UKRAINIANS AND AMERICANS IN PARTNERSHIP TO FIGHT HIV/AIDS
PEPFAR

METIDA
M&E-related Technical Assistance and Improved Data Application in HIV

Alliance for Public Health

MONITORING OF BEHAVIOR AND HIV PREVALENCE AMONG PEOPLE WHO INJECT DRUGS AND THEIR SEXUAL PARTNERS

Results of the 2015 study

Kyiv • 2016

UKRAINIANS AND AMERICANS
IN PARTNERSHIP TO FIGHT HIV/AIDS
PEPFAR

METIDA
M&E-related Technical Assistance
and Improved Data Application in HIV

Alliance
for Public Health

Results of the 2015 study

Monitoring of Behavior and HIV Prevalence among People Who Inject Drugs and Their Sexual Partners

Kyiv, 2016

УДК
ББК

Authors:
Y. Barska (1)
Y. Sazonova (2)

(1) Independent researcher
(2) Alliance of Public Health

Monitoring of behavior and HIV prevalence among people who use injecting drugs and their sexual partners / Y. Barska, Y. Sazonova. – K.: ICF "Alliance of Public Health", 2016. – 130 p.

The report is based on the 2015 study "Monitoring of behavior and HIV prevalence among the injecting drug users and their sexual partners as a component of second generation HIV surveillance». The study results presented in the report describe social and demographic structure of the group, provide information about the prevalence of key risky sexual and behavioral practices, level of access to the prevention and treatment programs, HIV, HBV, HCV and syphilis prevalence.

Drafting and publication of this report were made possible with the technical support of the Project "Engaging Local Indigenous Organizations in Improving Monitoring and Evaluation of HIV in Ukraine" (METIDA), implemented by ICF "Alliance of Public Health", funded by the Centers for Disease Control and Prevention (CDC), within the President's Emergency Plan for HIV/AIDS Relief (PEPFAR).

This publication is supported by the Cooperative Agreement No. U2GGH000840 with the U.S. Centers for Disease Control and Prevention. The authors are solely responsible for the contents of this publication, which does not necessarily reflect the official positions of U.S. Centers for Disease Control and Prevention (CDC).

УДК
ББК

Content

ACRONYMS 9

SUMMARY 10

INTRODUCTION 11

METHODOLOGY 13

OBJECTIVES 13
TARGET POPULATIONS 13
SAMPLING DESIGN AND METHOD 14
GEOGRAPHY 14
SAMPLE SIZE 14
TIME AND PLACE 16
DATA COLLECTION METHODS 16
ETHICS 17
DATA QUALITY ASSURANCE 17
DATA ANALYSIS 18

SECTION 1. SOCIODEMOGRAPHIC PROFILE OF PWID 19

SECTION 2. DRUG USE PRACTICE 22

INITIATION OF DRUG USE 22
DRUG STAGE PARAMETERS 26
FREQUENCY OF INJECTED DRUG USE 29
PROCUREMENT METHOD, COSTS AND AVAILABILITY OF THE MAIN DRUG 30
PREVALENCE OF DANGEROUS PRACTICES RELATED TO INJECTED DRUG USE 34
OVERDOSING AND DRUG DEPENDENCE TREATMENT 40

SECTION 3. SEXUAL BEHAVIORS 42

SEXUAL ACTIVITY 42

USING A CONDOM FOR THE LAST SEXUAL CONTACT 42

SEXUAL RELATIONS WITH DIFFERENT TYPES OF PARTNERS AND USING CONDOMS IN SUCH RELATIONS 43

TRENDS IN SEXUAL BEHAVIORS OF PWID 44

GROUP SEX EXPERIENCE 44

HOMOSEXUAL CONTACTS 44

SECTION 4. AWARENESS OF HIV TRANSMISSION ROUTES 55

SECTION 5. PRESENCE OF SEXUALLY TRANSMITTED INFECTIONS AND OTHER DISEASES 59

SECTION 6. PREVENTION PROGRAMMING COVERAGE 62

DISTRIBUTION OF SYRINGES AND CONDOMS 62

COVERAGE OF OPIOID AGONIST MAINTENANCE TREATMENT 64

TESTING FOR HIV 65

SECTION 7. PREVALENCE OF HIV/HEPATITIS C/HEPATITIS B/SYPHILIS AMONG THOSE WHO ANSWERED THE QUESTION 67

SECTION 8. ACCESS TO TREATMENT PROGRAMS 70

SECTION 9. MAIN DETERMINANTS OF INCIDENCE OF HIV/HEPATITIS C/HEPATITIS B/SYPHILIS 72

SOCIODEMOGRAPHIC DETERMINANTS OF INFECTION WITH HIV, HCV, HBV, AND SYPHILIS, AND THE DRUG USE PROFILE 72

RISKY INJECTION PRACTICES 73

SEXUAL BEHAVIORS 73

SECTION 10. SEXUAL PARTNERS OF PWID 84

SOCIODEMOGRAPHIC PROFILE OF THE SEXUAL PARTNERS OF PWID 84

USAGE OF PSYCHOACTIVE SUBSTANCES 84

SEXUAL CONTACTS WITH THE RECRUITER AND CONDOM USAGE 86

OTHER SEXUAL PARTNERS AND CONDOM USAGE 88

STIS AND OTHER DISEASES 90

AWARENESS OF ROUTES OF HIV TRANSMISSION 90

KNOWLEDGE OF SYMPTOMS OF OVERDOSING AND PROVISION OF AID 92

USAGE HIV PREVENTION SERVICES AND TESTING PROGRAMS 94

TESTING RESULTS 96

SECTION 11. REGIONAL DIFFERENCES IN THE MAIN INDICATORS 98

SOCIODEMOGRAPHIC CHARACTERISTICS 98
DRUG STAGE 100
RISKY INJECTION BEHAVIORS 105
SEXUAL BEHAVIORS. 108
PREVALENCE OF HIV, HCV, HBV, AND SYPHILIS 110

DISCUSSION OF RESULTS. 113

SOCIODEMOGRAPHIC PROFILE OF PWID 113
DRUG USE PRACTICES 114
SEXUAL BEHAVIORS. 115
AWARENESS OF ROUTES OF HIV TRANSMISSION. 116
PRESENCE OF SEXUALLY TRANSMITTED INFECTIONS AND OTHER DISEASES 116
PARTICIPATION IN PREVENTION PROGRAMS 117
PREVALENCE OF HIV/HEPATITIS B/HEPATITIS C/SYPHILIS 117
MAIN DETERMINANTS OF PREVALENCE OF HIV/HEPATITIS B/HEPATITIS C/SYPHILIS 118
SEXUAL PARTNERS OF PWID 118
STUDY LIMITATIONS 119

CONCLUSIONS. 120

GENERAL CONCLUSIONS OF THE STUDY 120
SOCIODEMOGRAPHIC PROFILE OF PWID 120
DRUG STAGE 120
RISKY INJECTION BEHAVIORS 121
RISKY SEXUAL BEHAVIORS 121
SEXUAL PARTNERS OF PWID 121
OVERLAPPING WITH OTHER KEY POPULATIONS IN TERMS OF HIV INFECTION. 121
EPIDEMIC SITUATION. 122
ACCESS TO PREVENTION AND TREATMENT PROGRAMS 122

RECOMMENDATIONS 123

STUDY ORGANIZATION 125

ANNEX 126

KEY REGIONAL LEVEL M&E INDICATORS 126

Diagrams and Tables

Figure 1. *Formally registered PWID, and the percentage of HIV-positive PWID among all the PWID and PWID under 25, according to bio-behavioral studies, 2008-2013* . . . 11

Figure 2.1. *Dynamics of the indicator of the average age of drug use initiation, 2011-2015, years* . . . 23

Figure 2.2. *Average age of PWID depending on the length of drug use, years* . . . 25

Figure 2.3. *Dynamics of injected drug use length, 2011-2015* . . . 25

Figure 2.4. *Dynamics of the use of different injected drugs, 2011-2015, %* . . . 28

Figure 2.5. *Average frequency of main drug use depending on its type, days* . . . 30

Figure 2.6. *Methods of procurement of the main drug in the last 30 days, %* . . . 30

Figure 2.7. *PWID's subjective perception of changes in price, quality, and access to the main drug in the last 12 months, %* . . . 32

Figure 2.8. *PWID's subjective perception of changes in price, quality, and access to the main drug in the last 12 months, %* . . . 33

Figure 2.9. *Practice of the joint drug use in the last 30 days, %* . . . 36

Figure 2.10. *Types of equipment most often shared with other PWID to cook and distribute drugs (n=2486), %* . . . 39

Figure 2.11. *Cumulative indicator of risky injection behavior, %* . . . 39

Figure 2.12. *Dynamics of the main indicators of injection-related risks, 2011-2015* . . . 40

Figure 3.1. *CSexual relations with different types of partners and condom usage in the last 90 days.* . . . 47

Figure 3.2. *ПReasons for not using a condom during the last sexual contact with different types of partners in the last 90 days.* . . . 48

Figure 6.1. *Access to HIV testing programs, 2011-2015, %* . . . 65

Figure 7.1. *Dynamics of HIV prevalence in 2011-2015, %* . . . 69

Figure 7.2. *Dynamics of Hepatitis C prevalence in 2013-2015, %.* . . . 69

Figure 8.1. *Treatment cascade among PWID, 2015** . . . 70

Figure 8.2. *Treatment cascade of PWID depending on participation in harm reduction programs, %* . . . 71

Figure 10.1. *Treatment cascade of sexual partners of PWID (N=115 HIV-positive according to rapid testing of the sexual partners).* . . . 96

Figure 10.2. *Prevalence of the four infections among sexual partners of PWID according to results of rapid testing, broken down by their experience of injecting drugs (N=769).* . . . 97

Figure 11.1. *The share of up to 25 years old PWID (%).* . . . 98

Figure 11.2. *Share of women among PWID (%).* . . . 99

Figure 11.3. *The share of PWID with an imprisonment experience (%).* . . . 99

Figure 11.4. *PWID distribution broken down by the experience of injecting drugs (%).* . . . 100

Figure 11.5. *Distribution of PWID by types of the main drug used (%).* . . . 101

Figure 11.6. *The share of PWID who used sterile needle and syringe during the last injection (%).* . . . 105
Figure 11.7. *The share of PWID who used a syringe already used by another person, in the last 30 days (%).* . . . 106
Figure 11.8. *The share of PWID who used their syringe/needle repeatedly to inject another dose of a drug, in the last 30 days (%).* . . . 106
Figure 11.9. *The share of PWID who received an injection in a pre-filled syringe without seeing the process of its filling, in the last 30 days (%).* . . . 107
Figure 11.10. *The share of PWID who shared equipment or materials for cooking or distribution of a drug substance in the last 30 days (%).* . . . 108
Figure 11.11. *The share of PWID who used a condom during the last sexual contact (in the last 30 days) (%).* . . . 109
Figure 11.12. *The number of sexual partners in the last 90 days (%).* . . . 109
Figure 11.13. *The average number of sexual partners of PWID in the last 90 days (persons).* . . . 110
Figure 11.14. *HIV prevalence among PWID according to results of rapid testing.* . . . 111
Figure 11.15. *HBV prevalence among PWID according to results of rapid testing* . . . 111
Figure 11.16. *HCV prevalence among PWID according to results of rapid testing* . . . 112
Figure 11.17. *Syphilis prevalence among PWID according to results of rapid testing.* . . . 112

Table 1. *Planned and actual sample size for PWID.* . . . 15
Table 2. *Planned and actual sample size for sexual partners of PWID.* . . . 16
Table 1.1. *Sociodemographic characteristics of PWID* . . . 20
Table 2.1. *Average age of initiation of drug use, years* . . . 22
Table 2.2. *Length of drug use, %.* . . . 24
Table 2.3. *Drugs used in the previous 30 days and 12 months (n=9405), %* . . . 26
Table 2.4. *Drugs used in the previous 30 days presented against sociodemographic characteristics, %* . . . 27
Table 2.5. *Frequency of injected drug use, times/days* . . . 29
Table 2.6. *Methods of procurement of the main drug in the last 30 days, %* . . . 31
Table 2.7. *Using clean needles and syringes for the last injection in the last 30 days, %* . . . 34
Table 2.8. *Repeated use of one's own syringe in the last 30 days* . . . 35
Table 2.9. *Prevalence of the practice of purchasing drugs in the filled drug and sharing it from a syringe used by another person in the last 30 days, %* . . . 37
Table 2.10. *Sharing equipment for cooking or distribution of drugs in the last 30 days, %* . . . 38
Table 2.11. *Registration and experience of treatment at a state narcological dispensary* . . . 41
Table 3.1. *Sexual activities of PWID, 2015 (N=9407)* . . . 45
Table 3.2. *Usage of a condom during the last sexual contact (among those with sexual contacts in the last 30 days), 2015 (N=6808)* . . . 46
Table 3.3. *Sexual relations of PWID with different types of partners in the last 90 days, 2015 (N=9407)* . . . 46
Table 3.4. *Reasons for not using a condom during the last sexual contact with different types of partners, 2015 (N=9407).* 49
Table 3.5. *Sexual behaviors in different sub-groups of PWID, 2015 (N=9405)* . . . 50

Table 3.6. *Trends in sexual activity, occurrence of different types of partners, and condom usage during sexual contacts among PWID* . . . 52
Table 3.7. *Group sex experience among PWID* . . . 54
Table 3.8. *Experience of homosexual relations among male PWID* . . . 54
Table 4.1. *Knowledge about HIV: percentage of respondents having correct knowledge of the ways to prevent HIV infection, and HIV transmission routes, 2015 (N=9407).* . . . 56
Table 4.2. *Correct answers of the routes of transmission and ways to prevent transmission of HIV in different categories of PWID, 2015 (N=9405)* . . . 57
Table 4.3. *Dynamics of correct knowledge of HIV transmission among PWID.* . . . 58
Table 5.1. *Occurrence of STIs and other diseases stated by PWID, 2015 (N=9407)* . . . 59
Table 5.2. *Occurrence of STIs and other diseases stated by PWID by groups, 2015 (N=9407)* . . . 60
Table 5.3. *Dynamics of occurrence of STIs and other diseases stated by PWID* . . . 61
Table 6.1. *NGO client status and receiving prevention materials in the last 12 months, %* . . . 62
Table 6.2. *Purchasing syringes and condoms in the last 30 days, %.* . . . 63
Table 6.3. *Receiving opioid agonist maintenance treatment drugs throughout the lifetime and at the time of the study, %* . . . 64
Table 6.4. *Access to HIV testing programs, %§* . . . 66
Table 7.1. *Prevalence of HIV, Hepatitis B, Hepatitis C, and syphilis, %.* . . . 68
Table 9.1. *HIV occurrence determinants: Results of a multidimensional regression analysis* . . . 74
Table 9.2. *HCV occurrence determinants: Results of a multidimensional regression analysis* . . . 76
Table 9.3. *HBV occurrence determinants: Results of a multidimensional regression analysis* . . . 79
Table 9.4. *Syphilis occurrence determinants: Results of a multidimensional regression analysis* . . . 81
Table 10.1. *Sociodemographic profile of the sexual partners of PWID (N=769)* . . . 85
Table 10.2. *Use of psychoactive substances by sexual partners of PWID (N=769)* . . . 86
Table 10.3. *Sexual contacts with the recruiter (N=769)* . . . 87
Table 10.4. *Condom usage during sexual contacts with the recruiter (N=769)* . . . 88
Table 10.5. *Sexual contacts with other partners besides the recruiter in the last 3 months (N=769)* . . . 89
Table 10.6. *STIs and other diseases in the last 12 months (according to the respondents) (N=769)* . . . 90
Table 10.7. *Knowledge about HIV: percentage of respondents having correct knowledge of the ways to prevent HIV infection, and HIV transmission routes (N=769).* . . . 91
Table 10.7.1. *Knowledge of symptoms of drug overdosing (N=769)* . . . 92
Table 10.7.2. *Knowledge of first aid for drug overdose (N=769)* . . . 93
Table 10.8. *Receiving or purchasing condoms* . . . 94
Table 10.9. *Experience of testing for HIV* . . . 95
Table 10.10. *Prevalence of HIV, HCV, HBV, and syphilis among sexual partners of PWID according to rapid testing results (N=769)* . . . 96
Table 10.11. *Prevalence of HIV, HCV, HBV, and syphilis among the couples of PWID and their sexual partners that do not inject drugs (N=769)* . . . 97
Table 11.1. *Distribution of PWID by the main drug used: opioids.* . . . 102
Table 11.2. *Distribution of PWID by main drug used: stimulants* . . . 104

Acronyms

RDS	Respondent driven sampling
ART	Antiretroviral therapy
HIV	Human immunodeficiency virus
HBV	Hepatitis B virus
HCV	Hepatitis C virus
UL	Upper limit (of confidence interval)
CI	95% confidence interval
HR	Harm reduction
STI	Sexually transmitted infection
PWID	Person who injects drugs
PLWH	People living with HIV
LL	Lower limit (of confidence interval)
NPO, NGO	Non-profit (non-government) organization
OAMT	Opioid agonist maintenance treatment
AIDS	Acquired Immune deficiency syndrome
SP	Sexual partner

Summary

The epidemic situation in Ukraine is concentrated in the population of people who inject drugs (PWID). And while over the past few years significant progress has been made towards tackling HIV among PWID, first of all due to large-scale prevention interventions, this group and their closest circle continue to remain in the focus of HIV surveillance.

The report presents the results of bio-behavioral study conducted among 9405 PWID in 29 cities of Ukraine and 769 sexual partners of PWID in 10 Ukrainian cities. The main objective of the study was to assess the prevalence of HIV, hepatitis B, hepatitis C and syphilis among PWID and their sexual partners, behavioral practices related to HIV infection, drug use, the use of HIV prevention and treatment services and HIV incidence among these two groups. Cross-sectional design was chosen for conducting the research among PWID and the RDS method (respondent-driven sample) was opted for to implement a sample population. The sex partners were recruited by the PWID themselves, if they had such partners (linked RDS). The field phase of the study lasted from June to November 2015.

The study results showed a high prevalence of HIV infection among PWID and their sexual partners – 21.9% and 15.0% respectively (among the sexual partners of PWID who never used injecting drugs – 9.2%). The prevalence of hepatitis C was recorded at the level of 55.9% among PWID and 25.9% among the sexual partners of PWID (among the sexual partners of PWID who never used injecting drugs the prevalence is 19.3%).

The socio-demographic profile of PWID remains practically unchanged, and the prevalence of risky injection and sexual practices has a clear tendency to decrease compared with previous rounds of similar studies.

Regression analysis allowed to reveal statistically significant relationships between some behavioral characteristics and test results for HIV, HBV, HCV and syphilis. The PWID of older age had highest chances to have appositive testing results for all four infections, with long experience of drug use and the experience of being in prison. Women were more likely to be infected with HIV and syphilis. As for risky injection practices, re-using a syringe was connected with three infections – HIV, HCV and HBV. As for other practices, injections with a syringe used by someone else or pre-filled increased the chances of getting infected with HIV. Taking a portion of the drug from the shared large syringe also increased the risk of getting infected with both HIV and HCV.

The results allowed to perform a descriptive analysis of the PWID group and to assess the magnitude of risk behavior and the prevalence of major infections among their sexual partners, while these data are extremely important for monitoring the development of the HIV epidemic in Ukraine, the evaluation of a comprehensive package of preventive interventions targeted at PWID and treatment programs.

Moreover, it allows to identify the further activities aimed at strengthening work on the way to overcoming the HIV epidemic.

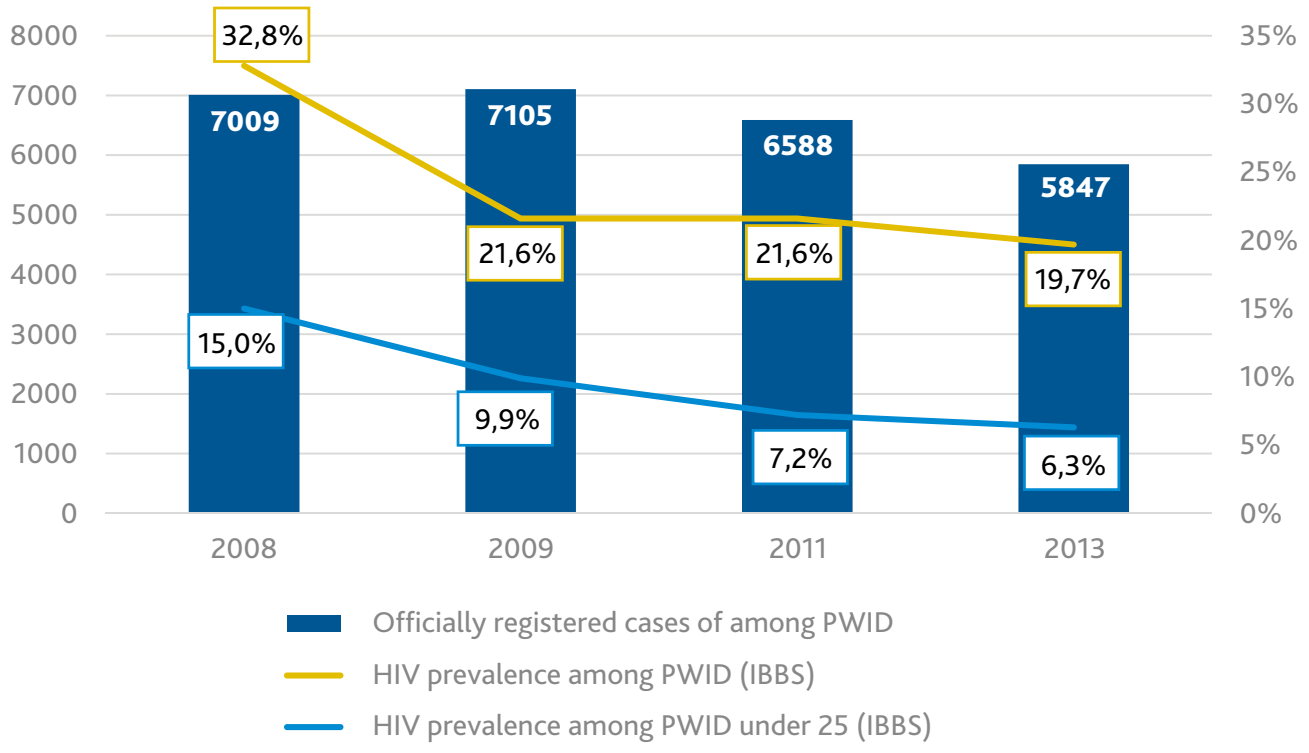
The study also collected dry blood drop samples from participants with HIV-positive dry blood analysis for further laboratory confirmation. These results will be highlighted in a separate publication.

Introduction

According to the Ukrainian Center for Socially Dangerous Disease Control (UCDC) of the Ministry of Health, the total number of registered HIV-positive citizens of Ukraine in 2014 was 139,573, including children with temporarily undetermined diagnosis born by HIV-positive mothers; the number of AIDS cases was 29,005. In 2013, 3514 AIDS-related deaths were registered[1]. In Ukraine, the most HIV-affected populations are people who inject drugs (PWID), commercial sex workers and men who have sex with men.

From 1995 to 2008, parenteral transmission of HIV through the use of injected drugs was the main transmission mode in Ukraine. I. e., PWID were the population with the highest HIV epidemic concentration in the country. The number of new cases was 5847 at the end of 2013, which pointed to a slight reduction of HIV cases among PWID compared with previous years. A similar descending trend was noted for HIV prevalence among PWID who had taken part in integrated bio-behavioral studies in the same period ***(Figure 1)***.

Figure 1. ***Formally registered PWID, and the percentage of HIV-positive PWID among all the PWID and PWID under 25, according to bio-behavioral studies, 2008-2013***



1 *Інформаційний бюлетень "ВІЛ-інфекція в Україні". – Київ: Міністерство охорони здоров'я України, ДУ «Український центр контролю за соціально небезпечними хворобами Міністерства охорони здоров'я України», ДУ "Інститут епідеміології та інфекційних хвороб ім. Л.В. Громашевського Національної академії медичних наук України".*

Second generation HIV surveillance is a component of the National System for Monitoring and Evaluation of HIV/AIDS response combining epidemiologic surveillance and behavioral research methods in order to achieve in-depth understanding and study HIV/AIDS spread.

Behavior monitoring was conducted through systematic behavioral studies providing information on the knowledge, attitude (stereotypes, perceptions, and myths), behavioral models and practices. HIV prevalence was estimated through sentinel surveillance. Bio-behavioral studies (behavior studies and HIV blood testing) enabled analyzing the links between the HIV status and behaviors.

Methodology

The **goal of the study** was to track changes and trends in the spread of HIV infection and to acquire information concerning potential behavioral factors related to spread of HIV among key populations to use it in awareness raising campaigns, planning, monitoring and evaluation of prevention programs.

Objectives

The objectives were to estimate the prevalence of HIV, hepatitis B, hepatitis C, and syphilis among PWID and their sexual partners, HIV-related behaviors, drug use, use of HIV prevention and treatment services.

Target populations

- PWID who have used drugs in the last 30 days;
- Sexual partners of PWID who are not active injection drug users (have not injected drugs in the last 30 days) and have had sex with PWID in the last three months (90 days).

The following eligibility criteria were used:

- at least 14 y.o. at the time of enrollment;
- residing/working/studying in the city where the study was conducted;
- consent to take part in all the components of the study (survey, rapid testing for four infections, dried blood spot testing, as required) – the informed consent form must be signed.

Elimination criteria were:

- multiple participation in the study in this round;
- refusal from participation in one or more components of the study;
- being under the influence of alcohol or drugs.

Sampling design and method

The study used a cross-sectional design. For PWID, respondent driven sampling was used. Sexual partners of PWID were recruited by the PWID themselves (provided they had such partners (linked RDS).

