.9-19.4)	46/289	21.7(14.7-29.2)	56/247
Injecting frequency of narcotic analgetics during last 12 months								
One month and more	13.7(9.4-19.2)	57/272	7.9(3.8-15)	24/274	20.4(14.2-27.4)	61/271	10.2(5.8-16.5)	26/219
More than one week and several times in the year	14.5(9.2-18.7)	59/272	17.1(11.7-24)	65/274	13(8.8-18.1)	68/271	14.9(9.7-18.9)	45/219
Withdrawals caused by easing narcotic analgetics usage or dosage reduction								
I haven't stopped	--	0/116	--	0/89	0(--)	1/129	0.9(0-44.3)	1/71
yes	80(61.5-93.4)	/116	100(--)	88/89	97.6(95.5-100)	122/129	77.7(19.3-98.2)	63/71
no	20(6.6-38.5)	/116	0(--)	1/89	2.4(0-4.5)	6/129	21.4(0-48.4)	7/71
Ever shared used								

	GORI		TELAVI		KUTAISI		RUSTAVI	
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
needle/syringe/other injecting equipment								
Yes	60(52.3-67.8)	179/290	56.3(48.9-63.3)	164/289	61.7(54.2-68.8)	184/289	51.8 (44.7-59.1)	123/247
No	38.6(31-46.2)	109/290	41.6 (34.5-49.1)	121/289	35.9 (28.8-43.4)	96/289	41.6 (33.7-49.1)	116/247
Don't know	1.3(0-4.1)	2/290	2.1 (0.1-4.6)	4/289	2.4 (0.6-4.7)	9/289	6.6 (1.8-13.7)	8/247
Used sterile needle/syringe/ other injecting equipment at last injection								
Yes	88.4 (83.2-92.9)	247/290	89.8(85.7-94)	259/289	90.5(86.96-94)	243/289	94.3 (91.1-97.3)	228/247
No	11.6(7.1-16.8)	43/290	10.2(6-14.3)	30/289	9.5(6-13.1)	46/289	5.7(2.7-8.9)	19/247
Used previously used by others needle/syringe/ other injecting equipment at last injection								
Yes	4.8(1.4-9)	11/290	3.3 (1.6-5.4)	14/289	2.2 (0.5-3.9)	7/289	1.2 (0-2.9)	3/247
No	93.6(89.2-97.5)	275/290	95 (91.3-97.7)	272/289	97.6 (95.1- 99.3)	280/289	98.2 (96.3-99.8)	242/247
Don't know	1.6(0.2-3.7)	4/290	1.7 (0-4.5)	3/289	0.2(0-2.1)	2/289	0.6 (0-1.6)	2/247
Used previously used by him/herself needle/syringe/ other injecting equipment at last injection								
Yes	5.8(3.4-10)	30/290	6.3 (2.9-10.2)	15/289	7.9 (4.9-11.6)	39/289	4.3 (1.9-7.2)	15/247
No	93.7(89.4-96.2)	258/290	93.7 (89.8-97.1)	274/289	92.1 (88.4-95.1)	250/289	94.7 (91.6-97.4)	230/247
Don't know	0.5(0-1.4)	2/290	--	0/289	--	0/289	0.9(0-2.5)	2/247
Used needle/syringe / other injecting equipment left at a place of gathering by somebody else at last injection								
Yes	2.4(0.8-4.7	9/290	5.2 (1.9-11.1)	9/289	1.3 (0.1-2.9)	4/289	1.8 (0.1-4.9)	4 /247
No	95(91.8-97.8)	274/290	91 (81.9-96.9)	279/289	98.3 (96.1-99.5)	281/289	96.3 (92.5-99.1)	241/247
Don't know	0.3(0-1.1)	1/290	3.8 (0.7-8.1)	1/289	0.2 (0-1.6)	2/289	1.8(0.4-3.6)	2 /247

	GORI		TELAVI		KUTAISI		RUSTAVI	
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
No Response	2.2(0.2-4.7)	6/290	--	0/289	0.2(0-0.5)	2/289	--	--
Used pre - filled syringe at last injection								
Yes	1.1(0.2-2.3)	6/290	--	0/289	--	0/289	--	--
No	97.6(95.4-99.2)	281/290	98.5 (95.6-100)	288/289	99.2 (98-99.9)	284/289	98.7 (95.1-100)	245/247
Don't know	1.4(0-3.2)	3/290	1.5 (0-4.4)	1/289	0.8 (0.1-2)	5/289	1.3 (0-4.9)	2 /247
Used shared bottle, spoon, boiling pan/ glass/ container, cotton/filter or water at last injection								
Yes	4(1.7-6.7)	26/290	5.1 (2.5-8.7)	16/289	2.1 (0.1-5.2)	4/289	12.9 (8-17.8)	34/247
No	95.2(92.1-97.7)	260/290	90.7 (85.7-94.7)	264/289	97 (93-99.3)	280/289	82.4 (75.4-88.9)	205/247
Don't know	0.8(0-2.5)	4/290	4.2 (1.4-8)	9/289	0.9 (0.3-2.5)	5/289	4.7 (1.4-9.2)	8/247
Used solution from the shared container at last injection								
Yes	9.9(5.2-14.9)	29/290	17.3 (12.1-23.1)	48/289	4.1 (1.6-7.2)	12/289	9.6 (6.1-13.5)	27/247
No	89.5(84.5-94.3)	260/290	82.7(76.9-87.9)	241/289	95.9(92.8-98.4)	277/289	89.5 (84.4-93.3)	218/247
Don't know	0.6(0-1.8)	1/290	--	0/289	--	0/289	0.9 (0-3.5)	2/247
Safe injecting practice at last injection								
IDUs with safe injection practice at last injection[28]	77.8 (71.3-84.1)	212/290	69.4(63.1-76.1)	201/289	86.5(82.2-90.8)	230/289	75.4 (68.3-82.3)	178/247

[28] No usage of needle/syringe previously used by somebody else or him/herself, no usage of needle/syringe left at a place of gathering, not usage of syringe prefilled by somebody else without his presence, not usage of syringe filled from previously used syringe, no usage of possibly contaminated shared equipment (container, cotton, filter, water), no usage of drug solution from shared container prepared without his/her presence.

	GORI		TELAVI		KUTAISI		RUSTAVI	
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
≤ 24 years old	78.1 (57.8-94.2)	21/29	46.7(28.8-64.7)	18/38	87.7(60.2-100)	9/12	74 (60.2-90.8)	18/29
≥ 25 years old	77.7 (70-84.3)	191/261	72.3(65.7-79.6)	183/251	85.7(80.2-89.9)	221/277	74.3 (67-82.7)	160/218
IDUs with safe injection practice at last injection_2 (excludes self-used syringe use)[29]	81(74.9-87)	265/290	73.7(67.1-80)	210/289	93.3(90-96.3)	264/289	76.1(68.7-83)	183/247
≤ 24 years old	77.5(57-94.5)	21/29	52.9(35-70.8)	20/38	89(64.4-100)	10/12	75.1(58.3-91.1)	19/29
≥ 25 years old	81.4(74.3-87.7)	204/261	76.7(70.1-83.2)	190/251	93.8(90.3-96.8)	254/277	75(67.4-83.3)	164/218
Last month sterile injecting equipment use								
Never used previously used injecting equipment by others or him/herself	23.8(17.9-30.7)	65/290	25(18.9-31.8)	73/219	11.3(7.1-15.7)	32/289	28.8(22.9-35)	66/247
Never used injecting equipment used by others	86.2(80.1-90.1)	227/290	87.9 (82.8-92.8)	254/289	82.7 (76-88.7)	224/289	90.9 (85.8-95.2)	224/247
Never used injecting equipment used by him/herself	23.8(17.5-30.3)	65/290	26.3 (20.9-33.7)	74/289	11.8 (7.8-16.6)	32/289	28.3 (22.6-34.4)	66/247
Last month injecting equipment shared with								
Regular sexual partner	--	0/63	--	0/35	--	0/65	--	0/23
Sex partner who you didn't know before	3.8(0-50)	1/63	--	0/35	--	0/65	--	0/23

[29] No usage of needle/syringe previously used by somebody else, no usage of needle/syringe left at a place of gathering, no usage of syringe prefilled by somebody else without his presence, no usage of shared equipment, no usage of drug solution from shared container prepared without his/her presence.

	GORI		TELAVI		KUTAISI		RUSTAVI	
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
Drug related friend	34.5(0-65)	16/63	0(0-0)	11/35	9.2(0-31.5)	6/65	0(--)	3/23
Drug trafficker	--	0/63	--	0/35	--	0/65	--	0/23
Stranger	7.5(0-49.6)	1/63	--	0/35	8.5(0-30.8)	2/65	--	0/23
Friend	3.85(0-15.5)	7/63	0(0-0)	1/35	--	0/65	0(--)	3/23
Number of injecting partners last month								
Mean # of needle sharing partners among all*[30]	0.66 (0-10)	119	0.37(0-6)	106	0.18(0-3)	92	0.14(0-4)	85
Mean # of needle sharing partners among those who shared last month*	1.44(0-10)	54	1.18(0-6)	33	0.28 (0-3)	60	0.63(0-4)	19
Cleaning the needle/syringe before usage								
Always	16.8(11-23.9)	55/225	17.2 (9.3-29.5)	35/216	16.3 (9-21.7)	60/257	5.7 (2.7-10.5)	19/181
Almost always	1.1(0-3.3)	2/225	0.6 (0-2.6)	1/216	1 (0-3.3)	1/257	--	0/181
Sometimes	1.5(0.1-2.8)	4/225	--	0/216	1 (0-2.8)	4/257	--	0/181
Once	1(0-3.9)	1/225	1.3 (0-5)	3/216	--	0/257	--	0/181
Never	7.6(1.9-14.5)	8/225	2.5 (0.1-6.8)	7/216	1.6 (0-3.7)	4/257	2.7 (0-6.1)	7/181
Don't know	--	0/225	0.2 (0-2.7)	1/216	--	0/257	--	0/181
No Response	72.1(61.8-81.4)	155/225	78.2 (63.8-86.1)	169/216	80.1 (74.3-88.3)	188/257	91.6 (85.6-95.9)	155/181
Methods used to clean the used								

[30] Don't know and no response regarded as missing cases and not included in the analysis.

