



**CURATIO**  
INTERNATIONAL  
FOUNDATION

# HIV risk and prevention behaviours among Prison Inmates in Georgia

Bio-behavioral surveillance survey in 2015

Study report

December 2015



Infectious Diseases, AIDS  
and Clinical Immunology  
Research Center

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## Acronyms

AIDS	Acquired Immune Deficiency Syndrome
BSS	Behavioral Surveillance Survey
CI	Confidence Interval
CIF	Curatio International Foundation
GARPR	Global AIDS Response Progress Report
GFATM	The Global Fund to Fight AIDS, Tuberculosis and Malaria
HIV	Human Immunodeficiency Virus
HTC	HIV Testing and Counseling
PWIDs	People Who Inject Drugs
MoC	Ministry of Corrections of Georgia
NGO	Non-Government Organization
SPSS	Statistical Package for the Social Sciences
SRS	Simple Random Sampling
STI	Sexually Transmitted Infection
TPHA	Treponema Pallidum Hemagglutination Assay

## Definitions<sup>1</sup>

**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 PWIDs).

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

**Homosexual contact** – A sexual contact with the person of the same sex.

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<sup>1</sup> Methodology of Behavioral Surveillance Studies of key populations, 2010 (Georgian version). [www.curatiofoundation.org](http://www.curatiofoundation.org)

# Executive Summary

## Introduction

Georgia is among the countries with low HIV/AIDS prevalence (0.3% (0.2-0.4% 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 five years heterosexual transmission is prevailing.

By 2012 there were about 23 000 prisoners in the Georgian penitentiary system. Georgia had one of the highest in the world prison population rate per 100,000.<sup>2</sup> However, after so-called “prison scandal” and change of the government in October 2012, about 14000 prisoners were released from penitentiary institutions. Despite the fact that conditions in the prisons have improved over the last years, still the situation remains quite hard. The main reason for imprisonment in Georgia still is drug-related crime. The majority of prisoners are arrested for repeated use of drugs or for keeping them in small amounts.

Prisons are considered as endemic areas for diseases such as tuberculosis, HIV infection, and hepatitis B and C. According to various data, risk behaviors such as sharing syringes, needles and other injecting equipment are widespread in prisons. Testing for blood-borne infections in prisons started in 2005 with wide expansion since 2008. As an example, in 2014 there were about 9000 prisoners tested on HIV.

This study represents the subsequent wave of Bio-BSS undertaken among prisoner population. The first Bio-BSS was conducted in 2008 using the SRS technique and managed to recruit 211 prisoners in total. Next round of the surveillance survey was conducted in 2012, having recruited 301 inmates. The objective of the current, 2015 Bio-BSS was to measure the prevalence of HIV and Syphilis among prisoners, to provide measurements of key HIV risk behaviours and to generate evidence for advocacy and policy-making. The study was implemented within the GFATM-funded project "Generating evidence base for risk behavior change and effectiveness of preventive interventions among high risk groups for HIV/AIDS" by Curatio International Foundation (CIF), Center for Information and Counseling on Reproductive Health - Tanadgoma and the Infectious Diseases, AIDS and Clinical Immunology Research Center.

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<sup>2</sup> World Prison Population List (8<sup>th</sup> edition) 2009. King's College London, International Center for Prison Studies

In addition to the Bio-BSS findings current report presents also some comparisons with the “Study of needs of harm reduction programs in penitentiary system institutions of Georgia”, conducted by Tanadgoma and Dutch NGO Mainline Foundation in 2011.<sup>3</sup>

## Methods

Simple Random Sampling (SRS) Method was used for forming the study sample. An advantage of this method is that it guarantees low risk of selection bias and, therefore, provides a highly representative sample. Three institutions were assigned by the Ministry of Corrections of Georgia (MoC) for the study sites: penitentiary establishment No 2 (located in Kutaisi), penitentiary establishment No 15 (located in Ksani) and penitentiary establishment No 17 (located in Rustavi). All of these institutions were advised by the Penitentiary Department. All of them are “mixed” or “semi-open” type of establishments. The sample size intended to reach was defined as 300 prisoners.

## Results

### Socio-demographic characteristics

The socio-demographic structure of prisoners’ cohort studied in 2015 is close to that studied in 2012, but still a bit different:

- Median age of prisoners is 34, however, in 2012 it was 32 years;
- Majority are with the secondary education;
- Slightly less than half is married, while in 2012 more than a half was married;

One important change is that median duration of imprisonment is 1.5 years – more than twice as less as in 2012, when it was 3.4, and this decrease is statistically significant ( $p < 0.01$ ).

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<sup>3</sup> “The study of needs of harm reduction programs (related to drug use, drug-related risky behaviors, drug dependency treatment and risk reduction) in penitentiary system institutions of Georgia”. Survey report. 2012.

<http://new.tanadgomaweb.ge/upfiles/dfltcontent/3/41.pdf>

## **HIV/AIDS related knowledge and testing practices**

Knowledge about HIV, measured by the Global AIDS Response Progress Report Indicator, was low – 23.3%. In general, level of knowledge on HIV has not changed from 2011 to 2015.

Level of stigma towards HIV infected seems to decrease, as more than one third (35.2%) of the respondents answered positively to the question about visiting dentist who has served an HIV infected person, which is higher than in 2012 (29.1%). However, the same proportion as in 2012 said they would stop any contacts with HIV infected cellmate. The proportion of the prisoners who would stop any contact with HIV positive cellmate has decreased since the 2008 survey from 23.3%, but stayed the same since 2012.

There is statistically significant increase in the proportion of prisoners who tested during the last 12 months and had received their results (from 21.3% in 2012 to 32.6% in 2015) ( $p < 0.01$ ).

Majority of the prisoners consider themselves being at medium risk for HIV infection.

*Prisoners' knowledge about HIV is relatively low and demonstrated no changes since the last survey of 2012. However, level of stigma towards HIV positive prisoners is not high. HIV testing offer in prisons as well as uptake by the prisoners has increased, which demonstrated successfulness of the HTC cabinets established by the prevention programs within the penitentiary system.*

## **Sexually Transmitted Infections**

Majority of respondents have heard about STIs, and is able to list several STIs as well as to list at least one STI symptom. Only 10.3% of inmates reported taking any STI test during the last 12 months and their majority (90.3%) had received their test results. Of those who reported having some STI symptoms during the last 12 months majority 58.3% referred to a medical doctor.

*Although awareness on STIs in general is high, knowledge or health-seeking behavior of the prisoners has not changed since 2012.*

## **Sexual behavior**

Much higher percentage of the respondents reported having had sexual intercourse during the last 12 months, compared to the survey of 2012 (35.2% vs. 8.6%), and this increase is statistically significant ( $p < 0.01$ ). Majority of them mentioned heterosexual contacts, four prisoners – both homosexual and heterosexual contacts and only one – homosexual contacts.

*Record of sexual practices among prisoners is not high, although higher than in the previous survey. However, mostly heterosexual contacts are being reported.*

### **Drug Use Behavior and Additional Risks**

There has been significant decrease in the percentage of the prisoners who reported having ever used drugs in their lives ( $p < 0.01$ ). 31 respondents reported using non-injecting drugs during the last 12 months and only 8 respondents mentioned using injecting drugs.

Additional analysis showed that only one inmate had used injecting drugs while in prison. Out of those having used non-injecting drugs during the last 12 months, only 3 respondents had used those while being in prison.

Additional risks related to HIV exposure were found to be also small. Almost one third of the prisoners (31.6%) reported having done tattoo while in prison. Only five prisoners reported using shared syringes for treatment purposes and 3% used razors that were used by the others. Alcohol use is extremely low in prisons - 3% reported using it during the last 12 months.

Administrative fines reported by the prisoners throughout the years 2008 – 2015 have increased, with highest rates reported in 2015. Increase in the administrative fines experience is statistically significant ( $p < 0.01$ ). Pre-trial detentions' rate has slightly decreased from 2008 to 2012 and then raised again in 2015. But in general mostly it is in the same range. As for previous imprisonment due to drug use, this indicator has also increased from 2008 through 2011 to 2012, and show the highest rate in 2015, but the change from 2012 to 2015 has not been statistically significant.

*Based on the survey results, it is difficult to exclude that there is some drug use in the prisons that were included in the survey. However, there almost no additional risk practices in the survey population such as sharing injecting equipment, alcohol use in Georgian prisons. This could explain that majority of the respondents do not consider themselves at high risk for HIV. However, risk perception has increased from low, reported by majority, to medium. Still tattooing practice is present, but without sharing equipment it does not represent any risk for HIV exposure.*

### **Interventions/Media**

Less than half of the respondents listed TV as a primary source of information on HIV and STIs, followed by special booklets, other prisoners and NGO representatives. This is the first time NGO representatives appear meaningfully in the list of the sources. As for the most popular and trusted sources of information, this is TV, booklets and NGO representatives – again for the first time. It

should be noted, that when the respondents list “other” sources, the highest trustful source named is “healthcare workers”.

The study revealed statistically significant increase in the percentage of the respondents (25.2% in 2015 vs 18.3% in 2012,  $p < 0.05$ ) who were covered by preventive program.

*Prisoners have various sources of getting information on HIV and STIs, the most trustful of them being TV, booklets, NGO representatives as well as healthcare workers. Coverage by prevention interventions has increased since 2012, most probably due to the extensive work of the HTC centers in almost every prison.*

### **Biomarker**

The HIV prevalence found by the survey was 2%. In the previous survey the prevalence was 0.3%. However, this increase is statistically not significant.

Prevalence of syphilis was low. Only 2 inmates were positive on TPHA test, however, one case was also doubtful positive. Comparison of syphilis prevalence with the data of 2012 survey demonstrated statistically significant decrease ( $p < 0.001$ ).

## Recommendations

Following recommendations are proposed based on the survey results:

**1. Coverage of the prisoners by prevention programs should increase.** Both coverage of the prisoners by the HIV prevention programs as well as HIV/AIDS awareness among the prisoners are low. In order to cover these gaps identified through the survey, it is necessary to continue and expand prevention programs inside penitentiary system of Georgia. Specific HIV-related information should be provided on constant basis using channels of information listed and trusted by the prisoners, such as NGO representatives, printed materials and healthcare workers. This would entail intensive training of prison healthcare workers so that they are able to provide explicit information on the basis of existing HTC centers in penitentiary establishments. Also, existing HTC centers and their services should be actively promoted inside each institution.

2. Since drug-related legislation in Georgia continues to be punitive, there is constant flow of PWIDs into penitentiary system. In order to prevent different risk practices, and especially lay ground for prevention of lethal overdoses after release, **specific psychosocial rehabilitation and harm reduction programs should be implemented.**

**3. Continue with surveillance.** Non-coercive, anonymous, ethical and systematic surveillance of prisoners (and other high risk groups), both behavioral and of selected biological markers, should be conducted on a regular basis to provide early warning of a possible dramatic increase in the prevalence rate. In addition, surveys can provide invaluable information for designing focused interventions as well as for monitoring whether STI/HIV prevention and reduction interventions are working.

