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**ANALYTICAL REPORT
MONITORING OF BEHAVIOR AND HIV PREVALENCE
AMONG MEN HAVING SEX WITH MEN
(NATIONAL PART)**

Kyiv

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The report was prepared on the basis of 2015 study "Monitoring of behavior and HIV prevalence among men having sex with men as the component of HIV second generation surveillance", carried out by the Sociology Center of the NAS of Ukraine and commissioned by the ICF “Alliance of Public Health”. The report presents the results regarding the social and demographic structure of the group of men having sex with men, key indicators of risky sexual behavior, experience of alcohol consumption and drug use, access to prevention programs, stigma and discrimination against MSM, HIV testing etc. The research focuses on the analysis of HIV prevalence and key determinants that cause HIV spread among men having sex with men. In certain key aspects the results are compared with the data of previous similar studies of 2009, 2011 and 2013.

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KEY TERMS

IBBS (Integrated Bio-Behavioral Survey) – integrated biobehavioral study envisaging simultaneous collection of linked behavioral and biological data. The report uses the English abbreviation IBBS.

Biological component of the study – testing the respondents for HIV, Hepatitis C, dry blood sampling (DBS) and providing pre-test and post-test counseling.

Sample – a part of the total population, the representatives of which are the objects of the study. This part of the general population is selected in such a way that its properties represent the characteristics of the entire general population.

Secondary respondents (in RDS) – participants of the study who have the invitation coupon from other recipients who took part in all components of the study.

Homophobia (from Greek *homos* – "the same", "equal" and *phobos* – "fear") – emotional rejection of homosexuality or the homosexual component of bisexuality and/or actively hostile attitude towards homo- and bisexuals.

Internal homophobia (internalized homophobia, homonegativity) – rejection or denial by the homosexuals or bisexuals of their own homo- or bisexual orientation, or homo- or bisexual orientation of other people, negative emotions of homo- or bisexual people towards homo- or bisexual orientation as such.

Discrimination – unequal treatment of people based on their actual or perceived pertaining to a certain social group or certain biological, physical or social characteristics inherent to the person.

Stakeholders – individuals and legal entities having a legitimate interest with regard to the activities of the organization/project, that is to a certain extent depend on them or can influence its activities; sometimes they are referred to as interested parties or advocacy groups.

Seeds, or primary respondents (in RDS) – participants recruited by the researchers and not by the respondents themselves.

VCT: counseling and testing – medical and psychological counseling of a certain person with regard to HIV/AIDS and the related medical testing for antibodies to HIV on the basis of the voluntary consent of the tested person.

PWID – people who inject drugs.

NGO or CSO – non-government or civil society organization, community or charitable organization legally established or registered under the laws of Ukraine.

Behavioral survey – research of the MSM group behavior implemented through face-to-face interviews, that is by direct communication between the interviewer and the respondent.

Field stage – a part of the study involving direct data collection by interviewing the respondents.

Recruiter (in RDS) – a person who, having passed the interview, received coupons allowing to recruit other respondents representing the target group.

SWs – sex workers – persons of both sexes providing commercial sex services.

RDS (respondent driven sample) – sample guided and implemented by respondents.

RDS-Analyst (RDS-A) – statistical software package used for the analysis of data collected under the RDS methodology.

Stigma – simplistic, stereotypical opinion on a certain social group or its representatives; perception of a person or social group from the perspective of the biased socially constructed beliefs (stereotypes), which involve extending the real or perceived characteristics of such social group to each its representative; attributing to an individual as a real or perceived member of such group certain socially unacceptable features perceived to be degrading.

Sexual orientation – one of the natural qualities of a human personality which is characterized by the focus of a person's psychological and emotional sphere and their sexual needs on the representatives of the opposite sex exclusively (heterosexuality), exclusively the representatives of the same sex (homosexuality), or both sexes (bisexuality).

AOR – adjusted odds ratio.

Trans-woman (or transgender woman, male-to-female, MtF) – the term used to describe trans-feminine persons who were born biologically male, but are in the process of physical "transition" (or have completed "transition") in order to modify their body and look like women.

Trans-man (or transgender man, female-to-male, FtM) – the term used to describe trans-masculine persons who were born biologically female, but are in the process of physical "transition" (or have completed "transition") in order to modify their body and look like men.

Shemale – a person having feminine appearance (secondary sexual characteristics) and behaving according to a feminine social role (tertiary sexual characteristics), also has male sexual organs (primary sexual characteristics) with the penis possibly capable of erection.

Transgender person – a person whose gender identity differs from the biological sex at birth.

Men having sex with men (MSM) – biological men who had during the last 6 months at least one oral or anal sexual contact with other biological male partner. This group includes, inter alia, transgender people who are biologically male and practice sex with men.

Cisgender – (from Latin *cis* – "this side" and Eng *gender*) – the term used to define people whose gender identity matches their biological sex.

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SUMMARY

The report presents the results of bio-behavioral study conducted among 4,550 MSM in 26 cities of Ukraine. Its main objective was to evaluate the prevalence of HIV, Hepatitis B, Hepatitis C and syphilis among MSM, behavioral sexual practices related to HIV, use of HIV prevention and treatment services and HIV incidence. To implement the study cross-sectional design and RDS sampling method was selected. Field research phase lasted from 14 November 2015 to 9 February 2016.

The results showed a high prevalence of HIV among MSM - 8.5%, of Hepatitis C - 4%, Hepatitis B - 2.7%, syphilis - 2.7%.

Socio-demographic profile of MSM has not changed, and the prevalence of risky sexual practices demonstrates a clear downward trend compared to previous study rounds.

Significant relations were found between behavioral characteristics and probable HIV seroconversion. Adult MSM and those who have close contact with an HIV-positive person (HIV-positive partner or indifference of a study participant to the HIV status of his sexual partners) and MSM who practice unsafe sex (unprotected sexual intercourse, the presence of blood markers of Hepatitis B and syphilis) have the greatest chance to change their status from HIV-negative to HIV-positive.

The results are important to carry out monitoring of the HIV epidemic in Ukraine, evaluation of a comprehensive package of prevention interventions aimed at MSM group and treatment programs and to identify possible areas of improvement for HIV response activities.

INTRODUCTION

According to the Center for Public Health of the Ministry of Health (previously - SI "Ukrainian Center of Socially Dangerous Diseases Control of the Ministry of Health") at the beginning of 2016 the total number of registered HIV-positive people in Ukraine amounted to 126,604 persons, including children born to HIV-infected mothers with temporarily certain diagnosis. 8468 cases of AIDS were recorded in 2015¹. The most affected groups are PWID, sex workers and MSM.

From 1995 to 2008 the parenteral transmission of HIV through injecting drug use was the main transmission mode in Ukraine. However, MSM is the most stigmatized and hard-to-reach among the groups at most risk of HIV in Ukraine (list of groups see in ²). Thus, according to official routine HIV incidence supervision in 2015, only 368 cases were listed as homosexual transmission of HIV (Fig. 1).

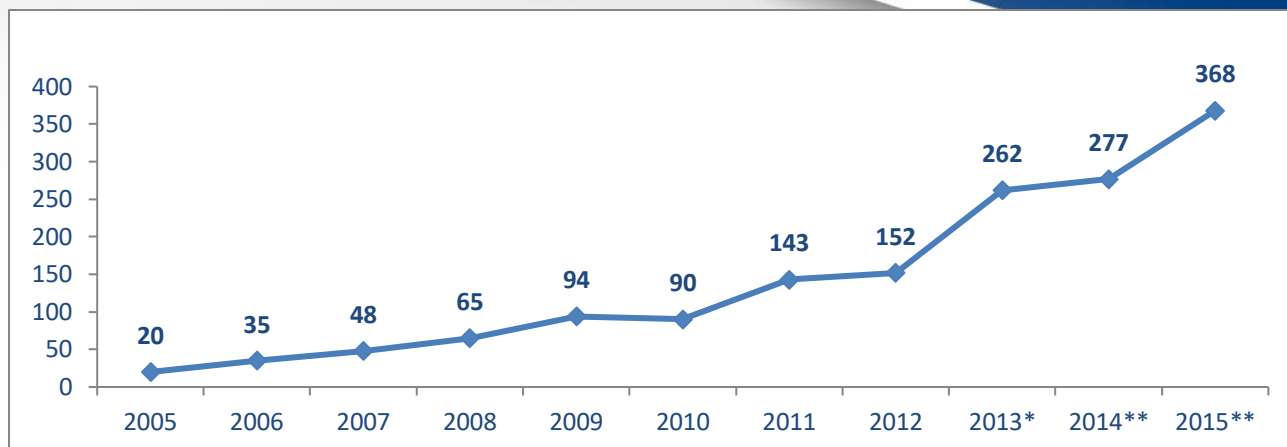


Fig. 1. The official statistics on the incidence of HIV among men who acquired HIV through homosexual intercourse, persons

(excluding the Crimea and Sevastopol City starting from the second quarter of 2014; ** Excluding Crimea, Sevastopol and ATO area of Donetsk and Lugansk oblast in 2015)*

Low rates of recording new cases among men infected through homosexual intercourse given in official statistics may be due to erroneous inclusion of such cases into the heterosexual or parenteral infection rates³.

Surveillance is the main data collection tool on infectious diseases, including HIV; this system includes collection, analysis and interpretation of data on infectious diseases, including periodic reports on the number of new infections and diseases. Such system is effective for the vast majority of infectious diseases. However, the experience of HIV surveillance showed that the existing data collection methods do not reflect the real scale because of a number of medical and non-medical peculiarities of the disease. This required finding a new strategy to assess HIV prevalence and epidemic scale – the second generation surveillance system which combines HIV surveillance, STI surveillance and behavior monitoring of the general population and specific target groups.

Second generation HIV surveillance is a part of the National System of HIV/AIDS response monitoring and evaluation. The aim of surveillance is to track the change of HIV spread trends and to obtain information about potential behavioral factors that contribute to the epidemic, and use this information for education and awareness, planning, monitoring and evaluation of prevention programs for target groups.

Behavior monitoring is carried out through systematic biological and behavioral surveillance providing information on knowledge, attitudes, stereotypes, perceptions, myths, patterns and behavior, the level of HIV and other infectious diseases spread. Biobehavioral studies allow to analyze the relationship between HIV status and behaviors.

This report presents the results of a regular bio-behavioral study conducted among MSM group in 2015 - early 2016.

STUDY METHODOLOGY

Tasks of the study:

- Assessing the prevalence of HIV, Hepatitis B, Hepatitis C and syphilis among MSM.
- Assessing the prevalence of behavioral practices associated with HIV infection, the existence of risky sexual behavior, drug use, use of HIV prevention and treatment services.

Design. Cross-sectional design was chosen for the study allowing to obtain infection spread data and behavioral practices during the specific period of time. To obtain the representative data on “hidden” population the RDS (respondent-driven sampling) method was chosen.

Behavioral data were collected via individual structured personal interviews.

Biological data were collected using rapid combined tests for HIV, Hepatitis B and C and syphilis.

The target group were the men who practiced sex with men during the last 6 months and met the following criteria:

- Aged 14 or older at the time of the study (self-declared);
- Living/working/studying in the study city (self-declared);
- Agreed to participate in all components of the study.

Representatives of the target group were excluded from the study if:

- Have already participated in the study (not permitted to re-participate);
- Refused to participate in one or more components of the study;
- Visited the study outlet under the influence of alcohol or drugs.

Like in previous rounds, the study among MSM was planned in 27 cities, representing all the highest level administrative regions of Ukraine. City of Kyiv and Kyiv oblast are administratively separated, so the study included Bila Tserkva city of Kyiv oblast.

The formative study found that bio-behavioral study among MSM cannot be held in Luhansk due to the military and political situation.

Table 1. Calculated and implemented sample

City	Calculated data			Field data	
	HIV spread in 2013 ⁴	Calculated sample	Rounded sample	Implemented sample	Number of seeds
Bila Tserkva (Kyiv oblast)	2.4%	50	150	150	2
Vinnitsya	4.2%	86	150	150	2
Dnipro	7.8%	153	200	200	3
Donetsk	14.6	266	300	300	5

Zhytomyr	5.2	105	150	150	3
Zaporizhya	4.6	94	150	150	2
Ivano-Frankivsk	7.3	144	150	150	3
Kyiv	16.9	300	300	300	3
Kropyvnytskyy	8.6	168	200	200	4
Luhansk	2.3	48	150	–	–
Lutsk	1.0	21	150	150	2
Lviv	2.6	54	150	150	4
Mykolayiv	0.7	15	150	150	2
Odesa	7.6	150	150	150	3
Poltava	3.5	72	150	150	2
Rivne	7.3	144	150	150	3
Sevastopol	16.6	295	300	302	3
Simferopol	1.8	38	150	150	2
Sumy	3.4	70	150	150	2
Ternopil	0.9	19	150	150	2
Uzhgorod	2.6	54	150	150	3
Kharkiv	1.4	29	150	150	2
Kherson	6.1	122	150	150	3
Khmelnyskyy	3.8	78	150	150	2
Cherkasy	10.9	207	250	250	3
Chernivtsi	1.6	34	150	150	2
Chernihiv	0.5	11	150	150	3
Total			4700	4550	70

Formative study preceded the biobehavioural one. It was carried out separately for each study city.

The objectives of a formative study were as follows:

- Criteria for involvement of primary respondents (seeds);
- Selection of study sites (points) for interviews and testing.

Formative studies were conducted by regional working groups using qualitative methods, including by interviewing key informants who were selected in each city on the following criteria:

- at least one representative of the target group, leader or active member of the community, non-governmental organizations;
- at least one representative of the medical facility that provides services to the target group;
- at least one representative of a social or outreach worker who provides services to members of the target group;

- has five years of experience in providing services to the target group or have been a target group representative for at least 5 years.

Selection of primary respondents (seeds) was based on formative study in each city. If during the field phase the rate of respondents' recruitment was lower than expected, or too many of chains discontinued, additional seeds were introduced in the study.

Seed eligibility criteria:

- motivation to participate in the study and disseminate information with members of the network;
- all seeds are from different areas of the city;
- all under 25;
- at least one respondent is a client of prevention programs, at least one is not a client;
- HIV-negative status (self-declared);
- at least one bisexual person;
- at least one respondent with low socio-economic status, at least one respondent with high socio-economic status;
- the size of the respondent's network of familiar MSM is not less than seven people.

Sample size was determined separately for each city based on HIV prevalence obtained in a similar study in 2013, the desired confidence interval 95%, accuracy error of 3% and a design effect equal to 2. The figures were rounded to 50 to simplify the sample implementation. For cities where the received values are too low, minimum sample size was set at the level of at least 150 respondents (Table 1).

Toolkit piloting. Despite the fact that the toolkit used questions from previous study rounds, it was tested on five target groups in Kyiv city to assure that the questions are unambiguous and understandable to participants and the interview duration is generally acceptable. Minor changes were made to the questionnaire based on the piloting results. This approach to piloting tools was also used in 2007-2013 studies.

Data collection was carried out using a standardized questionnaire. Questions were formulated so as to gather information to analyze the performance of the national HIV epidemic response, reporting at national and international level (GARPR, national monitoring and evaluation plan) and calculate population size estimates. To enable comparison with previous IBBS rounds (2007-2013), the structure and the main part of the questionnaire were preserved. The questionnaire was reviewed by the National Working Group, program specialists and LGBT community leaders. The tool collected data on socio-demographic characteristics, risk and safer behaviors with regard to HIV, knowledge about HIV, previous experience of HIV testing, prevention and use of medical services. Questionnaires and other tools were available in Ukrainian and Russian.

Data collection took place from 14 November 2015 to 9 February 2016. During this period almost all of the planned sample was implemented, except in Luhansk, where the study was not initiated due to military and political situation, adoption of homophobic laws and the prohibition of any organizations not accredited by the self-proclaimed leadership of the so-

called LPR and the refusal of team members to take responsibility for the study implementation.

Field data collection was carried out by supervisors who have experience in managing data collection phase and work with MSM and are familiar with the RDS methodology. Biological information was also collected by medical staff of AIDS centers certified on successful learning of testing procedures set forth in the "Voluntary HIV counseling and testing procedure (Protocol)" (hereinafter – VCT protocol)[\[5\]](#) and previously participated in the training for health professionals on dry blood drop sampling methods. Because the study used the RDS method, respondents were recruited by representatives of the target group. Only primary respondents (seeds) were chosen by the research team.

Biological component of the study included testing with rapid combo tests for HIV-1/2, Hepatitis B and C and syphilis, as well as recent HIV infection detection algorithm. To confirm the result of tests for HIV and other test results the study participants were referred to AIDS centers and other specialized medical facilities.

Biological material collection, rapid testing and counseling were provided by qualified experts of regional AIDS centers or other authorized medical institutions trained according to the VCT Protocol. Dry blood samples were collected for further analysis and detection of recent infections in the National Reference Laboratory.

HIV. After completion of the study toolkit development and before taking samples for laboratory tests pre-test and post-test HIV counseling was provided to all participants in accordance with the procedure described in the VCT Protocol.

Hepatitis. Government regulations prohibit establishing the diagnosis of Hepatitis B and C on the basis of rapid tests. Patients with positive results of Hepatitis B or C tests shall be informed that positive screening test result means possible presence of Hepatitis infection, and it is necessary to conduct confirmatory test. Patients with positive results were referred to the AIDS Center (in case of HIV co-infection) or infectious diseases specialist of a local medical facility where they could appropriate treatment.

Syphilis.

In case of a positive result for syphilis the staff explained to the patient that positive screening test means that they could have been infected in the past or recently, so it is necessary to do a confirmatory test. These patients were referred to the relevant local health facilities for appropriate medical services.

Study protocol and toolkit were examined with regard to observance of human rights by the Institutional Review Board of the Ukrainian Institute of Public Health Policy and were approved by the Centers for Disease Control and Prevention (CDC, Atlanta, USA) with regard to human rights.

All key researchers had the certificate of completion of the ethical guidelines training.

All study participants had signed the informed consent form. A member of the project team would read it out aloud to every eligible respondent. Answers and explanations on all possible issues were provided. Potential participants were informed that participation in the study is completely voluntary, meaning they could refuse to participate in it at any time. Refusal at any stage did not affect the access to prevention or treatment services beyond research. It was also explained that any information provided during the study is confidential. If members agreed to participate in the study, it was documented by signing the informed consent form. While signing, the participants were explained that they do not have to indicate their name or provide other personal information within the study.

Study participants received financial compensation in UAH both for participating in the study (after the interview, following rapid testing and DBS sampling (if necessary) and for recruitment of other participants.

Data analysis was designed to implement the key tasks of the study:

1. To estimate HIV prevalence and risk behavior. The value of appropriate parameters at the city level and corresponding 95% confidence interval obtained using the RDS-Analyst software.
2. To identify key predictors of HIV, HCV, HBV and syphilis. The analysis was carried out by bivariate and multivariate distributions. Establishing statistically significant relationships between variables based on the chi-square test for categorical variables and Student's t-test - for quantitative variables; nonparametric Wilcoxon tests and Kruskal-Wallis used for quantitative variables distributed abnormally. The key socio-demographic characteristics (e.g., gender, age), knowledge of HIV status and risk behavior, services usage with $p \leq 0.1$ in the bivariate analysis are included in the logistic regression model using stepwise procedure. Finite simple models include variables whose values in multivariate models reached $p < 0.05$. To determine the best models, the adjusted models statistics was studied (-2 Log Likelihood, AIC, BIC).

SOCIAL AND DEMOGRAPHIC PROFILE

This section presents the basic socio-demographic characteristics of MSM who participated in the survey in 2015 (Table 2) and contains data in dynamic comparison with 2007, 2009, 2011 and 2013.

