HIV risk and prevention behaviors among Men who have Sex with Men in Tbilisi, Batumi and Kutaisi, Georgia

Bio-Behavioral Surveillance Survey in 2018

Study Report

Acknowledgements

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Acronyms

AIDS	Acquired Immune Deficiency Syndrome
AI	Anal Intercourse
BSS	Behavioral Surveillance Survey
CIF	Curatio International Foundation
CT	Chlamydia Trachomatis
EECA	Eastern Europe and Central Asia
EU	European Union
GFATM	The Global Fund to Fight AIDS, Tuberculosis and Malaria
GAM	Global AIDS Monitoring
GEL	Georgian Lari
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
KP	Key Population
MSM	Men who have Sex with Men
NCDCPH	National Center for Disease Control and Public Health
NG	Neisseria Gonorrhea
NGO	Non-Governmental Organization
PEP	Post Exposure Prophylaxis
PrEP	Pre Exposure Prophylaxis
PSE	Population Size Estimation
PWID	People Who Inject Drugs
RDS	Respondent Driven Sampling
RDS-A	Respondent Driven Sampling Analyst
RPR	Rapid Plasma Reagin
SHIP	STI/HIV Prevention
SOGI	Sexual Orientation and Gender Identity
SPSS	Statistical Package for the Social Sciences
STI	Sexually Transmitted Infection
TPHA	Treponema Pallidum Hemagglutination Assay
USAID	United States Agency for International development
USD	United States Dollar

Definitions

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

Anonymous-linked testing – testing, where no names are taken but results are linked to a number that only the participant knows.

Consistent condom use – use of condoms every time sexual relations occur, which includes vaginal, anal, or oral sex.

Man who has Sex with Man (MSM) - A man, who has had sexual contacts with other men, independently of his self-identification as gay.

Man who has Sex with Man (MSM) (for the survey purposes) - A man, who has had sexual contacts with other men during the last 12 months, independently of his self-identification as gay.

Regular sex partner for MSM – A sex partner, with whom sexual contacts and established without material remuneration and the relationship is stable.

Occasional (non-regular) sex partner for MSM – A sex partner, for a short period of time, who is not a regular partner and with whom sexual contact is established without materials remuneration.

Commercial sex partner for MSM – A sex partner with whom sexual contact is established in exchange for material remuneration, meaning that MSM paid money or gave some other material remuneration to the partner.

Client for MSM involved in commercial sex – A sex partner with whom sexual contact is established in exchange for material remuneration, meaning that MSM received money or some other material remuneration from the partner.

Executive summary

Introduction

Georgia is among the countries with low HIV/AIDS prevalence 0.4% among adult population but with a high potential for the development of a widespread epidemic. From the early years of epidemic injecting drug use was the major route for HIV transmission, however for the last three years heterosexual transmission is prevailing. According to the national HIV surveillance system, infections acquired through homosexual contact contributed to 19.97% and 19.64% of all newly registered cases in 2017 and 2018, respectively.

The current study represents a next wave of BBS among MSM in Tbilisi and Batumi and the first wave for Kutaisi. In this wave, involving the third city into the study enlarged the study setting. The previous studies were carried out in 2007, 2010, 2012 and 2015. The objective of the 2018 iBBS is to measure the prevalence of HIV, syphilis, hepatitis C, gonorrhoea and chlamydia among MSM, to provide measurements of key HIV risk behaviours and to generate evidence for program planning, advocacy and policy-making. The study was implemented within the GFATM-funded project "HIV risk and prevention behaviors among Men who have Sex and estimating size of this population" by Curatio International Foundation (CIF) and Center for Information and Counseling on Reproductive Health - Tanadgoma.

Methods

The study used a cross-sectional design and a respondent-driven sampling methodology (RDS). The inclusion criteria for participation in the study included the following: age 18 years or older; homosexual anal contact during the previous 12 months; being a resident of Tbilisi, Batumi or Kutaisi and ability to understand and communicate in Georgian.

The study protocol and questionnaires were approved by the Institutional Review Board of the National Center for Disease Control and Public Health.

Recruitment was accomplished by six seeds in Tbilisi, 5 – in Batumi and 5 – in Kutaisi. A sample size of overall 621 respondents: 300 (Tbilisi), 172 (Batumi) and 149 (Kutaisi) was reached. Face-to-face individual interviews were conducted in Georgian by the trained interviewers using interviewer-administered electronic questionnaires. The biomarker component involved analyses of blood specimens for HIV, Syphilis, hepatitis C and urine samples for gonorrhoea and chlamydia.

Data entry and analysis took place with the help of the SPSS (version 13.0) software. Respondent Driven Sampling Analysis tool (RDS-Analyst 3.1.1) software was used for the analysis of waves. The desired sample sizes were obtained in Tbilisi and Kutaisi and nearly reached in Batumi.

Results

Key findings from 2018 survey and comparisons with 2010 as well as 2015 survey data are given below.

Socio-demographic characteristics

- The median age was 25 years in Tbilisi, 25.5 – in Batumi and 27 – in Kutaisi. Majority in all three survey sites had received secondary education; vast majority had never been married, big proportion of MSM had permanent work, and majority's monthly income in Tbilisi and Batumi was over 1000 GEL (394 USD), and in Kutaisi – 500-700 GEL (197-276 USD[1]).

- The study revealed very low proportion of heavy alcohol use or injecting drug use, indicating that there is no overlap with key populations such as MSM and PWID. However, the proportion of MSM reporting using drugs (both injecting and non-injecting) during the last 12 months has increased significantly, mainly due to increased use of non-injecting drug use.

The socio-demographic structure of MSM population studied in 2018 (both in Tbilisi and in Batumi) has slightly changed. The recruitment process in the current survey managed to bring into the survey: more MSM from younger age group of <25 years of age at all three survey sites; more from different socio-economic layers – those with a middle income in Tbilisi and Batumi. Hence, the survey findings illustrate characteristics of the lower and middle socio-economic segment of this population.

As proved by last three surveys alcohol use, and especially injecting drug use is not widespread among MSM. Two high risk groups – MSM and PWIDs – hardly overlap and the infection does not travel from one most-at-risk population to another. Significant increase is observed in using of non-injecting drugs – mainly marijuana - at all survey sites. Having sexual contacts under marijuana is quite common.

Sexual behaviour

- MSM had different types of both male and female sex partners (regular, occasional and commercial). The median number of male partners (anal partners) in the last 12 months was 4 in Tbilisi, 6 in Batumi and 5 – in Kutaisi. The data cannot be compared to the 2015 survey, since the inclusion criteria for the 2015 BBS included also oral partners.

- Condom use during the last anal intercourse was reported by 76.1% in Tbilisi, 71.2% in Batumi and 69.9% in Kutaisi. Almost half of MSM reported consistent condom use during anal sexual intercourse in Tbilisi (48.7%) and Kutaisi (44.9%), and more than one third - in Batumi (34.6%).

- In Tbilisi there is an increase of condom use with all types of partners during the last intercourse

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[1]According to the average exchange rate of the National Bank of Georgia for the fieldwork period in 2018.

however the change is statistically not significant except for condom use during the last AI with occasional partners (2015-2018). In Batumi, although there are some fluctuations in the condom use data, the changes are also not statistically significant.

- Consistent condom use is less prevalent than last AI condom use. Changes in the consistent condom use rates from 2015 to 2018 in Tbilisi with each of partners' types are statistically non-significant. Still, the indicator of overall consistent condom use during the last AI in the last 12 months in Tbilisi has increased significantly. As for Batumi, consistent condom use during the last AI in the last year has not changed significantly both overall and with various types of partners.

- At all three survey sites overall 40-60% of MSM reported having a female sex partner (regular, occasional or paid) in the past year. Since 2015 there is no statistically significant change in condom use at last sex with female partners in both Tbilisi and Batumi. Also, no change is observed in consistent condom use with female partners during the last 12 months. However, the rates are quite high.

- Particularly high risk behaviour such as engagement in group sex activities was reported by not more than one third of MSM in all three cities. Out of those who had group practices in Tbilisi much more reported condoms use at the last group sex, compared to the 2015 data. As for Batumi, condom use during the group sex stayed very high. Engagement in commercial sex was reported by a lower proportion of respondents in Tbilisi, and higher proportion in Batumi. This could be explained by increased tourism in Batumi, as well as probable migration of sex workers MSM from Batumi to Turkey, whereas Batumi is their regular place to live. No statistically significant changes were observed in condom use rates with the clients compare to the data of 2015. Other sexual practices, such as fingering, using sex toys, etc. were not widespread among MSM in all three cities.

The study showed high sexual activity among MSM. The respondents reported a large number of different types of partners, both male and female; however, condoms use rates show tendency of improvement.

Condoms and lubricants
- Awareness about condoms and places to obtain them stays high. As for lubricants use, quite small proportion of MSM reported having used lubricants consistently during anal intercourses during the last 12 months.

- Majority (63.6% in Tbilisi, 76.3% in Batumi and 67.2% in Kutaisi) received condoms and lubricants from preventive programs during the last year. There is increase in the proportion of MSM who have received condoms and lubricants in Tbilisi and Batumi compared to the 2015 BBS.

Awareness on places of condom and lubricant supply is high among MSM, and coverage by prevention programs has slightly increased since 2015.

Knowledge and testing on HIV

- Analysis of Global AIDS Monitoring indicator on HIV knowledge showed significant improvement in Tbilisi since 2010 - from 19.9% in 2010 to 30.4% in 2015 and to 37.4% in 2018. In Batumi this indicator was 35.2% in 2015 and has reached 41.1%. In Kutaisi the knowledge was measured for the first time and demonstrated higher level than in Tbilisi and Batumi – 42%.

- During the recent eight years there was statistically significant improvement in proportion of MSM who were HIV tested on HIV during the last year and know their result from 2010 to 2015. And in 2018 this rate has also increased, although not in a significant way. Still the tendency of growth is clear. Batumi data also demonstrate slight non-significant increase. The new version of the GAM indicator – having been tested on HIV during the last 12 months or knowing one's HIV status – was also more than half at all survey sites (54.7% in Tbilisi, 54.3% in Batumi and 56.3% in Kutaisi).

- Lower percentage remains untested from the whole survey cohort in Tbilisi (70.6% in 2010, 30.3% in 2015 and 18.2% in 2018). In Batumi no significant changes are demonstrated in the proportion of never tested MSM.

- Not more than 10% at all survey sites assessed their personal risk regarding HIV infection as high, majority believed they are at medium risk.

Knowledge about HIV infection is high and has improved over the last years, but this does not improve personal risk perception among MSM. HIV testing uptake is improving gradually.

Stigma, discrimination and violence

Very small percentages of MSM reported having faced various forms of discrimination due to their sexual behaviour or orientation. As for the violence, from the interviewed MSM 10.2% in Tbilisi, 3.6% in Batumi and 8% in Kutaisi reported they had experienced violence because of sexual orientation or sexual behaviour in the last 12 months.

There is statistically significant decrease regarding this indicator among Tbilisi respondents compared to 2015. This can be attributed to the extensive anti-violence and rights defending work carried out by the community organizations, some amendments that were made to the legislative framework, and launching and implementation of mechanisms for protection of rights, e.g. at the Pubilc Defender's Office, at the Ministry of Internal Affairs.

Violence towards MSM because of sexual behaviour or orientation exists but has decreased during the last 3 years.

- Coverage by preventive intervention measured by awareness of where to get a HIV test and receipt of a condom during the last 12 months has increased both in Tbilisi (from 43.5% in 2015 to 61.8% in 2018), and in Batumi (from 41.9% in 2015 to 65.8% in 2018). In Kutaisi – 57.7% were covered by preventive program. Both in Tbilisi and in Batumi program coverage has increased significantly.

- The data according to the renewed GAM indicator for program coverage has demonstrated high proportions of MSM covered by the program. However, the comparison with the previous BBS data cannot be made.

- NGOs, internet and friends seem to be the major and best way for conveying messages to MSM. In Kutaisi TV/radio is also a main source for information. As for the trusted sources, NGOs and internet have been listed by the respondents.

Coverage by preventive programs has been gradually increasing during the last 8 years in Tbilisi and the last 3 years in Batumi. New HIV prevention interventions introduced since 2010 and especially since 2014, as well as strengthened LGBT community organizations should have played a positive role in coverage increase.

Biomarker

- The most alarming finding during the recent years was dramatic increase in HIV prevalence in Tbilisi from 6.4% in 2010 to 25.1% in 2015. When comparing the current data (21.5%) of 2018 to the previous, it was clear that overall there was no statistically significant change in the prevalence during the last 3 years. The same picture is in Batumi prevalence. Kutaisi has also revealed high prevalence among MSM – 9.6%, still this is the lowest among the three cities studied.

- Prevalence of other infections and comparison to the previous BBS survey revealed decrease of the syphilis (from 35% to 7.9%%) and hepatitis C (from 7.1% to 2.6%) prevalence in Tbilisi, and also decrease of hepatitis C prevalence in Batumi (from 18.9% to 1.8%). Chlamydia was found among 8.6% in Tbilisi, 8.7% - in Batumi and 5.1% - in Kutaisi. As for gonorrhea, it was revealed in single cases in Tbilisi and Batumi.

HIV prevalence has not increased in Tbilisi and Batumi; still, MSM population has the highest rates of HIV infection among all key populations in Georgia. Hence, there is necessity to implement prevention strategies that are evidence based and are informed by realities of HIV transmission risks for MSM.

Recommendations

Based on the findings of this study the recommendations focus on: 1) Increasing the coverage of MSM by preventive interventions aimed at risk reduction through implementing various approaches covering all segments of MSM population and specifically targeting young MSM, MSM that use non-injecting drugs and positive prevention strategies among HIV positive MSM; 2) Focusing on reducing HIV-associated, as well as homosexuality-associated stigma and discrimination; 3) Continue conducting systematic surveillance of both behavioral and selected biological markers among MSM, in order to monitor the prevalence dynamics of HIV infection and other STIs; 4) Ensure active recruitment in the following rounds of the survey through introducing more attractive incentive system and maintaining testing for various STIs in the biomarker component; 5) Continue conducting size estimation studies with improved innovative approaches to reach other hidden, stigmatised, or otherwise hard-to-reach population.

Table 1: Summary of Core Indicators

Key indicators	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
Socio-demographic characteristics						
Median age (years)	25.00	300	25.5	172	27.00	149
Education (No education/Elementary /Secondary)	39.3(32.5-46.1)	122/300	54.9(46.3-63.3)	95/172	66.1(59-73.1)	99/149
Education (Higher / incomplete higher)	60.7(53.9-67.5)	178/300	45.1(36.7-53.6)	77/172	34(27-41.3)	50/149
Georgian nationality	99.0(98.0-100)	296/300	100	172/172	100	149/149
Marital status						
Married	8.2(5.1-11.2)	23/300	5.9(1.6-10.4)	9/172	21.4(13.3-30)	30/149
Divorced/Separated	11.1(7.1-15.3)	38/300	13.1(8.6-17.6)	25/172	14(8.4-20)	24/149
Widower	0.6(0-1.3)	2/300	0	0/172	1(0-1.4)	1/149
Never been married	80.3(74.9-85.4)	237/300	80.4(75-86.1)	137/172	64(54.4-73.2)	94/149
No response	0	0/300	0.5(0.2-1.3)	1/172	0	0/149
Alcohol and drug use						
Alcohol use last month						
I did not drink	23.1(17.9-28.3)	73/300	32.1(24.2-40.0)	52/172	23.5(17.9-29.2)	38/149
Every day	2.7(1.1-4.3)	11/300	3.0(0.9-5.1)	6/172	5.8(2-9.5)	10/149
At least once in a week	33.4(27.2-39.6)	97/300	39.3(31.6-46.9)	67/172	33(24.9-41)	48/149
At least once in two weeks	17.1(12.6-21.6)	51/300	9.6(5.5-13.8)	18/172	15.3(10-21)	22/149
Once in a month	20.8(15.1-26.5)	60/300	16.1(10.4-21.6)	29/172	22.6(15.2-29.4)	31/149

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Key indicators	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
Don't know	0.9(0-2)	3/300	0	0/172	0	0/149
No response	1.9(0.1-3.8)	5/300	0	0/172	0	0/149
Drug used during the last 12 months	43.9 (37.5-50.3)	126/300	75(68.1-81.7)	126/172	50.8(41.8-59.7)	76/149
Drug injected during the last 12 months	1.1 (0.1-2.1)	4/300	3.0(1.2-4.7)	7/172	5.1(2.1-8.1)	8/149
Sexual behavior						
Median anal partners in the last 12 months	4.0	300	6.00	172	5.00	149
≤ 24	4.0	141	4.00	81	4.00	62
≥ 25	4.0	159	6.00	91	6.00	87
Used condom at last anal intercourse (AI)	76.1(70.8-81.2)	228/300	71.2(65.4-76.9)	118/172	69.9(61.7-77.8)	104/149
≤ 24	75.2(68.1-82.5)	106/141	71.8(62.7-81.0)	56/81	70.1(57.7-83.1)	44/62
≥ 25	76.6(69.9-83.3)	122/159	70.5(62.5-78.6)	62/91	69.7(58.5-80.9)	60/87
Consistent condom use during AI in the last 12 months	48.7(42.2-55.2)	151/300	34.6(27.8-41.4)	60/172	44.9(37.1-52.9)	69/149
≤ 24	46.6(36.5-56.6)	69/141	28.1(19.3-37.1)	26/81	44.1(31.7-56.7)	28/62
≥ 25	50.9(42.8-58.8)	82/159	39.2(29.4-48.9)	34/91	45.8(34.5-57.0)	41/87
Had anal regular male partner in the last 12 months	76.2 (70.3-82.0)	229/300	84.0(77.9-90.1)	146/172	92.3(88.9-95.7)	136/149
Used condom at last AI with regular partner	71.7(65.4-77.9)	163/229	57.6(50.1-64.8)	87/146	66.1(56.3-75.8)	88/136
≤ 24	73.4(65.2-81.7)	78/110	56.2(43.2-68.4)	42/70	71.3(58.6-84.0)	41/56
≥ 25	69.9(60.1-79.8)	85/119	59(48.9-69.2)	45/76	62.4(49.5-74.8)	47/80
Consistent condom use during AI in the last 12 months with regular partners	47.8(40.0-55.5)	109/229	29.2(22.6-35.9)	44/146	42.6(33.5-51.5)	60/136
≤ 24	45.0(34.6-55.6)	48/110	21.1(11.6-30.8)	17/70	41.6(28.5-54.8)	24/56
≥ 25	50.5(40.4-60.7)	61/119	37.2(26.8-47.6)	27/76	43.2(29.0-57.4)	36/80
Had occasional anal male partner in the last 12 months	72.7(66.9-78.5)	217/300	78.3(71.4-85.4)	137/172	75.9(69.1-82.7)	112/149
Used condom at last AI with occasional partner	82.3(76.8-87.9)	180/217	80.5(73.6-87.3)	112/137	81.1(74.1-88.4)	87/112
≤ 24	84.0(77.2-90.9)	87/103	73.7(60.6-86.1)	49/62	81.7(73.8-90.2)	33/44
≥ 25	80.5 (72.9-88.2)	93/114	86.4(79.7-93.4)	63/75	80.8(71.5-90.3)	54/68
Consistent condom use during AI in the last 12 months with occasional partners	60.2(53.4-67.1)	135/217	62.8(54.5-70.8)	89/137	50.8(41.5-60.4)	57/112
≤ 24	61.5(49.8-73.1)	67/103	59.4(46.8-71.8)	40/62	55.4(43.0-69.0)	22/44

Key indicators	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
≥ 25	58.8(50.2-67.3)	68/114	65.5(52.5-78.4)	49/75	47.7(34.3-61.1)	35/68
Had anal paid male partner in the last 12 months	2.5 (0.6-4.3)	7/300	3.1(0.8-5.3)	6/172	14.4(7.1-21.9)	18/149
Used condom at last AI with paid partner	87.6(65.7-100)	6/7	87.8(67.9-109.6)	5/6	87.1(68.5-100)	15/18
≤ 24	100	2/2	100	2/2	100	2/2
≥ 25	87.6(50.7-100)	4/5	78.1(41.3-100)	3/4	85.0(66.0-100)	13/16
Consistent condom use during AI with paid partner in the last 12 months	87.5(65.9-100)	6/7	87.9(68.4-100)	5/6	52.6(37.8-68.0)	12/18
≤ 24	100	2/2	100	2/2	100	2/2
≥ 25	82.6(51.3-100)	4/5	77.9(39.5-100)	3/4	47.4(21.6-68.3)	10/16
Had male client (received material reward for sex) in last 12 months	6.6(3.8-9.4)	23/300	22.3(16.2-28.4)	37/172	10.6(6.0-15.2)	17/149
Money (received material reward for sex)	92.6(77.6-100)	21/23	100	37/37	94.3(69.2-100)	16/17
Used condom at last intercourse with male client	86.7(77.0-96.5)	20/23	86.4(82.4-90.5)	32/37	50.3(25.6-74.2)	9/17
Had female partner in the last 12 months	42.2(35.4-49.1)	120/300	45.3(38.2-52.4)	78/172	60.0(50.4-69.7)	88/149
Used condom at last intercourse with female partner	72.8(62.9-82.7)	89/120	77.8(68.8-87)	60/78	55.0(45.1-65.2)	52/88
≤ 24	80.4(65.3-95.5)	39/47	77.9(64.2-91.5)	28/35	63.1(46.7-79.0)	21/31
≥ 25	66.5(53.8-79.5)	50/73	77.7(66.5-89.6)	32/43	50.4(37.2-63.8)	31/57
Used condoms at last group sex	77.8(69.3-86.3)	49/60	73.4(57.4-88.9)	34/46	59.0(32.7-83.7)	11/16
Consistent lubricant use during AI in the last 12 months	28.4(22.3-34.7)	87/300	11.9(7.5-16.3)	22/172	7.7(3.8-11.7)	12/149
STIs						
Test for any STI in the last 12 months	69.8(63.1-76.5)	146/201	56.4(47.1-65.5)	59/101	58.2(46.0-70.7)	47/88
≤ 24	77.5(69.8-85.1)	69/87	52.1(36.5-67.8)	25/48	59.7(46.2-73.6)	21/37
≥ 25	64.5(55.6-73.5)	77/114	61.1(45.9-75.7)	34/53	53.9(32.2-75.8)	26/51
Never tested for any STI	34.1(27.7-40.4)	99/300	40.8(33.7-47.9)	71/172	39.9(32.4-47.6)	61/149
Knowledge, opinions and attitudes towards HIV/AIDS						
Have heard about the HIV/AIDS	93.3(89.6-96.8)	283/300	99(97.6-100)	171/172	84.9(78.6-91.1)	126/149
≤ 24	92.6(86.9-98.4)	134/141	98(95.3-101)	80/81	82.4(73.4-91.3)	50/62

Key indicators	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
≥ 25	93.9(90.5-97.3)	149/159	100	91/91	86.7(78.8-94.4)	76/87
Correctly answer 5 questions (GARPR indicator)	37.4(31.0-43.6)	120/300	41.1(32.0-50.2)	74/172	42.0(33.9-50.2)	64/149
≤ 24	31.4(21.8-41.1)	49/141	27.7(18.0-37.4)	23/81	40.3(29.2-51.2)	25/62
≥ 25	43.2(35.4-51.0)	71/159	53.1(39.9-66.5)	51/91	43.3(31.4-55.2)	39/87
Know where to get HIV test	94.9(92.2-97.6)	269/283	86(80.2-91.6)	148/171	83.7(75.6-91.6)	109/126
Test for HIV In the last 6months	42.4(35.8-48.8)	124/283	43(35.1-50.8)	73/171	26.5(18.7-34.2)	37/126
Test for HIV the last 6-12 months period	10.6(7.2-14)	32/283	9(4-14)	16/171	22.6(13.2-22.1)	27/126
Never tested on HIV	19(13.4-24.3)	51/283	24(15.4-32.5)	37/171	21.2(13.3-29.2)	25/126
Knows HIV status	79.4(74.1-84.6)	228/283	77(69.3-84.6)	133/171	77(69.7-84.3)	100/126
Received HIV test last year and know their results	52.1(45.5-59)	154/283	51.1(42.3-59.9)	89/171	51.6(42.9-60.4)	64/126
≤ 24	57.0(48.1-65.9)	75/134	44.5(32.9-56.4)	37/80	54.1(42.1-66.0)	28/50
≥ 25	49.8(41.4-58.1)	79/149	57.4(46.4-68.4)	52/91	50.0(36.8-63.2)	36/76
Tested for HIV in the past 12 months, or who know their current HIV status	54.7(48.6-60.8)	159/283	54.3(46.2-62.2)	93/171	53.6(45.2-61.8)	70/126
≤ 24	55.9(47.5-64.5)	74/134	45.1(34.1-56.1)	37/80	58.6(47.8-69.5)	30/50
≥ 25	53.7(45.6-61.7)	85/149	63.2(52.5-73.9)	56/91	50.3(36.6-63.8)	40/76
Tested for HIV in the past 12 months and whose current HIV status was negative	42.7(36.5-49)	127/283	43.1(33.6-52.7)	97/171	46.2(37.6-54.5)	60/126
≤ 24	48.3(40-57)	67/134	41.3(29.8-52.8)	33/80	54(40.3-67.4)	28/50
≥ 25	38(29.6-46.7)	60/149	44.8(31.9-57.6)	41/91	41(27.7-54.2)	32/76
Current HIV status was positive	13.5(9-18)	32/228	13.1(6.5-19.6)	19/133	9.7(4.4-14.9)	10/100
≤ 24	6.6(2.3-10.9)	7/98	6.6(1.1-12.1)	4/54	5.8(0-12.6)	2/41
≥ 25	81.2(74.2-88.1)	104/130	22.3(9.5-35.3)	15/79	12.4(5.7-19)	8/59
Current HIV status was negative	84.6(79.8-89.4)	192/228	85.4(79-92.2)	111/133	87.5(81.4-93.8)	87/100
≤ 24	6.6(2.3-10.9)	7/98	90.8(83.9-97.9)	48/54	91.6(83.8-99.4)	38/41
≥ 25	81.2(74.2-88.1)	104/130	76.6(63.5-89.4)	63/79	84.7(77.8-91.8)	49/59
Have been given condoms and lubricant In the past three months	61.2(55.5-66.8)	184/300	64.8(56.9-72.8)	115/172	51.7(44.6-58.6)	78/149
≤ 24	63.2(54.8-71.5)	89/141	58.3(47.4-69.1)	49/81	60.5(48.8-72.0)	38/62