	GORI		TELAVI		KUTAISI		RUSTAVI	
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
needle/syringe								
Water (boiled and non - boiled)	100(--)	56/62	90.9 (76.6-100)	32/39	100 (--)	62/65	100(SPSS)	19/19
Disinfecting solution and chlorine	--	0/62	0	1/39	--	0/65	--	0/19
Boiling the needles/syringes	0(0-0)	2/62	--	0/39	--	0/65	--	0/19
Other	0(--)	6/62	37.8 (13.5-75.3)	11/39	0(--)	4/65	0(--)	1/19
Frequency of giving the used needle/ syringe to others last month								
Always	0.2(0-2)	1/290	0	0/289	--	0/289	--	0/247
Almost always	0.3(0-2.1)	1/290	0	0/289	0.8(0-4.1)	1/289	1.8(0-4.8)	2/247
Sometimes	2.7(1.1-5)	14/290	3.7 (1.4-7.5)	10/289	2.3(0.4-3.5)	6/289	2.7(0.3-5.9)	3/247
Once	4.7(2.2-7.7)	18/290	5.8 (3-8.6)	17/289	3.8 (0.8-7.7)	4/289	2.3 (0.9-4)	7/247
Never	91.2(85.2-94.8)	255/290	90.2 (85.3-9.4)	261/289	93 (86.8-97.9)	278/289	91.4 (83.9-96.7)	233/247
Don't know	0.8(0-2.7)	1/290	0.4 (0-1.2)	1/289	--	0/289	1.9 (0-4.9)	2/247
Getting of new and unused needle/syringe when needed								
Yes	96.3(93.3-98.4)	275/290	97.9 (95.2-99.8)	285/289	95.4 (91.6-98.5)	279/289	97 (91.8-99.4)	242/247
Place to get/buy new (unused) needle/syringe								
Drug store	85.2(79.2-90.9)	232/275	91.3 (87.2-94.8)	260/285	98.2 (96.2-99.5)	268/279	91.6 (87.4-95.8)	218/242
Shop	--	0/275	--	0/285	--	0/279	--	0/242
Hospital	4(0-8.7)	2/275	--	0/285	0.1(0-0.5)	3/279	1.4(0-3.4)	3/242
Family/Relatives	5.9(2.7-9.6)	14/275	1.9 (0.2-4.4)	8/285	3.3 (1.1-6.1)	11/279	3 (0.8-5.8)	7/242
Sex partner	--	0/275	1 (0-3.6)	1/285	--	0/279	0.8(0-2.3)	2/242
Friends	10.1(5.3-16.7)	25/275	11.5 (7.5-16.1)	35/285	4.3 (1.6-7.9)	11/279	7.8 (4.7-11.6)	19/242
Other injection drug user	28.4(21.3-36)	87/275	2.2 (16.1-2.9)	73/285	16.6 (12-23.2)	63/279	19.3 (13.9-25.4)	47/242

	GORI		TELAVI		KUTAISI		RUSTAVI	
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
Drug trafficker	0.8(0.1-1.9)	4/275	1.9 (0.3-3.9)	4/285	0.3 (0-0.9)	3/279	3.2 (0-7.5)	3/242
Syringe exchange program	37.1(29.1-46)	116/275	17.5 (12.2-23.5)	62/285	12.5 (0.78-18.5)	44/279	24.9 (18.1-31.9)	62/242
Other	4.4(0.2-9.6)	5/275	0.9(0-2.4)	2/285	0.8(0-2.4)	3/279	4.5(2-7.7)	17/242
Injected in other locations in last 12 months								
Other cities in Georgia	38.6(30.3-46.7)	135/290	66.4 (59.1-72.5)	192/289	53.7 (45.6-61.1)	166/289	48.8 (41-55.8)	133/247
Other countries outside of Georgia	49.1(42-58)	159/290	43.9(36.7-51.3)	113/289	44.3(36.1-53)	130/289	26.4(20.1-33.1)	64/247
Used shared injecting equipment in other locations								
Other cities in Georgia	6(1-14.3)	12/135	6.2(2.5-12.5)	14/192	0(--)	1/166	3.9(0-17.2)	3/133
Other countries outside of Georgia	16.8(8.3-24.2)	33/159	12.1(3.8-25.9)	16/113	11.1(2.5-21.5)	15/173	13.1(0-29.5)	8/64
Other locations (cities or counties)	14.2(8.3-20.4)	40/224	10.6(6.4-16.8)	24/230	7.5(3.1-13.5)	15/218	7.3(2.5-11.5)	11/174
Both (cities and counties)	4.6(1.9-9.3)	14/224	5.7(2.7-10.3)	14/230	0.2(0-0.9)	3/218	5.7(0.3-15.1)	5/174
Overdoses experience last year								
Yes	8.5(5.3-12.6)	37/290	6.6(3.1-11.2)	20/289	11.8(6.4-17)	34/289	5.6(2.9-8.8)	19/247
Usual place of gathering to take drugs								
(flat)	79.7(73.4-85.8)	231/290	80.4(74.4-86.4)	238/290	86.1(80.3-92.2)	257/289	72.2(65.1-79.4)	186/247
Method of throwing away used needle								
(garbage bin)	56.4(49.3-63.8)	155/290	57.8 (51.4-64.4)	152/289	63.9 (56.2-71.4)	158/289	60.4 (52-67.5)	143/247

Table 14: Sexual behavior (Continued)

	GORI		TELAVI		KUTAISI		RUSTAVI	
Sexual history	RDS population estimates, % (95%	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95%	n/N	RDS population estimates, % (95%	n/N
Sexual behavior								
Median age at first sexual contact*	16.00	286	16.00	289	16.00	288	16.00	246
Had sex in the last 12 months	92.6(88.4-96.1)	273/290	93.1(88.8-96.6)	270/289	87.4(81.5-92.6)	261/289	88.5(82.9-93.7)	227/247
Condom use at last intercourse								
Used condom at last intercourse	38.7 (31.4-47.6)	105/273	45.9(38.3-54.5)	120/270	30.9(22.8-37.5)	87/261	35.6 (28.1-44.6)	72/227
≤ 24 years old	44.6 (22.9-70.5)	12/29	75.6(57.4-90.2)	28/37	43.8(8.8-81.3)	7/12	67.2 (44.4-88.9)	21/29
≥ 25 years old	38.6 (30.1-47.1)	93/244	40.8(33.4-49.8)	141/233	31.5(23.9-38.5)	80/249	29.7(21.9-38.9)	51/198
Regular sex partner last 12 months								
Had regular sex partner	81.4(75.4-86.6)	236/290	71.9(65.6-78.1)	210/289	73(64.4-79.7)	216/289	77.5(71.2-83.9)	197/247
Mean (min – max)	1.35 (1-5)	236	1.29 (1-5)	210	1.26 (1-4)	216	1.44 (1-5)	197
Median	1.00		1.00		1.00		1.00	
Used condom at last intercourse	24.5 (16.2-32.7)	61/236	34.5(24.2-43.1)	60/210	23.3(14.9-30.1)	46/216	28.3 (22.4-39.3)	49/197
≤ 24 years old	16.9 (0-41.5)	7/24	53.4(24.6-85.5)	11/25	14.6(0-71.6)	2/8	100(100-100)	9/18
≥ 25 years old	26.3 (17-34.6)	54/212	32.7(22.3-41.6)	49/185	23.6(14.9-30.4)	44/208	29.1(50-50)	40/179
Occasional sex partner(s) last 12 months								
Had occasional sex partner last year	41.6(33.9-50.1)	137/290	53.9(46-61.5)	163/289	36.1(28.9-44.2)	120/289	46.1(35-48.3)	115/247
Mean (min – max)*	4.88 (1-35)	137	5.95 (1-35)	163	4.64 (1-35)	119	4.9 (1-30)	115
Median*	3.00		3.00		3.00		3.00	
Used condom at last intercourse	60.9 (50.2-79.1)	85/137	67.2(56.1-79.5)	100/163	39.6(23.2-62)	63/120	42.1(20.6-54.7)	56/115
≤ 24 years old	69.5 (10.7-100)	11/18	70.3(44-87.7)	21/31	100(50-100)	7/9	71(16.3-100)	14/19
≥ 25 years old	59.1 (45.8-78.6)	74/119	65.6(52.3-81.6)	79/132	37.2(23.8-61)	56/111	44.2(14.7-58.1)	42/96