Table 1. Social and demographic profile of respondents

Characteristics	% or average (95% CI)
Age	
Average age	28.9 (28.9–29.0)
14–24	36
25 and older	64
Legal marital status, %	
Has never been married	83
In a registered marriage with a woman	5
Divorced	11
Widower	1
Actual family status – lives with..., %	
Parents/relatives	36
Single	42
With male partner	17
With female partner	5
Education, %	
Basic secondary (9 years)	3
Complete secondary (11 years)	9
Secondary vocational (technical)	29
Basic higher (BA)	23
Graduate (Master, Specialist)	34
Degree (PhD, ScD)	1
No answer	1
Financial status, %	
Often lacking money for food - sometimes begging	< 1
Not enough money for food	3
Sufficient money only for food	13
Generally enough money for basic needs	38
Enough money for everything one needs, but unable to make savings	28
Enough for everything one needs, able to make savings	13
Well-off	4
Dependent on parents	< 1
Do not know/No answer	< 1
Average personal income in the last 30 days (UAH)	6039 (5889–6206)
Duration of residence in the study city	
Since birth, %	69

Years	7.8 (7.7–8.0)
Number of days spent by MSM outside of the place of survey, during the last month	2.4 (2.3–2.5)

STRUCTURAL CHANGES IN THE MSM POPULATION (2007–2015)

The use of a standard questionnaire and uniform sampling methodology in 2007-2015 studies enables comparing results over time (Table 3). Eventually, despite the total sample decrease (almost halved) and monitoring geography shrinking (no surveys in Kryvyi Rih and Luhansk) no significant changes occurred in key social and demographic indicators in eight years.

Table 2. Dynamic comparison of social and demographic characteristics of the MSM, %

	2007, N = 1764	2009, N = 2302	2011, N = 5950	2013, N = 8100	2015, N = 4550
Age					
Younger than 20	12	10	10	10	10
20–29	53	55	56	49	49
30–39	26	27	27	28	28
40–49	7	6	6	10	10
50 and older	2	2	1	3	3
Official marital status *					
Has never been married	–	79	83	79	83
In a registered marriage	–	6	5	8	5
Divorced	–	14	11	12	11
Widower	–	1	1	1	1
Actual family status *					
Lives with parents/relatives	–	34	35	41	42
Lives alone	–	40	43	34	36
Lives with male partner	–	6	6	17	5
Lives with female partner	–	20	17	8	17
Education **					
Basic secondary (9 years)	8	2	3	2	3
Complete secondary (11 years)	65	61	63	65	61
Secondary vocational (technical)					
Basic higher (BA)					
Graduate and postgraduate (Master, Specialist, PhD)	27	37	34	33	35
"You are sexually attracted to...?" ***					
Only men	–	63	60	65	65
Mostly men but sometimes women	–	23	23	16	21
Men and women are approximately equally attractive	–	11	12	10	11

Mostly women, but sometimes men	–	3	5	8	3
Only women	–	0	<1	–	–
I cannot decisively tell	–	<1	<1	1	–
"Which of the below term describes your sexual orientation best?" ***					
Homosexual	–	70	66	69	70
Bisexual	–	28	31	27	28
Heterosexual	–	1	2	2	1
Transsexual	–	<1	<1	–	– ****
Difficult to answer	–	1	1	2	1

Notes:

** In 2007, the wording of answers on marital status was significantly different from the current version, thus a direct comparison is possible only to the 2009 results.*

*** in 2007 the education levels included complete secondary, secondary professional and incomplete higher education.*

**** In 2007, there were no questions about sexual orientation and gender identity, customer cards or individual codes were not implemented, so the client status was determined in a completely different way. In 2013, the answer "transsexual" was excluded from the list of proposed answers.*

***** in 2015 the question of sexual identity did not contain the category "transgender/transsexual", while the question about identifying themselves as a transgender person was asked separately in the following wording: "Do you consider yourself to be a transgender person? Yes/No".*

Socio-demographic characteristics of MSM population in Ukraine are stable: four-fifths of MSM belong to the age group of 20-39 years, have never been married, have middle income level. Nearly half of MSM live alone, have incomplete or complete higher education (23% and 34% respectively), and two-thirds are interested exclusively in men - they define their sexual orientation as gay.

Thus, respondents aged 14 to 70 years were included in the sample. Average age is 29 years. The data can be compared with the results of Ukrainian society monitoring⁶: in 2015 the group of respondents under 30 accounted for 22% of people, while the share of persons within this age group among MSM is three times higher (63%). In 2013, the average age of respondents was 28 years.

Just as in previous studies among MSM in Ukraine, most of the respondents, in contrast to the population of a similar age, were not married and lived alone.

Similarly to the previous studies among MSM of Ukraine, the major part of the respondents, unlike general population, were not married and lived alone.

The official marital and actual family status is eventually related. Thus, 84% of MSM living with a female partner are in an officially registered heterosexual marriage, and 94% of those living with a male partner are either unmarried or divorced or widowers. However, it should be noted that the share of unregistered heterosexual partnerships is quite significant: for example, among those living with a female partner 4% are divorced and 11% are single. These findings match those of the previous bio-behavioral monitoring among MSM. The actual marital status is important in the study of MSM behavior, especially in the context of the existence of bridge groups.

The sample has a fairly large proportion of people with higher education – generally one-third. In further analysis we combine people with higher education and scientific degree into one group. MSM sample is represented by a fairly high rate of respondents with higher education - 57% have complete or incomplete higher education, 1% have a scientific degree. The national sample, according to the Sociology Institute monitoring in 2015, has 39% of respondents with complete or incomplete higher education.

Regarding the financial status, it seems logical that the respondents are still symmetrically distributed around the most represented group with average middle income. Although in comparison with 2013 impoverishment of MSM, however slight, was observed. If we compare the data from a survey of a representative sample of Ukrainian population, the respondents of our research are more prosperous; thus, among respondents of the Ukrainian Monitoring 2015 more than a third (41%) chose the answer "sufficient money for food," whereas among our respondents only 13% chose this option. However, the proportion of those who make savings (13%) exceeds the nationwide figures by twenty times, and proportion of those fully well-off (4%) exceeds the nationwide indicator by eight per cent.

In monetary terms, the average income of the sample respondents is 6039 UAH and is significantly higher than the average income in Ukraine (according to the State Statistics Service, the average wage at the end of 2015 amounted to 4848 UAH among men of working age⁵).

Two-thirds of respondents (69%) are natives of cities in the study. For those who are not native inhabitants, the average length of stay in the study city was eight years. On average for MSM reported that they have been away from home for 2 days during the last month.

IMPRISONMENT

The study also included a number of questions about the experience of being in prison and experience of sexual contacts with men during this period (

Table 3).

Table 3. Experience of imprisonment and occurrence of sexual contacts with men during this period

Characteristics	% or average (95% CI)
Imprisonment, %	
Had been in prison	4
Had not been in prison	95
<i>Refusal to answer</i>	1
Average times of having been imprisoned (among those who had such experience)	1.4 (1.3–1.4)
Duration of imprisonment during the last time, <i>months</i> (among those who had such experience)	23.5 (22.7–24.5)
Oral sex with a man while in prison (pre-trial detention, prison and penitentiary facilities),%	
Yes	61
No	39
Anal sex with a man while in prison (pre-trial detention, prison and penitentiary facilities),%	
Yes	52
No	45
<i>No answer</i>	3

As in previous years, the majority of respondents (95%) have never been in prison. Most often this experience was limited to one time (the sample average - 1.4). Those who have had the experience of sentencing have spent on average two years in prison. 4% were imprisoned for less than one month. The longest sentence was 10 years. Maximum stay in prison was 20 years (only one person from the entire sample, which is rather an exceptional case).

Marital status of respondents was generally associated with the experience of being in prison (thus, among former prisoners 37% have experience of heterosexual marriage, while among those who never served a sentence this rate is only 3%, $p < 0.001$).

There is a link between the respondents' level of education and the experience of being in prison - among former prisoners there are significantly more people without higher education (72% vs. 40% among those who had no experience of imprisonment, $p < 0.001$). The experience of imprisonment is also linked to financial status - those who have served a sentence, often have a low level of income (38% of impoverished respondents among those who had been in prison, against 16% among other MSM, $p < 0.001$).

Half of MSM had experience of oral and anal sexual contacts with another man while in prison.

MANIFESTATIONS OF VIOLATIONS AND BIASED ATTITUDE TOWARDS LGBT FROM THE LAW ENFORCEMENT STRUCTURES AND INFORMAL ORGANIZATIONS/MOVEMENTS

According to the majority of respondents, attitudes towards LGBT by law enforcement officers and informal power structures did not change if compared with 2013, while a minority (17%) believes that there have been some improvements (Table 5).

Table 4. Manifestations of violations and biased attitude towards LGBT from the law enforcement structures and informal organizations/movements, %

Characteristics	%	
Change of law enforcement officers' attitude towards LGBT after 2013 (compared with the period preceding the Revolution of Dignity - Euromaidan), %		
Yes, improved	17	
Yes, worsened	5	
Not changed	61	
Difficult to answer	17	
Manifestations of violations and biased attitude by the law enforcement officers towards LGBT (% only of those who experienced such incidents), %		
Stopped at the street or other public place without valid reasons	18	
Search of personal belongings without valid reason	12	
Blackmailed, threatening with liability for dissemination of pornographic photos/videos	1	
Demanded money or other material values under various pretexts	4	
Refused to accept a statement on offense/crime if I was a victim of such offense	6	
Other	1	
Instances when representative of informal organizations/movements (like "Fashion Sentence", "Occupy-Pedofilei" etc) committed violence towards MSM or their acquaintances during the last 12 months (% of only those who faced such incidents)	Towards you, %	Towards your friends and acquaintances, %
Verbal abuse, humiliation	7	19
Threats, extortion, blackmail	3	13
Forced interrogation	1	10
Beatings, use of force	2	11
Filming humiliating videos/photos and their publication	1	9
Other	1	1

About a fifth of the MSM had experience of detention by informal enforcement units. Thus, 18% of respondents were unlawfully stopped on the street or other public place, 12% of respondents unreasonably searched, one-fifth experienced violent incidents.

SEXUAL ORIENTATION AND IDENTITY

Two thirds of the respondents reported that they are sexually attracted only to men (Fig. 2).

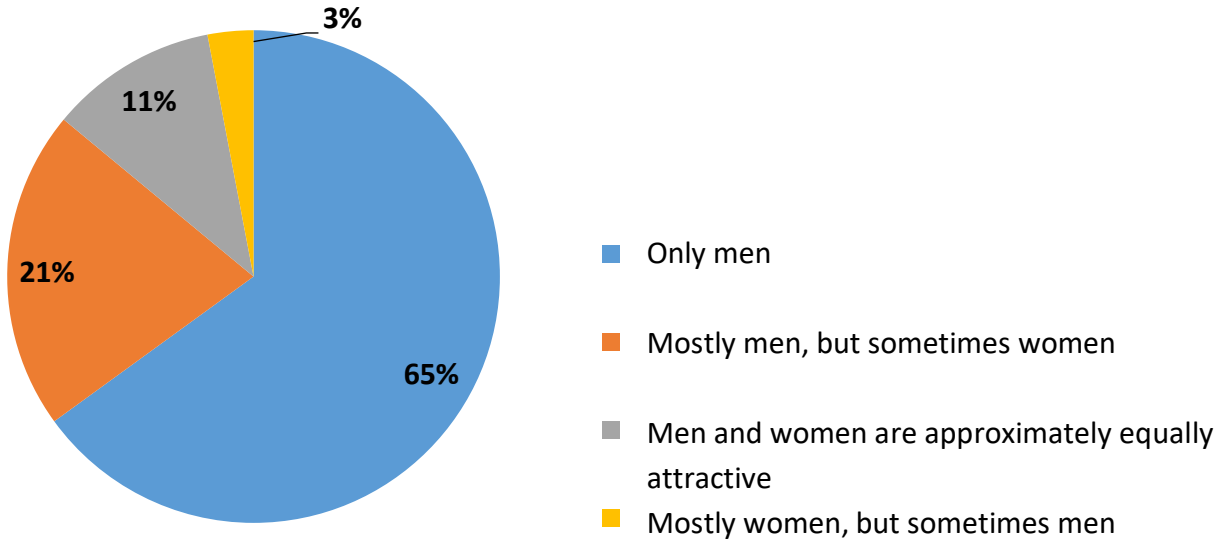


Fig. 2. MSM distribution by answers to the question: "You are sexually attracted to...?"

Differences in age is statistically significant, and those who have not yet decided on their own sexual orientation belong to the youngest group (Table 6).

Table 5. Distribution of respondents in different age subgroups by the level of sexual attractiveness for persons of different sexes to the respondent, %

"You are sexually attracted to...?"	Under 19, N = 532	20–24, N = 1063	25 and older, N = 2955	All, N = 4550
Only men	64	68	57	60
Mostly men but sometimes women	18	18	21	20
Men and women are approximately equally attractive	13	10	16	14
Mostly women, but sometimes men	2	3	6	5
Only women	1	< 1	–	< 1
I cannot decisively tell	2	< 1	–	< 1

The actual family status is also associated with a sense of sex appeal of people of different sexes to the respondent (Table 7) – the share of those living with a male partner is the

highest among those attracted to "only men", while the largest proportion of those living with a female partner is observed among those who are "mostly attracted to women".

Table 6. Relation between actual family status and sexual attractiveness of persons of different sexes to the respondent, %

Actual family status	"You are sexually attracted to...?"				
	Only men, N = 2735	Mostly men, but sometimes women, N = 913	Men and women are approximately equally attractive, N = 636	Mostly women, but sometimes men, N = 214	Only women, N = 11
Living with male partner	21	12	4	3	4
Living with female partner	<1	4	18	54	12
Living with parents or relatives	38	33	30	18	80
Living alone	40	51	48	25	4

Those who are exclusively or predominantly attracted to men constitute the majority of respondents. They usually belong to the age group of 20-24, are single, do not live with a female partner.

Two-thirds of respondents describe their sexual orientation as "homosexual" (Fig. 3). The oldest group are bisexual MSM. Most homosexuals in the sample represented the 20-24 years old age group (Fig. 4). In addition, 2% consider themselves to be transgender.

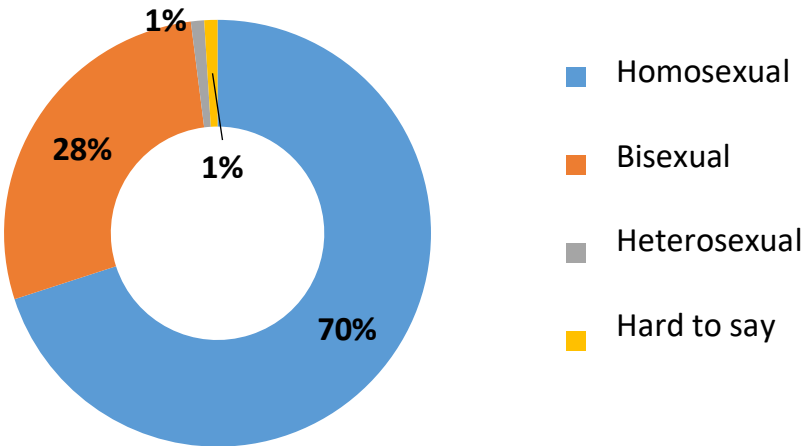


Fig. 3. Distribution of respondents by sexual orientation

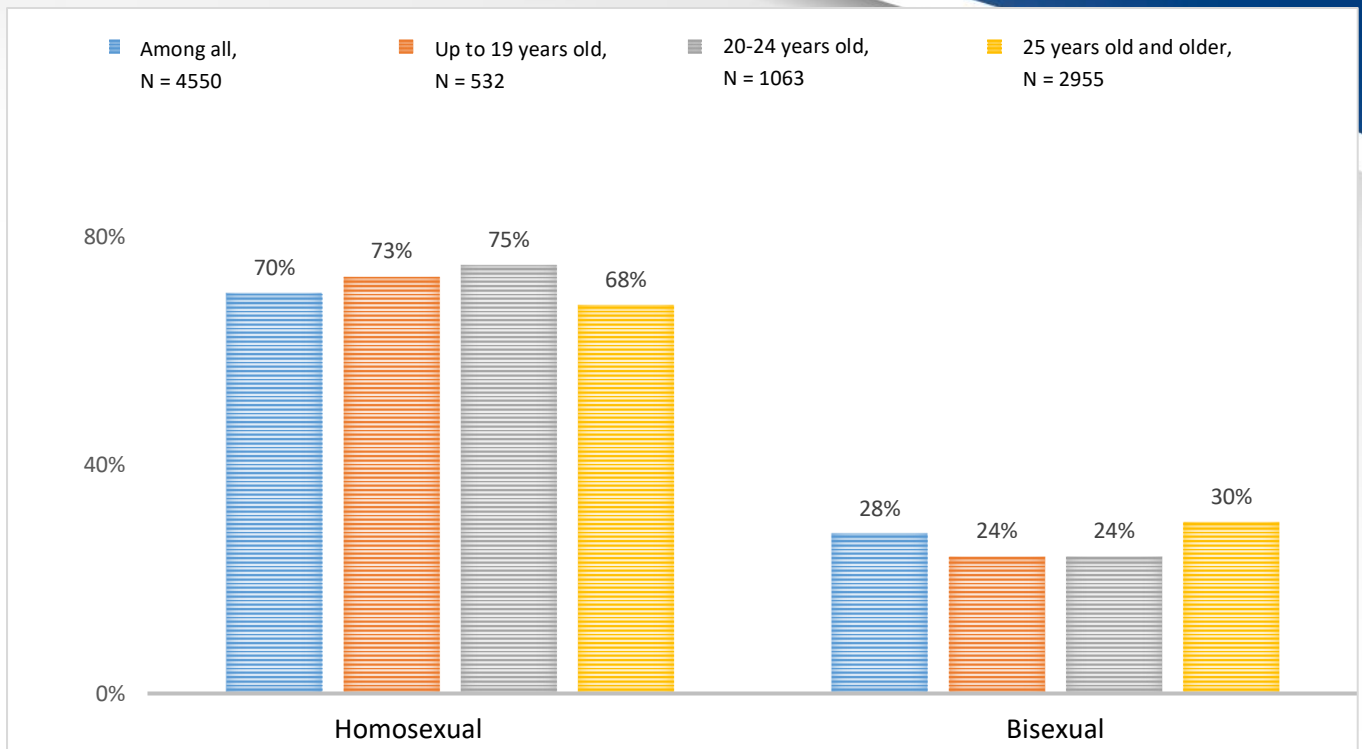


Fig. 4. Shares of homo- and bisexuals among MSM of different groups

Most respondents (92%) who identify themselves as homosexuals, never been married and live alone (41%) or with parents (38%).

WAYS OF LOOKING FOR MALE PARTNERS

More than half of respondents are active users of social networks such as VKontakte, Facebook, etc. (Table 8). And the younger the respondents are, the more of them use social media to find male sexual partners. The same is true for special applications for smartphones, tablets and dating websites.

Table 7. Distribution of respondents by different age groups with regard to remote dating methods, %

"During the last 6 months, did you use any of the following to find male sexual partners ..."	All, N = 4550	Under 19, N = 532	20–24, N = 1063	25 and older, N = 2955
Special smartphone and tablet apps such as Hornet, Grindr etc?	45	53	54	40
Dating websites [websites for use from tabletop PCs or laptops, regardless of whether they have mobile devices apps]	48	52	49	46
Social media [Vkontakte, Facebook etc]	57	74	67	50

The network of friends and acquaintances still remains the most popular way of finding partners: 51% of respondents found a male partner through this network in the last six months (Table 9). Searching for partners through male friends is also popular among the youngest age group - under 19. Hotspots ("pleshki") are more popular among the older (25+) MSM. One-third looked for partners in clubs, saunas and other leisure facilities, and a one-fifth – at hotspots and in other public places.

Table 8. Distribution of respondents in different age groups by the method of finding partners, %

"How did you find male partners during the last 6 months?"	All, N = 4550	Under 19, N = 532	20–24, N = 1063	25 and older, N = 2955
In clubs, saunas and other leisure facilities	29	27	30	27
Through friends and acquaintances	51	56	48	51
On "hotspots" (e.g., in parks, at beaches and other public places)	20	16	15	22
Other:	42	49	50	38
<i>including:</i>				
<i>Internet</i>	72	70	70	75
<i>social networks</i>	19	22	24	16
<i>dating sites</i>	3	5	1	3
<i>mobile applications</i>	3	3	2	3
<i>teletext</i>	1	1	1	1
<i>NGO</i>	2	0	2	2
Did not look for partners	15	13	12	16

Oguys.ru is the most popular among dating sites. All sites have roughly the same percentage of users among our respondents – one-third. In average, the respondents have one profile on dating websites (Table 10).

Table 9. Dating websites popularity

Dating sites	Users (have profiles), N = 2177	Number of profiles, N = 2177
mamba group websites (mamba.ru, love.gay.ru, facelink.ru, love.mail.ru)	33	1
qguys.ru	39	1
bluesystem.ru	38	1
loveplanet.ru	33	1
Other	5	1

SEXUAL BEHAVIOR WITH MEN

This section provides information related to the safe and risky sexual behavior of MSM at the national level.