Key indicators	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
≥ 25	59.3(51.4-67.4)	95/159	71.4(61.0-81.6)	66/91	45.3(35.0-55.5)	40/87
Experience of violence						
Experienced violence in last 12 months	9.8(6.1-13.4)	30/300	3.6(1.3-5.9)	7/172	11.6(6.5-16.7)	15/149
Preventive program coverage						
Know where to get HIV test and received condoms from preventive programs in the last 12 months	61.8(55.3-66.3)	185/300	65.8(57.5-74.2)	121/172	57.7(48.8-66.7)	88/149
≤ 24	61.0(51.9-70.3)	88/141	60.1(48.5-71.4)	51/81	55.0(43.2-66.6)	35/62
≥ 25	60.6(53.0-68.2)	97/159	70.9(58-84)	70/91	59.9(48.1-71.7)	53/87
Biomarker						
HIV						
Prevalence	21.5(16.2-26.7)	61/300	15.6(9.2-22.1)	23/168	9.6(5.1-14.2)	16/149
≤ 24	12.0(6.0-18.1)	15/141	8.6(1.4-15.6)	6/80	5.1(0-10.3)	4/62
≥ 25	29.1(21.8-36.4)	46/159	22.6(13.1-31.9)	17/88	13.1(6.1-19.9)	12/87
Syphilis						
Prevalence	7.9(4.2-11.6)	24/300	22.1(12.3-31.8)	36/172	0	0/149
≤ 24	6.3(2.2-10.5)	9/141	14.1(3.9-24.6)	10/81	0	0/62
≥ 25	9.3(4.2-14.3)	15/159	29.7(17.7-41.8)	26/91	0	0/87
Gonorrhoea						
Prevalence	2.9(0-6.1)	7/300	1.5(0-3.2)	3/172	0	0/149
≤ 24	3.5(0-8.7)	4/141	1.4(0-3.3)	1/81	0	0/62
≥ 25	2.5(0-5.2)	3/159	1.7(0-3.5)	2/91	0	0/87
Hepatitis C						
Prevalence	2.6(1.0-4.5)	8/300	1.8(0-3.6)	3/172	0	0/149
≤ 24	1(0-1.9)	1/141	1.0(0-2.1)	1/81	0	0/62
≥ 25	4.0(1-7.1)	7/159	2.8(0-6.5)	2/91	0	0/87
Chlamydia						
Prevalence	8.6(5.1-12.1)	26/300	8.7(4.0-13.3)	13/172	5.1(1.9-8.3)	8/149
≤ 24	9.4(3.9-14.9)	14/141	12.1(2.0-22.3)	8/81	4.1(1-7.4)	3/62
≥ 25	8.0(3.2-12.8)	12/159	5.5(1.1-9.8)	5/91	5.9(1.3-10.5)	5/87

Introduction

The overall prevalence of HIV infection in Georgia is 0.4% among adult population (15-49 years of age). As of December 31, 2018 a total of 7385 HIV cases have been registered by the national HIV surveillance system. Increasing number of HIV infections are diagnosed annually. The National Center for Disease Control and Public Health (NCDCPH) reported 673 new cases of HIV in 2018 (18 new cases per 100,000 population), while in early 2000 this number did not exceed to 100. Since the first reports of HIV in the late 1980s in Georgia, injecting drug use was the major route of transmission. However, for the last three years heterosexual contacts became a dominant route of HIV spread. According to the national HIV surveillance system, HIV infections acquired through homosexual contact account to a small proportion of all HIV cases. The homosexual route of transmission contributed to 19.97% and 19.64% of all newly registered cases in 2017 and 2018, respectively[2].

HIV surveillance in Georgia has primarily focused on Key Populations (KP) surveillance using Biomarker-Behavior Surveillance (BBS) among these groups. BBS among KPs has been introduced since 2002 in Georgia, in order to make its contribution to informing the national response to HIV. Save the Children Georgia Country Office conducted the first BBS among MSM in Tbilisi under the USAID-funded STI/HIV Prevention (SHIP) project in 2007.

The following waves of BBS among MSM were conducted in Tbilisi in 2010, 2012 and 2015 under the GFATM funded HIV/AIDS surveillance system strengthening project. Study used respondent-driven sampling methodology to recruit study participants in study setting. The studies were implemented by Curatio International Foundation (CIF) in partnership with Center for Information and Counseling on Reproductive Health – Tanadgoma and the Infectious Disease, AIDS and Clinical Immunology Research Center (in 2010 and 2015) and NCDCPH (in 2012).

The current study represents a next wave of BBS among MSM in Tbilisi and Batumi and the first wave for Kutaisi. In this wave, involving the third city into the study enlarged the study setting. It should be mentioned that the BBS was conducted in conjunction with the population size estimation survey, which will be published as a separate report.

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[2] National AIDS Center database, unpublished.

The objectives of the study are to:

- Measure the prevalence of HIV, Syphilis, Hepatitis C, gonorrhea and chlamydia among the key population;
- Provide measurements of key HIV risk behaviours;
- Generate evidence for advocacy and policy-making.

The study was implemented within the GFATM-funded project "HIV risk and prevention behaviors among Men who have Sex and estimating size of this population" by Curatio International Foundation (CIF), and Center for Information and Counseling on Reproductive Health - Tanadgoma. The laboratory responsible for the biomarker component in the presented study in Tbilisi was Richard Lugar Center for Public Health Research and in Batumi and Kutaisi - regional laboratories of the National Center for Disease Control and Public Health.

Methods

Study design

The study used a cross-sectional study design. Study participants (621 respondents in total) were recruited using respondent-driven sampling (RDS) in three cities of Georgia: Tbilisi, Batumi and Kutaisi.

Sampling procedure

Appropriate sampling is crucial to ensuring that BBS generates reliable picture of trends assessed by this study. Variety of sampling approaches is proposed for recruitment of MSM and other KPs to collect the risk behavior data. Time location sampling (TLS),[1,2] chain referral sampling,[3,4] targeted sampling[5] and community based methods, such as RDS,[6,7,8,9] are well suited for investigating KPs. But the latter has been considered to be more robust methodologically. Unlike snowball sampling, RDS uses a mathematical model for weighting the data collected in order to get a representative sample.[10] RDS has been used widely all over the world; specifically it was employed in over 460 studies from 69 countries.[11]

RDS is based on the premise that peers are better able to locate and recruit other members of a hidden population, compared to outreach workers and researchers. It differs from traditional snowball sampling in three respects: RDS involves a dual incentive system – a reward for being interviewed and a reward for recruiting others into the study; subjects are asked to recruit their peers into the study and recruitment quotas are introduced.[12] The BBS among MSM in 2018 was carried out by using RDS method.

For the current survey the MSM were recruited through RDS in all three study settings – Tbilisi, Batumi and Kutaisi. Inclusion criteria for participation in the study included the following: 1) age 18 years or

older, 2) homosexual anal contact during the last 12 months, 3) being a resident of study areas – Tbilisi, Batumi or Kutaisi, respectively and 4) ability to understand and communicate in Georgian.

Association "Tanadgoma" which is a trusted and well-respected organization with extensive experience of working with the target population conducted fieldwork. The first step was to recruit initial respondents, so-called "seed" participants. The seeds were carefully selected to represent the demographic profile and socially diverse MSM network in Tbilisi, Batumi and Kutaisi (age, income, occupation, education). In total 6 seeds were involved in the study in Tbilisi and 5 seeds – both in Batumi and in Kutaisi.

Following an eligibility assessment and provision of informed consent the seeds underwent the behavioral and biological 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. The seeds were instructed on how to refer other eligible MSM. Each coupon was printed with a serial number, study location (map) and information about 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 (9.8 USD)[3] and an additional incentive of 5 Gel (1.97 USD) for each eligible person they recruited.

The MS Excel based software specifically developed for the coupon tracking[4] was used to manage the data on the coupons given to participants.

To ensure that participants met the eligibility criteria, a verification procedure was followed at the study site. The verification procedure, conducted by an experienced social worker, included a preliminary informal discussion. The participants were asked different questions face to face in a private setting, so that it was possible to detect whether they belonged to the target group. The basic questions asked were related to knowledge and experience of the participants about places and means for MSM to find partners, sexual practices they use with their partners, frequency of partner change, health problems related to homosexual relations they have experienced etc.

The eligible respondents were assigned unique identification number. Also, in order to overcome subject duplication, field coordinators and social workers paid special attention to physical

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[3]According to the average exchange rate of the National Bank of Georgia for the fieldwork period in 2018.
[4]Author HrvojeFuchek, Iskorak, Zagreb, Croatia

characteristics of the participants such as height, weight, scars, tattoos and some biometric measures. Every shift of field workers included some person from the previous shifts, in order to make sure that the same person did not take part in the survey for a second time.

Recruitment results for MSM

The recruitment in Tbilisi started with 2 seeds. Additional 2 seeds were added later, and 2 more - later to ensure sufficient number of respondents. In total, 6 seeds were active in Tbilisi survey. In Batumi, the recruitment started with 3 seeds, and additional 4th and later 5th seeds were added quite soon during the recruitment. In total, 5 seeds were active in Batumi survey. In Kutaisi, the recruitment started with 3 seeds, and additional 2 seeds were also added quite soon during the recruitment. In total, 5 seeds were active in Kutaisi survey.

The basic demographic characteristics of the seeds are presented in theTable 2 below:

Table 2: Basic characteristics of the seeds

Basic Demographic Characteristics of seeds	Tbilisi	Batumi	Kutaisi
	n	n	n
Age groups			
<=24	3	1	3
25-34	2	3	2
>=35	1	1	0
Nationality			
Georgian	6	5	5
Level of education completed			
No education/Elementary/Secondary	2	3	2
Higher/incomplete higher	4	2	3
Marital status			
Never been married	5	3	3
Married	0	0	0
Divorced/Separated	1	2	2
Employment status			
Permanent job	3	1	2
Temporary job	1	2	1
Student	2	0	1
Unemployed	0	1	1
Monthly income			
176-300 GEL	0	2	2
300-500 GEL	3	1	2
500-700 GEL	1	0	0
700-1000 GEL	0	1	0
>=1001 GEL	2	1	0
Refused to answer	0	0	1
Total	6	5	5

All eligible respondents were asked several questions about their network size, e.g.: "How many MSM do you know in Tbilisi/Batumi/Kutaisi?", "Among those, how many do you know personally (you know them by name and they know yours)?", "How many of those are above 18 years"?, "How many of those had homosexual contact during the last 12 months?", "How many of those have you seen during the last 3 months?" and "How many of those (who are over 18 years of age, are MSM, had homosexual contact during the last 12 months) would you consider to recruit for the study?" (See section R in the Annex 2. Questionnaire).

During verification procedure 5 potential beneficiaries in Batumi were excluded from the research, since it was revelaed that they were not MSM. It should be noted, that in Tbilisi two participants were excluded from the survey during the interview, due to denying having sexual contacts with men.

Recruitment in Tbilisi reached the sample of 300 participants and was finalized after 9 weeks. The desired sample size in Batumi (200 participants) was not accomplished and only 172 MSM (including seeds) were recruited. The fieldwork took 11 weeks. As for Kutaisi, the sample to be reached was 150 MSM, and during 8 weeks of recruitment 149 respondents were recruited.

Measurements

The survey instrument used in the study was a standardized behavior questionnaire for MSM which is a part of standardized BBS methodology developed in the country in 2010.[5] The instrument is based on a questionnaire provided in the manual Behavior Surveillance Surveys: Guidelines for Repeated Behavior Surveys in Populations at Risk for HIV, published by Family Health International.[6] The questionnaire with slight modifications was applied in the previous BBSs among MSM in 2007, 2010, 2012 and 2015. For the given BBS a few additional revisions were made to the questionnaire in order to make sure that all indicators of the National and Global AIDS Monitoring reporting are captured. Besides, some questions were added from an instrument used in SIALON-II study "Bio-Behavioral Survey among MSM in 13 Euripean Cities"[7]. A draft version of the questionnaire was pre-tested in all three survey sites, followed by slight corrections in the instrument.

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[5]http://www.curatiofoundation.org(Georgian version)
[6]http://gametlibrary.worldbank.org/pages/19_Surveys_surveillance_English.asp
[7] The Sialon II Project. Report on a Bio-behavioural Survey among MSM in 13 European cities. ISBN 978-88-98768-55-4 Cierre Grafica, 2016. Editors: Massimo Mirandola, Lorenzo Gios, Nigel Sherriff, Igor Toskin, Ulrich Marcus, Susanne Schink, Barbara Suligoi, Cinta Folch, Magdalena Rosińska

"Tanadgoma" staff was selected as interviewers based on familiarity with the target population and previous experience in similar studies. Interviewers' training, which also included orientation on RDS procedures, was provided prior to the field implementation.

The biomarker component involved testing of blood specimens for HIV, Syphilis, hepatitis C, as well as urine testing for gonorrhoea and chlamydia. Sample analyses were done at the Richard Lugar Center for Public Health Research and at the regional laboratories of the National Center for Disease Control and Public Health (Kutaisi and Batumi).

Table 3: Test systems used in biomarker component

Biomarker	Screening	Confirmation
HIV	TOYO Anti-HIV 1/2 TEST, WB/S/P (TURKLAB TIBBI MALZEMELER SAN. TIC. A.S., Turkey)	Xpert® HIV-1 VL, Cepheid Abbott Architect HIVAg/Ab Inno-Lia HIVI/II Score, Fujirebio
Syphilis	Syphilis Rapid Test Cassette (BIOTECH,INC, USA)	Syphilis RPR, Human diagnostics Syphilis TPHA, Human diagnostics Inno-Lia Syphilis Score, Fujirebio
Hepatitis C	HCV Hepatitis C Rapid Test (Healgen Scientific Limited Liaability Company, USA)	Xpert HCV VL, Cepheid Abbott Architect HCV core Ag Abbott HCV VL
Gonorrhea		Xpert CT/NG, Cepheid
Chlamydia		Xpert CT/NG, Cepheid

The study protocol and questionnaires were approved by the Institutional Review Board of the National Center for Disease Control and Public Health (certificate IRB0000215, Protocol #2018-038). During the study design and field implementation the following ethical issues were taken into consideration:

- Participation in the surveys was strictly voluntary. Participants were free to withdraw at any time and were informed that refusal or withdrawal would not affect services they would normally receive.
- Complete anonymity was ensured. No names or personal identifiers were recorded; all documentation was labelled only by a study number.
- The staff engaged in the study, were trained in discussing sensitive issues and protecting participants' confidentiality and human rights.
- Individuals identified as positive for HIV or any other infections were offered counselling and referred to designated facilities for further testing and/or free treatment.

Data collection

The data collection period in Batumi was from October 10, 2018 to December 27, 2018 – 11 weeks; in Tbilisi the fiedwork period was from October 15, 2018 and continued till December 21, 2018, lasting almost 9 weeks. And in Kutaisi the fieldwork took 8 weeks, starting from November, 5, 2018 to December 27, 2018. Interviews were available from 11:00 pm to 19:00 pm in Tbilisi, from 12:00 pm to 20:00 – in Batumi, and from 11:00 pm to 19:00 – in Kutaisi, Monday to Friday, at a fixed site – the Tanadgoma offices in all three cities.

After registration, the participants were taken to interview rooms to maintain privacy. Face-to-face individual interviews were conducted in Georgian by the trained interviewers using interviewer-administered electronic questionnaires. A small number of hard copies of questionnaires were printed out in case of technological issues. Some RDS forms were paper-based and filled in manually by the interviewers. Each interview lasted on average 40-60 minutes (since it included BBS questionnaire sections, taking the laboratory samples and then PSE questionnaire sections). Following the completion of the BBS questionnaires, participants were asked to voluntarily provide a blood and urine samples for testing on infections (see above, section "Measurements"). If a participant agreed, pre-test counselling was provided and 3 screen tests were conducted with capillar blood. For each screening positive test, 5 ml of blood was collected on site by a trained nurse. The blood was centrifuged and samples were transported to the Richard Lugar Center for Public Health Research in Tbilisi. The transportation in Tbilisi was done based on the number of samples collected: urine samples were transported everyday, and blood samples – approximately 2-3 times a week. Transportation of samples from Batumi to the regional laboratories of the NCDCPH was as follows: urine was transported every day, and blood samples – 3 times a week. As for Kutaisi, all samples were taken to the regional laboratory of the NCDCPH on daily basis. The blood tests were anonymous-linked. Each MSM that volunteered to provide a blood and urine specimen was given an identification number, which was recorded on the blood tube, urine container and the questionnaire. In addition the participant was given a card with the identification number and with the organization's telephone number and address. The testing results were reported back to the study site within three weeks. The participants were asked to return, with their identification card, to receive their results. Post-test counselling was provided on site.

Internal quality control of the fieldwork was provided by the Tanadgoma staff and external control – by the CIF staff. The completed questionnaires were checked for consistency, and any problems identified were followed up with the interviewers.

Data processing and analysis

Data entry and analysis took place with the help of the SPSS software. Examining frequencies and cross-tabs and checking the logic of all variables in the datasets resolved any discrepancies. Hard and electronic copies of the completed questionnaires were kept at the CIF office.

Respondent Driven Sampling Analysis tool (RDS-Analyst 3.1.1) software was used for the analysis of waves. RDS-A is provided for the analysis of RDS data and it allows for many types of analysis. Using Gile's SS (Sequential Sampler) is recommended when the sample is a significant fraction of the target population.[13] It is based on the inclusion probabilities of members of the sample, which are based on reported network sizes. An estimate of the population size is required to use this estimator. Gile's SS estimator, imputed visibility enrollment order and estimates for PSE were applied during analysis. Comparison of selected indicators was done using 2015 and 2018 datasets.

Description of the target group

There is certain hierarchy reflected in existence of different subgroups in the MSM population in Tbilisi. This has been proved also by outreach experience of Tanadgoma, which has more than seventeen years working experience with this population. Since then the internal structure of the MSM population has not changed and is valid for 2018. MSM population can be divided according to two parameters: **social status** ("with money" and "without money", using the language of MSM) and **involvement in commercial sex**.

1. Description of MSM according to the social status:

1.1. MSM with a lower socio-economic background

This group includes mainly: MSM who arrived in the capital from other cities/regions in search of employment or other material benefits; and MSM that live in the capital with low or no income and mostly unemployed.

1.2. MSM with a relatively higher socio-economic background

This group includes persons with a relatively higher income, who can afford to visit bars, clubs and other gathering places; and so called "elite" gays, which include persons in high positions, for example, representatives of show business, in general, public faces.

As a rule, representatives of these two – high and low – tiers do not meet each other in everyday life. However, there is some type of relationship between them: mainly, generally knowing each other or

having sexual contacts with persons belonging to the other group. The higher the social level of the MSM, the less the probability that he is involved in commercial sex as well as a lower frequency of occasional sexual contacts. And vice versa, the lower the social level of MSM, the higher the number of sexual partners and the higher the number of cases of involvement in commercial sex.

2. Description of MSM according to involvement in commercial sex:

2.1 MSM involved in commercial sex

This group includes mainly MSM standing at the bottom of socio-economic ladder and in exchange for material remuneration offer sexual services to other men.

The main reasons for involvement in commercial sex are: money, the opportunity of frequent change of partners and the possibility of having a good time.

This category of MSM can be characterized as representatives of the lower social tier, who are in dire economic situation; are residents of the capital, or from a regional city/village living in the capital for some time; the majority have no other occupation or job (quite a lot out of them are students); they tend not to be married or are separated, they have occasional or permanent female partners. They can be accessed at: the open gathering places in the city (so-called MSM cruising areas); as well as some closed places - facilities (baths, saunas etc), which are known to be places where MSM can meet each other.

2.2 MSM not involved in commercial sex

This group includes mainly MSM that belong to middle and a relatively higher socio-economic background. These MSM mainly establish homosexual contacts with other men for the following reasons: pleasure - satisfying sexual needs, the opportunity of a frequent change of partners.

This category of MSM can be characterized as representatives of a higher social tier with a normal economic situation; they are residents of the capital, or from a regional city/village, that have been in the capital for some time; the majority have some other occupation or job; they tend to be married, with children, or have occasional or permanent female partners. They can be accessed at: the open gathering places in the city (known as places of gathering for MSM commercial sex workers), where they are looking for commercial or non-commercial sexual partners; the open gathering places in the city (known as places of gathering for MSM); closed entertainment places (cafes, bars, baths, movie theatres, etc), which are known to be places where MSM can meet each other.

Study Results

Socio-demographic characteristics

The median age of the recruited MSM was 25 years in Tbilisi, 25.5 years – in Batumi and 27 years – in Kutaisi. 50% of the respondents in Tbilisi were young - were less than 25 years of age. In Batumi the younger age group made up to almost half of the survey respondents. In Kutaisi the same age group represented 41.6% of the respondents.

Figure 1: Age distribution
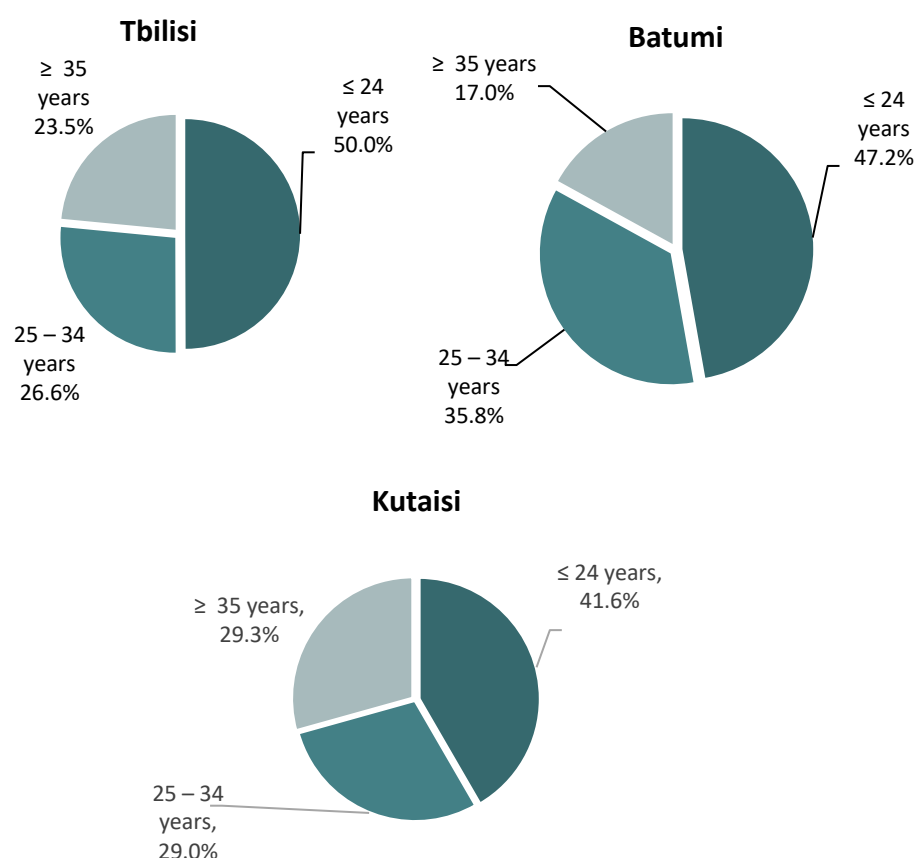
The largest percentages of MSM in all three cities received secondary education (38.2% in Tbilisi, 57% - in Batumi and 63.4% – in Kutaisi), and one fourth and more – higher education (36.1% in Tbilisi, 25% - in Batumi and 26.5% - in Kutaisi). It is noteworthy that more than half of MSM in Tbilisi had received higher or incomplete higher education.

Vast majority of the respondents were of Georgian nationality (only 4 persons in Tbilisi were of other nationality). Big majority in Tbilisi (80.3%), Batumi (80.4%) and Kutaisi (64%) were never married. Only 8.2% in Tbilisi, 5.9% in Batumi, but much more – 21.4% - in Kutaisi were currently married.

Big proportion of MSM had permanent work (46.2% in Tbilisi, 38.5% - in Batumi and 42% - in Kutaisi). Less than one third of the respondents had no occupation (27.7% in Tbilisi and 28.8% - in Batumi, 17.1%

in Kutaisi). Fewer had temporary work in Tbilisi and more – in Batumi and Kutaisi. Only 8.1% in Tbilisi, 2.3% - in Batumi and 6% - in Kutaisi were students.