**Table 1: Summary of Core Indicators**

HIV/AIDS Knowledge	%	n/N
<b>Aware of HIV/AIDS</b>		
Correctly answer 5 questions (GARPR indicator) * <sup>4</sup>	23.3	70/301
≤ 24	25.6	11/43
≥ 25	22.9	59/258
Correctly answer 7 questions (National indicator) * <sup>5</sup>	32.9	99/301
≤ 24	27.9	12/43
≥ 25	33.7	87/258
<b>HIV testing while being in prison last year</b>		
Tested on HIV last 12 months and knows result *	32.6	98/301
≤ 24	23.63	10/43
≥ 25	34.1	88/258
<b>Sexual Behavior</b>	<b>%</b>	<b>n/N</b>
<b>Condom use at last homosexual contact</b>		
Used condom *	60.0	3/5
≤ 24	66.7	2/3
≥ 25	50.0	1/2
<b>Drug using behavior</b>	<b>%</b>	<b>n/N</b>
<b>Drug consumption while being in prison</b>		
Non-injected drug use last 12 months	0	0/301
Injected drug use last 12 months *	2.7	8/301
<b>Needle sharing practice while being in prison</b>		
Shared needle/syringe last 12 month *	0	0/301
<b>Preventive program coverage</b>		
Received information about HIV/AIDS from preventive program and offer about HIV testing while being in prison last 12 months *	25.2	76/301
≤ 24	16.3	7/43
≥ 25	26.7	69/258

<sup>4</sup> One may protect oneself from HIV/AIDS by having one uninfected and reliable sexual partner; Can reduce the HIV risk if one properly uses condoms during every sexual contact; healthy looking person can be infected with HIV; no one can get HIV as a result of a mosquito's bite; no one can get HIV by taking food or drink with infected person .

<sup>5</sup> One may protect oneself from HIV/AIDS by having one uninfected and reliable sexual partner; Can reduce the HIV risk if one properly uses condoms during every sexual contact; healthy looking person can be infected with HIV; one may be infected with HIV/AIDS by using a needle already used by someone else; one may be infected with HIV/AIDS by using bottle, spoon, boiling pan/glass, container, cotton/filter or water where might been touched needle already used by someone else; one may be infected with HIV/AIDS by taking solution from the shared container; drug users may protect themselves from HIV/AIDS by switching to non-injection drugs.

HIV/AIDS Knowledge	%	n/N
<b>Biomarker</b>	<b>%</b>	<b>n/N</b>
HIV (ELISA with Western Blot confirmation)		
HIV prevalence (positive) 1000 prisoners	19.9(7.2-44.2)	6/301
≤ 24	0	0/43
≥ 25	23.3(8.4-51.5)	6/258
Syphilis1000 prisoners		
Positive	6.6(1-23.9)	2/301
Suspicious positive	3.3(0.2-17.9)	1/301
≤ 24 Positive	0	0/43
≤ 24 Suspicious positive	0	0/43
≥ 25 Positive	7.8(1.2-27.9)	2/258
≥ 25 Suspicious positive	3.9(0.3-20.8)	1/258

Questions marked with \* represent GARPR or national indicators.

## Introduction

The overall prevalence of HIV infection in Georgia is 0.3% (0.2-0.4%) among adult population (15-49 years of age). As of December 1, 2015 a total of 5,331 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 564 new cases of HIV in 2014 (15.1 new cases per 100,000 population), while in early 2000 this number did not exceed to 100.<sup>1</sup> 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.<sup>2</sup>

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.

This study represents the subsequent wave of Bio-BSS undertaken among prisoners, the first Bio-BSS was conducted in 2008 using the SRS technique and managed to recruit 211 prisoners in total. The second wave was conducted in 2012 and recruited 301 prisoners.

It should be noted that in 2011, Association “Tanadgoma”, together with the Dutch NGO “Mainline Foundation”, with the support of the Dutch MATRA program, carried out a study of needs of harm reduction programs (related to drug use, drug related risky behaviors, drug dependency treatment and risk reduction) in penitentiary system institutions of Georgia<sup>6</sup>. Necessity of this research was based on the low-scale harm reduction interventions existing in Georgian prisons, combined with the strict drug legislation, which caused flow of high number of PWIDs into the system. In this survey, 47% of injecting drug users and 14% of non-injecting drug users report that current imprisonment is connected to drug use. The survey revealed that prisoners’ knowledge regarding HIV infection is unsatisfactory, HIV testing uptake is not high, there is high concentration of the drug users in prisons, but no drug use in penitentiary establishments, there is lack of information about

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<sup>6</sup> The study of needs of harm reduction programs (related to drug use, drug-related risky behaviors, drug dependency treatment and risk reduction) in penitentiary system institutions of Georgia. Survey report. 2012.

<http://new.tanadgomaweb.ge/upfiles/dfltcontent/3/41.pdf>

harm reduction interventions, but high need for them, starting from methadone detox, methadone substitution, as well as psychosocial rehabilitation. Some data of this research are well comparable to the Bio-BSS surveys data, so they are taken into consideration when certain trends in behavioral patterns are being discussed.

The objective of the current, 2015 Bio-BSS was to measure the prevalence of HIV and Syphilis among prisoners, to provide measurements of key HIV risk behaviours and to generate evidence for advocacy and policy-making. The study was implemented within the GFATM-funded project "Generating evidence base for risk behavior change and effectiveness of preventive interventions among high risk groups for HIV/AIDS" by Curatio International Foundation (CIF), Center for Information and Counseling on Reproductive Health - Tanadgoma and the Infectious Diseases, AIDS and Clinical Immunology Research Center.

### **Conditions in the penitentiary system**

Situation in Georgian penitentiary systems has changed drastically during the last 3 years. In September 2012, a "prison scandal" took place, when cases of ill-treatment and torture were demonstrated through media. Since October 2012, after change of the Georgian Government, more than half of the prisoners have been released from the system and the new administration of the Ministry of Corrections (MoC) has initiated new waves of reforms to improve conditions in prisons.

Several healthcare related problems had been taken care of in the penitentiary system, such as building of a new TB establishment and starting hepatitis C testing and treatment program. However, the legal environment and very strict drug policy in Georgia has not changed, still causing inflow of drug users into the prisons.

The reforms contributed also to very strict internal regulations and control. Bio-BSS of 2008 and 2012 showed that risk behaviors, such as drug use and sexual intercourses decreased to the minimum. The same regulation are active till now.

### **Communicable diseases in the penitentiary system**

Data about various communicable diseases in the penitentiary system is limited to those infections which are under strong surveillance, which include mainly HIV, Tuberculosis, STIs and viral hepatitis B and C. According to the MoC annual report of 2014, during the year 2014 there were: 9081 prisoners tested for HIV with 34 newly diagnosed HIV cases, 28 persons were included in the ARV treatment program.

As of October, 2015, there were 10201 (9876 males, 325 - females) prisoners in Georgian penitentiary system, which included 15 establishments. Number of HIV positive inmates in the

system was 92 – 2 females and 90 males. Number of prisoners screened for HIV in October, 2015 was 614.

## Methods

### Sampling Procedure

Simple Random Sampling (SRS) Method was used for forming the study sample. It is well known that such approach requires the existence of precise data on a target population. Since such data exist and are available within the penitentiary system, Simple Random Sampling Method was selected for this survey. An advantage of this method is that it guarantees low risk of selection bias and, therefore, provides a highly representative sample. Moreover, data retrieved from statistical analysis of the results in studies using SRS may be easily extrapolated.

There were three institutions assigned by the Penitentiary Department of the MoC for the study sites: penitentiary establishment No 2 (located in Kutaisi), penitentiary establishment No 15 (located in Ksani) and penitentiary establishment No 17 (located in Rustavi). All of these institutions are “mixed” or “semi-open” type of establishments. Furthermore, these three institutions were defined as the survey sites since they proved to have basically required conditions, which is essential for these types of surveys. Namely, the establishments should have provided an isolated room for the survey interviews. So, the implementing organizations asked the Ministry of Corrections to advise establishments meeting these conditions. After final selection of institutions the sample size of 300 prisoners was defined. The study managed to recruit 301 respondents.

### Recruitment and Interviewing of the Study Participants

Recruitment of the respondents was conducted from October 1 till November 25, 2015.

Representatives of Tanadgoma were involved in recruiting the study participants. They received complete lists of inmates for identification of study participants, then they selected possible respondents and offered participation in the survey. Particular subjects for the study were defined by the random number frames according to the numbers predefined beforehand.

Recruitment was accomplished using the simple formula  $X=Y/Z$ , where X is sequence number of the survey participants, Y – total number of the prisoners at this particular establishment at the moment of the survey and Z – planned number of the survey participants.

In total number of recruited participants was 368, out of those 67 refused to take part in the survey before starting the interview. In case of refusal by the inmate, the next person in the list was chosen and offered participation. No material incentives were provided for participation in the study.

## Measurements

The survey instrument used in the study was a standardized behavior questionnaire for Prisoners which is a part of standardized Bio-BSS methodology developed in the country in 2010. 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.<sup>7</sup> The questionnaire with slight modifications was applied in the previous BSS among prisoners in 2012. For the given BSS a few additional revisions were made to the questionnaire in order to make sure that all indicators of the National and Global AIDS Response Progress Reporting are captured.

The biomarker component involved testing of blood specimens for HIV and Syphilis. Sample analyses for HIV and syphilis (TPHA) were done at the laboratory of the of the Infectious Diseases, AIDS and Clinical Immunology Research Center in Tbilisi.

**Table 2: Test systems used in biomarker component**

Biomarker	Screening	Confirmation
HIV	HIV Ag/Ab ELISA	Western Blot HIV Blot 2.2, MP Biomedical
Syphilis	Syphilis IgM (Diapro, Italy)	

## Data processing and analysis

Data entry and analysis took place with the help of the SPSS software (version 19.0). Any discrepancies were resolved by examining frequencies and cross-tabs and checking the logic of all variables in the datasets. Hard copies of the completed questionnaires were kept at the CIF office.

The final report was completed by Tanadgoma in collaboration with CIF.

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<sup>7</sup> [http://gametlibrary.worldbank.org/pages/19\\_Surveys\\_surveillance\\_English.asp](http://gametlibrary.worldbank.org/pages/19_Surveys_surveillance_English.asp)

## Ethical Issues

Researchers were cognizant of the fact that the study participants - prison inmates – were at some risk in the case of identification of the respondent, especially in connection to illegal behaviors such as drug use inside the penitentiary institution. Therefore, the survey was designed to provide maximal confidentiality; all interviews were carried out strictly face-to-face. Several ethical issues were taken into consideration:

- Participation in the survey was voluntary and the study participants were free to withdraw at any time.
- No names were registered. All documentation was anonymous and linked only by a study number.
- Staff conducting the survey was trained in discussing sensitive issues and protecting participants' confidentiality and human rights.
- Recruitment of participants was done initially by NGO "Tanadgoma" staff, who already worked with the population at the penitentiary institutions.

