

# HIV risk and prevention behaviours among Prison Inmates in Georgia

## Bio-behavioral surveillance survey in 2012

### Study report

Prepared by:

Curatio International Foundation

Center for Information and Counseling on Reproductive Health - Tanadgoma

February 2013



## Acknowledgements

Curatio International Foundation (CIF) and the Association “Tanadgoma” would like to acknowledge the financial support provided by the GFATM under the project "Generating evidence base for risk behavior change and effectiveness of preventive interventions among high risk groups for HIV/AIDS”, which made this survey possible.

The report was prepared by Nino Tsereteli (Tanadgoma) and Dr. Ivdity Chikovani, Dr. Natia Shengelia, Nino Chkhaidze (CIF).

These surveys would not have been accomplished without collaboration with the National Center for Disease Control and Public Health, whose professional staff: Maia Tsereteli – coordinator of the research project, Maia Alkhazashvili and Ketevan Galdavadze carried out the laboratory testing.

The authors appreciate the highly professional work of the Tanadgoma staff – coordinator Kakhaber Kepuladze, field interviewers: Sergo Chikhladze, Vazha Kasrelishvili, Giorgi Lomidze, Archil Rekhviashvili, Maia Jibuti, and Ketevan Chelidze for their input in interviewing process. The survey would not be accomplished without dedicated work of the nurses Manana Gulverdashvili, Elisabeth Mzareulishvili and Liza Vardziashvili.

Special thanks are extended to Dr. Davit Asatiani, Head of Medical Department of MCLA and Anton Kelbakiani, Head of the Social Service at the Department of Prisons of the MCLA.

The BSS team also wishes to thank all participants who agreed to dedicate their time and effort to the survey.

## Table of Content

Acronyms	iii
Definitions	iv
Executive Summary	1
Introduction	7
Methods	9
Sampling Procedure	9
Recruitment and Interviewing of the Study Participants	10
Measurements	10
Data processing and analysis	11
Ethical Issues	11
Study Results	12
Socio-Demographic Characteristics	12
HIV/AIDS Knowledge	13
Sexually Transmitted Infections (STI)	16
Sexual Behavior	16
Drug Use Behavior	16
Additional Risks	17
Coverage/Media	17
Biomarker	18
Study Limitations	18
Conclusions and Discussion	19
Recommendations	25
Annex 1: Data tables	27
Annex 2: Study questionnaire	35

## 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
MCLA	Ministry of Corrections and Legal Assistance 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.

---

<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 but with a high potential for the development of a widespread epidemic. From the early years of epidemic injecting drug use was the main route for HIV transmission, however for the last two years heterosexual transmission is prevailing.

By 2012 there were 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> The main reason for imprisonment in Georgia is drug-related crime. The majority of prisoners are arrested for repeated use of drugs or for keeping them in small amounts. Despite the fact that conditions in the prisons have improved over the last years, still the situation remains very hard.

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. By 2012, there were about 6000 prisoners tested annually.

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. The objective of the 2012 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 “Generate evidence base on progress in behavior modification among MARPs and effectiveness of preventive interventions, to inform policies and practice” by Curatio International Foundation (CIF), Center for Information and Counseling on Reproductive Health - Tanadgoma and the National Center for Disease Control and Public Health.

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>

---

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

<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>

## **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 and Legal Assistance of Georgia (MCLA) for the study sites: penitentiary establishment No 5 for women, penitentiary establishment No 7 and penitentiary establishment No 17. Two institutions for male inmates represent both types of prisons – “closed” and “semi-open”. The third was the only female establishment in Georgia selected with aim to guarantee adequate participation of female inmates in the survey.

The sample size intended to reach was defined as 300 prisoners.

## **Results**

Key findings from 2012 Bio-BSS and comparisons with 2008-2009 Bio-BSS and 2011 survey results are given below.

### ***Socio-Demographic characteristics***

The survey was carried out in three penitentiary institutions. Sample size of 301 was achieved, which included 16.6% of female respondents - a higher proportion than that in the previous Bio-BSS of 2008.

The socio-demographic structure of prisoners' cohort studied in 2012 is close to that studied in 2008: Median age of prisoners is 32 years, majority are with the secondary education and more than a half is married. Median duration of imprisonment is 3.4 years. Proportion of divorced respondents is higher among women prisoners.

### ***HIV/AIDS Knowledge and Testing***

Awareness of HIV/AIDS among prisoners is (97%). Knowledge about HIV, measured by the Global AIDS Response Progress Report Indicator, was relatively low - 24.6% were able to correctly list ways of HIV transmission and reject major misconceptions about HIV. Level of knowledge on HIV has not changed from 2011 to 2012.

More than half of the inmates (55.8%) were ever tested on HIV which is higher than that found in 2011 with statistically significant difference.

Testing was offered to more than half of the inmates while in prison, and 53.2% have undergone it. In 2008 19.4% of the respondents reported being tested while in prison. There is statistically significant increase in testing in prison, as well as testing during the last year since 2008.

About one fifth (21.3%) of the respondents in the survey were tested during the last 12 months and had received their results. There is no statistically significant change since 2008.

Majority of the prisoners consider themselves being at no risk for HIV infection.

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

Majority (86.4%) of the respondents have heard about STIs, which is the proportion similar to that received in the survey of 2011. Also, majority is able to list several STIs, as well as at least one STI symptom. However, only 10.4% of inmates reported taking any STI test during the last 12 months. Although awareness on STIs is high, still there is low access and low awareness on availability of STI treatment among prisoners.

### ***Sexual Behavior***

Very small proportion of the inmates reported having sexual intercourse during the last 12 months; majority of them mentioned heterosexual contacts, and only 3 prisoners – homosexual contact.

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

None of the respondents reported using any kind of drugs during the last 12 months. Consequently, the survey could not identify drug use-related risk practices among prisoners, such as needle/syringe sharing, etc. These data corresponds to the data of survey conducted in 2011, where also no drug use was found in the penitentiary system.

As for additional risks, related to HIV exposure, they were also very small. One third of the prisoners (34.9%) reported having done tattoo while in prison. Only one prisoner reported using shared syringes for treatment purposes and 11% used razors that were used by the others. Alcohol use in prisons is also very low - overall 2.3% reported alcohol use.

Experience of inmates with the law enforcement demonstrated that about 40% of the prisoners have paid administrative fines for drug use, have been in pre-trial detention and have been previously imprisoned due to drug use. Such high rates 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.

### ***Coverage/Media***

More than half of the respondents listed TV as a primary source of information on HIV and STIs, followed by other prisoners and special booklets. As for the most popular and trusted sources of information, healthcare workers were in the first place, followed by TV and special booklets. Coverage by prevention interventions is low, despite existence of HTC centers in almost every prison. Less than one fifth of the respondents (18.3%) were covered by preventive program and among male respondents these rate was higher than among females.

### **Biomarker**

The survey found very low prevalence of HIV in Georgian prisons. Rates of lifetime syphilis were high, especially among women. Such low prevalence of HIV among prisoners could be explained by practical elimination of all HIV-related risk behaviors during the last 3-4 years inside the penitentiary system. At the same time, considering overall HIV prevalence among PWIDs in Georgia, estimated as 3.0%<sup>4</sup> - HIV prevalence among prisoners is not surprisingly low.

### **Recommendations**

Based on the findings of this study the recommendations suggest focusing on the following:

- 1. Increasing coverage of the prisoners by prevention programs**, through providing specific HIV-related information on constant basis using channels of information listed and trusted by the prisoners, such as healthcare workers and peer prisoners, as well as using existing HTC centers and their services;
- 2. Condoms should be made available in prisons**, so that the prisoners have free and easy access to them;
3. Different approaches that can reduce risks of HIV transmission inside penitentiary institutions should be considered and implemented if necessary, such as different harm reduction and specific psychosocial rehabilitation programs;
4. Continue with surveillance. Non-coercive, anonymous, ethical and systematic surveillance of prisoners (and other high risk groups), should be conducted on a regular basis to provide early warning of a possible dramatic increase in the prevalence rate.