Monthly income of more than 1000 GEL (394 USD[8]) was reported by the largest proportion of the interviewed MSM in Tbilisi and Batumi (19.6% in Tbilisi and 29% - in Batumi). In Kutaisi the biggest proportion reported having income of 500-700 GEL (197 - 276 USD). Less than 10% in all three cities had monthly income less than 175 GEL[9] (69 USD). To summarize, monthly income over the half of MSM in all three cities is more than 500 GEL (197 USD).

Figure 2: Monthly income in GEL
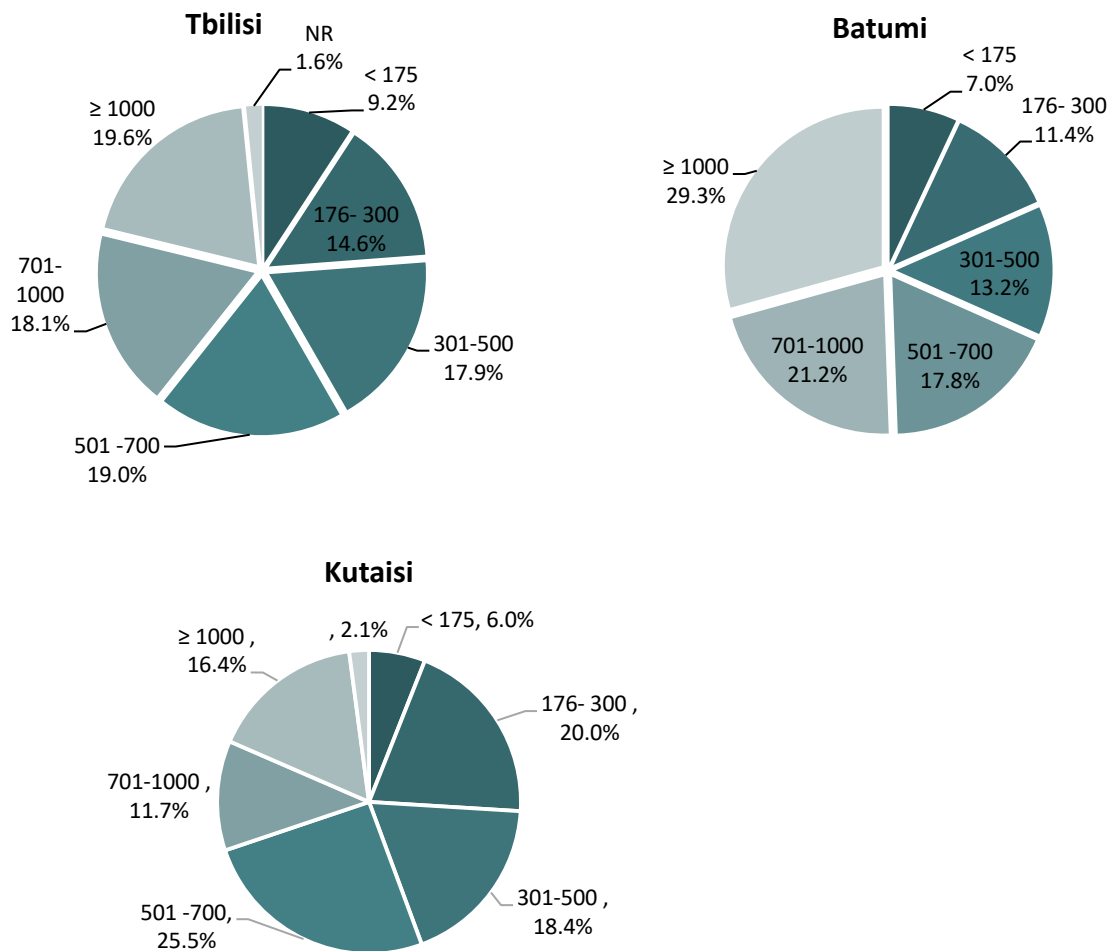
Alcohol and drug use

The study investigated alcohol use during the last month and drug use for the 12 months period prior to survey, also questions were asked about sexual contacts under influence of alcohol and drugs and sexual contacts with the injecting drug users.

Heavy alcohol consumption (every day) was mentioned by very small number of the respondents (2.7% in Tbilisi, 3% - in Batumi and 6% - in Kutaisi).

Drug use (both injecting and non-injecting) during the last 12 months was reported by 44% in Tbilisi, 75% in Batumi and 48% in Kutaisi.

Non-injecting drug use was mentioned by 44% of the respondents in Tbilisi, 75% - in Batumi and 48% - in Kutaisi. The percentages are the same as for overall drug use, since all of those respondents who reported drug use, had used non-injecting drugs. Marijuana was the most frequently cited non-injecting drug.

As for the injecting use, it was reported by very small proportion of the respondents: 1.1% in Tbilisi, 3.7% - in Batumi and 4.7% - in Kutaisi. Heroin was the most frequently cited -injecting drug. Use of shared needle/syringe has not been mentioned by the respondents.

In Tbilisi 9.7%, in Batumi – 25.7% and in Kutaisi – 5.3% of respondents reported having had sex under the influence of alcohol during the last 12 months. As for having sexual contacts under the influence of drugs, marijuana was reported by some, not high percentages of the MSM (6.2% in Tbilisi, 6.5% in Batumi, 10.9% in Kutaisi).

Very small number of respondents in Batumi and Kutaisi (only 6 cases in each city) and 12.8% - in Tbilisi had unsafe sex with injecting drug user during the last 12 months.

Figure 3: Use of non-injecting drugs during the last 12 months

Use of non-injecting drugs during the last 12 months
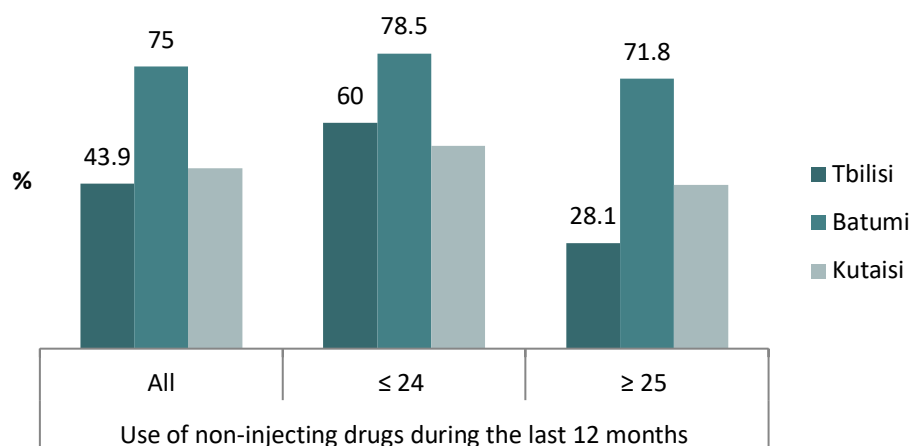
Figure 4: Types of non-injecting drugs used during the last 12 months
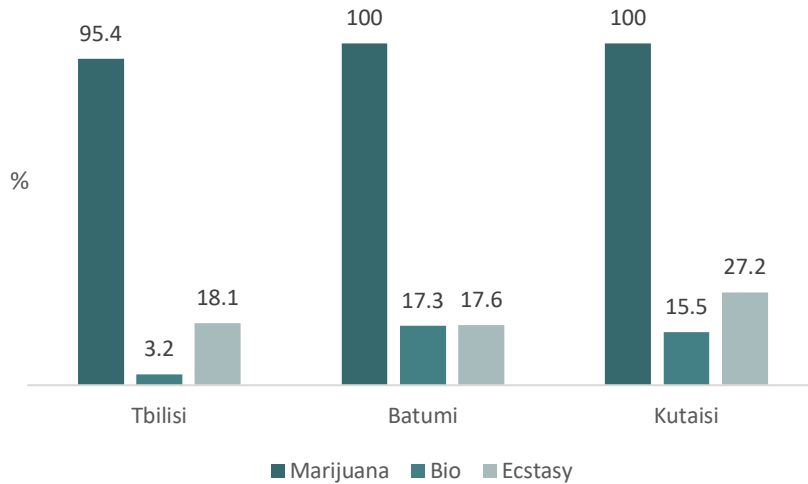
Sexual behavior

Male partners

Median age at the first anal intercourse is 18 in Tbilisi and Batumi and 17 – in Kutaisi. Majority of the interviewed report that they are both penetrative and penetrating partners (59.6% in Tbilisi, 70.7% in Batumi and 50% - in Kutaisi).

The median number of male partners (anal partners) in the last 12 months was 4 in Tbilisi, 6 in Batumi and 5 – in Kutaisi. From 2 to 5 male partners were the most frequent response. Having one partner during the last year was mentioned by less than one fifth of respondents in all three cities.

Condom use during the last anal intercourse was reported by 76.1% in Tbilisi, 71.2% in Batumi and 69.9% in Kutaisi. If considering this indicator in the age groups <25 and >25, almost the same proportion as in the whole cohort reported condom use at the last AI.

Figure 5: Used condom at last anal intercourse

Used condom at last anal intercourse (AI)
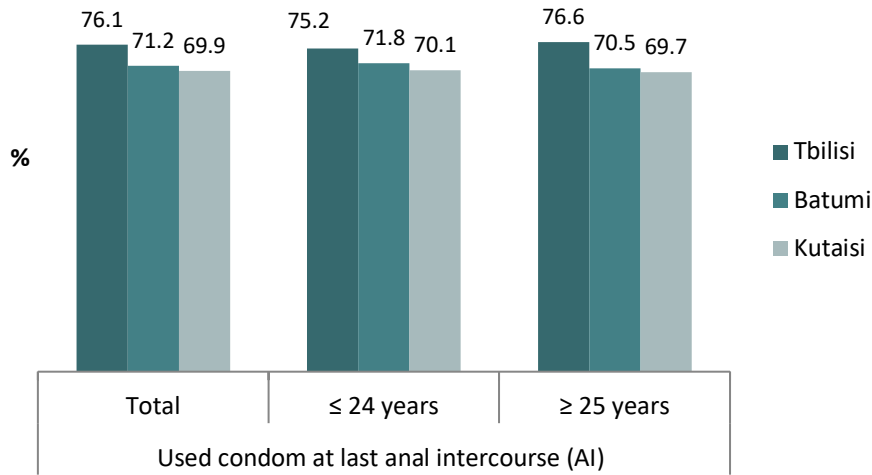
Participants were asked how frequently they used condom during anal intercourse (AI) with any type of partner during the last 12 months. Consistent condom use was defined as "always" use of condom in the last 12 months. Almost half of MSM reported consistent condom use during anal sexual intercourse in Tbilisi (48.7%) and Kutaisi (44.9%), and more than one third - in Batumi (34.6%). In all three cities older MSM tend to use condoms in a more consistent manner, compared to the younger group.

Figure 6: Consistent condom use during AI in the last 12 months

consistent condom use during AI last 12 month
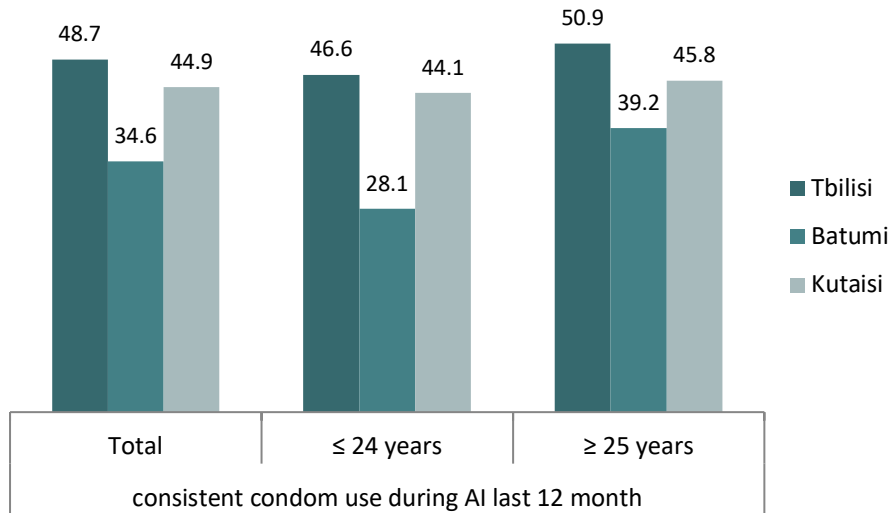
The study also looked at various sexual behaviour patterns with different types of male sexual partners (regular, occasional, and commercial).

Having regular male partners during the last 12 months was reported by majority of MSM in all three cities (76.2% in Tbilisi, 84% - in Batumi and 92.3% - in Kutaisi).The median number of this type of

24

partners was 2 for Tbilisi and Batumi and one – for Kutaisi. About three fourths of interviewed MSM in three cities (72.7% in Tbilisi, 78.3% in Batumi and 75.9% - in Kutaisi) had occasional anal male sexual partners with five median partners in Tbilisi and Kutaisi and 7 – in Batumi. Only 2.4% of MSM in Tbilisi, 3.1% - in Batumi and 14.4% - in Kutaisi said that they paid for sex with a male partner for anal sex during the last 12 months; median number of commercial partners was 2 in Tbilisi and Kutaisi and 2.5 - in Batumi.

Proportion of MSM who reported condom use at their last AI with different types of partners varies from lowest 57.6% with regular (in Batumi) to highest 87.8% with paid (in Batumi) partners. Given that the denominators for paid partners are very small these proportions should be interpreted with caution.

The respondents were asked to indicate frequency of protected sex with all types of partners in the last 12 months. Consistent condom use was defined as "always" use of condom during the last 12 months. It is noteworthy that consistent condom use with regular partners was less prevalent compared to occasional and paid partners. Besides, consistent condom use with reguar sexual partners was higher in Tbilisi, and with occasional as well as paid partners – in Batumi. Batumi demonstrated much lower consistent condom use with regular, than occasional and commercial partners.

Figure 7: Using condoms during last AI and consistent condom use with regular, occasional and commercial partners
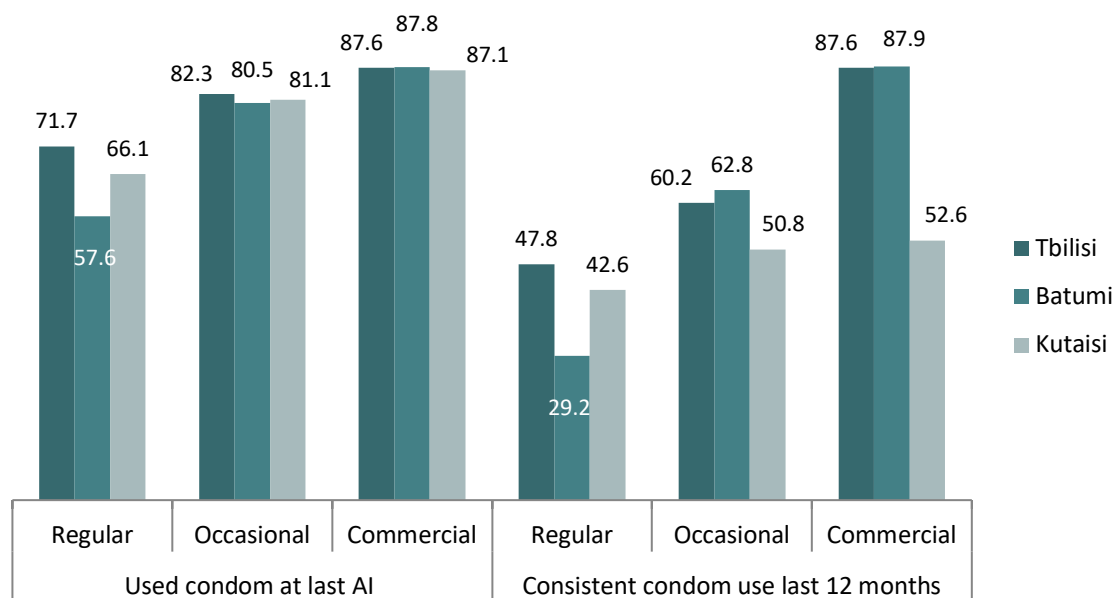
When asked about resons for not using condoms with the regular partners, majority of MSM responded they thought it was not necessary (38.9% in Tbilisi, 31% in Batumi and 58.1% - in Kutaisi).

Respondents were also asked whether they discussed HIV-related issued with their male partners. To a question, whether they knew HIV status of their last anal male partner, majority in all three cities

answered, that they think, he was HIV negative (35.6% in Tbilisi, 41.2% in Batumi and 38.1% in Kutaisi). At the same time, majority in Tbilisi told their last anal partner, they they were HIV negative. However, in Batumi and Kutaisi bigger proportion of MSM did not say anything about their HIV status. When asked if they knew about their partner being on some kind of preventive treatment (PrEP or PEP), majority in Tbilisi refused to answer this question. In Batumi and Kutaisi majority said that they do not know or do not remember if their partner was on some preventive treatment.

Sexual behavior with male partners abroad

The survey also asked some questions about safe sexual practices while being abroad during the last 12 months. Out of Tbilisi respondents 7.8% reported having sexual contacts with men abroad. Among Batumi respondents this proportion was much higher – 23%. And in Kutaisi it was 9.7%. Out of these MSM, almost half of Tbilisi respondents – 48.2% reported having used condoms. In Batumi and Kutaisi these proportions were higher – 81.9% and 74.7%, respectively.

Female partners

At all survey sites overall quite a few MSM reported having a female sex partner (regular, occasional or paid) during the last 12 months (42.2% in Tbilisi, 45.3% in Batumi amd 60% in Kutaisi), with a median number of 2, 3 and 4 partners, respectively.

Majority of the respondents (73% in Tbilisi, 77.8% in Batumi and 55% in Kutaisi) said they used a condom at last sexual intercourse with their female partner. Out of those MSM who had a regular female partner, consistent condom use during the last 12 months was reported by 41.5% in Tbilisi, 58.7% in Batumi and 37.1% - in Kutaisi. With occasional female partners reported consistent condom use was higher than with regular ones in Tbilisi and Kutaisi (65% in Tbilisi and 48.3% in Kutaisi) and almost the same in Batumi (57.7%).

Figure 8: Consistent condom use with regular, occasional and commercial female partners
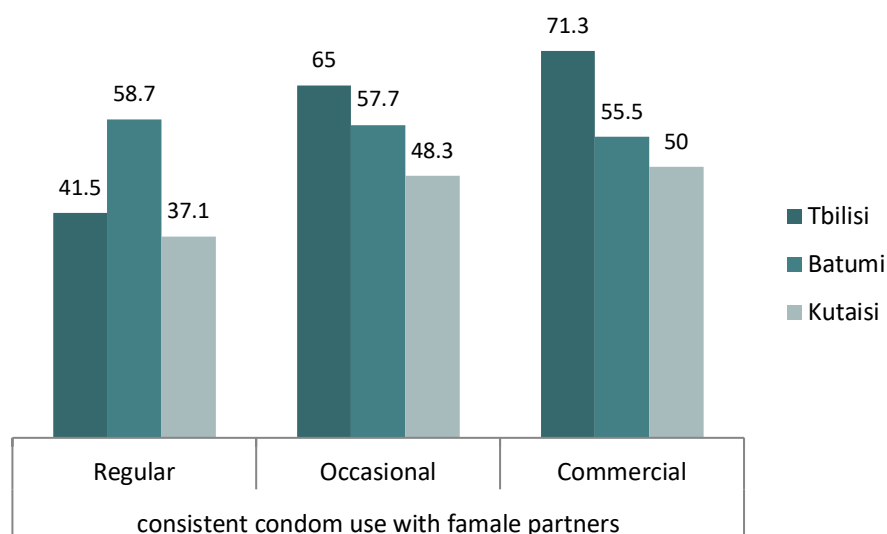
Engagement in commercial sex

The respondents were asked whether they have received any type of material remuneration for sex in the last 12 months. In Tbilisi 6.6% of MSM, in Batumi – 22.3% and in Kutaisi – 10.6% responded positively to this question, meaning that they were engaged in commercial sex, however, only 55% of them in Tbilisi, 35.5% - in Batumi and 17.5% - in Kutaisi identified themselves as sex workers. Median number of clients during a working day is 4 in Tbilisi, 1 – in Batumi and 3 – in Kutaisi.

The majority reported receiving money from their clients. The cost of services differed; prevalent amounts were: in Tbilisi – more than 100 GEL (39 USD) per service (22.4%), in Batumi – 50-100 GEL (19 - 39 USD)[10] (43.4%) and in Kutaisi – 20-50 GEL (8 - 19 USD) (24.5%). Total monthly income from this occupation for the majority of MSM in Tbilisi is 100-200 GEL (39 - 78 USD), 200-300 GEL (78 - 118 USD) in Batumi, and 100-200 GEL (39 - 78 USD) in Kutaisi.

Big majority of those engaged in commercial sex in Tbilisi and Batumi said they used a condom during their last anal intercourse with the client (86.6% and 86.4%, respectively). As for Kutaisi, only 50.4% said they used a condom. Proportion of respondents who reported consisted condom use during the last 12 months with their clients was again higher in Tbilisi and Batumi (67.1% and 60%, respectively), and lower in Kutaisi (28.9%).

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[10]According to average exchange rate of the National Bank of Georgia for the fieldwork period in 2018.

Group Sexual Practices

Not big proportion of MSM in all three cities were involved in group sex during last year: 19.2% in Tbilisi, 27.9% - in Batumi and 10.5% - in Kutaisi. Involvement in only male group sex is the most prevalent practice in Tbilisi and Batumi, however, mixed groups are prevailing in Kutaisi. As for condom use, majority reported this behaviour during the last group sex: in Tbilisi – 78%, in Batumi – 73.3% and in Kutaisi – 62.9%.

Other sexual practices

Small percentage of MSM reported other sexual practices, such as fingering, fisting, using sex toys, etc. The highest proportion in Tbilisi, Batumi and Kutaisi indicated fingering (15%, 19.5% and 10.6% respectively).

Condoms and Lubricants

Vast majority of MSM (98.6% in Tbilisi, 98.4% in Batumi and 99.5% in Kutaisi) know where to get condoms and the most frequent response about the places to get condoms is pharmacy. Majority (63.6% in Tbilisi, 76.3% in Batumi and 67.2% in Kutaisi) received condoms and lubricants from preventive programs during the last year.

Quite small proportion of MSM reported having used lubricants consistently during anal intercourses during the last 3 months (28.1% in Tbilisi, 11.7% - in Batumi and 7.2% - in Kutaisi).

Sexually Transmitted Infections (STI)

Majority (90% in Tbilisi, 95% in Batumi and 87.5% in Kutaisi) were aware of Sexually Transmitted Infections. The respondents were further asked to list STI symptoms. Up to 90% at all three survey sites were able to mention at least one STI symptom.

In Tbilisi 69.8% of MSM and in Batumi and Kutaisi - more than half of the respondents (54% and 54.2%, respectively) reported taking any STI test during the last 12 months. None of the interviewed respondents in all three cities were tested for STIs during the last 3 months. More than one third of respondent in Tbilisi – 34.1%, and even more – in Batumi (39%) and Kutaisi (40.5%) reported never being tested for STIs during their lifetime, listing "no need for testing and knowing one is healthy" as a main reason.

With regard to STI experience in the last 12 months 21.4% in Tbilisi, 15.2% - in Batumi and 25.6% - in Kutaisi reported having some STI symptoms.

Among those who had ever been tested for STIs, majority named prevention as a main reason for testing; about one fourth undertook testing after the appearance of symptoms in Tbilisi and Batumi, and more (47.1%) - in Kutaisi.

When asked about their actions during the symptomatic period, the most prevalent answer was "referred to a health facility" – 14.4% in Tbilisi, 19.1% in Batumi and 23.3% in Kutaisi. The second most frequent answer was having stopped sexual intercrouse during symptoms. Informing sexual partners about STI symptoms was the third most prevalent answer to this question. Condom use was reported only by 5.2% in Tbilisi, 6.3% in Batumi and 6.1% in Kutaisi. Applying self-treatment during STI symptomatic period was reporting by single cases in Tbilisi and Batumi, and no one – in Kutaisi.

Out of those MSM, who had experience STI symtoms during the last 12 months, small percentage had used proctologist's service (10.3% in Tbilisi, 2.8% in Batumi and 7.8% in Kutaisi) and just several cases (3 in Tbilisi, 2 in Batumi) reported being circumcised.

Knowledge / opinions and attitudes towards HIV/AIDS

Vast majority of the interviewed MSM (94.5% in Tbilisi, 99% in Batumi and 83.6% in Kutaisi) were aware of HIV/AIDS. More than one third of the respondents in Tbilisi (37.4%) correctly answered all 5 questions according to the Global AIDS Monitroring (GAM) indicator on knowledge of HIV prevention.[11]In Batumi this indicator reached 41.1% and in Kutaisi – 42%. Although majority correctly cited ways of HIV transmission and preventive measures, misconceptions about HIV transmission through mosquito bite still exists among MSM, and proportion of correct answers to this particular question falls out of the total picture of prevalently correct answers. In Tbilisi only one fifth of the respondents could answer this questions correctly.

The Figure 9 below shows the proportion of MSM who responded correctly to each of the knowledge questions:

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[11]Having sex with one faithful, healthy partner reduce the risk of HIV transmission (yes); Can using condoms during every sexual contact reduce risk of HIV transmission (yes); Healthy - looking person can have HIV (yes); Can a person get HIV from mosquito bites (no); Can a person get HIV by sharing meal with someone who is infected (no).