Research protocol was approved by the ethical committee of the HIV/AIDS Patients' Support Foundation (certificate # 809/910 of 20.06.2015).

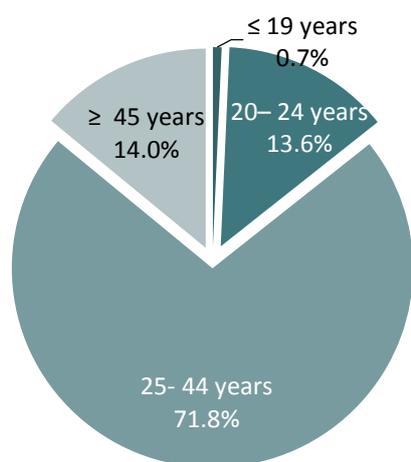
## Study Results

### Socio-Demographic Characteristics

The study was carried out in 3 penitentiary institutions of the Penitentiary Department of the Ministry of Corrections of Georgia: penitentiary establishment No 2 (located in Kutaisi), penitentiary establishment No 15 (located in Ksani) and penitentiary establishment No 17 (located in Rustavi).

The median age of prisoners is 34, with the age ranging from 18 to 78 years. The majority of respondents are in the age group of 25-44 (78.1%). Age groups of over 45 years and from 20 to 24 years of age are almost of the same size in the sample. Those under 20 represent big minority – 0.7% of the total sample.

**Figure 1: Age distribution**



According to level of education, almost three fourths (74.1%) of prisoners had received secondary education and 15.6% had completed higher education. Survey found 5 inmates with no formal education.

Only 7.3% (22 persons) of prisoners were Internally Displaced Persons.

As for the marital status, less than half (46.8%) of the inmates were married, more than one third - 37.5% - have never been married and 15% reported being divorced.

Median duration of imprisonment is 1.5 years, ranging from 0.08 to 19 years.

## HIV/AIDS Knowledge

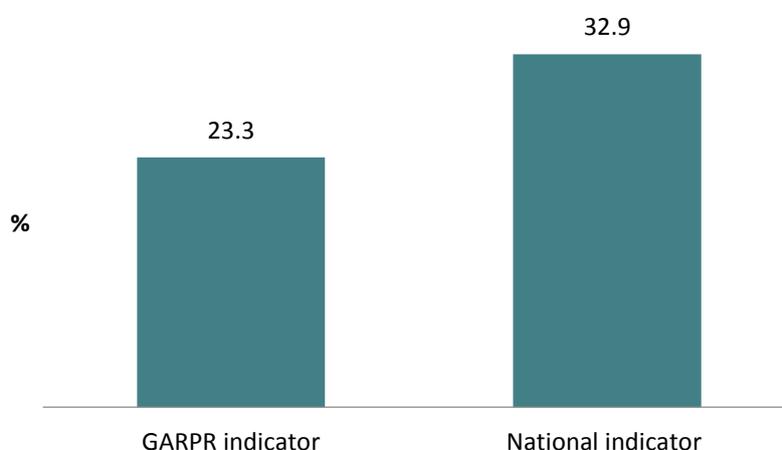
The majority of the respondents (91.4%) report that they have heard about HIV/AIDS. There are still 26 inmates who have not heard of the disease.

One fourth of the respondents (23.3%) correctly answer 5 questions on the ways of HIV transmission (Global AIDS Response Progress Report Indicator<sup>8</sup>). Correct answers are given by approximately the same proportion of both younger (under 25) and older (25+) age groups of respondents. Still there is not high proportion of the respondents who correctly answer the question about mosquito bites. Also, about half believe that HIV can be transmitted through saliva.

As for the National HIV Knowledge Indicator<sup>9</sup>, 32.9% of all respondents answered those 7 questions correctly (see

Figure2).

**Figure 2: Knowledge on HIV/AIDS prevention**



<sup>8</sup> One may protect oneself from HIV/AIDS by having one uninfected and reliable sexual partner; Can reduce the HIV risk if one properly uses condoms during every sexual contact; healthy looking person can be infected with HIV; no one can get HIV as a result of a mosquito's bite; no one can get HIV by taking food or drink with infected person.

<sup>9</sup> One may protect oneself from HIV/AIDS by having one uninfected and reliable sexual partner; Can reduce the HIV risk if one properly uses condoms during every sexual contact; healthy looking person can be infected with HIV; one may be infected with HIV/AIDS by using a needle already used by someone else; one may be infected with HIV/AIDS by using bottle, spoon, boiling pan/glass, container, cotton/filter or water where might been touched needle already used by someone else; one may be infected with HIV/AIDS by taking solution from the shared container; drug users may protect themselves from HIV/AIDS by switching to non-injection drugs.

More than half of the inmates (60.8%) knew that HIV diagnosis is done through a special blood test. More than half of the prisoners think that HIV cannot be cured, 22.5% think that it can be cured in some cases and 6.2% believe that this is completely possible. Less than one fifth (15.3%) of the respondents did not know whether HIV could be cured.

Stigmatization of the HIV infected was measured by questions about going to dentist who has served an HIV infected person, as well as stopping contact with HIV positive cellmate. More than one third (35.2%) of the respondents answered positively to the question about dentist (they would visit a dentist who has served an HIV positive person), and only 12.6% said they would stop any contacts with HIV infected cellmate.

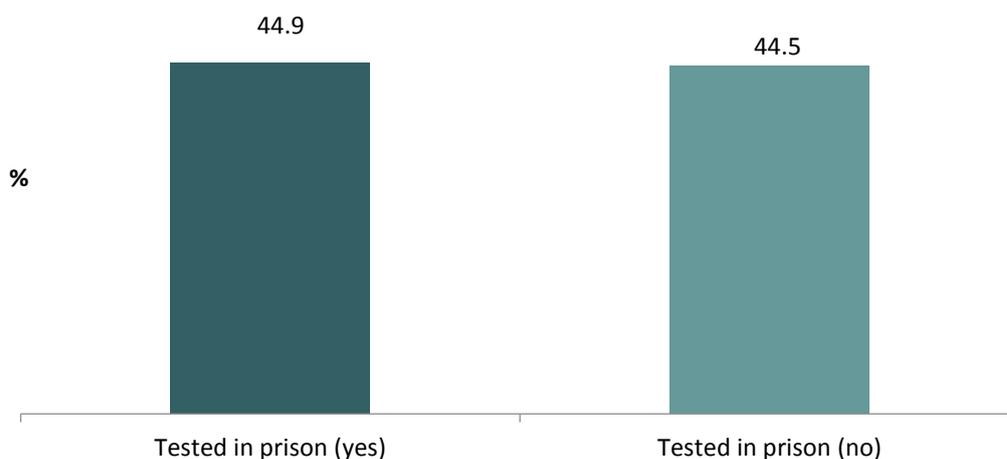
Out of interviewed inmates, 50.5% reported they had been offered HIV testing while being in prison, majority of them received this offer during the last year (77.4%). More than one third (39.9%) of respondents reported they have never been offered testing during their imprisonment.

When asked about being ever tested on HIV, 50.5% responded positively. As for HIV testing while being in prison, 44.9% reported it and 75.9% underwent testing during the last year. Less than half (44.5%) of prisoners have not taken HIV tests while being imprisoned.

Most of the prisoners who were not tested on HIV ever (58.3%) think that they do not need HIV testing, as they are healthy.

About one third (32.6%) of the respondents were tested during the last 12 months and had received their results (Global AIDS Response Progress Report Indicator). Out of those bigger proportion fell under the older age group, compared to the younger one.

**Figure 3: HIV testing**



It is also important to note that only 9.8% assessed their personal risk regarding HIV infection as high, majority – 41.5% believed they are at medium risk, 30.5% - that they are at low risk and 14.5% perceived no risk.

## **Sexually Transmitted Infections (STI)**

Majority (91.0%) of the respondents have heard about STIs. According to the survey, syphilis, gonorrhoea and trichomoniasis are sexually transmitted infections that are most familiar to prisoners. HIV/AIDS is in the fourth place on the list of familiar STIs. The respondents were further asked to list STI symptoms. 61.1% were able to list at least one STI symptom, while more than one third (36.2%) could not name any.

Only 10.3% of inmates reported taking any STI test during the last 12 months and their majority (90.3%) had received their test results. With regard to STI experience in the last 12 months 12% reported having some symptoms. When asked about their actions during the symptomatic period, 16.7% refrained from answering this question; 58.3% referred to a medical doctor, and 15% had done nothing.

As for reasons for not being treated on STIs, 38.1% out of those, who reported doing nothing during the symptomatic period, reported they are healthy and 9.5% mentioned that they did not know whom to refer for treatment.

## **Sexual Behavior**

Majority of the respondents (64.8%) reported not having had sex during the last 12 months. Out of those who reported having sexual intercourse (35.2%), majority (95.3%) said it was heterosexual contact, 4 respondents reported having both heterosexual and homosexual contacts and only 1 inmate said it was homosexual contact. As for the condom use during the last anal intercourse, 3 out of 5 respondents said it was used, and other reported not using condom due to the trust towards the partner.

## **Drug Use Behavior**

Slightly more than half of the respondents (52.2%) reported having used drugs in their lives. Out of those, who have ever used drugs, 87.9% reported use of injecting drugs and 68.8% - use of non-injecting drugs.

Inmates were asked about experience with law enforcement, as well as previous detention due to the drug use before current imprisonment. More than half (57.3%) of them reported having received administrative fine for drug use, 45.9% said they were in pre-trial detention and half – 50.3% reported being imprisoned before.

10.3% of the respondents reported using non-injecting drugs during the last 12 months, and only 8 inmates reported having used injecting drugs. It is noteworthy that none of the inmates reported needle/syringe sharing during the last 12 months.