Paid sex partner(s) last 12 months								
Had paid sex partner last year	20.2(15.2-25.7)	77/290	29.3(22.9-36.5)	91/289	17.5(12.3-23.2)	65/289	16.6(11.7-22.3)	43/247
Mean (min – max)*	4.6(1-50)	77	6.51 (1-39)	91	3.6 (1-15)	65	4.63 (1-30)	43
Median*	2.00		4.00		3.00		3.00	
Used condom at last intercourse	88.2 (73.9-98.6)	68/77	88.5(77.5-100)	79/91	100(--)	53/65	100(--)	40/43
≤ 24 years old	100 (50-100)	10/11	91.9(65.2-100)	20/22	95.(50-50)	3/4	79.5(31.5-100)	11/11
≥ 25 years old	85.4 (70.6-98.5)	58/66	70.7(0-100)	59/69	0(0-0)	50/51	90.7(40-100)	29/32
Married IDUs paid/occasional sex partners last 12 months								
Had occasional sex partners last year	39.5(24.5-56.8)	58/130	54.1(30.6-73.6)	51/108	26.6(15.1-35.4)	48/149	30.6(16.8-41.5)	39/112
Had paid sex partners last year	22.3(15.6-39.7)	30/130	19.8(7.3-29.1)	21/108	11.1(5.9-20.2)	28/149	10.5(2.4-18.9)	10/112
Man had male sex partner								
Ever had male sex partner	0.5(0-1.6)	2/285	1.5 (0.2-3.2)	4/283	6.9(3.1-11.1)	14/281	1.7(0-4.6)	3/239
Had male sex partner last year	0.2(0-3)	1/285	0.5 (0-1.7)	1/283	1.2(0-3.6)	2/281	1.1(0-4.3)	1/239
Used condom with male partners at last intercourse	100	1/1	100	1/1	100	2/2	100	1/1
Reasons for not using condom at last intercourse with occasional partner								
Don't like it	92(--)	10/52	56.1(22.6-80.8)	26/63	0(--)	18/56	52.5(10.7-87.9)	27/59
Didn't think necessary	100(--)	32/52	38.5(25.8-64.3)	29/63	56.3(26.4-94.3)	28/56	24.4(11.3-66.7)	33/59
Frequency of using condom with regular partner last year								
Always	9.4(4.9-14.5)	26/236	15(7.7-19.4)	23/210	10.2(4.5-14.9)	19/216	13(7.5-22.6)	26/197
Never	59.6(50.7-67.9)	142/236	50.9(42.8-63.1)	124/210	60.5(52.8-70.6)	138/216	61.4(49.5-67.4)	122/197
Frequency of using condom with occasional partner last year								
Always	42.4(27.6-57.9)	52/137	40.5(28.4-55.8)	69/163	20.8(7.5-36.5)	43/120	23.9(8-31.7)	42/115
Never	11.7(1.8-16.2)	16/137	15.7(6.6-28.4)	31/163	30.4(10.8-50.9)	27/120	37.7(37.2-61.6)	34/115

Frequency of using condom with paid for sex partner last year								
Always	59(0-98.2)	55/77	59.1(34.3-82.4)	67/91	63(0-100)	50/65	100(--)	37/43
Never	1.4(0-38.1)	2/77	12.3(0-21.7)	5/91	4.2(0-33.9)	3/65	0(0-0)	2/43
Anal sex last 12 months								
Anal intercourse with any sexual partner last 12 months (yes)	6.4(3.8-10.2)	26/290	2.9(1-5.2)	9/289	8(4.2-12.2)	21/289	7.2(3.9-11)	21/247
Condom use during anal intercourse (yes)	66.8(--)	14/26	2.9(1-5.2)	2/9	21.4(0-55.5)	12/21	100(100-100)	17/21
Sex partner is IDU								
Regular sex partner is an injecting drug user (yes)	1.1(0-2.8)	3/236	3.9(0.6-7.1)	11/210	3.1(0.3-6.8)	7/216	6.7(2.8-11.5)	14/197
Occasional sex partner is an injecting drug user (yes)	1(0-3.2)	11/137	5.6(0.6-11.3)	6/163	7.2(0-14.1)	5/120	7.1(0.7-25.2)	7/115
Paid sex partner is an injecting drug user	0(--)	3/77	3.7(0-16.5)	2/91	2.5(0-41.2)	1/65	0(--)	2/43

Table 15: Knowledge of HIV/AIDS (Continued)

	GORI		TELAVI		KUTAISI		RUSTAVI	
Knowledge of HIV/AIDS	RDS population estimates, % (95%	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95%	n/N	RDS population estimates, % (95%	n/N
HIV/AIDS awareness								
Yes	100 (SPSS)	290	99.2(97.9-100)	287/289	100 (SPSS)	289/289	100 (SPSS)	247/247
Knowledge of someone who is HIV infected, ill, or died of AIDS (yes)	43.2(36.5-52.1)	148/290	28.5(22.2-35.2)	98/287	41.3(33.7-48.5)	152/289	26.7(19.9-33)	78/247
One may reduce HIV risk by having one uninfected and reliable partner (yes)	99.5(95.1-100)	287/290	95.2(92-98)	275/289	98.9(97.2-100)	286/289	97(94-99.3)	240/247
One can reduce HIV risk if one properly uses condoms during every sexual contact (yes)	99.3(98.2-100)	287/290	95.8(92.9-98.4)	276/289	93.5(88.5-97.4)	278/289	94.8(90.1-98.3)	238/247
A healthy looking person can have HIV (yes)	94.9(91.5-98.7)	282/290	88.5(82.7-93.3)	256/289	95.7(92.3-97.8)	265/289	92.8(88.7-96.3)	227/247
One can get HIV as a result of a mosquito bite (no)	55.7(46-63.5)	172/290	36.4(28.8-44.3)	110/289	50(43.8-58.6)	134/289	37.1(29.8-45)	97/247
One can get HIV by sharing meal with someone who is infected (no)	86.9(81.9-92)	253/290	72(65.1-78.7)	203/289	89.7(84.7-93.7)	257/289	76.7(70.7-82.2)	192/247
One may be infected with HIV by using a needle/syringe already used by someone else (yes)	99.7(98.6-100)	289/290	98.5(96.7-99.9)	283/289	100(SPSS)	289/289	98.6(96.7-100)	244/247
One may be infected with HIV by using a shared bottle, spoon, boiling pan/glass/container, cotton/filter or water (yes)	98.1(95.9-99.6)	279/290	92.8(88-96.4)	269/289	99.5(98.6-100)	287/289	94.8(91.7-97.6)	235/247
One may be infected with HIV by using solution from the shared container which was prepared	97.9(96-99.3)	280/290	96.3(93.1-98.6)	276/289	99.2(96.5-100)	288/289	94.1(90.4-97.1)	232/247

	GORI		TELAVI		KUTAISI		RUSTAVI	
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
without his/her presence (yes)								
Drug users may protect themselves by switching to non-injection drugs (yes)	95.8(91.9-99.2)	278/290	94.2(90.1-97.8)	276/289	99.1(97.8-100)	286/289	94.9(91.5-97.7)	235/247
HIV/AIDS infected woman can transfer the virus to her fetus or baby (yes)	66.7(59.1-74.6)	197/290	73.3(67.1-79.9)	215/289	73.1(64.3-78)	207/289	77.2(69.6-83.2)	191/247
IDUs correctly identifying ways of preventing and transmitting HIV (Answers 5 UNGASS indictor questions correctly)[31]	52.4 (43.8-60.3)	158/290	31.9(24.4-39.9)	96/289	46.7(40-55.1)	122/289	35.6(28.5-43.6)	93/247
≤ 24 years old	53 (29.4-69.3)	12/29	13.7(2.5-28)	6/38	46.8(10.7-80.6)	4/12	29.1(17.2-47.7)	7/29
≥ 25 years old	52.5 (43.1-60.8)	146/261	31.9(24.4-39.9)	96/289	45.9(38.5-54.2)	118/277	35.9(28.8-45.4)	86/218
IDUs correctly identifying ways of preventing and transmitting HIV (Answers 7 National indictor questions correctly)[32]	89.6 (85.1-94.4)	256/290	77.8(70.7-84.4)	229/289	89.7(84.7-93.9)	254/289	83.3(77.4-88.6)	203/247
≤ 24 years old	98.7 (85.3-100)	27/29	68.9(52-85-8)	26/38	95.8(66.6-100)	10/12	74.6(54.1-92.7)	23/29
≥ 25 years old	87.8 (81.9-93.1)	229/261	79.2(71.9-85.9)	203/251	88.7(82.2-92.7)	24/277	85.6(79-90.6)	180/218
Knows possibility of confidential HIV testing in his/her city								

[31] One may protect oneself from HIV/AIDS by having one uninfected and reliable sexual partner; Can reduce the HIV risk if one properly uses condoms during every sexual contact; A healthy looking person can be infected with HIV; No one can get HIV as a result of a mosquito bite; No one can get HIV by taking food or drink with an infected person.

[32] One may protect oneself from HIV/AIDS by having one uninfected and reliable sexual partner; Can reduce the HIV risk if one properly uses condoms during every sexual contact; A healthy looking person can be infected with HIV; One may be infected with HIV/AIDS by using a needle already used by someone else; One may be infected with HIV/AIDS by using bottle, spoon, boiling pan/glass, container, cotton/filter or water where might been touched needle already used by someone else; One may be infected with HIV/AIDS by taking solution from the shared container; Drug users may protect themselves from HIV/AIDS by switching to non-injection drugs.