---

<sup>4</sup> "HIV risk and prevention behaviours among People Who Inject Drugs in six cities of Georgia", Bio-behavioral surveillance survey in Tbilisi, Batumi, Zugdidi, Telavi, Gori, Kutaisi in 2012, Study report, Curatio International Foundation, Public Union Bemoni. [www.curatiofoundation.org](http://www.curatiofoundation.org)

**Table 1: Summary of Core Indicators**

Indicators	%	n/N
<b>HIV/AIDS Knowledge</b>		
Correctly answer 5 questions (UNGASS indicator) * <sup>5</sup>	24.6	74/301
≤ 24	27.3	15/55
≥ 25	24.0	59/246
Female	10.0	5/50
Male	27.5	69/251
Correctly answer 7 questions (National indicator) * <sup>6</sup>	34.2	103/301
≤ 24	38.2	21/55
≥ 25	33.3	82/246
Female	32.0	16/50
Male	34.7	87/251
<b>HIV testing while being in prison last year</b>		
Tested on HIV last 12 months and knows result *	21.3	64/301
≤ 24	23.6	13/55
≥ 25	20.7	51/246
Female	18.0	9/50
Male	21.9	55/251
<b>Sexual Behavior</b>		
<b>Condom use at last homosexual contact</b>		
Used condom among males *	50.0	1/2
≤ 24	0	0
≥ 25	50	1/2
Used condom among females * (no response)	100.0	1/1
<b>Drug using behavior</b>		
<b>Drug consumption while being in prison</b>		
Non-injected drug use last 12 months	0	0/195
Injected drug use last 12 months *	0	0/195

<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; 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>6</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.

Indicators	%	n/N
Needle sharing practice while being in prison		
Shared needle/syringe last 12 month *	0	0/301
Preventive program coverage		
Received information about HIV/AIDS from preventive program and offer about HIV testing while being in prison last 12 months *	18.3	55/301
≤ 24	18.2	10/55
≥ 25	18.3	45/246
Male	20.7	52/251
Female	6.0	3/50
<b>Biomarker</b>	<b>1000 prisoners, 95% CI</b>	<b>n/N</b>
HIV (ELISA with Western Blot confirmation)		
HIV prevalence (positive)1000 prisoners	3.5 (0.2-18.8)	1/286
≤ 24	0	0/54
≥ 25	4.3 (3.0-23.2)	1/232
Female	20.8 (1.4-107.5)	1/48
Male	0	0/238
Syphilis (TPHA)		
Syphilis prevalence among 1000 prisoners	115.4 (78-162.6)	33/286
≤ 24	55.6 (12.6-156.0)	3/54
≥ 25	129.3 (85.9-184.4)	30/232
Female	416.7 (268.1-577.5)	20/48
Male	54.6 (28.2-94.7)	13/238

\*indicates National or Global AIDS Response Progress Report indicator

## Introduction

Georgia is among the countries with low HIV/AIDS prevalence but high potential for developing a widespread epidemic. The estimated prevalence of HIV among the adult population is 0.2%<sup>7</sup>. As of December 31, 2012 in total 3,559 HIV cases have been registered by the national HIV surveillance system. The annual number of new cases grew from around a hundred during early 2000s to over five hundred in 2012. From the early stage of HIV epidemic in Georgia injecting drug use was the major mode of transmission. However, for the last two years heterosexual transmission became prevailing route for HIV spread. According to the national HIV surveillance system HIV infections acquired through intravenous drug use still account for significant proportion of all HIV cases. In 2012, this route of transmission contributed to 42.9% of all newly registered cases, heterosexual transmission reached 44.3% and homosexual route of transmission contributed to 9.3% of all newly registered cases<sup>8</sup>.

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 objective of the 2012 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 “Generate evidence base on progress in behavior modification among MARPs and effectiveness of preventive interventions, to inform policies and practice” by Curatio International Foundation (CIF), Center for Information and Counseling on Reproductive Health - Tanadgoma and the National Center for Disease Control and Public Health.

### Conditions in the penitentiary system

Situation in Georgian penitentiary systems has changed drastically after the survey was implemented. 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, almost half of the prisoners have been released from the system and the new administration of the Ministry of Corrections and Legal Assistance (MCLA) has initiated reforms to improve conditions in prisons. However, this report describes situation for the moment when survey took place.

Despite the fact that conditions in prisons improved significantly over the last years, at the moment of the survey still the situation was quite hard. The reason for that was excessive number of

---

<sup>7</sup> UNAIDS, AIDSinfo, 2012. <http://www.unaids.org/en/regionscountries/countries/georgia/>

<sup>8</sup> National Center for Disease Control and Public Health, unpublished data.

prisoners. During 2004-2012 the number of prisoners increased about 2.5 times. Overloaded prisons represented very good ground for spreading of communicable diseases including blood-borne infections.

During the last decade major changes took place in the Georgian penitentiary system. Before 2003 the prisons in Georgia were mostly organized as Soviet “colony type” institutions where all inmates could easily move inside the prison territory. The criminal authorities were actively involved in prison management; they were running prisons in coordination with prison administration. In these conditions there was no control on traffic of restricted items in and out of prisons. Drugs could easily leak inside prisons, sharing injecting equipment was very common. Along with this, there were unprotected sexual contacts (both homo- and heterosexual).

Although prisoners were not allowed to keep needles and syringes, NGOs were given the possibility of needle and syringe distribution and donation. This meant that the needles were donated to the prison’s local medical posts and were used for medical reasons as well as for harm reduction purposes. In “open” type prisons it was possible to have discussions and consultations with the inmates in friendly and unconstrained environments which resulted in effective educational meetings.

The reforms initiated since 2004 by the Penitentiary Department of the MCLA led to transformation of the majority of “open” type prisons to “semi-open” or “closed” type institutions. This transformation had a positive effect on control of illegal items’ traffic, especially drugs, into prisons. This was a positive moment, but access to single-use injecting items was also restricted.

At the end of 2005 an internal regulation, according to which the inmates are banned to keep any syringe/needle, was fully activated. Now, if a needle is found on the prisoner, he/she can be the subject of administrative penalty or even more strict punishment. This resulted in the situation where small amounts of drugs could get inside prisons but accessibility of injecting materials was completely restricted.

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

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>9</sup>. Necessity of this research was based on the low-scale harm reduction interventions existing in Georgian prisons, combined with the strict drug legislation,

---

<sup>9</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>

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 harm reduction interventions, but high need for them, starting from methadone detox, methadone substitution, as well as psychosocial rehabilitation.

### **Prevalence of communicable diseases in the penitentiary system**

As of July, 2012, there were 23000 (21800 males, 1200 - females) prisoners in Georgian penitentiary system, which included 17 establishments. Number of HIV positive inmates in the system was 130. As mentioned in the annual report for Monitoring of Penitentiary establishments and temporary detention isolators (2011), released by the National Preventive Mechanism of the Public Defender of Georgia<sup>10</sup>, population of the Penitentiary System of Georgia has been showing a trend of sharp increase judging from the data of the recent years. Despite the construction of new penitentiary establishments and the upgrading of the capacities of the existing infrastructure, number of prisoners and the existing capabilities are still disproportional. Overcrowding is certainly one of the evident reasons of healthcare related problems in a prison, communicable diseases in the first place among them.

Data about various communicable diseases in the penitentiary system is limited to those infections which are under strong surveillance, which include mainly HIV and Tuberculosis and do not include viral hepatitis B and C. In 2011, there were 4240 prisoners tested for HIV, 48 persons were newly diagnosed and 39 started treatment. As for TB, more than 1600 cases were identified in 2011 and majority of them started treatment.

## **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,

---

<sup>10</sup> Public Defender of Georgia National Preventive Mechanism Annual report for 2011: Monitoring of Penitentiary establishments and temporary detention isolators, 2012  
<http://www.ombudsman.ge/files/downloads/en/noxsxilefcgmnbwfcoeq.pdf>

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 MCLA for the study sites: penitentiary establishment No 5 for women (located in Rustavi), penitentiary establishment No 7 (located in Ksani) and penitentiary establishment No 17 (located in Rustavi). These institutions were advised by the Penitentiary Department, as two of the male institutions represented both types of prisons – “closed” and “semi-open” establishments. The third was the only female establishment in Georgia, which was selected in order to guarantee the adequate participation of female inmates in the survey. Furthermore, these three institutions were defined as the survey sites since they proved to have basically required material and technical background, which is essential for these types of surveys. After final selection of institutions the sample size of 300 prisoners was defined.

### **Recruitment and Interviewing of the Study Participants**

Recruitment of the respondents was conducted from September 18 till October 19, 2012.