To start the sampling, initial PWID respondents were selected in each city. In addition to the main eligibility criteria, all of the potential participants had to be up to 25 y. o. and be HIV-negative or have HIV-unknown status (themselves-declaration). The initial respondents had to reflect the variety of the following parameters: gender (male/female), age (14-19 and 20-24 y. o.), drugs used (opiates/stimulants), length of drug use (up to 2 years inclusive, more than 2 years), harm reduction program client status (client/not a client). They also had to represent different districts of their cities.

All the PWID respondents could recruit up to three potential participants of the study who had to meet the same criteria and be their friends or acquaintances. In 10 cities (see Table 2), if a participant PWID had a permanent sexual partner who did not use injected drugs, he/she received an additional coupon to recruit such a partner. The sexual partners themselves could not recruit anyone for the study.

Geography

The study of PWID was conducted in 29 cities of Ukraine: 25 centers of oblasts and the AR of Crimea, the city of Sevastopol, and three towns in Kyiv oblast: Bila Tserkva, Fastiv, and Vasylkiv.

The study of sexual partners of PWID was conducted in 10 cities ***(listed in Table 2)***. The locations for surveying were selected so that they represented five geographic regions (the North, the South, the East, the West, and the Center) and different intensity of the epidemics (based on the cumulative number of registered cases) in each region.

Sample size

The size of the sample of PWID was determined individually for each of the cities based on HIV prevalence according to the similar 2013 study, 95% confidence interval, 3% error, and the design effect of 2. The resulting figures were rounded to 50 for the convenience sake. For cities, where very low values were received, the minimal sample size was set manually at 150 respondents.

For sexual partners of PWID, the sample size was determined based on the planned PWID sample and the assumption (based on the previous study) that approximately one in four respondent PWID will recruit his/her sexual partner who does not inject drugs. The resulting value was also rounded to 50.

The planned and the actual sizes of the sample, as well as planned and actual number of the initial participants are given in ***Tables 1 and 2***.

***Table 1.** Planned and actual sample size for PWID.*

	Sample size		Number of initial respondents	
City	planned	actual	planned	actual
Simferopol	400	400	4	5
Vinnytsia	250	250	2	2
Lutsk	350	350	3	3
Dnipropetrovsk	500	500	4	4
Donetsk	450	444	4	4
Zhytomyr	350	350	3	3
Zaporizhzhia	150	150	2	2
Uzhhorod	150	150	2	2
Ivano-Frankivsk	350	350	3	3
Bila Tserkva	350	350	3	3
Vasylkiv	150	150	2	2
Fastiv	400	400	4	6
Kirovohrad	300	300	3	3
Luhansk	150	150	2	2
Lviv	400	401	4	6
Mykolaiv	500	500	4	4
Odesa	450	450	4	4
Poltava	150	150	2	2
Rivne	400	400	4	4
Sumy	150	150	2	2
Ternopil	350	350	3	3
Kharkiv	200	200	2	2
Kherson	400	400	4	4
Khmelnytskyi	450	450	4	4
Cherkasy	350	350	3	3
Chernivtsi	150	150	2	2
Chernihiv	350	360	3	3
Kyiv	400	399	4	5
Sevastopol	400	401	4	4
Total	**9400**	**9405**	**–**	**–**

***Table 2.** Planned and actual sample size for sexual partners of PWID.*

City	Sample size		
	planned	actual	%
Simferopol	100	19	19%
Dnipropetrovsk	150	133	88,7%
Kyiv	100	61	61%
Kirovohrad	100	100	100%
Lviv	100	72	72%
Ternopil	100	100	100%
Kharkiv	50	50	100%
Kherson	100	100	100%
Cherkasy	100	100	100%
Chernihiv	100	34	34%
Total	**1000**	**769**	**76,9%**

Time and place

For the field stage of the study, office premises were rented. The exceptions were in Uzhhorod, Lutsk, Donetsk, and Luhansk, where the studies were conducted at the AIDS Center, as well as Vasylkiv, Simferopol, and Chernihiv, where the work was done in the offices of organizations providing services to PWID.

The field stage took place from June to November 2015 (23 weeks overall), but the main part of the sample was taken in July and August. The average length of the field stage at one site was 37 days.

Data collection methods

Information about social and demographic characteristics of the respondents, their use of drugs and risky injection practices, sexual behaviors, incidence and treatment of certain disease, HIV/AIDS awareness, participation in prevention programs, experience of HIV testing, drug treatment, and serving time in prison was received from structured one-on-one interview, based on the respondents' self-declaration.

In Mykolaiv, Luhansk, Donetsk, Simferopol and Sevastopol, interviewers conducted the surveys using tablets with the special software. In the other cities, paper forms were used.

Rapid combo-tests for HIV, hepatitis B, hepatitis C, and syphilis were used to determine a respondent's status.

Ethics

Protocol of the study was reviewed and approved by the Ethics Committee of the Ukrainian Institute on Public Health Policy (Kyiv, Ukraine), as well as Centers for Disease Control and Prevention (Atlanta, USA).

All the participants went through the informed consent procedure involving explanation of the procedure for participation and commitment to principles of voluntariness and confidentiality. All the data of a particular participant were assigned a unique ID number to link his/her data from the behavioral and biologic component to.

The participants were rewarded for taking part in the study and recruiting other participants.

Data quality assurance

Members of the national team, external monitoring consultants, and a representative of the Ukrainian Center for Socially Dangerous Disease Control visited the study sites to control the compliance with the procedure of the Study Protocol during the field stage. Overall, 133 visits were conducted.

In addition to self-declarations and screening questions, study personnel checked participants' belonging to the target populations by examining the injection marks.

Conformity of the data base of survey and testing results to the completed paper forms was checked by re-entering data from 10% of all the paper questionnaires. The average rate of input errors was 0.3%.

Observance of the transition logic in questionnaire and the logic of the answers was checked by comparing information from different parts of the questionnaire, screening and medical forms. The questionnaires completed on tablets used software checking the control of transition between questions and a certain control of the logic of the answers.

Data analysis

Prevalence of the four infections in question and behavioral practices was calculated by RDS-Analyst software taking the size of the network of the participants, with prior adjustments for outliers (imputed visibility procedure) and calculation of 95% confidence intervals into account. To assess these indicators on the national level, equal weights were saved and imported in SPSS software. Where the absolute number of observations was too small to be used to determine prevalence of certain phenomena with RDS-Analyst, such prevalence was calculated with SPSS 21.0 software using weights imported from RDS-Analyst.

The main characteristics were stratified by gender, age group, length of drug use, type of the main drug, and harm reduction program client status, in order to gain understanding of patterns of different behaviors and infection.

Determinants of infection with HIV, hepatitis B, hepatitis C, and syphilis were examined through a multidimensional regression logistic analysis using unweighted data in SPSS 21.0.

Besides, the quality of the actual sample in terms of equal seeding of the participants per the main characteristics of the sample (recruitment homophily) – age, gender, length of drug use, drug type, harm reduction client status, and actual HIV status. Also, we analyzed the dynamics of recruitment of respondents per each seed, seed waves, and numbers of utilized coupons.

* *http://wiki.stat.ucla.edu/hpmrg/index.php/RDS_Analyst_Install*

SECTION 1.

Sociodemographic profile of PWID

The average age of the respondent PWID was almost 34 years (33.9 years), which shows a gradual increase of almost one year compared to 2011 ***(Table 1.1)***. The proportion of women in the sample also gradually decreased from 27.5% in 2011 to one fifth (20.3%) in 2015.

The share of PWID with primary and secondary education in the sample gradually increased, while the share of PWID with a university degree decreased. In 2015, three fifths of all the respondents completed secondary education (61.8%), and about one fifth received basic education or a university degree. The proportions concerning primary occupation remained the same: on fifth of PWID had a regular job (23.1%), almost half – irregular jobs (47.7%), less than one third were unemployed (28.3%), and 0.8% were only studying.

40.6% of PWID were single and did not have a permanent sexual partner. Compared with the studies of 2011 and 2013, this proportion had decreased by 1.3-1.4. Some 30% of respondents in 2015 were formally or informally married to a partner who also injected drugs, and 29.3% had a partner who had never used drugs.

As in previous studies, almost all respondents (97.5%) had permanent dwelling (their own, their relatives' or friends', or rented). Only 1.6% of the respondents claimed that they had to change their residence often, and 0.2% admitted the status of being homeless.

Almost half of the respondent PWID (43.9%) claimed their income in the previous month was in the range of UAH 1001-3000; 17.0% had the income of UAH 1000 or less; the others received more than UAH 3000 in the previous month.

The shares of PWID residing in the particular city from the birth and the ones who have moved to it remain almost the same as before (86.8% and 12.0% respectively). However, the proportion of respondents who moved to the city in question less than a year before has been gradually increasing (0.6% in 2011, 1.1% in 2013, and 1.3% in 2015).

The share of PWID with imprisonment experience was 40.6%, which is more than in 2013 and 2011.

***Table 1.1.** Sociodemographic characteristics of PWID*

Characteristic		2011		2013		2015	
		№	%	№	%	№	%
Age	14 - 19	246	**2.7**	258	**2.5**	190	**2.0**
	20 - 24	1262	**13.9**	1116	**10.9**	771	**8.4**
	25 - 29	4029	**44.4**	4262	**44.0**	1887	**21.0**
	30 - 34					2262	**25.0**
	35 or older	3532	**38.9**	3866	**42.6**	4295	**43.6**
	Average age, years	**33.1**		**33.4**		**33.9**	
Gender	Male	6578	**72.5**	7366	**76.4**	7424	**80.1**
	Female	2491	**27.5**	2136	**23.6**	1851	**19.9**
Education	Primary	234	**2.6**	330	**3.2**	294	**3.4**
	Basic secondary	1175	**13.0**	1647	**16.9**	1301	**15.1**
	Completed secondary	5181	**57.3**	5509	**59.4**	5774	**62.6**
	Basic higher	1604	**17.7**	1385	**14.2**	1086	**10.7**
	Completed higher	855	**9.5**	606	**6.3**	796	**8.1**
Primary occupation	Student	281	**3.1**	263	**2.6**	74	**0.8**
	Regular job	5587	**61.8**	2222	**23.0**	2105	**23.1**
	Irregular jobs			4406	**46.1**	4642	**47.7**
	Unemployed	3175	**35.1**	2668	**28.3**	2378	**28.3**
Marital status	Married or with a permanent partner	4238	**46.8**	4175	**43.3**	5611	**59.4**
	Single	4814	**53.2**	5326	**56.6**	3661	**40.6**
Permanent sexual partner-PWID	Yes	–		–		1971	**21.2**
	No, but he/she used to inject drugs	–		–		703	**7.3**
	No, he/she never injected drugs	–		–		2785	**29.3**
	Not sure	–		–		152	**1.6**
	No permanent partner	–		–		3660	**40.6**

Continuation of Table 1.1.

Characteristic		2011		2013		2015	
		№	%	№	%	№	%
Residence in the last 3 months	Own home/relatives' or friends' home/ rented dwelling	–		–	**95.9**	9033	**97.5**
	Occasional places (often changed)	–		–	**2.3**	164	**1.6**
	In the street, abandoned buildings, railway stations (homeless)	–		–	**0.5**	25	**0.2**
Personal income in the last 30 days	UAH 1000 or less	–		1910	**23.2**	1679	**17,0**
	UAH 1001 – 3000	–		5235	**55.2**	4032	**43,9**
	UAH 3001 – 5000	–		1680	**15.9**	1847	**21,4**
	Over UAH 5000	–		656	**5.5**	1529	**15,8**
	Refused to answer	–		–	**–**	187	**1,8**
Length of residence in the city where the study took place	Since birth	7550	**83.5**	7960	**83.1**	7712	**86,8**
	More than a year	1324	**14.7**	1255	**13.6**	1107	**12,0**
	Up to one year inclusive	58	**0.6**	91	**1.1**	113	**1,3**
	Not a permanent resident – visiting occasionally	108	**1.2**	149	**1.6**	–	**–**
Imprisonment experience			**31.6**		**33.8**		**40.6**
Total		**9069**		**9502**		**9405**	

N – number of respondents in the sample;
% – weighted share according to RDS.

SECTION 2.

Drug use practice

Initiation of drug use

Most PWID start using with non-injectable drugs (66%). Only 2% of PWID started injecting drugs before using non-injectable drugs. Every seventh (14%) of them had never used non-injectable drugs. Most PWID try the drugs for the first time in their adolescence, before 19 y. o.: 73% used non-injectable drugs and 59% – injected drugs.

The average age of initiation of drug use varies depending on gender, age, and HR client status. Analysis by the type of drugs showed that those PWID who practiced mixed use (i. e. used both opiates and stimulants) had started using drugs somewhat earlier than the other PWID ***(see Table 2.1)***.

Table 2.1. *Average age of initiation of drug use, years*

Disaggregation variables	Average age of initiation of the use of…	
	…non-injectable drugs, N *(number of years§)*	injectabledrugs, N *(number of years§)*
All categories	7614 (16.4)	9227 (19.8)
*Gender****		
Males	6175 (16.2)	7388 (19.6)
Females	1439 (17.1)	1839 (20.4)
Age		
14 - 19	165 (14.8)	189 (16.3)
20 - 24	682 (15.6)	756 (17.9)
25 - 34	3481 (16.0)	4065 (19.5)
35 or older	3286 (17.1)	4217 (20.6)

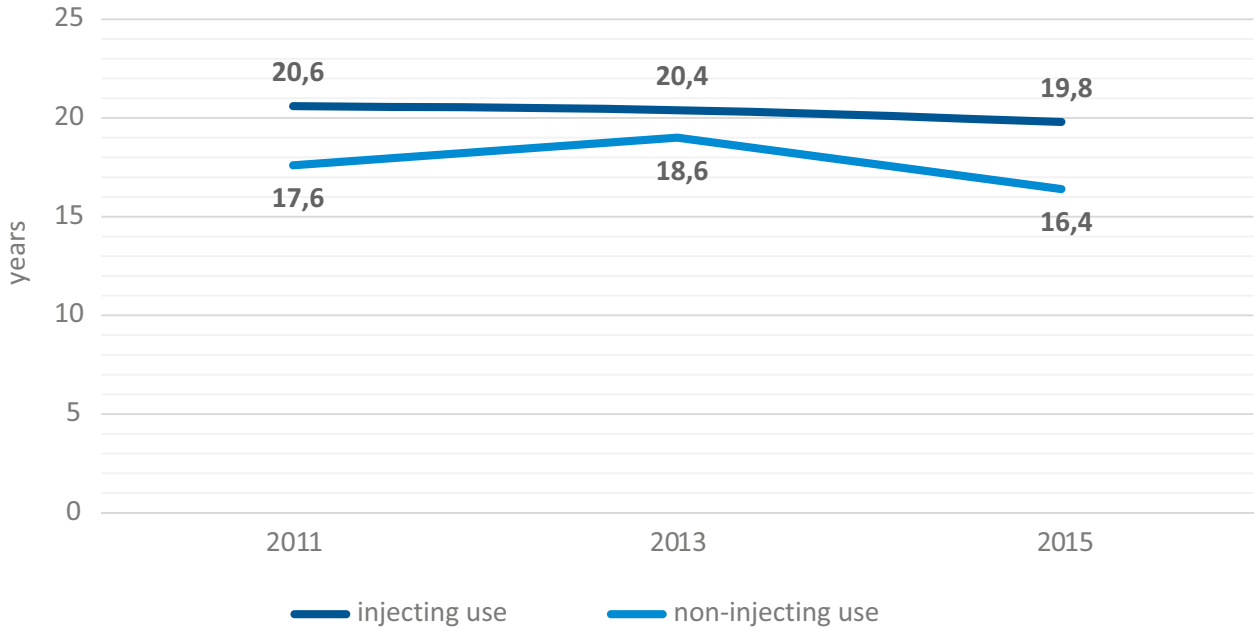
Continuation of Table 2.1.

Disaggregation variables	Average age of initiation of the use of…	
	…non-injectable drugs, N *(number of years§)*	injectabledrugs, N *(number of years§)*
Drug type		
Opiates	4980 (16.4)	6177 (19.9)
Stimulants	958 (16.7)	1151 (20.3)
Mixed use	1619 (16.0)	1834 (18.9)
*HR client status****		
Clients	2026 (16.1)	2456 (18.9)
Not clients	5570 (16.5)	6749 (20.1)

§ The data are weighted according to the design of the study
****p < 0.001.*

Analysis of the dynamics of the indicator of injected drug use initiation shows that the age of the initiation remained unchanged in 2015 compared with 2011 and 2013. The average age of the first non-injected drug use in 2015 was lower than in 2013 ***(Figure 2.1)***.

Figure 2.1. Dynamics of the indicator of the average age of drug use initiation, 2011-2015, years



63% of PWID are long-time injected drug users (11 or more years). The share of new injected drug users is bigger among women than among men. The same trend could be observed among stimulant users as compared with opiate users of those practicing mixed drug use. Teenage PWID are almost completely (79%) represented by the group with the experience of drug use under 3 years, while the PWID over 34 y. o., on the opposite, used drugs for more than 10 years – 91% ***(Table 2.2)***. I. e., there is a strong correlation between the length of injected drug use and the age of PWID (p<0.001) ***(Figure 2.2)***.

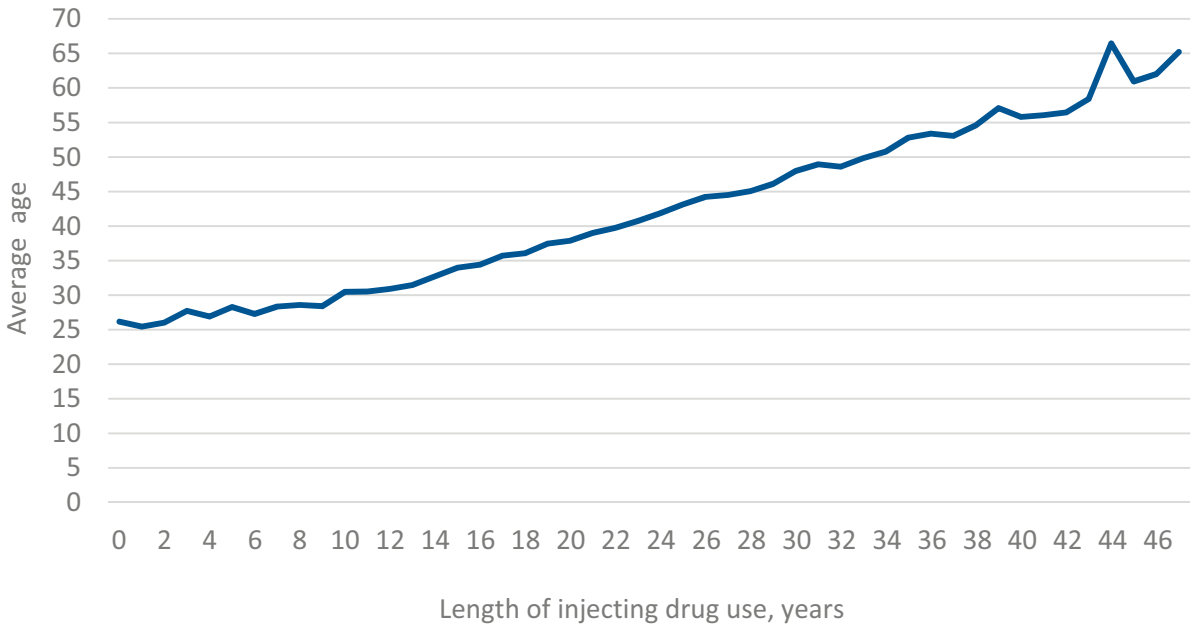
Table 2.2. *Length of drug use, %*

Disaggregation variables	Length of drug use			
	<3-x years, N (%§)	3–5 years, N (%§)	6–10 years N (%§)	11≥ years N (%§)
All categories	732 (7.3)	1038 (10.8)	1762 (19.2)	5695 (62.7)
*Gender****				
Males	516 (6.6)	787 (10.3)	1393 (18.9)	4692 (64.3)
Females	216 (10.2)	251 (12.7)	369 (20.7)	1003 (56.5)
*Age****				
14 - 19	153 (78.9)	35 (20.8)	1 (0.2)	0 (0.0)
20 - 24	187 (22.4)	314 (40.2)	250 (36.8)	5 (0.6)
25 - 34	299 (6.3)	550 (12.6)	1292 (31.1)	1924 (50.0)
35 or older	93 (1.9)	139 (2.9)	219 (4.7)	3766 (90.5)
*Drug type****				
Opiates	401 (5.6)	586 (9.1)	1051 (17.7)	4139 (67.5)
Stimulants	193 (18.0)	221 (18.8)	282 (23.6)	455 (39.5)
Mixed use	136 (7.1)	214 (11.2)	419 (22.2)	1065 (59.5)
*HR client status****				
Clients	71 (2.5)	163 (6.3)	373 (14.5)	1849 (76.7)
Not clients	659 (9.0)	871 (12.4)	1386 (20.9)	3833 (57.6)

§ The data are weighted according to the design of the study.

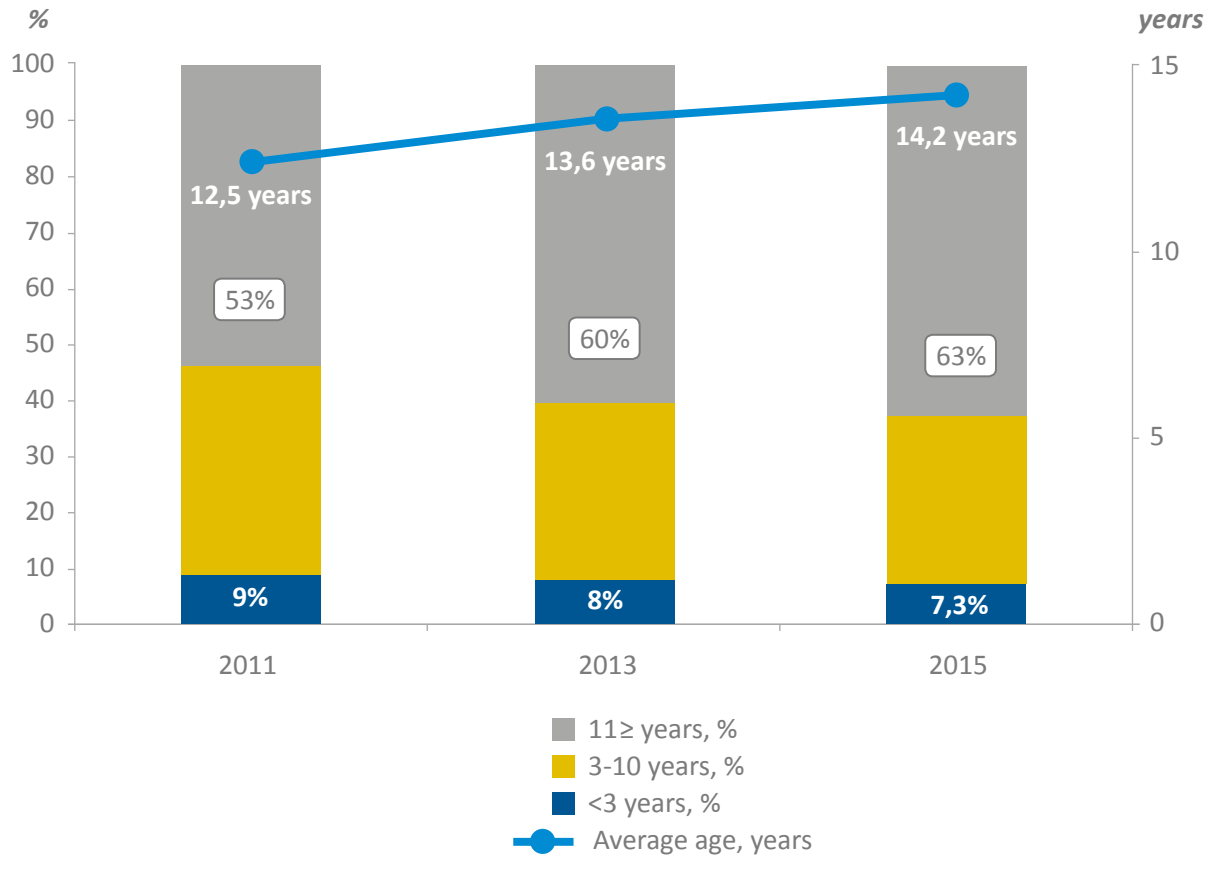
**** p < 0,001.*

***Figure 2.2.** Average age of PWID depending on the length of drug use, years*



In 2015, the trend to gradual increase of the average length of drug use compared with the previous rounds of the study persisted. At the same time, there was a gradual increase in the share of PWID practicing injected drug use for 11 or more years, and reduction in new PWID with the length of drug use less than three years ***(Figure 2.3)***.

***Figure 2.3.** Dynamics of injected drug use length, 2011-2015*



Drug stage parameters

Opium extract known as "shirka" remains the most popular drug among Ukrainian PWID. Among the stimulants, the one most often mentioned was dissolved methamphetamine, or "vint" ***(Table 2.3)***. The most popular of non-injected drugs used by PWID was marijuana/ marihuana (cannabis) – 27%. Furthermore, 4% of the respondents mentioned using only non-injected amphetamine, 1% – tramadol, and 2% – other pharmacy drugs.

Table 2.3. *Drugs used in the previous 30 days and 12 months (n=9405), %*

	Injected in the previous 30 days*, %§	Injected and non-injected in the previous 12 months*, %§	Specified as the main drug used**, %§
Opium extract	77.6	81.3	69.1
Dissolved methamphetamine ("vint")	15.5	19.7	8.6
Amphetamine ("phen")	12.7	22.4	5.4
Street methadone	11.9	16.5	6.0
Street buprenorphine	6.7	8.8	3.0
Desomorphine	4	5.4	2.0
Pharmacy drugs (tropicamide, rinasoline, calypsol, ketamine)	2.2	5.7	0.2
Heroin	1.6	3.9	0.6
Methamphetamine powder	1.6	3.4	0.2
Salt	1	2	0.3
Tramadol	0.5	2.5	0.1
Methcathinone ("jeff")	0.3	0.8	0.1
Cathinone	0.3	0.6	0.0

** The sum of the values in the column is more than 100% because respondents could select several answers.*

*** 4.4% more PWID selected other drugs.*

§ The data are weighted according to the design of the study.