Figure 9: Knowledge on HIV/AIDS prevention
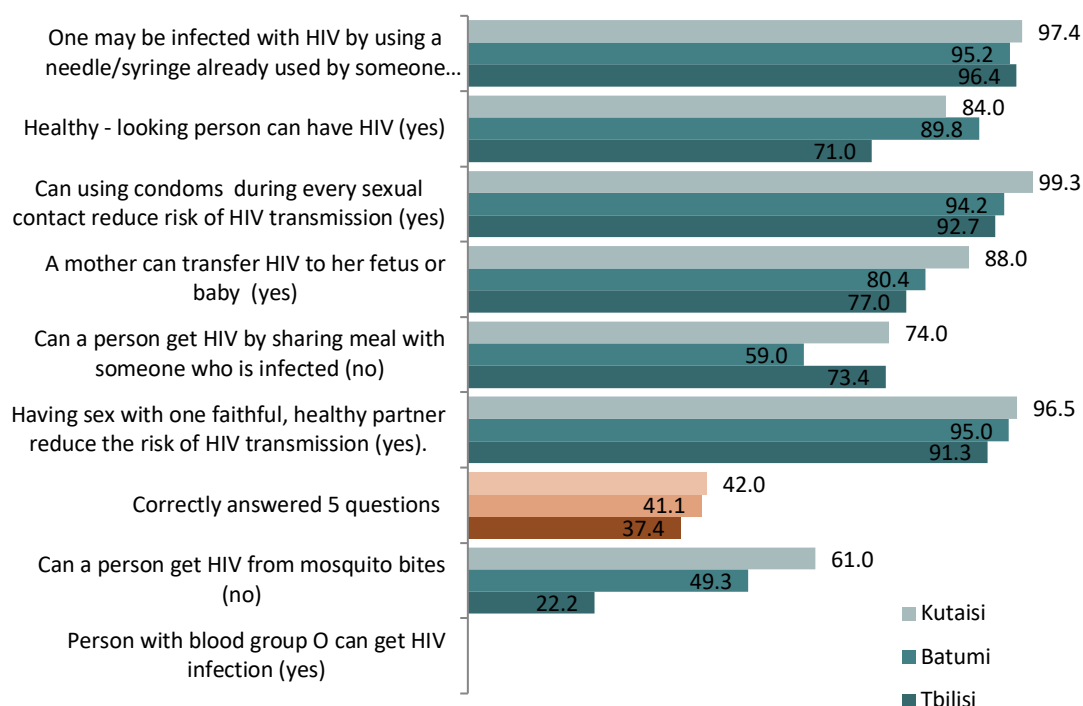
Big majority of interviewed MSM (94.9% in Tbilisi, 86% in Batumi and 83.7% in Kutaisi) knew where to get HIV test. Quite high proportion of the interviewed in all three cities – 67% in Tbilisi, 66% in Batumi and 63% - in Kutaisi was tested during the last 12 months and the remaining was tested prior to that.

The survey also asked questions about current HIV status known to the respondents. Up to 80% of MSM knew their HIV status (79.4% in Tbilisi and 77% both in Batumi and Kutaisi). In Tbilisi 13.5% of MSM knew they were HIV positive, in Batumi this proportion was 13.1% and in Kutaisi – 9.7%. Still there are 18.3% of the respondents in Tbilisi, 24% - in Batumi and 21.2% – in Kutaisi who have never been tested for HIV at all.

The GAM indicator of being tested during the last year and knowing the results of the test (old version of the GAM indicator) has reached 52.1% in Tbilisi, 51.1% - in Batumi and 51.6% - in Kutaisi.

New version of the GAM indicator – being tested during the last 12 months or knowing their current HIV status – has been measured as well and reached 54.7% in Tbilisi, 54.3% in Batumi and 53.6% in Kutaisi.

Figure 10: Were tested on HIV during the last 12 months and know their results
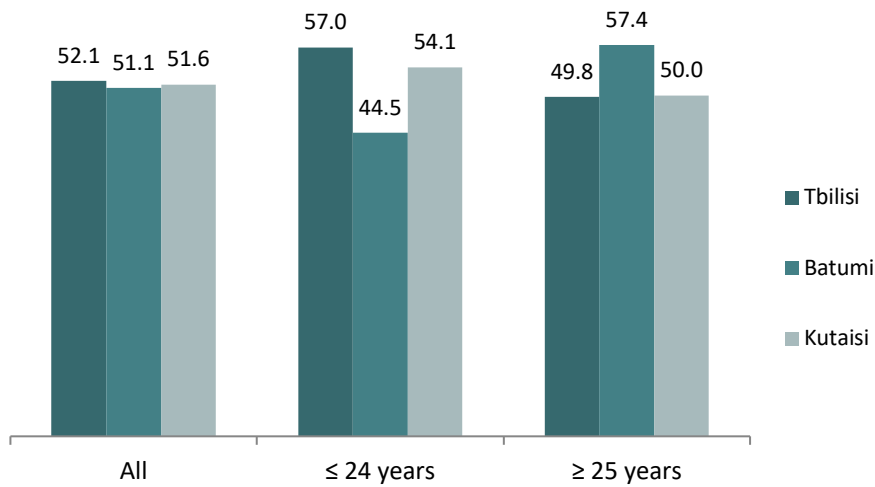
It is also important to note at all three survey sites majority of the respondents assessed their personal risk regarding HIV infection as medium (67.1% in Tbilisi, 66.6% in Batumi and 66.2% – in Kutaisi), and not more than 10% believed they are at high risk.

Figure 11: HIV risk perception
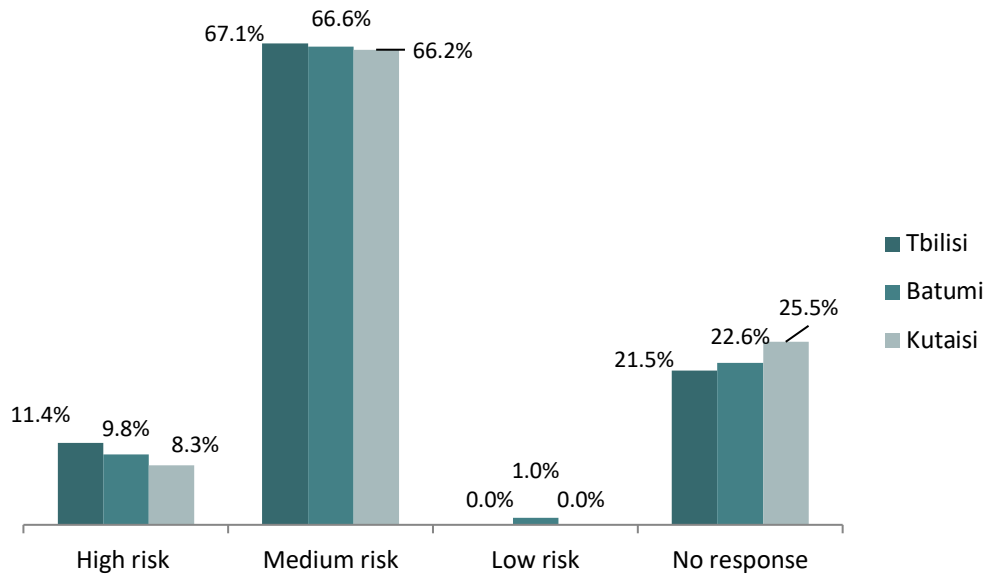
Stigma, discrimination and violence

In the 2018 survey some questions were added to the questionnaire about stigma and discrimination that MSM are facing. Very small percentages of MSM in all three cities reported that they had faced cases such as denying medical services, or employment, or having problems while renting an apartment. As for being denied help from police, 11 respondents reported this in Tbilisi.

From the interviewed MSM 10.2% in Tbilisi, 3.6% in Batumi and 8% in Kutaisi reported they had experienced violence because of sexual orientation or sexual behaviour in the last 12 months. Out of the reported cases in Tbilisi, the majority were verbal assaults (83.5%), followed by physical (43.2%) and sexual violence (3.8%). As for 7 Batumi cases, 4 out of them were physical violence. In Kutaisi 15 MSM reported cases of violence, majority being physical. In majority of the cases the perpetrator of the violence was a stranger, in the rest of the cases an acquaintance and family member/relative.

When asked about referring to police in cases of discrimination and violence, about half of the respondents in each city responded positively (46.7% in Tbilisi, 51.1% in Batumi and 55% in Kutaisi). The rest of the MSM did not notify police, some because of not expecting an adequate reaction, some – for other reasons.

Program coverage / Media

The respondents were asked to list all sources of information on these diseases. Internet was listed as a primary source of information in Tbilisi (60%), followed by NGOs (57.8%) and friends (20.8%). As for Batumi and Kutaisi, primary sources were NGOs' representatives (55.7% Batumi, 49.8% - Kutaisi). However, the second source in Batumi was internet (53.1%) and in Kutaisi – TV/Radio (43.9%) , and the third source were friends in Batumi (44.3%) and internet – in Kutaisi (43%). Among the trusted sources were listed: In Tbilisi – internet (47.5%), in Batumi and Kutaisi – NGO representatives (52.3% and 55.3%, respectively).

The respondent was considered to be covered by preventive program interventions if a) he knew where to go for HIV testing and b) he had received condoms/lubricants during the last 12 months. In Tbilisi 61.8%, in Batumi – 65.8% and in Kutaisi – 57.7% were covered by preventive program. The renewed GAM indicator for program coverage has formulated the questions differently. One of the questions by which the respondent is considered to be covered by preventive program is having received condoms/lubricants during the last 3 months. The data for this indicator are: in Tbilisi – 61.2%, in Batumi – 64.8% and in Kutaisi – 51.7%.

Figure 32: Preventive program coverage
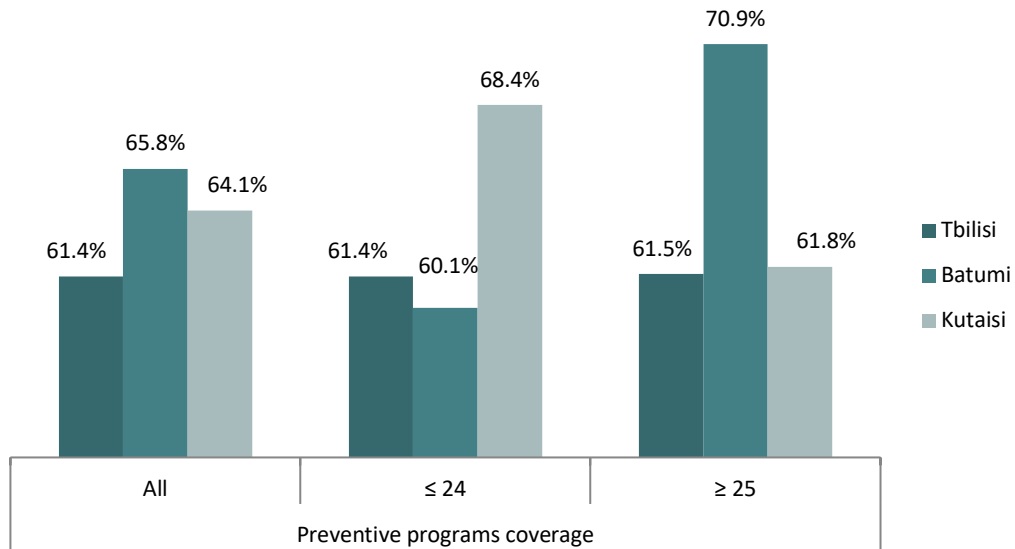
Biomarker

Blood and urine samples for testing on HIV infection, Syphilis, Hepatitis C, gonorrhoea and chlamydia were taken from almost all survey participants. The results show that 21.5% of MSM in Tbilisi, 15.6% - in Batumi and 9.6% - in Kutaisi were HIV positive. HIV prevalence is higher among older age group in all three cities.

Syphilis was detected in 7.9% of the MSM in Tbilisi, 22.1% - in Batumi. As for Hepatitis C prevalence, it was found as 2.6% in Tbilisi and 1.8% - in Batumi. Gonorrhea was detected in 2.9% in Tbilisi and 1.5% - in Batumi. In Kutaisi no syphilis, hepatitis C and gonorrhea cases were identified among the respondents.

Chlamydia was found among 8.6% in Tbilisi, 8.7% - in Batumi and 5.1% - in Kutaisi.

Figure 43: HIV, Hepatitis C, Syphilis, Gonorrhea and Chlamydia prevalences
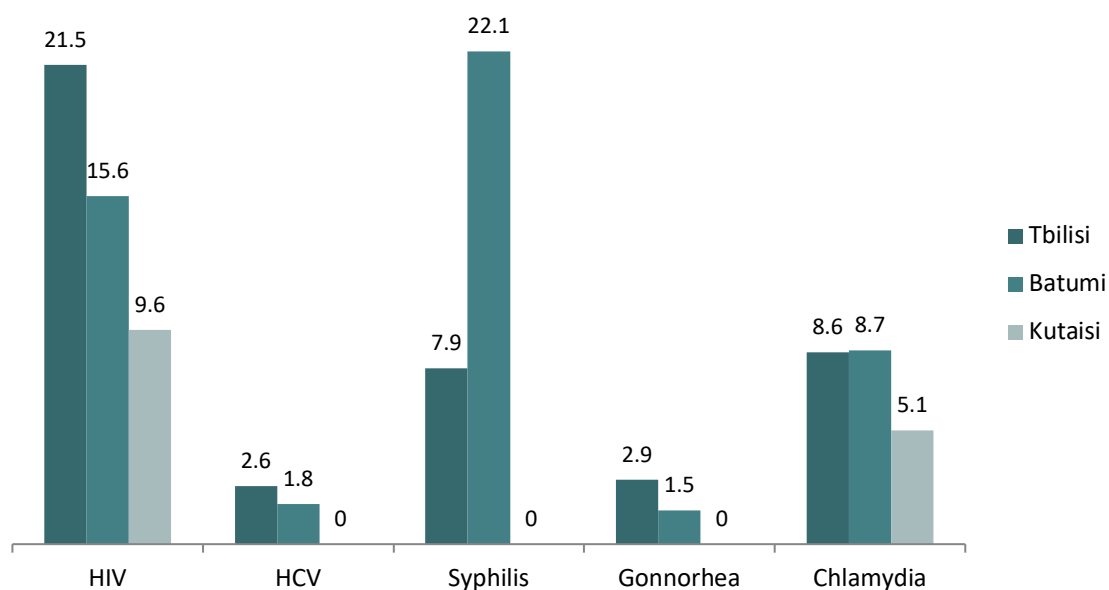
The characteristics of the HIV positive MSM is given in the Table 4. Their majority is of 25-34 years of age in Tbilisi and Batumi, and over 35 – in Kutaisi; not married and have not used injecting drugs during the last 12 months except 1 case in Batumi. Among these respondents, 95.8% of MSM in Tbilisi, 96.4% - in Batumi and 97.5% - in Kutaisi had been ever tested on HIV. The remaining small percentages, accordingly, were never tested. In Tbilisi 59.6% knew their current HIV positive status, in Batumi this proportion was 55.5% and in Kutaisi – 71.8%.

As to to their sexual behaviour report, majority used condom during the last AI, and reported consistent condom use during the last 12 months as well.

Table 4: Characteristics of HIV positive MSM

Key indicators	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
Socio-demographic characteristics						
Age (years)						
<=24	13(2.1-23.7)	15/61	23(81.7-37.1)	6/23	8.9(0-18.5)	4/16
25-34	54.8(30.6-78.5)	25/61	46.2(26-66.5)	10/23	44.4(22.3-67.8)	6/16
>=35	32.3(11.5-53.6)	21/61	30.8(9.7-52.6)	7/23	46.7(20.9-71.5)	6/16
Married	12.4(2.4-22.1)	6/61	11.6(1.6-21.5)	3/23	14(0.4-27.9)	2/16
Drug injected during the last 12 months	0	0/61	4.3(0-12)	1/23	0	0/16
Sexual behavior						
Median anal partners in the last 12 months	3.00	61	5.00	23	4.5	16
Used condom at last anal intercourse (AI)	79.3(61-100)	50/61	92.9(84.3-100)	21/23	78.1(53.5)100	11/16
Consistent condom use during AI in the last 12 months	65.3(46-85.7)	37/61	53.5(36.6-70.5)	12/23	76.3(51.6-99.7)	10/16
Used condom at last AI with regular partner	71.9(47.2-96.7)	37/47	5.4(71.9-99.1)	14/17	81.3(57-100)	11/16
Used condom at last AI with occasional partner	65(39.6-90.5)	35/44	92.9(81-100)	13/14	80.1(51.4-100)	11/14
Used condom at last intercourse with male client	100	1/1	100	1/1	100	2/2
Used condom at last intercourse with female partner	72.8(39.5-100)	17/21	85.5(67.5-100)	12/14	82.5(48-100)	5/6
Test for STIs						
Ever tested for STIs	81.8(68.5-95.1)	42/61	64(42.2-86)	13/23	43(16-70)	6/16
Never tested for any STIs	18.2(4.9-31.5)	19/61	36(14-57.8)	10/23	57(30.1-84.1)	10/16
Test for any STI in the last 12 months	72.6(52.7-93.1)	34/42	33.2(12-53.3)	6/13	67.9(30.9-100)	2/6
Test for HIV						
Ever tested	95.8(91.9-99.6)	54/60	96.4(90.6-100)	22/23	97.5(95.5-99.5)	14/15
Never tested	4.1(0.4-8.1)	6/60	3.6(0-9.4)	1/23	2.5(0.5-44.8)	1/15
Tested for HIV In the last 6months	54.8(21.9-46.7)	32/60	43.2(28.5-58.3	11/23	33.7(10.7-57)	5/15

Key indicators	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N	RDS population estimates, % (95% CI)	n/N
Tested for HIV the last 6-12 months period	10.9(2.6-19.2)	6/60	6.7(0-14.8)	2/23	6(0-16)	1/15
Received HIV test last year and know their results	52.6(31.6-73.1)	37/60	58.1(40.8-76.4)	13/23	43.3(15-72.7)	6/15
Tested for HIV in the past 12 months, or who know their current HIV status	72.8(61.5-84.3)	43/60	81.4(67.8-95.4)	18/23	78.8(64.8-92.6)	12/15
Tested for HIV in the past 12 months and whose current HIV status was negative	19.7(7.7-31.5)	11/60	27.2(4.3-49.8)	4/23	13.4(0-28.2)	2/15
Current HIV status was positive	59.6(45.1-74)	32/53	55.5(32-80.2)	14/22	71.8(48.7-84.8)	10/14
Current HIV status was negative	36.7(22.1-51.4)	19/53	42(17.3-66)	7/22	21.5(0.9-42.1)	3/14
Other biomarkers						
Syphilis positive	17.9(8.4-27.3)	10/61	3.6(0-9.5)	1/23	0	0/16
Gonorrhoea	2.2(0-5.8)	2/61	7.1(0-15.7)	2/23	0	0/16
Hepatitis C	4.4(0-9.6)	4/61	8.5(0-18.2)	2/23	0	0/16
Chlamydia	5.9(0-12.8)	6/61	7(0-15.5)	2/23	0	0/16

Recruitment pattern by HIV status

The pictures below represent recruitment patterns of MSM in Tbilisi, Batumi and Kutaisi by their HIV status. On the pictures below larger triangles represent seeds and red circles – HIV positive respondents.

Picture 1: Recruitment chain of Tbilisi MSM
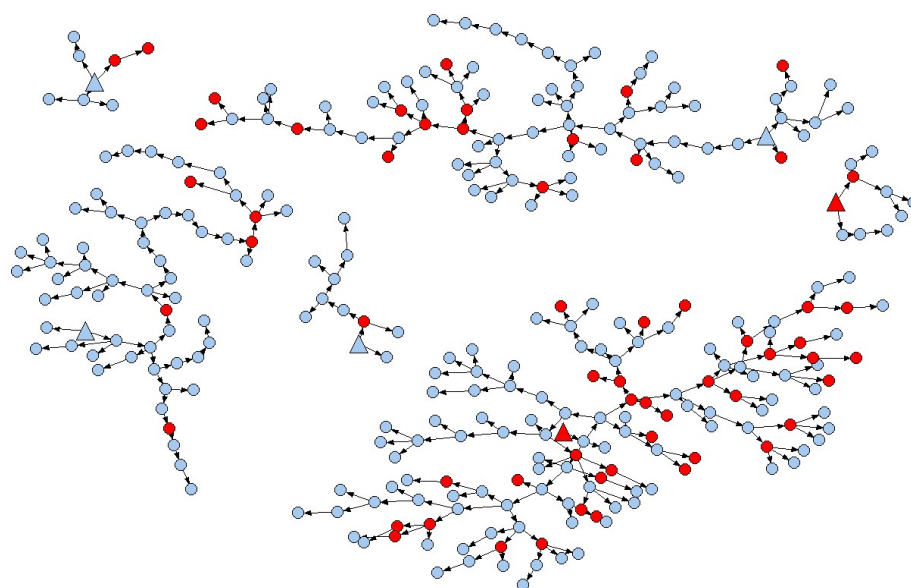
Picture 2: Recruitment chain of Batumi MSM
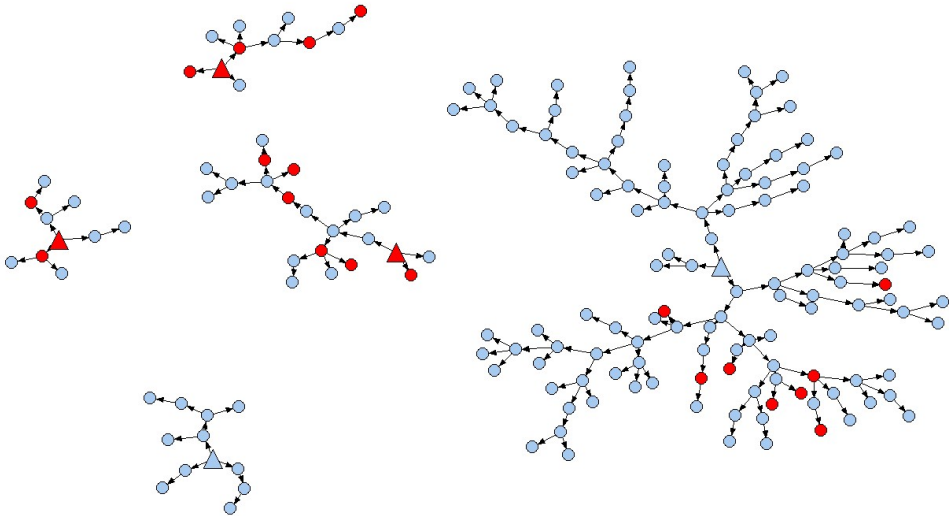
Picture 3: Recruitment chain of Kutaisi MSM
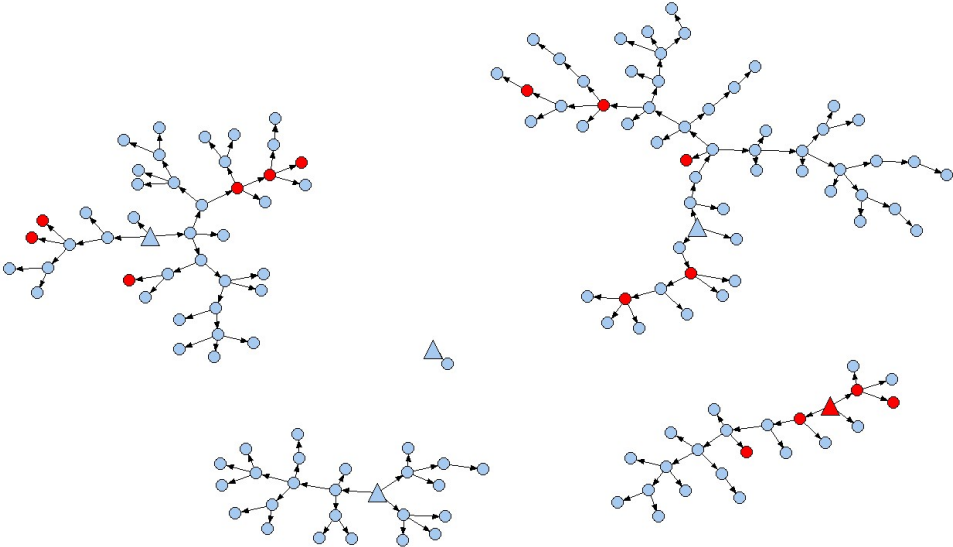
Study Limitations

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 original seeds in the presented study were quite diverse, still a comparison of the seeds versus the final sample shows that RDS resulted in different characteristics of the final samples. Study managed to recruit MSM mainly from the lower and middle socio-economic layer. Majority of the study participants had medium or small monthly income; therefore the study incentives were attractive to them.

- 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, e.g. group sex, engagement in commercial sex may be under-reported, while condom use may be over-reported by the 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.

Conclusions and Discussions

Overall, the Bio-BSS findings provide valuable data regarding the presence of HIV and risk behaviours among the key populations at increased risk of exposure to and transmission of HIV in Georgia.