	GORI		TELAVI		KUTAISI		RUSTAVI	
Knowledge of HIV/AIDS	RDS population estimates, % (95%	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95%	n/N	RDS population estimates, % (95%	n/N
Yes	70.2(62.2-77.5)	221/290	44.7(37.1-51.9)	137/289	55.8(48.6-63.5)	153/289	42.5(35.7-50.2)	118/247
No	29.8(22.5-37.8)	69/290	55.3(48.1-62.9)	152/289	44.2(36.5-51.4)	136/289	57.5(49.8-64.3)	129/247
Knows where HIV testing can be done								
Yes	70.4(63-78.4)	222/290	35(27.6-42)	105/289	43.8(36.6-51.6)	129/289	31.3(24.8-38.7)	85/247
No	29.6(21.6-37)	68/290	65(58-72.4)	184/289	56.2(48.4-63.4)	160/289	68.7(61.3-75.2)	162/247
Voluntary HIV testing								
During the last year	28.4(20.9-35.6)	105/290	15.2(9.8-21.3)	45/289	26.1(20.2-33.2)	76/289	18.4(12.4-24.2)	51/247
From one to two years period	8.3(5.1-13.2)	24/290	5.7(2.9-9.5)	14/289	2.2(0.7-4.2)	10/289	1.5(0.2-3.1)	7/247
Two years ago	19.9(13.8-26.2)	68/290	34.5(26.7-41.5)	98/289	25.8(18.9-32.2)	76/289	12.4(8.1-16.7)	35/247
Never been tested	42.6(33.7-50.9)	90/290	44.6(36.8-52.6)	132/289	45.9(37.4-54.3)	127/289	67.7(60.6-75.5)	154247
Do not remember	0.8(0-2.8)	3/290	--	0/289	--	0/289	--	0/247
HIV testing during the last year								
Received HIV test last year and know their results	29.9 (22.3-36.3)	103/290	15.4(10.1-21.6)	45/289	26.5(20.2-33)	74/289	17.4 (11.6-23.3)	51/247
≤ 24 years old	23.7 (8.1-37)	8/29	15.4(3.9-28.6)	5/38	21.2(0-56.4)	2/12	19 (3.5-25.7)	5/29
≥ 25 years old	30.9 (22.6-37.5)	95/261	15.4(9.7-22.6)	40/251	26.2(19.7-32.5)	72/277	18.4 (12.6-25.9)	46/218
Informing others of HIV positive status								
Informing sex partner on HIV positive status	95.3(92.3-97.7)	276/290	85.9(79.4-91.2)	256/289	90.6(85.1-94.9)	269/289	82.5(75-88.9)	218/247
Informing IDU partner on HIV positive status	94(90.5-97.1)	274/290	86.7(79.8-92.3)	259/289	91.7(86.3-96.2)	274/289	80.2(73.5-88.4)	220/247

Table 16: Drug treatment and HIV/AIDS prevention (Continued)

	GORI		TELAVI		KUTAISI		RUSTAVI	
Drug treatment and HIV/AIDS prevention	**RDS population estimates, % (95%**	**n/N**	**RDS population estimates, % (95% CI)**	**n/N**	**RDS population estimates, % (95%**	**n/N**	**RDS population estimates, % (95%**	**n/N**
Drug treatment								
Currently under medical treatment	0.6(0-1.8)	1/290	--	0/289	1.7(0-3.9)	3/289	--	0/247
Used to take a medical treatment during last 12 months, but now isn't treating	2(0.5-3.9)	9/290	3.2(1.3-5.5)	11/289	5.5(2.3-9.5)	11/289	1.7(0.2-3.6)	4/247
Never been treated	85.6(80.5-90.1)	244/290	83.8(78-89)	243/289	74.5(67.8-81)	220/289	77.9(71.1-83.9)	193/247
Kind of medical treatment and assistance taken last 12 months								
Apply to a medical facility to get a special treatment because he/she is a drug user during last 12 months	2.8 (1-5.2)	11/290	3.6(1.6-6)	12/289	7.2(3.6-11.5)	14/289	1.7(0.2-3.6)	4/247
≤ 24 years old	4.2(0-13.2)	2/29	4.9(0-16.3)	1/38	5(0-20.5)	1/11	0(0-0)	0/29
≥ 25 years old	2.5 (0.6-4.9)	9/261	3.7(1.5-6.3)	11/251	7.1(3.4-11.3)	13/277	1.8(0-4.2)	4/218
Consultations at a health centers	--	0/9	16.2(11-22.1)	2/11	--	0/14	75(SPSS)	3/4
Self-treatment groups	--	0/9	--	0/11	--	0/14	25(SPSS)	1/4
Detoxification with Methadone	--	0/9	9.1(SPSS)	1/11	--	0/14	--	0/4
Substitution with Methadone	14(0-43.5)	2/9	45.5(SPSS)	5/11	0(--)	5/14	50(SPPS)	2/4
Detoxification with other drugs	0(--)	1/9	9.1(SPSS)	1/11	--	0/14	--	0/4
Detoxification without drugs	44.7(0-100)	4/9	36.4(SPSS)	4/11	100(--)	3/14	25(SPSS)	1/4
Psycho-social rehabilitation center	0(--)	1/9	9.1(SPSS)	1/11	24.3(0-56.3)	1/14	--	0/4
At home	0(--)	1/9	--	0/11	0(--)	3/14	--	0/4
Other	--	0/9	9.1(SPSS)	1/11	0(--)	1/14	--	0/4
Survived "extreme need" with somebody else's help last 12	3.2(1.3-5.5)	11/289	1.7 (0.3-3.4)	7/290	4.2(1.4-8)	8/289	1.7(0.2-3.6)	4/247

	GORI		TELAVI		KUTAISI		RUSTAVI	
Drug treatment and HIV/AIDS prevention	RDS population estimates, % (95%	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95%	n/N	RDS population estimates, % (95%	n/N
months								
≤ 24 years old	4.9(0-16.6)	1/38	2.8(0-10.9)	1/29	0 (0-0)	0/12	0 (0-0)	0/29
≥ 25 years old	3.3(1.3-5.7)	10/251	1.5 (0.1-3.3)	6/261	4.3(14-80)	8/277	1.8(0.2-4.2)	4/218
Survived "extreme need" without anybody's help last 12 months	34.6(2.72-4.16)	121/290	24.2(18.4-30.9)	92/289	38.6(31.1-46.3)	138/289	36.1(29.2-42.2)	105/247
IDUs reached with prevention programs								
Aware about HIV testing possibilities and received sterile injecting equipment and condom last 12 months*	30.9(24.2-38.3)	120/290	8(4.7-12.1)	31/290	12(7.4-17.1)	45/289	13.5(7.7-20.4)	39/247
≤ 24 years old	17.7(2.9-38.6)	8/29	7.3(0-20.4)	1/38	16.1(0-47.7)	1/12	20.5(3.4-30.7)	5/29
≥ 25 years old	33.2(2.6-41.1)	112/261	8.6(5-13.1)	30/251	11.5(6.8-16.2)	44/277	13.8(7.1-21)	34/218
Program minimal coverage[4]	32.1(24.3-40.3)	140/290	22.9(18.3-28.9)	75/289	25.1(17.6-31.8)	82/289	31.8(24.5-39.6)	87/247
≤ 24 years old	26.8(9.8-47.2)	11/29	41(23.6-58.1)	14/38	25.4(0-64.5)	3/12	32.1(10.6-48.4)	10/29
≥ 25 years old	33.5(25.8-42.5)	129/261	20(15.1-26.3)	61/251	24.3(16.6-30.4)	79/277	30(23.3-39.3)	77/218
Program full coverage[5]	26.4 (20.8-34.3)	101/290	7.4(4.2-11.3)	29/289	10.2(6.1-15.3)	40/289	9.3(5.2-14.5)	31/247
≤ 24 years old	7.6 (0-20.7)	4/29	7.3(0-20.3)	1/38	16.2(0-46.8)	1/12	14.4(1.9-22.2)	4/29
≥ 25 years old	28.9 (23.1-37.9)	97/261	7.9(4.5-12.2)	28/251	9.7(5.5-14.3)	39/277	9.9(5-15.5)	27/218
Received sterile injecting equipment last 12 months	30.1 (21.8-37.8)	129/290	14.3(10.1-19.4)	50/289	15.8(10.2-21.9)	56/289	25.7(18.6-33.2)	73/247
≤ 24 years old	19.9 (4.2-37.5)	9/29	9(0-19.5)	3/38	16.1(0-47.7)	1/12	20.8(4.3-38.5)	8/29
≥ 25 years old	32.6 (24.5-41.6)	120/261	15.3(10.8-21.2)	47/251	15.3(9.4-21.3)	55/277	24.5(17.6-33.1)	65/218
Received condoms last 12 months	30.7 (24-38.4)	123/290	17.8(13.6-23.3)	59/289	13.5(8.6-18.6)	54/289	21.5(14.8-29.2)	61/247
≤ 24 years old	17.9 (3.2-36.2)	8/29	38(20.3-55.3)	13/38	21.1(0-55.8)	3/12	21.7(5.2-40.3)	8/29
≥ 25 years old	33.1 (26.4-41.7)	115/261	14.4(10.1-20)	46/251	12.6(7.9-17.4)	51/277	20.1(13.2-28.5)	53/218
Received brochures/pamphlets/	30.8 (24.6-39.7)	124/290	22.5(17.6-28.5)	72/289	19.4(13.7-25.5)	71/289	22.3(16.2-28.9)	63/247