SEXUAL ACTIVITY

The first sexual contact with a man occurred mainly at 18 (in 27% of MSM it happened when they were under 16), while a debut with a woman mostly occurred at 16. On average men had the first sexual contact with a male partner in two years after sexual debut with a woman. Usually a male partner in their first sexual contact was about five years older (average age of first male partner is 23).

LAST SEXUAL CONTACT

Nearly all respondents had anal sex with a male partner during the last six months of (Fig. 5).

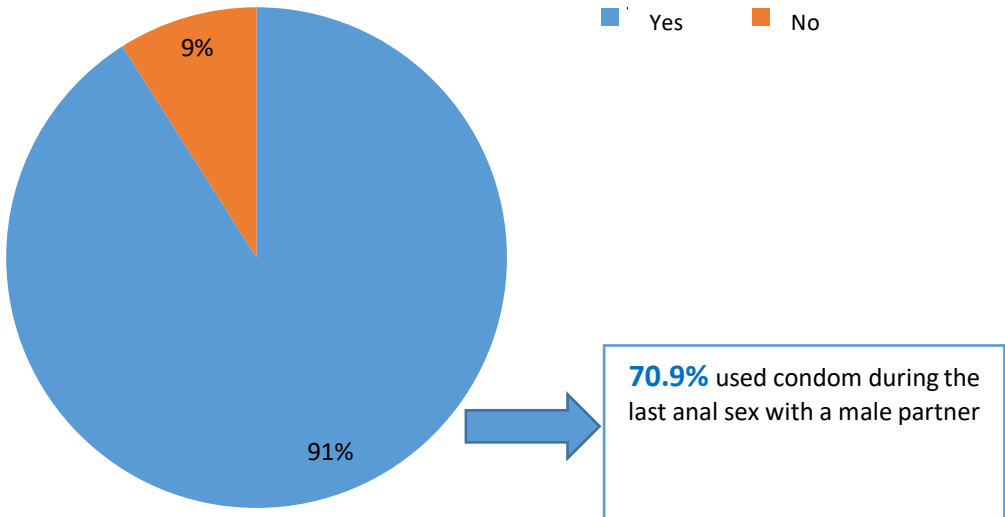


Fig. 5. Distribution of MSM by having had anal sex with a male partner during the last 6 months

In half of the cases (48%) last anal sex occurred with a long-time partner, 38% reported having an intercourse with a casual partner, 1% - that it was a partner, who paid the respondent for sex and 1% reported that it was the partner whom the respondent paid for sex and 2% had their last anal contact during group sex. Among heterosexuals the percentage of those who had recent sexual contact with multiple partners is 17%.

During the last sexual with men, respondents had on average two anal intercours. 66% used a condom during the last sexual contact.

The respondents received condoms they used the last time during anal sex with a male partner, from social workers that a typical customer MSM/LGBT service organizations, or purchased (Fig. 6).

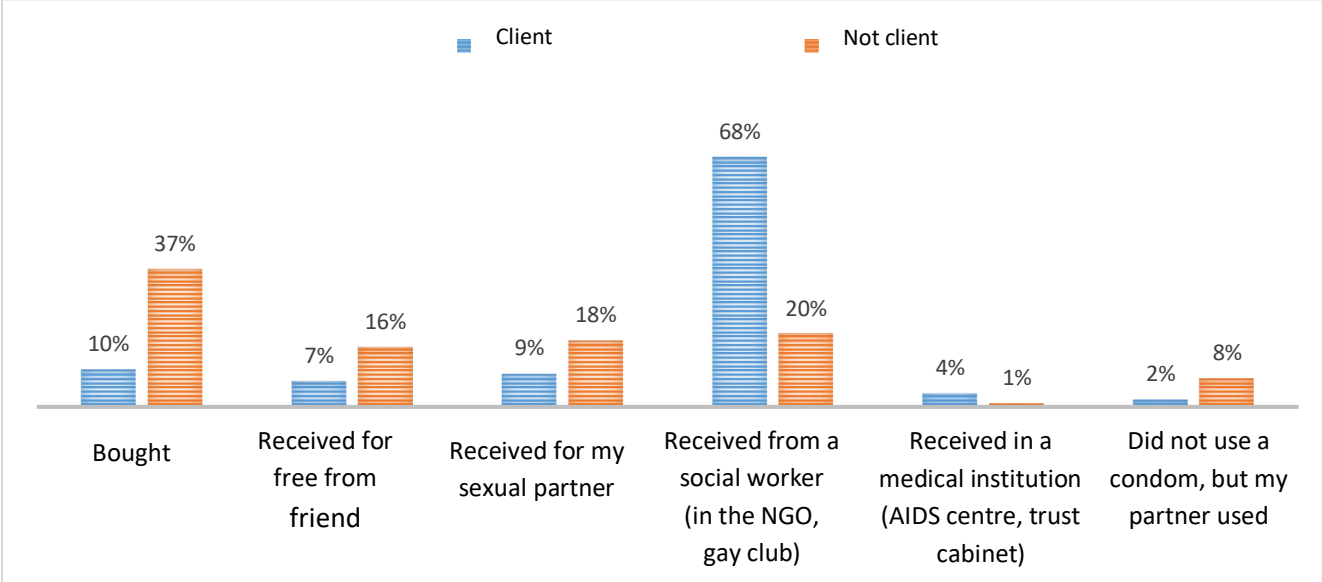


Fig. 6. Distribution of MSM by responses to the question: "Where did you take/obtain the condom you used during the last sexual contact with a male partner?" (among those who used a condom during the last sexual contact with a male partner)

The proportion of MSM who use condoms is higher among the age group of 20-24 (Table 11). It can be assumed that in the age group of 25 and older a larger proportion of respondents have a permanent partner with whom they use condom less often.

Among married MSM and those who have a common household with a female higher proportion practices protected sex with male partners, while the proportion of those practicing unprotected sex is higher among MSM living with a male partner.

The rates of condom use are lower among people with secondary education and complete higher education. This connection probably is caused by other factors and does not directly derive from the respondents' education level.

Condom use during homosexual contacts was relatively low in the most financially vulnerable group - those who are often lacking money for food and who sometimes have to beg. Accordingly, the highest condom use rate is among the well-off MSM.

Being in prison is also negatively associated with condom use.

During group sex with women only the respondents reported to use condoms less often, if the partners are both sexes - more often.

A condom was used most often during the last sexual intercourse with a casual partner, and least often - with a partner who paid the respondent for sex.

Awareness of the partner's HIV status of the partners increases the frequency of condom use, however, it is the same in those who do not know the HIV status of their partner, and, accordingly, assume that he might be HIV-positive.

The proportion of respondents who used a condom the last time they had anal sex with male partner was greater among clients of MSM-servicing organizations than among non-clients of NGOs.

Table 10. Using the condom (%) during the last anal sex with a man for different social and demographic subgroups

Characteristics	% or average (95% CI)
"Do you consider yourself to be a transgender person?" , $p = 0.66$	
Yes	67
No	71
Age, years , $p = 0.006$	
under 19	77
20–24	73
25 and older	69
Legal marital status , $p = 0.099$	
Never Married	71
In a registered marriage	75
Divorced	71
Widower	63
Actual family status , $p < 0.001$	
Lives with parents/relatives	73
Lives alone	77
Lives with male partner	51
Lives with female partner	79
Education , $p = 0.442$	
Basic secondary (9 years)	73
Complete secondary (11 years)	74
Secondary vocational (technical)	73
Basic higher (BA)	72
Graduate and postgraduate (Master, Specialist, PhD)	67
Scientific degree (associate PhD, PhD)	77
"How would you estimate your financial condition?" , $p = 0.145$	
Often lacking money for food - sometimes begging	50
Not enough money for food	70
Sufficient money only for food	76

Characteristics	% or average (95% CI)
Generally enough money for basic needs	71
Enough money for everything one needs, but unable to make savings	68
Enough for everything one needs, able to make savings	74
Well-off	72
Dependent on parents	40
"Have you ever been imprisoned – in temporary detention facilities, pre-trial detention facilities, correctional facilities?", $p = 0.027$	
Yes	62
No	71
"You are sexually attracted to... ?", $p < 0.001$	
Only men	69
Mostly men but sometimes women	71
Men and women are approximately equally attractive	78
Mostly women, but sometimes men	86
Only women	87
I cannot decisively tell	71
"Which of the below terms defines your sexual orientation in a most precise way?", $p < 0.005$	
Homosexual	69
Bisexual	74
Heterosexual	91
Difficult to answer	65
"Do you know the HIV status of your last partner (male/female)?", $p < 0.001$	
I know their HIV status - it is negative	63
I know their HIV status - it is positive	69
I do not know his/her HIV status	75
"did you practice group sex during the last 6 months. (more than one sexual partner at once)", $p < 0.005$	
No	71
Yes, with men (women did not participate)	67
Yes, with women (men did not participate)	100
Yes, with men and women at the same time	81
"With whom did you have the last anal intercourse?", $p < 0.001$	
With a permanent partner	64
With a casual partner	80
From those whom you paid for sex	61
With those who paid you for sex	59
The last contact was with several partners	73
"Are you a client of the organization providing HIV prevention services to MSM?", $p = 0.003$	
Yes	73
No	69

The accessibility of condoms is quite a significant factor for their use by MSM. Thus, almost half of the respondents did not buy condoms and received them for free from an NGO social worker.

Using a special lubricant is an additional way to reduce risk. 87% of respondents used it with varying frequency during the last sex (Fig. 7). Those who did not use lubricant report the lack of lubricant and the belief that the lubricant is not necessary during sexual intercourse (Table 12).

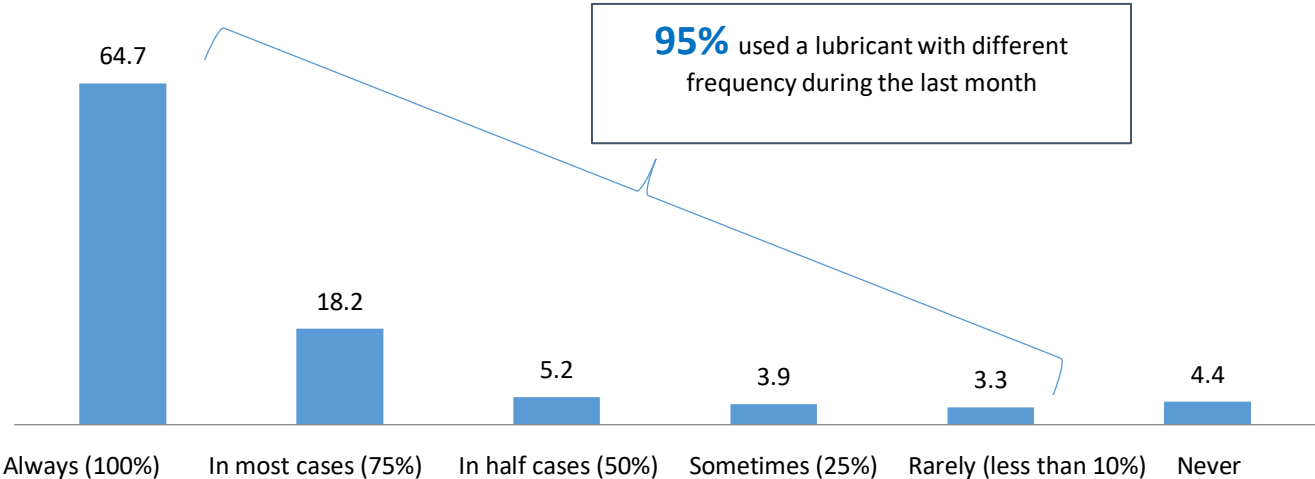


Fig. 7. Use of lubricant with male partner during a sexual contact in the last 30 days, % (among those who had sexual contacts with males in the last 6 months)

Table 11. Reasons why the respondents did not use lubricant during their last anal intercourse with a man (the sum of the column is not equal to 100%, because choosing several variants was possible)

Reason	%, N = 508
No lubricant available/had no lubricant with them	41
Lubricants are too expensive	9
I do not know where one can get it	3
Not considered it necessary to use a lubricant	28
Was drunk	6
Was under the influence of drugs	1
I did not think about it	16
Other	4

Regarding the preference of respondents, they preferred water-based lubricants, although a fifth of respondents do not know how the lubricants differ at all (Fig. 8).

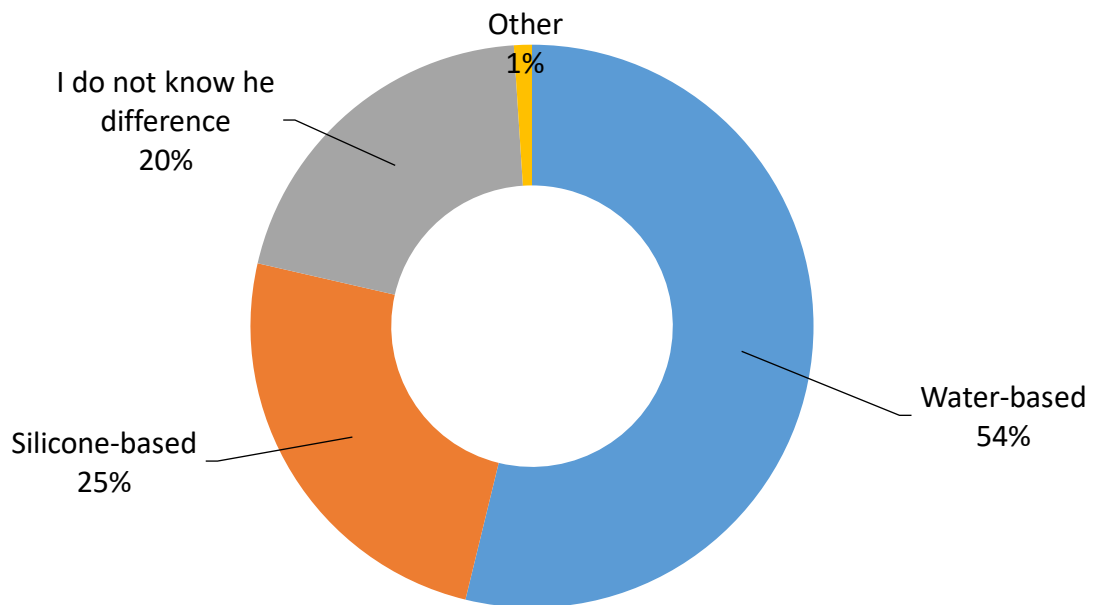


Fig. 8. Popularity of different types of lubricants among MSM

27% of MSM reported using lubricants without a condom.

SEX WITH MEN DURING THE LAST 30 DAYS

The respondents said that over the past 30 days the average number of oral contacts was 7, anal - 4.

Sexual activity is statistically associated with age, sexual orientation, sexual identity, legal and actual family status. For example, the age group of 20-24 accounts for a large number of oral sexual contacts in the past 30 days, the youngest age category - for anal passive role, while anal intercourse in active role were to greater extent characteristic of the age group of 25 and older. However, the respondents with the following features: gay, married, living with a male partner had more oral contacts while gay, married MSM living with a female partner reported more anal contacts in passive roles, and heterosexuals and bisexuals, married or widowers living with a male partner reported having more anal contacts in the active role.

Over the past 30 days, more than half of MSM who had sex with men during that time used a condom always, while some (2%) reported that there was a case when they had unprotected sex (Table 13).

Table 12. Frequency of using a condom with male partners during the last 30 days

"How often did you use a condom with male partners during the last 30 days?"	%, N = 3875
Always (100%)	60
In most cases (75%)	15
In half the cases (50%)	7
Sometimes (25%)	4
Rarely (less than 10%)	3
Never	11

In general, married MSM and those who have common household with a female always used a condom during sex with men in the past 30 days (Table 14). There is no statistically significant difference in indicator values depending on age.

The share of MSM using the condom was larger among those with higher level of education.

The largest share of those who reported using condoms "rarely" is among the most financially vulnerable (those who often do not have enough money for food and sometimes have to beg, and those who do not have their own income and are dependent on parents).

Connection of safe behavior with sexual orientation, a sense of sex appeal of the same and other sex, orientation and openness demonstrates a pattern - the largest proportion of those who always used a condom in the last 30 days among is among those who identify themselves as heterosexual and predominantly has sexual desire towards women; the same is during group sex if it happens only with women, when the proportion of those who always uses a condom increased almost by half.

The largest share of those who always used a condom in the last 30 days is associated with MSM who had sex with a partner whom the respondent had paid for sex.

Knowledge of HIV status of their partners is associated with a greater proportion of those who always uses a condom.

Among MSM service customers the proportion of respondents who always used a condom during the last 30 days was greater than among non-customers.

Table 13. Comparing the share of MSM who always use condom with a man during the last 30 days, with those who had a case of unprotected intercourse and those who never used a condom.

Characteristics	MSM who ALWAYS used a condom	MSM who HAD A CASE of unprotected intercourse	MSM who NEVER used the condom
Age, years, $p = 0.136$			
under 19	64	27	9
20–24	57	33	10
25 and older	58	30	12
Official marital status, $p < 0.001$			
Never married	57	31	12
In a registered marriage	72	22	6
Divorced	57	32	12
Widower	56	31	14
Actual family status, $p < 0.001$			
Lives with parents/relatives	60	33	7
Lives alone	62	31	7
Lives with male partner	40	29	31
Lives with female partner	76	18	7
Education, $p = 0.005$			
Basic secondary (9 years)	59	27	14
Complete secondary (11 years)	56	33	11
Secondary vocational (technical)	59	31	10
Basic higher (BA)	57	32	11
Graduate and postgraduate (Master, Specialist, PhD)	58	30	12
Financial status, $p < 0.001$			
Often lacking money for food - sometimes begging	47	22	32
Not enough money for food	48	38	14
Sufficient money only for food	60	31	9
Generally enough money for basic needs	57	33	10
Enough money for everything one needs, but unable to make savings	57	29	14
Enough for everything one needs, able to make savings	63	25	12
Well-off	65	22	13
Dependent on parents	24	64	12
"You are sexually attracted to...?", $p < 0.001$			
Only men	55	32	13
Mostly men but sometimes women	60	30	10

Characteristics	MSM who ALWAYS used a condom	MSM who HAD A CASE of unprotected intercourse	MSM who NEVER used the condom
Men and women are approximately equally attractive	63	30	8
Mostly women, but sometimes men	81	13	6
Only women	88	0	13
I cannot decisively tell	51	14	36
"Which of the below terms defines your sexual orientation in a most precise way?", $p < 0.001$			
Homosexual	56	32	13
Bisexual	63	29	8
Heterosexual	87	6	7
Difficult to answer	50	22	28
Did you use a condom during the last sexual contact with a male partner, %, $p < 0.001$			
Yes	74	24	2
No	19	46	35
"With whom you had the last anal intercourse?", $p < 0.001$			
With a permanent partner	52	29	18
With a casual partner	65	31	4
From those whom you paid for sex	76	19	6
With those who paid you for sex	63	35	3
The last contact was with several partners	56	43	0.4
"Do you know the HIV status of your last partner (male/female)?", $p < 0.001$			
I know their HIV status - it is negative	51	30	18
I know their HIV status - it is positive	69	18	13
I do not know his/her HIV status	56	35	8
"Did you practice group sex during the last 6 months. (more than one sexual partner at once)?", $p = 0.2$			
No	57	30	13
Yes, with men (women did not participate)	61	34	6
Yes, with women (men did not participate)	87	13	0
Yes, with men and women at the same time	66	32	2
"Are you a client of the organization providing HIV prevention services to MSM", %, $p < 0.005$			
Yes	60	29	10
No	56	32	12

SEXUAL CONTACTS WITH DIFFERENT TYPES OF MALE PARTNERS

Half of MSM have a permanent sexual partner. But 18% of them, also had casual partners apart from regular partners in the last six months, and 24% have casual partners (accidental or commercial). The average number of casual partners in the last six months was 3. In addition, there are multiple partnerships, when the number of partners is more than one. Condom use is traditionally the lowest with regular partners, especially when it comes to regular condom use; this indicator is 49%. The highest indicator of use both during the last intercourse and always in the past six months is with commercial partners, in cases where the respondent paid for sex.

Almost a fifth of respondents had experience of commercial sex (purchasing or providing such services) at least once in their lives (Table 15). Among those who provided it at least once in their life, 46% did so in the last 30 days with a different frequency: from 3-4 times per week (6%), 1-2 times a week (10%) 2-3 times per month (16%) (Fig. 9).