Disaggregated analysis of the main sociodemographic characteristics was conducted for the drug types which 4% or most of the PWID claimed to have used in the previous 30 days ***(Table 2.4)***.

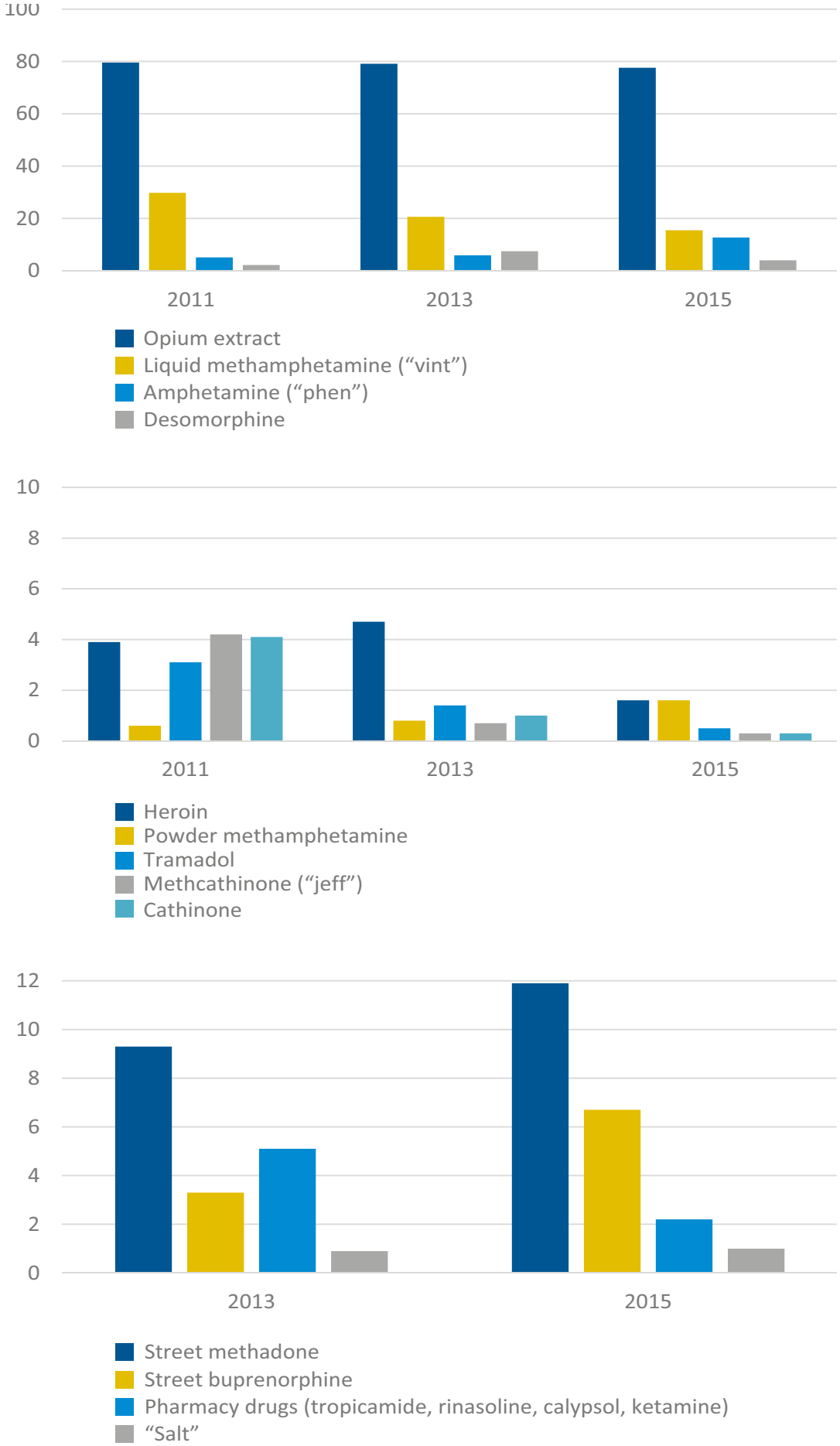
***Table 2.4.** Drugs used in the previous 30 days presented against sociodemographic characteristics, %*

Disaggregation variables	Opium extract, N (%§)	Methamphetamine ("vint"), N (%§)	Amphetamine ("phen") N (%§)	Methadone/ buprenorphine N (%§)	Desomorphine N (%§)
Gender	*p < 0.001*	*p < 0.001*	*0.042*	*p < 0.001*	*p < 0.01*
Males	5598 (78.2)	1086 (14.8)	1042 (12.9)	1399 (18.6)	339 (3.9)
Females	1362 (75.1)	345 (18.5)	236 (12.1)	243 (14.6)	99 (4.4)
Age	*p < 0.001*	*p < 0.001*	*p < 0.001*	*p < 0.001*	*p < 0.001*
14 - 19	83 (46.8)	57 (37.4)	67 (34.2)	27 (11.5)	8 (3.4)
20 - 24	421 (58.4)	166 (23.2)	214 (26.6)	142 (17.7)	47 (5.3)
25 - 34	2957 (76.0)	688 (16.5)	652 (14.4)	873 (21.0)	259 (5.3)
35 or older	3499 (84.3)	520 (12.1)	345 (7.3)	600 (14.8)	124 (2.4)
HR client status	*p < 0.001*	*p < ..001*	*p < 0.001*	*p < 0.991*	*p < 0.001*
Clients	1963 (80.8)	392 (17.5)	284 (9.9)	432 (17.8)	153 (5.4)
Not clients	4985 (76.4)	1038 (14.9)	990 (13.7)	1202 (17.8)	284 (3.4)

§ The data are weighted according to the design of the study.

Analysis of drug use in 2011-2015 indicates that the biggest changes were observed in reduction of the share of PWID using liquid methamphetamine, pharmacy drugs, heroin, methcathinone, cathinone, and tramadol. The use of opium extract remains virtually the same; the same is true for another, less popular drug – "salt". The proportion of users of amphetamine ("phen"), street methadone and buprenorphine, methamphetamine powder increased. With regard to the use of desomorphine, the share of its users substantially increased in 2013, but has recently been declining ***(Figure 2.4)***.

***Figure 2.4.** Dynamics of the use of different injected drugs, 2011-2015, %*



Frequency of injected drug use

Frequency of injected drug use is measured in the number of injections in the last day and the number of days in the last week and month. PWID informed that, on average, they had injected drugs once in the last 24 hours. In the previous week, they had injected drugs about 5 days, and in the previous month – about 20 days. The biggest variations of the frequency of drug use are determined by the age of the PWID and drug type ***(Table 2.5)***.

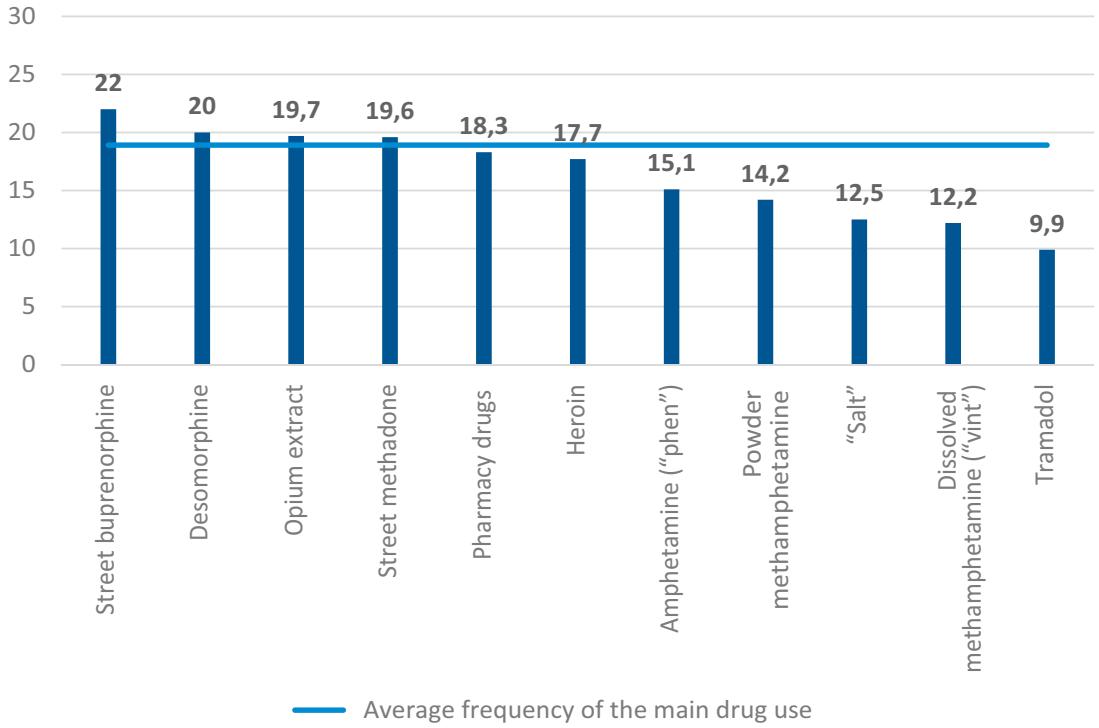
Table 2.5. *Frequency of injected drug use, times/days*

Disaggregation variables	Average frequency of drug use			
	in the last day N (days§)	in the last week N (days§)	in the last month N (days§)	in the last month, main drug N (days§)
All categories	8856 (1.2)	9211 (4.7)	9254 (19.8)	9097 (18.9)
Gender	*p <0.001*	*p <0.001*	*p <0.001*	*p <0.001*
Males	7108 (1.2)	7374 (4.8)	7408 (20.3)	7278 (19.4)
Females	1748 (1.0)	1837 (4.2)	1846 (17.7)	1819 (17.0)
Age				
14 - 19	183 (0.9)	189 (3.6)	189 (15.3)	189 (14.1)
20 - 24	735 (1.2)	758 (4.4)	760 (18.3)	752 (17.4)
25 - 34	3943 (1.2)	4069 (4.8)	4078 (20.6)	4002 (19.6)
35 or older	3995 (1.1)	4195 (4.6)	4227 (19.4)	4154 (18.7)
Drug type				
Opiates	5940 (1.2)	6175 (4.8)	6190 (20.2)	6082 (19.6)
Stimulants	1085 (0.7)	1139 (3.5)	1159 (14.5)	1143 (13.7)
Mixed use	1771 (1.4)	1835 (5.0)	1843 (21.3)	1814 (19.4)
HR client status	*p <0.001*	*p <0.001*	*p <0.001*	*p <0.001*
Clients	2392 (1.3)	2461 (4.8)	2470 (20.3)	2425 (19.4)
Not clients	6443 (1.1)	6728 (4.6)	6763 (19.6)	6653 (18.7)

§ *The data are weighted according to the design of the study.*

The highest frequency of the main drug use was recorded among PWID who stated that their main drug was street buprenorphine, while the lowest frequency was noted for tramadol users ***(Figure 2.5)***.

***Figure 2.5.** Average frequency of main drug use depending on its type, days*



Procurement method, costs and availability of the main drug

Most PWID noted that they had bought their main drug in the last month. A significant number of respondents identified they cooked the drug themselves or were treated to by their friends ***(Figure 2.6)***.

***Figure 2.6.** Methods of procurement of the main drug in the last 30 days, %*

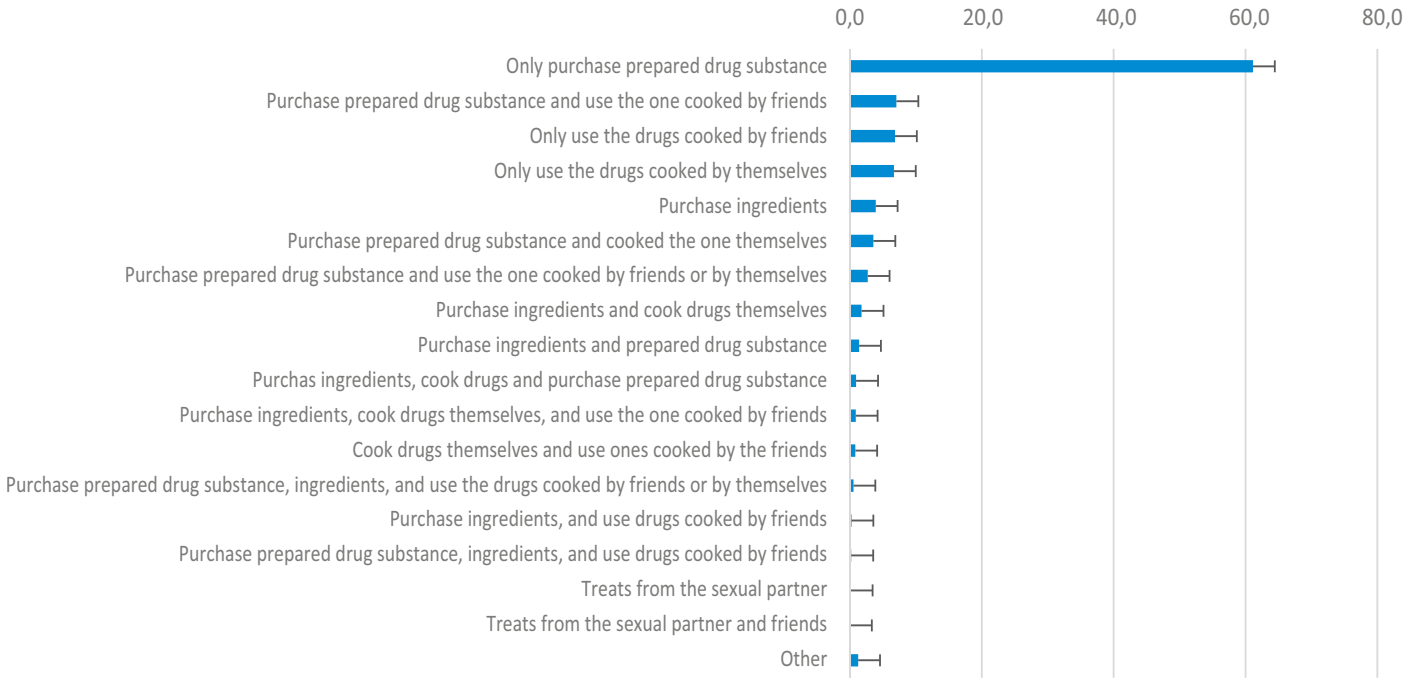


***Table 2.6.** Methods of procurement of the main drug in the last 30 days, %*

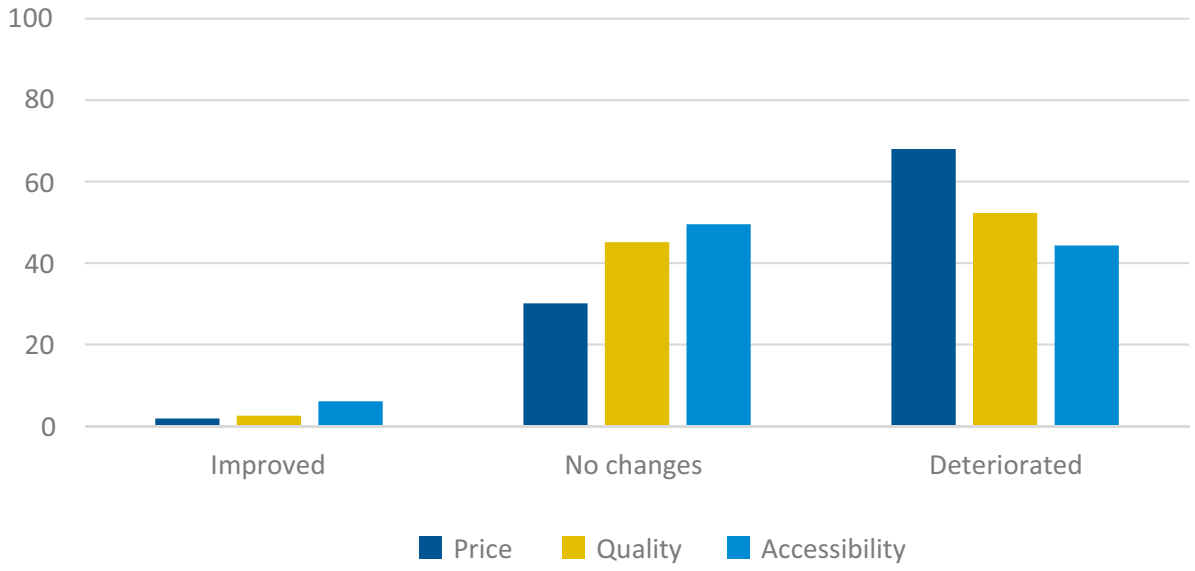
	Opium extract	Metham-phetamine ("vint")	Amphet-amine ("phen")	Street metha-done	Street buprenor-phine	Deso-mor-phine
	(n=6138)	(n=819)	(n=556)	(n=518)	(n=357)	(n=238)
Only purchase prepared drug substance	60.1	41.6	75.1	77.4	85.8	22.7
Purchase prepared drug substance and use the one cooked by friends	7.3	18.9	3.5	0.6	0.2	2.8
Only cook themselves	6.8	6.3	3.4	3.9	3.1	25.4
Only use the drugs cooked by friends	6.4	11.9	8.4	2.4	2.4	19.2
Purchase prepared drug substance and cooked the one themselves	4.3	1.3	1.4	2.6	0.2	2
Purchase ingredients	3.7	4.2	4.6	4	5	6.4
Purchase prepared drug substance and use the one cooked by friends or by themselves	3.6	2.3	0	0	0	0.4
Purchase ingredients and cook drugs themselves	1.9	1.8	0.3	1	0.4	7.7
Purchase ingredients and prepared drug substance	1.5	0.8	0.8	0.7	0.7	1.8
Purchas ingredients, cook drugs and purchase prepared drug substance	1.2	0.4	0.2	0.2	0	0.4
Cook drugs themselves and use the ones cooked by friends	0.7	1	0.5	0.2	0	6.1
Purchase prepared drug substance, ingredients, and use the drugs cooked by friends or by themselves	0,7	0,6	0,3	0	0	0
Purchase ingredients, cook drugs themselves, and use the one cooked by friends	0,5	5,9	0	0,2	0	0,4
Purchase prepared drug substance, ingredients, and use drugs cooked by friends	0,2	0,5	0	0	0	0
Purchase ingredients, and use drugs cooked by friends	0,1	0,2	0,1	0,1	0	3,9
Treats from the sexual partner	0,1	0,5	0	0	0	0,7
Treats from the sexual partner and friends	0	0,1	0	0	0	0
Other	0,7	1,7	1,5	6,6	2,3	0

Table 2.6 lists information about the methods of procurement of the main drug mentioned as such by at least 4% of PWID: opium extract, methamphetamine ("vint"), amphetamine ("phen"), methadone, buprenorphine, desomorphine. For all of the above mentioned drugs but for desomorphine, purchasing is the most popular way of procurement. With regard to desomorphine, almost equal shares of PWID noted that they cooked it themselves or bought already cooked substance. Liquid methamphetamine is the drug they often receive from their friends.

4.7% of PWID noted that they did not spend any money to procure drugs in the last month because they already had all the necessary ingredients for cooking, or received their drugs free of charge from their friends or sexual partners. The average expenditure on drug in the last month was UAH 2300 overall, with UAH 2413 for men and UAH 1853 for women. Teenagers (14 to 19 y. o.) spent the least money to purchase or cook drugs in the last month as compared with the respondents older than that – UAH 1657; 20 – 24 y. o. – UAH 1803, 25 – 34 y. o. – UAH 2466, 35 or more year olds – UAH 2255. There is a strong correlation between drug expenses and the frequency of drug use: with the increase of use by one day a month, the spending increased, on the average, by UAH 61.9. ($p<0.001$).

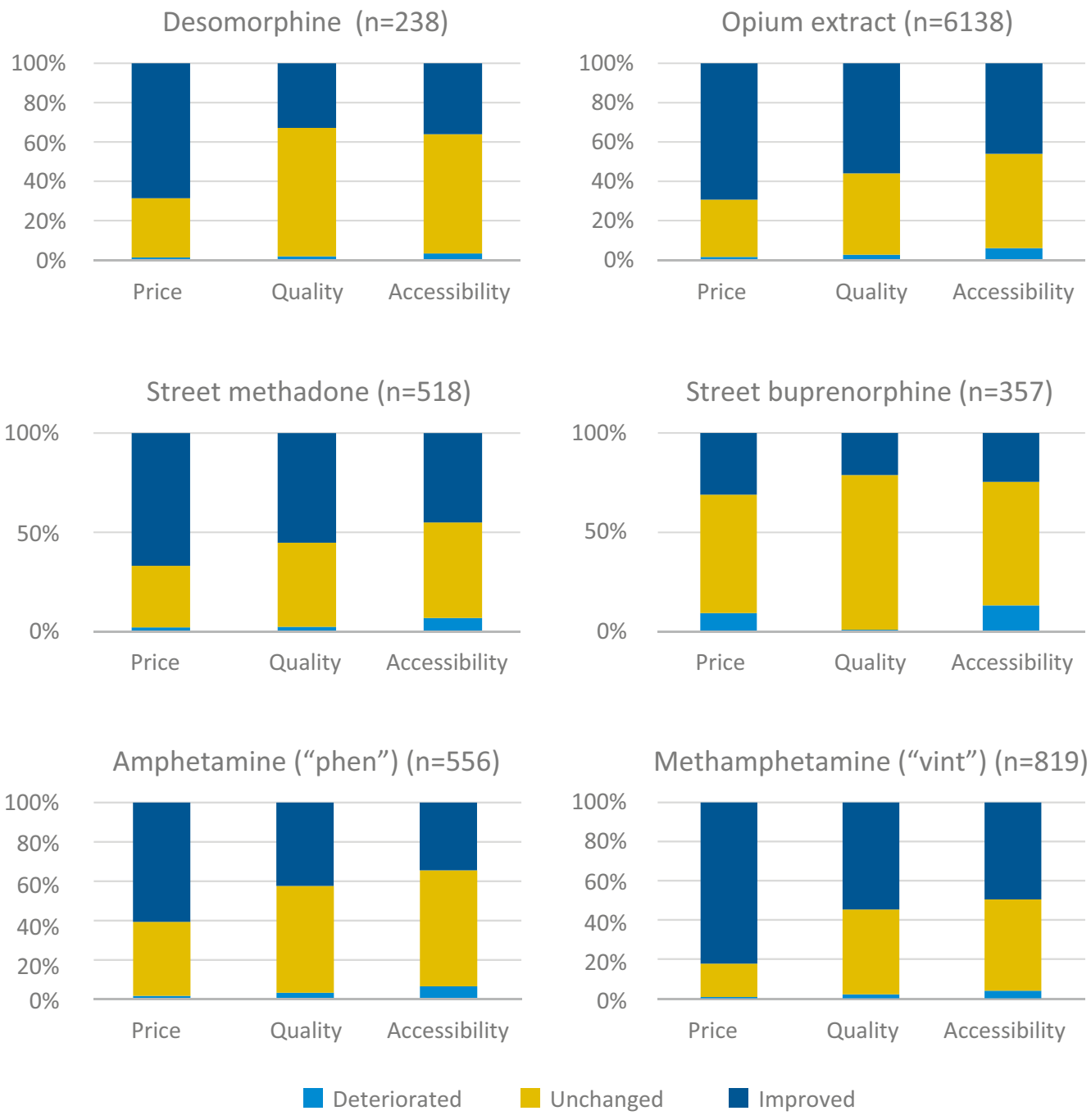
Positive changes of the price, quality, and availability of the main drug were noted by 1.9%, 2.6%, and 6.1% of PWID respectively. Most of the PWID said that the changes in the last year had been for the worse: 68% noted raising prices, 52% – lower quality and 44% – worse access ***(Figure 2.7)***.

Figure 2.7. ***PWID's subjective perception of changes in price, quality, and access to the main drug in the last 12 months, %***



Considering the type of the main drug, the biggest share of methamphetamine users noted worsening in all three parameters, while buprenorphine users noted no changes in the last year ***(Figure 2.8)***.

***Figure 2.8.** PWID's subjective perception of changes in price, quality, and access to the main drug in the last 12 months, %*



Prevalence of dangerous practices related to injected drug use

Almost all of the PWID claimed they had used a sterile syringe/needle during the last injection of the drug. Also, vast majority of them ascertained that they had not practiced using a syringe/needle after another person in the last 30 days. These figures remain virtually the same regardless of sociodemographic characteristics ***(Table 2.7)***.

Table 2.7. *Using clean needles and syringes for the last injection in the last 30 days, %*

Disaggregation variables	Used a sterile syringe/needle during the last injection, N (%[§])	Did not share a syringe/needle during the last 30 days, N (%[§])
All categories	8901 (96.5)	8690 (93.5)
Gender	*p=0.528*	*p<0.001*
Males	7136 (96.5)	6972 (94.3)
Females	1765 (96.2)	1718 (92.2)
Age	*p<0.001*	*p<0.01*
14 - 19	180 (95.6)	179 (91.9)
20 - 24	726 (95.8)	710 (93.3)
25 - 34	3959 (97.1)	3828 (93.9)
35 or older	4036 (96.0)	3973 (94.0)
Drug type	*p<0.001*	*p<0.001*
Opiates	5965 (96.6)	5873 (94.9)
Stimulants	1124 (97.2)	1087 (92.6)
Mixed use	1750 (95.6)	1670 (91.2)
HR client status	*p<0.001*	*p<0.001*
Clients	2391 (97.0)	2345 (94.9)
Not clients	6489 (96.3)	6325 (93.5)

[§] *The data are weighted according to the design of the study.*

Among those who mentioned that they injected drug with a syringe that had been used by another person in the last 30 days, most indicated that they practiced it once or twice. There were also PWID indicating that they practiced it 20 to 30 times in the last month. The average number of uses of a syringe after another PWID is 2.8 times, the average number of PWID a syringe was used after is 1.5 (minimum – 1, maximum – 8).