### **Additional Risks**

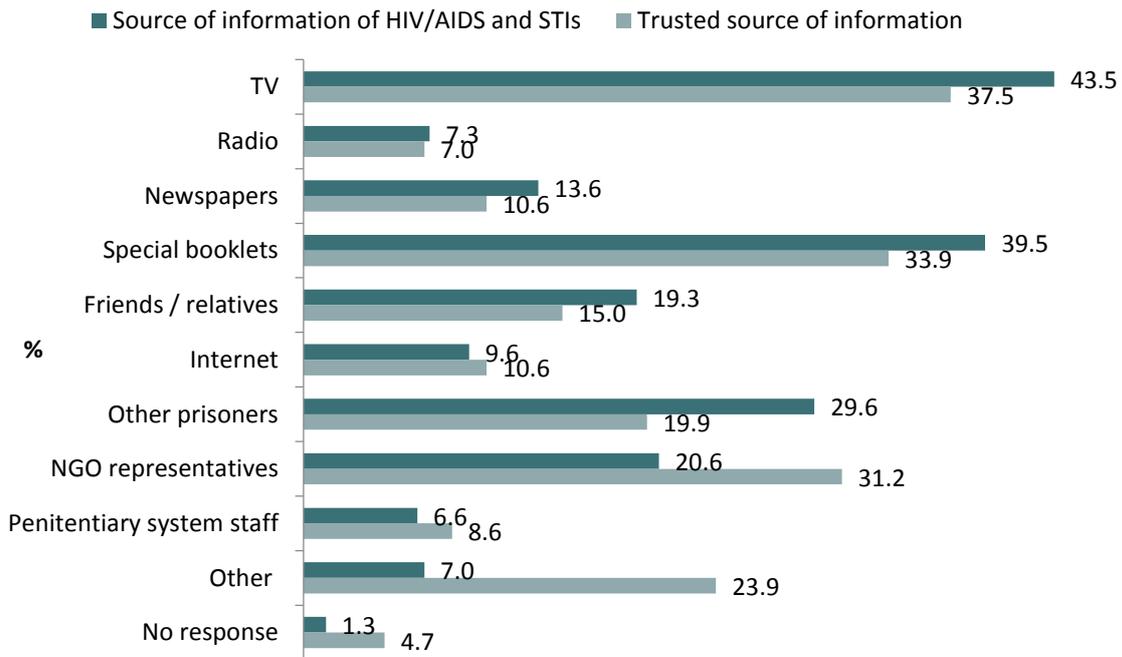
One third of the prisoners (31.6%) reported having done tattoo while in prison. This proportion is almost the same among both ages groups of inmates.

Only 2 prisoners reported using tooth brushes that were used by the others and only five reported using shared syringes for treatment purposes. Also, 9 respondents used razors that were used by the others. Majority (96%) reported no use of alcohol while being in prison during the last 12 months. Out of those nine respondents, who reported having used alcohol, 7 reported that they used alcohol once in a month or less and 2 – once or more times a week.

### **Interventions/Media**

The respondents were asked to list all sources of information on HIV/AIDS and STIs. TV was listed in the majority of cases (43.5%), followed by special booklets (39.5%), other prisoners (29.6%) and NGO representatives (20.6%). As for the most trusted sources of information, TV and special booklets were listed in the first place (37.5% and 33.9%, respectively), as well as NGO representatives (31.2%). Almost one fourth mentioned other sources, and among them healthcare workers were in the first place.

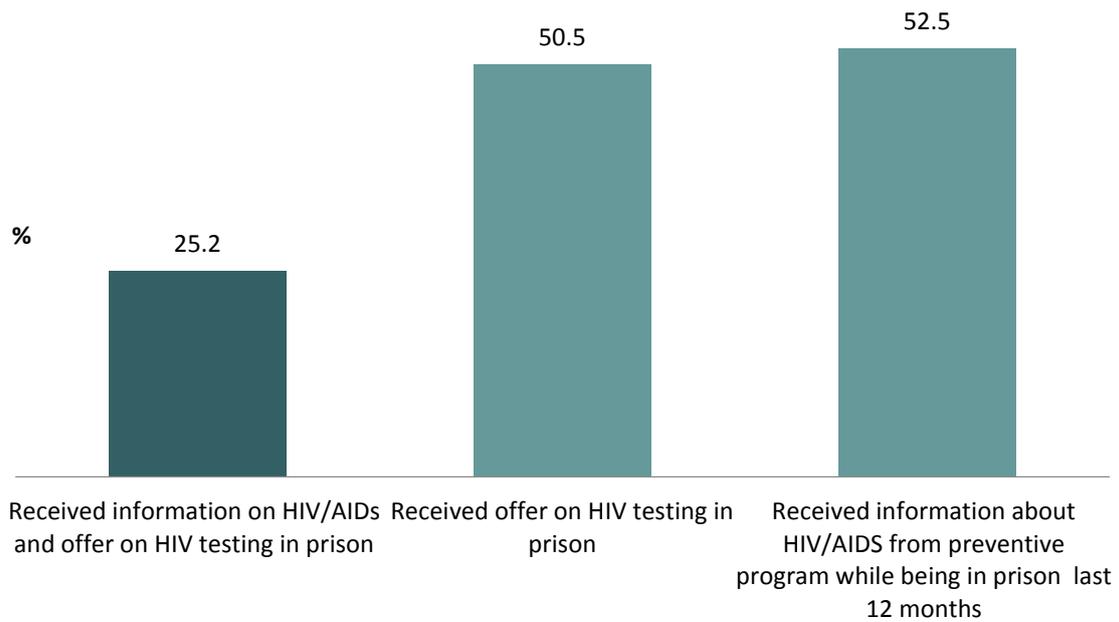
**Figure 4: Sources of information on HIV/STIs**



Slightly less than half (47.8%) of the interviewed inmates reported they have not received information about HIV/AIDS prevention program while being in prison during the last 12 months. However, 52.2% did receive some information.

The respondent was considered to be covered by preventive program interventions if a) he/she had been offered HIV testing while in prison and b) he/she had received educational materials on HIV/AIDS during the last 12 months. One fifth of the respondents (25.2%) were covered by preventive program. Disaggregating these data by age groups, proportion of prisoners covered by prevention interventions is much higher among older age group, compared to younger.

Figure 5: Prevention program coverage



## Biomarker

Blood samples for testing on HIV infection and Syphilis (TPHA) were taken from 301 participants. HIV prevalence in the study sample was 2.0%, which is an increase compared to the 0.3% of HIV prevalence in 2012. All HIV cases are concentrated in the age group above 25 years of age.

Syphilis (TPHA) was detected in 0.7% of the surveyed sample (2/301), also, 1 case was suspicious for being positive on syphilis.

## Study Limitations

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

**Study site.** Selection of penitentiary institutions was not done randomly but was pre-selected by the Ministry of Corrections of Georgia, based on the technical requirements provided beforehand. The Ministry could have selected the institutions where illegal acts e.g. drugs smuggling is less likely compared to other places. Therefore the findings of this study should be interpreted with caution.

**Reporting bias.** As in any interview-based survey, it is possible that respondents may not have accurately answered some of the sensitive questions, or may have had difficulties in recalling information. Due to social stigma, some behaviors, such as having same gender sex, drug injection or needle sharing may be under-reported by respondents. Since all interviews were conducted in private places, the survey was anonymous and personal identification details were not collected, it is expected that this might minimize reporting bias.

**Gender representation.** In this round of the Bio-BSS female penitentiary institutions was not included in the sampling frame. This was due to the fact that at the period of the survey planning females represented very small proportion among all the prison population and their sample would not be representative of the female prisoners.

## Conclusions and Discussion

The findings of the surveys could be briefly summarized in the conclusions below, which also include some comparisons with the previous Bio-BSS conducted in 2012. Although the survey instrument was slightly changed, the sample size in the presented survey was the same (301) as in the previous one, so, the major indicators can be compared. Besides, as mentioned above, in order to better demonstrate trends in some specific areas, such as drug use and HIV knowledge, current survey results are compared to the results of the 2011 survey.

### Socio-demographic characteristics

The survey was carried out in three penitentiary institutions. Sample size of 301 was achieved.

The socio-demographic structure of prisoners' cohort studied in 2015 is close to that studied in 2012, but still a bit different:

- Median age of prisoners is 34, however, in 2012 it was 32 years;
- Majority are with the secondary education;
- Slightly less than half is married, while in 2012 more than a half was married;

One important change is that median duration of imprisonment is 1.5 years – more than twice as less as in 2012, when it was 3.4, and this decrease is statistically significant ( $p < 0.01$ ).

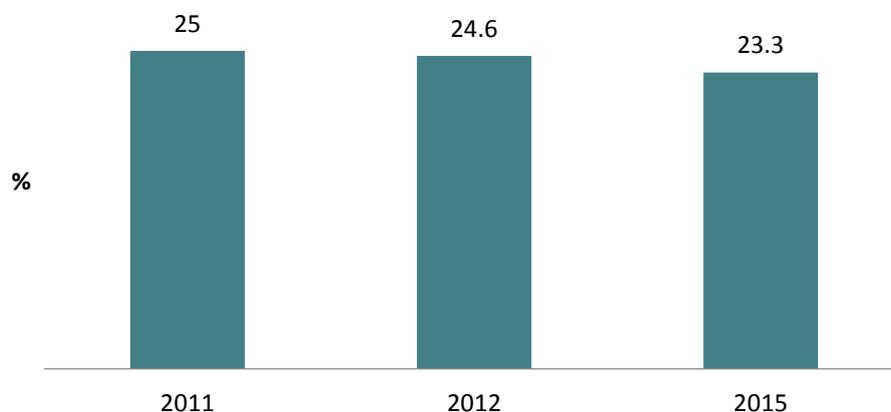
This decrease of median duration of imprisonment can be explained by massive amnesty and parole that took place after October 2012, so-called “prison scandal” in Georgia. Since then more than 14000 of prisoners were released from prisons, and, given that half of the respondents in this sample had been imprisoned before due to drug use, they are serving second or maybe even third sentence, which started quite recently.

### HIV/AIDS Knowledge

Lower proportion of the respondents has heard of HIV/AIDS, compared to the previous survey, however, it is still higher than in 2008 (91.4% vs. 97% vs. 83.4%). Knowledge about HIV, measured by the Global AIDS Response Progress Report Indicator, was low – 23.3% of the respondents were able to correctly list ways of HIV transmission and reject major misconceptions about HIV, but there is no change since the last 2012 survey (24.6%). It is noteworthy that more than half of the inmates having had drug use experience still are not giving high percentage of correct answers when it comes to details of preventing transmission while using drugs.

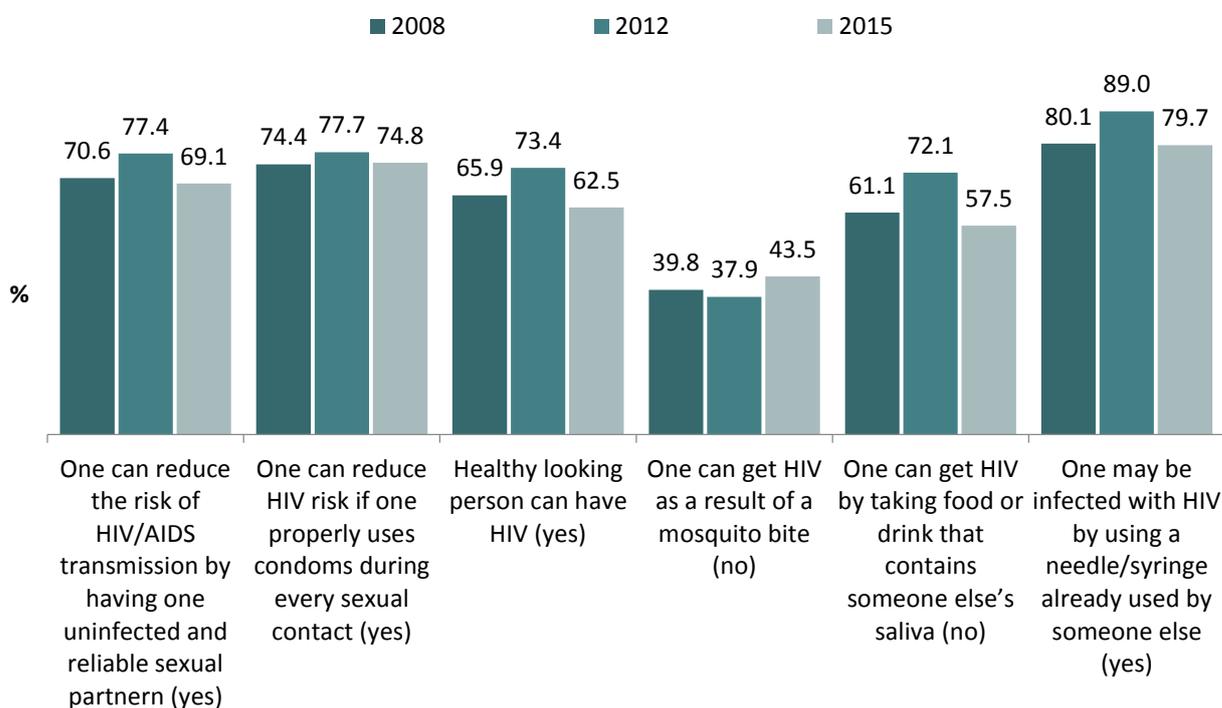
Data on HIV/AIDS knowledge can be also compared to the data of the 2011 survey. In the latter survey this indicator was 25% indicating that level of knowledge on HIV has not changed from 2011 to 2015.