Table 14. Practice of sexual contacts with different partners

During the last 30 days:

	Permanent partner	Occasional partner	Commercial partner whom the respondent paid for sex	Commercial partner who paid for sex
Presence of the partner	57	50	3	5
<i>Among those who had contacts with the above type of partners:</i>				
Average number of partners	2	3	1	–
Using a condom during their last sexual intercourse	67	88	89	80
Always use a condom during the last 30 days	49	69	80	70

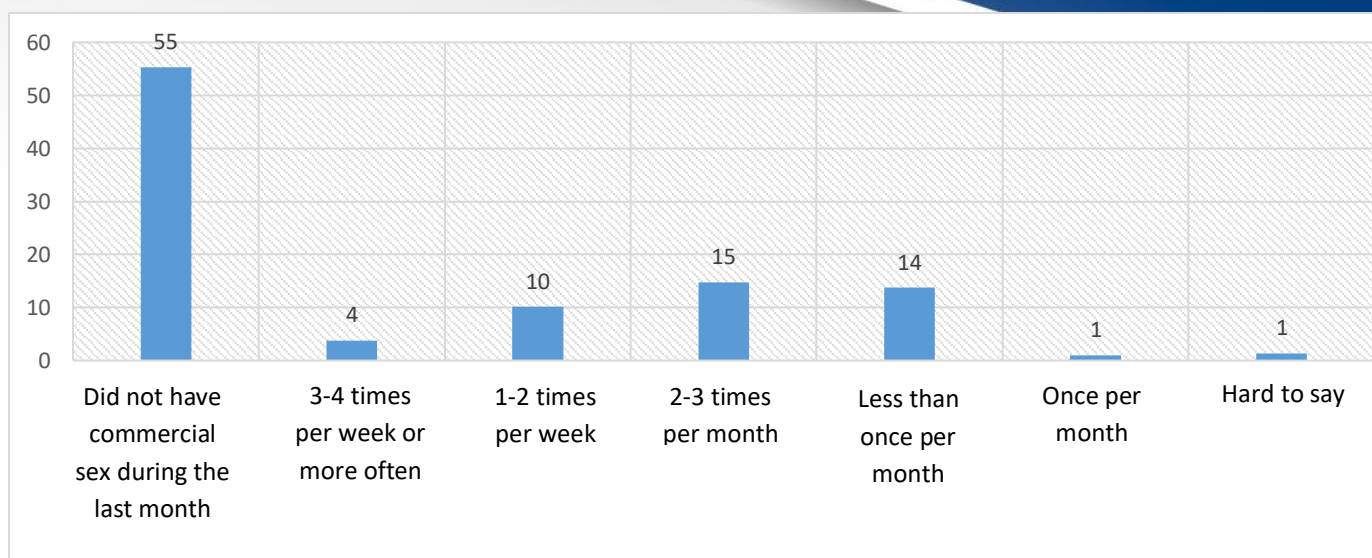


Fig. 9. Engagement of the surveyed MSM to the commercial sex during the last month

The reasons for not using condoms vary depending on with which partner the sexual contact occurred. For example, respondents who had casual sexual contacts often refer to the fact that there was no condom at hand. Respondents who paid for sex say they decided to engage in unprotected contact to achieve more intense sensations. MSM who were paid for sex did not use a condom because of its high price. In the case of sex with a regular partner the respondents were sure that he is healthy (Table 16).

Table 15. Reasons for not using a condom with different types of partners

Reason	With a permanent partner	With a casual partner	With a commercial partner: you paid	With a commercial partner: you were paid
There was no condom available/at hand	6	21	18	11
Without a condom it is more pleasant (its use reduces sensitivity)	47	37	59	11
The condom is too expensive	2	5	–	42
Partner wanted it without a condom	18	23	10	5
I am sure that the partner is healthy	74	14	9	37
I was drunk	6	26	5	9
I was "high" (under the influence of drugs)	1	3	4	13

I was in active role and perceived no risk to me	6	10	11	4
I like it when the partner ejaculates inside me	14	9	4	6
I myself like to ejaculate inside the partner	13	7	71	6
Other	–	–	–	4
Difficult to answer	1	1	–	1

SEX WITH WOMEN

More than half of MSM (61%) had an experience of heterosexual contact during their life, among them 24% had such contact over the past six months, in average with two partners. The average age of first sexual contact with a woman is 16.

As the survey shows (Table 17), the distinctive characteristics of bisexual men is that among more respondents among them had experience of marriage, more of them live with a female partner, as well as more respondents who have experience of imprisonment, while the share of respondents with higher education is lower. They usually define themselves as bi- or heterosexual, and are rarely interested exclusively in male partners.

Table 16. Comparative characteristics of MSM with a heterosexual experience in the last 6 months and without it, %

Characteristics	Had contacts with men	Had no sexual contacts with men
Age, years, $p < 0.001$		
under 19	5	9
20–24	22	21
25 and older	73	70
"Do you consider yourself to be a transgender person - Yes", $p = 0.4$	2	1
Legal marital status, $p < 0.001$		
Never married	80	59
In a registered marriage	3	20
Divorced	16	20
Widower	1	1
Actual family status, $p < 0.001$		
Lives with parents/relatives	35	24
Lives alone	43	50
Lives with male partner	21	5
Lives with female partner	1	21
Education, $p < 0.001$		

Characteristics	Had sexual contacts with men	Had no sexual contacts with men
Basic secondary (9 years)	1	5
Complete secondary (11 years)	6	9
Secondary vocational (technical)	26	33
Basic higher (BA)	24	17
Master's	41	35
Financial condition, $p < 0.001$		
Often lacking money for food - sometimes begging	< 1	< 1
Not enough money for food	3	4
Sufficient money only for food	12	12
Generally enough money for basic needs	37	36
Enough money for everything one needs, but unable to make savings	32	27
Enough for everything one needs, able to make savings	12	14
Well-off	3	6
"Have you ever been imprisoned – in temporary detention facilities, pre-trial detention facilities, correctional facilities - Yes", $p < 0.001$	5	9
"You are sexually attracted to...? ", $p < 0.001$		
Only men	63	13
Mostly men but sometimes women	29	33
Men and women are approximately equally attractive	7	38
Mostly women, but sometimes men	1	16
Only women	< 1	< 1
I cannot decisively tell	< 1	< 1
"Which of the below terms defines your sexual orientation in a most precise way?", $p < 0.001$		
Homosexual	72	20
Bisexual	27	75
Heterosexual	< 1	4
Difficult to answer	1	1
"Do you know the HIV status of your last partner (male/female)", $p = 0.1$	68	79
"With whom did you have the last anal intercourse?", $p < 0.001$		
With a permanent partner	58	46
With a casual partner	37	47
From those whom you paid for sex	1	2
With those who paid you for sex	2	2
The last contact was with several partners	2	3
"Do you know the HIV status of your last partner (male/female)?", $p < 0.001$		
I know their HIV status - it is negative	75	72
I know their HIV status - it is positive	2	1
I do not know his/her HIV status	23	27
"Did you practice group sex during the last 6 months (more than one sexual partner at once)?", $p <$		

Characteristics	Had sexual contacts with men	Had no sexual contacts with men
<i>0.001</i>		
No	71	73
Yes, with men (women did not participate)	28	13
Yes, with women (men did not participate)	–	1
Yes, with men and women at the same time	1	13

An important feature of bisexually active men subgroup is their more careful sexual behavior (in terms of condom use in relationships with men), but among their male partners there are more casual and commercial partners and those who practiced group sex with partners of both sexes.

The condom use in recent vaginal or anal sex with female partner was reported by 62% of those who had heterosexual intercourse in the last six months. Among the reasons for non-use (Fig. 10), the credibility of the partner is prevailing (she is healthy and/or she is the respondent's wife). Reduced sensitivity when using a condom is also important for the respondents.

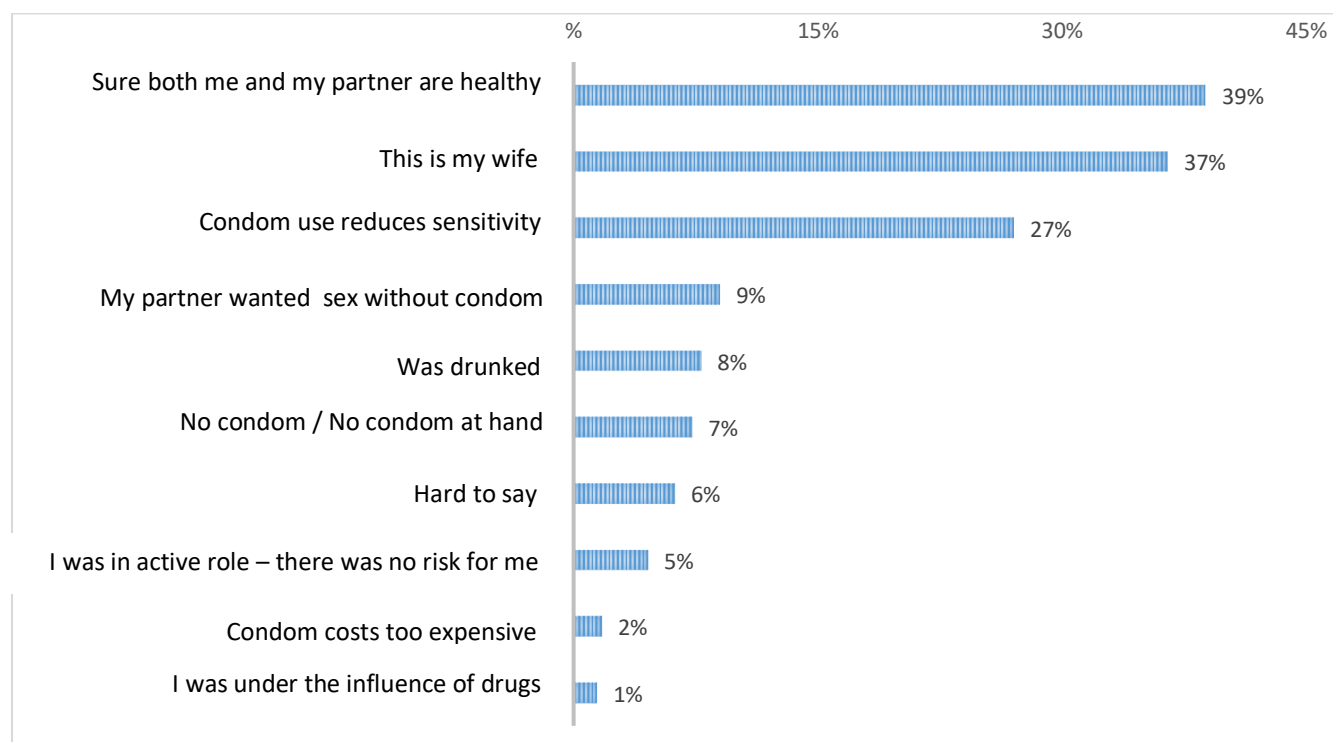


Fig. 10. Reasons for non-using a condom during the last sexual contact with a woman

Almost half (46%) of active bisexual men always used a condom during vaginal or anal sex with women, 21% used in most cases, and 15% never used a condom.

Among active bisexual MSM 3% of people used the services of commercial sex workers (CSWs) over the last six months, while 84% used condom during the last intercourse with FSWs.

Overall more than half of MSM had sex with women sometimes in the course of their life, of which 40% can be attributed to active bisexual respondents, as they also had sex with women in the past six months.

SEX WITH TRANSGENDERS

A minor part of the sample (5%) had sexual contacts with transgenders. Among them the largest percentage (3% of the general sample) had sexual contacts with MtF, and 1% from the general sample – with she-male (Fig. 11).

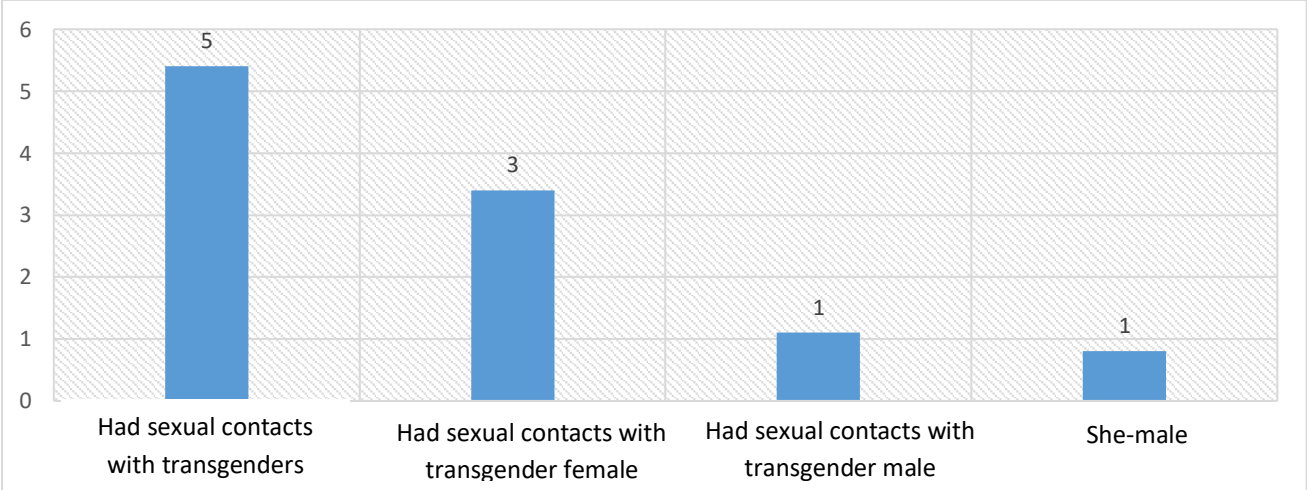


Fig. 11. Sexual contacts with transgenders, %

ADDITIONAL RISKS OF SEXUAL BEHAVIOR

Additional risk sexual behavior we include improper use of condoms, knowledge of partner’s HIV status, experience of violence and participation in group sex.

INCORRECT USE OF CONDOM

During the last 30 days during sexual contact with a man (Table 18) there were cases of incorrect condom use, and 14% said that condom during sex broke or slipped or sexual act began without a condom and it was put on already in the process of sexual intercourse.

Table 17. Cases of incorrect use of the condom

During the last 30 days, when you used a condom with male partners... "	Yes	No	Do not remember
Have there been cases when a condom broke or slipped?	86	14	–
Were there occasions when intercourse started without a condom (condom was put on during the act)?	85	14	1
Have there been cases where sexual intercourse continued after removing the condom?	81	12	1

If we consider the cases (Fig. 12) of improper condom use among the category of MSM who said they always used it in the last 30 days, it can be stated that this category stands out among others with regard to correct use skills (all three indicators), as they score above average for performance among the sample.

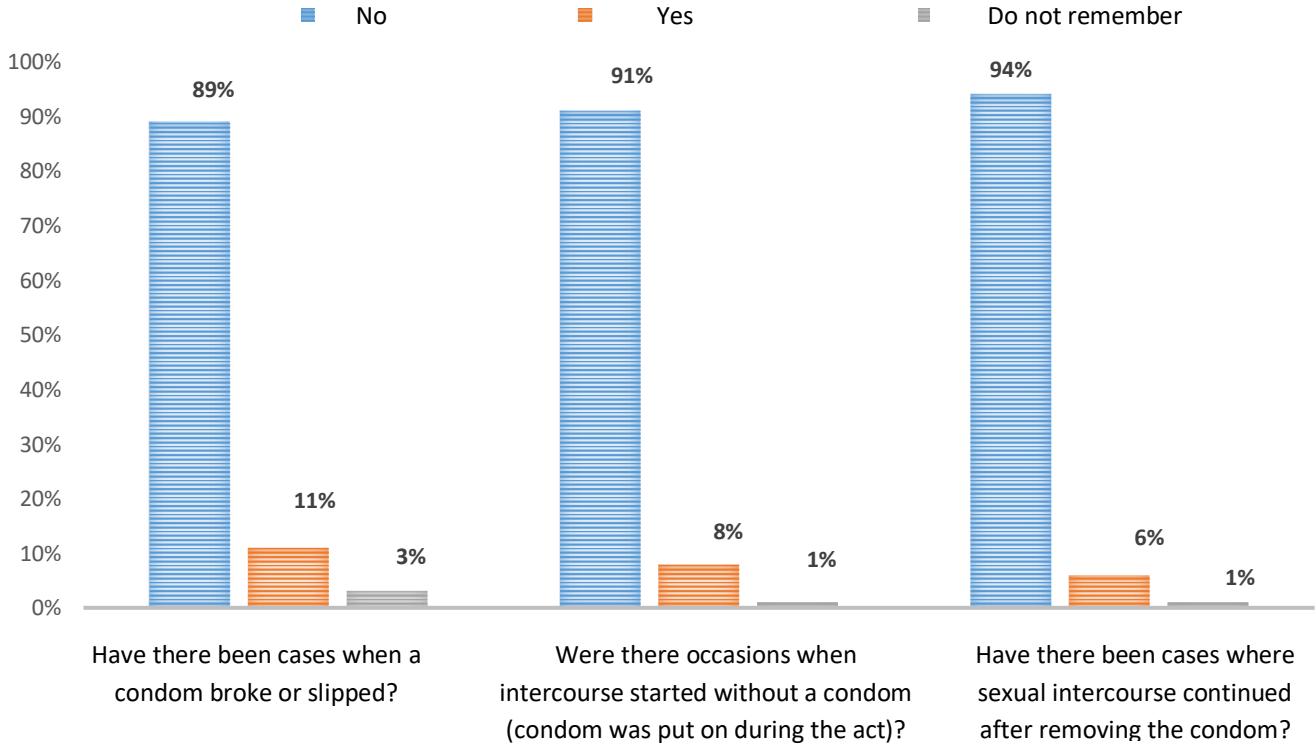


Fig. 12. Incorrect use of a condom among MSM (among those who always used a condom during the sexual contacts in the last 30 days)

KNOWLEDGE OF THE PARTNER’S HIV STATUS

A quarter of respondents (24% of the total sample) do not know the HIV status of their last male or female partner, 41% say that it is negative, 1% - positive. In addition, a quarter of

those who did not know the HIV status of the partner, yet not used during anal sex with him a condom.

Around a fifth of respondents consider unimportant the fact that their partners would be aware of the HIV status of respondents, and for about a tenth of the respondents the HIV status of their partners is unimportant (Fig. 13).

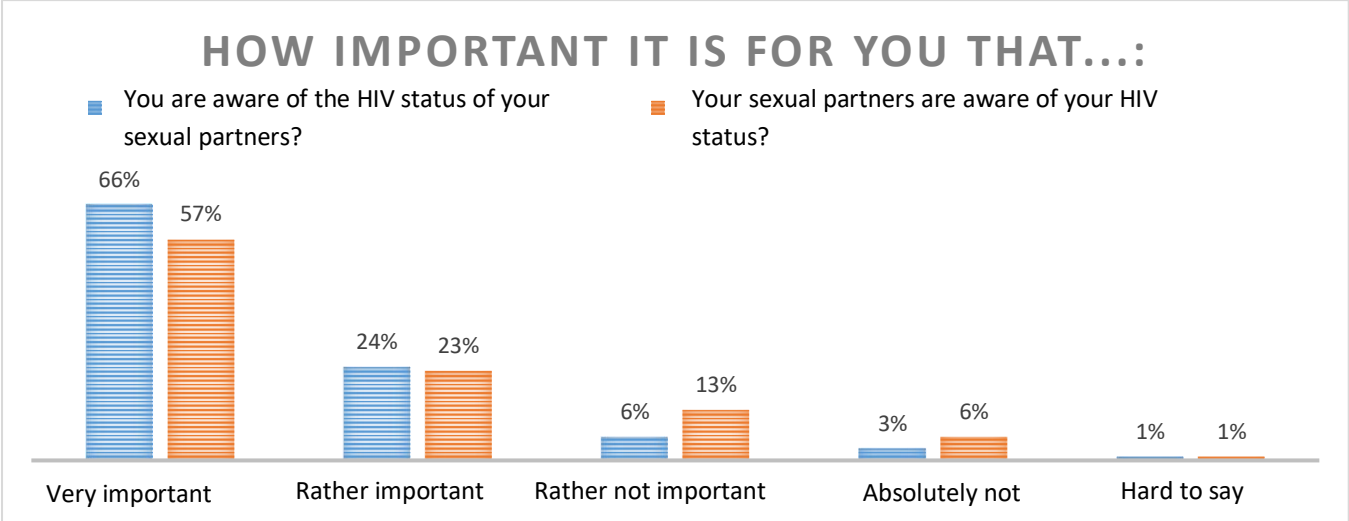


Fig. 13. Distribution of the MSM attitude to the knowledge of their partners' HIV status

GROUP SEX

The vast majority (74%) did not group sex in the past six months (Fig. 14), among the rest, almost all (83%) had experience of simultaneous sexual contacts with several men without women.