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 301. In case of refusal (18 prisoners refused in total) 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>11</sup> The questionnaire with slight modifications was applied in the previous BSS among prisoners in 2008. 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

---

<sup>11</sup> [http://gametlibrary.worldbank.org/pages/19\\_Surveys\\_surveillance\\_English.asp](http://gametlibrary.worldbank.org/pages/19_Surveys_surveillance_English.asp)

are captured. A Georgian version of the questionnaire was pre-tested.

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 National Center for Disease Control and Public Health in Tbilisi.

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

Biomarker	Screening	Confirmation
HIV	Genscreen Ultra HIV (BIO-RAD, France)	Western Blot HIV Blot 2.2, MP Biomedicals
Syphilis	Treponema Pallidum Hemagglutination Assay (IMMUTREP-TPHA OD081, Omega Diagnostics)	

### Data processing and analysis

Data entry and analysis took place with the help of the SPSS software (version 18.0). 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.

### 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 penitentiary institutions.

Research protocol was approved by the ethical committee of the HIV/AIDS Patients' Support Foundation (certificate # 619/720 of 04.09.2012).

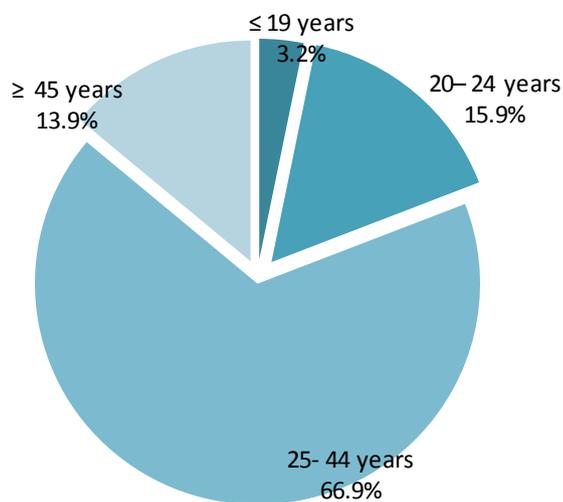
## Study Results

### Socio-Demographic Characteristics

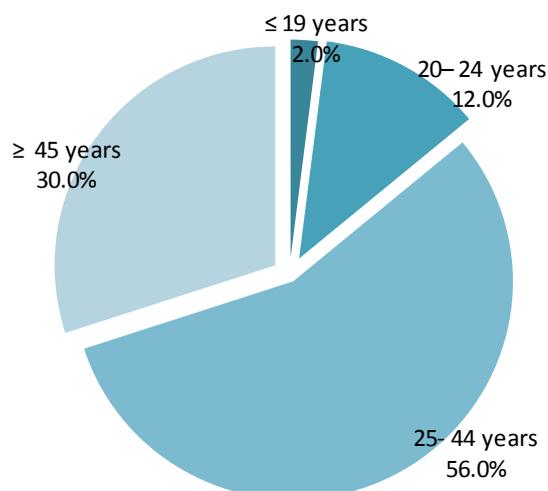
The study was carried out in 3 penitentiary institutions of the Penitentiary Department of the Ministry of Corrections and Legal Assistance of Georgia: penitentiary establishment No 5 for women (50 respondents), penitentiary establishment No 7 (146 respondents) and penitentiary establishment No 17 (105 respondents).

The median age of prisoners is 32, with the age ranging from 17 to 66 years. The biggest majority of respondents are in the age group of 25-44 (65.1%). As for age distribution between male and female groups of respondents, here also the majority of the prisoners in both gender groups are above 25 years of age (66.9% among males and 56.0% - among females):

**Figure 1: Age distribution – male prisoners**



**Figure 2: Age distribution – female prisoners**



Large majority of interviewed were males (83.4%) and 16.6% - females. According to level of education, more than half (69.1%) of prisoners had received secondary education and 22.6% had completed higher education. As for the gender differences in received education level, larger proportion of males has received secondary or vocational education than females (71.7% and 51.0%, respectively). At the same time, larger proportion of females had received higher education, compared to males (34.0% and 20.3%, respectively). Survey found 3 inmates with no formal education. Only 2.7% of prisoners were Internally Displaced Persons.

As for the marital status, more than half (54.8%) of the inmates were married, 34.6% - have never been married and 8.3% reported being divorced. Much higher proportion of females were divorced or separated with their spouses forever, compared to males (32.0% and 3.6%, respectively).

Median duration of imprisonment is 3.42 years, ranging from six months to 14 years.

### **HIV/AIDS Knowledge**

The majority of the respondents (97.0%) report that they have heard about HIV/AIDS. Disaggregating these data by sex, the survey could not find big difference between males and females in HIV/AIDS awareness.

One fourth of the respondents (24.6%) correctly answer 5 questions on the ways of HIV transmission (Global AIDS Response Progress Report Indicator<sup>12</sup>). Correct answers are given by approximately the same proportion of both younger and older age groups of respondents. It has to be mentioned that higher proportion of male respondents gave correct answers to these 5 questions, compared to the female respondents (27.5% and 10.0%, respectively). Still there is low proportion of the respondents who correctly answer the question about mosquito bites (37.9%).

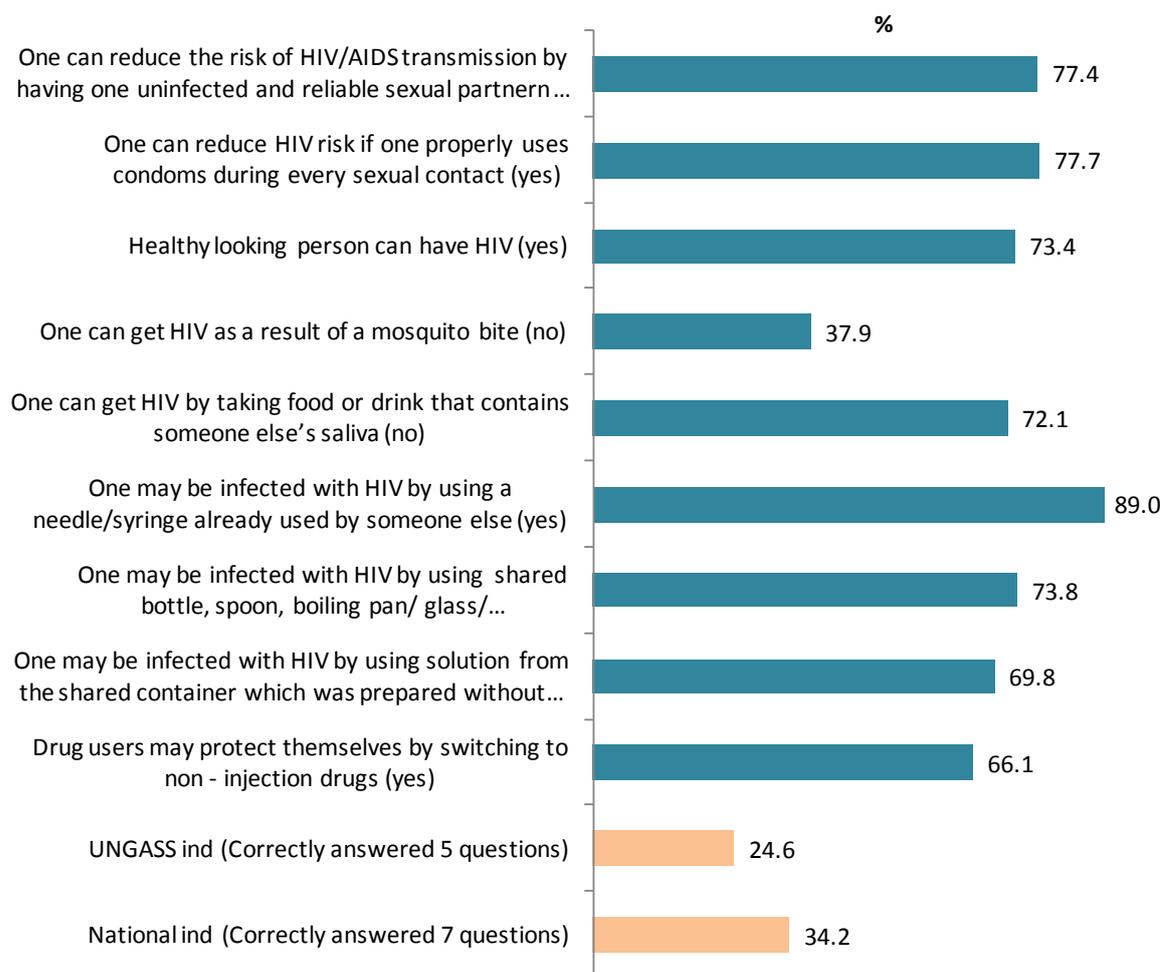
As for the National HIV Knowledge Indicator<sup>13</sup>, 34.2% of all respondents answered those 7 questions correctly (see Figure 3). Correct answers were given by almost the same proportions by younger and older age groups, as well as by male and female prisoners (see Figure 4).