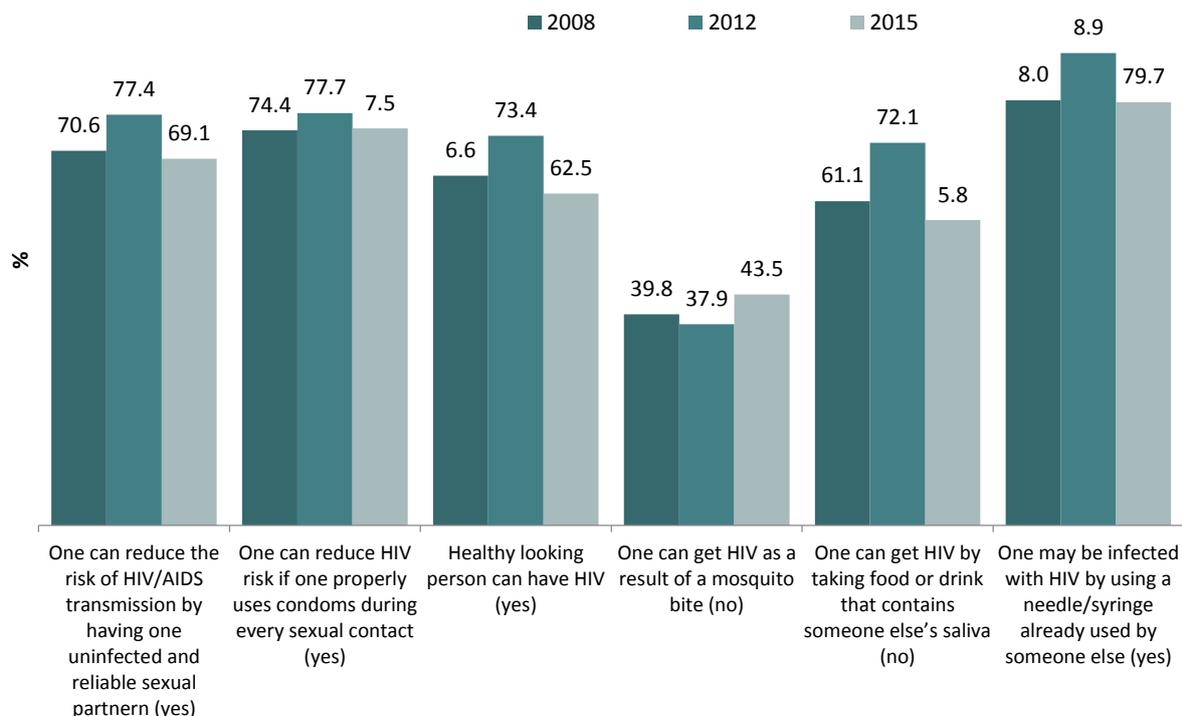
**Figure 6: HIV/AIDS knowledge; comparison of GARPR indicator, 2011, 2012 and 2015**



Unfortunately, it is impossible to compare data of Global AIDS Response Progress Report Indicator on HIV/AIDS knowledge with the Bio-BSS of 2008. However responses on individual questions measuring HIV knowledge demonstrate some positive, as well as negative changes from 2008 through 2012 to 2015. The figure 7 shows that the proportion of correct answers increased on a question regarding mosquito bites, however, other questions were answered correctly in less cases, than in 2012.

**Figure 7: Questions on HIV/AIDS knowledge; comparison of 2008, 2012 and 2015**





Comparing to the survey of 2012, when 6.8% of prisoners believed that HIV can be completely cured, in this survey proportion who stated the same was 6.2%. Also, the same proportion stated that it is not possible to cure HIV. This demonstrates no changes in awareness about HIV/AIDS in general and HIV treatment in particular.

Level of stigma towards HIV infected seems to decrease, as more than one third (35.2%) of the respondents answered positively to the question about visiting dentist who has served an HIV infected person, which is higher than in 2012 (29.1%). However, the same proportion as in 2012 said they would stop any contacts with HIV infected cellmate. The proportion of the prisoners who would stop any contact with HIV positive cellmate has decreased since the 2008 survey from 23.3%, but stayed the same since 2012.

Testing has been offered to slightly less proportion of the prisoners, compared to the survey of 2012 (50.5% in 2015 vs. 57.8% in 2012), but this change is not statistically significant. However, bigger proportion than in 2012 stated that testing has been offered during the last year (77.4% in 2015 vs. 62.1% in 2012), and this change is statistically significant ( $p < 0.01$ ). When asked about being ever tested on HIV, again less inmates responded positively, than in 2012 (50.5% in 2015 vs. 55.8% in 2012). If compared with the previous surveys, 27% and 38.0% were ever tested in 2008 and 2011 respectively.

Figure 8: Ever tested on HIV; comparison of 2008, 2011, 2012 and 2015

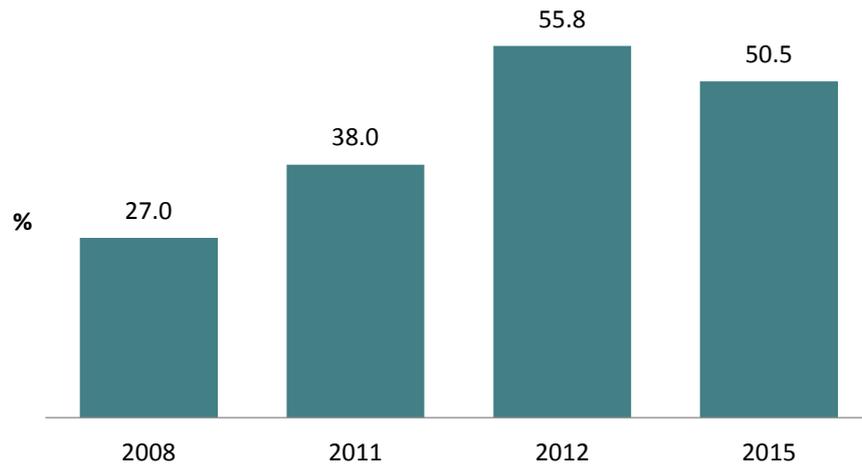
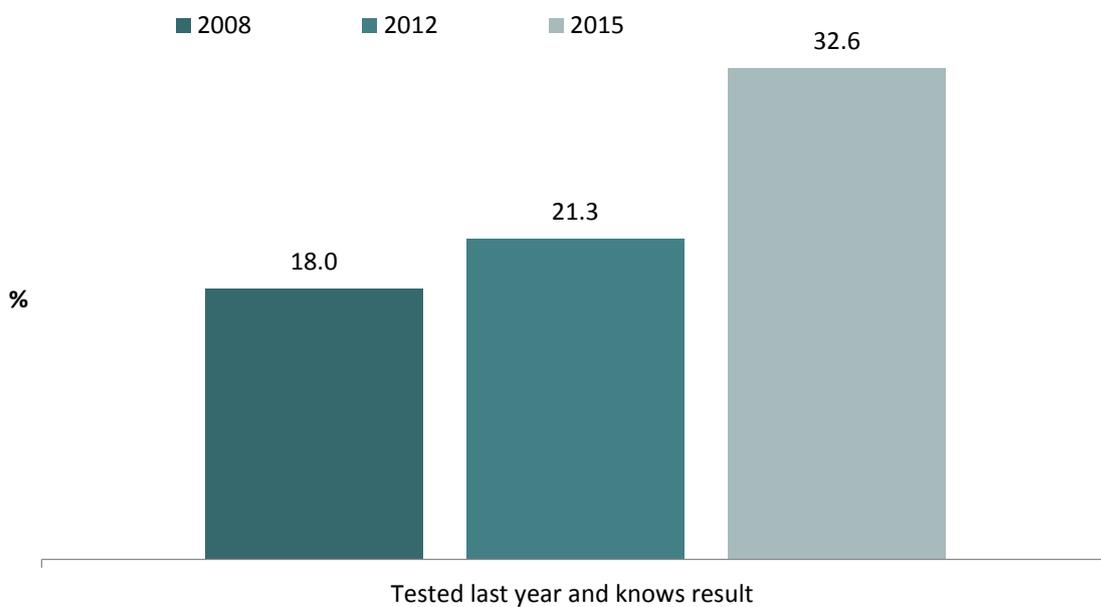


Figure 9: Tested on HIV during the last year and knows testing results; comparison of 2008, 2012 and 2015 data



There is statistically significant increase in the proportion of prisoners who tested during the last 12 months and had received their results (from 21.3% in 2012 to 32.6% in 2015) ( $p < 0.01$ ).

Majority of the prisoners consider themselves being at medium risk for HIV infection. Personal risk perception has changed, since in 2012 majority perceived low risk of HIV infection for themselves.

*Prisoners' knowledge about HIV is relatively low and demonstrated no changes since the last survey of 2012. However, level of stigma towards HIV positive prisoners is not high. HIV testing offer in prisons as well as uptake by the prisoners has increased, which demonstrated successfulness of the HTC cabinets established by the prevention programs within the penitentiary system.*

## **Sexually Transmitted Infections (STI)**

Majority (91.0%) of respondents have heard about STIs, which is similar to that found in the survey of 2012 (86.4%). Majority is able to list several STIs as well as to list at least one STI symptom. Only 10.3% - the same proportion as in 2012 - of inmates reported taking any STI test during the last 12 months and their majority (90.3%) had received their test results. Of those who reported having some STI symptoms during the last 12 months majority 58.3% referred to a medical doctor.