Comparative analysis across the years allows measuring changes and gives directions for future focus of preventive strategies. The first round of the Bio-BSS among MSM in Tbilisi was carried out in 2007 that yielded 140 respondents, subsequent wave in 2010 recruited 278 participants and the one in 2012 - 218 participants. In the survey of 2015 a new survey location – city of Batumi was added and in total the study recruited 300 participants in Tbilisi and 115 – in Batumi. In the current study one new site – city of Kutaisi was added. Recruitment brought to the study sites 300 participants in Tbilisi, 172 – in Batumi and 149 – in Kutaisi.

This section provides comparisons of key indicators of the survey in Tbilisi with the previous surveys (2010 and 2015) and also comparison of Batumi site surveys of 2015 and 2018. Based on this, in the section below two kinds of comparison is provided:

- Comparison of weighted data from Tbilisi sample of 2010 and 2015 with 2018 (all done through RDS-A tool) for the key indicators, demonstrating trends over the last 8 years;
- Comparison of weighted data from Batumi sample of 2015 with 2018 (all done through RDS-A tool) for the key indicators, demonstrating trends over the last 3 years;
- Comparison of current Tbilisi and Batumi data with the 2015 survey for non-key indicators.

Socio-demographic characteristics

The socio-demographic structure of Tbilisi MSM population studied in 2018 (both in Tbilisi and in Batumi) has slightly changed. Median age is 25 and 25.5 (in 2015 in Tbilisi it was 28 and in Batumi - 29); Majority has received secondary education, followed by higher education. It is noteworthy that more than half of MSM in Tbilisi had received higher or incomplete higher education. Majority has been never married; Majority is Georgian by nationality and represent mainly middle and lower socio-economic layer of MSM population. Also, in 2018 big proportion of MSM report having permanent job. The monthly income for majority in Tbilisi and Batumi is over 1000 GEL (394 USD) – that is higher compared to 2015. In Kutaisi the study recruited MSM with the lightly lower economical status – majority reported income of 500-700 GEL (197 - 276 USD).

The recruitment process in the current survey managed to bring into the survey: more MSM from younger age group of <25 years of age at all three survey sites; more from different socio-economic

layers – those with a middle income in Tbilisi and Batumi. Hence, the survey findings illustrate characteristics of the lower and middle socio-economic segment of this population.

Alcohol and drug use

Alcohol and drug use are considered to be risky behaviours connected with HIV transmission. However, current study, similar to that of 2015, as well as study at the new survey location - Kutaisi, did not find high percentages of heavy alcohol use (everyday use) or injecting drug use. However, the proportion of MSM reporting using drugs (both injecting and non-injecting) during the last 12 months has increased significantly, mainly due to increased use of non-injecting drug use.

Figure 14: Overal drug use and non-injecting drug use in 2015 and 2018, Tbilisi and Batumi (sample sizes 300 and 300 in Tbilisi, 115 and 172 in Batumi)
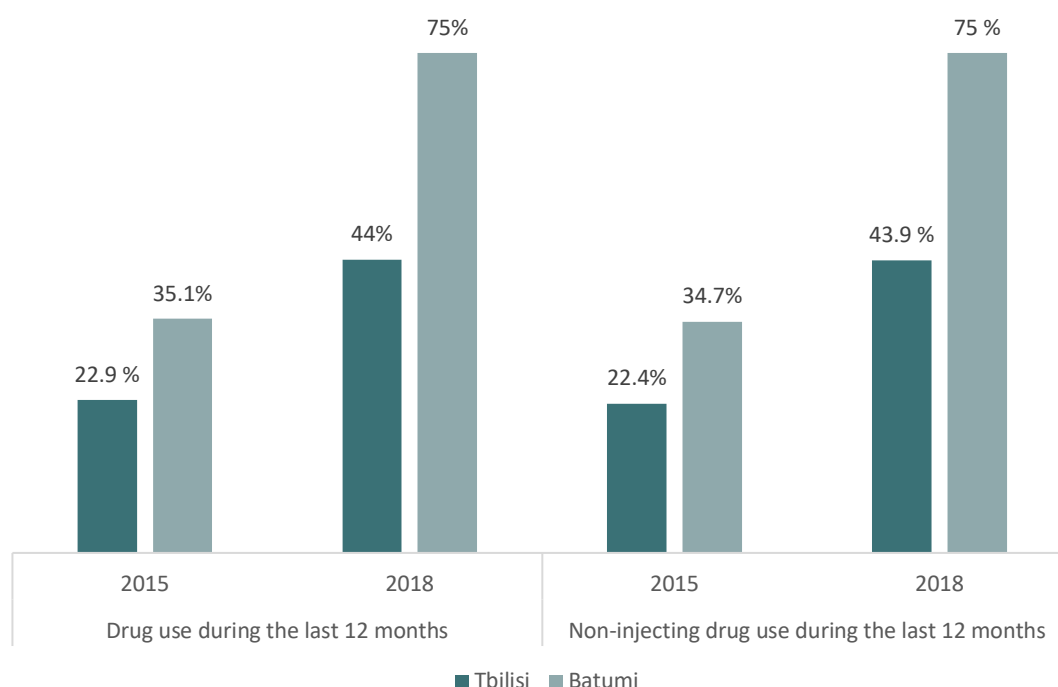
 As proved by last three surveys alcohol use, and especially injecting drug use is not widespread among MSM. Two high risk groups – MSM and PWIDs – hardly overlap and the infection does not travel from one most-at-risk population to another. Significant increase is observed in using of non-injecting drugs – mainly marijuana - at all survey sites. Having sexual contacts under marijuana is quite common.

Sexual behavior

The MSM had several types of both male and female partners.

Sexual Behavior with male partners

The median number of male partners (anal partners) in the last 12 months was 4 in Tbilisi, 6 – in Batumi and 5 – in Kutaisi. The data cannot be compared to the 2015 survey, since the inclusion criteria for the 2015 BBS included also oral partners.

Condom use at last AI reported in 2018 is much higher in Tbilisi, compared to 2015, however, still without statisticaly significant difference (see Figure 15). As for Batumi, even though the point estimate of 2018 is lower than in 2015, the change is statistically not significant due to overlap of the confidence intervals. Kutaisi condom use has been measured for the first time, and cannot be compared to the previous data. However, it is quite high – 69.9%.

Figure 15: Condom use at last AI in 2010, 2015 and 2018, Tbilisi (sample sizes 269, 276 and 300 respectively)
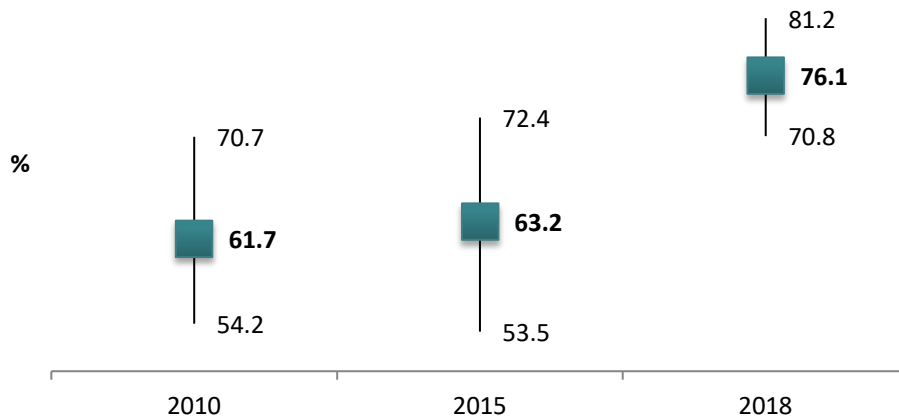
Figure 16: Condom use at last AI in 2015 and 2018, Batumi (sample sizes 115 and 172 respectively)
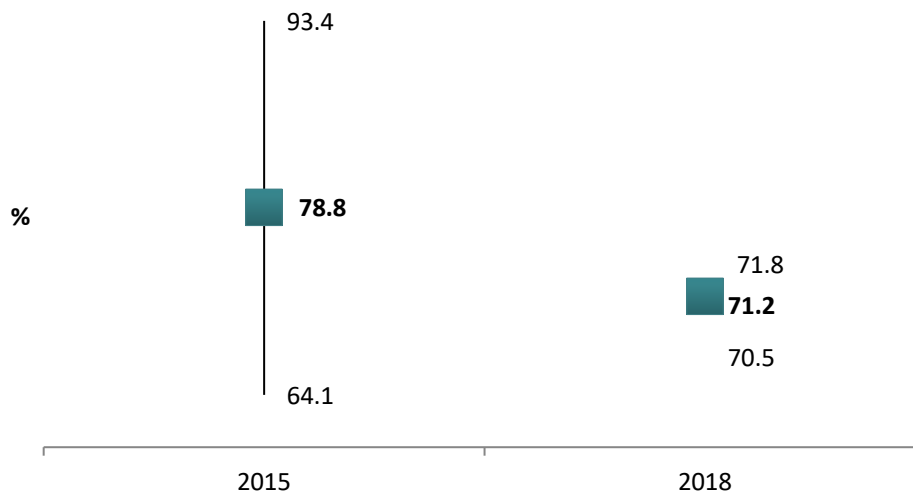
In Tbilisi there is an increase of condom use with all types of partners during the last intercourse however the change is statistically not significant except for condom use during the last AI with occasional partners (2015-2018). In Batumi, although there are some fluctuations in the condom use data, the changes are also not statistically significant.

Figure 57: Condom use at last AI with different types of partners in Tbilisi by years
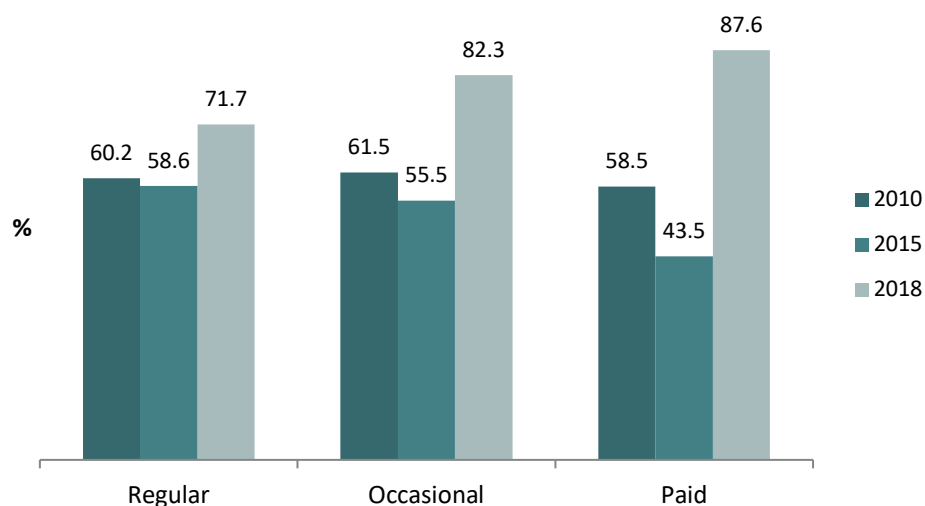
Figure 68: Condom use at last AI with different types of partners in Batumi by years
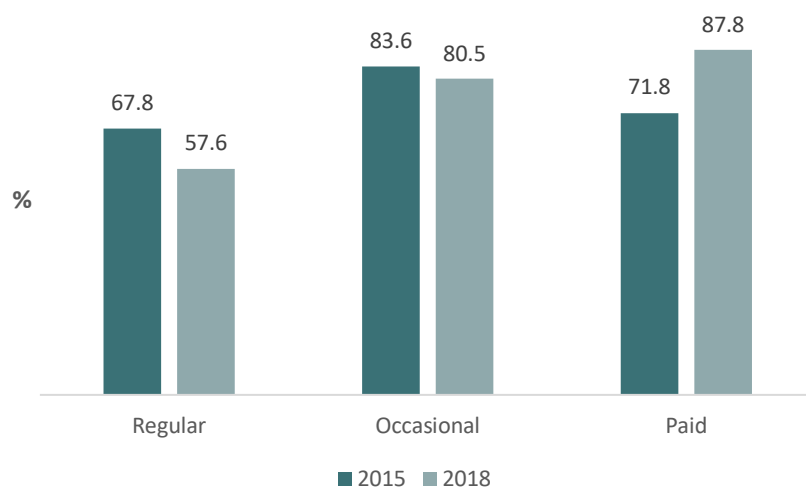
Consistent condom use is less prevalent than last AI condom use. This pattern is well documented in the literature.[14,15] MSM generally tend to have more protected sexual practices with occasional than with regular partners, however our study did not show that. Condom use at last AI and consistent condom use did not differ between regular and occasional male partners. Changes in the consistent condom use rates from 2015 to 2018 in Tbilisi with each of partners' types are statistically non-significant. Still, the

indicator of overall consistent condom use during the last AI in the last 12 months in Tbilisi has increased significantly.

As for Batumi, consistent condom use during the last AI in the last year has not changed significantly both overall and with various types of partners.

Condom use at last AI and consistent condom use with different types of partners are not low, and have not changed in Batumi during the last 3 years. In Tbilisi consistent condom use practice has increased significantly, but condom use during last AI has stayed the same – at a quite high levels.

Figure 79: Consistent condom use with any anal and different types of partners in Tbilisi by years

Consistent condom use last 12 months (Tbilisi)
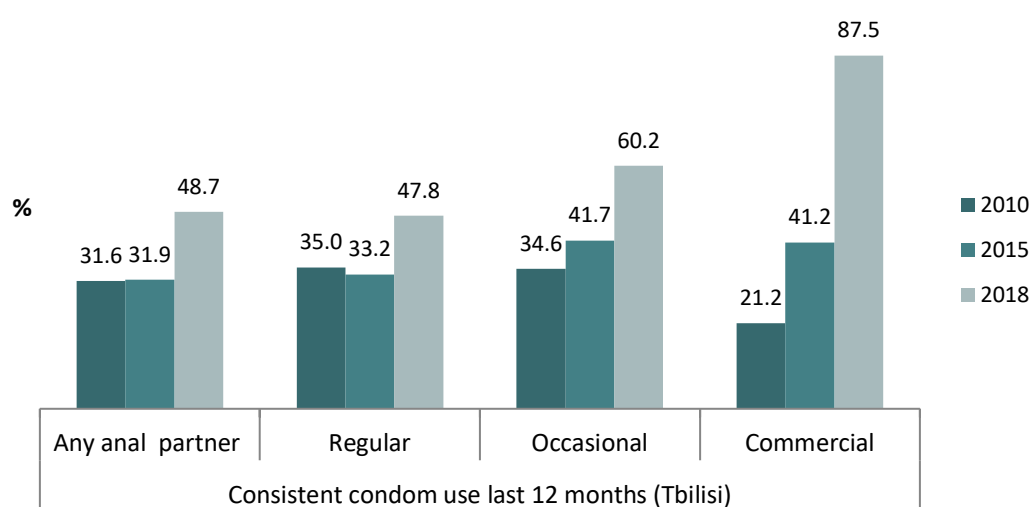
Figure 20: Consistent condom use with any anal and different types of partners in Batumi by years
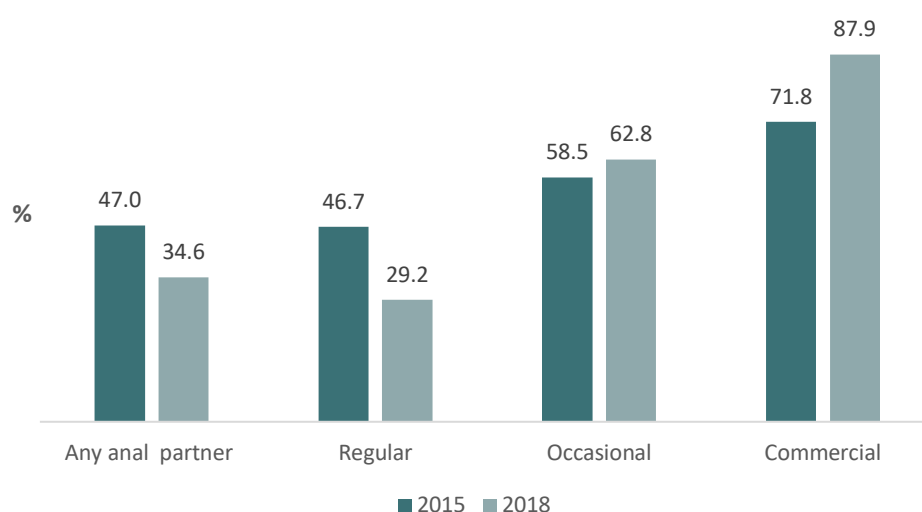
Group sex experience and involvement in commercial sex

Particularly high risk behaviour such as engagement in group sex activities was reported by not more than one third of MSM in all three cities. However, the data of Tbilisi and Batumi are lower than in the survey of 2015. Out of those who had group practices in Tbilisi much more reported condoms use at the last group sex, compared to the 2015 data. As for Batumi, condom use during the group sex stayed very high.

Engagement in commercial sex was reported by a lower proportion of respondents in Tbilisi – 6.6%, compared to 8.3% in 2015, and higher proportion of respondents in Batumi - 22.3%, compared to 10.2% in 2015. This could be explained by increased tourism in Batumi, as well as probable migration of sex workers MSM from Batumi to Turkey, whereas Batumi is their regular place to live. It should be noted that out of those engaged in commercial sex more than half does not consider themselves sex workers. Condom use rates at last AI with the client in Tbilisi and Batumi were higher than in Kutaisi. No statistically significant changes were observed in condom use rates compare to the data of 2015.

Other sexual practices, such as fingering, using sex toys, etc. were not widespread among MSM in all three cities.

Sexual behaviour with females

At all three survey sites overall 40-60% of MSM reported having a female sex partner (regular, occasional or paid) in the past year. It is less than during the previous BBS, where more than 70% of the respondents had female partners. In general, such high rate of bisexual activity could be explained by social pressure and stigmatization of homosexual behaviour. MSM might engage in sexual relationship with women to dispel any doubts about their homosexuality. High rates of reported sexual activity with women could also reflect social desirability bias. Still, this is a fact that needs a more in-depth qualitative investigation. Similar to 2010 and 2015 studies, current survey results revealed behavioral factors that create ground for HIV/STI transmission from MSM to their female partners. Since 2015 there is no statistically significant change in condom use at last sex with female partners in both Tbilisi and Batumi. Also, no change is observed in consistent condom use with female patners during the last 12 months. However, the rates are quite high.

The study showed high sexual activity among MSM. The respondents reported a large number of different types of partners, both male and female; however, condoms use rates show tendency of improvement.

Condoms and lubricants

Vast majority of MSM know where to get condoms and pharmacies are the most frequently named places. Majority (63.6% in Tbilisi, 76.3% in Batumi and 67.2% in Kutaisi) received condoms and lubricants from preventive programs during the last year. There is increase in the proportion of MSM who have received condoms and lubricants compared to the 2015 BBS.

Quite small proportion of MSM reported having used lubricants consistently during anal intercourses during the last 12 months.

Awareness on places of condom supply is high among MSM, and proportion of MSM received condoms from preventive programs has increased during the latest 3 years in Batumi and 8 years – in Tbilisi.

Sexually Transmitted Infections

Majority of MSM were aware of Sexually Transmitted Infections and are able to list at least one STI symptom among men. Proportion of MSM reporting having been tested on STIs during the last 12 months have not changed significantly in Tbilisi and Batumi. None of the interviewed respondents in all three cities were tested for STIs during the last 3 months. More than one third of respondents reported never being tested for STIs during their lifetime.

Knowledge about STIs is quite high. STI testing uptake among MSM in Tbilisi and Batumi has not changed and is not satisfactory.

Knowledge / opinions and attitudes towards HIV/AIDS

Although HIV/AIDS awareness is very high, still there are some cases where MSM are not aware of this disease at all survey sites. Analysis of Global AIDS Monitoring indicator on HIV knowledge showed significant improvement in Tbilisi since 2010 - from 19.9% in 2010 to 30.4% in 2015 and to 37.4% in 2018. In Batumi this indicator was 35.2% in 2015 and has reached 41.1%. In Kutaisi the knowledge was measured for the first time and demonstrated higher level than in Tbilisi and Batumi – 42%.

During the recent eight years there was statistically significant improvement in proportion of MSM who were HIV tested on HIV during the last year and know their result from 2010 to 2015. And in 2018 this rate has also increased, although not in a significant way. Still the tendency of growth is clear. Batumi data also demonstrate slight non-significant increase. This comparison is provided below, but based on the old version of the GAM indicator, for comparing purposes. However, the new version of the GAM indicator – having been tested on HIV during the last 12 months or knowing one's HIV status – was also more than half at all survey sites (54.7% in Tbilisi, 54.3% in Batumi and 56.3% in Kutaisi). As for Kutaisi,

this indicator was measured for the first time and calculated according to the both – old and new versions of GAM.

Figure 21: MSM rates who were tested during the last 12 months and received results in 2010, 2015 and 2018, Tbilisi (sample sizes 278, 300 and 300 respectively)
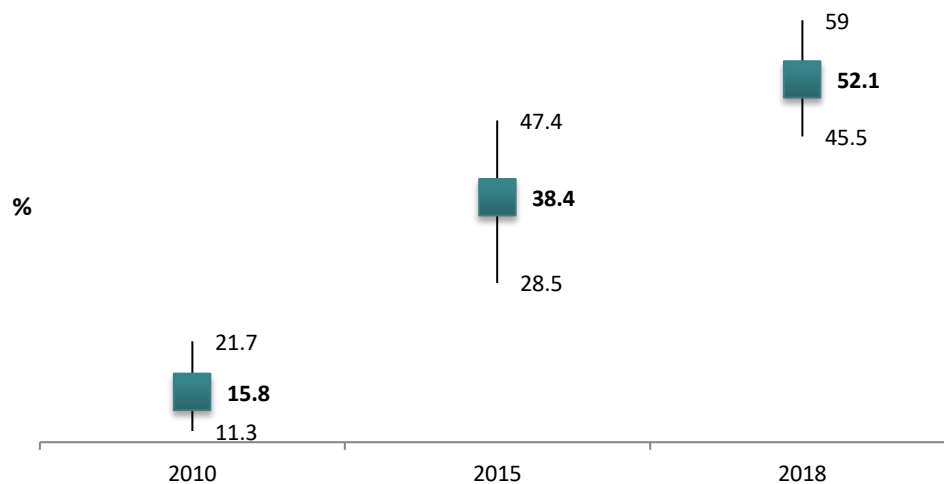
Figure 22: MSM rates who were tested during the last 12 months and received results in 2015 and 2018, Batumi (sample sizes 115 and 171, respectively)
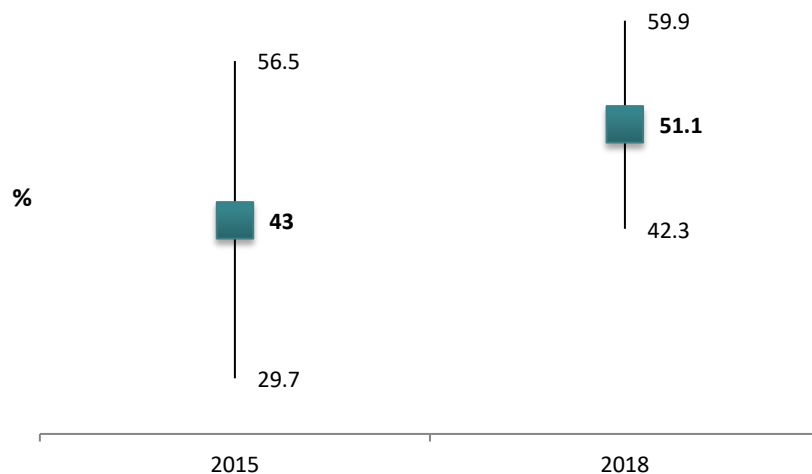
Lower percentage remains untested from the whole survey cohort in Tbilisi (70.6% in 2010, 30.3% in 2015 and 18.2% in 2018). This change was statistically significant ($p< 0.01$) between 2010 and 2015. In Batumi no significant changes are demonstrated in the proportion of never tested MSM.

Figure 238: HIV testing practices in Tbilisi, by years
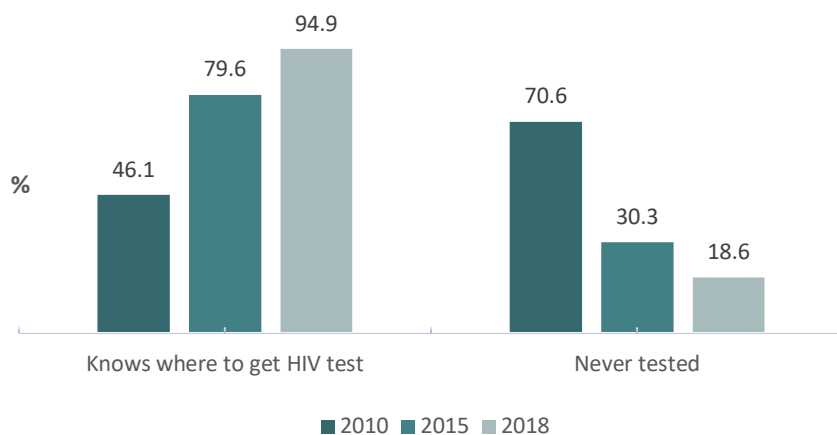
Figure 24: HIV testing practices in Batumi, by years
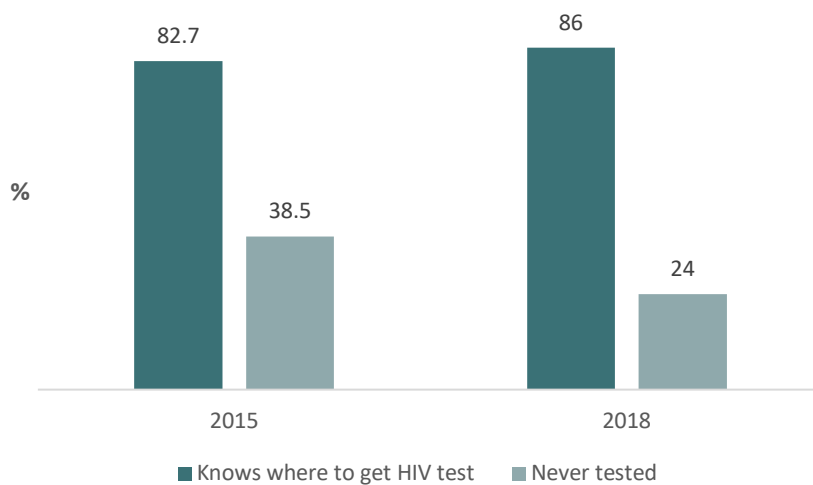
Not more than 10% at all survey sites assessed their personal risk regarding HIV infection as high, majority believed they are at medium risk.