	GORI		TELAVI		KUTAISI		RUSTAVI	
Drug treatment and HIV/AIDS prevention	RDS population estimates, % (95%	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95%	n/N	RDS population estimates, % (95%	n/N
booklet on HIV/AIDS last 12 months								
≤ 24 years old	27.6 (9.5-48.5)	8/29	37.7(20.1-55.3)	12/38	14(0-48.3)	2/12	18.2(4.3-35.4)	7/29
≥ 25 years old	31.5 (25.3-41.2)	116/261	20.1(14.7-26.4)	60/251	19.1(12.9-24.7)	69/277	21.1(15.2-29.1)	56/218
Received qualified information on HIV/AIDS last 12 months	29.1 (22.2-37.3)	119/290	19.5(14.8-25.2)	65/289	19.9(14.1-26.8)	69/289	22.1(16.4-28.9)	61/247
≤ 24 years old	20.4 (5.9-37.7)	8/29	35(17.4-52.9)	11/38	13.1(0-48.3)	2/12	11.1(0.9-26.1)	6/29
≥ 25 year old	30.1 (23.4-39.3)	111/261	17.1(12.3-22.7)	54/251	19.7(13.5-26.1)	67/277	21.7(15.9-29.8)	55/218
Heard information about syringe exchange program	61.2(51.3-68.7)	206/290	34.6(27.4-41.4)	117/289	24.3(17.1-30.6)	80/289	40.3(32.5-48.7)	109/247
Received sterile syringes from the program during the last 12 months	50.7(37.2-62.4)	129/206	41.1(25.3-52.4)	50/117	77.2(59.7-90.6)	56/80	66.1(54-79.9)	73/109
Heard about substitution therapy program	94.5(90.2-97.6)	277/290	91.4(87.1-95.1)	266/289	98.9(97.5-100)	286/289	94.3(90.7-97.4)	233/247
Top two persons with major influence on continuing drug use								
No one	79.9(72.7-85.9)	228/290	91.2(87.2-94.7)	262/289	89.2(84.8-93.2)	255/289	86.1(80.4-90.9)	205/247
Needle partner	19.6(13.7-26.9)	54/290	4.7(2.3-7.6)	16/289	10.6(6.6-15)	34/289	13.5(8.8-19)	40/247
Top two persons with major influence on quitting drug use								
No one	33.6(24.8-40.5)	101/290	45.3(36.9-52.8)	130/289	55.3(46.2-62.9)	142/289	46.2(38.8-54.9)	95/247
Friend	26.4(21.5-33.4)	93/290	23.2(17.8-29.5)	68/289	12.3(7-17.7)	37/289	29.5(21.8-36.2)	78/247

Table 17: HIV and HCV prevalence (Continued)

	GORI		TELAVI		KUTAISI		RUSTAVI	
Biomarker	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								
HIV prevalence	2.4 (0.4-5)	5/287	1.2(0-2.9)	5/285	2.6(0.5-5.3)	8/284	0.9(0-4.6)	2/246
≤ 24	0	0/29	0	0/38	0 (0-0)	0/12	4.8(0-17.2)	0/29
≥ 25	2.9 (0.5-5.8)	5/258	1.4(0-3.4)	5/247	2.7(0.5-5.3)	8/272	1.8(0-5)	2/217
HCV								
HCV prevalence	57.1(49.6-65.7)	168/287	41.6(34.3-49)	119/287	74.6(66.3-81.8)	216/284	50(40.5-57.5)	139/246
≤ 24	8.2(0-24.1)	2/29	4.4(0-13.9)	2/38	35.7(0-72.7)	4/12	3.2(0-11.2)	2/29
≥ 25	62.8(55-71.3)	166/258	47.3(39.8-55)	117/287	75.3(66.8-82)	212/272	57.7(49.5-67)	137/217

Annex 3: RDS forms

Questionnaire identification number: _____

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

Questions About Your Recruiter (Do not ask seeds)

Questions	Responses
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)	____Drug Friend ____Friend ____Husband/wife ____Sex partner ____Parent (mother/father) ____Sibling (brother/sister) ____Offspring (daughter/son) ____Neighbor ____Person from the same district ____Co-worker ____Relative ____Stranger ____ Other
How do you know the person who referred you to this study? (check all that apply)	____Person I have sex with often, my main sex partner ____ Person I have sex with occasionally ____ Person I use drugs with ____ Person I buy drugs with ____ Person I buy drugs from ____ Person I share needles with ____ Person I know through other drug user ____ Other
Not including the time you received your coupon, how many times have you seen your recruiter during the last four weeks?	_____
How old is your recruiter? (Probe:) What would be your best guess?	_____ years
About how long have you known your recruiter?	_____ years Or _____ months
How close are you to your recruiter?	____Very close ____Somewhat close ____Not very close
How often do you see your recruiter?	____Every day ____Once a week ____Once a month ____Less than once a month

Client Checklist Form

To be filled out by authorized personnel

Date:			
Coupon number:	| | | | | | | | | | | |		
Questionnaire number:	| | | | | | | | | | | |		
			Signature
The participant can join the study.	❑ Yes	❑ No[1]	
Informed consent has been signed.	❑ Yes	❑ No[2]	
The participant has completed the questionnaire.	❑ Yes	❑ No	
Counselor has completed the network size form.	❑ Yes	❑ No	
Counselor has counseled participant.	❑ Yes	❑ No	
Blood sample taken.	❑ Yes	❑ No	
Recruitment coupons released.	❑ Yes	❑ No	
Primary incentive paid.	❑ Yes	❑ No	
Secondary incentive paid.			
First	❑ Yes	❑ No	
Second	❑ Yes	❑ No	
Notes:			

1 – Please fill non eligibility criteria form

2 – Please fill refusal form

Form has been entered into Database ❑

Ineligibilty 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 (Take away the coupon and write the number in this column)	Date	Reason for Non-Eligibility (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 (Take away the coupon and write the number in this column)	Date	Reason for Refusal (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.*

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: _____

Date primary incentive given	Coupon number	Quest. number	RDS coupons given	Date secondary incentive given*	Expiration date (two weeks)	Running total for primary incentive	Running total for secondary incentive
		Total					

Coupon Tracking Form

Instructions: The coupon tracking form must be completed for each seed each day

by the screener.

Seed number: _____

Serial number	Referral Coupon Numbers					
	Questionnaire number	Date	Coupon Number	Coupon 1	Coupon 2	Coupon 3
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.)*

Annex 4: Study questionnaire

Questionnaire Identification Number_____

Questionnaire is Coded as: ☐

Questionnaire is Word Processed by: ☐

Bio Behavioral Surveillance Study among People Who Inject Drugs in Georgia 2014-2015

City _____

Year _____

Partner Organization: _____Bemoni_____

Introduction: "My name is…….. Curatio International Foundation and Bemoni Public Union implement a joint project titled "Establishment of evidence based for HIV/AIDS National Program, by strengthening surveillance system", funded by the Global Fund. Did you take an interview over the last five weeks of this study?

Interviewer: If somebody has already taken an interview with the person you are talking, don't take another one. Tell him/her, that you cannot re-interview him/her. Thank the person and finish the conversation. If nobody has taken an interview with the person in question, continue. 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 your 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
Date	
Interviewer	
Result	

Result Codes: 1. Completed; 2. Partially Completed; 3. Refusal; 4. other _____ (please specify)

Date and time of interview: /_____/date/____/hour/____/minute/

Signature: _____

Q1. City:

1. Tbilisi
2. Gori
3. Telavi
4. Zugdidi
5. Batumi
6. Kutaisi
7. Rustavi

Q2. Respondent ID # [ ]

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

1. He is a patient/client of the counterpart organization
2. He has been picked out on a snowball basis
3. Other _____ (please specify)

Q4. Place of the interview: (Field of place of institution):

Q5. How many times have you participated in the same survey?

_____ times		*Continue*
None	77	***Go to A1.***
No response	99	

Q6. Did you find out the result of your HIV test?

Yes	1	***Go to A1.***
No	2	*Continue*
I haven't done the test	3	***Go to A1.***
No response	99	

Q7. Why not?

1. Forgot
2. Did not interest the results
3. I was afraid of the positive result
4. I could not manage to go back
5. From my point of view, the testing was not necessary at all (I was healthy – did not have any symptoms)
6. Other (please specify) _____
88. Don't know
99. No response

Section A. Respondent's Demographic Data

A1. Where do you live presently?

1. City (please indicate) _____
   1.1 District of the city (please indicate) _____
   1.2 Village (please indicate) _____
99. No response

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

(Please write down only the number of years, e.g. 2 years and 5 months as 3 years)

_____ years

77. Always (since birth)
99. No response

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

A5. How old are you?

/_____/_____/ years old

A6. Gender

1. Male
2. Female

A7. What is your nationality?

1. Georgian
2. Other (please indicate) _____
99. No response

A8. Level of Education completed?

1. None
2. Primary (1- 4 classes)
3. Secondary (school, technical school, vocational school)
4. Incomplete Higher
5. Higher
99. No response

A9. Employment

1. Pupil/student
2. Have a permanent job
3. Have a temporary job
4. Retired/disabled
5. Unemployed
99. No response

A9.1 How much is your monthly income?

1. Less than 100 GEL
2. 100-300 GEL
3. 300-500 GEL
4. 500-700 GEL
5. 700-1000 GEL
6. 1000 GEL and more
99. No response

A10. What is your marital status?