---

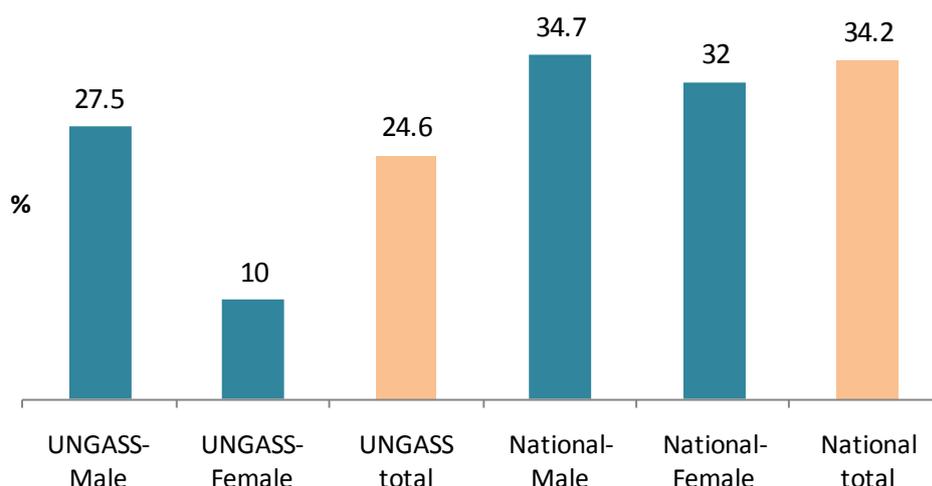
<sup>12</sup> One may protect oneself from HIV/AIDS by having one uninfected and reliable sexual partner; Can reduce the HIV risk if one properly uses condoms during every sexual contact; healthy looking person can be infected with HIV; no one can get HIV as a result of a mosquito's bite; no one can get HIV by taking food or drink with infected person.

<sup>13</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.

**Figure 3: Knowledge on HIV/AIDS prevention**



**Figure 4: Knowledge on HIV/AIDS prevention among males and females**



More than half of the inmates (55.5%) knew that HIV diagnosis is done through a special blood test. More than half of the prisoners think that HIV cannot be cured (55.1%), 14.4% think that it can be cured in some cases and 6.8% believe that this is completely possible. About one fifth of the

respondents did not know whether HIV could be cured.

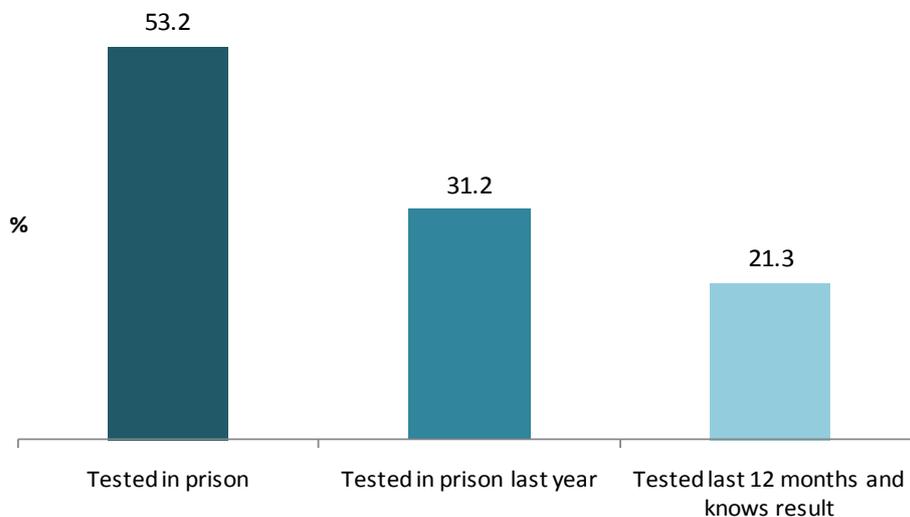
Stigmatization of the HIV infected was measured by questions about going to dentist who has served an HIV infected person, as well as stopping contact with HIV positive cellmate. One third (29.1%) of the respondents answered positively to the question about dentist (they would visit a dentist who has serves an HIV positive person), and only 13.0% said they would stop any contacts with HIV infected cellmate.

Out of interviewed inmates, 57.8% reported they had been offered HIV testing while being in prison, majority of them received this offer during the last year (62.1%). More than one third (36.2%) in both males and females reported they have never been offered testing during their imprisonment (37.7% among males and 35.4% among females).

When asked about being ever tested on HIV, 55.8% responded positively. As for HIV testing while being in prison, 53.2% reported it and 31.2% underwent testing during the last year (Figure 5).

About one fifth (21.3%) of the respondents were tested during the last 12 months and had received their results (Global AIDS Response Progress Report Indicator). Out of those almost the same proportions fell under the younger and older age groups. However, this indicator was slightly higher among male respondents, compared to females (21.9% and 18.0%, respectively).

**Figure 5: HIV testing**



More than one third (37.9%) of prisoners have not taken HIV tests. Most of them (46.7%) think that they do not need HIV testing, as they are healthy.

It is also important to note that only 8.2% assessed their personal risk regarding HIV infection as high, majority - 29.1% believed they are at no risk, 28.1% - that they are at low risk and 18.5% perceived medium risk.

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

Majority (86.4%) of the respondents have heard about STIs. Disaggregating these data by sex shows that there is higher proportion of males not having heard of STIs, than females (15.1% and 6.0%, respectively). 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. The respondents were further asked to list STI symptoms. The majority (59.1%) were able to list at least one STI symptom, while one third (29.2%) could not name any.

Only 10.4% of inmates reported taking any STI test during the last 12 months and their majority (88.9%) had received their test results. With regard to STI experience in the last 12 months 14.6% reported having some symptoms. When asked about their actions during the symptomatic period, 60.5% referred to a medical doctor, 26.3% had done nothing and only one respondent applied self-treatment.

As for reasons for not being treated on STIs, 36.4% out of those, who reported doing nothing during the symptomatic period, mentioned that they did not know whom to refer for treatment.

## **Sexual Behavior**

Majority of the respondents (90.4%) reported not having had sex during the last 12 months. Out of those who reported having sexual intercourse (8.6%), majority (80.8%) said it was heterosexual contact and only 3 (one female, two males) inmates said it was homosexual contact. As for the condom use during the last anal intercourse, one respondent said it was not used due to the trust towards the partner.

## **Drug Use Behavior**

About two thirds of the respondents (64.8%) reported having used drugs in their lives. This rate is 2.5 times higher among males compared to females (72.1% and 28%, respectively). Out of those, who have ever used drugs, 73.8% reported use of injecting drugs. Also, 65.1% have been using injecting drugs as well as non-injecting ones. It is interesting to mention that out of female respondents who reported ever use of drugs (14 prisoners) all of them used injecting drugs. None of the women prisoners reported having used non-injecting drugs.

Inmates were asked about experience with law enforcement, as well as previous detention due to the drug use before current imprisonment. Less than half (41.7%) of them reported having received administrative sentence for drug use, more than two thirds (39.6%) said they were in pre-trial detention and the same proportion reported being imprisoned before.

None of the respondents reported using drugs during the last 12 months, either injecting or non-injecting drugs. Consequently, the survey could not identify drug use-related risk practices among prisoners, such as needle/syringe sharing, etc.