Knowledge about HIV infection is high and has improved over the last years, but this does not improve personal risk perception among MSM. HIV testing uptake is improving gradually.

Stigma, discrimination and violence

Very small percentages of MSM reported having faces various forms of discrimination due to their sexual behaviour or orientation. As for the violence, from the interviewed MSM 10.2% in Tbilisi, 3.6% in

Batumi and 8% in Kutaisi reported they had experienced violence because of sexual orientation or sexual behaviour in the last 12 months.

There is statistically significant decrease regarding this indicator among Tbilisi respondents compared to 2015. Before that, from 2010 to 2015, there was increase, which could have been caused by increase in negative attitudes as well as aggressive actions towards persons with homosexual orientation and/or behaviour during that particular years. The decrease since 2015 in Tbilisi can be attributed to the extensive anti-violence and rights defending work carried out by the community organizations. Further, some amendments were made to the legislative framework, e.g. Criminal Code considers violence based on SOGI as an aggravating factor. Also, during these 3 years specific mechanisms for protection of rights have been put in place and used by the community, e.g. at the Pubilc Defender's Office, at the Ministry of Internal Affairs.

Out of the reported cases in Tbilisi, the majority were verbal assaults, followed by physical and sexual violence. In majority of the cases the perpetrator of the violence was a stranger, in the rest of the cases an acquaintance and family member/relative.

Half of the cases have been reported to the police. Some, but not all reasons for not reporting to the police were low expectations of the adequate reaction.

Violence towards MSM because of sexual behaviour or orientation exists but has decreased during the last 3 years.

Program coverage / Media

NGOs, internet and friends seem to be the major and best way for conveying messages to MSM. In Kutaisi TV/radio is also a main source for information. As for the trusted sources, NGOs and internet have been listed by the respondents.

Coverage by preventive intervention measured by awareness of where to get a HIV test and receipt of a condom during the last 12 months has increased both in Tbilisi (from 43.5% in 2015 to 61.8% in 2018), and in Batumi (from 41.9% in 2015 to 65.8% in 2018). In Kutaisi – 57.7% were covered by preventive program. Both in Tbilisi and in Batumi program coverage has increased significantly.

The data according to the renewed GAM indicator for program coverage has demonstrated high proportions of MSM covered by the program. However, the comparison with the previous BBS data cannot be made.

Coverage by preventive programs has been gradually increasing during the last 8 years in Tbilisi and the last 3 years in Batumi. New HIV prevention interventions introduced since 2010 and especially since

2014, as well as strengthened LGBT community organizations should have played a positive role in coverage increase.

Biomarker

The most alarming finding during the recent years was dramatic increase in HIV prevalence in Tbilisi from 6.4% in 2010 to 25.1% in 2015. When comparing the current data (21.5%) of 2018 to the previous, it was clear that overall there was no statistically significant change in the prevalence during the last 3 years. Data are presented on Figure 25 below. The same picture is in Batumi prevalence, presented on the Figure 26. Kutaisi has also revealed high prevalence among MSM – 9.6%, still this is the lowest among the three cities studied.

Figure 259: HIV prevalence rates in 2010, 2015 and 2018 Tbilisi (sample sizes 271, 300 and 300 respectively)
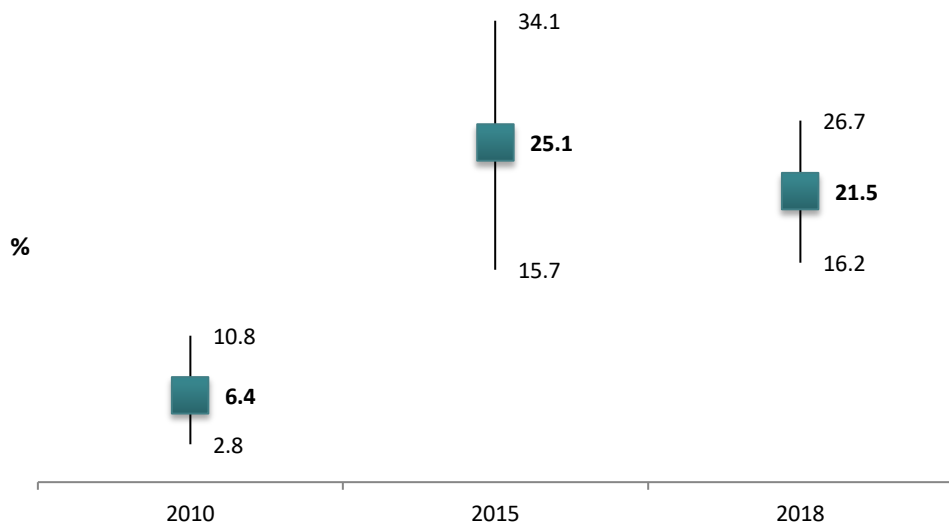
Figure 26: HIV prevalence rates in 2015 and 2018 Batumi (sample sizes 115 and 168, respectively)
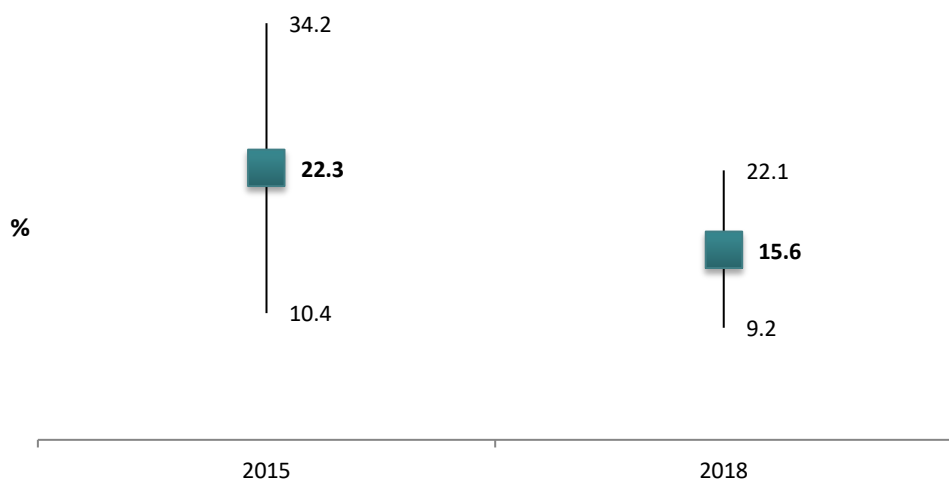
Although there is no increase in HIV prevalence since 2015, MSM continue to be the most affected key population in Georgia. This trend is typical in lots of countries in EU as well as Eastern Europe and Central Asia, where epidemics of HIV in MSM continue to expand. Sex between men remains the predominant mode of HIV transmission reported in the EU/EEA, accounting for 38% of all new HIV diagnoses in 2017 and half (50%) of diagnoses where the route of transmission was known[12]. According to the Eurasian Coalition on Male Health, Georgia rate is the highest among EECA coutnries studied[13]. Recent evidence suggests that HIV infection in MSM is heavily biologically determined, requiring that programmatic efforts should acknowledge these realities.

Prevalence of other infections and comparison to the previous BBS survey revealed decrease of the syphilis (from 35% to 7.9%%) and hepatitis C (from 7.1% to 2.6%) prevalence in Tbilisi, and also decrease of hepatitis C prevalence in Batumi (from 18.9% to 1.8%). Chlamydia was found among 8.6% in Tbilisi, 8.7% - in Batumi and 5.1% - in Kutaisi. As for gonorrhea, it was revealed in single cases in Tbilisi and Batumi.

HIV prevalence has not increased in Tbilisi and Batumi; still, MSM population has the highest rates of HIV infection among all key populations in Georgia. Hence, there is necessity to implement prevention strategies that are evidence based and are informed by realities of HIV transmission risks for MSM.

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[12] "HIV/AIDS surveillance in Europe 2018 – 2017 data", ECDC, https://www.ecdc.europa.eu/sites/portal/files/documents/hiv-aids-surveillance-europe-2018.pdf
[13] "HIV among MSM in Eastern Europe and Central Asia. Eipdemiological Review 2018".
https://docs.google.com/viewerng/viewer?url=https://ecom.ngo/wp-content/uploads/2018/12/HIV-among-MSM-in-EECA-2018-1.pdf&hl=ru

Recommendations

The following recommendations are proposed based on the findings of this study:

1. Increase coverage of MSM by preventive interventions aiming at risk behaviour reduction and HIV risk transmission reduction. The interventions should continue to include, but not be limited to, condom and lubricant distribution, awareness raising and STI/HIV testing:

a) Apply various approaches to increase accessibility of HIV-related preventive services such as outreach, individual counselling, internet-based & community-based interventions and peer education or similar peer-based interventions

b) Expand MSM-friendly STI/HIV testing services

c) Expand PrEP among MSM;

d) Reinforce safer sex messages, especially on the importance of protected sex

e) Design specific interventions to address risks undertaken by young MSM

f) Implement positive prevention strategies among HIV positive MSM

g) Continue and expand HIV rapid testing and self-testing provision at the sites of MSM gathering

h) Design and implement specific interventions for non-injecting drug use related harm reduction among MSM

2. Focus on reducing HIV-associated as well as homosexuality-associated stigma and discrimination.

3. Conduct regularly non-coercive, anonymous, ethical and systematic surveillance of both behavioral and selected biological markers among MSM also in other locations, in order to monitor the prevalence dynamics of HIV infection and other STIs.

4. Ensure active recruitment in the following rounds of the survey through a) introducing more attractive incentive system and b) keep testing for various STIs in the biomarker component.

5. Continue conducting size estimation studies with multiple, improved innovative methods to identify and then reach hidden, stigmatised, or otherwise hard-to-reach segments of MSM population.

Annex 1. Data Tables

Network recruitment	Tbilisi		Batumi		Kutaisi	
Participation in earlier studies	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
2010	7.7	26/300	1.2	3/172	0	0/149
2012	13.3	47/300	4.1	9/172	0	0/149
2015	33.2	101/300	14.6	28/172	0	0/149
2010 & 2012 & 2015	6.4	21/300	0.8	2/172	0	0/149

Sociodemographic characteristics	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
Sociodemographic characteristics						
Age						
≤ 24	50.0 (42.5-57.3)	141/300	47.2(37.5-56.9)	81/172	41.6(30.5-52.6)	62/149
25 – 34	26.6 (21.6-31.6)	83/300	35.8(27.2-44.4)	56/172	29.0(22.3-35.7)	42/149
≥ 35	23.5 (17.7-29.3)	76/300	17.0(11.5-22.7)	35/172	29.3(19.5-39.2)	45/149
Mean (minimum-maximum)	28.00 (18-74)	300	27.00(18-60)	172	29.71(18-56)	149
Median	25.00	300	26.00	172	27.00	149
Education						
No education or Elementary	1.1(0-2.1)	4/300	1(0-2.1)	2/172	2.7(1-4.5)	4/149
Secondary	38.2(31.2-45.3)	118/300	57(49.1-65)	93/172	63.4(55.3-71.5)	95/149
Incomplete higher	24.6(18.0-31.1)	71/300	17.1(12-22.3)	32/172	7.4(3.3-11.4)	12/149
Higher	36.1(30.3-42.0)	107/300	25 (18.7-31)	45/172	26.5(19-34.1)	38/149
Nationality						
Georgian	99.0(98.0-100)	296/300	100	172/172	100	149/149
Other	0.9(0-2.1)	4/300	0	0/172	0	0/149
Marital Status						
Married	8.2(5.1-11.2)	23/300	5.9(1.6-10.4)	9/172	21.4(13.3-30)	30/149
Divorced / Separated	11.1(7.1-15.3)	38/300	13.1(8.6-17.6)	25/172	14(8.4-20)	24/149
Widower	0.6(0-1.3)	2/300	0	0/172	1(0-1.4)	1/149
Never married	80.3(74.9-85.4)	237/300	80.4(75-86.1)	137/172	64(54.4-73.2)	94/149
No response	0	0/300	0.5(0.2-1.3)	1/172	0	0/149

Sociodemographic characteristics	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
Occupation						
Permanent Work	46.2(39.5-53.0)	141/300	38.5(31.3-45.8)	71/172	42(32.6-51)	61/149
Temporary work	17.2(12.4-21.9)	51/300	30.5(22.4-38)	45/172	34.7(27-42.7)	52/149
Student	8.1(4.7-11.6)	25/300	2.3(0.2-4.4)	4/172	6(2.2-9.2)	9/149
No occupation	27.7(21.7-33.6)	81/300	28.8(22-36)	52/172	17.1(10.7-23.3)	26/149
Monthly Income						
≤ 175 GeL	9.2(5.9-12.5)	28/300	6.9(3.7-10.2)	13/172	6(2.1-10)	10/149
176 – 300 GeL	14.6(10.1-19.0)	44/300	11.3(6.6-16)	21/172	20(13.2-26)	28/149
300 - 500 GeL	17.9(12.6-23.2)	55/300	13.1(8.1-18)	23/172	18.4(12.5-24.3)	28/149
500 -700 GeL	19.0(13.6-24.3)	56/300	17.6(11-24)	29/172	25.5(17-34.4)	33/149
700 - 1000 GeL	18.1(12.2-24.0)	47/300	21(14.6-27.4)	34/172	11.7(7-16.4)	19/149
≥ 1000 GeL	19.6(14.9-24.2)	65/300	29(22.2-35.5)	49/172	16.4(11-22)	27/149
No response	1.6(0.1-3.2)	5/300	1.2(0.04-2.3)	3/172	2.1(3.1-4)	4/149

Alcohol and drug use	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
Alcohol use						
Drink alcohol every day	2.7(1.1-4.3)	11/300	3(1-5)	6/172	6(2.3-9.2)	10/149
Drug use						
Used non or injected drugs last 12 months	44(37.5-50.3)	126/300	75(68.6-81.4)	126/172	48(38.5-57.4)	76/149
Non-injection drug used during last 12 months	43.9 (37.5-50.3)	126/300	75(68.1-81.7)	126/172	48(39-57)	76/149
≤ 24	60(51.3-68)	81/141	78.5(67.7-89)	65/81	54(41.5-66.5)	34/62
≥ 25	28.1(21-35.2)	45/159	71.8(61.9-81.8)	61/91	43.5(32.6-55)	42/87
Most frequently used drug (Marijuana)	95.4(92-99)	119/126	100	126/126	100	76/76
Most frequently used drug (bio)	3.2(0-6.9)	4/126	17.3(10.9-23.9)	21/126	15.5(3.5-28.3)	6/76
Most frequently used drug (ecstasy)	18.1(10.6-25.7)	23/126	17.6(10.6-24.5)	23/126	27.2(12.1-43.1)	14/76
Drug injected during last 12 months	1.1(1-2.1)	4/300	3.7(1.2-6.2)	7/172	4.7(1.7-7.2)	8/149
≤ 24	0	0/141	0.8(0-2)	1/81	1.7(0-5)	1/62
≥ 25	1.9(0.1-3.6)	4/159	6.4(1.3-11.3)	6/91	6.4(2.4-10.2)	7/87
Mostly injected drug (Heroin)	1.3(1-3.5)	2/126	3.8(0.4-7.2)	5/126	6.7(1.7-11.5)	6/76

Alcohol and drug use	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
Injected with used needle/syringe during last injection	0	4/4	0	7/7	0	0/8
Alvohol and drug use and sex						
Used alcohol during last anal intercourse	9.7(5.8-13.8)	25/300	25.7(17.3-34.3)	43/172	5.3(1.7-8.9)	7/149
Used Heroin during last anal intercourse	0	0/300	0	0/172	0.8(0-2)	1/149
Used vint/jef/amphetamine during last anal intercourse	1.5(0.1-2.9)	4/300	0	0/172	0	0/149
Used marijuana during last anal intercourse	6.2(3-9.5)	19/300	6.5(3.1-9.9)	12/172	10.9(3.2-18.5)	16/149
Unsafe sex with people who inject drugs in the last 12 months	12.8(8.2-17.5)	36/300	3(0.8-5.3)	6/160	3(0.9-5.2)	6/149

Sexual behavior	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
Male partners						
Age at first anal intercourse						
Mean (minimum-maximum)	18.32(7-55)	296	18.15(8-39)	171	17.8(13-40)	146
Median	18	296	18	171	17	146
Type of sex partner						
penetrated	15.6(11-20.3)	44/300	17.1(12.1-22.2)	30/172	11(6.9-15)	17/149
penetrating	23.6(18.4-28.8)	74/300	12.1(7.4-16.8)	22/172	39.1(31.9-46.4)	57/149
Both	59.6(54-65.1)	179/300	70.7(64.5-77)	120/172	50(42.7-57.1)	75/149
Number of anal/oral partners in last 12 month						
1	19(13.6-24.2)	55/300	12.7(7.1-18.3)	20/172	11.7(6.5-17)	17/149
2 – 5	41.1(35.3-47)	124/300	38.1(31-45.3)	67/172	43.3(35.1-51.5)	69/149
6 – 9	14.3(10-19)	39/300	25(18.5-31.2)	44/172	25.8(17.5-33.8)	34/149
≥ 10	25.6(20.4-31)	82/300	24.3(18-30.6)	41/172	19.2(12.8-25.7)	29/149
Median anal partners	4.00	300	6.0	172	5.00	149
≤ 24	4.00	141	4.0	81	4.00	62
≥ 25	4.00	159	6.0	91	6.00	87

Sexual behavior	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
Used condom at last anal intercourse (AI)	76.1(70.8-81.2)	228/300	71.2(65.4-76.9)	118/172	69.9(61.7-77.8)	104/149
≤ 24	75.2(68.1-82.5)	106/141	71.8(62.7-81.0)	56/81	70.1(57.7-83.1)	44/62
≥ 25	76.6(69.9-83.3)	122/159	70.5(62.5-78.6)	62/91	69.7(58.5-80.9)	60/87
Consistent condom use during AI in last 12 month	48.7(42.2-55.2)	151/300	34.6(27.8-41.4)	60/172	44.9(37.1-52.9)	69/149
≤ 24	46.6(36.5-56.6)	69/141	28.1(19.3-37.1)	26/81	44.1(31.7-56.7)	28/62
≥ 25	50.9(42.8-58.8)	82/159	39.2(29.4-48.9)	34/91	45.8(34.5-57.0)	41/87
Regular male partners						
Had anal regular partner in last 12 months	76.2 (70.3-82.0)	229/300	84(77.9-90.1)	146/172	92.3(88.9-95.7)	136/149
Median number of anal partners	2.00	229	1.00	146	2.00	136
Used condom at last AI	71.7(65.4-77.9)	163/229	57.6(50.1-64.8)	87/146	66.1(56.3-75.8)	88/136
≤ 24	73.4(65.2-81.7)	78/110	56.2(43.2-68.4)	42/70	71.3(58.6-84.0)	41/56
≥ 25	69.9(60.1-79.8)	85/119	59(48.9-69.2)	45/76	62.4(49.5-74.8)	47/80
Consistent condom use during AI in last 12 month	47.8(40.0-55.5)	109/229	29.2(22.6-35.9)	44/146	42.6(33.5-51.5)	60/136
≤ 24	45.0(34.6-55.6)	48/110	21.1(11.6-30.8)	17/70	41.6(28.5-54.8)	24/56
≥ 25	50.5(40.4-60.7)	61/119	37.2(26.8-47.6)	27/76	43.2(29.0-57.4)	36/80
Reasons for not using condom at last AI with regular male partner (Didn't think necessary)	38.9(11.6-66.1)	25/66	31(20.6-41.1)	18/59	58.1(44.5-71.8)	28/48
Occasional male partners						
Had occasional anal partner in last 12 months	72.7(66.9-78.5)	217/300	78.3(71.4-85.4)	137/172	75.9(69.1-82.7)	112/149
Median number of anal partners	5.00	217	7.00	137	5.00	112
Used condom at last AI	82.3(76.8-87.9)	180/217	80.5(73.6-87.3)	112/137	81.1(74.1-88.4)	87/112
≤ 24	84.0(77.2-90.9)	87/103	73.7(60.6-86.1)	49/62	81.7(73.8-90.2)	33/44
≥ 25	80.5 (72.9-88.2)	93/114	86.4(79.7-93.4)	63/75	80.8(71.5-90.3)	54/68
Consistent condom use during AI in last 12 month	60.2(53.4-67.1)	135/217	62.8(54.5-70.8)	89/137	50.8(41.5-60.4)	57/112
≤ 24	61.5(49.8-73.1)	67/103	59.4(46.8-71.8)	40/62	55.4(43.0-69.0)	22/44
≥ 25	58.8(50.2-67.3)	68/114	65.5(52.5-78.4)	49/75	47.7(34.3-61.1)	35/68
Reasons for not using condom at last AI with occasional male partner (Did not have it)	17.0(4.4-29.5)	7/37	28.7(7.2-50.7)	6/25	13.3(0-61.3)	4/25
Paid male partners						

Sexual behavior	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
Had anal paid partner in last 12 months	2.4(1-4.2)	7/300	3.1(0.8-5.3)	6/172	14.4(7.1-21.9)	18/149
Median number of anal partners	2.00	7	2.50	6	2.00	18
Used condom at last AI	88(66-100)	6/7	87.8(67.9-109.6)	5/6	87.1(68.5-100)	15/18
≤ 24	100	2/2	100	2/2	100	2/2
≥ 25	82.7(50.7-100)	4/5	21.9(0-58.7)	1/4	85.0(66.0-100)	13/16
Consistent condom use during AI in the last 12 months	87.5(66-100)	6/7	84.6(55.2-114.5)	5/6	52.6(37.8-67.9)	12/18
≤ 24	100	2/2	100	2/2	100	2/2
≥ 25	83(51.3-100)	4/5	77.9(39.5-100)	3/4	47.4(21.6-68.3)	10/16
Reasons for not using condom at last AI with paid male partner (Refused to answer)	87.5(65-100)	6/7	82.4(50-100)	5/6	81.2(65.3-97.5)	15/18
Engagement in commercial sex						
Had male client (received material reward for sex) in the last 12 months	6.6(3.9-9.3)	23/300	22.3(16.2-28.4)	37/172	10.6(6.0-15.2)	17/149
Self-identified as sex worker	55(1-100)	13/23	35.5(20.3-52.3)	11/37	17.5(17.5-17.5)	3/17
Median number of clients during a working day	4.00	17	1.00	11	3.00	11
Cost of commercial sex service (GEL)						
Less than 10 GEL	0	0/23	0	0/37	8.5(8.3-8.3)	2/17
10-20 GEL	15.3(10-20.8)	3/23	0	0/37	20.2(20.1-20.1)	4/17
20-50 GEL	27(1-73.4)	7/23	22.2(0-64.4)	8/37	24.5(0.1-49.6)	3/17
50-100 GEL	23.2(0-78)	5/23	43.4(29.6-57.3)	16/37	18.5(18.4-18.4)	3/17
More than 100 GEL	22.4(12.5-57.5)	5/23	25.6(0-58.6)	10/37	17.6(17.5-17.5)	3/17
Other	0	0/23	6.1(0-14.6)	2/37	0	0/17
No response	12.2(1-74.4)	3/23	0	0/37	10.7(0-35.2)	2/17
Monthly income from commercial sex service (GEL)						
Up to 50 GEL	18(1-36.4)	4/23	0	0/37	11.3(10.3-12.8)	2/17
50-100 GEL	3(0-6)	1/23	5.7(0-21)	3/37	11.2(0-36.2)	2/17
100-200 GEL	24.8(30	4/23	6.6(0-16)	2/37	34.6(28.6-40.4)	6/17
200-300 GEL	7.8(1.8-14)	2/23	26.2(0-64)	10/37	13.4(11.8-14.7)	2/17
300-500 GEL	6.5(2-11)	2/23	19.2(0-59.2)	7/37	0	0/17
500-1000 GEL	18(1-49.2)	4/23	10.6(0-37.8)	4/37	8.3(7.3-9.3)	1/17