1. Married
2. Divorced/Separated for ever
3. Widow/widower
4. Has never been married
5. Other (please indicate)_____

A11. 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 a partner
3. Single
4. With parents/relatives
5. Other:_____ (Please indicate)

99. No response

A12.a Have you ever been imprisoned?

1. Yes
2. No

99. No response

A12. Penalty for drug usage: (Please read out the options and match the responses with the relevant options in the table below)

	Yes	How many times?	No	No response
1. Have you detained in administrative sentence because of your drug use during the last 12 months?	1		77	99
2. Have you imprisoned before trial because of your drug use during the last 12 months?	1		77	99
3. Have you imprisoned because of your drug use during the last 12 months? *(If **"yes"**, continue, unless **go to A13**).*	1		77	99
3.1 After your release from prison last time, when did you take a drug injection?	_____ Days _____ Months 88. Don't remember			99

A13. Within the last month how often have you consumed alcoholic beverages, such as beer, wine, vodka, other?

1. Every day
2. More than once a week
3. Once a week
4. Rarely
5. Never (don't read out loud)
6. Other (please indicate) _____
99. No response

Section B.Drug Usage History

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 old were you when you took the first drug injection?

_____ years old (please indicate an exact age)

B3. How long ago realized that you are depending on injection drug? (Please indicate only a number of years, or months, or both)

_____ years old

77. Don't think I'm depended on drug
99. No response

*(Interviewer: If in the question B3 respondent indicated "**5 years or less** " or **"Don't think I'm depended on drug "** continue, unless **go to B4**)*

B3.1. During the last 5 years have you received any of the following products and/or information with no money *(several responses can be acceptable)*

	Yes	No	Don't know	No response
1. Brochures/pamphlets/booklets on AIDS	1	2	88	99
2. Qualified information on AIDS	1	2	88	99
3. Condoms	1	2	88	99
4. Needle/syringe	1	2	88	99
5. Other (please specify)_____	1	2	88	99

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

Yes	1	Continue
No, alone	2	**Go to B5**
No, with other PWIDs	3	
Don't know	88	
No response	99	

B4.1 How many PWIDs are members of your regular injecting group?

_____ (please indicate an exact number)

B5. 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 Month		Injected Last Month	
	Yes	No	Yes	No
1. CNS depressants				
1.1 Barbiturates (_____)	1	2	1	2
1.2 Tranquilizes (_____)	1	2	1	2
1.2.1 Zopiclone	1	2	1	2
1.2.2 Zaleplon	1	2	1	2
1.2.3 Diazepam	1	2	1	2
1.2.4 Nitrazepam	1	2	1	2
1.2.5 Reladorm	1	2	1	2
1.3 Inhalants (_____)	1	2	1	2
1.4 Antihistamines (_____)	1	2	1	2
1.5 Other depressants (_____)	1	2	1	2
1.5.1 Baclofen	1	2	1	2
1.5.2 Gabapentin	1	2	1	2
1.5.3 Pregabalin	1	2	1	2
2. Narcotic analgesics				
2.1 Codeine				
2.2 Heroin	1	2	1	2
2.3 Opium	1	2	1	2
2.4 Poppy	1	2	1	2
2.5 Methadone	1	2	1	2
2.6 Subutex	1	2	1	2
2.7 Morphine	1	2	1	2
2.8 Dezomorphine ("Crocodile")	1	2	1	2
2.9 Tramadol	1	2	1	2
2.10 Other Opiates (_____)	1	2	1	2
3. CNS stimulates				
3.1 Cocaine	1	2	1	2
3.2 Amphetamine	1	2	1	2

3.3 Ecstasies				
3.4 Ephedrone (Vint)	1	2	1	2
3.5 Jeff	1	2	1	2
3.6 Other stimulates (_____)	1	2	1	2
4. Hallucinates				
4.1 LSD	1	2	1	2
4.2 Hemp (marijuana, hashish, anasha)	1	2	1	2
4.3 Cyclodol		2	1	2
5.Combination (please specify) _____	1	2	1	2
6. Other (please specify) _____	1	2	1	2
7. New psychoactive products				
7.1 Bio	1	2	1	2
7.2 Bio –LSD	1	2	1	2
7.3 Cristal, shower salt	1	2	1	2
8. Other psychoactive products				
8.1 Tropicamide	1	2	1	2
8.2 Magitus	1	2	1	2
Don't know/don't remember	88		88	
No response	99		99	

*(Interviewer: If in the question **B5** respondent mentioned usage of some drugs from "**section B"** continues, unless **go to B6**)*

B5.1 You mentioned, that you have injected _____(Indicate drugs from section B). During the last 12 months have you been injecting this drug with a continuous manner, every day?

Yes, for a month and over	1	*Continue*
Yes, everyday in a week and frequently in a year	2	
No	3	**Go to B6**
Don't remember	88	
No response	99	

B5.2 Did you feel bad (cold turkey symptoms) when you tried to stop drug usage or decreased dosage.

1. I have never stopped injecting drugs
2. Yes
3. No
88. Don't know
99. No response

B6. When did you inject drugs last?

1. _____ days ago (Interviewer: If the answer is "Today" please specify 0)

88. Don't remember
99. Refused to answer (**go to B8**)

B7. **How many times did you take drugs that day?**

1. _____
88. Don't remember
99. Refused to answer

B8. **Which drug did you inject at last?**

1. _____
88. Don't remember
99. Refused to answer

B9. (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
5. Other (please indicate) _____
6. Injected today or yesterday
99. No response (don't read out)

B10. **Within the last month how often did you inject drugs?**

1. Once a month
2. Several times a month
3. Once a week
4. 2-3 times a week
5. 4-6 times a week
6. Once a day
7. Several times a day
8. Have not injected *(don't read out)*
88. Don't know
99. No response

Section C. Needle Sharing Behavior

C1.1 Have you ever used a needle/syringe that was used by somebody else before?

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

C1.2 Have you ever used a needle/syringe that was used by yourself before?

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

C2.1 At last, when you injected drugs, have you ever used needle/syringe that was used by anybody?

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

C2.2 At last, when you injected drugs, have you ever used needle/syringe that was used by you?

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

*(Interviewer: If **C2.1** and **C2.2** is **"No", go to C2.4)***

C2.3 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

C2.4 If many people were there, how do you think, how many people used the shared needle?

1. _____ (please specify the number)
77. I was alone
88. Don't know
99. No response

C3.1 In the case of injection before the last usage, did you use a needle/syringe that had been used by anybody else before?

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

C3.2 In the case if injection before the last usage, did you use a needle/syringe that had been used by you before?

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

*(Interviewer: If **C3.1** and **C3.2** is **"No", go to C3.4**)*

C3.3 Did you then use a needle/syringe that was left at the place of gathering by somebody else, or by you (of drug preparing, or some other place)?

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

C3.4 If several people were there at that time, how do you think, how many people could have used the shared needle/syringe?

1. _____ (please specify the number)
77. I was alone
88. Don't know
99. No response

C4. During the last month when you injected the drug how often did it with the needle/syringe, which was used by somebody else?

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

C5. During the last month when you injected the drug how often did it with the same needle,which was used by you?

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

*(Interviewer: If **C4** and **C5** answers are **"Never" – go to C9**)*

C6. How many times did you clean needle/syringe that had been used by you or by others last month?

Always	1	*Continue*
Almost always	2	
Sometimes	3	
Once	4	
Never	5	**Go to C7**
Don't know	88	
No response	99	

C6.1. If you cleaned the needle/syringe, how did you do it? *(several responses are acceptable)*

	Yes	No	Don't know	No response
1. With water (boiled, not-boiled, hot)	1	2	88	99
2. With disinfection solution	1	2	88	99
3. Boil the needle/syringe	1	2	88	99
4. Another method (please specify)_____	1	2	88	99

C7. During the last month, did you use a needle/syringe that had been used by any of the following people? (several responses are available)

	Yes	No	Don't know	No Response
1. Your usual partner in sex (girlfriend)	1	2	88	99
2. Partner in sex whom you didn't know before	1	2	88	99
3. Someone from the drug-addict community (drug-related friend)	1	2	88	99
4. Drug trafficker	1	2	88	99
5. Stranger	1	2	88	99
6. Friend	1	2	88	99
7. Other (please specify):_____	1	2	88	99

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

1. _____ (Number of Partners)

88. Don't know

99. No response

C9. During the last month how many times did you give the used needle/syringe to others?

Always	1	*Continue*
Almost always	2	
Sometimes	3	
Once	4	
Never	5	**Go to C11**
Don't know	88	
No response	99	

C10. When you gave an used needle/syringe to others for using, did you or they, whom did you give, clean them before usage?

Always	1	*Continue*
Almost always	2	
Sometimes	3	
Once	4	
Never	5	**Go to C11**
Don't know	88	
No response	99	

C10.1. If you or they, whom did you give, cleaned the needle/syringe, how did you do that? *(several responses are acceptable)*

	Yes	No	Don't know	No response
1. With water (boiled, not-boiled, hot)	1	2	88	99
2. With disinfection solution	1	2	88	99
3. Boil the needle/syringe	1	2	88	99
4. Another method (please specify)_____	1	2	88	99

C11. When you last threw away the used needle, how did you do that? *(Do not read out the options. Match the responses to 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. Broke the needle and threw into the garbage bin
3. Threw the needle into the garbage bin with a cap
4. Put into a bottle/can/boiling pan and left there
5. Throw on the ground
6. Burnt it in a stove
7. Other (please specify) _____

99. No response

C12. During the last month how often have you used new and unused needle/syringe? *(Compare **C4** answers)*

1. Always
2. Almost always
3. Sometimes
4. Never

88. Don't know

99. No response

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

Yes	1	*Continue*
No	2	**Go to C15**
Don't know	88	
No response	99	

C14. Where do you get/buy new needles/syringes? (several responses are available)

	Yes	No
1. Drugstore	1	2
2. Shop	1	2
3. Hospital	1	2
4. Family/Relatives	1	2
5. Partner in sex	1	2
6. Friends	1	2
7. Other injection drug user	1	2
8. Drug trafficker	1	2
9. Syringe exchange programs	1	2
10. Other (please specify) _____	1	2

C15. During the last month how many times have you used a syringe that had already been filled with drugs without your presence?