### Additional Risks

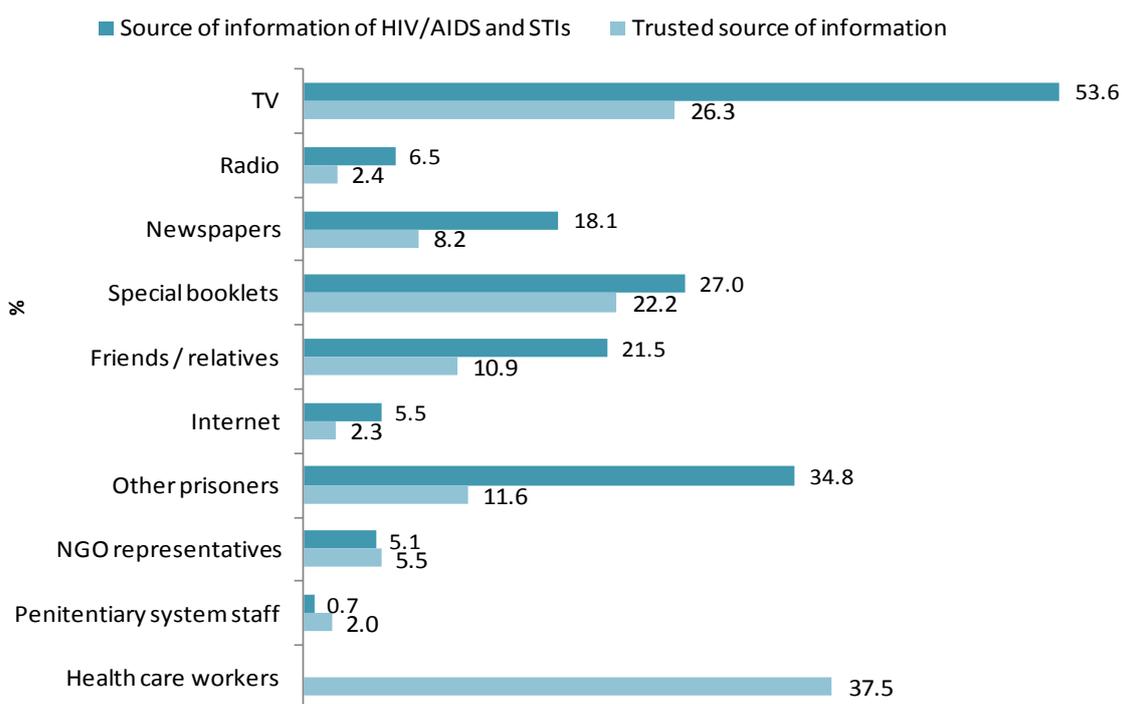
One third of the prisoners (34.9%) reported having done tattoo while in prison. This proportion is higher among younger inmates.

None of the prisoners reported using tooth brushes that were used by the others and only one reported using shared syringes for treatment purposes. However, 11% used razors that were used by the others. Majority (96.3%) reported no use of alcohol while being in prison during the last 12 months. Out of those seven respondents, who reported having used alcohol, 4 did not respond to the question about frequency of alcohol consumption, and 3 reported that they used alcohol once in a month or less.

### Coverage/Media

The respondents knowledgeable about HIV were asked to list all sources of information on HIV/AIDS and STIs. TV was named in the majority of cases (53.6%), followed by other prisoners (34.8%), special booklets (27.0%), friends and relatives (21.5%). As for the most trusted sources of information, healthcare workers were in the first place on the list for inmates (35.5%), followed by TV (26.3%), special booklets (22.2%) and other prisoners (11.6%).

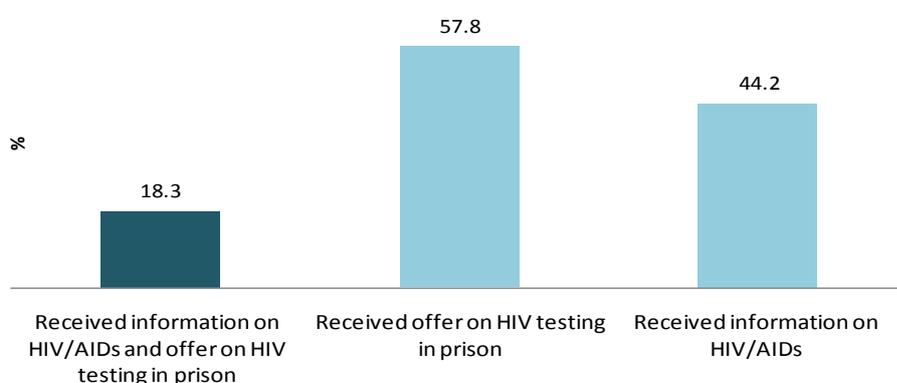
**Figure 6: Sources of information on HIV/STIs**



More than half (55.8%) 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, 44.2% 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. Less than one fifth of the respondents (18.3%) were covered by preventive program. Disaggregating these data by sex, higher coverage was identified among male prisoners, than among females (20.7% and 6.0%, respectively). As for the desegregation by age groups, proportion of prisoners covered by prevention interventions is the same among younger and older age groups.

**Figure 7: Prevention program coverage**



### **Biomarker**

Blood samples for testing on HIV infection and Syphilis (TPHA) were taken from 286 participants.

Only one female inmate, from the age group over 25 years was found HIV positive. HIV prevalence in the study sample was 0.3% (1/286). The results show that HIV prevalence in prisons is 3.5 per 1000 prisoners (CI 95% 0.2-18.8).

Syphilis was tested by the TPHA (quantitative) method that shows lifetime infections as well.

Positive reaction was detected in 11.5% of the surveyed sample (33/286). The results show that lifetime syphilis prevalence in prisons is 115.4 per 1000 prisoners (CI 95% 78-162.6). Prevalence of lifetime syphilis is higher among age group of over 25, and among females.

### **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 and Legal Assistance of Georgia. 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.

## 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 2008. Although the survey instrument was slightly changed, and the sample size in the presented survey is larger (301) compared to the previous one (211), still, some of the indicators can be compared. It is noteworthy, that some of the key indicators are compared to the most recent survey on needs of harm reduction programs in the penitentiary system of Georgia, conducted in 2011.

### Socio-demographic characteristics

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

Females represent 16.6% of the whole sample, which is higher than in the previous BioBSS of 2008, where proportion of females was 9.5%.

The socio-demographic structure of prisoners' cohort studied in 2012 is close to that studied in 2008: Median age of prisoners is 32 years, majority are with the secondary education and more than a half is married. Median duration of imprisonment is 3.4 years. Proportion of divorced respondents is higher among women prisoners.

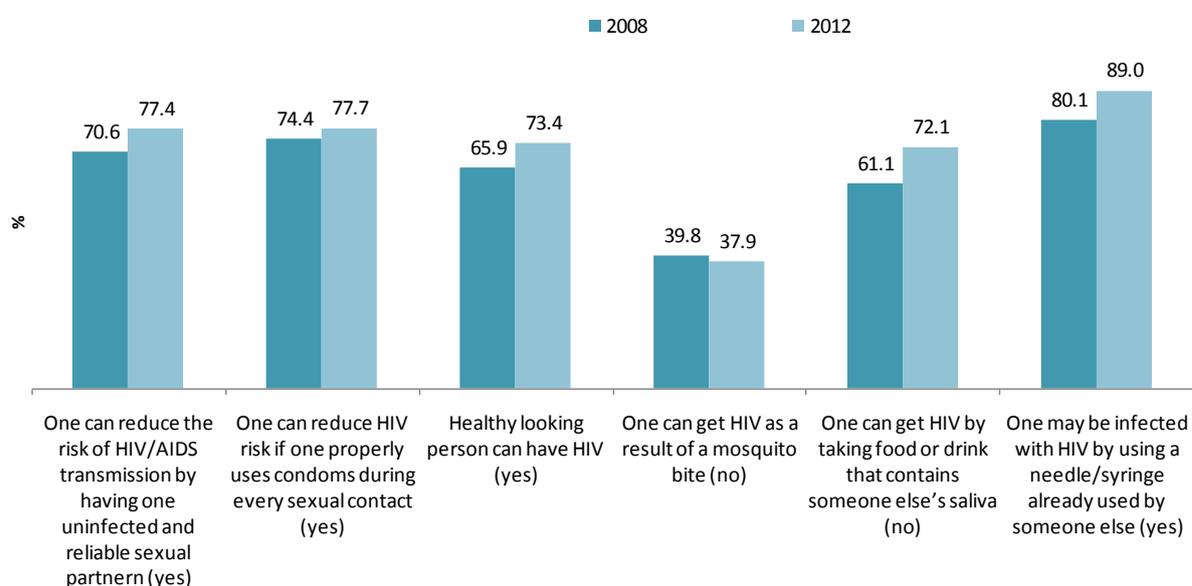
The high rate of divorces among women prisoners can be explained by high stigmatization of women prisoners, which represents an obstacle for women to maintain their families. Male imprisonment is somehow more acceptable for society, while in terms of women there is no such attitude and female imprisonment is regarded only in negative perspective. This stems, probably, from the gender stereotypes still prevalent in Georgia, when female role is regarded as more submissive compared to males.