Sexual behavior	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
More than 1000 GEL	11.6(2.5-20.6)	3/23	26(2.2-51)	8/37	0	0/17
Don't know	4(1-7.2)	1/23	2.5(0-27.8)	1/37	0	0/17
No response	6.5(1-25)	2/23	3.4(0-27.6)	2/37	21.2(0-47)	4/17
Used condom at last AI with male client	86.8(76.7-96.8)	20/23	86.4(82.4-90.5)	32/37	50.4(25.9-74)	9/17
Consistent condom use during AI in the last 12 months with male client	67.1(0-100)	16/23	60.5(50.0-72.0)	21/37	28.9(28.9-28.9)	5/17
Often	13.7(0-62.6)	2/23	21.2(9.9-32.4)	8/37	50.6(50.6-50.6)	8/17
Sometimes	12.1(7.0-17.1)	3/23	13.4(5.6-19.5)	6/37	20.6(20.5-20.5)	4/17
Never	3.0(0-27.0)	1/23	5.3(3.5-7.1)	2/37	0	0/17
No response	4.1(1.2-7.0)	1/23	0	0/37	0	0/17
Condom use at last AI with regular client	92(72.6-100)	11/12	76.8(55.7-97.5)	14/18	37.5(3.7-71.9)	3/9
Consistent condom use with male regular client in the last 12 months	55.7(55.7-55.7)	7	46.4(15.1-78.3)	5/11	7.0(7.0-7.0)	1/13
Had sex with male abroad during last 12 months	7.8(4.8-10.7)	27/300	23(17.1-29)	43/172	9.7(4.4-15)	14/149
Germany	17.2(0-75.4)	5/27	8.2(0-25.4)	3/43	41.2(0-100)	4/14
Turkey	26.2(0-91)	7/27	31(11-50)	15/43	30.7(0-76.7)	5/14
England	0	0/27	35.5(18.3-52.2	16/43	0	0/14
Used condom abroad	48.2(34.4-61.8)	13/27	81.9(72.2-91.6)	36/44	74.7(61.3-88.8)	10/14
Knowledge of HIV status of the last anal partner						
I think he was HIV negative	19.6(14.5-24.8)	62/300	5.7(2.7-8.6)	11/172	11.6(6.3-16.9)	18/149
I know he was HIV negative	35.6(29.3-41.9)	105/300	41.2(32.2-50.2)	67/172	38.1(29.5-46.7)	56/149
I think he was HIV positive	3.1(0.7-5.4)	7/300	0.6(0-1.6)	1/172	3(0.4-5.5)	5/149
I know he was HIV positive	4.5(2-6.9)	15/300	4.5(1.6-7.4)	8/172	0	0/149
I know he does not know for sure	0.5(0-1.1)	2/300	15.9(10.1-21.7)	27/172	1(0-2.6)	1/149
Did not think about this	6.2(3.3-9)	22/300	9.9(4.4-15.4)	17/172	34.4(26.1-42.7)	50/149
Don't know/don't remember	5.2(2.4-8.1)	16/300	7.5(3.6-11.4)	15/172	2.2(0.2-4.3)	4/149
No response	25.4(19-31.7)	71/300	14.6(9.3-20)	26/172	9.7(5.4-14.1)	15/149
Informing last anal partner about own HIV status						
I told him I don't know my status	3.7(0.6-6.9)	9/300	0.9(0-2)	2/172	0.8(0-2)	1/149
I told him I was HIV negative	38.9(32.7-45.1)	117/300	15.5(9.6-21.4)	27/172	33.3(25-41.7)	51/149
I told him I was HIV positive	8.6(5-12.2)	25/300	3.9(1.5-6.3)	8/172	6.1(1.9-10.4)	9/149

Sexual behavior	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
I did not say anything about my status	20.6(15.5-25.7)	70/300	63.1(53.9-72.3)	105/172	48.3(39.6-57)	70/149
Don't know/don't remember	2.1(0.4-3.8)	6/300	1.5(0-3.1)	3/172	2.5(0.3-4.8)	4/149
No response	26(19.9-32.1)	73/300	15(9.2-20.9)	27/172	8.9(4.6-13.2)	14/149
If the last anal partner was on prevention treatment						
He was on PrEP	0.2(0-0.6)	1/300	1.2(0-2.5)	2/172	0	0/149
He was PEP	0.5(0-1.2)	2/300	0	0/172	0	0/149
I don't know/don't remember	9.8(6-13.6)	34/300	56.9(49.4-64.4)	98/172	68.9(60.9-76.8)	102/149
I was on PrEP	3.3(1.1-5.5)	9/300	0	0/172	0	0/149
I was on PEP	2(0.6-3.4)	8/300	0	0/172	0	0/149
No response	83.8(79.8-88)	245/300	41.6(34.2-49)	71/172	31.2(23.2-39.1)	47/149
Female partners						
Had female partner in the last 12 months	42.2(35.4-49)	120/300	45.3(38.2-52.4)	78/172	60(50.6-69.4)	88/149
Median number of female partners	2.00	120	3.00	78	4.00	88
Median number of regular partners	1.00	68	1.00	51	1.00	68
Median number of occasional partners	1.00	76	1.00	50	3.00	66
Median number of paid partners	1.5	9	2.00	8	2.00	23
Used condom at last intercourse	73(63-82.6)	89/120	77.8(68.8-87)	60/78	55(44.4-65.3)	52/88
≤ 24	80.4(65.3-95.5)	39/47	77.9(64.2-91.4)	28/35	63.1(46.8-79.0)	21/31
≥ 25	66.5(53.8-79.5)	50/73	77.7(66.5-89.6)	32/43	50.7(35.7-65.0)	26/57
Consistent condom use with regular partners in the last 12 months	41.5(29-54)	31/68	58.7(29.4-88.8)	28/51	37.1(22.1-52.5)	24/68
Consistent condom use with occasional partners in the last 12 months	65(51.1-79)	53/76	57.7(40.2-76.1)	28/50	48.3(35.4-60.8)	36/66
Consistent condom use with paid partners in the last 12 months	71.3(48-95.3)	6/9	55.5(25.7-88.0)	4/8	50.0(0-99.3)	14/23
Group sex						
Had been involved in group sex in the last 12 months	19.2(14.3-24.1)	60/300	27.9(21.4-34.5)	46/172	10.5(5.2-15.7)	16/149
Were those groups only male groups, only female groups or mixed						
Only male	70.5(51.5-89.4)	43/60	67.6(56.5-78.7)	31/46	26.5(6.0-47.4)	4/16
Only female	1.3(1-1.7)	1/60	3.7(1.9-5.9)	1/46	18.9(8.5-29.4)	3/16
Mixed	28.2(9.3-47.1)	16/60	28.7(17.6-39.3)	14/46	54.6(34.7-73.9)	9/16

Sexual behavior	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
Used condoms at last group sex (yes)	78(69.4-86.1)	49/60	73.3(57.4-89)	34/46	62.9(43.3-80.5)	11/16
Access to condoms						
Knows where to obtain condoms	98.6(96.7-99.6)	294/300	98.4(96.8-100)	169/172	99.5(99-100)	148/149
Places where condoms can be obtained (most frequently mentioned)-Pharmacy	97.7(96-99.5)	286/294	92.1(87.3-96.8)	157/169	92(87.6-96.2)	135/148
Received condom during the last 12 months	63.6(58-70)	195/300	76.3(69.6-82.9)	130/172	67.2(59.3-75.0)	102/149
Use of lubricants during AI						
Always	28.5(22.7-34.2)	87/300	11.7(0.7-16.1)	22/172	7.2(3.6-10.8)	12/149
Never	13(8.7-16.7)	39/300	25.4(18.2-33)	43/172	23(16.5-29.6)	30/149
Don't know what it is	1.4(0.1-2.8)	4/300	3.9(1.3-6.5)	7/172	17.2(11.3-23.1)	26/149
Other sexual practices						
Toys	4(1.7-6.3)	12/300	4.5(1.3-7.7)	7/172	3.3(0.8-5.7)	5/149
Fingering	15(11.5-19)	47/300	19.5(13.4-25.5)	34/172	10.6(5.5-15.6)	14/149
Fisting	3.2(0.8-5.6)	10/300	1.5(0-3)	3/172	0	0/149
Other	0.4(0-1)	1/300	0	0/172	0	0/149

STIs	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
Aware of STIs						
Have heard about the STIs (yes)	90 (85-93)	269/300	95(91.8-98)	163/172	87.5(82.1-93)	132/149
Knowledge of symptoms of STI						
At least one	87.3(83.4-91.2)	232/269	88.8(84.3-93.3)	144/163	88.2(83.5-92.9)	116/132
No	12.7(8.8-16.6)	37/269	11.2(6.7-15.7)	19/163	11.8(7.1-16.5)	16/132
No response	0	0/269	0	0/163	0	0/132
Test for STI						
In last 12 months	69.8(63.1-76.5)	146/201	54(43.8-63.6)	59/101	54.2(42.7-65.7)	47/88
During 1-2 years	19.1(12.8-25.2)	34/201	17.2(9.1-25.4)	17/101	23.6(13.6	20/88
2 years ago	11.2(6.2-16.1)	21/201	29(19.9-38.1)	25/101	22.3(11.7-32.8)	21/88
Do not remember	0	0/201	0	0/101	0	0/88

STIs	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
Never tested	34.1(27.7-40.4)	99/300	39.0(32.4-45.6)	71/172	40.5(33.2-47.9)	61/149
Reasons for testing						
Prevention	72(64-80)	149/201	71(63.1-79.5)	67/101	55.4(45.4-65.6)	49/88
After appearance of symptoms	25(17-32.5)	46/201	26.6(17.8-35.2)	31/101	47.1(37.3-57)	41/88
Partner had STI	1(1-1.5)	1/201	3.2(0.7-5.7)	3/101	6.1(1.1-10.9)	6/88
Other requested	2.7(2.1-5.1)	5/201	0	0/101	0	0/88
Reasons for not testing						
No need. I know that I am healthy	19.2(14.2-24.2)	56/300	22.8(16.3-29.5)	37/172	31(24.2-37.8)	48/149
Experience of STI last 12 months						
Had symptoms of STI	21.4(15.4-27.5)	60/300	15.2(9.7-20.6)	25/172	25.6(18.6-32.6)	36/149
Referral for treatment and preventive actions during STI symptoms manifestation						
Self-treatment	2.0(0.3-3.6)	6/300	3.6(0.9-6.3)	6/172	0	0/149
Traditional healer	0	0/300	1.5(0-3.2)	2/172	0.8(0-2.5)	1/149
Health facility	14.2(9.0-19.5)	44/300	19.1(12.2-25.8)	29/172	23.3(16.7-30.0)	36/149
Private doctor at home	1.2(0-2.5)	3/300	2.5(0-4.9)	4/172	0.6(0-1.4)	1/149
Pharmacy	0.4(0-1.0)	1/300	0	0/172	1.3(0-2.7)	2/149
Informed sex partner about STI symptoms	12.0(7.0-17.0)	37/300	15.0(8.8-21.1)	22/172	14.7(9.2-20.2)	22/149
No sexual intercourse during symptoms	13.4(8.8-18.0)	41/300	18.6(12.6-24.4)	28/172	18.1(12.8-23.4)	27/149
Condom use during symptoms	5.2(2.8-7.5)	18/300	6.3(2.3-10.4)	10/172	6.1(2.0-10.3)	10/149
Received proctologist service during last 12 months	10.3(0-26)	6/60	2.8(1.5-3.5)	1/25	7.8(0-18.3)	2/36
Circumcision	5.8(0-17.1)	3/60	6(0-15.6)	2/25	0	0/36

Knowledge, opinions and attitudes towards HIV/AIDS	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
HIV/AIDS knowledge						
Have heard about the HIV/AIDS	94.5(92-97)	283/300	99(97.6-100)	171/172	83.6(76.1-91)	126/149
One may protect oneself from HIV/AIDS by having one uninfected and reliable sexual partner (yes)	91.3(88-95)	258/283	95(92.1-97.8)	162/171	96.5(94.4-98.7)	121/126
One can reduce HIV risk if one properly uses condoms during every AI (yes)	92.7(89.4-96)	262/283	94.2(90.2-98.2)	163/171	99.3(98.3-100.4)	125/126
Healthy looking person can have HIV (yes)	71(65-77)	201/283	89.8(85.2-94.4)	154/171	84(77.7-90.3)	106/126
One can get HIV as a result of a mosquito bite (no)	22.2(17-28)	60/283	49.34(39.6-59.1)	91/171	61(51.8-70)	80/126
One can get HIV by sharing meal with someone who is infected (no)	73.4(4.2-10.5)	22/283	59(50.8-67.2)	107/171	74(66.1-81.8)	95/126
One may be infected with HIV by using a needle/syringe already used by someone else (yes)	96.4(94-98.7)	273/283	95.2(91.3-99)	165/171	97.4(94.3-100.3)	124/126
Correctly answered 5 questions (GARPR indicator)	37.4(31.0-43.6)	120/300	41.1(32.0-50.2)	74/172	42.0(33.9-50.2)	64/149
≤ 24	31.4(21.8-41.1)	49/141	27.7(18.0-37.4)	23/81	40.3(29.2-51.2)	25/62
≥ 25	43.2(35.4-51.0)	71/159	53.1(39.9-66.5)	51/91	43.3(31.4-55.2)	39/87
A mother can transfer the HIV/AIDS virus to her fetus or baby (yes)	77.0 (71.4-82.5)	220/283	80.4(73.8-87)	141/171	88(83.6-92.5)	109/126
Know where to get HIV test						
Yes	95.0 (92.4-97.6)	269/283	86(80.2-91.6)	148/171	87(81.8-92)	109/126
Test for HIV						
In last 6 months	13.3(8.7-17.9)	32/231	11(5.1-16.7)	16/134	35.5(20.1-52.1)	27/101
6-12 months	52.3(45.6-60.4)	124/231	54.8(46.1-63.6)	73/134	27.2(15.3-38)	37/101
In last 1 - 2 years	20(15-25.2)	45/231	22.9(14.5-31.3)	31/134	114.8(0.8-27.7)	24/101
More than 2 years	12.6(7.3-17.9)	27/231	10.8(4.2-17.4)	13/134	18.2(6.4-30.9)	11/101
Do not remember	0.4(0-0.9)	1/231	0.6(0-1.6)	1/134	0	0/101
No response	0.7(0-1.7)	2/231	0	0/134	4.3(0-11.6)	2/101
Never tested	18.3(13.1-23.5)	51/283	24(15.4-32.5)	37/171	21.2(13.6-28.8)	25/126

Knowledge, opinions and attitudes towards HIV/AIDS	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
Received HIV test last year						
Received HIV test last year and know their results	52.1(45.5-59)	154/283	51.1(42.3-59.9)	89/171	51.6(42.9-60.4)	64/126
≤ 24	57.0(48.1-65.9)	75/134	44.5(32.9-56.4)	37/80	54.1(42.1-66.0)	28/50
≥ 25	49.8(41.4-58.1)	79/149	57.4(46.4-68.4)	52/91	50.0(36.8-63.2)	36/76
HIV risk perception						
High risk	11.4(7.6-15.1)	32/283	9.8(5.3-14.3)	19/171	8.3(3.8-12.9)	10/126
Medium risk	67.1(61.1-73.2)	192/283	66.6(59.1-74.0)	111/171	66.2(58.3-73.9)	87/126
Low risk	0	0/283	1.0(0-2.8)	1/171	0	0/126
No risk	0	0/283	0	0/171	0	0/126
Don't know	0	0/283	0	0/171	0	0/126
No response	21.5(16.0-27.1)	59/283	22.6(15.8-29.4)	40/171	25.5(18.1-32.9)	29/126

Stigma, Discrimination and Violence because of sexual orientation or homosexual relations	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
Discrimination because of being MSM						
Denied healthcare services	1.2(0.4-2.4)	4/300	0.6(0-1.5)	1/172	0	0/149
Denied employment	2.9(1-4.8)	9/300	0.3(0.2-0.4)	1/172	1.3(0-2.8)	2/149
Denied renting or kicked out of an apartment	1.6(0.3-2.9)	5/300	0.5(0-1.2)	1/172	0.6(0-1.4)	1/149
Denied help from police	3.4(1.4-5.3)	11/300	0.2(0-0.7)	1/172	0	0/149
Notified police about violence	46.7(33.6-59.6)	14/30	51.1(10-90)	4/7	55(29.6-80.6)	8/15
Did not notify police about violence	53.3(40.4-66.3)	16/30	49(10-90)	3/7	45(19.4-70.4)	7/15
Reason for not notifying police						
Not adequate reaction	31.9(7-57)	5/16	0	0/172	36.2 (0.3-74)	2/7
Because of shame that I have sex with men	0	0/16	0	0/172	26(0-53.7)	2/7
Other	21.9(2.4-41)	4/16	84.2(65.2-100)	2/3	26(0-56.7)	2/7
Don't know	31(7.6-54.5)	5/16	15.7(0-34.8)	1/3	12(0-32.4)	1/7
Experienced violence in the last 12 months						

Stigma, Discrimination and Violence because of sexual orientation or homosexual relations	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
Yes	10.2(6.5-13.9)	30/300	3.6(1.3-5.9)	7/172	8(4.6-11.6)	15/149
No	89.8(86.1-93.5)	270/300	96.4(94.1-99)	165/172	91.9(88.4-95.4)	134/149
Type of violence						
Physical	66.1(53.1-78.8)	21/30	69.6(55.9-100)	5/7	75.4(53.6-97.3)	11/15
Perpetrator of violence						
Stranger	64.5(44.5-84.6)	14/21	40.1(0-83.5)	2/5	26.9(1.9-51.5)	3/11
Acquaintance	18.5(8.6-28.4)	4/21	59.9(16.5-100)	3/5	23.1(0-45.4)	3/11
Family member / Relative	4.3(1.2-7.3)	1/21	0	0/5	19.6(0-45.6)	2/11
police	4.3(1.0-7.5)	1/21	0	0/5	0	0/11
client	0	0/21	0	0/5	22.1(0-50.8)	2/11
Other	0	0/21	0	0/5	0	0/11
No response	8.5(0-17.7)	1/21	0	0/5	8.5(0-23.4)	1/11
Verbal	92.0(88.9-94.0)	27/30	87.6(66.5-100)	6/7	100	15/15
Perpetrator of violence						
Stranger	65.1(10.3-100)	17/27	86.0(60.6-100)	5/6	43.6(16.2-71.5)	6/15
Acquaintance	17.0(10.7-23.2)	5/27	0	0/6	27.9(6.7-48.4)	5/15
Family member / Relative	6.7(0-61.0)	2/27	14.0(0-39.4)	1/6	14.7(0-34.5)	2/15
police	7.6(3.2-12.1)	2/27	0	0/6	6.4(0-17.6)	1/15
client	0	0/27	0	0/6	7.5(0-22.0)	1/15
No response	3.7(3.2-12.1)	1/27	0	0/6	0	0/15
Sexual	35.7(22.8-48.6)	10/30	47.6(10.0-86.8)	3/7	20.5(0-42.5)	3/15
Perpetrator of violence						
Stranger	10.2(0-28.0)	1/10	25.9(0-65.8)	1/3	44.8(0-100)	1/3
Acquaintance	15.0(0-32.2)	2/10	0	0/3	24.1(0-61.0)	1/3
Family member / Relative	0	0/10	0	0/3	0	0/3
police	0	0/10	0	0/3	0	0/3
client	0	0/10	0	0/3	0	0/3
Don't know	10.2(0-28.9)	1/10	25.9(0-68.4)	1/3	0	0/3
No response	64.7(37.8-91.9)	6/10	48.2(0-100)	1/3	31.1(0-81.4)	1/3
Economic	49.2(35.9-62.7)	14/30	12.4(0-35.3)	1/7	6.3(0-18.8)	1/15
Perpetrator of violence						
Stranger	25.4(5.0-45.6)	4/14	0	0/7	0	0/1
Acquaintance	29.6(4.7-54.6)	4/14	0	0/7	0	0/1
Family member / Relative	6.3(0-17.9)	1/14	0	0/7	0	0/1

Stigma, Discrimination and Violence because of sexual orientation or homosexual relations	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
police	0	0/14	0	0/7	0	0/1
client	0	0/14	0	0/7	0	0/1
Don't know	0	0/14	100	7/7	0	0/1
No response	38.7(12.9-64.7)	5/14	0	0/7	100	1/1

Interventions / Media	Tbilisi		Batumi		Kutaisi	
	RDS population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N	RDS-A population estimates, % (95% CI)	n/N
Source of information of HIV/AIDS and STIs						
Have not heard about the HIV/AIDS and STIs	3.7(1.6-5.7)	12/300	1.1(0-2.4)	2/172	8.4(4.4-12.4)	12/149
TV/ Radio	15.5(10.8-20.2)	51/300	20.6(14.5-26.7)	34/172	43.9(35.2-52.5)	66/149
Newspapers/books/booklets/	11.1(6.7-15.6)	30/300	4.7(0.5-8.7)	5/172	2.7(0.4-5)	4/146
Friends	20.8(15.6-25.9)	66/300	44.7(37.1-52.2)	82/172	36.3(27.6-44.9)	52/149
Clients	1.3(0-3.9)	2/300	1.0(0-2.2)	2/172	0.4(0-0.9)	1/149
Family members	1.3(0-3.0)	2/300	2.2(0.3-4.0)	4/172	2.7(0-5.6)	3/149
Tanadgoma/ community organizations	58.6(51.9-65.3)	181/300	61.2(54-68.3)	107/172	53.7(45.5-61.0)	81/149
Internet	60.0(53.7-66.4)	182/300	53.1(48.9-61.3)	92/172	43.0(34.5-51.4)	60/149
Aids center	8.5(4.7-12.4)	24/300	6(2.3-10)	10/72	1.1(0-2.4)	2/149
Others	13.5(9.6-17.3)	39/300	4.6(2-7.1)	9/172	2.4(0.3-4.6)	4/149
Trusted source of information						
TV	5.7(3.0-8.5)	18/300	13.5(7.8-19.3)	21/172	23.8(18.1-29.5)	37/149
Radio	0.2(0-0.6)	1/300	0.5(0-1.4)	1/172		
Newspapers	1.8(0.4-3.2)	6/300	1.2(0-2.3)	2/172	0.6(0-1.8)	1/149
Internet	47.5(41.5-53.5)	140/300	22.9(16.6-29.2)	39/172	30.5(22.5-38.3)	42/149
Booklets	22.9(17.8-28.1)	67/300	22.5(16.0-29.1)	42/172	5.3(2.2-8.5)	8/149
Friends / relatives	10.5(7.3-13.7)	33/300	19.1(13.6-24.9)	33/172	16.7(11.1-22.3)	22/149
Other MSM	3.1(1.4-4.9)	10/300	1.0(0-2.2)	2/172	7.6(3.4-11.8)	11/149
NGO representatives	46.2(40.1-52.2)	136/300	52.3(45.0-59.7)	92/172	55.3(47.4-63.1)	85/149
Others	24.5(19.6-29.4)	71/300	7.8(3.7-11.9)	15/172	1.8(0-3.7)	3/149
No response	24.4(19.6-29.5)	71/300	10.6(6.2-14.9)	19/172	3.3(0.7-5.9)	5/149

Annex 2. Survey Instrument

Questionnaire on HIV risk and prevention behaviors among Men who have Sex with Men and size estimation of this population

Questionnaire ID Number: ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Coupon ID Number ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Questionnaire is Coded as: ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

City: _____ **Year**:_____

Operational definition of respondent: Men who have had anal sex with another man in the past 12 months.

Introduction: "My name is_____. This survey is conducted by _____ (name of the organization) under the project _____(project title), funded by _____(donor). Has anybody taken an interview over the last tow months for this study?

Interviewer: If somebody has already taken an interview from the person you are talking to over the BBS period, don't take another one. Tell him, that you cannot re-interview him. Thank the person and finish conversation. In case of a negativ answer, continue.

☐☐☐ **Interviewer's Code:**

Date	
Result	

Result Codes: Completed – 1; Partially Completed – 2; Previously Interviewed – 3;

Refusal – 4; Other – 5

Q1.Date and time of interview: /_____/date/_____/hour/_____/minute/

Signature: _____ Date _____

General instruction to the interviewer: In case of any question, if there is no indication "Do not read", please

read all the responses to the interviewee, except the questions, where the responses are "Yes, No, Do not know".

REMEMBER THAT ONLY MALES ARE TO BE INTERVIEWED WITH THIS INSTRUMENT.

A1. How old are you?

/_____/_____/ (please specify an exact age)

No response   99

A2. What is the highest level of education you have achieved?

No education	0
Primary (4 grades)	1
Secondary (5-11 grades) (general or vocational school)	2
Incomplete higher	3
Higher	4
No response	99

A3. How long have you lived in this city (Tbilisi/Batumi/Kutaisi)?

Number of years   /_____/

Record 00 if less than 1 year

Don't know   88

No response   99

A3.aDo you have a permanent dwelling?

Yes	1
No, I rent the appartment	2
No, I live with my with someone else	3
No response	99

A5. Are you Georgian citizen?

Yes	1
No	2
No response	99

A6. What is your marital status?

Married	1
Divorced/Separated	2
Widower	3
Has never been married	4
Other (please indicate)_____	
No response	99

A7. Are you employed? (Do not read)

Yes, I have permanent job	1
Yes, I have temporary job	2
Student	3
No	4
Other (please specify)_____	5
No response	99

A8. What is your monthly income (I mean all sources of income, including support from family member or others)?