*Although awareness on STIs in general is high, knowledge or health-seeking behavior of the prisoners has not changed since 2012.*

## **Sexual Behavior**

Much higher percentage of the respondents reported having had sexual intercourse during the last 12 months, compared to the survey of 2012 (35.2% vs. 8.6%), and this increase is statistically significant ( $p < 0.01$ ). Majority of them mentioned heterosexual contacts, four prisoners – both homosexual and heterosexual contacts and only one – homosexual contacts.

As long-term conjugal visits were very limited in Georgian penitentiary system during the years preceding 2012, majority of the prisoners did not have any heterosexual contacts. However, since 2011 in 8 establishments created spaces for conjugal visits. This is an explanation for increase in reported heterosexual contacts among the prisoners. Homosexual contact was reported by only five prisoners in total. It is likely that homosexual contacts are also limited in prisons, especially due to the infrastructure changes in almost all establishments. At the same time, it should be expected that some respondents would try to hide their homosexual contacts, due to high stigma and discrimination of homosexual behavior in the society as well as in the prisons.

*Record of sexual practices among prisoners is not high, although higher than in the previous survey. However, mostly heterosexual contacts are being reported.*

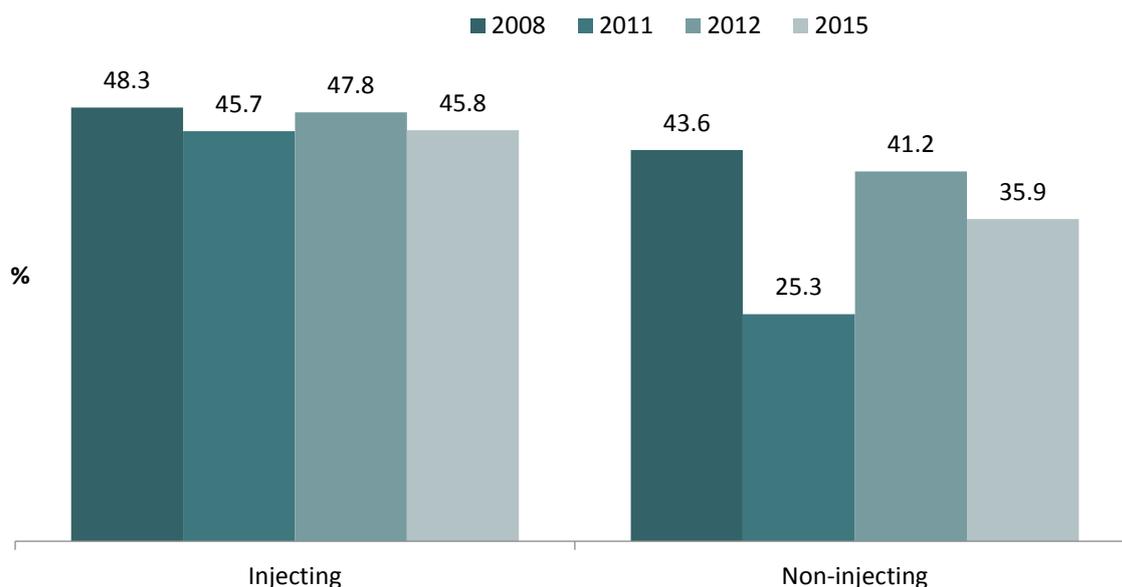
## **Drug Use Behavior and Additional Risks**

There has been significant decrease in the percentage of the prisoners who reported having ever used drugs in their lives ( $p < 0.01$ ). Only 31 respondents (10.3%) reported using non-injecting drugs during the last 12 months and only 8 respondents mentioned using injecting drugs. In the survey of 2012 none of the respondents mentioned using any kind of drugs at all.

Additional analysis showed that only one inmate had used injecting drugs while in prison. Out of those having used non-injecting drugs during the last 12 months, only 3 respondents had used those while being in prison.

The Figure 10 demonstrates proportions of ever using drugs, compared among all four surveys – of 2008, 2011, 2012 and 2015. It is obvious that levels of ever using injecting drugs are quite high and almost half of the prisoners throughout these years had injecting drug use experience. As for non-injecting drug use, there is decrease from 2008 to 2011, and then increase again in 2012.

Figure 10: Drug use ever; comparison of 2008, 2011, 2012 and 2015



Additional risks related to HIV exposure were found to be also quite small. Almost one third of the prisoners (31.6%) reported having done tattoo while in prison. Only five prisoners reported using shared syringes for treatment purposes and 3% used razors that were used by the others. Alcohol use is extremely low in prisons - 3% reported using it during the last 12 months.

Experience of inmates with law enforcement, as well as previous detention due to the drug use before current imprisonment is demonstrated in the Figure 11. Administrative fines reported by the prisoners throughout the years 2008 – 2015 have increased, with highest rates reported in 2015. Increase in the administrative fines experience is statistically significant ( $p < 0.01$ ). Pre-trial detentions' rate has slightly decreased from 2008 to 2012 and then raised again in 2015. But in general mostly it is in the same range. As for previous imprisonment due to drug use, this indicator has also increased from 2008 through 2011 to 2012, and show the highest rate in 2015, but the change from 2012 to 2015 has not been statistically significant. These changes, especially in the administrative fines and imprisonments, are most likely explained by increasing measures undertaken by the law enforcement structures for combating drug use, which is based on high criminalization of drug use by Georgian law. According to the current drug policy and regulations, the first time during a year when a person is arrested by police and is under the drug influence, he/she should pay an administrative fine. And if this happens for the second time during a year, then either the fine is to be paid, which is quite high, or the person is put in jail.

**Figure 11: Experience of inmates with law enforcement and previous detention due to drug use; comparison of 2008, 2011, 2012 and 2015**



Based on the survey results, it is difficult to exclude that there is some drug use in the prisons that were included in the survey. However, there almost no additional risk practices in the survey population such as sharing injecting equipment, alcohol use in Georgian prisons. This could explain that majority of the respondents do not consider themselves at high risk for HIV. However, risk perception has increased from low, reported by majority, to medium. Still tattooing practice is present, but without sharing equipment it does not represent any risk for HIV exposure.

### Interventions/Media

Less than half of the respondents listed TV as a primary source of information on HIV and STIs, followed by special booklets, other prisoners and NGO representatives. This is the first time NGO representatives appear meaningfully in the list of the sources. As for the most popular and trusted sources of information, this is TV, booklets and NGO representatives – again for the first time. It should be noted, that when the respondents list “other” sources, the highest trustful source named is “healthcare workers”.

There is a statistically significant decrease (47.8% in 2015 vs. 55.8% in 2012) in the proportion of the prisoners who reported they have not received information about HIV/AIDS prevention program while being in prison during the last 12 months. However, the rest did receive some information through booklets and education sessions. The study revealed statistically significant increase in the percentage of the respondents (25.2% in 2015 vs 18.3% in 2012,  $p < 0.05$ ) who were covered by preventive program.

*Prisoners have various sources of getting information on HIV and STIs, the most trustful of them being TV, booklets, NGO representatives as well as healthcare workers. Coverage by prevention interventions has increased since 2012, most probably due to the extensive work of the HTC centers in almost every prison.*

### **Biomarker**

The HIV prevalence found by the survey was 2%. In the previous survey the prevalence was 0.3%. However, the increasing tendency of HIV spread is noteworthy, although it did not demonstrate statistically significant change.

Prevalence of syphilis was low. Only 2 inmates (0.66%) were positive on TPHA test, however, one case was also doubtful positive. It is noteworthy that both positive and doubtful positive cases were found in the age group above 25 years of age. Comparison of syphilis prevalence with the data of 2012 survey demonstrated statistically significant decrease ( $p < 0.001$ ).

Taking into consideration that during the last 5-6 years HIV-related risk behaviors were practically eliminated in the penitentiary system of Georgia and due to strict regulations there was almost no drug use, no sexual intercourses, no alcohol use, increase in HIV prevalence can be connected to the high prevalence of drug use history before imprisonment in the sample of the respondents. Possible connection with the tattooing practices should also be take into consideration, as about noe third of the survey participants had made a tatoo while being imprisoned.

## Recommendations

Following recommendations are proposed to affectively address the problems and gaps revealed through the study:

**1. Coverage of the prisoners by prevention programs should increase.** Both coverage of the prisoners by the HIV prevention programs as well as HIV/AIDS awareness among the prisoners are low. In order to cover these gaps identified through the survey, it is necessary to continue and expand prevention programs inside penitentiary system of Georgia. Specific HIV-related information should be provided on constant basis using channels of information listed and trusted by the prisoners, such as NGO representatives, printed materials and healthcare workers:

- Prison healthcare workers should be trained intensively so that they are able to provide explicit information on the basis of existing HTC centers in penitentiary establishments. At the same time, training shall make a special emphasis on both major, as well as additional risks of HIV transmission, including tattooing.
- Existing HTC centers and their services should be actively promoted inside each institution, so that prisoners know that they have right to visit these units for doctor-counselor's advice, as well as for testing.

**2. Different approaches that can reduce risks of HIV transmission inside penitentiary institutions should be considered and implemented if necessary.** Since drug-related legislation in Georgia continues to be punitive, there is constant flow of PWIDs into penitentiary system. In order to prevent different risk practices, and especially lay ground for prevention of lethal overdoses after release, specific psychosocial rehabilitation and harm reduction programs should be implemented.

**3. Continue with surveillance.** Non-coercive, anonymous, ethical and systematic surveillance of prisoners (and other high risk groups), both behavioral and of selected biological markers, should be conducted on a regular basis to provide early warning of a possible dramatic increase in the prevalence rate. In addition, surveys can provide invaluable information for designing focused interventions as well as for monitoring whether STI/HIV prevention and reduction interventions are working.