The practice of using own syringes is rather widespread – 35% of PWID practiced it in the last 30 days ***(Table 2.8)***.

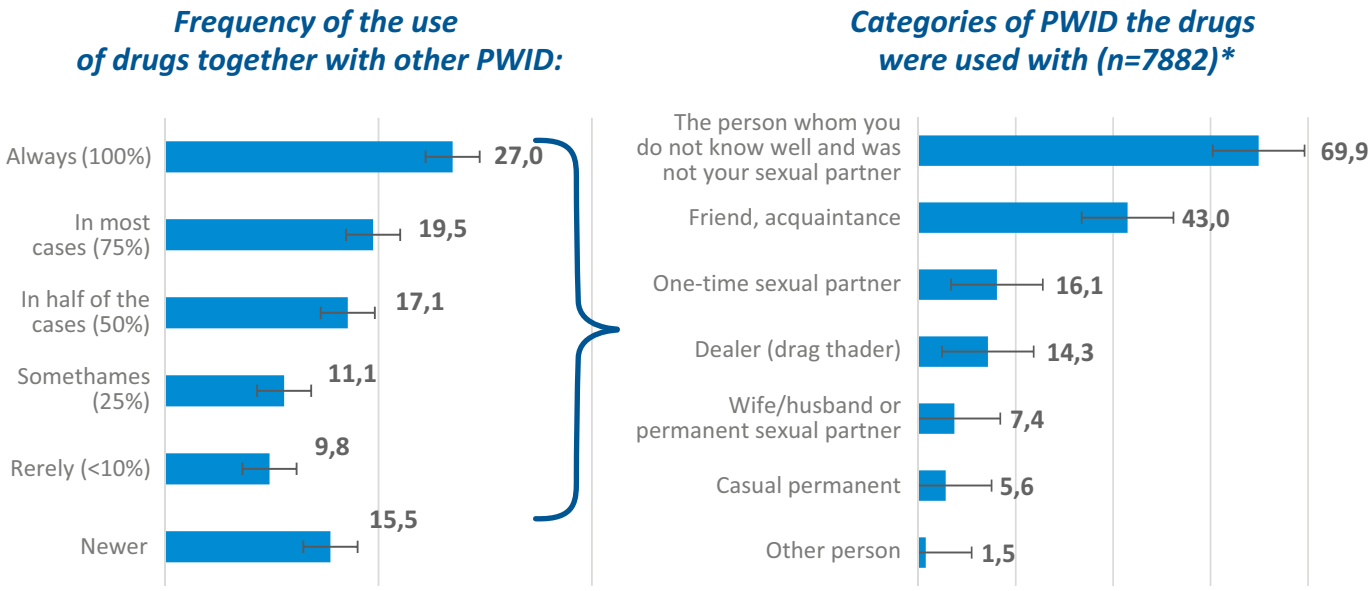
Table 2.8. *Repeated use of one's own syringe in the last 30 days*

Disaggregation variables	Repeated use of syringe, N (%§)	Among those who used a syringe repeatedly (n=3194)		
		Average no. of syringes used repeatedly, pcs§	Average no. of uses of a single syringe, times§	Average no. of days of repeated use of a syringe, days§
All categories	9272 (35.0)	5.57	3.36	3.08
Gender	*p<0.001*	*p<0.001*	*p<0.001*	*p=0.126*
Males	2598 (35.5)	5.72	3.40	3.09
Females	596 (33.2)	4.96	3.16	3.03
Age	*p<0.001*			
14 - 19	34 (22.5)	4.33	3.24	3.93
20 - 24	202 (27.7)	5.06	3.85	3.36
25 - 34	1456 (36.2)	5.67	3.29	3.02
35 or older	1493 (35.8)	5.59	3.35	3.06
Drug type	*p<0.001*			
Opiates	2047 (33.8)	5.75	3.39	3.12
Stimulants	295 (26.4)	3.86	2.84	3.15
Mixed use	827 (43.9)	5.73	3.44	2.93
HR client status	*p =0.529*	*p=0.293*	*p=0.050*	*p<0.001*
Clients	878 (34.9)	5.56	3.37	2.72
Not clients	2307 (35.1)	5.58	3.35	3.21

§ *The data are weighted according to the design of the study.*

Approximately 84% of PWID indicated that they practiced using drugs together with other PWID in the last 30 days. At the same time, almost 70% of them did it with a person they did not know well ***(Figure 2.9).***

***Figure 2.9.** Practice of the joint drug use in the last 30 days, %*



** The sum of the values does not equal 100% because respondents could select multiple answers.*

Concerning the last 30 days, 4.3% of PWID indicated to have given a syringe they had used to another person for injecting a drug. The average number of persons borrowing a syringe (for those who practised this) is 1.75 (minimum – 1 person, maximum – 20 persons), with such a practice taking place, on the average, 3.15 times in the last month (minimum – 1 time, maximum – 60 times).

Purchasing a drug in a syringe without having seen the process of its filling for further use was one of the most common practices among the PWID (50.5%) ***(Table 2.9)***. Among those, 14.7% mentioned disinfecting the drug: 11.1% boiled it before use, 2.1% treated it with an alkaline solution, and 1.6% mentioned another method (changing the needle, washing it with alcohol or eau de Cologne, filtering, and rinsing with boiled water).

36.5% of PWID indicated to have practiced sharing a drug from a big syringe ("collector"). Considering this, investigation of risks related to this practice was also relevant. ***Table 2.9*** lists the results concerning prevalence of the practice of sharing a drug from a used syringe.

Table 2.9. *Prevalence of the practice of purchasing drugs in the filled drug and sharing it from a syringe used by another person in the last 30 days, %*

Disaggregation variables	Purchased drugs in a syringe without seeing how it was filled, N (%§)	Distributed drugs from an already used syringe, N (%§)
All categories	4516 (50.5)	731 (8.6)
Gender	*p=0.561*	*p<0.001*
Males	3578 (51.5)	594 (8.6)
Females	938 (51.0)	137 (8.8)
Age	*p<0.001*	*p<0.001*
14 - 19	77 (46.3)	12 (7.2)
20 - 24	393 (53.2)	60 (9.0)
25 - 34	2038 (52.9)	352 (9.5)
35 or older	2008 (49.7)	307 (7.7)
Drug type	*p<0.001*	*p<0.001*
Opiates	3014 (51.5)	488 (8.7)
Stimulants	499 (44.5)	56 (5.6)
Mixed use	979 (55.5)	178 (10.1)
HR client status	*p<0.001*	*p<0.001*
Clients	1174 (49.9)	201 (8.8)
Not clients	3334 (52.0)	527 (8.5)

§ *The data are weighted according to the design of the study.*

Sharing cooking equipment may also create risks of HIV, hepatitis C, and other infections. 28.4% of PWID admitted to have practised such a sharing in the last 30 days ***(Table 2.10)***.

***Table 2.10.** Sharing equipment for cooking or distribution of drugs in the last 30 days, %*

Disaggregation variables	Shared equipment/dishware, N (%[§])
All categories	2505 (28.4)
Gender	*p<0.001*
Males	2077 (29.4)
Females	428 (24.4)
Age	*p<0.001*
14 - 19	73 (40.6)
20 - 24	213 (30.2)
25 - 34	1125 (28.5)
35 or older	1094 (27.4)
Drug type	*p<0.001*
Opiates	1571 (26.5)
Stimulants	226 (20.9)
Mixed use	688 (38.9)
HR client status	*p<0.001*
Clients	713 (29.9)
Not clients	1787 (27.9)

[§] *The data are weighted according to the design of the study.*

Those who shared the equipment to cook injected drugs most often mentioned the following: kitchen utensils, syringes, water for rinsing, and filters. To share drugs with other PWID, syringes and needles were most often used ***(Figure 2.10)***.

To calculate the cumulative indicator of risky behavior among PWID in the last 30 days, an aggregated indicator was developed combining occurrence of at least one risky practice: sharing a syringe/needle and/or purchase of a drug in an already filled syringe without seeing the process of filling, and/or sharing equipment for distribution/cooking of a drug, and/or distributing a drug from a syringe that has already been used by another person. In 2015 such an indicator showed that 71% of PWID were taking a risk of HIV infection in the last 30 days ***(Figure 2.11)***. In the previous year this indicator was even higher: 80% in 2013, and 81.5% in 2011.

***Figure 2.10.** Types of equipment most often shared with other PWID to cook and distribute drugs (n=2486), %*

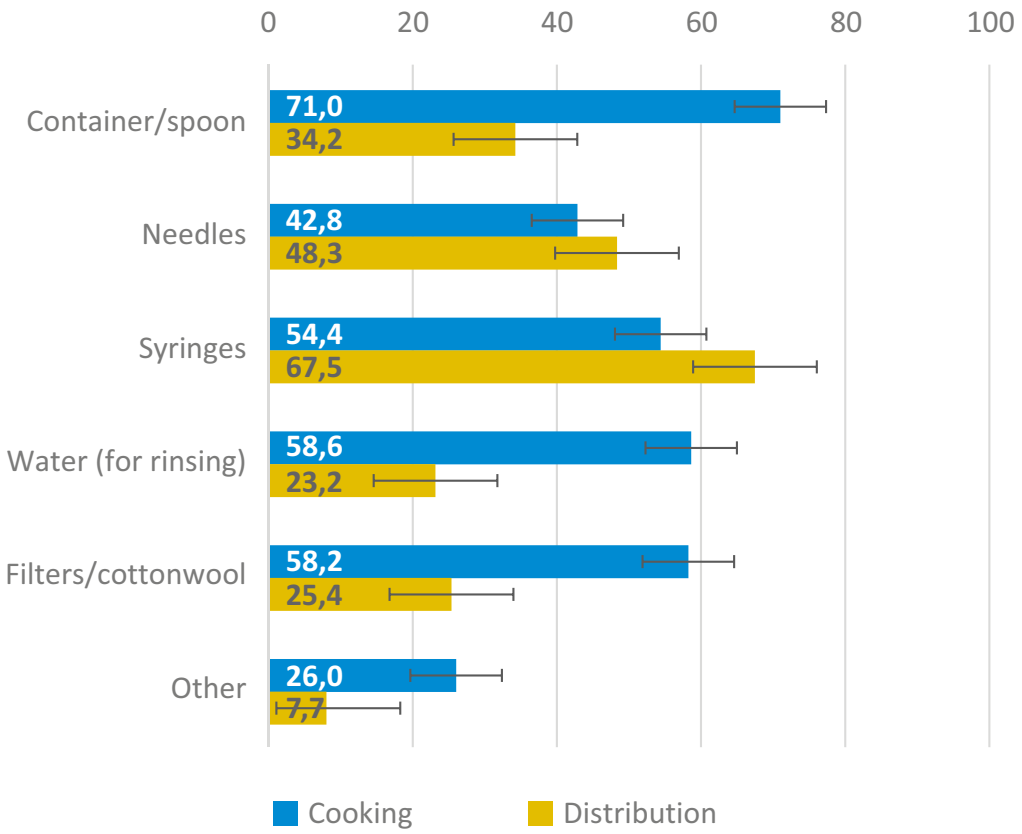
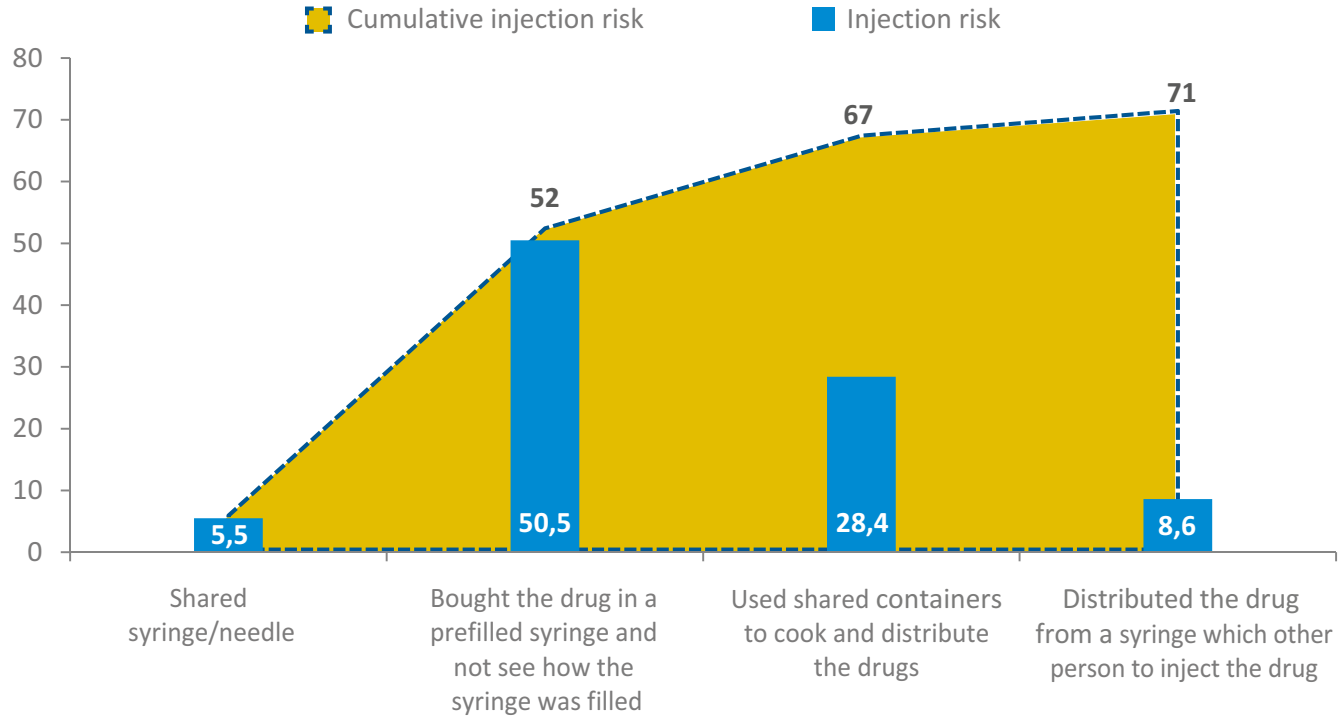
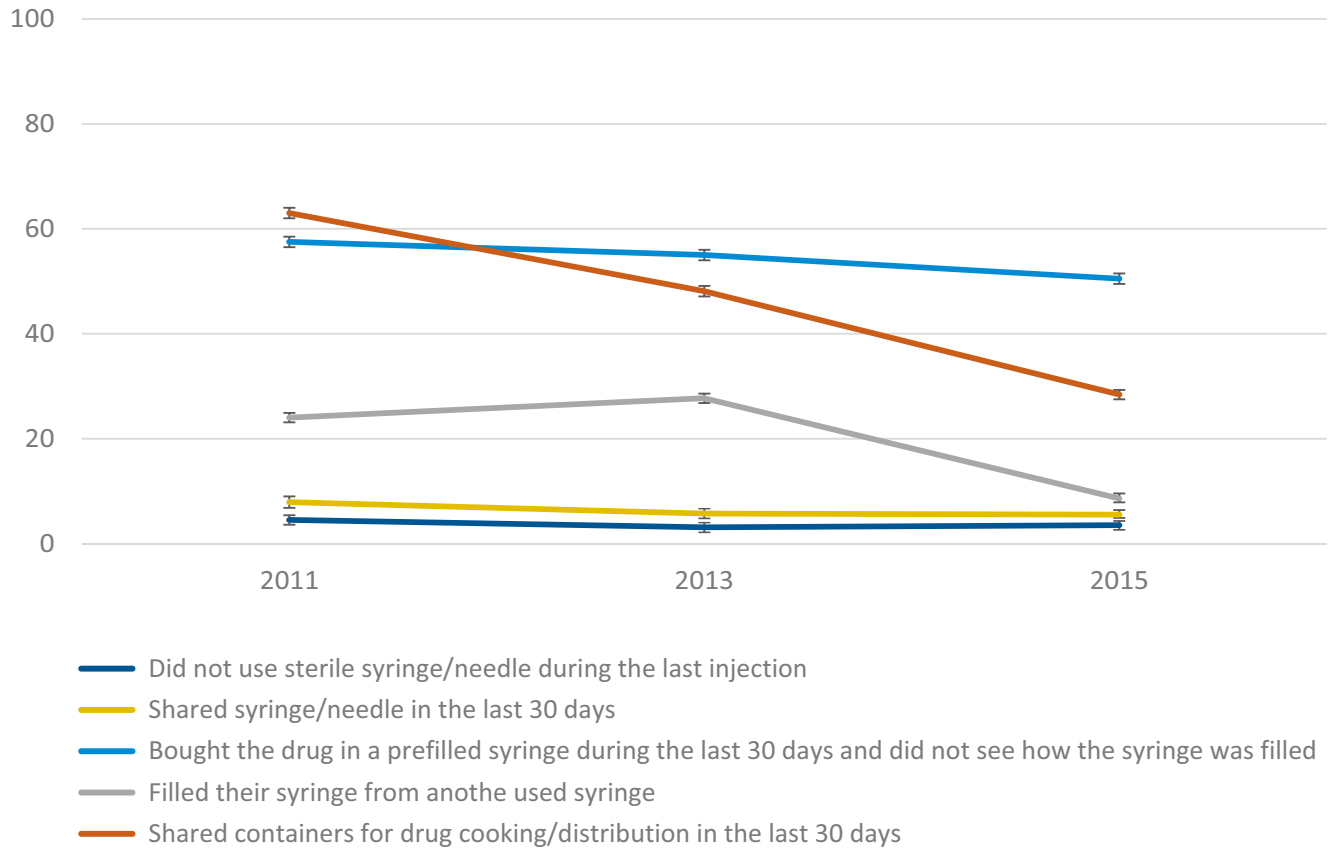


***Figure 2.11.** Cumulative indicator of risky injection behavior, %*



Analysis of the main indicators of injection risk reveals that, in the last five years (2011-2015), substantial improvement in safety of such injection practices as purchasing drugs in a filled syringe, filling syringes from an already used syringe/needle, and sharing equipment was achieved. Using a sterile syringe for the last injection and not sharing a syringe in the last 30 days remains consistently high in that period ***(Figure 2.12)***.

Figure 2.12. ***Dynamics of the main indicators of injection-related risks, 2011-2015***



Overdosing and drug dependence treatment

6% of PWID indicated that they had had overdosing in the last 12 months. The experience of overdosing is virtually equally common for both male and female PWID (6.1% and 5.7% respectively, p<0.237). Statistically significant differences exist in incidence of overdosing linked to the following characteristics:

- age: 7.5% among 14-19-year-olds, 5.9% among 20-24-year-olds, 6.9% among 25-34-year-olds, and 5.2% among older PWID, p<0.001;
- drug type: 5.2% among opiate users, 5.1% among stimulant users, and 9.7% among those practicing mixed use, p<0.001;
- experience of participation in prevention programs: 6.5% among clients and 5.9% among non-clients of NGOs, p<0.001.

A third of PWID indicate that they are registered at the narcological dispensary in connection with their intravenous use of drugs. There are statistically significant differences depending on age, types of drugs used, and NGO client status ***(Table 2.11)***.

7.9% of the PWID received treatment of drug dependence at a state narcological dispensary in 2014-2015. This share was substantially bigger among PWID from the age group of 35+ (8.5%), PWID practicing mixed use (9.3%), and NGO clients (13.4%) ***(Table 2.11)***.

Table 2.11. *Registration and experience of treatment at a state narcological dispensary*

Disaggregation variables	Registered with a state narcological facility, N (%[§])	Received treatment at a state narcological facility in the last two years, N (%[§])
All categories	4516 (32.6)	731 (7.9)
Gender	*p<0.001*	*p<0.572*
Males	3578 (32.9)	594 (7.9)
Females	938 (31.5)	137 (8.0)
Age	*p<0.001*	*p<0.001*
14 - 19	77 (4.6)	12 (2.9)
20 - 24	393 (13.7)	60 (6.8)
25 - 34	2038 (28.0)	352 (7.8)
35 or older	2008 (42.3)	307 (8.5)
Drug type	*p<0.001*	*p<0.001*
Opiates	3014 (34.9)	488 (8.3)
Stimulants	499 (18.6)	56 (3.3)
Mixed use	979 (32.8)	178 (9.3)
HR client status	*p<0.001*	*p<0.001*
Clients	1174 (53.0)	201 (13.4)
Not clients	3334 (25.2)	527 (5.9)

[§] *The data are weighted according to the design of the study.*

SECTION 3.

Sexual Behaviors

Sexual activity

Five fifths of all the respondent PWID informed that they had had sexual contacts in the last year (85.7%), and three fourth told that they had had sexual contacts in the last month (73.0%) ***(Table 3.1)***.

In the last 90 days, every sixth of the respondents (16.3%) had not got any sexual contacts; every three out of five (58.1%) had one partner, and a quarter of the PWID (25.6%) informed that they had had sexual relations with two or more partners. For the whole sample, the average number of sexual partners in the last 90 days was 1.9 persons.

On the average, one respondent PWID in the sample had one sexual contact in four days.

Most of sexually active PWID belong to the age group of 20-29 with a shorter experience of injecting drugs, and to users of stimulants or stimulants and opiates. The share of male PWID who reported being sexually active was larger than that of female respondents ***(Table 3.5)***. Information of having had two or more sexual partners in the last 90 days was more often given by younger males with a shorter experience of injecting drugs, users of stimulants or stimulants and opioid, not being clients of prevention programs.

Using a condom for the last sexual contact

Almost half of all the respondent PWID (48.0%) who had sexual contacts in the last six months reported using a condom during the last sexual contact ***(Table 3.2)***.

59.5% of those who used a condom had purchased it themselves, 11% received it from their sexual partners, friends or acquaintances, and 28.9% received it free of charge, mostly from social workers.

Using a condom during the last sexual contact was most often reported by younger PWID, males, respondents with a shorter experience of drug use, and slightly more often by clients of harm reduction programs ***(Table 3.5)***.

Sexual relations with different types of partners and using condoms in such relations

In the last three months, every six of the respondents had had no sexual contacts (16.3%). Every three out of five PWID had sexual contacts with a permanent partner (63.3%); almost every third informed of having had sexual contacts with irregular partners (30.2%); 3.0% had bought sexual services, and 1.7% had received reward for providing sexual services ***(Figure 3.1, Table 3.3)***.

The share of risky contacts in the last sexual contacts with each type of partners (i. e. contacts without a condom) was 36.8% for contacts with permanent partners, 9.5% – with irregular, and 0.3% – for commercial contacts for the whole population of PWID (or 59.9%, 33.3%, 17.3%, and 21.1% for the respondents having had sexual contacts with respective partners in the last 90 days).

The share of those who informed about having permanent partners was higher among females, older PWID, users of opioid drugs, and clients of prevention programs ***(Table 3.5)***. Sexual contacts with irregular partners were more often reported by men, younger PWID, with a shorter experience in drug use, users of stimulants and those who had used both types of drugs in the last 30 days, and not clients of harm reduction programs.

The use of commercial sex services in the last 90 days was reported mostly by males from the age group of 20-29, users of stimulants, and not clients of prevention programs. Mostly younger females with the average experience of drug use (3-5 years), users of stimulants only, and clients of harm reduction programs reported selling sexual services for money.

Among PWID who had not used a condom during the last contact with the permanent partner, the most common reason for the failure to use it was confidence in the fact that both partners were healthy (50.5% of those who had such contacts and did not used a condom during the last contact) ***(Figure 3.2, Table 3.4)***. Not having a condom "near at hand" was the most commonly mentioned reason for not using it during sexual contacts with irregular partners (37.0%) and commercial contacts, where the respondent was the purchaser of the services (17.0%). Failure to use a condom during the last sexual contact with a commercial partner, where the respondent paid for sex was most often caused by being under influence of alcohol and/or drugs (19.9% and 20.6% respectively); this cause was almost as common in cases of not using a condom with irregular partners (14.2% and 17.5% respectively). While selling sexual services, 30.5% of respondents were not using condoms because their partners insisted on not using them.

Not using a condom because it reduces sensitivity was equally commonly mentioned for all categories of partners. This was the reason for not using a condom during the last sexual contact with their permanent partner according to 39.0% of those who had such contacts and did not use a condom during the last sexual contact, with an irregular partner – 33.8%, with a commercial partner where the respondent provided a reward – 19.5%, with a commercial partner where the respondent received a reward – 32.5% of the group.

Trends in sexual behaviors of PWID

Occurrence of sexual contacts in the last year and month did not change compared with the studies of 2013 and 2011 ***(Table 3.6)***. The number of sexual partners in the last 90 days among respondent PWID having sexual contacts in that period was 2.5 persons in 2015, compared with 2.7 persons in 2011. For those having sexual contacts in the last 12 months, proportions of different types of sexual partners also did not change: three quarters of respondents who were sexually active in the last year had sexual contacts with a permanent partner, about a third – with an irregular one, 3-4% of the respondents bought sexual services, and about 2% sold them.

PWID, surveyed in 2015, used condoms less often during sexual contacts than PWID surveyed in 2013 and 2011 in almost all cases. The share of respondents having used a condom during the last sexual contact in the last 12 months was 48.1% in 2015 compared with 54.1% in 2013 (in 2011 the questions were asked individually for each type of sexual contacts), i. e. it decreased by about 6%.