## HIV/AIDS Knowledge

Higher proportion of the respondents is aware of HIV/AIDS, compared to the previous survey (97% vs. 83.4%). Knowledge about HIV, measured by the Global AIDS Response Progress Report Indicator, was relatively low - 24.6% were able to correctly list ways of HIV transmission and reject major misconceptions about HIV. Data on HIV/AIDS knowledge can be 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 2012.

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 positive changes from 2008 to 2012. The Figure 8 shows that the proportion of correct answers increased on five out of six questions.

**Figure 8: Question on HIV/AIDS knowledge; comparison of 2008 and 2012**



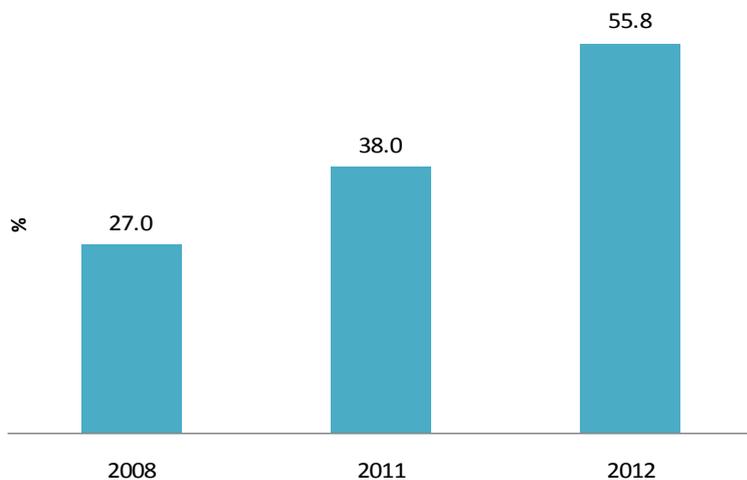
Comparing to the survey of 2011, when 33% of prisoners believed that HIV can be completely cured, in this survey proportion who stated the same was 14.4%. This also demonstrates better awareness about HIV/AIDS.

Level of stigma towards HIV infected is not high, as one third (29.1%) of the respondents answered positively to the question about visiting dentist who has served an HIV infected person, and only 13.0% 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 last survey from 23.3%.

Testing has been offered to more than half of the inmates while in prison, and 53.2% have undergone it, majority out of them have been tested during the last year. When asked about being

ever tested on HIV, 55.8% responded positively. If compared with the previous surveys 32.4% and 38.0% were ever tested in 2008 and 2011 respectively. Increase from 2011 to 2012 is statistically significant ( $p < 0.01$ ).

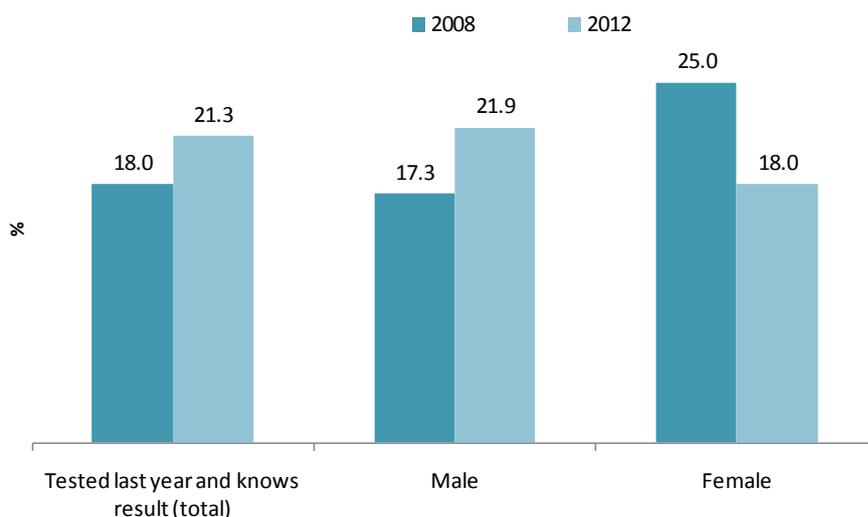
**Figure 9: Ever tested on HIV; comparison of 2008, 2011 and 2012**



As for HIV testing while being in prison, 53.2% reported it. In 2008 19.4% of the respondents reported being tested while in prison. There is statistically significant increase of the rate of testing in prison since 2008 ( $p < 0.01$ ). As for the testing during the last year, in 2008 it was 5% and in 2012 - 31.2%, which also showed statistically significant increase ( $p < 0.01$ ).

About one fifth (21.3%) of the respondents in the survey was tested during the last 12 months and had received their results. This indicator was 18.0% in 2008, which has increased slightly, but does not show any statistically significant change.

**Figure 10: Tested on HIV during the last year and knows testing results; comparison fo 2008 and 2012 data**



Majority of the prisoners consider themselves being at no risk for HIV infection.

Prisoners' knowledge about HIV is relatively low, although testing uptake in prisons has increased significantly since 2011. There is significant increase in ever tested on HIV since 2011 and in being tested during the last year since 2008. This positive change in HIV testing uptake could be explained by wide introduction of HIV testing and counselling in penitentiary institutions under the GFATM-supported program during 2008-2010. This program rolled out in 2008 and by the time of the previous Bio-BSS implementation it was in the inception phase. By 2011, in 16 out of 17 penitentiary institutions HTC centers were already established and actively functioning, providing testing and counselling to about 6500 inmates annually.

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

Majority (86.4%) of respondents have heard about STIs, which is similar to that found in the survey of 2011. Majority is able to list several STIs, as well as at least one STI symptom. Proportion of knowledgeable prisoners on STIs is higher among women. Only 10.4% of inmates reported taking any STI test during the last 12 months and their majority (88.9%) had received their test results. Of those who reported having some STI symptoms during the last 12 months only 60% referred to a medical doctor.

Although awareness on STIs is high, still there is low access and low awareness on availability of STI treatment among prisoners.

### **Sexual Behavior**

Very small proportion of the inmates reported having sexual intercourse during the last 12 months; majority of them mentioned heterosexual contacts, and only three prisoners – homosexual contact. As long-term conjugal visits were very limited in Georgian penitentiary system during the recent years, therefore majority of the prisoners did not have any heterosexual contacts. Homosexual contact was reported by only three prisoners, out of them one woman. 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.

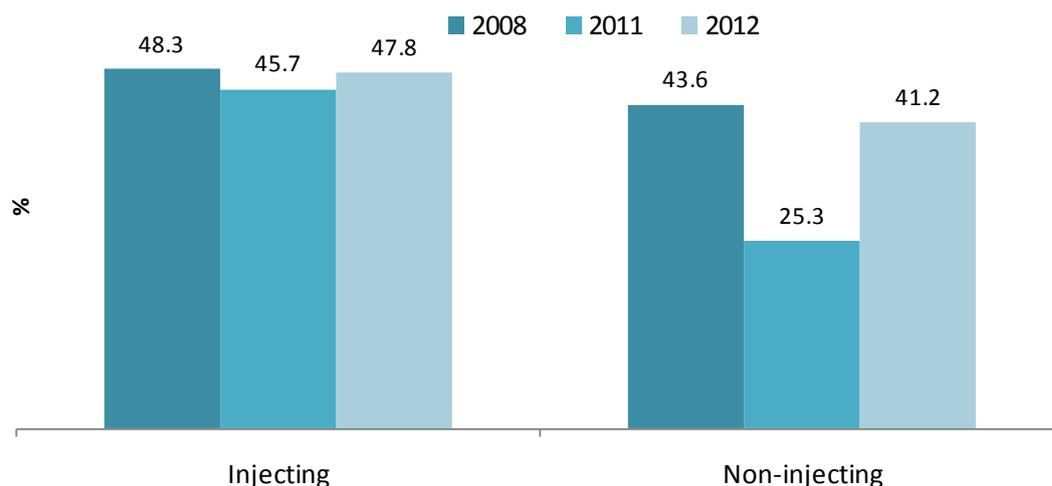
### **Drug Use Behavior and Additional Risks**

None of the respondents reported using any kind of drugs during the last 12 months. Consequently, the survey could not identify drug use-related risk practices among prisoners, such as needle/syringe

sharing, etc. The findings are in line with the 2011<sup>14</sup> survey result, where also no drug use was found in the penitentiary system.