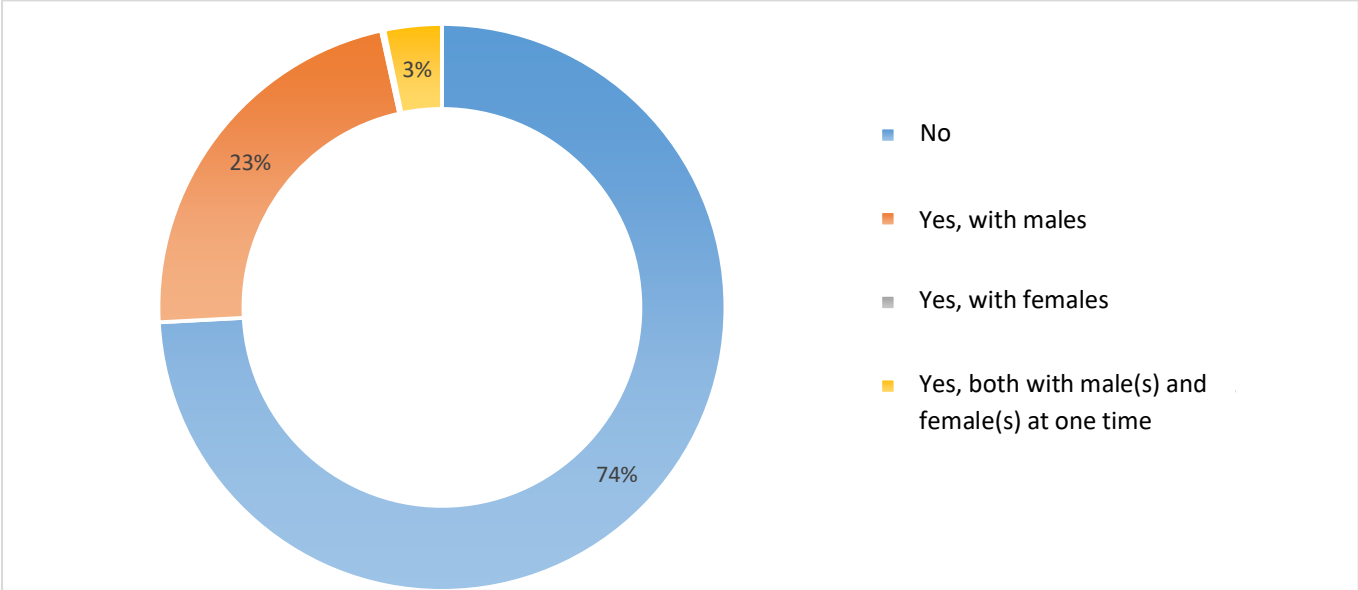


Fig. 14. Distribution of responses to the question: "Did you practice group sex during the last 6 months?" (%)

Respondents who practiced group sex for six months, as a rule, do not know the HIV status of their male and female partner during the last case of group sex (61%). This accounts for the largest proportion of those who practiced group sex with men, while among respondents who had group sex with women such cases are absent (Fig. 15).

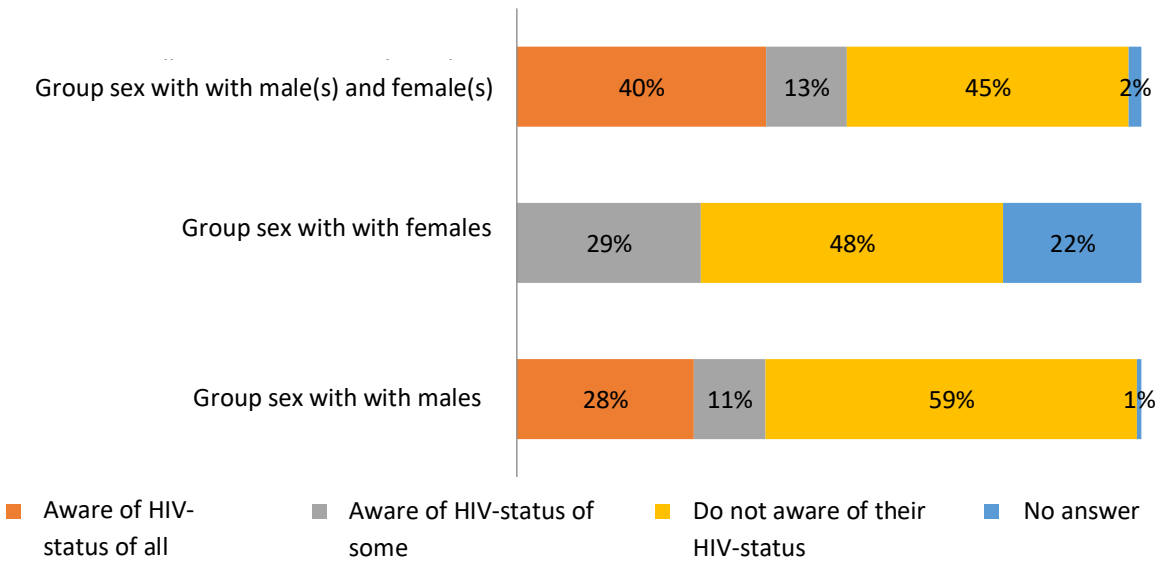


Fig. 15. Awareness about the HIV status of partners in the group sex

It should be noted that the lack of knowledge of the partners’ HIV status in group sex is related to the frequency of condom use (Fig. 16). The highest percentage of those who reported having always used a condom during a group sex is recorded among MSM who know the HIV status of some partners (83%) and the highest rates of inconsistent condom use (24%) are reported among MSM who do not know HIV status of their group sex partners.

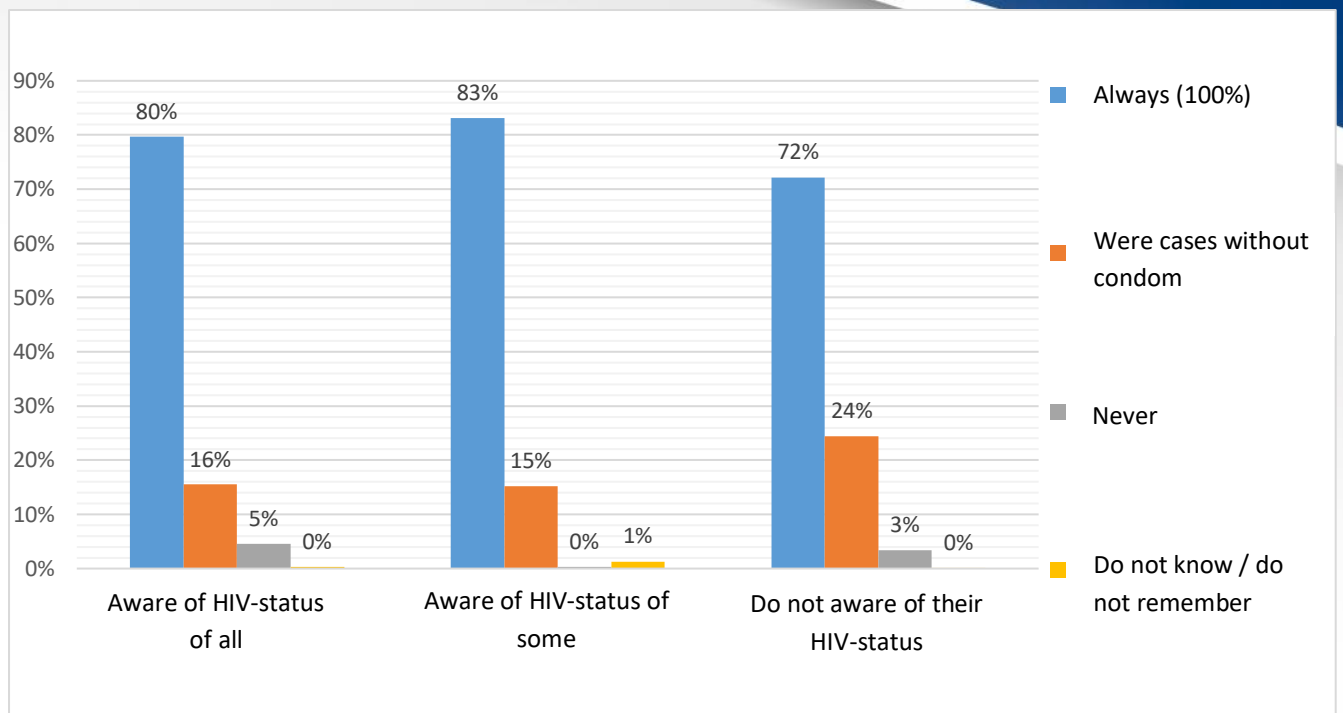


Fig. 16. Frequency of condom use depending on the awareness of the partner's HIV status

The knowledge of the fact that someone from among group sex partners has HIV-positive status increases the frequency of condom use. In this case the frequency of its use is limited to such categories as "always" and "in most cases".

EXPERIENCE OF VIOLENCE

Another risk is the experience of sexual violence, because receptive partners, especially if they are victims of violence, have a much higher risk of contracting HIV or other STIs. Usually when a victim has no choice during such violent contacts. According to the survey, 11% of respondents once have been victims of violence, 2% refused to answer the question.

Most often the following groups of MSM became victims of sexual abuse (Table 19): transgenders; MSM who have the lowest level of education and the lowest financial status; those who had experience of being in prison; those who had experience of group sex with men in the past six months, with men and those whose last sexual partner was a man who paid them for sex.

Table 18. The share of MSM who were the survivors of violence in different subgroups

Characteristics	%
"Do you consider yourself to be a transgender person?", $p < 0.001$	
Yes	24
No	11

Characteristics	%	
Legal marital status, $p < 0.001$		
Never married	11	
In a registered marriage	8	
Divorced	14	
Widower	14	
Actual family status, $p < 0.001$		
Lives with parents/relatives	13	
Lives alone	10	
Lives with male partner	12	
Lives with female partner	5	
Education, $p < 0.001$		
Basic secondary (9 years)	33	
Complete secondary (11 years)	12	
Secondary vocational (technical)	13	
Basic higher (BA)	8	
Graduate and postgraduate (Master, Specialist, PhD)	10	
Scientific degree (associate PhD, PhD)	6	
"How would you estimate your financial condition?", $p < 0.001$		
Often lacking money for food - sometimes begging	50	
Not enough money for food	14	
Sufficient money only for food	17	
Generally enough money for basic needs	11	
Enough money for everything one needs, but unable to make savings	9	
Enough for everything one needs, able to make savings	7	
Well-off	11	
Dependent on parents	41	
"Have you ever been imprisoned – in temporary detention facilities, pre-trial detention facilities, correctional facilities?", $p < 0.001$		
Yes	37	
No	10	
"You are sexually attracted to... ?", $p < 0.001$		
Only men	12	
Mostly men but sometimes women	13	
Men and women are approximately equally attractive	6	
Mostly women, but sometimes men	12	
Only women	4	
I cannot decisively tell	16	
"Which of the below terms defines your sexual orientation in a most precise way?", $p < 0.001$		
Homosexual	11	
Bisexual	11	
Heterosexual	7	
Difficult to answer	22	
Sexual contacts with men while staying in prison, $p < 0.001$		
	Yes	No

Characteristics	%	
Oral contacts	44	29
Anal contacts	48	28
"Did you practice group sex during the last 6 months (more than one sexual partner at once)?", $p < 0.001$		
No	9	
Yes, with men (women did not participate)	19	
Yes, with women (men did not participate)	0	
Yes, with men and women at the same time	12	
"With whom did you have the last anal intercourse?", $p < 0.001$		
With a permanent partner	10	
With a casual partner	12	
From those whom you paid for sex	17	
With those who paid you for sex	38	
The last contact was with several partners	19	

Consequently, risky sexual intercourses are associated primarily with the presence of the partners of different types at the same time, besides, they are characterized by unprotected sexual contacts with occasional and commercial partners. However, sex with regular partners can also be characterized as potentially dangerous because of the subjective assessment of the type of partner and regarding them as permanent partners.

66% of respondents reported using condoms on a regular basis, regardless of the type of sexual partners.

The spread of HIV from MSM to the general population can occur through sexual intercourses with women. Results of the study confirm the prevalence of such practices for a number of consecutive years, including the practice of group sex involving women.

Additional risks of sexual behavior in the sample is the practice of improper condom use, ignorance of HIV status of their last male or female partner along with unprotected intercourse.

Another risky practice, albeit inherent for a small fraction in the sample, is group sex where the HIV status of all partners is not always known to respondents. The largest share of respondents who were unaware about the HIV status of partners in group sex is among those who practiced it only with men.

About a tenth of the sample had experience of sexual violence.

DYNAMICS OF MSM SEXUAL BEHAVIOR

It is possible to compare results over time (Table 20). As you can see, the age of first contact with the man has not changed, while the number of male sex partners, both permanent and

casual, increased; meanwhile, the respondents have fewer female partners, although the percentage of MSM who had sex with women sometimes in the course of their life in 2015 is slightly higher. The proportion of MSM who regularly use condoms with a male partner gradually increases, and as for female partners remained the same. The value of the national indicator "Percentage of MSM who used a condom the last time they had anal sex with a male partner" remains consistently high. Indicator of condom use during the last sexual intercourse with a woman dropped slightly over the past two years.

Table 19. Dynamics of the main indicators of sexual behavior in 2007-2015.

Generally in Ukraine	2007	2009	2011	2013	2015
The average age of first sexual contact with a man	–	18	18	18	18
The average number of permanent male partner in the last 30 days	–	1	1	1	2
The average number of casual male partners in the last 30 days	–	3	2	3	3
The average number of female partners in the last 6 months.	1	3	1	3	1
Respondents who had sex with women sometimes in their lifetime,%	52	58	54	54	61
The national indicator "Percentage of MSM who used a condom the last time they had anal sex with a male partner",%	39	64	71	72	71
Respondents who always use a condom during anal sex with another man within 30 days, %	–	46	49	54	60
Respondents who used a condom during their last sexual intercourse with a female partner, %	53	58	66	66	62
Respondents who always use a condom during sexual intercourse with a female partner in the last 6 months,%	–	36	47	47	46

PREVALENCE OF STI AND OTHER DISEASES

HIV-servicing NGOs provide their clients with a range of services, first and foremost of which is the distribution of condoms and lubricants, counseling and HIV testing, counseling by psychologists and lawyers, referral of clients to other health care institutions (e.g., AIDS centers or STI clinics). Here we will focus on testing the clients, their experience of treatment and care of their own health.

According to the study, about half (45%) of respondents had medical examinations over the past 12 months and passed the preventive tests (Fig. 17).

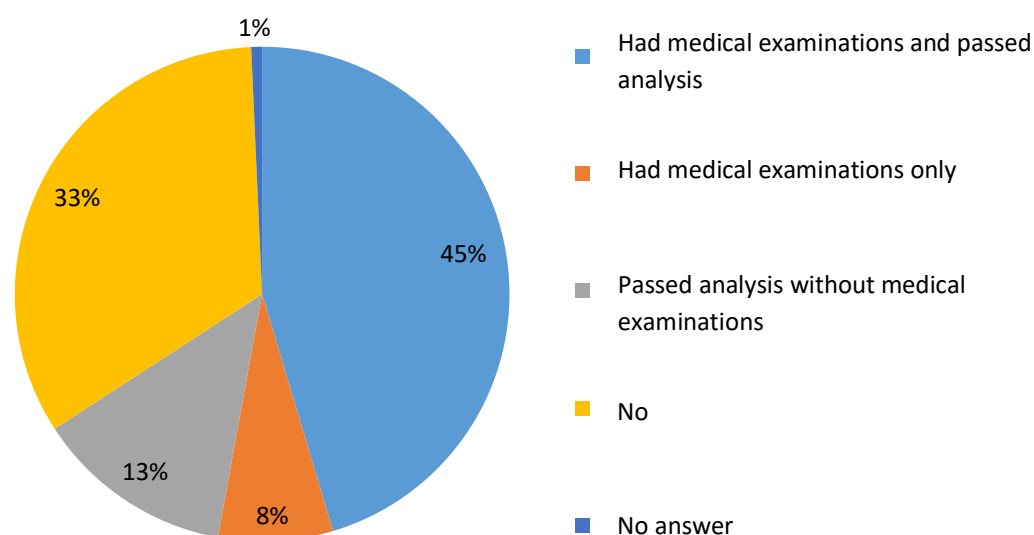


Fig. 17. Distribution of the respondents by replies to the question: "during the last 12 months, did you have medical examinations or passed analysis with the preventive aims and not to solve a health problem you faced?"

WHO recommends vaccination against Hepatitis B for MSM as a vulnerable group. According to the survey, one-fifth (22%) of respondents had this vaccination.

One of the services provided by MSM/HIV servicing organizations to their customers is testing with rapid HIV tests. In addition, a number of organizations also provide rapid testing for other STIs, such as syphilis, gonorrhoea, chlamydia. We studied the experience of MSM testing with rapid tests both in 2014 and 2015. The share of respondents tested for STI in 2014 (other than HIV and syphilis) was sometimes almost twice higher than in 2015 (Table 21).

Table 20. Percentage of MSM tested with rapid tests for certain infections in HIV-servicing organizations (the total of columns is not equal to 100%, because a respondent could have passed a number of different tests or neither of them)

Test	%, N = 4550	
	2014	2015
Syphilis	32	34
Chlamydia	17	11
Gonorrhoea	14	10
Hepatitis B	30	18
Hepatitis C	31	18
HIV	40	43

We asked whether respondents had cases of STIs in the last 12 months and whether they were treated and how. According to the responses, MSM most often reported being infected with Hepatitis. Meanwhile, the respondents treated these condition to the least extent. Typically, in case of contracting certain STIs respondents visited medical facilities, less frequently - NGOs (the latter is most characteristic of Hepatitis C). Over the past 12 months there were cases of gonorrhoea, chlamydia, herpes, candidiasis and other diseases among the respondents. Such cases in the sample together accounted for the largest share of respondents. Normally these diseases are treated if the symptoms are detected, and one-third of the respondents did it on their own (Fig. 18).

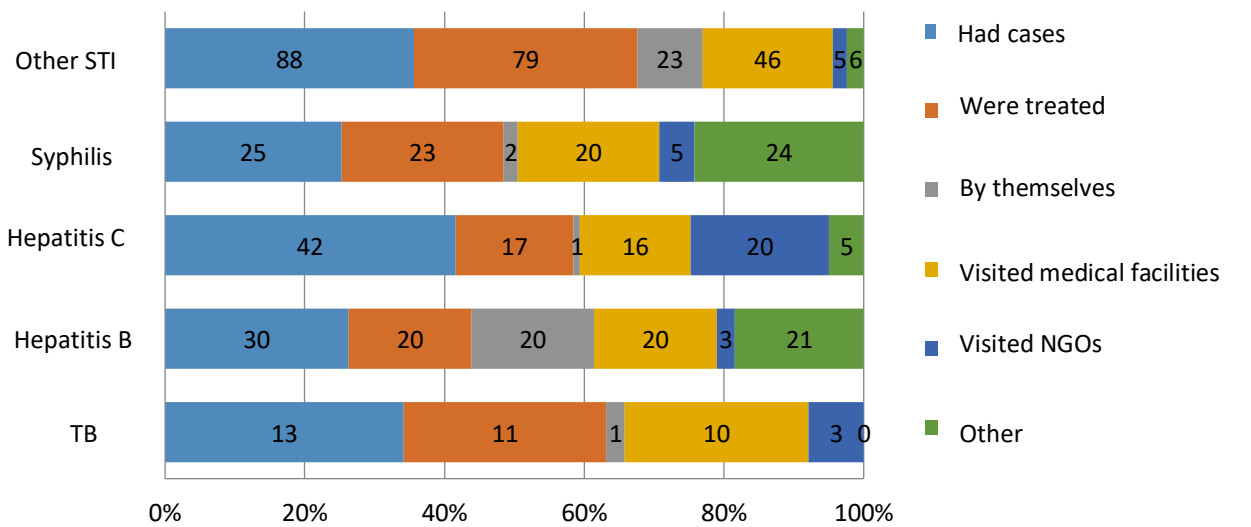


Fig. 18. STI incidence, number of persons

According to the study, preventive examinations are not common because the percentage of those who passed medical examinations and analysis to prevent diseases in the last year is very low - less than half of the sample.