The same change is observed in the use of a condom during the last sexual contact with the permanent and irregular partners among those who had had such partners in the last 90 days. Usage of a condom during all contacts with the permanent partners in the last 90 days shifted to the total avoidance of condoms (from 35.8% in 2011 and 34.6% in 2013 to 45.1% in 2015), and with irregular partners – to irregular use and non-use.

Usage of condoms while buying sexual services increased compared with 2013, returning to the level of 2011, constituting approximately four fifths of all the last contacts of this type. Reported use of a condom during selling of sexual services remained unchanged compared to 2013.

Group sex experience

The share of respondents reporting of having sexual contacts with several partners simultaneously in the last 90 days was 3.2% (280 persons) of the total number of respondents, or 3.7% of those having had sexual contacts in the last 12 months. Compared with the study of 2015, the share of respondents practicing group sex increased by 1% ***(Table 3.7)***.

The share of those who reported using a condom during each of such contacts, on the contrary, dropped from 55.1% in 2013 to 36.6%, pointing to inconsistent use of condoms.

Homosexual contacts

The share of men reporting having had sexual contacts with men in the last year was 0.5% (34 persons) ***(Table 3.8)***. This figure did not change compared with 2013. 24 of them (71.1%) claimed to have used a condom during the last sexual contact with a man.

***Table 3.1.** Sexual activities of PWID, 2015 (N=9407)*

Характеристика	N	%
Occurrence of sexual contacts in the last 12 months	*8012*	*85.7*
Occurrence of sexual contacts in the last 30 days	*6808*	*73.0*
Frequency of sexual contacts in the last 90 days		
None	1465	17.3
Once a month or less	1102	11.9
Once a week or less	2757	28.7
Several times a week	2519	27.5
Daily or almost daily	1248	14.6
Average number of sexual contacts in the last 90 days per 1 PWID	**9091**	**23**
Frequency of sexual contacts in the last week		
None	3165	33.9
Once a week or less	2518	27.0
Several times a week	2446	26.2
Daily or almost daily	1042	12.8
Average number of sexual contacts in the last 7 days per 1 PWID	**9171**	**1.7**
Total number of sexual partners in the last 90 days		
None	1438	16.3
One	5385	58.1
Two or more	2435	25.6
Average number of partners	**9258**	**1.9**
Median number of partners	9258	1.0

N –number of respondents in the sample;
% – weighted share according to RDS.

***Table 3.2.** Usage of a condom during the last sexual contact (among those with sexual contacts in the last 30 days), 2015 (N=6808)*

Characteristic	N	%
Usage of a condom during the last sexual contact (among those with sexual contacts in the last 12 months)	3345	48.0
The source of obtaining/purchasing the condom (among condom users)		
Bought it himself/herself	1837	59.5
Received it from a sexual partner, friend/acquaintance	353	11.0
Received it free of charge*	954	28.9
Other	24	0.7
Type of the partner in the last sexual contact		
Permanent	5075	74.8
Irregular	1592	23.2
Commercial partner (bought services)	77	1.0
Commercial partner (sold services)	61	1.0
Last contact type		
Vaginal	6338	94.5
Anal	118	1.8
Oral	249	3.7

N –number of respondents in the sample; % – weighted share according to RDS.
**In a drugstore – 1.3%, from a social worker – 26.4%, in a healthcare facility – 1.2%.*

***Table 3.3.** Sexual relations of PWID with different types of partners in the last 90 days, 2015 (N=9407)*

Partner type	N	%	Using a condom for the last sexual contact	Condom usage in the last 3 months		
				always	not always	never
Permanent partner	5893	63.3	2506 (25.8%)	1563 (16.4%)	1691 (17.5%)	2534 (28.7%)
Irregular partner	2815	30.2	1893 (20.0%)	1327 (13.9%)	1023 (11.0%)	393 (4.6%)
Commercial partner (bought services)	301	3.0	248 (2.4%)	197 (1.9%)	71 (0.7%)	15 (0.1%)
Commercial partner (sold services)	152	1.7	119 (1.3%)	87 (0.9%)	45 (0.6%)	8 (0.1%)
No partners in the last 90 days	1438	16.3	-	-	-	-

N – number of respondents in the sample;
% – weighted share according to RDS.

***Figure 3.1.** CSexual relations with different types of partners and condom usage in the last 90 days.*

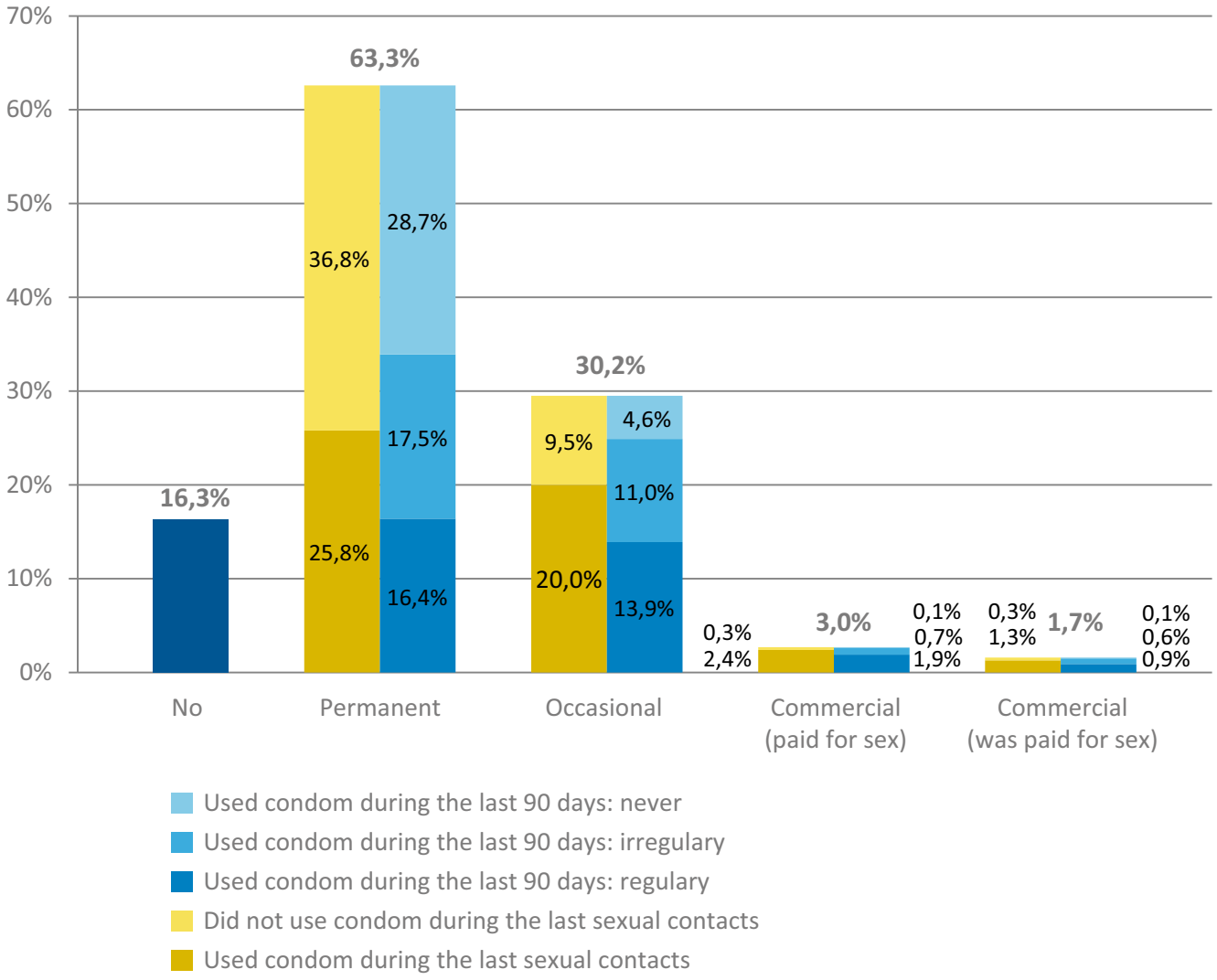


***Figure 3.2.** ПReasons for not using a condom during the last sexual contact with different types of partners in the last 90 days.*

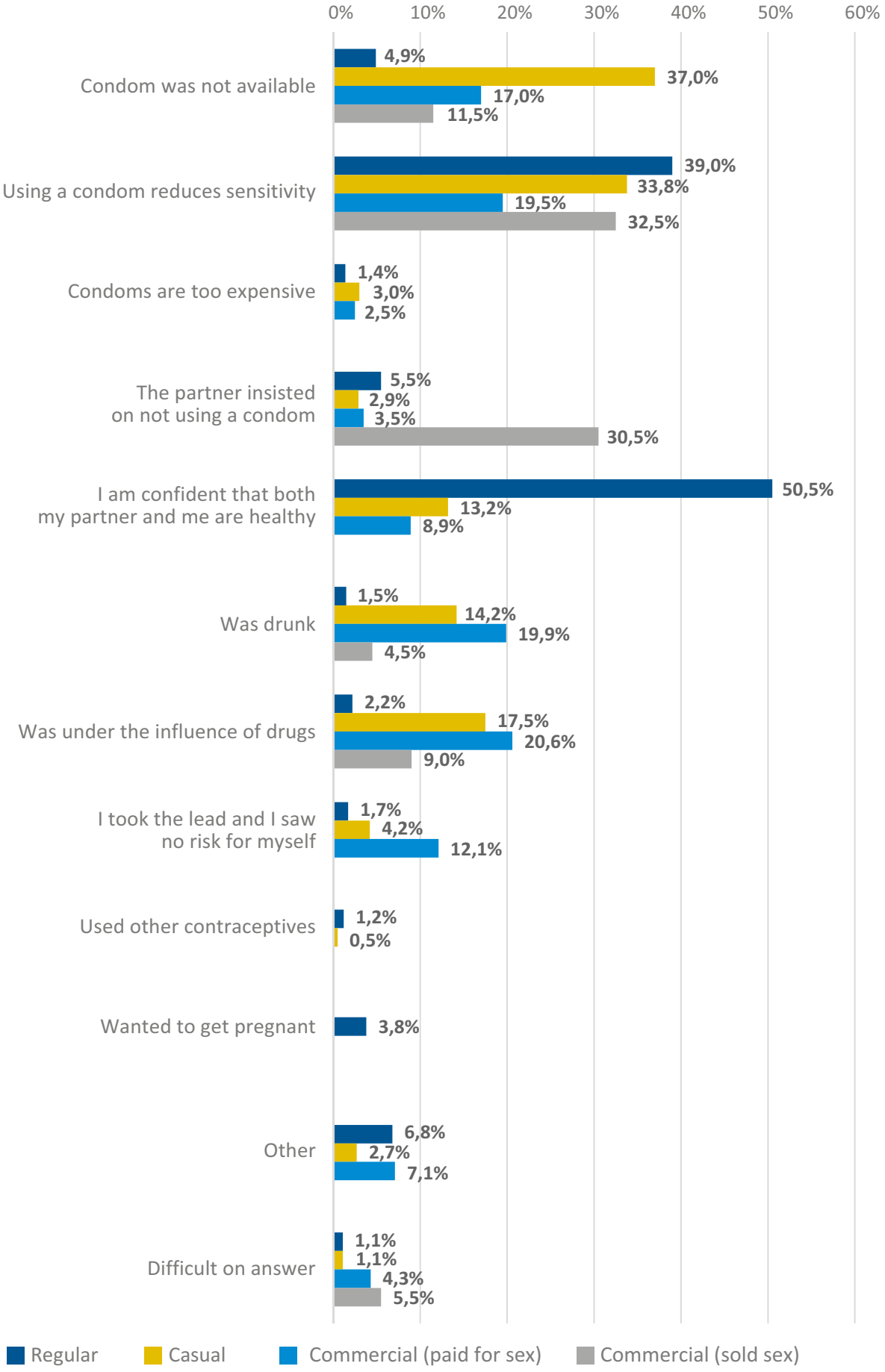


***Table 3.4.** Reasons for not using a condom during the last sexual contact with different types of partners, 2015 (N=9407).*

Reason	With the permanent partner	With an irregular partner	With a commercial partner (bought services)	With a commercial partner (sold services)
Condom absence or is not available at hand	178 (4.9)	354 (37.0)	9 (17.0)	4 (11.5)
Using a condom reduces sensitivity	1365 (39.0)	298 (33.8)	11 (19.5)	8 (32.5)
Condoms are too expensive	45 (1.4)	34 (3.0)	1 (2.5)	-
The partner insisted on not using a condom	180 (5.5)	31 (2.9)	1 (3.5)	10 (30.5)
I am confident that both my partner and me are healthy	1703 (50.5)	146 (13.2)	5 (8.9)	–
I was drunk	47 (1.5)	119 (14.2)	8 (19.9)	2 (4.5)
I was under the influence of drugs	81 (2.2)	155 (17.5)	9 (20.6)	3 (9.0)
I took the lead and I saw no risk for myself	60 (1.7)	31 (4.2)	4 (12.1)	–
We used other contraceptives	49 (1.2)	5 (0.5)	–	–
Wanted to have a child	108 (3.8)	–	–	–
The price is higher without a condom	–	–	–	–
Other	202 (6.8)	25 (2.7)	5 (7.1)	–
Not sure	34 (1.1)	11 (1.1)	3 (4.3)	3 (5.5)
The number of respondents who had such partners in the last 90 days (% of those of them who did not use a condom during the last sexual contact)	5893 (59.9)	2815 (33.3)	301 (17.3)	152 (21.1)

N – number of respondents in the sample;
% – weighted share according to RDS.

The sum of percentage figures in columns may exceed 100% because the respondents could select multiple answers.

Table 3.5. *Sexual behaviors in different sub-groups of PWID, 2015 (N=9405)*

Socio-demographic groups	N	Had sexual contacts in the last 12 months	Used a condom for the last sexual contact*	Total number of sexual partners in the last 90 days			Sexual partners in the last 90 days			
				none	one	two or more	permanent	irregular	commercial (bought services)	commercial (sold services)
All categories	**9274**	**85.7**	**48.1**	**16.3**	**58.1**	**25.6**	**63.3**	**30.2**	**3.0**	**1.7**
Gender										
Male	**7424**	85.2	49.0	17.1	56.1	26.8	60.7	33.0	3.6	0.5
Female	**1851**	87.9	44.8	13.5	65.7	20.8	73.6	19.4	0.3	6.6
Significance of deviation		*p<0.001*	*p<0.001*	*p<0.001*			*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*
Age										
14 - 19	**190**	88.0	68.7	13.4	35.4	51.2	42.5	58.9	3.0	4.1
20 – 24	**771**	93.8	58.1	7.8	46.1	46.0	56.2	50.4	4.5	3.1
25 – 10	**1887**	91.1	48.3	10.6	56.7	32.7	64.0	37.8	4.0	2.0
30 – 34	**2262**	88.7	48.8	13.4	60.9	25.7	68.2	30.1	3.0	1.5
35 or older	**4295**	80.0	44.0	22.5	60.5	17.1	62.7	21.5	2.1	1.3
Significance of deviation		*p<0.001*	*p<0.001*	*p<0.001*			*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*
Drug injecting experience										
Up to 2 years	**732**	91.6	51.4	10.0	57.9	32.1	64.9	37.7	2.5	1.6
3 – 5 years	**1038**	90.2	53.7	11.4	53.6	34.9	60.3	40.1	3,0	3,4
6+ years	**7457**	84.6	46.9	17.5	58.7	23.8	63.5	28.3	3.0	1.5
Significance of deviation		*p<0.001*	*p<0.001*	*p<0.001*			*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*

Continuation of Table 3.5.

Socio-demographic groups	N	Had sexual contacts in the last 12 months	Used a condom for the last sexual contact*	Total number of sexual partners in the last 90 days			Sexual partners in the last 90 days			
				none	one	two or more	permanent	irregular	commercial (bought services)	commercial (sold services)
Drugs injected in the last 30 days										
Opiates only	**6207**	83.6	48.1	18.6	60.5	20.9	64.6	25.6	2.3	1.4
Stimulants only	**1152**	92.0	53.0	10.1	49.5	40.3	60.6	43.3	5.7	3.0
Both	**1858**	89.7	45.1	12.1	54.5	33.4	60.7	38.6	3.6	1.9
Significance of deviation		*p<0.001*	*p<0.001*	*p<0.001*			*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*
NGO client status										
Client	**2474**	87.3	50.8	15.4	63.2	21.5	69.4	23.6	2.2	2.7
Not a client	**6801**	85.2	47.0	16.7	56.2	27.1	61.1	32.6	3.2	1.3
Significance of deviation		*p<0.001*	*p<0.001*	*p<0.001*			*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*

N – number of respondents in the sample;

% – weighted share according to RDS.

** Among those who had sexual contacts in the last 30 days*

***Table 3.6.** Trends in sexual activity, occurrence of different types of partners, and condom usage during sexual contacts among PWID*

Characteristic		2011	2013	2015
		%	%	%
Sexual contacts in the last 12 months (among those having ever had sexual contacts)		89.2	84.9	85.9
Occurrence of sexual contacts in the last 30 days (among those having had sexual contacts in the last 12 months)		87.9	84.5	85.9
Total number of sexual partners in the last 90 days	None	–	–	16.3
	One	–	–	58.1
	Two or more	–	–	25.6
The average number of sexual partners in the last 90 days (among PWID having had partners in the last 90 days)		**2.7**	**–**	**2.5**
Usage of a condom during the last sexual contact (among those with sexual contacts in the last 30 days)		**–**	**54.1**	**48.1**
Different types of partners in the last 90 days (among those having had sexual contacts in the last 12 months)	Permanent partner	77.1	75.7	73.6
	Irregular partner	32.6	34.2	35.0
	Commercial partner (bought services)	2.7	4.1	3.4
	Commercial partner (sold services)	2.8	1.8	2.0
Condom use during contacts with permanent partners*	**During the last sexual contact**	**47.1**	**46.8**	**40.9**
	During the last 3 months: always	26.9	28.5	25.7
	During the last 3 months: not always	35.9	35.4	27.4
	During the last 3 months: never	35.8	34.6	45.1
	During the last 3 months: not sure	1.4	1.5	1.8
Condom use during contacts with irregular partners*	**During the last sexual contact**	**77.3**	**74.3**	**66.7**
	During the last 3 months: always	52.9	56.0	46.0
	During the last 3 months: not always	33.8	33.0	36.4
	During the last 3 months: never	10.3	9.0	15.1
	During the last 3 months: not sure	3.0	2.0	2.5

Continuation of Table 3.6.

Characteristic		2011	2013	2015
		%	%	%
Condom use during contacts with commercial partners (bought services)*	**During the last sexual contact**	**83.9**	**76.0**	**82.8**
	During the last 3 months: always	62.6	62.9	65.9
	During the last 3 months: not always	28.6	19.7	24.5
	During the last 3 months: never	6.2	14.8	4.8
	During the last 3 months: not sure	2.6	2.6	4.8
Condom use during contacts with commercial partners (sold services)*	**During the last sexual contact**	**86.8**	**79.4**	**78.9**
	During the last 3 months: always	57.6	61.9	50.7
	During the last 3 months: not always	35.0	30.6	36.6
	During the last 3 months: never	3.6	2.6	4.5
	During the last 3 months: not sure	3.8	4.9	8.2
Total number of respondents		**9069**	**9502**	**9407**

N – number of respondents in the sample;
% – weighted share according to RDS.
** Among those who had such partners in the last 90 days.*

***Table 3.7.** Group sex experience among PWID*

Characteristic		2011	2013	2015
		%	%	%
Group sex experience in the last 90 days (among those having had sexual contacts in the last 12 months)		–	2.7	3.7
Condom use during group sex in the last 90 days (among those having had such partners)	Always	–	55.1	36.6
	Not always	–	26.0	42.1
	Never	–	17.4	17.7
	Not sure		1.5	3.6
Total		**9069**	**9502**	**9405**

N – number of respondents in the sample;
% – weighted share according to RDS.

***Table 3.8.** Experience of homosexual relations among male PWID*

Characteristic	2011	2013	2015
	%	%	%
Experience of homosexual contacts among men in the last 12 months	0.9	0.5	0.5
Using a condom during the last homosexual contact (among those who had such contacts)	35.0	–	71.1
Total	**6578**	**7366**	**7424**

N – number of respondents in the sample;
% – weighted share according to RDS.

SECTION 4.

Awareness of HIV transmission routes

The percentage of correct answers to each of 10 questions concerning HIV transmission routes and infection prevention was from two thirds to over 95% ***(Table 4.1)***.

95.7% of all respondents knew that one can contract HIV by using someone else's needle for injection. Also, almost nine out of ten respondents (89.1%) agreed with the fact that a healthy-looking person may be HIV-positive.

About 85% of respondent PWID provided correct answers to questions about the myths of HIV transmission routes: a person cannot contract HIV by drinking in turns from the same glass with an infected person (86.9%) or sharing a toilet, swimming pool, sauna (84.8%). The same proportion of right answers was received to the question concerning prevention of HIV infection by using a condom during each sexual contact (86.2%) and sexual relations with only one, HIV-negative partner (87.9%).

The least aware were PWID regarding the issue about mother-to-child transmission of HIV (during pregnancy – 75.9%; during childbirth – 73.6%), and especially while breastfeeding (65.5%), and about the fact that HIV cannot be contracted through a mosquito bite (76.1%).

Right answers to all 10 questions were given by 34.8% of respondents. At the same time, 73.3% of PWID correctly named two ways of prevention of sexual transmission of HIV, 67.1% of PWID rejected all three myths about HIV transmission routes, and 56.7% of respondents were able to list all three routes of mother-to-child HIV transmission.

The only difference in awareness demonstrated by representatives of different genders concerned questions of vertical HIV transmission: women in 1.4 more cases knew that HIV can be transmitted during pregnancy, childbirth, and breastfeeding (71.5% of women against 52.9% of men) ***(Table 4.2)***. The share of correct answers to questions about HIV transmission through a used syringe was the same regardless of age, gender, drug use experience, types of drugs used, or harm reduction client status.

With regard to the other groups of questions, older PWID with a longer term of use of injected drugs, stimulant users, and harm reduction clients demonstrated a somewhat higher awareness than the rest of respondents.

The knowledge of HIV transmission routes measured using six questions ("A healthy-looking person can be HIV-positive", "HIV infection can be contracted through the use of a needle already used by another person", two questions about the myths about HIV transmission routes (via dishware, toilet, swimming pool, sauna), and two questions about the means to prevent HIV infection)) has remained virtually the same as in 2013 and 2011, at the level of 59.2% ***(Table 4.3)***.

***Table 4.1.** Knowledge about HIV: percentage of respondents having correct knowledge of the ways to prevent HIV infection, and HIV transmission routes, 2015 (N=9407).*

Statements about HIV infection	N	%
A healthy-looking person can be HIV-positive	8243	89.1
HIV transmission routes		
HIV infection can be contracted through the use of a needle already used by another person	8829	95.7
Myths concerning HIV transmission routes		
HIV infection can be contracted through a mosquito bite	7024	76.1
A person can contract HIV by taking turns drinking from the same glass with a HIV-positive person	7959	86.9
A person can contract HIV through sharing a toilet, swimming pool, or sauna with a HIV-positive person	7720	84.8
Correct answers to all questions about myths concerning HIV transmission routes	**6100**	**67.1**
Ways to prevent HIV infection		
HIV infection can be prevented by having sex with one faithful non-infected partner	7953	86.2
HIV infection can be prevented by correct use of a condom during each sexual contact	8159	87.9
Correct answers to all questions about ways to prevent HIV infection	**6682**	**73.3**
Knowledge about vertical transmission of HIV		
HIV infection can be transmitted from an HIV-positive mother to her child during pregnancy	6988	75.9
HIV infection can be transmitted from an HIV-positive mother to her child during childbirth	6773	73.6
HIV infection can be transmitted from an HIV-positive mother to her child during breastfeeding	5972	65.5
Correct answers to all questions about vertical transmission of HIV	**5059**	**56.7**
Correct answers to all questions	**2905**	**34.8**
Correct answers to questions about HIV transmission*	**5255**	**59.2**

N – number of respondents in the sample;
% – weighted share according to RDS.
* *These questions include the following (6 questions overall): "A healthy-looking person can be HIV-positive", "HIV infection can be contracted through the use of a needle already used by another person", two questions about the myths about HIV transmission routes (via dishware, toilet, swimming pool, sauna), and two questions about the means to prevent HIV infection.*

Table 4.2. *Correct answers of the routes of transmission and ways to prevent transmission of HIV in different categories of PWID, 2015 (N=9405)*

Socio-demographic groups	N	All correct answers to questions about HIV transmission routes	Correct knowledge of…				
			A healthy-looking person can be HIV-positive	HIV is transmitted through shared injection equipment	No myths concerning HIV transmission routes	Ways to prevent HIV infection	Vertical transmission of HIV
All categories	**9271**	**59.2**	**89.1**	**95.7**	**67.1**	**73.3**	**56.7**
Gender							
Male	**7424**	**58.7**	89.1	95.7	66.2	73.1	52.9
Female	**1851**	**60.8**	89.1	95.6	70.8	74.2	71.5
Significance of deviation		*p<0.001*	*ns*	*ns*	*p<0.001*	*p<0.001*	*p<0.001*
Age							
14 – 19	**190**	**33.8**	72.3	97.6	40.7	58.8	41.8
20 - 24	**771**	**45.3**	81.4	95.7	56.5	65.3	45.0
25 – 29	**1887**	**57.2**	89.1	96.1	64.2	72.0	53.3
30 - 34	**2262**	**60.7**	90.1	95.8	67.9	73.4	58.0
35 or older	**4295**	**63.1**	90.8	95.3	71.4	76.0	60.4
Significance of deviation		*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*
Drug injecting experience							
Up to 2 years	**732**	**43.8**	83.9	96.9	47.8	65.8	47.8
3 – 5 years	**1038**	**51.5**	84.1	95.7	59.7	68.9	51.0
6+ years	**7457**	**61.6**	90.2	95.6	69.8	74.5	58.2
Significance of deviation		*p<0.001*	*p<0.001*	*p<0.01*	*p<0.001*	*p<0.001*	*p<0.001*
Drugs injected in the last 30 days							
Opiates only	**6207**	**61.1**	89.9	95.5	67.5	75.4	58.1
Stimulants only	**1152**	**51.3**	85.1	95.6	61.2	68.6	53.4
Both	**1858**	**56.9**	88.6	96.4	69.1	68.7	53.7
Significance of deviation		*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*

Continuation of Table 4.2.