175 Lari and less	1
176-300 lari	2
300-500 lari	3
500-700 lari	4
700-1000 lari	5
1000 lari and more	6
No response	99

A9. Did you take a part in the study which was carried out by Tanadgoma and implied questionnaire filling and blood testing? *(Interviewer: Focus on the fact that the survey included both components – questionnaire filling and blood testing)*

Yes (2010)	1
Yes (2012)	2
Yes (2015)	3
No	4
Do not remember	88
No response	99

Section B: Drug and Alcohol Use

B1. In the previous month, how frequently did you drink alcohol beverages? (all type of alcohol beverages, including beer) *(only one answer)*

Every day	1
At least once a week	2
At least biweekly	3
Once a month	4
Don't know	88
No response	99
I did not drink *(Don't read)*	0

B2. Some people have tried various drugs. If you have done this, which one have you tried in the last 12 months? *(For each drug tick relevant option)*. *Ask for the mentioned drugs –* Please tell me, how did you take this drug: did you inject, smoke, inhale, drink, breath in or how? *(Don't help; multiple answer)*

Mult. ans.	Drugs	Inhale/Breath in/Drink/Swallow	Inject	Don't know	No response
0	Has not tried *(don't read)*				
1	Heroin	1	2	88	99
2	Opium	1	2	88	99
4	Subutex	1	2	88	99
5	Vint/Jef/Amphetamin	1	2	88	99
6	Dezomorphine (Crocodile)	1	2	88	99
7	Inhalants (glue)	1	2	88	99
8	Marijuana	1	2	88	99
9	Ecstasy	1	2	88	99
10	Cocaine	1	2	88	99
11	Sedatives	1	2	88	99
12	Other (Specify) -------------------	1	2	88	99
13	Bio	1	2	88	99
14	"Needles" ("ephedra vint")	1	2	88	99
88	Don't know/Don't remember	88			
99	No response	99			

Interviewer: If the respondent has tried injecting drugs, then ask:

B3. Please try to remember, when you injected drugs for the last time, did you use syringe or needle used by someone else?

Yes	1
No	2
Don't remember	88
No response	99

B4. Please try to remember, did you have unprotected sex with injecting drug user during last 12 months?

Yes	1
No	2
Don't remember	88
No response	99

Section C: Sexual history: numbers and types of partners

C2.   **Have you have anal sexual intercourse with a man during the last 12 months?**

Yes	1
No	2 (STOP the interview)

C2.1. In general what kind of sexual partner you are?

Penetrated	**1**
Penetrative	2
Both penetrated and penetrative	3
No response	99

C2.c Please, remember, when you last had anal sex, were you under influence of any of the following? (For each response tick the relevant answer)

Mult. ans.	Drugs	Inhale/Breath in/Drink/Swallow	Inject	No response
1	Alcohol			
2	Heroin	1	2	99
3	Opium	1	2	99
4	Subutex	1	2	99
5	Vint/Jeff/Amphetamin	1	2	99
6	Dezomorphine (Crocodile)	1	2	99

7	Inhalants (glue)	1	2	99
8	Marijuana	1	2	99
9	Ecstasy	1	2	99
10	Cocaine	1	2	99
11	Sedatives	1	2	99
12	Bio	1	2	99
13	"Needles" ("ephedra vint")	1	2	99
14	Other (Specify) -------------------	1	2	99

Now I would like to ask you several questions about your sexual partners during the last 12 months:

C3a. How many regular male partners have you had during the last 12 months?

_____ (Explain: regular partner means a partner with whom sexual relationship is without remuneration and is stable/regular)

C3b. How many occasional male partners have you had during the last 12 months?

_____ (Explain: occasional partner means a sex partner with whom sexual contact is established without exchange for material remuneration, for a short period of time, who is not a spouse, a regular partner, or a sex worker)

C3c. How many commercial male partners have you had during last 12 months?__ (**Explain:** commercial partner means a sex partner with whom sexual contact is established in exchange for material remuneration, meaning that you paid money or gave some other material remuneration to the partner)

(If the respondent answers yes all type of question 0, STOP the interview)

C6.1 How old were you when you first had anal sexual contact with a man?

/_____/_____/ (please specify an exact age)

No response   99

C7**.1 Please remember, the last time, when you had anal sex with a man, with whom that was?**

One regular partner   1

One occassional partner   2

Commercial partner   3

Several partners (group sex)   4

No response   99

C8. The last time you had anal sex, did you and your partner use a condom?

Yes   1

No   2

Don't remember   88

No response   99

C9. In general, with what frequency did you and your male partners use a condom during anal sex during the past 12 months?

Always   1

Often   2

Sometimes   3

Never   4

Don't know   88

No response   99

Now, I would like to ask you questions about your sexual contacts with male partners that you had

abroad during the last year. (Interviewer: Several coutries can be listed. In case the same country is listed

more than once, indicate the last case)

C10.a Have you had sex with male partner abroad during last year				C10.b If yes, have you had unprotected sex?			
Yes	No	Don't know	No response	Yes	No	Don't know	No response
1	2	88	99				
1.1 (Specify countries)_____				1	2	88	99
1.2				1	2	88	99
1.3				1	2	88	99
1.4				1	2	88	99
1.5				1	2	88	99

C11. The last time when you had anal sex with a man, in your opinion, what was his HIV status – was he HIV infected? *(Read)*

I think he was HIV negative   1

I know he was HIV negative   2

I think he was HIV positive   3

I know he was HIV postive   4

I know he does not know exactly his status   5

I did not think about this   6

Don't know/don't remember   88

No response   99

C12. The last time when you had anal sex with a man, did you inform your partner about your HIV status (HIV status means whether the person is HIV infected or not)? *(Read)*

I told him that I did not know my status   1

I told I was HIV negative   2

I told him I was HIV positive   3

I did not tell him anything about my HIV status   4

Don't know/don't remember   88

No response   99

C13. The last time when you had anal sex with a man *(Read, multiple answers possible)*

He was on PrEP   1

He was on PeP   2

I don't know/don't remember if he was on PrEP or PeP   3

I was on PrEP   4

I was on PeP   5

Don't know/don't remember   88

No response   99

Section D: Sexual history: Male regular partners

Interviewer: Check question C3a

IF HAD SEX WITH REGULAR PARTNER DURING PAST 12 MONTHS - **Continue**

IF HAD NOT SEX WITH REGULAR PARTNER DURING PAST 12 MONTHS - **Go to Section E**

D1. You said that you had (*Interviewer: specify the number of C3a*) _____regular male partners, with how many of them did you have anal sexual intercourse last 12 months?

_____ (Specify the number of partners)

Had no anal contact   2 **Go to Section E**

Don'tknow/Don't remember   88

No response   99

D3. Please remember last time you had anal sex with your regular partner, did you use a condom?

Yes   1 **Go to D5**

No   2

Don't know/Don't remember   88 **Go to D5**

No response   99

D4. If no, what was the reason for not using condom? (Do not read the answers)

Did not have   1

Too expensive   2

Partner objected   3

Don't like them   4

Didn't think it was necessary   5

Didn't think of it   6

Other_____7

Don't know   88

No response   99

D5. In general, with what frequency did you and your regular male partner(s) use a condom during the past 12 months?

Always   1

Often   2

Sometimes   3

Never   4

Had no anal contact 5

Don't know   88

No response   99

Section E: Sexual history: Occasional partners

Interviewer: Check question C3b

IF HAD SEX WITH OCCASIONAL PARTNER DURING PAST 12 MONTHS - **Continue**

IF HAD NOT SEX WITH OCCASIONAL   PARTNER DURING PAST 12 MONTHS - **Go to Section F**

E1. You said that you had (*Interviewer: specify the number of C3a*) _____occassional male partners, with how many of them did you have anal sexual intercourse last 12 months?

_____ (Specify the number of partners)

Had no anal contact   77 **Go Section F**

Don'tknow/Don't remember   88

No response   99

E3. The last time you had anal sex with occasional male partner, was a condom used?

Yes   1 Go to E5

No   2

Don't know/Don't remember   88 **Go to E5**

No response   99

E4. If no, what was the reason for not using condom? (Do not read the answers)

Did not have   1

Too expensive   2

73

Partner objected	3
Don't like them	4
Didn't think it was necessary	5
Didn't think of it	6
Other _____	7
Don't know	88
No response	99

E5. In general, with what frequency did you and your occasional male partners use a condom during the past 12 months?

Always	1
Often	2
Sometimes	3
Never	4
Had no anal contact	5
Don't know	88
No response	99

Section F: Sexual history: Commercial Sex partners

Interviewer: Check question C3c

IF HAD SEX WITH MALE COMMERCIAL PARTNER DURING PAST 12 MONTHS - **Continue**

IF HAD NOT SEX WITH MALE COMMERCIAL PARTNER DURING PAST 12 MONTHS - **Go to Section H**

F1. You said that you had (*Interviewer: specify the number of C3a)* _____commercial male partners. Plase remember those partners, to whom you paid money or gave some other material remuneration for sexual contact. With how many of such partners did you have anal sexual intercourse during the last 12 months?

_____ (Specify the number of partners)

Had no anal contact	**77 Go Section H**
Don'tknow/Don't remember	88
No response	99

F2. Please remember your last partner, with whom sexual contact was established in exchange for material remuneration, did you use a condom during anal contact with him?

Yes	1 Go to F4
No	2
Don't know/Don't remember	88 **Go to F4**
No response	99

F3. If no, what was the reason for not using condom? (Do not read the answers)

Did not have	1

Too expensive	2
Partner objected	3
Don't like them	4
Didn't think it was necessary	5
Didn't think of it	6
Other _____	7
Don't know	88
No response	99

F4. In general, with what frequency did you and your commercial male partners use a condom during the past 12 months?

Always	1
Often	2
Sometimes	3
Never	4
Had no anal contact	5
Don't know	88
No response	99

Section G: Involvement in Commercial Sex

G1. Have you sex with men in exchange of material remuneration? (Explain: By material remuneration I mean either money or some goods, or paying for your flat, etc.)

Yes   1

No   2   Go to section H

No response   99 **Go to section H**

G2. Over the last 12 months, approximately how often have you had sex with men in exchange of material remuneration?

Everyday	1
Several times a week	2
Once a week	3
2-3 times a month	4
Once a month	5
Once in three months or less	6
Do not know	88
No response	99

G3. Please specify, what kind of material remuneration do you usually get for your service? *(Multiple answer possible)*

Money	1
Food	2
Apartment/living place	3
Other (Specify) ---------	4
Do not know	88
No response	99

(Interviewer: if the respondent does not take money for his service, go to G6.)

G4. How much money do you get for your services per day?

Less than 10 Lari and less	1
10-20 Lari	2
20-50 Lari	3
51 – 100 Lari	4
More than 100 Lari	5
Other ------------------ **(Specify)**	6
Do not know	88
No response	99

G5. What is your monthly income from this service?

Up to 50 Lari	1
51-100 Lari	2
101-200 Lari	3
201-300 Lari	4
301-500 Lari	5
501-1000 Lari	6
1001 and more	7
Other	8
Do not know	88
No response	99

G6. Do you have any other source of income besides this business (commercial sex)?

Yes	1
No	2

Do not know   88

No response   99

G7. Over the last 12 months, about how many clients did you have per one working day?

_____ (*the number)*

Do not know   88

No response   99

G8. Do you consider yourself as involved in the sex-business?

Yes   1

No   2 Go to G10

Do not know   88 **Go to G10**

No response   99 **Go to G10**

G9. What is the reason of your involvement in the sex-business? (*Don't read; help if needed*)

Earning money   1

I like my occupation and

don't want to do anything else 2

I cannot do anything else   3

Other _____(**Specify)**   4

Do not know   88

No response   99

G10. Last time when you had sex with a male partner for material remuneration, did you or your partner use a condom?

Yes   1 **Go to G12**

No   2

Do not know   88 **Go to G12**

No response   99

G11. If no, what was the reason for not using condom?

Did not have   1

Too expensive   2

Partner objected   3

Don't like them   4

Didn't think it was necessary 5

Didn't think of it   6

Other_____ 7

Don't know   88

No response   99

G12. In general, with what frequency did you and your male clients use a condom during the anal sex past 12 months?

Always   1

Often   2

Sometimes   3

Never   4

Had no anal contact   5

Don't know   88

No response   99

G13. How many regular clients do you have? (Explain: regular client means, when repeatedly uses sexual services of a particular person)

_____   (Specify the number of clients)

Have no regular client   77 **Go Section H**

Don't know   88

No response   99

G14. Was your commercial male partner your regular client?

Was regular client   1 Go to G17

Was not regular client   2

No response   99

G15. Remember your last regular client, when you had anal sex, did you or your partner use condom?

Yes   1 Go to Section H

No   2 Continue

Don't know   88 Go to G17

No response   99 Go to G17

G16. If no, what was the reason for not using condom? (Do not read the answers)

Did not have   1

Too expensive   2

Partner objected   3

Don't like them   4

Didn't think it was necessary   5

Didn't think of it   6

Other _____   7

Don't know   88

No response   99

G17. In general, with what frequency did you and your regular client(s) use a condom during the anal sexual intercourse in the past 12 months?

Always   1

Often   2

Sometimes   3

Never   4

Had no anal contact   5

Don't know   88

No response   99

Section H: Sexual history: Sex with females

H1. Have you had sexual intercourse with a woman during the last 12 months?

Yes   1

No   2 Go to section I

No response   99 **Go to section I**

Now I would like to ask you several questions about your female sexual partners that you had during the last 12 month.

H3a. How many regular female partners have you had during last 12 month?___ (Explain: regular partner means a spouse or sex partner, with whom the relationship is stable).

H3b. How many occasional female partners have you had during last 12 month?___ (Explain: occasional partner is a sex partner, for a short period of time, who is not a spouse, a regular partner, or a sex worker).

H3c. How many commercial female partners have you had during last 12 month?___ (Explain: commercial partner is a sex partner with whom sexual contact is established in exchange for material remuneration, meaning that you paid money or gave some other material remuneration to the partner).

(If the respondent answers 0 to all questions about types of partners, Go to Section I)

H5. The last time you had sex with female sex partner, was a condom used?

Yes   1

No   2

Don't remember   88

No response   99

H6. *Interviewer:* Check question H3a

IF HAD SEX WITH REGULAR FEMALE PARTNER DURING PAST 12 MONTHS - **Continue**

IF HAD NOT SEX WITH REGULAR FEMALE PARTNER DURING PAST 12 MONTHS - **Go to H7**

In general, with what frequency did you use a condom with your regular female partner during last 12 months?

Always   1

Often   2

Sometimes   3

Never   4

Don't know   88

No response   99

H7. *Interviewer*: Check question H3b

IF HAD SEX WITH OCCASIONAL FEMALE PARTNER DURING PAST 12 MONTHS - **Continue**

IF HAD NOT SEX WITH OCCASIONAL FEMALE PARTNER DURING PAST 12 MONTHS - **Go to H8**

In general, with what frequency did you use a condom with your occasional female partners during last 12 months?

Every time   1

Most times   2

Occasionally   3

Never   4

Don't know   88

No response   99

H8. *Interviewer*: Check question H3c

IF HAD SEX WITH COMMERCIAL FEMALE PARTNER DURING PAST 12 MONTHS - **Continue**

IF HAD NOT SEX WITH COMMERCIAL FEMALE PARTNER DURING PAST 12 MONTHS – **Go to I**

In general, with what frequency did you use a condom with your commercial female partners during last 12 months?

Always   1

Often   2

Sometimes   3

Never   4

Don't know   88

No response   99

Section I: Group sexual practices

I2. Did you have group sex during the last 12 months?

Yes   1

No   2 Go to section J

Don't know   88 Go to section J

No response   99 **Go to section J**

I3. Were those groups only male groups, only female groups or mixed (male and female) groups?

Only males   1

Only females   2

Mixed   3

Don't know   88

No response   99

I4. At the last time you took part in the group sex, did you use a condom with all partners?

Yes   1

No   2

Don't know   88

No response   99

Section J: Condoms, lubricants

J1. Do you know of any place or person from which you can obtain condoms?

Yes   1

No   2 Go to J3

No response   99

J2. Which place or person do you know where you can obtain condoms? (Don't read, circle each mentioned answer.)

Shop   1

Pharmacy   2

Market   3

Clinic   4

Bar/guest house/hotel   5

Peer educator   6

Friend   7

"Tanadgoma"   8

Other_____   9

Don't know   88

No response   99

J3. During the last 12 months, have you been given condoms and lubricants, say, by social workers, or at the "healthy cabinets", or by peer educators?

Yes   1

No   2

Don't know   88

No response   99

J3.1. During the last 3 months, have you been given condoms and lubricants, say, by social workers, or at the "healthy cabinets", or by peer educators?

Yes   1

No   2

Don't know   88

No response   99

J5. Now I would like to ask you some questions about the use of lubricants during sexual intercourse with men. (*Explain: I mean some dope grease that is used during sexual intercourse to make it less painful*.)

Have you used lubricants during anal intercourse with men in the past 3 months?

Always   1

Often   2

Sometimes   3

Never   4

Don't know   88

No response   99

Section W: Other sexual practices

W1. Did you use any of the following items during sex?	Yes	No	No response
a. Sex toys (Dildo, Faloimitator)	1	2	99
b. Fingering	1	2	99
c. Fisting	1	2	99
d. Other _____			

Section K: Sexually Transmitted Infections (STIs)

K1. Have you ever heard of diseases that can be transmitted through sexual intercourse (so called venereal diseases)?

Yes   1

No   2 **Go toK3**

No response   99 **Go toK3**

K2. Can you describe any symptoms of STIs in men? What external signs or symptoms may cause men to suspect they may be infected? - Any other signs? (Don't read, Circle all mentioned responses. More than one answer is possible)

Genital discharge 1

Burning and pain during urination 2

Genital/anus ulcers/sores 3

Swelling in groin area 4

Other _____ 5

No response 99

K3. Have you had anal or genital discharge during the past 12 months?

Yes 1

No 2

Don't know 88

No response 99

K4. Have you ever been tested for STIs?

Yes 1

No 2 **Go toK8**

No response 3 **Go to section L**

K5. If yes, when was the last time you were tested on STIs?

During the last year 1

During 1-2 year 2

2 years ago 3

Durin the last 3 months 4

Do not know 88

No response 99

K6. Why did you decide to be tested? *(Multiple answer possible)*

For prophylaxis 1

After discovering symptoms 2

Sexual partner had an STI 3

I was asked to 4

Other (Specify)_____ 5

No response 99

K8. If you have not been tested, what was the reason for that? *(Multiple answer possible)*

Don't know where to get tested   1

Don't need it, I know I am healthy   2

Have never thought about this   3

Afraid of the result, I prefer not to know   4

It is very expensive   5

Feel shy before the personnel   6

Don't want to meet some acquaintances

when I go for testing   7

Don't want someone to know my test results

(even medical personnel)   8

Don't trust doctors   9

Other (Specify) _____

No response   99

Note: Module L should be filled only for those respondents, who have suffered STI symptoms over the last 12 months (Check question K3). Otherwise go to Section M.

Section L: STI Treatment seeking behaviors

L1. What did you do when you had genital or anal release or ulcer/boil last time? *(Circle one answer for each question)*

Questions	Yes	No	NR
1. Applied self-treatment	1	2	99
2. Consulted or received a treatment from a traditional healer or a wise man	1	2	99
3. Consulted or received a treatment at the health clinic or hospital	1	2	99
4. Consulted or received a treatment from a medical doctor, but privately	1	2	99
5. Consulted or received a treatment at a drugstore	1	2	99
6. Told your sexual partner about your symptoms or STI	1	2	99
7. Did you stop having sex when the symptoms appeared?	1	2	99
8. Did you use the condoms during the symptom period?	1	2	99

L2. Have you referred to a proctologist during the last 12 months?

Yes   1

No   2

No response   99

L3. Have you been circumcised?

Yes   1

No   2

No response   99

Section M: Knowledge, opinions, and attitudes towards HIV/AIDS

M1. Have you ever heard of HIV or the disease called AIDS? (*Explain:* HIV is a human immunodeficiency virus which causes AIDS. *Make sure that the respondent understood what HIV is. You may use additional definitions too.*)

Yes   1

No   2   Go to section N

No response   99

M3. Please give me your opinion regarding the following:

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

Statements	Yes	No	DK	NR
1. One can reduce risk of HIV infection (which causes AIDS) by having one uninfected and reliable sexual partner	1	2	88	99
2. One can reduce 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. One can get HIV as a result of a mosquito bite	1	2	88	99
5. Do you believe that one can get HIV/AIDS by sharing food with an infected person?	1	2	88	99
6. Do you believe that one may be infected with HIV/AIDS by using a needle/syringe already used by someone else?	1	2	88	99
8. Do you believe that an HIV-infected woman can infect her fetus or child?	1	2	88	99

M10. How you evaluate your risk for HIV?

High risk   1

Medium risk   2

Low risk   3

No risk   4

Don't know   88

No response   99

M5. Do you know the place where you can get HIV tested if you wished to do so?

Yes   1

No   2

No response   99

M6. Hhave you ever been tested for HIV?

Yes   1

No   2 Go to section HH

No response   99 Go to section HH

M7. When was the last time you were tested for HIV?

In the period of 1 year ago to 2 years ago   1

2 years ago   2

During the last 6 months   3

In the period of 6-12 months ago   4

Don't know   88

No response   99

M7.1. Do you know your HIV status?

Yes   1

No   2 Go ro section HH

No response   99 Go to section HH

M7.3. You may not tell me, but what was your HIV status?

Positive   1

Negative   2

Indeterminate   3

No response   99

Section HH: Stigmra, Discrimination and Violence

HH. During the last 12 months, did you come across cases when you were denied of the things listed below because you are MSM *(Interviewer: read)*	Yes	No	DK	NR
1. Medical services	1	2	88	99
2. Employment	1	2	88	99
3. Renting an apartment/kicked out of apartment	1	2	88	99
4. Help from the police	1	2	88	99

Now I would like to ask some questions about violence cases during the last 12 months. (Interviewe: Multiple answers. If there are several cases of each, focus on the last case.) HH5. During the last 12 months, have you been a victim of violence? (Interviewer: If the answer is No, Go to section Q.)	Yes	No	DK	NR
	1	2	88	99

HH6. If yes, who perpetrated this violence?	Stranger	Acquain-tance	Family member/ relative	Police	Client	Other (specify)	DK	NR
1.1. Yes, verbal	1	2	3	4	5	6_____	88	99
1.2. Yes, physical	1	2	3	4	5	6_____	88	99
1.3. Yes, sexual	1	2	3	4	5	6_____	88	99
1.4. Yes, economical (money extortion, not giving money, racketiering etc)	1	2	3	4	5	6_____	88	99

HH7. Did you notify police about this incident?

Yes   1 Go to section Q

No   2 Continue

Don't know   88 Go to section Q

No response   99 Go to section Q

HH8. If you di not notify police, what was the reason for that?

Makes no sense, there will be no adequate reaction   1

I am embarassed to say that I have sex with men   2

Other _____   3

Don't know   88

No response   99

Section Q: Exposure to Intervention and media communication

Q1. Could you list all sources of information on STI/HIV? (Don't read) Could you remember some other sources of information? (Multiple answer)

TV/Radio   1

Newspapers   2

Friends   3

Clients	4
Family members	5
"Tanadgoma"	6
Internet	7
Community organizations	9
AIDS Center	10
Other_____	88
No response	99
I have never heard anything about STI/HIV	0 Go to section P

O2. What is the most reliable source for you? *(Multiple answer)*

TV	1
Radio	2
Newspapers, magazines	3
Internet	4
Special Boolkets	5
Friends, relatives	6
Other homo/Bisexual males	7
NGO representatives	8
Other (specify)_____	9
No response	99

Now please go to provide us with the laboratory samples and then come back to continue.

NOTE: NEXT SECTION OF THE QUESTIONNAIRE IS FOR POPULATION SIZE ESTIMATION AND RELEVANT INSTRUMENTS ARE PROVIDED IN THE SIZE ESTIMATION REPORT. ONLY ONE PSE INSTRUMENT IS RELEVANT TO THE BBS SURVEY AS WELL - PROVIDED BELOW AS SECTION R.

Section R. Network size

Now I will ask questions about your social network. Please, tell me, how many men live in Tbilisi/Baumi/Kutaisi, who have sexual contacts with other men and how many of them you knkow personally. I do not ask their names. Please, respond to the questions:

#	Questions	Response
1.	In your opinion, how many men who have sex with men live in this city?	
2.	How many out of them you know personally, so that they know you personally too?	
3.	How many out of them are above 18 years of age?	
4.	How many out of them have had sexual contacts during the last 12 months?	
5.	How many of them have you seen during the last one month?	
6.	How many of them have you seen during the last 3 months?	
7.	In your opinion, how many of them could you invite to take part in this survey? (You could contact them and invite them despite their agreement to participate)	
8.	Would you invite to the survey a person, who gave you a coupon, knowing that he does not have a coupon?	1. Yes. 2. No
9.	Why did you agree to take part in the survey? (*multiple answer*)	1. Monetary incentive 2. Because the person who gave me the coupon has aasked me 3. Survey topic is interesting/useful for me 4. I had lots of free time 5. Other (specify)_____

Q3. Our questionnaire is over. You have been very helpful. After finishing this present study our organization will plan projects that will be beneficial for all. If in several months I need to take another interview from you, would you make yourself available?

Yes   1

No   2

Don't know (let's see)   3

Thank the respondent for cooperation and say good bye. After the interview srite down the identification data of the respondent, so that it is possible to contact him for the further stage of the panel research.

Q4. During the interview the respondent was:

Interested   1

Calm   2

Indifferent   3

Agitated   4

Uninterested   5

Time when interview was concluded_____

The questionnaire is kept till completion of the project.

Quality control on the interview was carried out by_____

Position_____

Organization_____

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