As we know, the risk of Hepatitis B infection is quite common for MSM, and therefore vaccination projects were introduced in 2014 in several cities of Ukraine. One-fifth of study participants reported that they were vaccinated against Hepatitis B.

Other preventive NGO-based services for MSM are available: rapid tests for HIV, syphilis, Hepatitis B and C, gonorrhoea and chlamydia. However, the proportion of persons tested over the past year for a number of infections is much lower than in 2014.

INTERNAL HOMOPHOBIA LEVEL

Research on social attitudes towards gay people held in the last third of the XX century in Western Europe and the USA, resulting in shaping the concept of homophobia as a form of xenophobia. Homophobia, that is the rejection of homosexuality, is a complex, multi-level phenomenon. In particular, it can manifest itself as psychological phenomenon: the emotional rejection of homosexuality or homosexual component of bisexuality, and/or personal or collective hostility towards gay and bisexual men; as a social phenomenon: social, political and domestic suppression of the homo- and bisexuality manifestations (verbal objection, disgust and hate speech, use of derogatory words, etc., discrimination, physical violence). Homophobia is one of the factors contributing to stigma and discrimination based on sexual orientation and gender identity.

The level of internal homophobia was measured both by a toolkit with proven efficiency in the world practices (scale 1), and an alternative Russian instrument (scale 2). Each questionnaire consisted of a set of statements for the respondents to score them from 1 - completely disagree to 5 - completely agree, subsequently these estimates were averaged for each respondent within the same scale. Higher rating means a higher level of internal homophobia.

Scale 2 demonstrates somewhat higher indicators than scale 1 - average 3.3 and 2.1 respectively, but they correlate (correlation coefficient is 0.52 at $p < 0.001$), that is higher values under one scale correspond to higher values under the other.

As we can see (Table 22), the level of internal homophobia can significantly (almost half) vary among MSM from different cities, which, according to the information on the relations with other variables, is likely to be due to different composition of regional samples. The most obvious trends show that the variable "level of education" (the higher it is, the lesser is the extent of rejecting themselves as gay or bisexual), "financial status" (people in poverty perceive homosexuality worse than more affluent people), "the experience of being in prison" (this experience is associated with higher levels of internal homophobia), "sexual orientation" and "actual family status" (the respondent demonstrates the higher level of homonegativity proportionally to the remoteness from "pure homosexuality"). Clients of HIV services have also show a better acceptance of themselves as gay or bisexual men.

Table 21. Average data under the internal homophobia scales among MSM in different subgroups

Characteristics	Average	
	scale 1	scale 2
City, $p < 0.001$		
Bila Tserkva	2,1	3,4
Vinnytsya	2,0	3,3
Dnipro	2,1	2,9

Donetsk	1,7	3,7
Zhytomyr	2,6	3,4
Zaporizhya	1,7	2,8
Ivano-Frankivsk	2,6	3,9
Kyiv	2,0	3,0
Kropyvnytskyy	3,0	3,1
Lutsk	2,2	3,4
Lviv	2,3	3,3
Mykolayiv	1,8	3,0
Odesa	1,7	2,7
Poltava	2,2	3,3
Rivne	2,3	3,6
Simferopol	2,0	3,0
Sevastopol	2,0	3,5
Sumy	2,4	3,7
Ternopil	1,5	3,1
Uzhgorod	2,1	2,9
Kharkiv	1,9	3,5
Kherson	1,9	2,9
Khmelnyskyy	2,0	3,6
Cherkasy	1,7	3,4
Chernivtsi	2,3	2,9
Chernihiv	1,6	3,3
"Do you consider yourself to be a transgender person?", $p < 0.001$		
No	2,1	3,3
Yes	1,8	3,1
Age, years, $p = 0.01$		
Under 24	2,0	3,2
25 and older	2,1	3,4
Legal marital status, $p < 0.001$		
Never married	1,9	3,2
In a registered marriage	2,9	3,8
Divorced	2,5	3,6
Widower	2,6	3,6
Actual family status, $p < 0.001$		
Lives with parents/relatives	2,1	3,3
Lives alone	2,1	3,3
Lives with male partner	1,7	3,1
Lives with female partner	2,9	3,8
Education, $p < 0.001$		
Basic secondary (9 years)	2,5	3,5
Complete secondary (11 years)	2,2	3,4
Secondary vocational (technical)	2,1	3,4
Basic higher (BA)	2,0	3,2
Graduate and postgraduate (Master, Specialist, PhD)	2,0	3,3
"How would you estimate your financial condition?", $p < 0.001$		

Often lacking money for food - sometimes begging	2,2	3,4
Not enough money for food	2,3	3,5
Sufficient money only for food	2,2	3,4
Generally enough money for basic needs	2,0	3,4
Enough money for everything one needs, but unable to make savings	2,0	3,3
Enough for everything one needs, able to make savings	2,0	3,2
Well-off	2,4	3,3
Dependent on parents	2,0	3,6
"Have you ever been imprisoned – in temporary detention facilities, pre-trial detention facilities, correctional facilities?" , $p < 0.001$		
Yes	2,8	3,7
No	2,0	3,3
"You are sexually attracted to... ?" , $p < 0.001$		
Only men	1,6	3,1
Mostly men but sometimes women	2,5	3,5
Men and women are approximately equally attractive	3,0	3,8
Mostly women, but sometimes men	3,3	4,0
Only women	2,9	3,2
I cannot decisively tell	3,3	3,8
"Which of the below terms defines your sexual orientation in a most precise way?" , $p < 0.001$		
Homosexual	1,7	3,1
Bisexual	2,9	3,7
Heterosexual	2,8	3,7
Difficult to answer	3,0	3,6
"Are you a client of the organization providing HIV prevention services to MSM?" , $p < 0.001$		
Yes	1,9	3,2
No	2,2	3,4

Relation of internal homophobia with key performance indicators of HIV services are provided in the relevant sections below.

ALCOHOL AND DRUG USE PRACTICE

The vast majority of MSM (83%) drink alcoholic beverages of different strength, almost half – strong drinks (46%).

23% of MSM reported that "sometimes" or "rarely" had sex while intoxicated during the last month. Instead, 13% of respondents indicated that in most cases they did this under the influence of alcohol. Those who drank strong spirits more often had sex while intoxicated than those who drank less strong beverages (Table 23).

Table 22. Frequency of sexual contacts, depending on the strengths of drinks, among those who consumed alcohol %

"How often you had sex while intoxicated in the last month (30 days)?"	Among all respondents, N = 3775	"Tell me please, what kind of alcohol do you consume most often?"		
		Soft beverages, N = 1051	Medium strength drinks, N = 988	Strong spirits, N = 1736
Always (100)	4	3	2	6
In most cases (75)	13	8	9	17
In half the cases (50)	18	15	19	20
Sometimes (25)	23	21	25	22
Rarely (less than 10)	23	28	23	20
Never	20	24	22	15

There is a connection between prevalence of drinking and other variables (Table 24). Among respondents in Lviv, Sevastopol, Kharkiv and Chernivtsi the largest share of MSM who use alcohol was found. Older respondents are more likely to indicate that they use alcohol, as well as those living with a female partner. Among those with incomplete secondary education, 72% drank alcohol, while among respondents with higher education the figure is 85%. Heterosexuals more likely to use alcohol than other groups. Values of homonegativity did not differ in groups of those who use alcohol and those who do not drink.

Table 23. Share of MSM who use alcohol in different subgroups

Characteristics	% or average (95% CI)
City, $p < 0.001$	
Bila Tserkva	86 [80–91]
Vinnytsya	76 [69–84]
Dnipro	85 [80–91]
Donetsk	75 [71–80]
Zhytomyr	83 [78–89]
Zaporizhya	76 [70–83]
Ivano-Frankivsk	87 [81–93]
Kyiv	77 [71–84]
Kropyvnytsky	74 [68–79]
Lutsk	71 [62–80]
Lviv	98 [95–100]
Mykolayiv	91 [87–96]
Odesa	89 [85–93]
Poltava	75 [69–81]
Rivne	73 [66–80]
Simferopol	87 [81–94]
Sevastopol	95 [93–97]
Sumy	84 [77–90]
Ternopil	94 [90–97]
Uzhgorod	83 [76–89]
Kharkiv	94 [89–99]
Kherson	88 [82–93]
Khmelnysky	90 [85–95]
Cherkasy	75 [70–80]
Chernivtsi	92 [88–95]
Chernihiv	69 [61–77]
"Do you consider yourself to be a transgender person?", $p > 0.05$	
No	83
Yes	84
Age, years, $p < 0.001$	
Under 24	82
25 and older	84
Legal marital status, $p < 0.001$	
Never married	83
In a registered marriage	88
Divorced	83
Widower	85
Actual family status, $p < 0.001$	
Lives with parents/relatives	82
Lives alone	84
Lives with male partner	83

Lives with female partner	90
Education, $p < 0.001$	
Basic secondary (9 years)	72
Complete secondary (11 years)	81
Secondary vocational (technical)	82
Basic higher (BA)	84
Graduate and postgraduate (Master, Specialist, PhD)	85
"How would you estimate your financial condition?", $p < 0.001$	
Often lacking money for food - sometimes begging	100
Not enough money for food	78
Sufficient money only for food	81
Generally enough money for basic needs	82
Enough money for everything one needs, but unable to make savings	87
Enough for everything one needs, able to make savings	84
Well-off	82
Dependent on parents	87
"Have you ever been imprisoned – in temporary detention facilities, pre-trial detention facilities, correctional facilities?", $p > 0.05$	
Yes	85
No	83
"You are sexually attracted to... ?", $p < 0.001$	
Only men	83
Mostly men but sometimes women	85
Men and women are approximately equally attractive	83
Mostly women, but sometimes men	89
Only women	89
I cannot decisively tell	55
"Which of the below terms defines your sexual orientation in a most precise way?", $p < 0.001$	
Homosexual	83
Bisexual	85
Heterosexual	93
Difficult to answer	67
"Do you know the HIV status of your last partner (male/female)?", $p < 0.001$	
I know their HIV status - it is negative	82
I know their HIV status - it is positive	70
I do not know his/her HIV status	86
"Did you practice group sex during the last 6 months (more than one sexual partner at once)", $p < 0.001$	
No	82
Yes, with men (women did not participate)	87
Yes, with women (men did not participate)	93
Yes, with men and women at the same time	85
"With whom did you have the last anal intercourse?", $p < 0.001$	
With a permanent partner	82
With a casual partner	86
From those whom you paid for sex	87

With those who paid you for sex	89
The last contact was with several partners	88
"Are you a client of the organization providing HIV prevention services to MSM?", $p < 0.001$	
Yes	82
No	84
Homonegativity, scale 1, average in the group of those who use alcohol (95% CI)	2,07 (2,04–2,11)
Homonegativity, scale 1, average in the group of those who do not use alcohol (95% CI)	2,08 (2,00–2,16)
Homonegativity, scale 2, average in the group of those who use alcohol (95% CI)	3,33 (3,31–3,36)
Homonegativity, scale 2, average in the group of those who do not use alcohol (95% CI)	3,30 (3,24–3,36)

39% of MSM had the experience of using non-injection drugs (including 8% used them in the past month, 9% - in the last year). Most (41%) had used stimulants (cocaine, amphetamine, methamphetamine, "jeff", ecstasy, "salt"). 5% of MSM had experience of injecting drug use, most of them have tried it long ago (in the survey year 0.5% of MSM used such drugs, another 0.2% of respondents had injected drugs in the last month before the survey). None of the respondents used someone else's needle.

The vast majority of MSM (99%) have not had sex in a state of narcotic intoxication.

COVERAGE WITH PREVENTION PROGRAMS

The coverage of vulnerable populations with prevention services is one of the indicators of national HIV service performance. For MSM this figure is measured as a proportion of all respondents who answered "yes" to the following questions: "Have you received condoms in the last 12 months?" And "Do you know whom to contact if you wish to pass a HIV test?".

54% of respondents are covered by prevention programs (Table 25), however, this indicator varies considerably in different cities - from 2% in Khmelnytsky to 93% in Chernihiv. For more information about the situation in the surveyed cities see annexes.

Table 24. Percentages of MSM covered with prevention services in different subgroups

Characteristics	%, N=4550
"Do you consider yourself to be a transgender person?", $p=0.031$	
No	53
Yes	63
Age, years, $p = 0.001$	
Under 24	50
25 and older	56

Legal marital status, $p=0.035$	
Never married	54
In a registered marriage	46
Divorced	54
Widower	52
Actual family status, $p < 0.001$	
Lives with parents/relatives	53
Lives alone	55
Lives with male partner	59
Lives with female partner	44
Education, $p < 0.001$	
Basic secondary (9 years)	50
Complete secondary (11 years)	44
Secondary vocational (technical)	53
Basic higher (BA)	57
Graduate and postgraduate (Master, Specialist, PhD)	55
"How would you estimate your financial condition?", $p < 0.001$	
Often lacking money for food - sometimes begging	53
Not enough money for food	39
Sufficient money only for food	47
Generally enough money for basic needs	54
Enough money for everything one needs, but unable to make savings	60
Enough for everything one needs, able to make savings	54
Well-off	49
Dependent on parents	21
"Have you ever been imprisoned – in temporary detention facilities, pre-trial detention facilities, correctional facilities?", $p < 0.001$	
Yes	37
No	54
"You are sexually attracted to... ", $p < 0.001$	
Only men	56
Mostly men but sometimes women	58
Men and women are approximately equally attractive	42
Mostly women, but sometimes men	33
Only women	45
I cannot decisively tell	21
"Which of the below terms defines your sexual orientation in a most precise way?", $p < 0.001$	
Homosexual	57
Bisexual	49
Heterosexual	22
Difficult to answer	40
"Did you receive condoms from a representative of a MSM HIV-servicing organization during the last 6 months?" – Yes, $p < 0.001$	
	75

Transgender people are to greater extent covered by HIV services than all other MSM. Regarding sexual orientation, there is a clear trend - with the "reduction" of homosexuality the coverage with prevention is also decreasing (incidentally, the same pattern was observed in the results previous studies).

The coverage of younger MSM is lower than the older ones (while the first are characterized by safer sexual behavior, see above).

In groups with higher education the coverage with prevention services is wider that can be hypothetically explained by the connection between education and age (the coverage is higher among the older group). However, this relationship is not simple, because respondents with incomplete secondary education are covered more than MSM with complete secondary education.

The relation between coverage with HIV services in the last 12 months and internal homophobia is quite obvious: the internal homophobia index among those who received free condoms and know where to get an HIV test is lower than among those who remained outside of HIV services (respectively 2.0 and 2.2 under scale 1 and 3.2 and 3.4 under scale 2).

Thus, the coverage of the group of married MSM, or those living with women or having experience of imprisonment or having low income (but not beggars) with HIV prevention services should be increased accordingly.

HIV TESTING

Counseling and testing are the critically important components of HIV prevention programs, because in addition to HIV test itself (a HIV-positive person aware of their HIV status tends to behave more carefully) everyone who has passed the test should obtain counseling from a doctor and a psychologist. This allows them to interpret test results correctly, and provides an opportunity to assess their risk and develop a plan of changing behavior towards less risky one.

79% of respondents have sought HIV testing at least once. Those who did not, usually (Table 26), claimed that they were not motivated (one-third of all cases), confident in their safety (a quarter of the responses), do not know where to seek testing, or fear that confidentiality will be breached (one-fifth of all cases).

Table 25. The popularity of the reasons for avoiding HIV testing (among people not tested for HIV)

Reasons	%, N = 955
I don't want to do it	37
My sexual behavior has always been safe	26
I don't know whom to seek advice from	20
I am afraid of my status disclosure	19

I already know my status	7
I don't know where the testing facility/point/center is	6
I don't have money for testing	4
Inconvenient working hours of the testing facility/point/center	4
I don't like the attitude of staff	4
In our city there is no facility providing testing	2
Inconvenient location of the testing facility/point/center	2
I am sure that I am positive	2

81% among people who applied for the test passed it: among them, 27% did it in the AIDS Centre, the same number of people - in trust cabinets, 40% in non-governmental organizations, 18% – in a local polyclinic, 10% - in a private hospital, 4% - in a private lab, 2% – in the youth-friendly clinic, and another 2% in some other settings (at home, in a dermatovenerologic dispensary, in correctional facility etc.). Thus, HIV-service NGOs, AIDS centers and trust cabinets prevail in the provision of these services for MSM.

The median number of tests which the respondents passed in the course of their lives was three. The reasons for the respondents' testing were the following: 76% – on their own initiative, 13% – on the initiative of their sex partner, 9% after a risky anal sex, 1% – on the initiative of relatives, 3% at a doctor's referral, 16% – during a mandatory medical examination. Thus, the main driving force was the personal motivation of the respondents.

According to the Protocol, testing should be accompanied by pre - and post-test counseling. However, one fifth of the participants claimed that the last test was not accompanied by pre-test counseling, and 17% said there was no post-test conversation with a consultant.

To measure the coverage of testing two questions are used: *“When was the last time you were tested for HIV?”* and *“I am not asking you about the result, but have you received the result of your last test?”*

If a respondent reported that his last test occurred within 12 months before the study, and he received a result, that person is considered covered by testing.

According to the study results, this figure is 55%. Like other figures, it varies considerably in different cities – from 20% in Lviv, 22% in Uzhgorod, 28% in Bila Tserkva, 32% in Donetsk and up to 84% in Rivne and 89% in Chernihiv (Table 27). The above list shows that there is no main factor determining the degree of testing coverage of MSM from different cities – on the one hand, there is Lviv, where the

HIV-service has been operating for a long time, and on the other hand - Chernihiv, where such programs have been introduced only recently; meanwhile, in Donetsk and Sevastopol (both affected by the Russian aggression) the coverage differs twice. For more information about the dynamics of this figure in individual cities, see the Annex.

Table 26. The proportion of MSM covered with HIV testing in the last 12 months in different subgroups

Characteristics	% (95% CI)
City, $p < 0.001$	
Simferopol	66.2 (57.2–75.1)
Vinnitsia	67.8 (59.7–75.6)
Lutsk	63.9 (55.4–72.3)
Dnipropetrovsk	59.1 (51.4–67.0)
Donetsk	30.2 (24.3–36.0)
Zhytomyr	40.5 (31.7–49.8)
Uzhgorod	20.4 (14.4–26.4)
Zaporizhya	46.6 (37.8–55.3)
Ivano-Frankivsk	38.6 (29.7–47.6)
Bila Tserkva (Kyivska Oblast)	20.3 (14.8–26.0)
Kirovohrad	35.1 (26.1–44.2)
Lviv	19.7 (13.3–27.8)
Mykolayiv	49.1 (40.8–57.4)
Odesa	66 (57.8–74.4)
Poltava	45.9 (37.9–53.7)
Rivne	85.4 (80.0–90.9)
Sumy	33.9 (26.4–41.3)
Ternopil	72.1 (65.6–78.6)
Kharkiv	34.8 (26.7–42.7)
Kherson	53.5 (43.8–63.1)
Khmelnyskyy	23.2 (16.1–30.2)
Cherkasy	72.2 (65.9–78.3)
Chernivtsi	53.6 (46.2–61.2)
Chernihiv	89.7 (85.1–94.2)
Kyiv	65.9 (60.0–71.9)
Sevastopol	54.7 (49.0–59.9)
"Do you consider yourself to be a transgender person?", $p < 0.001$	
No	62
Yes	55
Age, years, $p = 0.001$	
Under 24	51

Characteristics	% (95% CI)
25 and older	57
Legal marital status, $p<0.001$	
Never married	55
In a registered marriage	45
Divorced	54
Widower	50
Actual family status, $p<0.001$	
Lives with parents/relatives	53
Lives alone	55
Lives with male partner	61
Lives with female partner	45
Education, $p<0.001$	
Basic secondary (9 years)	42
Complete secondary (11 years)	43
Secondary vocational (technical)	51
Basic higher (BA)	60
Graduate and postgraduate (Master, Specialist, PhD)	59
"How would you estimate your financial condition?", $p<0.001$	
Often lacking money for food - sometimes begging	53
Not enough money for food	35
Sufficient money only for food	45
Generally enough money for basic needs	54
Enough money for everything one needs, but unable to make savings	61
Enough for everything one needs, able to make savings	60
Well-off	56
Dependent on parents	29
"Have you ever been imprisoned – in temporary detention facilities, pre-trial detention facilities, correctional facilities?", $p<0.001$	
Yes	40
No	55
"You are sexually attracted to... ?", $p<0.001$	
Only men	56
Mostly men but sometimes women	60
Men and women are approximately equally attractive	44
Mostly women, but sometimes men	40
Only women	39
I cannot decisively tell	19
"Which of the below terms defines your sexual orientation in a most precise way?", $p<0.001$	
Homosexual	57
Bisexual	51
Heterosexual	45
Difficult to answer	37
"Did you practice group sex during the last 6 months. (more than one sexual partner at once)?", $p<0.001$	

Characteristics	% (95% CI)
No	54
Yes, with men (women did not participate)	59
Yes, with women (men did not participate)	38
Yes, with men and women at the same time	45
"With whom did you have the last anal intercourse?", $p < 0.001$	
With a permanent partner	59
With a casual partner	52
From those whom you paid for sex	30
With those who paid you for sex	50
The last contact was with several partners	40
"Are you a client of the organization providing HIV prevention services to MSM?", $p < 0.001$	
Yes	80
No	33

MSM considering themselves to be transgender people are by 7% more covered with HIV prevention services in the last 12 months than cisgender ones. Younger people are less covered than older ones (although the former are characterized by safer sexual behavior, see above). The same trend is observed in the correlation of coverage with marital status: married bisexual and heterosexual MSM are less covered (unlike the homosexual ones who are either not married or living with a male partner), but (see above) more often practice protected sex with men.