Socio-demographic groups	N	All correct answers to questions about HIV transmis-sion routes	Correct knowledge of…				
			A healthy-looking person can be HIV-positive	HIV is transmitted through shared injection equipment	No myths concerning HIV transmission routes	Ways to prevent HIV infection	Vertical transmission of HIV
NGO client status							
Client	**2474**	**67.5**	93.4	97.2	77.7	76.8	65.0
Not a client	**6801**	**56.1**	87.5	95.2	63.3	72.0	53.6
Significance of deviation		*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*

N N – number of respondents in the sample;

% – weighted share according to RDS.

* *These questions include the following (6 questions overall): "A healthy-looking person can be HIV-positive", "HIV infection can be contracted through the use of a needle already used by another person", two questions about the myths about HIV transmission routes (via dishware, toilet, swimming pool, sauna), and two questions about the means to prevent HIV infection.*

ns – the variation is not statistically significant

***Table 4.3.** Dynamics of correct knowledge of HIV transmission among PWID*

	2011 %	2013 %	2015 %
The share of PWID possessing correct knowledge of the HIV transmission routes*	64.0	61.1	59.2
Total	**9069**	**9502**	**9405**

N – number of respondents in the sample;

% – weighted share according to RDS.

* *These questions include the following (6 questions overall): "A healthy-looking person can be HIV-positive", "HIV infection can be contracted through the use of a needle already used by another person", two questions about the myths about HIV transmission routes (via dishware, toilet, swimming pool, sauna), and two questions about the means to prevent HIV infection*

SECTION 5.

Presence of sexually transmitted infections and other diseases

A quarter of respondent PWID reported having had Hepatitis C (26.4%). Slightly over one tenth of all respondents had or still have Hepatitis B (13.6%) and pulmonary tuberculosis (11.8%). Only 3.6% of PWID in the sample admitted having been diagnosed with syphilis ***(Table 5.1)***.

The experience of treatment of such infections showed the opposite trend. Almost seventy per cent (67.9%) of PWID knowing they had Hepatitis C had never treated it. Slightly less than a third of respondents (30.0%) knowing of having Hepatitis B had not received any treatment. On the other hand, less than 3% of respondents who reported that they had, or had had pulmonary tuberculosis or syphilis, had not received treatment (2.9% and 2.6% respectively) ***(Table 5.1)***.

Table 5.1. *Occurrence of STIs and other diseases stated by PWID, 2015 (N=9407)*

Do/did you have…	N	%	Have you received treatment (if applicable)			
			yes, complete course	yes, but I have not completed it	yes, I am receiving it now	no / I do not know
Hepatitis B	1285	13.6	59.0	7.4	3.7	30.0
Hepatitis C	2371	26.4	19.2	9.5	3.4	67.9
Pulmonary tuberculosis	1125	11.8	86.1	4.0	6.9	2.9
Syphilis	334	3.6	88.6	6.7	2.1	2.6

NN – number of respondents in the sample;
% – weighted share according to RDS.

The biggest share of respondents indicating that they were or had been infected with the four infection in question was among older PWID, with longer experience of drug use, those who had used opiates in the last month, had been imprisoned, and had taken part in harm reduction programs *(Table 5.2)*. .

***Table 5.2.** Occurrence of STIs and other diseases stated by PWID by groups, 2015 (N=9407)*

Sociodemographic groups	N	Do/did you have…			
		Hepatitis B	Hepatitis C	Pulmonary tuberculosis	Syphilis
All categories	**9273**	**13.6**	**26.4**	**11.8**	**3.6**
Gender					
Male	**7424**	14.0	26.0	12.6	3.3
Female	**1851**	12.0	28.2	8.6	5.1
Significance of deviation		*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*
Age					
14 - 19	**190**	0.8	2.4	0.4	0.0
20 - 24	**771**	3.5	7.0	2.0	0.8
25 - 29	**1887**	7.9	18.2	3.5	1.9
30 - 34	**2262**	13.4	26.5	8.0	2.4
35 or older	**4295**	19.0	35.1	20.2	5.8
Significance of deviation		*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*
Drug injecting experience					
Up to 2 years	**732**	2.2	4.6	2.8	2.1
3 – 5 years	**1038**	5.3	8.6	3.6	1.9
6+ years	**7457**	15.8	30.7	13.6	4.0
Significance of deviation		*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*
Drugs injected in the last 30 days					
Opiates only	**6207**	15.2	28.6	13.1	3.7
Stimulants only	**1152**	8.1	13.8	5.3	3.3
Both	**1858**	11.1	26.4	11.2	3.8
Significance of deviation		*p<0.001*	*p<0.001*	*p<0.001*	*ns*

Continuation of Table 5.2.

Sociodemographic groups	N	Do/did you have…			
		Hepatitis B	Hepatitis C	Pulmonary tuberculosis	Syphilis
NGO client status					
Client	**2474**	20.4	45.5	17.8	4.4
Not a client	**6801**	11.2	19.6	9.7	3.4
Significance of deviation		*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*
Imprisonment experience					
Have been imprisoned	**3736**	18.1	35.9	22.3	4.7
Have never been imprisoned	**5536**	10.6	20.0	4.6	2.9
Significance of deviation		*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*

N – number of respondents in the sample;
% – weighted share according to RDS.
ns – the variation is not statistically significant

3According to the PWID, occurrence of sexually transmitted infections and other diseases did not change in 2015 compared with 2013 ***(Table 5.3)***.

Table 5.3. *Dynamics of occurrence of STIs and other diseases stated by PWID*

Had / have...	2011	2013	2015
	%	%	%
Hepatitis B	–	14.6	13.6
Hepatitis C	–	27.6	26.4
Pulmonary tuberculosis	–	11.7	11.8
Syphilis	–	–	3.6
Total	**9069**	**9502**	**9405**

N – number of respondents in the sample;
% – weighted share according to RDS.
– The question was not asked that year.

SECTION 6.

Prevention programming coverage

Distribution of syringes and condoms

26.5% of respondents indicated that they were clients of a non-governmental organization working with injection drug users. A somewhat bigger share of PWID informed that they received syringes and/or condoms free of charge: 37% and 35.2% respectively ***(Table 6.1)***. It was more common for female PWID to mention receiving prevention materials (syringes, condoms etc). Older PWID are another category that received such materials more often.

Table 6.1. *NGO client status and receiving prevention materials in the last 12 months, %*

Disaggregation variables	NGO clients, N (%§)	Received syringes in the last 12 months, N (%§)	Received condoms in the last 12 months, N (%§)
All categories	**2473 (26.5)**	**3517 (37.0)**	**3324 (35.2)**
Gender	*p<0.001*	*p<0.001*	*p<0.001*
Males	1862 (24.6)	2702 (35.3)	2562 (33.8)
Females	611 (34.0)	815 (43.5)	762 (40.8)
Age	*p<0.001*	*p<0.001*	*p<0.001*
14 - 19	7 (3.9)	18 (8.1)	31 (15.8)
20 - 24	113 (13.8)	170 (21.8)	198 (26.3)
25 - 34	1020 (24.2)	1456 (34.5)	1409 (33.4)
35 or older	1334 (32.4)	1873 (43.8)	1686 (39.7)
Drug type	*p<0.001*	*p<0.001*	*p<0.001*
Opiates	1705 (26.5)	2462 (38.5)	2301 (36.2)
Stimulants	223 (18.5)	317 (25.6)	322 (26.4)
Mixed use	530 (30.1)	717 (38.6)	680 (36.8)

Continuation of Table 6.1.

Disaggregation variables	NGO clients, N (%§)	Received syringes in the last 12 months, N (%§)	Received condoms in the last 12 months, N (%§)
HR client status		*p<0.001*	*p<0.001*
Clients		2315 (93.8)	2238 (90.9)
Not clients		1201 (16.5)	1084 (15.2)

§ *The data are weighted according to the design of the study.*

***Table 6.2.** Purchasing syringes and condoms in the last 30 days, %*

Disaggregation variables	Purchased syringes / needles, N (%§)	Median number of purchased syringes / needles, *pcs.*	Purchased condoms, N (%§)	Median number of purchased condoms, *pcs.*
All categories	**7772 (85.7)**	**20**	**2076 (22.2)**	**6**
Gender	*p<0.001*		*p<0.001*	
Males	6358 (87.3)	20	1816 (24.2)	6
Females	1414 (79.1)	15	260 (14.3)	9
Age	*p<0.001*		*p<0.001*	
14 - 19	177 (94.6)	8	74 (40.7)	6
20 - 24	687 (92.3)	15	271 (37.1)	8
25 - 34	3599 (89.5)	20	1064 (25.6)	6
35 or older	3309 (80.1)	20	667 (15.1)	6
Drug type	*p<0.001*		*p<0.001*	
Opiates	5081 (84.2)	20	1302 (20.9)	8
Stimulants	983 (86.1)	10	345 (30.9)	6
Mixed use	1650 (90.3)	20	412 (22.1)	6
HR client status	*p<0.001*		*p<0.001*	
Clients	1448 (62.6)	15	228 (8.8)	6
Not clients	6306 (94.0)	20	1842 (27.1)	7

§ *The data are weighted according to the design of the study.*

In addition to receiving free materials, 86% and 22% (respectively) had purchased syringes and/or condoms in the last 30 days. Median indicator of syringes/needles purchased in the last month was 20, and of condoms – 6. Purchasing syringes and/or condoms is a less common practice among harm reduction clients than among those who are not clients of such programs. Median number of purchased syringes and condoms also differs significantly depending on HR client status ***(Table 6.2)***.

Coverage of opioid agonist maintenance treatment

Over 15% of respondent PWID received Opioid Agonist Maintenance Therapy (OAMT) drugs in their lives, and about 7% continued receiving the therapy at the time of the study. The share of PWID receiving the therapy is higher among women, older PWID, and harm reduction clients ***(Table 6.3)***.

Table 6.3. ***Receiving opioid agonist maintenance treatment drugs throughout the lifetime and at the time of the study, %***

Disaggregation variables	Ever received OAMT, N (%§)	Currently receiving OAMT, N (%§)
All categories	**1281 (14.9)**	**472 (6.8)**
Gender	*p<0.226*	*p<0.001*
Males	1035 (14.8)	375 (6.5)
Females	246 (15.3)	97 (7.8)
Age	*p<0.001*	*p<0.001*
14 - 19	3 (1.2)	1 (0.4)
20 - 24	38 (5.5)	16 (2.9)
25 - 34	500 (13.3)	212 (7.0)
35 or older	740 (19.1)	243 (7.7)
Drug type	*p<0.001*	*p<0.001*
Opiates	919 (16.1)	332 (7.3)
Stimulants	99 (9.0)	42 (4.4)
Mixed use	257 (14.3)	94 (6.5)
HR client status		
Clients	643 (26.8)	280 (13.9)
Not clients	633 (10.6)	190 (4.3)

§ *The data are weighted according to the design of the study.*

Testing for HIV

Most of PWID (88%) know where they can get tested for HIV, and have taken the test at least once (72%) ***(Table 6.4)***.

They took tests for HIV at the following facilities: AIDS Center (28.1%), a private counseling room (8.9%), NGO (12.3%), local polyclinic (11.6%), private hospital (1.5%), and laboratory (1.5%).

The main causes preventing PWID who have never taken tests for HIV (28%) from taking such tests are unwillingness (40.4%), confidence that their sexual and injection-related behaviors could not cause infection (20.1% and 21.8% respectively), as well as fear of learning of being HIV-positive (14.6%).

The coverage of testing for HIV throughout the period of 2011-2015 remained virtually the same ***(Figure 6.1)***.

Figure 6.1. *Access to HIV testing programs, 2011-2015, %*

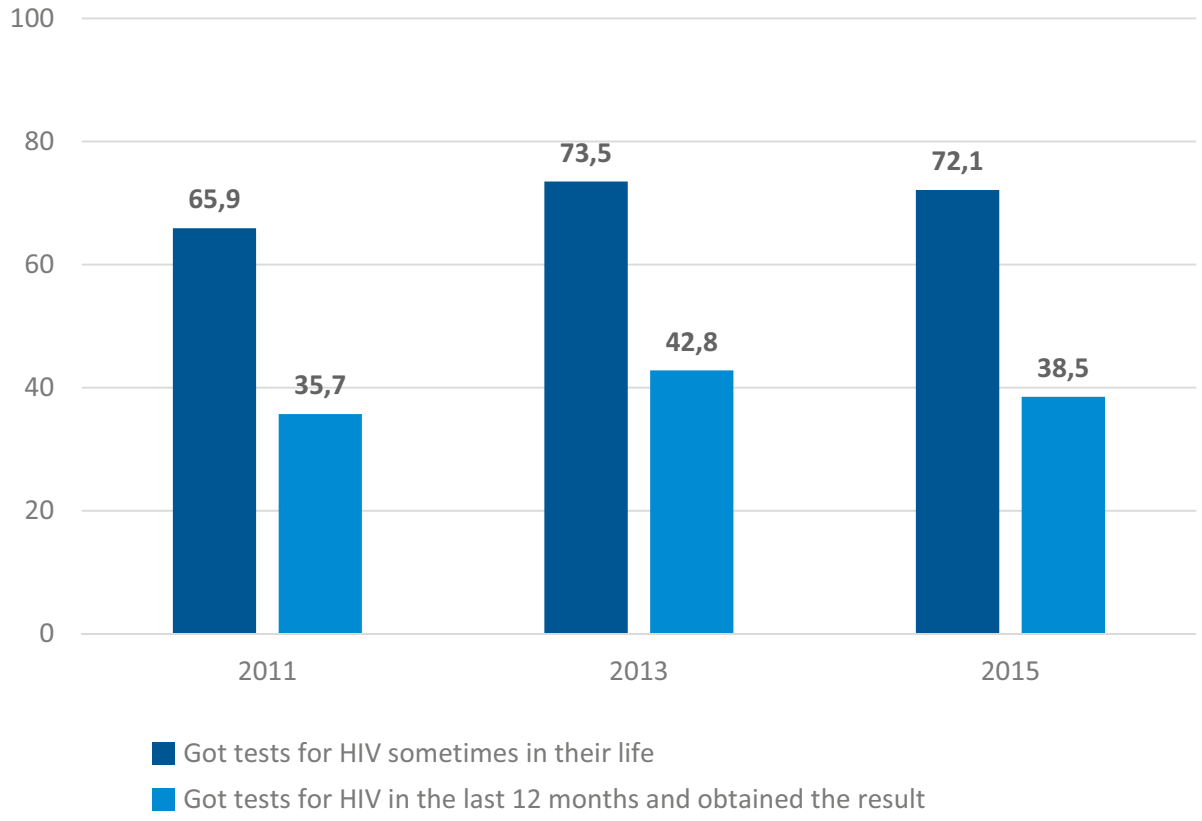


***Table 6.4.** Access to HIV testing programs, %[§]*

	All categories (n=9405)	Gender		Age				Drug type			HR client	
		males (n=7424)	females (n=1851)	14–19 (n=190)	20–24 (n=771)	25–34 (n=4149)	35+ (n=4295)	opiates (n=6202)	stimu-lants (n=1163)	mixed use (n=1844)	clients (n=2474)	not clients (n=6779)
Know where to go for testing for HIV	**88.0%**	*p<0.001*		*p<0.001*				*p<0.001*			*p<0.001*	
		87.5	89.8	87.1	86.8	87.1	89.2	88.0	84.6	90.4	96.6	84.9
Have taken a test for HIV	**72.1**	*p<0.001*		*p<0.001*				*p<0.001*			*p<0.001*	
		71.0	76.2	31.4	55.2	72.0	77.4	74.1	58.4	73.3	93.5	64.3
Received pre-test counseling	**57.8**	*p<0.001*		*p<0.001*				*p<0.001*			*p<0.001*	
		56.5	63.0	21.7	44.2	57.5	62.4	59.8	46.3	57.7	83.2	48.7
Received after-test counseling	**52.6**	*p<0.001*		*p<0.001*				*p<0.001*			*p<0.001*	
		51.2	58.0	16.3	41.0	52.1	57.1	54.1	43.8	52.8	77.5	43.6
Took a test for HIV in the last 12 months and received a result	**38.5**	*p<0.001*		*p<0.001*				*p<0.001*			*p<0.001*	
		38.0	43.4	19.0	32.4	40.3	38.7	39.5	31.0	42.7	62.7	30.6

[§] *The data are weighted according to the design of the study*

SECTION 7.

Prevalence of HIV/Hepatitis C/Hepatitis B/syphilis

Every fifth PWID tested during the study was HIV-positive. Prevalence of Hepatitis B and syphilis was 5.4% and 2.5% respectively. Testing for Hepatitis C revealed prevalence of 55.9% among PWID. PWID who had recently started injecting drugs, i. e. had been using the drugs for less than two years, were much less often infected with HIV or Hepatitis C than the PWID who had been injecting drugs for 3-5 or over 6 years ***(Table 7.1)***.

In the previous rounds of the study, only testing for HIV was conducted. Testing for Hepatitis C was performed in 2013 and 2011, but no reliable figures of Hepatitis C prevalence were received in 2011. Neither testing for Hepatitis B nor syphilis was conducted among PWID in the previous years. Since 2011, prevalence of HIV among the group as a whole has been retained at virtually the same level, while noticing a certain down-going trend for prevalence of the epidemic among new PWID ***(Figure 7.1)***. Similar trend can be seen in Hepatitis C prevalence: studies of 2013 and 2015 showed virtually the same level of prevalence of the disease among PWID ***(Figure 7.2)***.

***Table 7.1.** Prevalence of HIV, Hepatitis B, Hepatitis C, and syphilis, %*

Disaggregation variables	HIV prevalence N (%§)	HBV prevalence, N (%§)	HCV prevalence, N (%§)	Syphilis prevalence, N (%§)
All categories	**2073 (21.9)**	**522 (5.4)**	**5105 (55.9)**	**268 (2.5)**
Gender	*p<0.001*	*p<0.05*	*p=0.074*	*p<0.001*
Males	1538 (20.5)	426 (5.5)	4075 (56.1)	176 (2.0)
Females	509 (27.6)	91 (5.1)	965 (55.2)	87 (4.4)
Age	*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*
14 - 19	4 (2.7)	2 (1.2)	17 (13.5)	0 (0.0)
20 - 24	37 (4.5)	25 (3.6)	212 (29.2)	6 (0.5)
25 - 34	689 (16.9)	230 (5.4)	2176 (53.7)	92 (1.9)
35 or older	1343 (31.3)	265 (6.0)	2700 (65.2)	170 (3.6)
Length of injected drug use	*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*
≤ 2 years	29 (3.7)	15 (2.0)	162 (21.7)	16 (2.0)
3 – 5 years	83 (7.8)	36 (3.5)	361 (35.9)	21 (1.8)
6+ years	1921 (25.4)	463 (6.0)	4489 (61.6)	224 (2.6)
Drug type	*p<0.001*	*p<0.001*	*p<0.001*	*p=0.094*
Opiates	1552 (24.5)	369 (6.0)	3602 (59.1)	175 (2.5)
Stimulants	141 (11.9)	61 (4.9)	404 (35.1)	37 (2.8)
Mixed use	337 (18.5)	84 (3.9)	1001 (57.0)	50 (2.3)
HR client status	*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*
Clients	823 (33.3)	174 (6.6)	1633 (68.7)	79 (3.1)
Not clients	1219 (17.8)	343 (5.0)	3396 (51.3)	184 (2.3)
Imprisonment experience	*p<0.001*	*p<0.001*	*p<0.001*	*p<0.001*
Yes	1183 (31.1)	257 (6.5)	2456 (66.4)	137 (3.3)
No	864 (15.7)	259 (4.7)	2583 (48.7)	126 (1.9)

§ The data are weighted according to the design of the study.

***Figure 7.1.** Dynamics of HIV prevalence in 2011-2015, %*

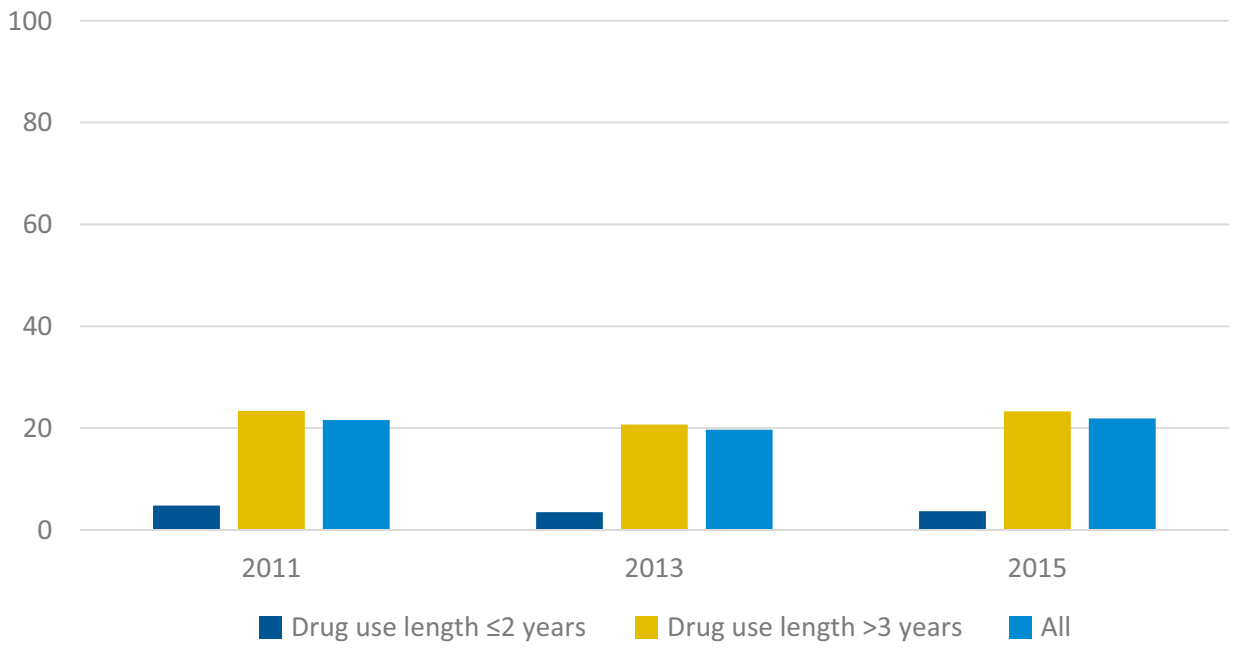
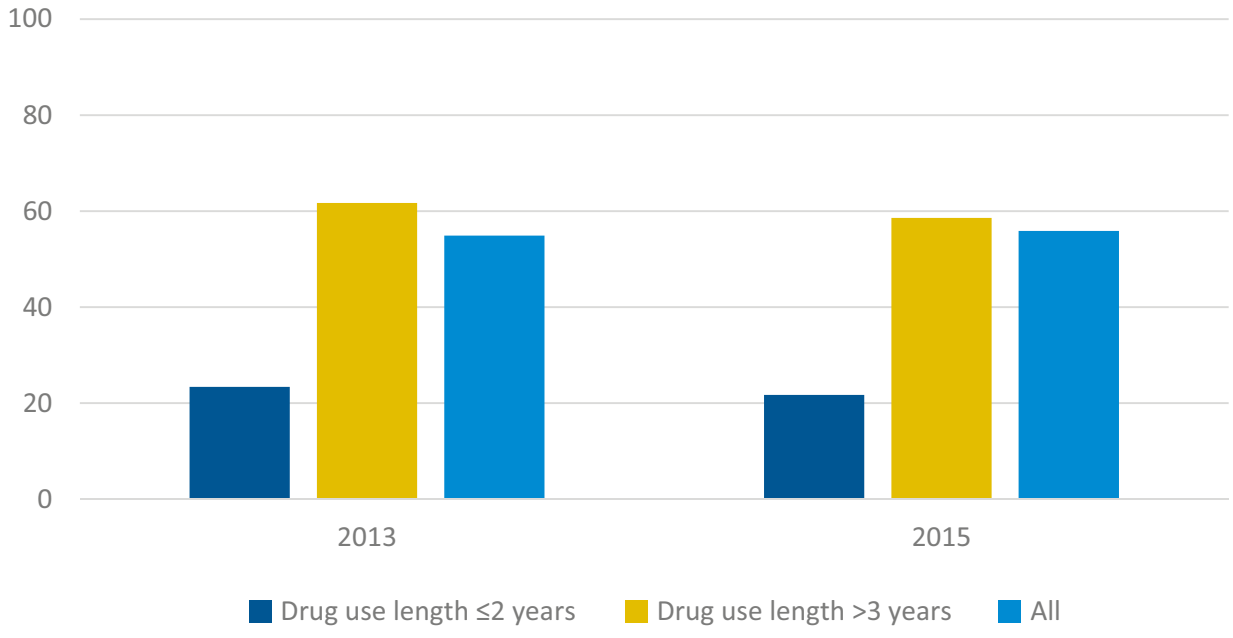


***Figure 7.2.** Dynamics of Hepatitis C prevalence in 2013-2015, %*



SECTION 8.

Access to treatment programs among those who answered the question

The following indicators of accessibility to treatment programs were determined for PWID tested HIV-positive during the study: discovering HIV infection or knowing one's HIV status, inclusion in the care and treatment system, and receiving antiretroviral therapy ***(Figure 8.1)***.