The Figure 11 demonstrates proportions of ever using drugs, compared among all three surveys – of 2008, 2011 and 2012. It is obvious that levels of ever using injecting drugs are the same 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 11: Drug use ever; comparison of 2008, 2011 and 2012**

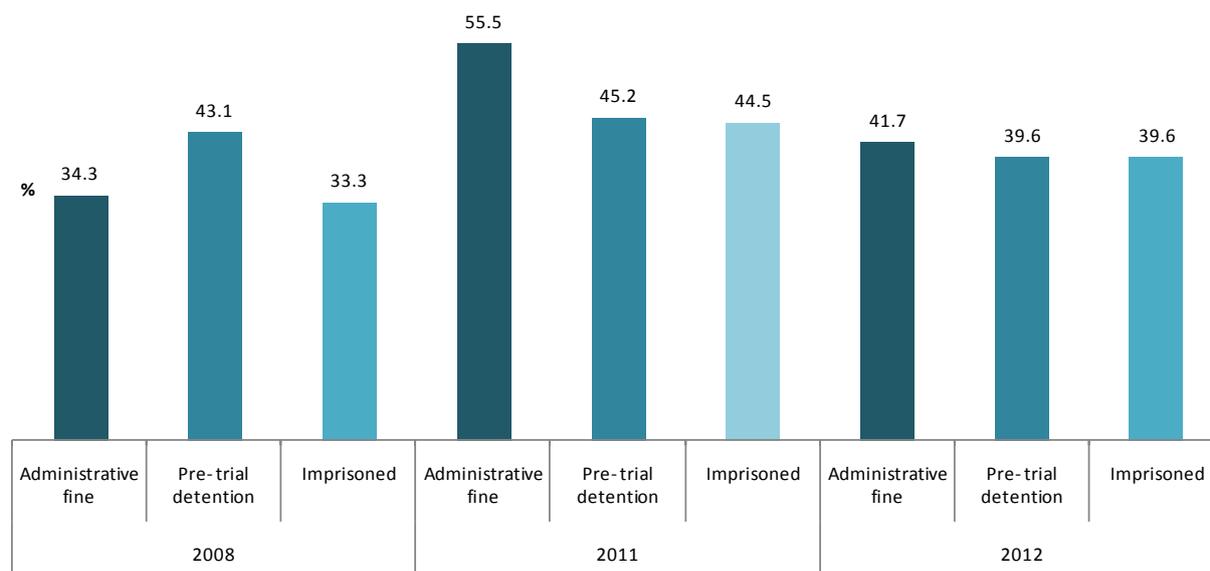


Additional risks related to HIV exposure were found to be also very small. One third of the prisoners (34.9%) reported having done tattoo while in prison. Only one prisoner reported using shared syringes for treatment purposes and 11% used razors that were used by the others. Alcohol use is also very low in prisons - 2.3% reported using it.

Experience of inmates with law enforcement, as well as previous detention due to the drug use before current imprisonment is demonstrated in the Figure 12. Administrative fines reported by the prisoners throughout the years 2008 – 2012 have increased, with highest rates were reported in 2011. Pre-trial detentions' rate has slightly decreased from 2008 to 2012. 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 to 2012, again showing the highest rate in 2011. 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.

<sup>14</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>

**Figure 12: Experience of inmates with law enforcement and previous detention due to drug use; comparison of 2008, 2011 and 2012**



There is no drug use as well as almost no additional risk practices such as sharing injecting equipment, alcohol use in Georgian prisons. This could explain that majority of the inmates do not consider themselves at high risk for HIV. Still tattooing practice is present, but without sharing equipment it does not represent any risk for HIV exposure.

One thing should be take into consideration when reduction of risk practices is demonstrated in Georgian prisons: considering high numbers of drug users concentrated in prisons, risks of overdoses after release among those should be also high. Unfortunately, there are no data about after-released overdoses in Georgia.

### Coverage/Media

More than half of the respondents listed TV as a primary source of information on HIV and STIs, followed by other prisoners and special booklets. As for the most popular and trusted sources of information, healthcare workers were in the first place on the list for inmates, followed by TV and special booklets.

More than half (55.8%) 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, 44.2% did receive some information through booklets and education sessions. Less than one fifth of the respondents (18.3%) were covered by preventive program and among male respondents these rate was higher than among females.

Coverage by prevention interventions is low, despite existence of HTC centers in almost every prison. Prison health workers are not mentioned in sources for information on HIV/STIs. At the same time, healthcare workers in general are most trusted source of such information.

### **Biomarker**

The survey found very low prevalence of HIV in Georgian prisons. Syphilis prevalence (lifetime syphilis) is high, especially among women.

Explanation of such low prevalence of HIV among prisoners could be found in practical elimination of all HIV-related risk behaviors during the last 3-4 years inside the penitentiary system of Georgia.

There was almost no drug use, no sexual intercourses, no alcohol use, and low rate of additional risk practices, such as tattooing. This is very positive achievement of the system.

At the same time, considering overall HIV prevalence among PWIDs in Georgia, estimated as 3.0%<sup>15</sup> - HIV prevalence among prisoners is not surprisingly low.

### **Recommendations**

Following recommendations are proposed to effectively 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 healthcare workers and peer prisoners:

- 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.
- Prisoners' training or education should continue and expand, with particular focus on peer techniques on how to provide information to other prisoners.
- 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. Condoms should be made available in prisons.** At the moment of the survey the situation in prisons almost excluded sexual contacts, either heterosexual, or homosexual. However, since the

---

<sup>15</sup> "HIV risk and prevention behaviours among People Who Inject Drugs in six cities of Georgia", Bio-behavioral surveillance survey in Tbilisi, Batumi, Zugdidi, Telavi, Gori, Kutaisi in 2012, Study report, Curatio International Foundation, Public Union Bemoni. [www.curatiofoundation.org](http://www.curatiofoundation.org)

situation has drastically changed, it is recommended to distribute condoms in prisons, so that the prisoners have free and easy access to them.

3. 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 sharing practices, as well as lay ground for prevention of lethal overdoses after release, specific psychosocial rehabilitation and harm reduction programs should be envisaged and planned, so that their implementation is easy and feasible.

**4. 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

**Table 3: Demographic and Social Characteristics**

Demographic and Social Characteristics	%	n/N
Age		
≤19	3.0	9/301
20-24	15.3	46/301
25-44	65.1	196/301
≥ 45	16.6	50/301
Median age	32.00	(301)
Mean age (Min-Max)	34.03 (17-66)	(301)
Sex		
Female	16.6	50/301
Male	83.4	251/301
Level of Education		
None	1.0	3/301
Primary 1-4 grades	4.0	12/301
Secondary	69.1	208/301
Incomplete higher	3.3	10/301
Higher	22.6	68/301
Internally Displaced Person		
Yes	2.7	8/301
Marital Status		
Married	54.8	165/301
Divorced	8.3	25/301
Widow(er)	2.3	7/301
Never been married	34.6	104/301
Duration of imprisonment (Years)		
Median	3.42	(301)
Mean (Min-Max)	3.87(0.58-14)	(301)

**Table 4: HIV/AIDS Knowledge, Attitude, Opinions**

HIV/AIDS Knowledge	%	n/N
Aware of HIV/AIDS		
Have you heard on HIV/AIDS (Yes)	97.0	292/301
One can reduce the risk of HIV/AIDS transmission by having one uninfected and reliable sexual partner	77.4	233/301

HIV/AIDS Knowledge	%	n/N
(yes)		
One can reduce HIV risk if one properly uses condoms during every sexual contact (yes)	77.7	234/301
Healthy looking person can have HIV (yes)	73.4	221/301
One can get HIV as a result of a mosquito bite (no)	37.9	114/301
One can get HIV by taking food or drink that contains someone else's saliva (no)	72.1	217/301
One may be infected with HIV by using a needle/syringe already used by someone else (yes)	89.0	268/301
One may be infected with HIV by using shared bottle, spoon, boiling pan/ glass/ container, cotton/filter or water (yes)	73.8	222/301
One may be infected with HIV by using solution from the shared container which was prepared without his/her presence (yes)	69.8	210/301
Drug users may protect themselves by switching to non - injection drugs (yes)	66.1	199/301
Correctly answer 5 questions (UNGASS indicator) *16	24.6	74/301
≤ 24	27.3	15/55
≥ 25	24.0	59/246
Female	10.0	5/50
Male	27.5	69/251
Correctly answer 7 questions (National indicator) *17	34.2	103/301
≤ 24	38.2	21/55
≥ 25	33.3	82/246
Female	32.0	16/50
Male	34.7	87/251
Would go to the dentist who has served HIV infected person	29.1	85/292
Stop contact with HIV positive prisoner (yes)	13.0	38/292