In groups with a higher level of education the testing coverage increases which can theoretically be explained by the association of education with age (among adults, coverage is higher).

There is an interesting association with the financial status of the respondents: the least covered are the MSM groups who are low-income ("Not enough money for food but does not beg", "Has enough money only for food"), but not marginalized (perhaps because these groups have to work hard and do not have time to visit the facilities where they can be tested); but the wealthier ones as well as completely marginalized ones attend HIV service facilities (of course, for different reasons and motives). The MSM who are financially supported by their parents (among them almost half are under the age of 19) likely either do not have the free time (e.g. due to their studies), or are not yet included in the social life of the local GB community.

The connection of testing coverage with the experience of being in prison (those who have been there are less covered than others) may indicate some problems in social work with this group (on the one hand, they are older, less well-off men – these factors are associated with greater coverage (see above); on the other hand – there are more MSM among them who identify themselves as bi - or heterosexual, and more of them are married – these are

the factors associated with lower coverage; the second of these associations is obviously more influential and there can be some other reasons at the same time).

The relationship of the coefficient of the test passing within the last 12 months with internal homophobia is quite noticeable: people who have passed the test and received the result, have lower degree of the internal homophobia than those who have not passed the test (respectively 1.9 and 2.2 according to scale 1 and 3.2 and 3.4 – according to the scale 2).

Thus, a conventional profile of the majority of people covered by testing is the following: people over the age of 25, having no imprisonment experience, homo - or bisexuals who live alone or with a male partner, and have a medium or high level of income (but somewhere it also includes beggars).

Another group, the inclusion of which into the programs of HIV service needs to be strengthened, respectively, consists of people with low income (but not beggars), married or living with women, having the experience of imprisonment.

ACCESS TO TREATMENT PROGRAMS FOR PLWH MSM

As noted above, the vast majority of respondents at least once in their lives have applied for a test for HIV infection, passed it and know the result. Among the MSM who have received a positive HIV test result during the study, indicators have been defined regarding their access to treatment programs: knowing their HIV positive status, undergoing dispensary supervision due to HIV infection, receiving ART medication (Fig. 19).

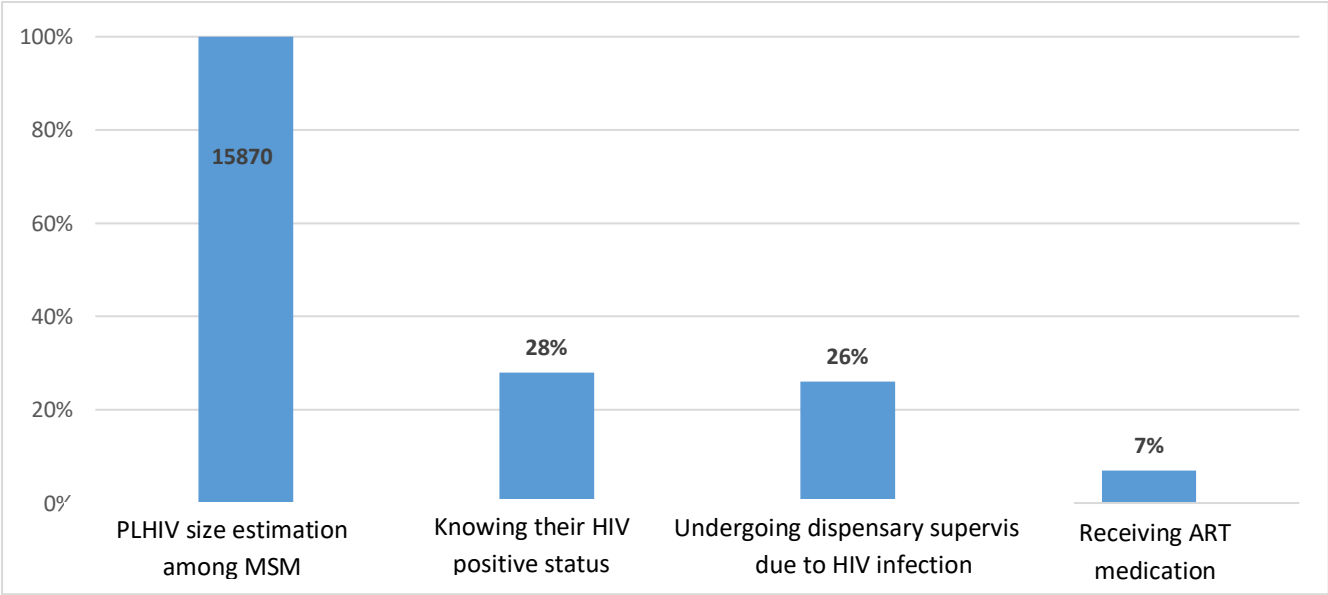


Fig. 19. Cascade of access to HIV treatment services for HIV-positive MSM

- **The estimated number of PLWH among MSM:** the estimated number of MSM, as of 2014 (186 700 MSM), multiplied by the HIV prevalence among MSM, according to the study findings (8.5 percent).
- **Knowing their HIV-positive status:** the percentage of MSM who reported during the interview that they had a HIV-positive result from the preliminary testing, among those who got a positive result of a rapid HIV test and agreed to answer questions about HIV status.
- **Enrolled on the dispensary record as a HIV-positive person:** status: the percentage of MSM who reported during the interview that they were registered with the dispensary as HIV positive persons, among those who got a positive result of rapid HIV test and agreed to answer questions about HIV status.
- **Taking ART:** the percentage of MSM who reported during the interview that they were taking ART among those who got a positive result of rapid HIV test and agreed to answer questions about HIV status.

Almost all (98%) of PLWH MSM who reported that they were registered with the AIDS center, were tested for the number of CD4-cells, and 96% of them know the results of this test.

HIV KNOWLEDGE

The national indicator of basic knowledge about HIV/AIDS is calculated as the percentage of people who gave correct answers to five questions. These test questions are: *"Is it possible to reduce the risk of HIV transmission by having sex with only one faithful, uninfected partner?"*, *"Is it possible to reduce the risk of HIV transmission if you consistently use a condom during sexual contacts?"*, *" Can a healthy looking person have HIV infection"*, *" Can you get HIV if you drink from the same glass with a HIV-infected person?"*, *" Can you get HIV if you share toilet, swimming pool, sauna with an HIV-infected person?"*.

60% of MSM correctly answered these test questions. The main connections (Table 28) were the following: the highest level of knowledge about HIV was demonstrated by the MSM in Ternopil (85% correctly answered to all 5 questions), Cherkasy (81%) and Kropyvnytskyy (79%), the lowest – in Kharkiv (41%), Lviv (39%) and Chernihiv (19%). Older respondents have higher level of basic HIV knowledge compared to younger ones, as well as those who live in a registered marriage; those who live with a partner (woman or man), are better informed about HIV; respondents with a higher education level have a higher level of knowledge about HIV, and MSM with a lower level of financial situation have a lower level; among the MSM who had been in prison, a somewhat lower level of knowledge about HIV is documented; the MSM reporting that they are sexually attracted only to women have a

lower level of HIV knowledge compared to others; the clients of organizations dealing with HIV prevention and working with MSM have a considerably higher level of knowledge.

Table 27. The proportion of MSM who correctly answered five basic questions about HIV/AIDS in different subgroups

Characteristics	% (95% CI)
City, $p < 0.001$	
Bila Tserkva	68 [60–76]
Vinnytsya	59 [52–66]
Dnipro	62 [55–69]
Donetsk	60 [54–66]
Zhytomyr	58 [51–66]
Zaporizhya	67 [59–75]
Ivano-Frankivsk	55 [47–64]
Kyiv	50 [44–56]
Kropyvnytskyy	77 [71– 83]
Lutsk	59 [51–68]
Lviv	37 [27–46]
Mykolayiv	54 [46–62]
Odesa	44 [36–53]
Poltava	70 [62–78]
Rivne	72 [65–79]
Simferopol	75 [67–83]
Sevastopol	60 [54–65]
Sumy	64 [57–72]
Ternopil	87 [82–92]
Uzhgorod	65 [55–74]
Kharkiv	40 [31–49]
Kherson	49 [41–57]
Khmelnyskyy	42 [34–51]
Cherkasy	80 [75–86]
Chernivtsi	69 [62–77]
Chernihiv	20 [12–27]
"Do you consider yourself to be a transgender person?", $p > 0.05$	
No	60
Yes	62
Age, years, $p < 0.001$	
Under 24	56
25 and older	62
Legal marital status, $p < 0.001$	
Never married	59
In a registered marriage	65
Divorced	62
Widower	58
Actual family status, $p < 0.001$	

Characteristics	% (95% CI)
Lives with parents/relatives	58
Lives alone	58
Lives with male partner	65
Lives with female partner	68
Education, $p < 0.001$	
Basic secondary (9 years)	48
Complete secondary (11 years)	54
Secondary vocational (technical)	61
Basic higher (BA)	58
Graduate and postgraduate (Master, Specialist, PhD)	63
"How would you estimate your financial condition?", $p < 0.001$	
Often lacking money for food - sometimes begging	13
Not enough money for food	47
Sufficient money only for food	60
Generally enough money for basic needs	61
Enough money for everything one needs, but unable to make savings	59
Enough for everything one needs, able to make savings	62
Well-off	67
Dependent on parents	54
"Have you ever been imprisoned – in temporary detention facilities, pre-trial detention facilities, correctional facilities?", $p < 0.001$	
Yes	57
No	60
"You are sexually attracted to... ?", $p < 0.001$	
Only men	61
Mostly men but sometimes women	57
Men and women are approximately equally attractive	58
Mostly women, but sometimes men	62
Only women	46
I cannot decisively tell	55
"Which of the below terms defines your sexual orientation in a most precise way?", $p < 0.001$	
Homosexual	60
Bisexual	59
Heterosexual	60
Difficult to answer	49
"Do you know the HIV status of your last partner (male/female)?", $p < 0.001$	
Yes	66
No	56

There is no connection between the indicator of knowledge about HIV and internalized homophobia – the groups of those who gave the correct answers and those who made mistakes do not differ in homonegativity.

PREVALENCE OF HIV, HEPATITIS B, HEPATITIS C, SYPHILIS

This section presents the data on the prevalence of HIV, Hepatitis B, Hepatitis C, and syphilis among MSM according to the results of the associated stage of the study which is testing with a rapid combo test. The obtained test results were compared with the obtained results of the enquiry, when respondents reported about the results of their preliminary examination if they had such an experience.

Each respondent, regardless of previous experience of testing, submitted blood sample for HIV testing after the survey. Overall, 8.5% of MSM got positive HIV screening results, which is slightly more than the results of the 2013 study (5.9 %). The situation in individual cities is significantly different (Table 29) from Ternopil (1%) to Sevastopol and Donetsk (17 and 23%, respectively).

Table 28. Prevalence of HIV among various subgroups of MSM according to the results of testing with rapid combo tests

Characteristics	% (95% CI)
City, $p < 0.001$	
Simferopol	5,3% (1,8–8,8)
Vinnytsia	3,3% (0.4–6,2)
Lutsk	3,8% (0.3–7,3)
Dnipropetrovsk	8,9% (4,4–13,4)
Donetsk	18,8% (14,7–22,9)
Zhytomyr	4,8% (1,4–8,2)
Uzhgorod	1,4% (0.1–2,9)
Zaporizhya	4,6% (0.9–8,2)
Ivano-Frankivsk	4,2% (1,4–7,1)
Bila Tserkva (Kyiv oblast)	4,5% (1,2–7,9)
Kirovohrad	3,3% (1,2–5,4)
Lviv	5,1% (1,4–8,7)
Mykolayiv	3,5% (0.8–6,2)
Odesa	12,3% (5,7–18,9)
Poltava	0.6% (0.1–1,5)
Rivne	3,2% (0.1–9,9)
Sumy	2,3% (0.1–4,8)
Ternopil	0.5% (0.1–1,5)
Kharkiv	2,3% (0.6–3,9)
Kherson	9,0% (4,6–13,3)
Khmelnyskyy	2,9% (0.7–5,1)
Cherkasy	15,6% (10.5–20.7)

Chernivtsi	6,0% (2,0–10,0)
Chernihiv	1,0% (0,1–2,5)
Kyiv	15,3% (10,8–19,8)
Sevastopol	17,7% (12,6–22,7)
"Do you consider yourself to be a transgender person?", $p = 0.529$	
No	9
Yes	7
Age, years, $p < 0.001$	
Under 24	5
25 and older	10
Legal marital status, $p = 0.077$	
Never married	9
In a registered marriage	6
Divorced	7
Widower	14
Actual family status, $p < 0.001$	
Lives with parents/relatives	7
Lives alone	8
Lives with male partner	13
Lives with female partner	4
Education, $p = 0.198$	
Basic secondary (9 years)	10
Complete secondary (11 years)	8
Secondary vocational (technical)	10
Basic higher (BA)	7
Graduate and postgraduate (Master, Specialist, PhD)	9
"How would you estimate your financial condition?", $p=0.754$	
Often lacking money for food - sometimes begging	15
Not enough money for food	12
Sufficient money only for food	9
Generally enough money for basic needs	8
Enough money for everything one needs, but unable to make savings	9
Enough for everything one needs, able to make savings	8
Well-off	7
Dependent on parents	6
"Have you ever been imprisoned – in temporary detention facilities, pre-trial detention facilities, correctional facilities?", $p=0.143$	
Yes	12
No	8
"You are sexually attracted to... ", $p=0.004$	
Only men	9
Mostly men but sometimes women	8
Men and women are approximately equally attractive	6

Mostly women, but sometimes men	6
Only women	14
I cannot decisively tell	0
"Which of the below terms defines your sexual orientation in a most precise way?", $p=0.018$	
Homosexual	9
Bisexual	7
Heterosexual	7
Difficult to answer	9
"Do you know the HIV status of your last partner (male/female)?", $p<0.001$	
I know their HIV status - it is negative	7
I know their HIV status - it is positive	33
I do not know his/her HIV status	11
"Are you a client of the organization providing HIV prevention services to MSM?", $p=0.038$	
Yes	9
No	8
Basic HIV knowledge indicator, $p=0.263$	
Does not know about HIV	7
Knows about HIV	8

A higher HIV prevalence level was documented in older age groups. The highest prevalence of HIV among widowers can be attributed to the small size of this group which was included in the study. However, married MSM practice safer lifestyle, and perhaps this explains the lowest HIV prevalence in this group (6%). There is also a higher prevalence of HIV among the MSM who live with a male partner (13%), in contrast to those who live with a female partner (4%).

Table 29. Prevalence of Hepatitis B, Hepatitis C and syphilis among various subgroups of MSM according to the results of testing with rapid combo tests

Characteristics	Prevalence of Hepatitis B, %	Prevalence of Hepatitis C, %	Prevalence of syphilis, %
"Do you consider yourself to be a transgender person?"	$p=0.567$	$p=0.559$	$p=0.057$
No	3	4	3
Yes	4	5	0
Age, years	$p=0.548$	$p=0.001$	$p=0.003$
Under 24	3	3	2
25 and older	3	5	3
Legal marital status	$p=0.268$	$p=0.002$	$p=0.147$
Never married	3	3	3
In a registered marriage	2	5	1

Divorced	3	7	3
Widower	7	9	6
Actual family status	<i>p=0.969</i>	<i>p=0.543</i>	<i>p=0.084</i>
Lives with parents/relatives	3	4	2
Lives alone	3	4	3
Lives with male partner	3	5	3
Lives with female partner	3	4	1
Education	<i>p=0.684</i>	<i>p=0.011</i>	<i>p=0.802</i>
Basic secondary (9 years)		8	3
Complete secondary (11 years)		4	3
Secondary vocational (technical)	3	5	3
Basic higher (BA)	2	3	3
Graduate and postgraduate (Master, Specialist, PhD)	3	3	3
"How would you estimate your financial condition?"	<i>p=0.798</i>	<i>p=0.025</i>	<i>p=0.713</i>
Often lacking money for food - sometimes begging	7	10	7
Not enough money for food	3	6	3
Sufficient money only for food	3	5	3
Generally enough money for basic needs	3	4	3
Enough money for everything one needs, but unable to make savings	3	3	2
Enough for everything one needs, able to make savings	4	3	4
Well-off	0.4	4	4
Dependent on parents	0	0	0
"Have you ever been imprisoned – in temporary detention facilities, pre-trial detention facilities, correctional facilities?"	<i>p=0.478</i>	<i>p=0.001</i>	<i>p=0.001</i>
Yes	3	13	8
No	3	4	3
"You are sexually attracted to... ?"	<i>p=0.712</i>	<i>p=0.008</i>	<i>p=0.603</i>
Only men	3	3	3
Mostly men but sometimes women	3	5	3
Men and women are approximately equally attractive	2	5	3
Mostly women, but sometimes men	3	6	1
Only women	0	0	0
I cannot decisively tell	0	0	4
"Which of the below terms defines your sexual orientation in a most precise way?"	<i>p=0.411</i>	<i>p=0.001</i>	<i>p=0.887</i>
Homosexual	3	4	3
Bisexual	3	5	3
Heterosexual	0	0	3
Difficult to answer	0	7	2

"Are you a client of the organization providing HIV prevention services to MSM?"	<i>p=0.105</i>	<i>p=0.231</i>	<i>p=0.567</i>
Yes	2	3	2
No	3	5	3
Basic HIV knowledge indicator	<i>p=0.58</i>	<i>p=0.24</i>	<i>p=0.567</i>
Does not know about HIV	3	5	4
Knows about HIV	3	4	3

The prevalence of Hepatitis B in Ukraine as a whole is 2.7% (Table 30). Among widowers and people with a very low standard of living the prevalence of Hepatitis B is twice as high as among all the others, while no statistically significant differences depending on age, experience of staying in prison, gender identity and experience of use of services of public HIV service organizations are observed.

Among groups of MSM with complete financial security (their own or provided by parents), heterosexual or not defined sexual orientation, as well as with incomplete secondary education a lower prevalence of Hepatitis B is observed.

Hepatitis C is associated with the parenteral way of infection (tattoos, non-sterile injections and the like). According to the results of testing the prevalence of Hepatitis C in Ukraine is 4.2% in general among the MSM group (Table 30). This index gradually increases in the groups defined according to different family status and is the smallest among the people who are not married, larger among married, and the largest among divorced and widowed, which may partly be due to age (among respondents under the age of 25 years, the prevalence is lower than among more mature ones).

However, statistically significant differences in the prevalence of Hepatitis C are documented in the groups according to different educational level - among the respondents with a higher education level the percentage of those who were infected with Hepatitis C is less. A larger percentage of those who got a positive result for Hepatitis C is found among people having less incomes compared to wealthier MSM. While the least financially secure respondents more often have the experience of staying in prison.