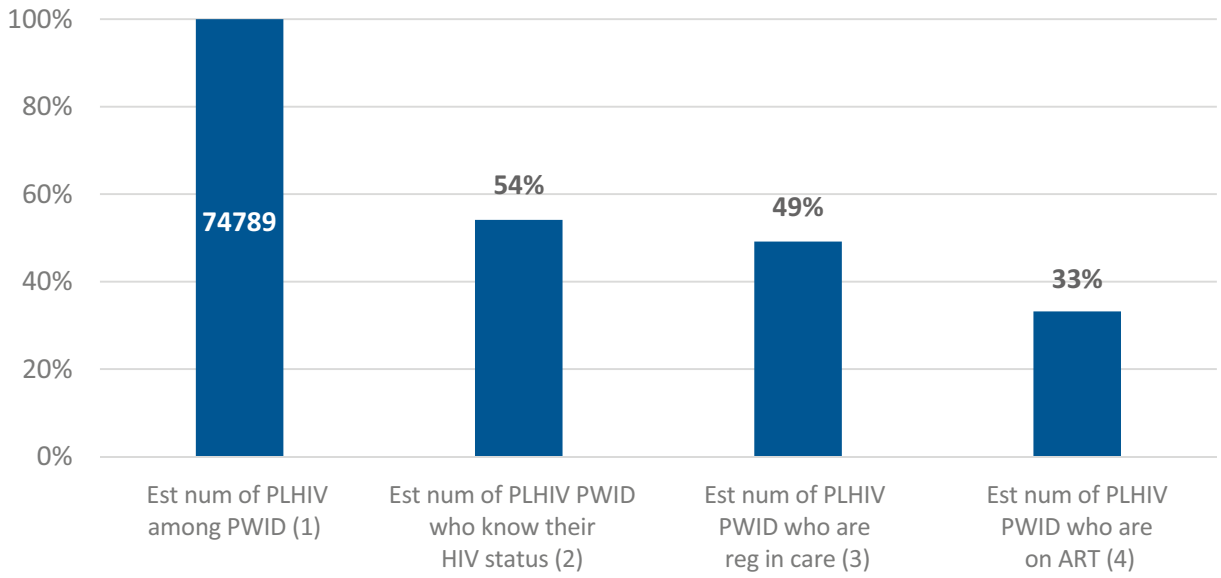
Figure 8.1. *Treatment cascade among PWID, 2015**

(1) PWID living with HIV: estimated number of PWID as of 2014 (341,500 PWID) multiplied by prevalence of HIV among PWID according to data of the study (21.9%).

(2) Knowing of their HIV+ status: the share of PWID who informed about being HIV-positive during the interview.

(3) Registered: percentage of PWID who informed about being registered as HIV-positive at the AIDS Center.

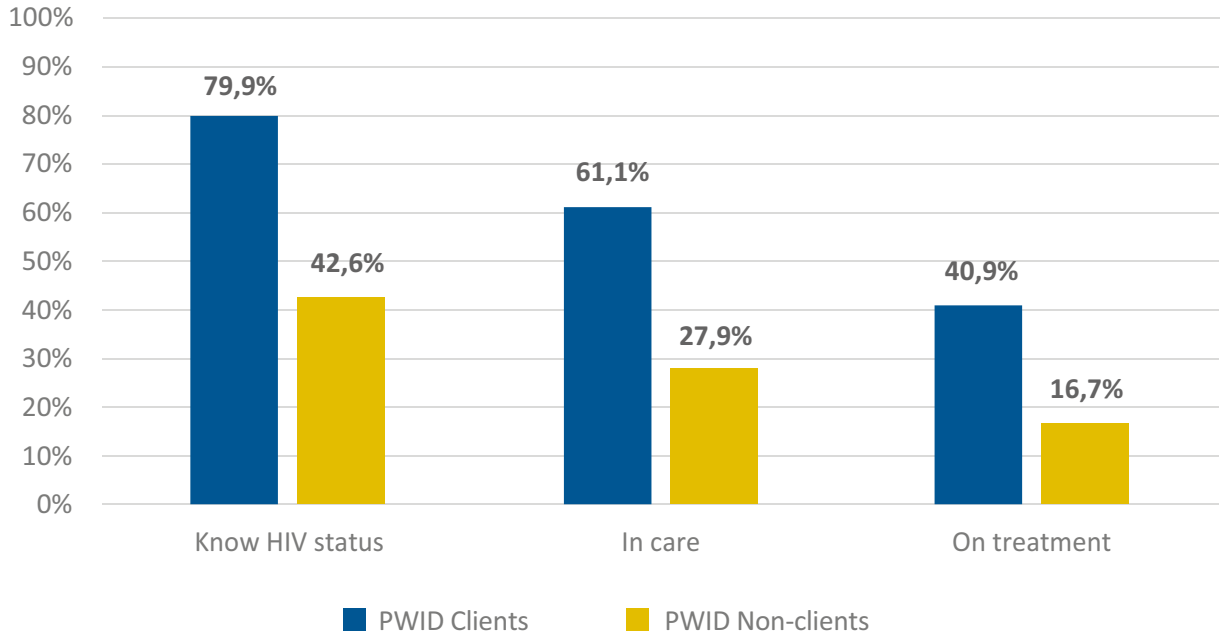
(4) Receiving ART: percentage of PWID who informed about receiving ART during interview.



* *The study does not provide sufficient data to determine virological success, but 21% of PWID reported having at least made a viral load test.*

Analysis of access to treatment depending on the prevention program client status shows that clients of harm reduction programs demonstrate twice as high figures at all stages of treatment cascade compared with non-clients ***(Figure 8.2)***.

Figure 8.2. ***Treatment cascade of PWID depending on participation in harm reduction programs, %***



* *The study does not provide sufficient data to determine virological success, but 21% of PWID reported having at least made a viral load test.*

SECTION 9.

Main Determinants of Incidence of HIV/Hepatitis C/Hepatitis B/syphilis

Sociodemographic determinants of infection with HIV, HCV, HBV, and syphilis, and the drug use profile

The most important predictors of occurrence of the four infections in question were an older age, longer experience of injecting drugs, and imprisonment experience. Thus, PWID in the age category of 25+ had 2.6 times higher chances of contracting HIV (CI of 1.8-3.7), 1.9 times higher chances of contracting hepatitis C (CI of 1.6-2.3), and 5.5 times higher chances of contracting syphilis (CI of 2.2-13.9) compared with 14 to 24-year old PWID.

Similarly, injecting drugs for 3-5 years increased the chance of contracting HIV by 1.8 times (CI of 1.1-2.7) and hepatitis C by 1.6 times (CI of 1.2-2.0) compared with the length of use of up to two years inclusive. Injecting drugs for six or more years increased chance of HIV infection by 4.1 times (CI of 2.8-6.0), hepatitis C – by 2.8 times (CI of 2.3-3.5), and hepatitis B – by 2.4 times (CI of 1.4-4) compared with the use of up to two years inclusive.

Among PWID with an imprisonment experience, the share of HIV-positive and syphilis positive people was twice higher (31.7% against 15.6% of HIV-positive, OR=1.9), and the ones positive for both types of viral hepatitis in question – higher by half (65.8% against 46.7% of HCV-positive, OR=1.6; 6.9% against 4.7% of HBV-positive, OR=1.3).

Gender was connected with HIV and syphilis infection, but the share of persons infected with both types of hepatitis was the same for men and women. Men had twice lower odds of being HIV-infected (20.7% against 27.5%), and 2.5 times lower odds of syphilis (2.4% against 4.7%) after adjustment for variation of all the other factors.

Main drug types did not have a one-way connection with the four infections. The biggest share of HIV-positive PWID was among users of opiates (24.2% against 12.2% among stimulant users and 14.0% among users of other injected drugs). The highest share of HCV-positive PWID was among those who indicated opiates and other drugs as their main drug (58.0% and 57.6%

against 36.8% among stimulant users respectively). At the same time, the share of syphilis-infected PWID was the lowest among opiate users (2.7% against 3.4% among stimulant users). There was no statistically significant difference between HBV infection levels depending on the type of main drug.

Risky injection practices

All risky injection practices had weaker relation to HIV, HCV, HBV, and syphilis than sociodemographic characteristics and drug use profile.

Of eight examined practices, the most consistent connection, after consideration of all the other factors was discovered between repeated use of one's own syringe for injection of another dose of a drug and HIV, HCV, and HBV infections: the odds of contracting these infection were thus increased by factor 1.2 (CI of 1.01-1.3), 1.3 (CI of 1.01-1.5), and 1.4 (CI of 1.3-1.6) respectively.

PWID who filled their syringes with drugs from a big syringe for further use had higher odds of contracting HIV (by factor 1.2 (CI of 1.1-1.4)) and hepatitis C (by factor 1.5 (CI of 1.4-1.7).

Receiving an injection from a pre-filled syringe, as well as injection with a syringe already used by another person increased the odds of HIV by 1.1 (CI of 1.01-1.3) and 1.2 (CI of 1.01-1.6) respectively.

The other risky injection practices demonstrated protective relation with one of the infections, or controversial one with several of the infections (i. e., protective for some and risky for the others). Among PWID reporting of having used sterile needle and syringe during the last injection of drugs, the higher share was of the ones infected with hepatitis C (OR=1.4, CI of 1.25-2.0). Among those who gave their syringes away after making an injection (OR=1.4, CI of 1.1-1.7) and those who informed of sharing cooking and distribution equipment (OR=1.25, CI of 1.01-1.4), the share of HIV-infected PWID was lower.

PWID who occasionally or regularly shared a room with other PWID for drug use had lower odds of HIV infection compared with those who claimed to have always used drugs alone (21.8% and 21.1% of HIV-infected among those who always or occasionally used drugs together with other PWID against 26.5% among those who always used drugs alone). Among PWID who always used drugs in a shared room, the share of HCV-infected was smaller, but the share of HBV-infected was higher, though the significance of such a relation was marginal.

Sexual behaviors

PWID with a permanent sexual partner did not differ from PWID without such a partner in terms of odds of HIV, hepatitis B, hepatitis C, or syphilis.

Having other sexual partners had a protective relation with certain types of the infections. E. g., PWID who had had sexual contacts with irregular partners in the last three months had lower odds of contracting HIV (OR=1.25, CI of 1.1-1.7) or HCV (OR=1.4, CI of 1.25-1.7). Among PWID who had purchased sexual services in the last three months, there was a smaller share of people infected with hepatitis C, while among PWID who had sold sexual services in the last three months, there was a smaller share of HIV-positive people.

***Table 9.1.** HIV occurrence determinants: Results of a multidimensional regression analysis*

	N	% of cases	OR	LL of CI	UL of CI	Significance
All categories	**9405**	**22.0**	–			
Gender						
Male	7424	**20.7**	0.5	0.4	0.6	**p<0.001**
Female (ref.)	1851	**27.5**				
Age						
Up to 24 years incl. (ref.)	961	**4.3**				
25 or older	8444	**24.1**	2.6	1.8	3.7	**p<0.001**
Length of injected drug use						
Up to 2 years (ref.)	732	**4.0**				
3 – 5 years	1038	**8.0**	1.8	1.1	2.7	**p<0.05**
6+ years	7457	**25.8**	4.1	2.8	6.0	**p<0.001**
Main drug type						
Opiates (ref.)	7615	**24.2**				
Stimulants	1570	**12.2**	0.6	0.5	0.7	**p<0.001**
Other	172	**14.0**	0.6	0.4	1.0	**p<0.05**
NGO client status						
Non-client (ref.)	6801	**18.0**				
Client	2474	**33.3**	1.8	1.6	2.1	**p<0.001**
Imprisonment experience						
None (ref.)	5536	**15.6**				
Yes	3736	**31.7**	2.1	1.9	2.3	**p<0.001**
Used sterile syringe and needle during the last injection of a drug						
No	353	**25.8**	1.2	0.9	1.6	**ns**
Yes (ref.)	8901	**21.9**				
Made an injection with a syringe already used by another person						
No (ref.)	8690	**22.0**				
Yes	570	**24.2**	1.2	1.0	1.6	**p<0.1**
Used his/her syringe/needle repeatedly to inject another dose of a drug						
No (ref.)	6006	**20.6**				
Yes	3245	**24.8**	1.2	1.0	1.3	**p<0.05**

Continuation of Table 9.1.

	N	% of cases	OR	LL of CI	UL of CI	Significance
Injected drugs together with other people (at the same time, in the same room)						
Always	2587	**21.8**	0.9	0.7	1.0	**ns**
Occasionally	5295	**21.1**	0.8	0.7	0.9	**p<0.01**
Never (ref.)	1388	**26.5**				
Gave away. lent. sold his/her syringe after making an injection						
No (ref.)	8723	**22.3**				
Yes	528	**18.9**	0.7	0.6	0.9	**p<0.05**
Received an injection in a pre-filled syringe without seeing the process of its filling						
No (ref.)	4683	**20.8**	1.0			
Yes	4588	**23.4**	1.1	1.0	1.3	**p<0.05**
Took a drug for injection into his/her syringe from a bigger syringe						
No (ref.)	5690	**20.7**				
Yes	3515	**24.3**	1.2	1.1	1.4	**p<0.01**
Shared equipment or materials for cooking or distribution of a drug						
No (ref.)	6628	**22.3**				
Yes	2560	**21.5**	0.8	0.7	1.0	**p<0.05**
Sexual contacts with a permanent partner in the last 90 days						
No (ref.)	3323	**22.9**				
Yes	5893	**21.6**	1.0	0.8	1.1	**ns**
Sexual contacts with an irregular partner in the last 90 days						
No (ref.)	6382	**24.3**				
Yes	2815	**16.9**	0.8	0.6	0.9	**p<0.01**
Sexual contacts with a commercial partner (bought the service) in the last 90 days						
No (ref.)	8926	**22.1**				
Yes	301	**22.3**	1.3	0.9	1.7	**ns**
Sexual contacts with a commercial partner (sold the service) in the last 90 days						
No (ref.)	9073	**22.1**				
Yes	152	**19.7**	0.6	0.4	1.0	**p<0.05**

Continuation of Table 9.1.

	N	% of cases	OR	LL of CI	UL of CI	Significance
Used a condom during the last sexual contact (among those with sexual contacts in the last 12 months)						
No (ref.)	3987	**18.0**				
Yes	3965	**23.3**	1.7	1.5	1.9	**p<0.001**
No sexual contacts in the last 12 months	1262	**31.3**	1.8	1.4	2.3	**p<0.001**
Constant			**0.003**			**p<0.001**

N N – number of observations;
OR – odds ratio;
LL of CI – lower limit of 95% confidence interval;
UL of CI – upper limit of 95% confidence interval.

***Table 9.2.** HCV occurrence determinants: Results of a multidimensional regression analysis*

	N	% of cases	OR	LL of CI	UL of CI	Significance
All categories	**9405**	**54.3**	**–**			
Gender						
Male	7424	**55.0**	1.0	0.9	1.1	**ns**
Female (ref.)	1851	**52.2**				
Age						
Up to 24 years incl. (ref.)	961	**23.8**				
25 or older	8444	**57.8**	1.9	1.6	2.3	**p<0.001**
Length of injected drug use						
Up to 2 years (ref.)	732	**22.1**				
3 – 5 years	1038	**34.8**	1.6	1.2	2.0	**p<0.001**
6+ years	7457	**60.3**	2.8	2.3	3.5	**p<0.001**
Main drug type						
Opiates (ref.)	7615	**58.0**				
Stimulants	1570	**36.8**	0.6	0.5	0.7	**p<0.001**
Other	172	**57.6**	1.0	0.7	1.5	**ns**

Continuation of Table 9.2.

	N	% of cases	OR	LL of CI	UL of CI	Significance
NGO client status						
Non-client (ref.)	6801	**50.1**				
Client	2474	**66.1**	1.6	1.4	1.7	**p<0.001**
Imprisonment experience						
None	5536	**65.8**	1.6	1.5	1.8	**p<0.001**
Yes (ref.)	3736	**46.7**				
Used sterile syringe and needle during the last injection of a drug						
No (ref.)	353	**54.6**				
Yes	8901	**47.9**	0.7	0.5	0.8	**p<0.01**
Made an injection with a syringe already used by another person						
No (ref.)	8690	**54.3**				
Yes	570	**57.0**	1.1	0.9	1.4	**ns**
Used his/her syringe/needle repeatedly to inject another dose of a drug						
No (ref.)	6006	**50.1**				
Yes	3245	**62.6**	1.4	1.3	1.6	**p<0.001**
Injected drugs together with other people (at the same time, in the same room)						
Always	2587	**51.1**	0.9	0.7	1.0	**p<0.05**
Occasionally	5295	**55.5**	1.0	0.8	1.1	**ns**
Never (ref.)	1388	**56.2**				
Gave away. lent. sold his/her syringe after making an injection						
No (ref.)	8723	**54.4**				
Yes	528	**55.2**	0.9	0.7	1.1	**ns**
Received an injection in a pre-filled syringe without seeing the process of its filling						
No (ref.)	4683	**54.5**				
Yes	4588	**54.3**	1.0	0.9	1.0	**ns**
Took a drug for injection into his/her syringe from a bigger syringe						
No (ref.)	5690	**49.6**				
Yes	3515	**62.4**	1.5	1.4	1.7	**p<0.001**

Continuation of Table 9.2.

	N	% of cases	OR	LL of CI	UL of CI	Significance
Shared equipment or materials for cooking or distribution of a drug						
No (ref.)	6628	**52.6**				
Yes	2560	**59.4**	1.1	1.0	1.2	**ns**
Sexual contacts with a permanent partner in the last 90 days						
No (ref.)	3323	**51.7**				
Yes	5893	**55.9**	1.0	0.8	1.1	**ns**
Sexual contacts with an irregular partner in the last 90 days						
No (ref.)	6382	**57.9**				
Yes	2815	**46.2**	0.7	0.6	0.8	**p<0.001**
Sexual contacts with a commercial partner (bought the service) in the last 90 days						
No (ref.)	8926	**54.8**				
Yes	301	**40.9**	0.6	0.5	0.8	**p<0.001**
Sexual contacts with a commercial partner (sold the service) in the last 90 days						
No (ref.)	9073	**54.6**				
Yes	152	**41.4**	0.7	0.5	1.0	**ns**
Used a condom during the last sexual contact (among those with sexual contacts in the last 12 months)						
No (ref.)	3987	**55.0**				
Yes	3965	**52.1**	1.0	0.9	1.1	**ns**
No sexual contacts in the last 12 months	1262	**60.0**	1.0	0.8	1.2	**ns**
Constant			**0.2**			**p<0.001**

N – number of observations;
OR – odds ratio;
LL of CI – lower limit of 95% confidence interval;
UL of CI – upper limit of 95% confidence interval.

***Table 9.3.** HBV occurrence determinants: Results of a multidimensional regression analysis*

	N	% of cases	OR	LL of CI	UL of CI	Significance
All categories	**9405**	**5.6**	–			
Gender						
Male	7424	**5.7**	1.2	0.9	1.6	**ns**
Female (ref.)	1851	**4.9**				
Age						
Up to 24 years incl. (ref.)	961	**2.8**				
25 or older	8444	**5.9**	1.4	0.9	2.3	**ns**
Length of injected drug use						
Up to 2 years (ref.)	732	**2.0**				
3 – 5 years	1038	**3.5**	1.6	0.9	3.1	**ns**
6+ years	7457	**6.2**	2.4	1.4	4.3	**p<0.01**
Main drug type						
Opiates (ref.)	7615	**5.6**				
Stimulants	1570	**5.4**	1.1	0.9	1.5	**ns**
Other	172	**4.1**	0.7	0.3	1.6	**ns**
NGO client status						
Non-client (ref.)	6801	**5.0**				
Client	2474	**7.0**	1.2	1.0	1.5	**p<0.05**
Imprisonment experience						
No (ref.)	5536	**4.7**				
Yes	3736	**6.9**	1.3	1.1	1.6	**p<0.01**
Used sterile syringe and needle during the last injection of a drug						
No	353	**4.8**	0.9	0.5	1.5	**ns**
Yes (ref.)	8901	**5.6**				
Made an injection with a syringe already used by another person						
No (ref.)	8690	**5.6**				
Yes	570	**5.6**	1.0	0.6	1.4	**ns**

Continuation of Table 9.3.

	N	% of cases	OR	LL of CI	UL of CI	Significance
Used his/her syringe/needle repeatedly to inject another dose of a drug						
No (ref.)	6006	**5.1**				
Yes	3245	**6.5**	1.3	1.0	1.5	**p<0.05**
Injected drugs together with other people (at the same time, in the same room)						
Always	2587	**6.5**	1.3	1.0	1.8	**p<0.1**
Occasionally	5295	**5.1**	0.9	0.7	1.2	**ns**
Never (ref.)	1388	**5.7**				
Gave away. lent. sold his/her syringe after making an injection						
No (ref.)	8723	**5.5**				
Yes	528	**6.1**	1.1	0.8	1.7	**ns**
Received an injection in a pre-filled syringe without seeing the process of its filling						
No (ref.)	4683	**5.4**				
Yes	4588	**5.8**	1.1	0.9	1.3	**ns**
Took a drug for injection into his/her syringe from a bigger syringe						
No (ref.)	5690	**5.4**				
Yes	3515	**5.8**	1.0	0.8	1.2	**ns**
Shared equipment or materials for cooking or distribution of a drug						
No (ref.)	6628	**5.6**				
Yes	2560	**5.5**	0.9	0.7	1.1	**ns**
Sexual contacts with a permanent partner in the last 90 days						
No (ref.)	3323	**5.8**				
Yes	5893	**5.4**	1.0	0.7	1.3	**ns**
Sexual contacts with an irregular partner in the last 90 days						
No (ref.)	6382	**5.7**				
Yes	2815	**5.2**	0.9	0.7	1.2	**ns**
Sexual contacts with a commercial partner (bought the service) in the last 90 days						
No (ref.)	8926	**5.5**				
Yes	301	**7.0**	1.1	0.7	1.8	**ns**

Continuation of Table 9.3.

	N	% of cases	OR	LL of CI	UL of CI	Significance
Sexual contacts with a commercial partner (sold the service) in the last 90 days						
No (ref.)	9073	**5.5**				
Yes	152	**7.2**	1.5	0.8	2.8	**ns**
Used a condom during the last sexual contact (among those with sexual contacts in the last 12 months)						
No (ref.)	3987	**4.6**	1.0			
Yes	3965	**6.3**	1.5	1.2	1.9	**p<0.001**
No sexual contacts in the last 12 months	1262	**6.4**	1.4	0.9	2.1	**ns**
Constant			**0.0**			

N – number of observations;
OR – odds ratio;
LL of CI – lower limit of 95% confidence interval;
UL of CI – upper limit of 95% confidence interval.

Table 9.4. *Syphilis occurrence determinants: Results of a multidimensional regression analysis*

	N	% of cases	OR	LL of CI	UL of CI	Significance
All categories	**9405**	**2.8**	**–**			
Gender						
Male	7424	**2.4**	0.4	0.3	0.6	**p<0.001**
Female (ref.)	1851	**4.7**				
Age						
Up to 24 years incl. (ref.)	961	**0.6**	1.0			
25 or older	8444	**3.1**	5.5	2.2	13.9	**p<0.001**
Length of injected drug use						
Up to 2 years (ref.)	732	**2.2**				
3 – 5 years	1038	**2.0**	0.9	0.4	1.7	**ns**
6+ years	7457	**3.0**	0.9	0.5	1.6	**ns**

Continuation of Table 9.4.

	N	% of cases	OR	LL of CI	UL of CI	Significance
Main drug type						
Opiates (ref.)	7615	**2.7**				
Stimulants	1570	**3.4**	1.4	1.0	2.0	**p<0.05**
Other	172	**4.1**	1.9	0.9	4.2	**ns**
NGO client status						
Non-client (ref.)	6801	**2.7**				
Client	2474	**3.2**	1.1	0.8	1.4	**ns**
Imprisonment experience						
No (ref.)	5536	**2.3**				
Yes	3736	**3.7**	1.9	1.4	2.4	**p<0.001**
Used sterile syringe and needle during the last injection of a drug						
No	353	**4.2**	1.2	0.7	2.2	**ns**
Yes (ref.)	8901	**2.8**				
Made an injection with a syringe already used by another person						
No (ref.)	8690	**2.7**				
Yes	570	**4.9**	1.5	0.9	2.4	**ns**
Used his/her syringe/needle repeatedly to inject another dose of a drug						
No (ref.)	6006	**2.8**				
Yes	3245	**2.9**	1.0	0.7	1.3	**ns**
Injected drugs together with other people (at the same time, in the same room)						
Always	2587	**3.1**	1.2	0.8	1.8	**ns**
Occasionally	5295	**2.7**	1.1	0.8	1.7	**ns**
Never (ref.)	1388	**2.8**				
Gave away. lent. sold his/her syringe after making an injection						
No (ref.)	8723	**2.7**				
Yes	528	**4.7**	1.5	0.9	2.4	**ns**
Received an injection in a pre-filled syringe without seeing the process of its filling						
No (ref.)	4683	**2.7**				
Yes	4588	**3.0**	1.1	0.8	1.4	**ns**

Continuation of Table 9.4.