1. Always
2. Almost always
3. Sometimes
4. Once
5. Never
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 a solution from a syringe that had been used by somebody else? *(Interviewer: 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. Almost always
3. Sometimes
4. Once
5. Never
88. Don't know
99. No response

C17. During the last month when you injected drugs, how many times did you use a shared syringe with left drug in it *(portion used by somebody else, remaining left to you)?*

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

C18. During the last month when you injected drugs, how many times did you use shared bottle, spoon, boiling pan/glass/container, cotton/filter or water?

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

C19. During the last month how many times did you take solution from the shared container?

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

*(Interviewer: match the **C15 – C19** responses to **C20**)*

C20. Please recall the last instance of taking drugs and tell me:

	Yes	No	Don't know	No response
1. Did you use a syringe after it was already filled by somebody else?	1	2	88	99
2. Did you use a syringe after it was filled by somebody else from his/her used syringe?	1	2	88	99
3. Did you inject drug it was left by somebody in the needle?	1	2	88	99
4. Did you use a shared bottle, spoon, boiling pan/glass, container, cotton/filter or water?	1	2	88	99
5. Did you take solution from the shared container?	1	2	88	99

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

C21.a Over the last year have you injected drugs in another country/city? If the answer is "No", **Go to C22**				**C21.b** which drug have you injected?			**C21.c** when you injected that drug, did you used needle/syringe that was used by anyone else?			
Yes **1**	No **2**	Don't know **88**	No response **99**	Please specify	DK	NR	Yes	No	DK	NR
1.1 Other cities of Georgia (please specify) _____					88	99	1	2	88	99
1.2					88	99	1	2	88	99
1.3					88	99	1	2	88	99
1.4					88	99	1	2	88	99
1.5					88	99	1	2	88	99
2.1 In other countries (please specify) _____					88	99	1	2	88	99
2.2					88	99	1	2	88	99
2.3					88	99	1	2	88	99
2.4					88	99	1	2	88	99
2.5					88	99	1	2	88	99

C22. Did you experience overdoses in the last year?

Yes	1	*Continue*
No	2	**Go to C23**
Don't remember	88	
No response	99	

C22.1 **What kind of help did you get?** (*Several responses are acceptable)*

1. Emergency aid
2. Hospital treatment
3. Other_____(please specify)

C23. Did you try to stop drug use without medical help during the last 12 months?

1. Yes
2. No
3. Had no overdoses

88. Don't know

99. No response

C24. Have you ever got special treatment because you are a drug user?

Yes	1	*Continue*
No	2	**Go to 0**
Don’t know	88	*Continue*
No response	99	

C25. Have you applied to a medical facility, specialized center to get a treatment or specialized assistance because you are a drug user during last 12 months?

Yes	1	*Continue*
No	2	**Go toC30**
Don’t know	88	*Continue*
No response	99	

C26. Have you currently got any medical treatment, or have you ever taken specialized treatment because you are a drug user?

Currently taking a medical treatment (Match to **B9)**	1	*Continue*
Used to take a medical treatment during last 12 months, but now I’m not taking	2	
No	3	**Go to 0**
No response	99	

C27. What kind of medical treatment or specialized assistance have you taken over 12 months? *(Do not read out the options. Ask also this: "What other treatments have you taken? Several responses are acceptable)*

	Yes	No
1. Consultations	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. At home	1	2
9. Other (please write down) _____	1	2
88. Don’t know	88	
99. No response	99	

C28. Can you tell me in which country/city did you take medical treatment?

1. Tbilisi
2. Batumi
3. Other city of Georgia (please indicate) _____
4. Foreign country

99. No response

C29. Did you want to get another treatment or specialized assistance, but couldn't get it?

Yes (I'd desire, but couldn't get it) detoxification	1	*Continue*
Yes (I'd desire, but couldn't get it) substitution with Methadone	3	
No	2	**Go to D1**
Don't know	88	
No response	99	

C30. Why you did not get treatment or specialized assistance during last 12 months? (*do not read out, more than one response is possible, match responses to given options)*

1. Have no desire
2. It is very expensive/ did not have enough money
3. Because of location
4. I applied, but wasn't enough place
5. I applied, but conditions were unsatisfactory
6. Couldn't find good specialist/doctor
7. Other (please specify)_____

88. Don't know
99. No response

Section D.Sexual Life Record *(For male)*

D1. How old were you when you had the first sexual contact?

_____ 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 with a female partner during the last year?

Yes	1	*Continue*
No	2	**Go to D4**
No response	99	

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

_____ (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 live-in partner, or sex partner you do not live with, but have regular sexual contact. Regular sexual contact means contact that lasts more than one year, or less than one year with an intention to continue it*)

_____ (number)

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*)

_____ (number)

88. Don't know
99. No response

D3.3 How many of those sexual partners were "occasional" ones? (*i.e. those who are not regular partners and never have paid money in exchange for sex*)

_____ (number)

88. Don't know
99. No response

D3.4 Which one was your last sexual partner?

1. Regular
2. Paid
3. Occasional

88. Don't know
99. No response

D3.5 Did you use condom during last sexual contact?

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

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

Yes	1	*Continue*
No	2	**Go to E1**
No response	99	

D4.1 Have you had male partners during the last 12 months?

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

D4.2 When you had sex with your male partner last time, did you use a condom?

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

Number and Types of Partners (For male)

The following questions I will ask you about your regular sexual partner. i.e. spouse or live-in partner, or sex partner, you do not live with, but have regular sexual contact. Regular sexual contact means contact that lasts more than one year, or less than one year with an intention to continue it

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

*(Circle the response to the question **D3.1**)*

Yes	1	*Continue*
No	2	**Go to E2**

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

_____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	*Continue*
No	2	**Go to E1.4**
Don't know	88	**Go to E1.5**
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

*(**Go to E1.5**)*

88. Don't know
99. Refused to answer

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)*

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

E1.5 How often have you used condoms with your regular sexual partner within the last year?

1. Always
2. Almost always
3. Sometimes
4. Never
88. Don't know
99. Refused to answer

E1.6 Does your regular sexual partner inject drugs?

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

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

E2. Did you have a paid-for sexual female partner over the last 12 months? *(Circle response to **D3.2**)*

Yes	1	*Continue*
No	2	**Go to E3**

E2.1.1 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?

_____ (exact number)

88. Don't know
99. No response

E2.1.2 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?

_____ (exact number)

88. Don't know
99. No response

*(Interviewer: If there are no numbers in **E2.1.1** and **E2.1.2 go to 0**)*

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

_____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	*Continue*
No	2	**Go to E2.5**
Don't know	88	**Go to 0**
No response	99	

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

1. Mine
2. Partner's
3. Mutual

(Go to 0)

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)*

	Yes	No	Don't know	NR
Was not available/Did not have it	1	2	88	99
Too expensive	1	2	88	99
Partner refused	1	2	88	99
Don't like it	1	2	88	99
Use other contraceptives	1	2	88	99
Didn't think necessary	1	2	88	99
Didn't think of it	1	2	88	99
Other (please indicate) _____	1	2	88	99

E2.6 Last year how often did you use condoms with your paid-for sexual partners?

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
2. No

88. Don't know

99. No response

The following questions I will ask you about your occasional sexual partners. An occasional sexual partner is someone whom 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? *(Circle the response to **D3.3**)*

Yes	1	*Continue*
No	2	***Go to E4***

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

_____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	*Continue*
No	2	***Go to 1***
Don't know	88	***Go to E3.5***
No response	99	

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

1. Mine
2. Partner's
3. Mutual
88. Don't know
99. Refused to answer

(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.)*

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

E4. Have you had anal sex with any sexual partners?

Yes	1	*Continue*
No	2	***Go to E5***
Don't know	88	
No response	99	

E4.1. Have you used condom then?

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

E5. During the last month have you had any problem with obtaining condom?

Yes	1	*Continue*
No	2	***Go to G1***
Don't know	88	
No response	99	

E5.1. If yes, what was the reason?

_____ *(please specify)*

Section D.Sexual Life Record *(For Female)*

D1. How old were you when you had the first sexual contact?

_____ 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 with a female partner during the last year?

Yes	1	*Continue*
No	2	***Go to E1***
No response	99	

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

_____ (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*)?

_____ (number)

88. Don't know
99. No response

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

_____ (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*)

_____ (number)

88. Don't know
99. No response

D3.4 Which one was your last sexual partner?

1. Regular
2. Paid
3. Occasional
88. Don't know
99. No response

D3.5 Did you use condom during last sexual contact?

1. Yes
2. No

88. Don't know
99. No response

Number and Types of Partners (For Female)

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?

*(Circle the response for the question **D3.1**)*

Yes	1	*Continue*
No	2	***Go to 0***

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

_____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	*Continue*
No	2	***Go to 1***
Don't know	88	***Go to E1.5***
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)*

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

E1.5 How often have you used condoms with your regular sexual partner within the last year?