The prevalence of syphilis. Connection of the prevalence of Hepatitis C with internal homophobia is quite noticeable: among people having a positive test result for Hepatitis C, the level of internal homophobia is higher than among those whose test result was negative (respectively, of 2.4 and 2.1 on the scale of 1 and 3.5 and 3.3 on the scale 2). The general prevalence of syphilis in Ukraine is 3%, (Table 30), and the highest one is found among MSM in Kharkiv (11%). Among transgender persons no single case of syphilis has been documented, while its prevalence among cisgender persons is 3%. The prevalence of syphilis does not differ depending on the educational level, sexual orientation, status of a HIV

service client and age. However, this figure has some differences depending on marital status, experience of staying in prison and financial status.

KEY HIV SEROCONVERSION FACTORS

HIV-positive status is still perceived as a stigma, which is why HIV-infected people in certain situations hide it (17% of those who did the test and know their results, researchers did not want to report their status).

That is why the research of factors associated with HIV-positive status taking into account only the self-representation of a person may be distorted. However, the results of a biological component only also do not provide a complete picture, because a person could have been infected for a long time and, knowing this, behaves more safely. Therefore, the data which is more relevant for the development of HIV prevention programs can be obtained only from the combination of what a respondent says, and what the results of a blood test demonstrate.

Some of the respondents (2816 people) have passed a test for HIV before the survey, know their result and say that it was negative. As the result of testing during the survey the HIV status of a respondent could either remain negative or change to positive. The second instance (167 people, or 4%) means that during the time from the previous test to this study seroconversion could occur, that is, a person has become infected.

It should be noted that 4% of seroconversion in the whole sample means that most MSM who have got the HIV-positive results for HIV during the study already knew their status, therefore, they could receive an appropriate treatment and have greater motivation for safer behavior. It's also worth remembering that in a similar 2013 study the seroconversion was observed in 1% of the respondents.

There are significant discrepancies between the cities – in Kyiv, Donetsk, Odesa and Sevastopol seroconversion is the highest, and in some ones it is equal to zero or does not exceed 4%.

The relationship between the event (seroconversion) and other factors were studied using binary logistic regression. The variables that in the bivariate distributions (Table 32) were associated with seroconversion at the level $p \leq 0.2$ were included to the initial models.

Table 30. Bivariate analysis of HIV seroconversion factors among various subgroups of MSM

Characteristics	%
City, $p < 0.001$	
Bila Tserkva	2
Vinnytsya	0
Dnipro	4

Donetsk	15
Zhytomyr	3
Zaporizhya	1
Ivano-Frankivsk	1
Kyiv	10
Kropyvnytskyy	0
Lutsk	1
Lviv	3
Mykolayiv	2
Odesa	11
Poltava	0
Rivne	2
Simferopol	2
Sevastopol	12
Sumy	1
Ternopil	0
Uzhgorod	1
Kharkiv	2
Kherson	3
Khmelnyskyy	1
Cherkasy	4
Chernivtsi	1
Chernihiv	0
Age, years, $p=0.001$	
Under 24	2
25 and older	5
Legal marital status, $p<0.001$	
Never married	5
In a registered marriage	1
Divorced	2
Widower	11
Actual family status, $p<0.001$	
Lives with parents/relatives	4
Lives alone	4
Lives with male partner	6
Lives with female partner	1
Education, $p=0.059$	
Basic secondary (9 years)	7
Complete secondary (11 years)	3
Secondary vocational (technical)	3
Basic higher (BA)	3
Graduate and postgraduate (Master, Specialist, PhD)	5
"You are sexually attracted to..." , $p=0.001$	

Only men	5
Mostly men but sometimes women	3
Men and women are approximately equally attractive	2
Mostly women, but sometimes men	1
Only women	14
I cannot decisively tell	0
"Which of the below terms defines your sexual orientation in a most precise way?", $p=0.001$	
Homosexual	5
Bisexual	3
Heterosexual	3
Difficult to answer	5
"Did you practice group sex during the last 6 months (more than one sexual partner at once)?", $p=0.1$	
No	4
Yes, with men (women did not participate)	5
Yes, with women (men did not participate)	0
Yes, with men and women at the same time	2
"Are you a client of the organization providing HIV prevention services to MSM?", $p=0.2$	
Yes	4
No	4
"How did you find male partners in the last 6 months: In clubs, saunas and other leisure facilities?", $p=0.08$	
No	4
Yes	3
"How did you find male partners in the last 6 months: using the help of your friends?", $p<0.001$	
No	5
Yes	2
"How did you find male partners in the last 6 months: at "hotspots"?", $p=0.4$	
No	4
Yes	3
"How often during the last 30 days have you used a condom during anal intercourse with male partners?", $p=0.2$	
Always	4
In most cases	5
Half the time	4
Sometimes	7
On rare occasions	4
Never	3
"Were there any instances in the last 30 days when a sexual act began without a condom (a condom was put on in the process of the act)?", $p=0.02$	
Yes	4
No	6
Don't remember	3
"Did you use a condom during the last anal sexual contact with a male partner?", $p=0.007$	

Yes	3
No	5
"How often in the last 6 months did you use a lubricant during anal intercourse with a male partner (both active and passive roles)?", $p=0.005$	
Always	5
In most cases	2
Half the time	3
Sometimes	2
On rare occasions	1
Never	2
"During the last anal sexual intercourse, was a special lubricant used?", $p=0.001$	
Yes	3
No	1
Difficult to answer	2
"Did you use the sexual services of female sexual workers in the last 6 months?", $p=0.2$	
Yes	2
No	4
"Did you have sexual contacts with transgender persons?", $p=0.01$	
Yes	7
No	4
" Did you use during the last 12 months legal sexual stimulants (Viagra, Cialis, Potentiale etc)?", $p=0.2$	
Yes	5
No	4
Used in the past	2
"Some people try different drugs. Did you use non-injection drugs?", $p=0.1$	
Yes, used in the last 30 days	3
Yes, used in the last 12 months	2
Yes, used over a year ago	1
Once long ago I tried but I don't remember anymore when it was	4
Never used and never tried	4
No answer	5
"Some people try injection drugs. Did you use injection drugs?", $p=0.005$	
Yes, used in the last 30 days	20
Yes, used in the last 12 months	14
Yes, used over a year ago	0
Once long ago I tried but I don't remember anymore when it was	3
Never used and never tried	4
No answer	9
Indicator: passing HIV test and receiving result within 12 months ., $p=0.001$	
No	5
Yea	3
Indicator: coverage with prevention during 12 months., $p=0.05$	

No	3
Yes	4
"Do you know the HIV status of your last permanent sexual partner?", $p < 0.001$	
Yes, I know the HIV status - it is negative	3
Yes, I know the HIV status - it is positive	21
Do not know his/her HIV status	5
"How important it is for you to know the HIV status of individuals with whom you have sex?", $p = 0.01$	
Very important	4
Rather important	3
Rather not important	5
Absolutely not important	9
"Have you passed medical examinations and tests to prevent diseases, not to address the health problems you have already faced, in the last 12 months?", $p = 0.14$	
Yes, I have passed medical examinations and tests	4
Yes, I have passed medical examinations only	4
Yes, I have passed tests without additional medical examinations	5
No	3
"Did you have the following diseases within the last 12 months ... ? – Hepatitis B", $p = 0.08$	
Yes	10
No	4
"Did you have the following diseases within the last 12 months... ? – Hepatitis C", $p = 0.001$	
Yes	15
No	4
"Did you have the following diseases within the last 12 months ... ? – Other sexually transmitted infections", $p = 0.08$	
Yes	10
No	4
Testing the respondent's blood for Hepatitis C, $p = 0.03$	
Positive	7
Negative	4
Testing the respondent's blood for Hepatitis B, $p = 0.005$	
Positive	9
Negative	4
Testing the respondent's blood for syphilis, $p = 0.001$	
Positive	9
Negative	4

After simplifying the original model (according to the step-by-step algorithm of eliminating insignificant variables and the Wald's method, missed responses were treated as substantive variants) the following results were obtained (Table 33).

Table 313. The calculation results of the logistic model that connects the probability of seroconversion of HIV with other factors. (N = 4334)

Independent variables	AOR	95% CI	
Respondent's age (ref. = "Under 25"), $p < 0.001$			
25 years or older	2.5	1.6	3.7
"Legal marital status" (ref. = "Never married"), $p = 0.001$			
Live in a registered marriage with a woman	0.1	0.0	0.8
Divorced	0.3	0.1	0.6
Widower	1.9	0.5	6.7
With whom do you live together and manage the household? (ref. "With parents/relatives"), $p = 0.062$			
Alone, with male or female cohabitants	0.8	0.5	1.1
With a male partner	1.4	0.9	2.2
With a female partner	1.9	0.4	8.6
"You are sexually attracted to ...?" (ref. = "Only men"), $p = 0.091$			
Only men, but sometimes women	0.7	0.4	1.1
Men and women approximately to the same extent	0.6	0.3	1.1
Only women, but sometimes men	0.2	0.0	1.4
Only women	4.5	0.5	43.3
I haven't decided yet	0.0	0.0	
"How did you find male partners in the last 6 months? – Using the help of friends" (ref. = "No"), $p < 0.001$			
Yes	0.5	0.3	0.7
"Were there any instances in the last 30 days when a sexual act began without a condom (a condom was put on in the process of the act) ?" (ref. = "No"), $p = 0.010$			
Yes	1.6	1.1	2.5
Don't remember	1.0	0.1	8.7
Question wasn't asked	0.6	0.4	1.0
Usage of a condom during the last anal sexual contact with a male partner (ref. = "Yes"), $p = 0.025$			
No	1.5	1.1	2.2
Passing HIV testing during the last 12 months (ref. = "Yes"), $p = 0.063$			
No	1.4	1.0	1.9
"During your last anal sexual intercourse, was a special lubricant used?" (ref. = "Yes"), $p = 0.025$			
No	0.5	0.2	1.2
Difficult to answer	0.9	0.1	7.4
Question wasn't asked	1.5	0.9	2.4
"Did you have sexual contacts with transgenders?" (ref. = "No"), $p = 0.030$			
Yes	1.8	1.1	3.1
"Do you know the HIV status of your last permanent sexual partner?" (ref. = "Yes, I know the HIV status - it is negative"), $p = 0.002$			
Yes, I know the HIV status - it is positive	5.7	2.3	14.1
Do not know his/her HIV status	1.6	0.9	2.6

No answer	1.9	0.6	5.8
Question wasn't asked	1.4	0.9	2.1
"How important it is for you to know the HIV status of individuals with whom you have sex?" (ref. = "Very important"), $p = 0.079$			
Rather important	1.0	0.6	1.5
Rather not important	1.0	0.5	1.9
Absolutely not important	2.6	1.3	5.2
Difficult to answer	1.2	0.3	5.5
"Did you have the following diseases within the last 12 months... ? – Other sexually transmitted infections" (ref. = "No"), $p = 0.081$			
Yes	2,2	0.9	5,6
The presence of Hepatitis B virus as a result of the blood test (ref. = "No"), $p = 0.025$			
Yes	2.3	1.1	4.7
The presence of syphilis as a result of the blood test (ref. = "No"), $p = 0.007$			
Yes	2.5	1.3	4.8

The main factors associated with HIV seroconversion are the following: belonging to the age group 25+ (AOR 2.5 [1.6–3.7]); the presence of experience of a formal heterosexual marriage (for people married at the present time (AOR 0.1 [0-0.8]); for divorced (AOR, 0.3 [0.1–0.6]) compared with the not married people); searching for sexual partners through friends or acquaintances (AOR 0.5 [0.3–0.7]); the instances when a sexual act started without a condom (AOR 1.6 [1.1–2.5]); not using a condom during the last anal sex with a man (AOR 1.5 [1.1–2.2]); the experience of sex contacts with transgender people (AOR 1.8 [1.1–3.1]); having a HIV-positive partner (AOR 5.7 [2.3–14.1]); indifference to the HIV status of sexual partners (AOR, 2.6 [1.3–5.2] for those to whom it is “Absolutely not important” compared to those who think it is “Very important” to know it); the presence in blood of markers of Hepatitis B virus (AOR 2.3 [1.1–4.7]) and syphilis (AOR 2.5 [1.3–4.8]).

As you can see, the factors which are associated with less chance of seroconversion include the experience of a heterosexual marriage and the search for sexual partners using the help of friends and acquaintances.

The experience of marriage is connected in bivariate distributions with less sexual contacts with male partners (married people had on average four oral contacts (unmarried – 6) with other men in 30 days, two receptive anal contacts (unmarried had 4) etc.; more frequent condom use (within 30 days 60% of married men always used a condom during homosexual contacts, while among the unmarried ones the figure was 50%; during the last anal sex with a man 67% of married men used a condom and 64% of unmarried used it, too); less "popularity" of anal sex (within 6 months 87% of married men and 91% of unmarried men had anal sex with a man); more frequent condom use even with regular male partners (84% of married men had protected anal sex with a regular partner during the last time and the figure among the unmarried ones was 65%).

Using the recommendations of friends or acquaintances in search of male sexual partner, on the one hand, may be due to a more cautious attitude towards new acquaintances (unfortunately, it is impossible to confirm or disprove this assumption using the available data), and on the other hand the choice of this dating method is associated with bisexuality both in terms of identity (54% of respondents who called their orientation bisexual, used to search for the men through friends and acquaintances, compared with 51% of those who called themselves homosexuals) and in terms of behavior (56% of married and divorced and 60% of those who are mostly sexually attracted to women have used this method of dating, in contrast to 51% of not married and 52% of those who are sexually attracted to, men only, or mostly men).

The factors that are associated with greatest chance of seroconversion can be divided into three groups: age – the chances of seroconversion in adults is almost three times greater than in MSM under 25; close contact with HIV-positive people (a respondent having a HIV-positive partner or the indifference of a study participant to the HIV status of his sexual partners), as well as dangerous sex (unprotected sexual intercourse, experience of sexual contact with transgender people, the presence of markers of Hepatitis B virus and syphilis in blood, because Hepatitis B, syphilis and HIV are not transmitted only by parenteral way, but by sexual way also).

Despite the fact that the group of MSM having 25 years of age or older includes more of those men who have the experience of a heterosexual marriage (they, as shown above, are characterized by the safer sexual behavior), a greater age in bivariate distributions is associated with such risks: frequent visits to anonymous sex places (“hotspots”, parks, etc.) – 23% among the group of 25+ have been looking for a sexual partner there, while the younger group included 15% of such men; less use of special lubricant during anal sex with men - among MSM 25+ it was used by 18% during the last anal sexual intercourse, while among the younger group this indicator was 20%; more frequent use of poppers – 15% of adult respondents used it during 12 months, in contrast to 13% of younger ones; more frequent use of strong alcohol – 44% of MSM 25+ prefer vodka and other concentrated alcohol, while among younger respondents this index is 27%; there is a larger proportion of adults who have experience of imprisonment, – 6% among the 25+ vs 1% among MSM under 25 years.

CONCLUSIONS

SOCIAL AND DEMOGRAPHIC PROFILE OF MSM. Age of surveyed MSM ranged from 14 to 70, average age was 29 years. Among MSM there are three times more young people under 30 than among the general population. Most of the respondents were not married and lived alone.

The vast majority of MSM (95%), as well as in previous years, had no experience in prison. Among the former prisoners 37% had the experience of heterosexual marriage, while among those who never served his sentence this indicator was 3%. The former prisoners are characterized by lower and low material level.

MSM often pointed out that they are attracted to only men or mostly men (80%). Internet was one of prevailing ways to seek partners (72%).

OFFENSES AND BIASED ATTITUDE TOWARDS LGBT. As MSM themselves reported, the attitude towards LGBT by representatives of law enforcement and informal power structures, slightly changed for the better in comparison with 2013. One fifth of MSM had experience of informal detention by the security forces, about a fifth of respondents faced violent actions towards them. Usually these were verbal abuse, humiliation (19%), threats, extortion, blackmail (13%), violent interrogations (10%), beatings, use of force (11%).

SEXUAL BEHAVIOR. The interviewed MSM had first sexual experience with a man in average at 18 years. While slightly more than half (57%) indicated having a permanent sexual partner, 18% of them apart from regular partners in the last six months also had casual partners, and 24% - several types of partners. In addition, there is a multiple partnership when there are more than one permanent partners. Use of condoms with permanent partners is traditionally the lowest, while with commercial partners – the highest. Commercial sex is fairly common (both if purchased and provided). Sometimes, the same person provided commercial sex services and bought them (7% of cases). The spread of HIV from MSM groups to the general population can occur through sexual intercourse with women.

The practice of improper condom use is an additional risky type of sexual behavior in the sample, as well as the lack of knowledge of HIV status of one's last male or female partner while not using a condom. A large proportion of respondents did not know the HIV status of their partners, not everyone thinks that they strongly need it, even more so that partners should know their HIV status.

Most respondents used a condom during their last sexual intercourse with a male partner (predominantly people aged 20-24 years, financially secure). The condom was usually provided by social workers, which is typical for clients of MSM/LGBT service organizations. 87% of respondents used it during the last sex with varying frequency.

PRACTICE OF ALCOHOL AND DRUG USE. The vast majority of MSM (83%) drink alcohol of varying strength, most frequently – strong liquors (46%). 39% of respondents had used non-injection drugs, and 5% - injecting, most of them have tried them long ago. Risky sexual behavior is closely related to the practice of drinking alcohol - 67% of MSM had sex while intoxicated (80% of those who used alcohol).

PREVENTION PROGRAMS COVERAGE. 54% of respondents were covered by prevention programs, while this result varies considerably in different cities - from 2% in Khmelnytsky to 93% in Chernihiv. Depending on the "lower degree" of homosexuality, prevention coverage is decreasing. Younger respondents, although characterized by less safe sexual behavior, are less covered with prevention programs than older respondents. Low-income MSM are less covered with prevention programs than the more affluent ones. In groups with higher education the prevention coverage is generally higher. However, respondents with incomplete secondary education are covered more than MSM with complete secondary education.

INTERNAL HOMOPHOBIA LEVEL. The level of internal homophobia varies considerably in different cities, being the highest among the surveyed MSM in Kropyvnytsky, Zhytomyr and Ivano-Frankivsk, the lowest - in Chernihiv and Ternopil. Respondents with higher education demonstrate lower level of rejection of themselves as homosexual or bisexual; people with low financial status perceive homosexuality worse than the more affluent ones; experience of being in prison is associated with higher internal homophobia; the farther a respondent is from "pure homosexuality" end of scale, the higher level of homonegativity they demonstrate. HIV service clients have also shown a better acceptance of themselves as gay or bisexual men.

HIV TESTING. HIV service NGOs, AIDS centers and trust cabinets are prevalent in providing counseling and testing for MSM, 79% among which sought HIV testing at least once. Those who did not, most often said they were just not motivated, confident in their safety or did not know where to get tested, or were afraid that their confidentiality will be breached. Summarized profile of the majority covered by testing is as follows: people older than 25, with no experience of imprisonment, gay or bisexual who live alone or with a male partner, have a medium-high level of financial status (but sometimes there are beggars). Another group for which HIV services should be strengthened, accordingly, consists of people with low income (but not beggars), or married or living with women, as well as those who have experience of imprisonment.

HIV PREVALENCE. Overall, 8.5% of MSM were carriers of immunodeficiency virus, which significantly higher than in the pre-war period (5.9%). The situation in some cities is very different - from Ternopil (0.5%) to Sevastopol, Donetsk (17 and 23% respectively). The main increase in prevalence is observed in the group aged under 25.

KEY HIV SEROCONVERSION FACTORS. Since the previous test and till this study seroconversion occurred in 4% of MSM, while in a similar study in 2013 it was fixed at 1% of the respondents, which may indicate the growing incidence of HIV. The highest seroconversion is observed in Kyiv, Donetsk, Odessa and Sevastopol.

Factors associated with a higher chance of seroconversion can be divided into three groups: age - chances of seroconversion in adults is almost three times larger than the MSM under 25; close contact with HIV-positive people (a HIV-positive partner of the respondent or indifference of the research participant to the HIV status of his sexual partners) and unsafe sex (unprotected sexual intercourse, the experience of sexual intercourse with transgenders, presence of Hepatitis B and syphilis markers in blood, as Hepatitis B, syphilis and HIV are transmitted not only by parenteral route, but also sexually).

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**ANALYTICAL REPORT
MONITORING OF BEHAVIOR AND HIV PREVALENCE AMONG MEN HAVING SEX WITH MEN
(NATIONAL PART)**

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