<sup>16</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>17</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
HIV diagnosis is possible by special blood test	55.5	162/292
Awareness on possibility of full recovery from HIV		
not possible	55.1	161/292
possible in some cases	14.4	42/292
completely possible	6.8	20/292
don't know	19.9	58/292
no response	3.8	11/292
HIV testing offer while being in prison		
yes	57.8	174/301
Last year	62.1	108/174
1 to 2 years period	4.6	8/174
2 years before	31.6	55/174
Don't remember/ no response	1.7	3/174
no	36.2	109/301
no response	3.0	9/301
Have not heard about HIV	3.0	9/301
HIV testing		
Yes	55.8	168/301
No	34.9	105/301
No response	6.3	19/301
Have not heard about HIV	3.0	9/301
HIV testing while being in prison		
yes	53.2	160/301
Last year	31.2	94/301
1 to 2 years period	3.0	9/301
2 years before	16.6	50/301
Don't remember/ no response	2.3	7/301
Not tested	37.9	114/301
no response	6.0	18/301
Have not heard about HIV	3.0	9/301
HIV testing while being in prison last year		
Tested on HIV last 12 months and knows result *	21.3	64/301
≤ 24	23.6	13/55
≥ 25	20.7	51/246
Female	18.0	9/50

HIV/AIDS Knowledge	%	n/N
Male	21.9	55/251
Reasons for not testing		
Don't need, because I am healthy	46.7	49/105
HIV risk perception		
High risk	8.2	24/292
Medium risk	18.5	54/292
Low risk	28.1	82/292
No risk	29.1	85/292
Don't know	11.3	33/292
No response	4.8	14/292

**Table 5: STI Knowledge, Attitude, Opinions**

STIs	%	n/N
Aware of STIs		
Have heard about the STIs (yes)	86.4	260/301
Please, specify all STIs you have ever heard about		
Syphilis	65.1	196/301
Gonorrhoea	67.1	202/301
Trichomoniasis	25.9	78/301
Chlamydia	6.6	20/301
Fungal infections	12.3	37/301
Genital Herpes	1.7	5/301
Genital warts	3.7	11/301
HIV/AIDS	19.9	60/301
Please specify the STI symptoms		
Vaginal (genital) release	45.8	138/301
Genital, skin or mucous membrane rash	25.9	78/301
Genital redness	6.6	20/301
Burning while urinating	19.3	58/301
Itching	12.3	37/301
Lower abdomen ache	1.0	3/301
Know at least one symptom	59.1	178/301
Do not know any	29.2	88/301
No response	11.6	35/301
Experience of STI last 12 months		

Had symptoms of STI	14.6	38/260
Hadn't symptoms of STI	82.7	215/260
No response	2.7	7/260
Test for STI last 12 months	10.4	27/260
Awareness of test results (yes)	88.9	24/27
Referral for treatment:		
Doctor	60.5	23/38
Self-treatment	2.6	1/38
Had done nothing	28.9	11/38
No response	7.9	3/38
Reasons for not receiving treatment		
Didn't know whom to apply for treatment	36.4	4/11

**Table 6: Sexual behavior**

Sexual Behavior	%	n/N
Had sex while being in prison last 12 months		3/29
Had sex	8.6	26/301
Homosexual sex	11.5	3/26
Heterosexual sex	80.8	21/26
No response	7.7	2/26
Had not sex	90.4	272/301
no response	1.0	3/301
Condom use at last homosexual contact		
Among males		
Used condom *	50.0	1/2
≤ 24	0	0
≥ 25	50	1/2
Among females		
Used condom * (no response)	100.0	1/1
Reasons for not using condom at last anal sex		
I trust my partner	100	1/1

**Table 7: Drug use history**

Drug using behavior	%	n/N
Drug use (ever)		
Yes	64.8	195/301

Injecting drugs	73.8	144/195
Non- injecting drugs	65.1	127/195
no response	1.0	2/195
No	35.2	106/301
Police and prison experience due to the drug use before imprisoned		
Administrative fine	41.7	60/144
Pre- trial detention	39.6	57/144
Imprisoned	39.6	57/144
Drug consumption while being in prison		
Non-injected drug use last 12 months	0	0/195
Injected drug use last 12 months *	0	0/195
Needle sharing practice while being in prison		
Shared needle/syringe last 12 month *	0	0/301

**Table 8: Additional risk behavior**

Additional risks	%	n/N
Additional risks while being in prison last 12 months		
Have done tattoo in prison	34.9	105/301
≤ 24	45.5	25/55
≥ 25	32.5	80/246
Have you used shared syringes for treatment purposes	0.3	1/301
Have you used razors that were used by the others	11.0	33/301
Have you used tooth brushes that were used by the others	0	0/301
Alcohol use while being in prison last 12 months		
Used alcohol	2.3	7/301
Once a month or less	42.9	3/7
no response	57.1	4/7
Didn't use alcohol	96.3	290/301
no response	1.3	4/301

**Table 9: Sources of Information**

Interventions / Media	%	n/N
Source of information of HIV/AIDS and STIs		
TV	53.6	157/293

Interventions / Media	%	n/N
Radio	6.5	19/293
Newspapers	18.1	53/293
Special booklets	27.0	79/293
Friends / relatives	21.5	63/293
Internet	5.5	16/293
Other prisoners	34.8	102/293
NGO representatives	5.1	15/293
Penitentiary system medical staff	0.7	2/293
others	3.0	20/293
no response	2.7	8/293
Knows about HIV/AIDS and STIs	97.3	293/301
Never heard about HIV/AIDS and STIs	2.7	8/301
Trusted source of information		
TV	26.3	77/293
Radio	2.4	7/293
Newspapers	8.2	24/293
Special booklets	22.2	65/293
Friends / relatives	10.9	32/293
Internet	2.3	7/293
Other prisoners	11.6	34/293
NGO representatives	5.5	16/293
Penitentiary system medical staff	2.0	6/293
No response	3.8	11/293
Others	40.9	120/293
Healthcare workers	37.5	110/293
Knows about HIV/AIDS and STIs	97.3	293/301
Never heard about HIV/AIDS and STIs	2.7	8/301
Preventive program coverage		
Received information about HIV/AIDS from preventive program while being in prison last 12 months	44.2	133/301
Special booklets	43.9	132/301
Educational Information	17.6	53/301
Didn't receive any information	55.8	168/301
Received information about HIV/AIDS from preventive program and offer about HIV testing while being in prison last 12 months *	18.3	55/301

Interventions / Media	%	n/N
≤ 24	18.2	10/55
≥ 25	18.3	45/246
Male	20.7	52/251
Female	6.0	3/50

**Table 10: Prevalence of HIV /STI (Syphilis )**

Biomarker	1000 prisoners, 95% CI	n/N
HIV (ELISA with Western Blot confirmation)		
HIV prevalence (positive)1000 prisoners	3.5 (0.2-18.8)	1/286
≤ 24	0	0/54
≥ 25	4.3 (3.0-23.2)	1/232
Female	20.8 (1.4-107.5)	1/48
Male	0	0/238
Syphilis (TPHA)		
Syphilis prevalence 1000 prisoners	115.4 (78-162.6)	33/286
≤ 24	55.6 (12.6-156.0)	3/54
≥ 25	129.3 (85.9-184.4)	30/232
Female	416.7 (268.1-577.5)	20/48
Male	54.6 (28.2-94.7)	13/238

## Annex 2: Study questionnaire

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

Questionnaire # \_\_\_\_\_

*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 code: \_\_\_\_\_

\_\_\_\_\_

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

#### Codes of Results:

Completed	1
Not completed	2
Other	3
No response	99

#### Venues for the Interview:

#5 (Tbilisi)	1
#7 (Qsani)	2
#17 (Rustavi)	3

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. Your date of birth (if needed, compare to A1.1)

/-----/-----/-----/

Day                      Month                      Year

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 (Go to E1)	1
Homosexual	2
No response (Go to E1)	99

### 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 G4)	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 \_\_\_\_\_