## Annex 1. Data tables

Demographic and Social Characteristics	%	n/N
<b>Age</b>		
≤19	0.7	2/301
20-24	13.6	41/301
25-44	71.8	216/301
≥ 45	14.0	42/301
Median age	34.00	(301)
Mean age (Min-Max)	34.72 (18-78)	(301)
<b>Level of Education</b>		
None	1.7	5/301
Primary 1-4 grades	2.0	6/301
Secondary	74.1	223/301
Incomplete higher	5.3	16/301
Higher	15.6	47/301
No response	1.3	4/301
<b>Internally Displaced Person</b>		
Yes	7.3	22/301
<b>Marital Status</b>		
Married	46.8	141/301
Divorced	15.0	45/301
Widow/er	0.3	1/301
Never been married	37.5	113/301
No response	0.3	1/301
<b>Duration of imprisonment (Years)</b>		
Median	1.5	(301)
Mean (Min-Max)	2.53(0.08-19)	(301)
<b>HIV/AIDS Knowledge</b>		
<b>Aware of HIV/AIDS</b>		
Have you heard on HIV/AIDS (Yes)	91.4	275/301
One can reduce the risk of HIV/AIDS transmission by having one uninfected and reliable sexual partnern (yes)	69.1	208/301
One can reduce HIV risk if one properly uses condoms during every sexual contact (yes)	74.8	225/301
Healthy looking person can have HIV (yes)	62.5	188/301
One can get HIV as a result of a mosquito bite (no)	43.5	131/301
One can get HIV by taking food or drink that contains	57.5	173/301

someone else's saliva (no)		
One may be infected with HIV by using a needle/syringe already used by someone else (yes)	79.7	240/301
One may be infected with HIV by using shared bottle, spoon, boiling pan/ glass/ container, cotton/filter or water (yes)	63.5	191/301
One may be infected with HIV by using solution from the shared container which was prepared without his/her presence (yes)	62.1	187/301
Drug users may protect themselves by switching to non - injection drugs (yes)	67.1	202/301
Correctly answer 5 questions (UNGASS indicator) * <sup>4</sup>	23.3	70/301
≤ 24	25.6	11/43
≥ 25	22.9	59/258
Correctly answer 7 questions (National indicator) * <sup>5</sup>	32.9	99/301
≤ 24	27.9	12/43
≥ 25	33.7	87/258
Would go to the dentist who has served HIV infected person	35.2	106/301
Stop contact with HIV positive prisoner (yes)	12.6	38/301
HIV diagnosis is possible by special blood test	60.8	183/301
<b>Awareness on possibility of full recovery from HIV</b>		
not possible	55.3	152/275
possible in some cases	22.5	62/275
completely possible	6.2	17/275
don't know	15.3	42/275
no response	0.7	2/275
<b>HIV testing offer while being in prison</b>		
yes	50.5	152/301
Last year	77.4	120/155
1 to 2 years period	12.3	19/155
2 years before	5.2	8/155
Don't remember/ no response	5.2	8/155
no	39.9	120/301
no response	1.0	3/301
Have not heard about HIV	8.6	26/301
<b>HIV testing</b>		
yes	50.5	152/301

no	39.9	120/301
no response	1.0	3/301
Have not heard about HIV	8.6	26/301
Reasons for not testing		
don't need, because i'm healthy	58.3	70/120
HIV testing while being in prison		
yes	44.9	135/301
Last year	75.9	107/141
1 to 2 years period	9.2	13/141
2 years before	10.6	15/141
Don't remember/ no response	4.3	6/141
Not tested	44.5	134/301
no response	2	6/301
Have not heard about HIV	8.6	26/301
HIV testing while being in prison last year		
Tested on HIV last 12 months and knows result *	32.6	98/301
≤ 24	23.63	10/43
≥ 25	34.1	88/258
HIV risk perception		
High risk	9.8	27/275
Medium risk	41.5	114/275
Low risk	30.5	84/275
No risk	14.5	40/275
Don't know	2.2	6/275
No response	1.5	4/275
<b>STIs</b>	<b>%</b>	<b>n/N</b>
Aware of STIs		
Have heard about the STIs (yes)	91.0	274/301
Please, specify all STIs you have ever heard about		
Syphilis	64.8	195/301
Gonorrhea	60.5	182/301
Trichomoniasis	21.3	64/301
Chlamydia	8.0	24/301
Fungal infections	14.0	42/301
Genital Herpes	1.0	3/301
Genital warts	0.3	1/301

HIV/AIDS	16.3	49/301
other	6.3	19/301
No response	12.0	36/301
Please specify the STI symptoms		
Vaginal (genital) release	46.8	141/301
Genital, skin or mucous membrane rash	25.9	78/301
Genital redness	9.6	29/301
Burning while urinating	23.6	71/301
Itching	9.3	28/301
Lower abdomen ache	4.3	13/301
Know at least one symptom	61.1	184/301
Do not know any	36.2	109/301
No response	2.7	8/301
Experience of STI last 12 months		
Had symptoms of STI	12.0	36/301
Hadn't symptoms of STI	86.4	260/301
No response	1.7	5/301
Test for STI last 12 months	10.3	31/301
Awareness of test results (yes)	90.3	28/31
Referral for treatment:		
Doctor	58.3	21/36
Had done nothing	25.0	9/36
No response	16.7	6/36
Reasons for not receiving treatment		
Don't need, because I'm healthy	38.1	8/21
Didn't know whom to apply for treatment	9.5	2/21
<b>Sexual Behavior</b>	<b>%</b>	<b>n/N</b>
Had sex during last 12 months		
Had sex	35.2	106/301
Homosexual sex	0.9	1/106
Heterosexual sex	95.3	101/106
Both, hetero and homosexual	3.8	4/106
Had not sex	64.8	195/301
Condom use at last homosexual contact		
Used condom *	60.0	3/5
≤ 24	66.7	2/3

≥ 25	50.0	1/2
Reasons for not using condom at last anal sex		
i trust my partner	40.0	2/5
<b>Drug using behavior</b>	<b>%</b>	<b>n/N</b>
Drug use (ever)		
Yes	52.2	157/301
Injecting drugs	87.9	138/157
Non- injecting drugs	68.8	108/157
No	47.8	144/301
Police and prison experience due to the drug use before imprisoned		
Administrative fine	57.3	90/157
Pre- trial detention	45.9	72/157
Imprisoned	50.3	79/157
Drug consumption during the last 12 months		
Non-injected drug use last 12 months	10.3	31/301
Injected drug use last 12 months *	2.7	8/301
Drug consumption while being in prison		
Non-injected drug use in prison	0.99	3/301
Injected drug use in prison	0.33	1/301
Needle sharing practice while being in prison		
Shared needle/syringe last 12 month *	0	0/301
<b>Additional risks</b>	<b>%</b>	<b>n/N</b>
Additional risks while being in prison last 12 months		
Have done tattoo in prison	31.6	95/301
≤ 24	32.6	14/43
≥ 25	31.4	81/258
Have you used shared syringes for treatment purposes	1.7	5/301
Have you used razors that were used by the others	3.0	9/301
Have you used toothbrushes that were used by the others	0.7	2/301
Alcohol use while being in prison last 12 months		
Used alcohol	3.0	9/301
Once a month or less	77.8	7/9
Once or more times a week	22.2	2/9
Didn't use alcohol	96.0	289/301
no response	1.0	3/301

Interventions / Media	%	n/N
<b>Source of information of HIV/AIDS and STIs</b>		
TV	43.5%	131/301
Radio	7.3%	22/301
Newspapers	13.6%	41/301
Special booklets	39.5%	119/301
Friends / relatives	19.3%	58/301
Internet	9.6%	29/301
Other prisoners	29.6%	89/301
NGO representatives	20.6%	62/301
Penitentiary system medical staff	6.6%	20/301
others	7.0%	21/301
no response	1.3%	4/301
Hasn't received information	5.6	17/301
<b>Trusted source of information</b>		
TV	37.5	113/301
Radio	7.0	21/301
Newspapers	10.6	32/301
Special booklets	33.9	102/301
Friends / relatives	15	45/301
Internet	10.6	32/301
Other prisoners	19.9	60/301
NGO representatives	31.2	94/301
Penitentiary system medical staff	8.6	26/293
No response	4.7	14/301
Others	23.9	72/301
Healthcare workers (doctors)	81.9	59/72
<b>Preventive program coverage</b>		
Received information about HIV/AIDS from preventive program while being in prison last 12 months	52.2	157/301
Special booklets	50.5	152/301
Educational Information	16.6	50/301
Didn't receive any information	47.8	144/301

Received information about HIV/AIDs from preventive program and offer about HIV testing while being in prison last 12 months *	25.2	76/301
≤ 24	16.3	7/43
≥ 25	26.7	69/258
<b>Biomarker</b>	<b>%</b>	<b>n/N</b>
HIV (ELISA with Western Blot confirmation)		
HIV prevalence (positive) 1000 prisoners	19.9(7.2-44.2)	6/301
≤ 24	0	0/43
≥ 25	23.3(8.4-51.5)	6/258
Syphilis 1000 prisoners		
Positive	6.6(1-23.9)	2/301
Doubtful positive	3.3(0.2-17.9)	1/301
≤ 24 Positive	0	0/43
≤ 24 Doubtful positive	0	0/43
≥ 25 Positive	7.8(1.2-27.9)	2/258
≥ 25 Doubtful positive	3.9(0.3-20.8)	1/258

## Annex 2. Study questionnaire

Questionnaire Identification Number \_\_\_\_\_

Questionnaire is Coded as:

Questionnaire is Word Processed by:

### HIV/STI Risk Related Behavior Surveillance Survey with Biomarker Component in Penitentiary System

City \_\_\_\_\_ Year \_\_\_\_\_

**Introduction:** Good day, my name is \_\_\_\_\_ I am going to ask you several questions. All your answers are completely confidential. Your name will not be written down to this form and never be used with regards to the information you will provide. You are not obliged to answer the questions you are reluctant to. You may withdraw from interview any time you like. We appreciate your participation into the survey and your help”

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

#### Codes of Results:

Completed	1
Not completed	2
No response	3
Other	99

#### Venues for the Interview:

#17 penitentiary establishment (Rustavi)	1
#15 penitentiary establishment (Qsani)	2
#2 penitentiary establishment (Kutaisi)	3

Q1. Interview Date and Start up time: /\_\_\_\_\_/ Date /\_\_\_/Time /\_\_\_/

*(Signature of Interviewer, confirming verbal consent gained from the Respondent)*

**Interview Date and Start up time:** /\_\_\_\_\_/ Date /\_\_\_/Time /\_\_\_/

## A. Social-Demographic Features of the Respondent

### A1. What is your age?

/\_\_\_\_\_/ Years of age

No answer 99

### A2. Which education did you gain (read)

None	1
Primary (1-4 class)	2
Secondary (school, college, prof. school)	3
Incomplete higher education	4
Higher education	5
No answer	99

### A3. What is your marital status? (read)

Married	1
Divorced/separated	2
Widower	3
Never been married	4
No response	99

### A4. Are you Internally Displaced Person?

Yes	1
No	2
No answer	99

### A5. For how long are you set to imprisonment?

----- (Write down date and highlight the period)  
(Day, Week, Month, Year)

## B. Knowledge, relations, thoughts regarding HIV/AIDS

### B1. Have you heard on HIV/AIDS?

Yes	1
No (Go to C1)	2
No response	99

*(Note to Interviewer: If the respondents have not, please explain the meaning of HIV/AIDS – ‘HIV is Human Immunodeficiency Virus causing chronic progressive infectious disease, but AIDS is the clinically manifested stage of it’)*

**B2. How HIV/AIDS is transmitted from one person to other? (Interviewer: do not read the shortlist; match the answer gained from respondent to the listed alternative)**

Unprotected sexual intercourse	1
Transfusing the unverified blood	2
Using the shared syringe	3
Shared injection equipment (glass, boiling pan, other	4
Shared razor	5
Coughing/sneezing	6
Handshaking	7
Using non-sterile needle for tatoo	8
Eating with HIV infected person	9
Using other persons clothes	10
Mother-to-child	11
Animal or insect bite	12
Don't know/find it difficult to answer	88
Other (specify)	99
No response	