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

*The following questions I will ask you about your **paid-for a 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? *(Circle response to **D3.2)***

Yes	1	*Continue*
No	2	***Go to E3***
Don't know	88	
No response	99	

E2.1.1 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?

_____ (exact number)

88. Don't know
99. No response

E2.1.2 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?

_____ (exact number)

88. Don't know
99. No response

*(Interviewer: If **E2.1.1** and **E2.1.2** isn't number **go to E2.3**)*

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

_____times

88. Don't know
99. No response

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

Yes	1	*Continue*
No	2	***Go to 1***
Don't know	88	***Go to E2.6***
No response	99	

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

1. Mine
2. Partner's
3. Mutual — ***(Go to E2.6)***
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)*

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

E2.6 Last year how often did you use condoms with your paid-for sexual partners?

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

E2.7 Does your paid-for sexual partner(s) inject drugs?

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

The following questions I will ask you about your occasional sexual partners. An occasional sexual partner is someone whom 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? *(Circle the response to **D3.3**)*

Yes	1	*Continue*
No	2	***Go to E4***

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

_____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?

	1	*Continue*
No	2	***Go to E3.4***
Don't know	88	***Go to 0***
No response	99	

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

1. Mine
2. Partner's
3. Mutual
88. Don't know
99. Refused to answer

(***Go to 0***)

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

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

E4. Have you had anal sex with any sexual partners?

Yes	1	*Continue*
No	2	***Go to E5***
Don't know	88	
No response	99	

E4.1. Have you used condom then?

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

E5. During the last month have you had any problem with obtaining condom?

Yes	1	*Continue*
No	2	***Go to G1***
Don't know	88	
No response	99	

E5.1. If yes, what was reason?

_____ *(please specify)*

Sedction G. Sexually Transmitted Diseases

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

1. Yes
2. No
99. No response

G2. Have you observed genital release or burning pain while urinating during the last 12 months?

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

G3. Have you observed genital ulcer/rash over the last 12 months?

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

*(Interviewer: If **G2** or **G3** answer is "**Yes**" – Continue, in other case **go to H1**)*

G4. Whom did you apply for medical treatment? (multiple answers are possible)

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

Section H. Knowledge, Opinion and Attitude

H1. Have you heard about HIV?

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

H2. Have you heard about AIDS?

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

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

*(Interviewer: If **H1** and **H2** there is "**No**" **go to 0**)*

H3. Do you know any person around you who has been infected, ill with, or has died of AIDS?

Yes	1	*Continue*
No	2	***Go to H5***
Don't know	88	
No response	99	

H4. 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

H5. How high is your risk of getting HIV infection?

1. High risk
2. Medium risk
3. Low risk
4. There is no risk
88. Don't know
99. No response

H6. Please give me your opinion regarding the following: *(mark the relevant answer)*

Assertions	Yes	No	DK	NR
1. Do you believe that one may protect oneself from HIV/AIDS by having one uninfected and reliable sexual partner?	1	2	88	99
2. Can one reduce the HIV risk if one properly uses condoms during every sexual contact?	1	2	88	99
3. Do you think that healthy looking person can be infected with HIV?	1	2	88	99
4. Can one get HIV as a result of a mosquito's bite?	1	2	88	99
5. Do you believe that one can get HIV/AIDS by taking food or drink of an infected person?	1	2	88	99
6. Do you believe that one may be infected with HIV/AIDS by using a needle already used by someone else?	1	2	88	99
7. Do you believe that one may be infected with HIV/AIDS by using a bottle, spoon, boiling pan/glass, container, cotton/filter or water previously touched by a needle/syringe used by someone else?	1	2	88	99
8. Do you believe that one may be infected with HIV/AIDS by taking solution from the shared container?	1	2	88	99
9. Do you believe that drug users may protect themselves from HIV/AIDS by switching to non-injection drugs?	1	2	88	99
10. Do you believe that an HIV/AIDS-infected pregnant woman can transfer virus to her fetus?	1	2	88	99

H7. 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
2. No

88. Don't know

99. No response

H8. If you wish to take an HIV test, do you know where to apply?

Yes	1	*Continue*
No	2	***Go to H9***
No response	99	

H8.1. If you wish to take an HIV test for free, do you know where to apply?

1. Yes
2. No

88. Don't know

99. No response

H9. I don't want to know about the test results, but have you ever taken an HIV test?

Yes	1	*Continue*
No	2	***Go to H10.1***
No response	99	***Go to H13***

H10. When did you take the last HIV test?

During the last year	1	***Go to H11***
About 1-2 year period	2	*Continue*
2 years ago	3	
Don't know	88	
No response	99	***Go to H13***

H10.1. Please indicate the reason why don't you take an HIV test during last 12 months?

1. I was afraid of the positive result
2. I don't think it's necessary
3. I don't know the place where to go
4. I wonder that someone could get information about my test result
5. They will understand that I am a drug user
6. I am afraid of the police could get information about my behavior
7. I did not have money
8. I did not think about it
9. Other (please specify) _____

99. No response

H11. Was it your initiative to take the HIV/AIDS test or it was needed for the certificate?

	Yes	No	No response
1. My initiative	1	2	99
2. Certificate	1	2	99
3. Other _____	1	2	99

H12. Don't tell me the test result, but do you know it?

1. Yes
2. No

99. No response

H13. If you are infected with HIV will you inform your spouse/sex partner?

1. Yes
2. No

88. Don't know
99. No response

H14. If you are infected with HIV will you inform your IDU partners?

Yes	1	***Go to H14.2***
No	2	*Continue*
Don't know	88	***Go to H14.2***
No response	99	

H14.1. Why you will not inform your IDU partners about your infection? You might have several reasons, please list all of them.

_____

H14.2. Would you take an HIV test if it is free and would be held in a government facility?

Yes	1	***Go to I1***
No	2	*Continue*
Don't know	88	***Go to I1***
No response	99	

H14.3. If you wouldn't why?

1. I am afraid of the positive test result
2. I don't think it's necessary
3. I wonder that someone could get information about my test result
4. They will understand that I am a drug user
5. I wonder that the police could get information about my behavior
6. Other (please specify) _____

99. No response

Section I. Use of prevention programs

*(**I1** Question for those respondents who answered positively to Q **H1 and/or H2**)*

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

	Yes	No
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. NGO representatives/Social Workers	1	2
9. Billboards/Street Advertising	1	2
10. Internet	1	2
11.Other (please specify) _____	1	2

*Interviewer: Check the responses of **B3.1** question, if the one response is **"yes", go to I2***

I2.A. Have you ever given anything of the following items and/or information in Georgia? *(Multiple answers are available)*

	Yes	No	DK	NR
1. Brochures/pamphlets/booklets on AIDS	1	2	88	99
2. Qualified information on AIDS	1	2	88	99
3. Condoms	1	2	88	99
4. Needle/syringe	1	2	88	99
5. Other (please specify)_____	1	2	88	99

I2. Did you receive anything of the following items and/or information in Georgia? *(Multiple answers are available)*

	Yes	No	DK	NR
1. Brochures/pamphlets/booklets on AIDS	1	2	88	99
2. Qualified information on AIDS	1	2	88	99
3. Condoms	1	2	88	99
4. Needle/syringe	1	2	88	99
5. Other (please specify)_____	1	2	88	99

I4. Have you heard/seen or read any information about the syringe exchange program over the last year?

Yes	1	*Continue*
No	2	***Go to I5***
Don't know	88	
No response	99	

I4.1. Did you get a sterile needle/syringe from this program during the 12 months?

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

I5. Have you heard any information about methadone or suboxon substitution therapy program?

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

Section J. Social Impact

J1. Please recall where do you normally inject drugs? *(Don't read out, several answers are acceptable)*

1. Street
2. Flat
3. Car
4. Main entrance
5. Nonliving space (garage, basement, garret, lift, abandoned home)
6. Open space (Forest, Field, Sea coast)
7. Where I buy drugs
8. Everywhere its possible
9. Other (please specify)_____

J2. Please specify two persons who have the major impact on you in terms of continuing the using of drugs. *(acceptable one answer in column)*

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

J3. Please specify two persons who have the major impact on you in terms of continuing the using of drugs. *(acceptable one answer in column)*

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

Section S. Network size

(Form must be completed by the interviewer)

Coupon Number __/__/__/__/__/__/__/__/__/__/__/__/

#	Question	Response
1	How do you think how many PWIDs are living in Tbilisi?	
2	How many of them do you know personally and the same time they know you by name?	
3	How many of them are above 18 years?	
4	How many of them have injected drugs during last 1 months?	
5	How many of them did you see during the last 1 month?	
6	Would you choose the same person for participation in the study who has given you the coupon? (In case he had not received it before)	1. Yes 2. No 3. Seed
7	How many of them (who are: above 18 years, PWIDs and have injected drugs during the last 1 month) do you think you can bring to participate in the research?	
8	Why did you agree to participate in the study (More than one answer is allowed)	a. Monetary incentive b. Because of blood test s.Influence of the person who gave the coupon to me d. The study topic is interesting/ useful for me e. I had plenty of free time f. Other (indicate) _____

Interviewer, thank the respondent for cooperation and say goodbye.

Q9. During the interview the respondent was:

1. Interested
2. Indifferent
3. Irritated
4. Calm
5. Excited
6. Under the influence of drugs

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_____

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