**B3. How AIDS can be diagnosed?**

By special blood testing	1
testing smear from genitals	2
By external observation	3
Do not know	88
Other(Specify)	

**B4. Do you think it is possible to be cured from HIV/AIDS? (Don't read)**

Impossible	1
In some cases possible	2
Rather possible	3
Do not know	88
Other (specify) / /	99

**B5. Have you been offered to be tested on HIV while being in prison? (It means current imprisonment)**

Yes	1
No (Go to B7)	2
No response (Go to B7)	99

**B6. When were you last offered?**

___ year ___ months ago	
Don't remember	77
No response	99

**B7. Have you personally tested on HIV??**

Yes	1
No (Go to B11)	2
No response	99

**B8. Have you been tested on HIV while being in prison??**

Yes	1
No	2
No response	99

**B9. When did you make your last testing on HIV/AIDS?**

_____ year _____ month ago	
Don't remember	88
No response	99

**B10. We are not going to ask you to tell us your test result, but have you been notified ?**

Yes	1
No	2
No answer	99

*(After this question go to **B12**)*

**B11. In case you did not make the testing, what was the reason? (Interviewer: do not read the shortlist; match the answer gained from respondent to the listed alternative)**

I did not know it was available	1
I do not need it, I know I am healthy	2
I did not get it in mind	3
I am afraid of the result, it is better not to know	4
I do not want somebody gets informed	5
I did not think on it	6
No response	99
Other (specify) /	/

**B12. Please tell us your opinion: (Read, denote appropriate answer for each option specified)**

Options	Yes	No	I do not know	No response
1. Is it possible to reduce the risk of HIV/AIDS transmission by having one uninfected and reliable sexual partner?	1	2	88	99
2. Is it possible to reduce the risk of HIV/AIDS transmission by using condoms during every sexual contact?	1	2	88	99
3. Do you think that healthy looking person can be infected with HIV?	1	2	88	99
4. Can one get HIV from mosquito's bite?	1	2	88	99
5. Can one get HIV/AIDS by sharing infected persons food?	1	2	88	99
6. Can one get HIV/AIDS by using a needle/syringe already used by someone else?	1	2	88	99
7. Can one get HIV/AIDS by sharing injection equipment (spoon, cotton/filter), or water where used needle/syringe may be placed?	1	2	88	99
8. Can one get HIV/AIDS by using drug liquid from container, which was prepared without persons presence	1	2	88	99
9. Can the drug users protect themselves form HIV/AIDS by switching to non-injection drugs?	1	2	88	99
10. Will you apply to a doctor (e.g. dentist, surgeon), if the HIV infected person applied before you?	1	2	88	99
11. Will you stop any contact with person at the same ward if you find out about HIV status?	1	2	88	99

**B13. How will you estimate your risk of HIV infection?**

High	1
middle	2
low	3
no risk	4
Don't know	88
No response	99

## C. Knowledge, relations, thoughts regarding Sexually Transmitted Infections

### C1. Have you heard on STIs?

Yes	1
No (Go to 0)	2
No answer	99

*(Interviewer: If the respondent have not, please explain the meaning of the Sexually Transmitted Infections – ‘Infectious diseases, which main mode of transmission is unprotected sexual intercourse’)*

### C2. If Yes, please specify all STIs (*Venereal diseases*) you have ever heard about

*(Interviewer: do not read the shortlist; match the answer gained from respondent to the listed alternative)*

Syphilis	1
Gonorrhea	2
Trichomoniasis	3
Chlamydia	4
Fungal infections	5
Herpes	6
Genital herpes	7
HIV/AIDS	8
No response	99
Other (specify) /	/

**C3. Please specify the external STI features (symptoms) (Interviewer: do not read the shortlist; match the answer gained from respondent to the listed alternative, try to receive the answers as much as possible)**

Discharge	1
Rash	2
Redness	3
Burning when urinating	4
Itching	5
Pain in lower abdominal	6
No response	99
Don't know	88
Other (specify) /	/

### C4. Have you observed STI symptoms during the last 12 months?

Yes	1
No	2
No response	99

### C5. Have you been tested on STI during the last 12 months?

Yes	1
No (go to C8)	2
No answer (go to C8)	99

**C6. If yes, when did you make your last test?**

_____year ____ month ago	1
Don't remember	77
No response	99

**C7. We are not going to ask you tell us, but do you know it ?**

Yes	1
No	2
No answer	99

*(After this question Go to C9)*

**C8. If so, why did not you make your testing on STIs? (Multiple answers possible)**

I did not know it was available	1
I do not need it, I know I am healthy	2
I did not get it in mind	3
I am afraid of the result, it is better not to know	4
I do not want somebody gets informed	5
I did not think on it	6
No response	99
Other (specify) /	/

**C9. What measures did you take, when STI symptoms revealed? (Note to Interviewer: do not read the shortlist; match the answer gained from respondent to the listed alternative)**

I applied to doctor	1
None	2
No response	99
Other (specify) /	

**C10. Have you been treated under doctors supervision during the last 12 month?**

Yes (Go to section D)	1
No	2
No response	99

**C11. In case you did not receive treatment, what was the reason? (Multiple answers possible)**

I did not know whom to apply to	1
I have no need	2
I did not get it in mind	3
Here it is impossible	4
I do not want somebody gets informed	5
I did not think on it	6
No response	99
Other (specify) /	/

## D. Sexual Behavior, Sexual Relations, the Condom Use

### D1. Did you have sexual intercourse within last 12 months?

Yes	1
No (Go to E1)	2
Don't remember	88
No response	99

### D2. Which type of sexual intercourse did you have (*Multiple answers possible*)?

Heterosexual	1
Homosexual(Go to E1)	2
Both type	3
No response (Go to E1)	99

### D2.1. How often did you use condom during the sexual contact within the last 12 months?

Always	1
Almost always	2
Sometimes	3
Never (Go to D2.3)	4
Don't know	88
No response	99

### D2.2. Did you use condom with your last female sexual partner?

Yes (Go to D3)	1
No	2
Don't know (Go to D3)	88
No response	99

### D2.3. Why did not you use condom with your last female sexual partner? (*Don't read, Multiple answers possible*)

Forgot	1
Refusal from partner	2
Less pleasure	3
I trust my partner	4
Condom was not accessible	5
Is often tore, no sense to use	6
Ashamed to offer	7
No response	99
Other (specify) /	/

**D3. Did you use condom during the last anal sexual contact with men?**

Yes (Go to E1)	1
No	2
Did not have anal sex	3
Don't remember	88
No response	99

**D4. In case you do not, what is the reason you do not use the condoms? (Don't read, Multiple answers possible)**

Forgot	1
Refusal from partner	2
Less pleasure	3
I trust my partner	4
Condom was not accessible	5
Is often tore, no sense to use	6
Ashamed to offer	7
No response	99
Other (specify) /	/

## E. Drug Use

**E1. Have you ever taken the drugs?**

Yes	1
No (Go to G1)	2
No response	99

**E2. If yes, which type of drugs have you taken? (Multiple answers possible)**

Injecting (IV or IM shot)	1
Non-injecting (smoking, drinking, inhaling) (Go to G1)	2
No response (Go to G1)	99
Other (specify) /	/

**E3. For how long are you being injecting drug user? (It is possible to specify solely years, or months, or both years and months)**

/ \_\_\_\_ Years/ \_\_\_\_ Months/

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

**E4. How long have you stopped drug consumption?**

/ \_\_\_\_ Years/ \_\_\_\_ Months/

Don't remember	88
No response	99

**E5. Have you consumed any drug during last 12 month?**

Yes	1
No (Go to E8)	2
No response (Go to E8)	99

**E6. Which type of drug did you consume? (Multiple answers possible)**

Injecting (IV or IM shot)	1
Non-injecting (smoking, drinking, inhaling)	2
No response	99
Other (specify) /	/

**E7. When did you inject drugs last?**

_____ year _____ months ago	
Don't remember	88
No response	99

**E8. Have you received penalty for injecting drug while not being in prison?**

Yes	1
No	2
No response	99

**E9. Have you been in preliminary detention cell because of injecting drug?**

Yes	1
No	2
No response	99

**E10. Have you been in prison because of drug consumption?**

Yes	1
No	2
No answer	99

## F. Practice of Sharing the Syringes and other Injecting Equipment

### F1. During the last time have you used a syringe or needle that had already been used?

Yes	1
No	2
No answer	99

### F2. During the last 12 month when did you use a syringe or needle that had already been used?

_____ year _____ months ago	
Don't remember	88
No response	99

## G. Additional Risks

### G1. Have you got tattoo in prison?

Yes	1
No (Go to G2)	2
No answer	99

### G2. While being in prison when have you last used already used syringe for treatment purpose?

_____ year _____ months ago	1
Haven't used	2
Don't remember	88
No response	99

### G3. While being in prison when have you last used already used razor?

_____ year _____ months ago	1
Haven't used	2
Don't remember	88
No response	99

### G4. While being in prison when have you last used already used toothbrush?

Yes	1
No	2
No response	99

### G5. Have you ever drunk alcohol while being in prison?

Yes	1
No (Go to H1)	2
No response (Go to H1)	99

### G7. How often do you drink alcohol in prison? (including beer and low alcohol concentration drinks)

Several times per week	1
Once per week	2
2-3 times per month	3
Once per month or even seldom	4
No response	99

## H. Source of information

### H1. Where from did you get the information on HIV/STIs?

Television	1
Radio	2
Newspapers, magazines	3
Special booklets	4
Friends, relatives	5
Internet	6
Other prisoners	7
NGO representatives	8
Penitentiary system staff	9
Never get the information	10
No response	99
Other (specify) /	/

### H2. Have you received brochures/booklets on AIDS from NGO representatives?

	Yes	No	Don't know	No response
1. Brochures/booklets on AIDS	1	2	88	99
2. Educational information	1	2	88	99
3. Other (specify) /	1	2	88	99

### H3. Which informational source is the most reliable to you? *(Multiple answers possible)*

Television	1
Radio	2
Newspapers, magazines	3
Special booklets	4
Friends, relatives	5
Internet	6
Other prisoner	7
NGO representatives	8
Penitentiary system staff	9
No response	99
Other (specify) /	/

**Q1. You did help us a lot. When this survey ends, our organization will plan the projects that would be beneficial for everyone. In case we need your interview then, would you please agree to let us have your time again?**

Yes	1
No	2
No answer	99

***Thank the respondent for collaboration and say goodbye.***

**Q2. During the interview respondent was:**

- |             |   |
|-------------|---|
| Interested  | 1 |
| Indifferent | 2 |
| Calm        | 3 |
| Excited     | 4 |

*The time of interview ending /\_\_\_\_\_/*

***The questionnaire must be kept until the project closure.***

***Quality control of the interview was assured by***

Position \_\_\_\_\_

Organization \_\_\_\_\_

## References

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<sup>1</sup> National Center for Disease Control and Public Health of Georgia, Statistical Yearbook, 2014

<sup>2</sup> UNAIDS, AIDS Response Progress Report, Georgia, Country Progress Report, 2015



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