	N	% of cases	OR	LL of CI	UL of CI	Significance
Took a drug for injection into his/her syringe from a bigger syringe						
No (ref.)	5690	**3.1**				
Yes	3515	**2.4**	0.8	0.6	1.1	**ns**
Shared equipment or materials for cooking or distribution of a drug						
No (ref.)	6628	**3.1**				
Yes	2560	**2.0**	0.7	0.5	1.0	**p<0.05**
Sexual contacts with a permanent partner in the last 90 days						
No (ref.)	3323	**2.3**				
Yes	5893	**3.1**	1.3	0.8	2.1	**ns**
Sexual contacts with an irregular partner in the last 90 days						
No (ref.)	6382	**3.0**				
Yes	2815	**2.4**	1.2	0.8	1.7	**ns**
Sexual contacts with a commercial partner (bought the service) in the last 90 days						
No (ref.)	8926	**2.9**				
Yes	301	**1.7**	0.7	0.3	1.8	**ns**
Sexual contacts with a commercial partner (sold the service) in the last 90 days						
No (ref.)	9073	**2.8**				
Yes	152	**5.3**	1.4	0.7	3.1	**ns**
Used a condom during the last sexual contact (among those with sexual contacts in the last 12 months)						
No (ref.)	3987	**3.2**				
Yes	3965	**2.4**	0.9	0.7	1.2	**ns**
No sexual contacts in the last 12 months	1262	**2.7**	1.2	0.6	2.1	**ns**
Constant		**0.0**				**p<0.001**

N – number of observations;

OR – odds ratio;

LL of CI – lower limit of 95% confidence interval;

UL of CI – upper limit of 95% confidence interval.

SECTION 10.

Sexual partners of PWID

Out of 3660 respondent PWID in the cities where the study included sexual partners, 37.0% did not have a permanent partner, 18.6% had a sexual partner who used drugs, and 44.4% had a permanent partner who did not use drugs. 20.2% of PWID recruited their non-user partners for the study.

Sociodemographic profile of the sexual partners of PWID

The average age of sexual partners of PWID is 32.2 (CI of 31.6-32.8), varying from 16 to 62 years old ***(Table 10.1)***. Five sixths of respondents included in the sample were women (87.3%, CI 84.9%-89.6%).

Most of the respondents completed secondary education (58.2%, CI 54.7%-61.7%), 70% had a job – regular (39.6%, CI 36.0%-43.1%) or irregular (28.4%, CI 24.2%-32.7%).

Three fifths described their marital status as common-law marriage (61.1%, CI 57.7%-64.6%), the rest were formally married. Two out of five had children (40.8%, CI 37.3%-44.3%).

Usage of psychoactive substances

Less than one third of surveyed sexual partners of PWID informed that they did not drink alcohol (27.5%, CI 24.3%-30.7%) ***(Table 10.2)***, two thirds had never used non-injection drugs (57.6%, CI 54.1%-61.0%), and three quarters had never injected drugs (75.5%, CI 72.4%-78.5%). At the same time, 7.2% of respondents (CI 5.4%-9.0%) noted that they drank alcohol every day, and 19.0% (CI 16.2%-21.8%) and 11.1% (CI 8.9%-13.4%) of sexual partners included in the sample had used non-injection and injection drugs respectively in the last year.

***Table 10.1.** Sociodemographic profile of the sexual partners of PWID (N=769)*

Characteristic	Categories	N	%	CI	
				LL	UL
Age		769	**32.2 years**	31.6	32.8
Gender	Male	98	**12.7**	10.4	15.1
	Female	671	**87.3**	84.9	89.6
Education	Primary	16	**2.1**	1.1	3.1
	Basic secondary	105	**13.7**	11.3	16.1
	Completed secondary	446	**58.2**	54.7	61.7
	Basic higher	126	**16.4**	13.8	19.1
	Completed higher	73	**9.5**	7.5	11.6
Primary occupation	Student	17	**2.2**	1.2	3.3
	Regular job	299	**39.6**	36.0	43.1
	Irregular jobs	215	**28.4**	24.2	32.7
	Unemployed	225	**29.8**	23.8	35.7
Marital status	Formally married	289	**37.7**	34.2	41.1
	Common-law marriage	469	**61.1**	57.7	64.6
	Single	9	**1.2**	0.4	1.9
Do you have children?	No	454	**59.2**	55.7	62.7
	Yes	313	**40.8**	37.3	44.3

N – number of persons in the sample;
CI – 95% confidence interval;
LL – lower limit;
UL – upper limit.

***Table 10.2.** Use of psychoactive substances by sexual partners of PWID (N=769)*

Characteristic	Categories	N	%	CI	
				LL	UL
Frequency of alcohol consumption	Daily	55	**7.2**	5.4	9.0
	1-3 times a week	286	**37.4**	34.0	40.9
	1-3 times a month	213	**27.9**	21.8	33.9
	Never	210	**27.5**	24.3	30.7
Non-injection drug use	In the last month	34	**4.4**	5.4	9.0
	2-12 months ago	112	**14.6**	12.1	17.1
	Over a year ago	180	**23.4**	20.4	26.4
	Never	442	**57.6**	54.1	61.0
Use of injection drugs	2-12 months ago	85	**11.1**	8.9	13.4
	Over a year ago	102	**13.4**	11.0	15.8
	Never	576	**75.5**	72.4	78.5

N – number of persons in the sample;
CI – 95% confidence interval;
LL – lower limit;
UL – upper limit.

Sexual contacts with the recruiter and condom usage

Almost all of the respondents had regular sexual contacts with PWID who recruited them for the study (97.6%, CI 96.6%-98.7%), 2.2% (17 persons, CI 1.2%-3.3%) – only irregular sexual contacts with the recruiter, and one person provided paid sexual services to the recruiter PWID ***(Table 10.3)***.

On the average, sexual partners of PWID had sexual contacts with their respective recruiters for 4.1 years (CI 3.8-4.4), and 15.0% of them (CI 12.4%-17.5%) – less than for one year. In the last three months, surveyed sexual partners had on the average, 27.9 (CI 26.3-29.5) sexual contacts with their recruiters (i. e. approximately one contact every three days) and about 3.5 contacts (CI 3.4-3.7) in the last week (i. e. every two days).

***Table 10.3.** Sexual contacts with the recruiter (N=769)*

Characteristic	Categories	N	%	CI	
				LL	UL
Partner type	Permanent	744	**97.6**	96.6	98.7
	Irregular	17	**2.2**	1.2	3.3
	Commercial (paid to by the recruiter)	1	**0.1**	0.1	0.4
Duration of sexual relations with the recruiter		769	**4.1 years**	3.8	4.4
Number of contacts in the last week		728	**3.5**	3.4	3.7
Number of contacts in the last 90 days		766	**27.9**	26.3	29.5

N – number of persons in the sample;
CI – 95% confidence interval;
LL – lower limit;
UL – upper limit.

48.5% of sexual partners of PWID (CI 45.0%-52.0%) reported using condom during their last sexual contact with their recruiters ***(Table 10.4)***. At the same time, their share did not differ among those who had other sexual partners besides the recruiter, and those who did not (48.3% among those who had sexual contacts with the recruiter only in the last 90 days against 49.1% among those who had also other partners throughout the same period) (not shown).

The most common reasons for failure to use a condom during the last sexual contact are confidence in the fact that both partners are healthy (26.0% of the sample, CI 22.9%-29.1%), and that use of a condom reduces sensitivity (18.2% of the sample, CI 15.5%-20.9%) (not shown). Some 5% of the sample did not use a condom during the last sexual contact with the recruiter because they "did not have it near at hand" (6.4%, CI 4.6-8.1%) or because the partner insisted on not using it (5.1%, CI 3.5%-6.6%). The other reasons were mentioned by 20 or less respondents, so extending them to the whole population would be incorrect.

About a third of the surveyed sexual partners of PWID informed that they had used condoms during all sexual contacts with the recruiter in the last three months (30.5%, CI 27.2%-33.8%), and the same portion of the respondents had never used a condom during the same period (35.9%, CI 32.5%-39.2%). The rest had used condoms inconsistently ***(Table 10.4)***.

At the same time, one in six respondents had encountered cases when a condom either tore or slipped off (13.8%, CI 11.3%-16.2%), the intercourse started without a condom (14.8%, CI 12.3%-17.3%) and/or continued after it was taken off (15.2%, CI 12.7%-17.8%).

***Table 10.4.** Condom usage during sexual contacts with the recruiter (N=769)*

Characteristic	Categories	N	%	CI	
				LL	UL
Using a condom for the last sexual contact with the recruiter		373	**48.5**	45.0	52.0
Condom usage in the last 3 months with the recruiter	Always	234	**30.5**	27.2	33.8
	Mostly	103	**13.4**	11.0	15.8
	In half of the cases	54	**7.0**	5.2	8.9
	Sometimes	55	**7.2**	5.3	9.0
	Seldom	46	**6.0**	4.3	7.7
	Never	275	**35.9**	32.5	39.2
In the last 90 days, there were cases during the use of a condom when…					
…the condom was torn or slipped off		106	**13.8**	11.3	16.2
…the intercourse started without a condom		114	**14.8**	12.3	17.3
...the intercourse continued after the condom was taken off		117	**15.2**	12.7	17.8

N – number of persons in the sample;
CI – 95% confidence interval;
LL – lower limit;
UL – upper limit.

Other sexual partners and condom usage

Approximately every fourth of the sexual partners of PWID informed of having had at least one sexual partner except for the recruiter in the last three months ***(Table 10.5)***; 16.5% had had sexual contacts with another permanent partner (CI 13.9%-19.2%); 8.0% – with another irregular partner (CI 6.1%-9.9%); 3.3% had sold sexual services (CI 2.0%-4.6%), and five out of 769 had purchased such services in the last three months.

Additionally, 4.8% of sexual partners of PWID (CI 3.3%-6.3%) noted that in the last three months their partners included PWID, and 3.2% (CI 1.9%-4.5%) noted that in the same period their sexual partners included persons who used non-injection drugs. Every tenth of the respondents did not know whether their other sexual partners used injection or non-injection drugs.

***Table 10.5.** Sexual contacts with other partners besides the recruiter in the last 3 months (N=769)*

Characteristic	Categories	N	%	CI	
				LL	UL
Other sexual partners besides the recruiter in the last 90 days					
	Yes	175	**23.3**	20.3	26.3
	No	576	**76.7**	73.7	79.7
Type of other sexual partners besides the recruiter in the last 90 days	Permanent partner	124	**16.5**	13.9	19.2
	Irregular partner	60	**8.0**	6.1	9.9
	Commercial partner (bought services)	5	**0.7**	0.1	1.2
	Commercial partner (sold services)	25	**3.3**	2.0	4.6
Other sexual partners who inject drugs	Yes	36	**4.8**	3.3	6.3
	No	59	**7.9**	5.9	9.8
	Not sure	80	**10.7**	8.4	12.9
	No other sexual partners	576	**76.7**	73.7	79.7
Other sexual partners who use non-injection drugs	Yes	24	**3.2**	1.9	4.5
	No	70	**9.3**	7.2	11.4
	Not sure	81	**10.8**	8.6	13.0
	No other sexual partners	576	**76.7**	73.7	79.7

N – number of persons in the sample;
CI – 95% confidence interval;
LL – lower limit;
UL – upper limit.

Approximately half of sexual partners of PWID who had had other irregular or permanent partners in the last three months used a condom during their last sexual contact with them: 44.4% – with a permanent sexual partner (CI 35.6%-53.1%) and 50.0% – with an irregular one (CI 37.3%-62.7%) (not shown). The main reasons behind failure to use condoms with such partners were the reduction of sensitivity and confidence in the fact that both partners were healthy. Besides, they did not use a condom with irregular partners because it was not "near at hand" when needed.

24 out of 25 respondents who had had commercial sexual contacts with other persons besides the recruiter in the last three months used a condom during the last such sexual contact (96.0%, CI 88.3%-99.9%), as well as four out of five respondents who had sold sexual services in that period (80.0%, CI 44.9%-99.9%).

STIs and other diseases

The most common of STIs in the last 12 months was candidiasis (5.3%, CI 3.7%-6.9%) and, to somewhat lesser extent, chlamydia (3.9%, CI 2.5%-5.3%). All the other diseases (genital herpes, trichomoniasis, gonorrhea, and syphilis) were reported by less than 2% of the respondents (Table 10.6). At the same time, respondents with gonorrhea and syphilis received treatment at healthcare facilities in all five cases. Also, 100% of the respondents treated chlamydia and trichomoniasis, but some of them did it independently, without seeking medical advice. Six out of seven sexual partners of PWID who admitted having had genital herpes in the last year, and five out of six who had had candidiasis received treatment. A third of those who treated genital herpes and almost half of those who treated candidiasis did it without seeking medical advice.

About 5% of the respondents reported having had viral hepatitis C in the last year (5.2%, CI 3.6%-6.8%). At the same time, only every third of them underwent treatment. About 2.0% of the respondents knew they had viral hepatitis B (1.0%-2.9%), and half of them treated it.

1.3% of sexual partners of PWID (CI 0.5%-2.1%) informed about having had tuberculosis in the last year. All but one received treatment at a healthcare facility.

***Table 10.6.** STIs and other diseases in the last 12 months (according to the respondents) (N=769)*

In the last 12 months, have you had…	N	%	CI	
			LL	UL
Gonorrhea	5	**0.7**	0.1	1.2
Genital herpes	14	**1.8**	0.9	2.8
Chlamydia	30	**3.9**	2.5	5.3
Syphilis	5	**0.7**	0.1	1.2
Trichomoniasis	10	**1.3**	0.5	2.1
Candidiasis	41	**5.3**	3.7	6.9
Hepatitis B	15	**2.0**	1.0	2.9
Hepatitis C	40	**5.2**	3.6	6.8
Tuberculosis	10	**1.3**	0.5	2.1

N – number of persons in the sample;
CI – 95% confidence interval;
LL – lower limit;
UL – upper limit.

Awareness of routes of HIV transmission

Generally, sexual partners of PWID showed good awareness of routes of HIV transmission and HIV prevention measures. Each of ten questions received 70% to over 95% of correct answers ***(Table 10.7)***.

***Table 10.7.** Knowledge about HIV: percentage of respondents having correct knowledge of the ways to prevent HIV infection, and HIV transmission routes (N=769)*

Statements about HIV infection	N	%	CI	
			LL	UL
A healthy-looking person can be HIV-positive	681	**88.6**	86.3	90.8
HIV transmission routes				
HIV infection can be contracted through the use of a needle already used by another person	745	**96.9**	95.7	98.1
Myths concerning HIV transmission routes				
HIV infection can be contracted through a mosquito bite	558	**72.6**	69.4	75.7
A person can contract HIV by taking turns drinking from the same glass with a HIV-positive person	625	**81.3**	78.5	84.0
A person can contract HIV through sharing a toilet. swimming pool, or sauna with a HIV-positive person	585	**76.1**	73.1	79.1
Ways to prevent HIV infection				
HIV infection can be prevented by having sex with one faithful non-infected partner	655	**85.2**	82.7	87.7
HIV infection can be prevented by correct use of a condom during each sexual contact	680	**88.4**	86.2	90.7
Knowledge about vertical transmission of HIV				
HIV infection can be transmitted from a HIV-positive mother to her child during pregnancy	661	**86.0**	83.5	88.4
HIV infection can be transmitted from a HIV-positive mother to her child during childbirth	608	**79.1**	76.2	81.9
HIV infection can be transmitted from a HIV-positive mother to her child during breastfeeding	546	**71.0**	67.8	74.2
Correct answers to all questions	**226**	**29.4**	**26.2**	**32.6**
Correct answers to questions about HIV transmission*	**383**	**49.8**	**46.3**	**53.3**

N – number of persons in the sample;
CI – 95% confidence interval;
LL – lower limit;
UL – upper limit.

* *These questions include the following (6 questions overall): "A healthy-looking person can be HIV-positive", "HIV infection can be contracted through the use of a needle already used by another person", two questions about the myths about HIV transmission routes (via dishware, toilet, swimming pool, sauna), and two questions about the means to prevent HIV infection.*

However, less than one third of the respondents answered all the questions correctly (29.4%, CI 26.2%-32.6%), and about a half of the respondents (49.8%, CI 46.3%-53.3%) provided correct answers to six questions about HIV transmission routes ("A healthy-looking person can be HIV-positive", "HIV infection can be contracted through the use of a needle already used by another person", questions about transmission via dishware, toilet, swimming pool, sauna, and about the means to prevent HIV infection).

Knowledge of symptoms of overdosing and provision of aid

More than a half of the sexual partners of PWID named different symptoms of overdosing (56.3%, CI 52.8%-59.8%) ***(Table 10.7.1)***. Nine out of ten suggested some activities in case of overdosing (90.0%, CI 87.9%-92.1%); 80.8% knew that in case of overdosing, emergency ambulance must be called (CI 78.0%-83.5%). All the other ways of providing pre-doctor care were named by less than one fifth of the respondents ***(Table 10.7.2)***.

Table 10.7.1. *Knowledge of symptoms of drug overdosing (N=769)*

Knowledge of symptoms of drug overdosing	N	%	CI	
			LL	UL
They do not know any signs of overdosing	**336**	**43.7**	**40.2**	**47.2**
They know signs of overdosing, namely:	**433**	**56.3**	**52.8**	**59.8**
lips and/or nails turn blue	180	**23.4**	20.4	26.4
breathing slows down or stops	164	**21.3**	18.4	24.2
prolonged unconsciousness	131	**17.0**	14.4	19.7
no response to external stimuli	130	**16.9**	14.3	19.6
rapid pulse	65	**8.5**	6.5	10.4
anxiety, panic	60	**7.8**	5.9	9.7
vegetovascular crisis	53	**6.9**	5.1	8.7
convulsions	49	**6.4**	4.6	8.1
severe headache	34	**4.4**	3.0	5.9
psychosis	32	**4.2**	2.7	5.6
severe irritability	29	**3.8**	2.4	5.1
chest pain	23	**3.0**	1.8	4.2
paranoia	19	**2.5**	1.4	3.6
tongue falls back in	19	**2.5**	1.4	3.6
heat	11	**1.4**	0.6	2.3
froth at the mouth	11	**1.4**	0.6	2.3
nausea, vomit	6	**0.8**	0.2	1.4
epileptic seizure, fits	3	**0.4**	0.1	0.8
eyes rolling back	3	**0.4**	0.1	0.8
death	2	**0.3**	0.1	0.6
dryness	1	**0.1**	0.1	0.4

N – number of persons in the sample;
CI – 95% confidence interval;
LL – lower limit;
UL – upper limit.

***Table 10.7.2.** Knowledge of first aid for drug overdose (N=769)*

	N	%	CI	
			LL	UL
No knowledge of first aid for drug overdose	**77**	**10.0**	**7.9**	**12.1**
Knowledge of at least one thing to do in case of drug overdose, namely:	**692**	**90.0**	**87.9**	**92.1**
call the ambulance	621	**80.8**	78.0	83.5
hold the tongue	147	**19.1**	16.3	21.9
take the person to a hospital	140	**18.2**	15.5	20.9
undo clothes to facilitate breathing	115	**15.0**	12.4	17.5
make the person drink a lot of water	86	**11.2**	9.0	13.4
move the person into a comfortable position	73	**9.5**	7.4	11.6
keep the person awake and calm	66	**8.6**	6.6	10.6
apply cold and wet dressing on the forehead, in the armpits, under the knees	63	**8.2**	6.3	10.1
inject naloxone	56	**7.3**	5.4	9.1
give 20-30 drops of Corvalol	24	**3.1**	1.9	4.3
perform cardiac massage	5	**0.7**	0.1	1.2
slap person's cheeks	4	**0.5**	0.1	1.0
splash with cold water	2	**0.3**	0.1	0.6
move the person into prone position	2	**0.3**	0.1	0.6
take the person to fresh air	1	**0.1**	0.1	0.4
apply artificial respiration	1	**0.1**	0.1	0.4
perform head massage	1	**0.1**	0.1	0.4
perform gastric lavage	1	**0.1**	0.1	0.4
perform resuscitation	1	**0.1**	0.1	0.4
inject glucose	1	**0.1**	0.1	0.4
inject saline solution	1	**0.1**	0.1	0.4
give some coffee	1	**0.1**	0.1	0.4
call other people	1	**0.1**	0.1	0.4
measure temperature	1	**0.1**	0.1	0.4
stabilize blood pressure	1	**0.1**	0.1	0.4

N – number of persons in the sample;
CI – 95% confidence interval;
LL – lower limit;
UL – upper limit.

Usage HIV prevention services and testing programs

Less than 5% of sexual partners of PWID were clients of NGOs (4.6%, CI 3.1%-6.0%) ***(Table 10.8)***. Correspondingly, 3.6% (CI 2.3%-5.0%) had received free of charge condoms in the last six months. But every fifth of them (22.2%, CI 19.3%-25.2%) had received condoms in the last year from outreach and awareness-raising programs or projects, counseling centers, centers of social services for family, children, and youth, during various events, through pharmacies.

Also, approximately each third respondent (30.4%, CI 27.2%-33.7%) had purchased condoms for himself or for the partner in the last month (not shown). At the same time, 8.1% (CI 6.1%-10.0%) of the respondents informed that, at least once in the last month, they had been unable to purchase condoms when needed. The most common reasons for it were a high price (3.8% of the sample, CI 2.4%-5.1%) or the fact that the pharmacy or shop were closed (3.1%, CI 1.9%-4.3%).

3.4% (CI 2.1-4.7%) of the respondents claimed of having received SMT, and about 1% (0.9%, CI 0.2%-1.6%) were receiving it at the time of the study.

Table 10.8. *Receiving or purchasing condoms*

Characteristics	N	%	CI	
			LL	UL
A client of an NGO	**35**	**4.6**	**3.1**	**6.0**
Receiving or purchasing condoms				
Received condoms from representatives of this NGO in the last 6 months	28	3.6%	2.3	5.0
Received condoms through outreach and awareness-raising projects or programs in the last 12 months	171	22.2	19.3	25.2
Purchased condoms in the last 30 days	234	30.4	27.2	33.7
Receiving SMT				
Ever received SMT	26	3.4	2.1	4.7
Is receiving SMT	7	0.9	0.2	1.6

N – number of persons in the sample;
CI – 95% confidence interval;
LL – lower limit;
UL – upper limit.

Four out of five sexual partners of PWID included in the sample noted that they knew where to go to take a test for HIV (79.7%, CI 76.9%-82.6%); every second of them had approached such facilities to take a test for HIV (52.7%, CI 49.1%-56.2%), and three out of five had actually taken such a test (64.4%, CI 61.0%-67.8%) ***(Table 10.9)***.

In the last year, 25.7% of sexual partners of PWID took a test for HIV and received a result (CI 22.7%-28.8%).

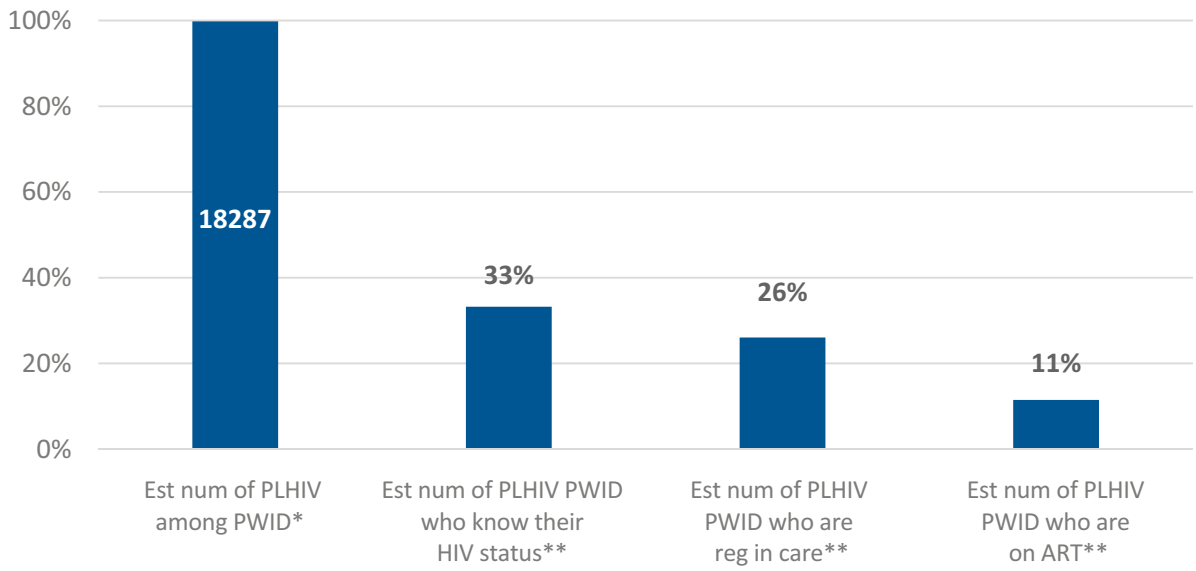
Table 10.9. *Experience of testing for HIV*

Characteristics		N	%	CI	
				LL	UL
Know where to go to take a test for HIV		613	**79.7**	76.9	82.6
Approached facilities/organizations to take a test for HIV		405	**52.7**	49.1	56.2
Ever took a test for HIV		495	**64.4**	61.0	67.8
Took a test for HIV in the last 12 months and received a result		198	**25.7**	22.7	28.8
Test result:					
	Positive	15	**2.0**	1.0	2.9
	Negative	159	**20.7**	17.8	23.5
	Refused to answer	26	**3.4**	2.1	4.7

N – number of persons in the sample;
CI – 95% confidence interval;
LL – lower limit;
UL – upper limit.

Of all the sexual partners of PWID with the positive result of the rapid test for HIV, 33% had known of it before taking part in the study, 26% were registered with the AIDS Center, and 11% were receiving ARV therapy ***(Figure 10.1)***.

***Figure 10.1.** Treatment cascade of sexual partners of PWID (N=115 HIV-positive according to rapid testing of the sexual partners).*



* *ІВВS – 2015, розраховано серед ВІЛ+ за результатами швидкого тесту та тих, хто погодився відповідати на запитання про ВІЛ-статус, досвід лікування в центрі СНІДу та отримання АРТ*

Testing results

Approximately every sixth sexual partner of PWID who took part in the study was HIV-positive according to the results of rapid testing (CI 12.4%-17.5%), every fourth had hepatitis C (25.9%, CI 22.8%-29.0%), around 3% had hepatitis B (2.9%, CI 1.7%-4.0%), and further 5% had syphilis (4.7%, CI 3.2%-6.2%) ***(Table 10.10)***.

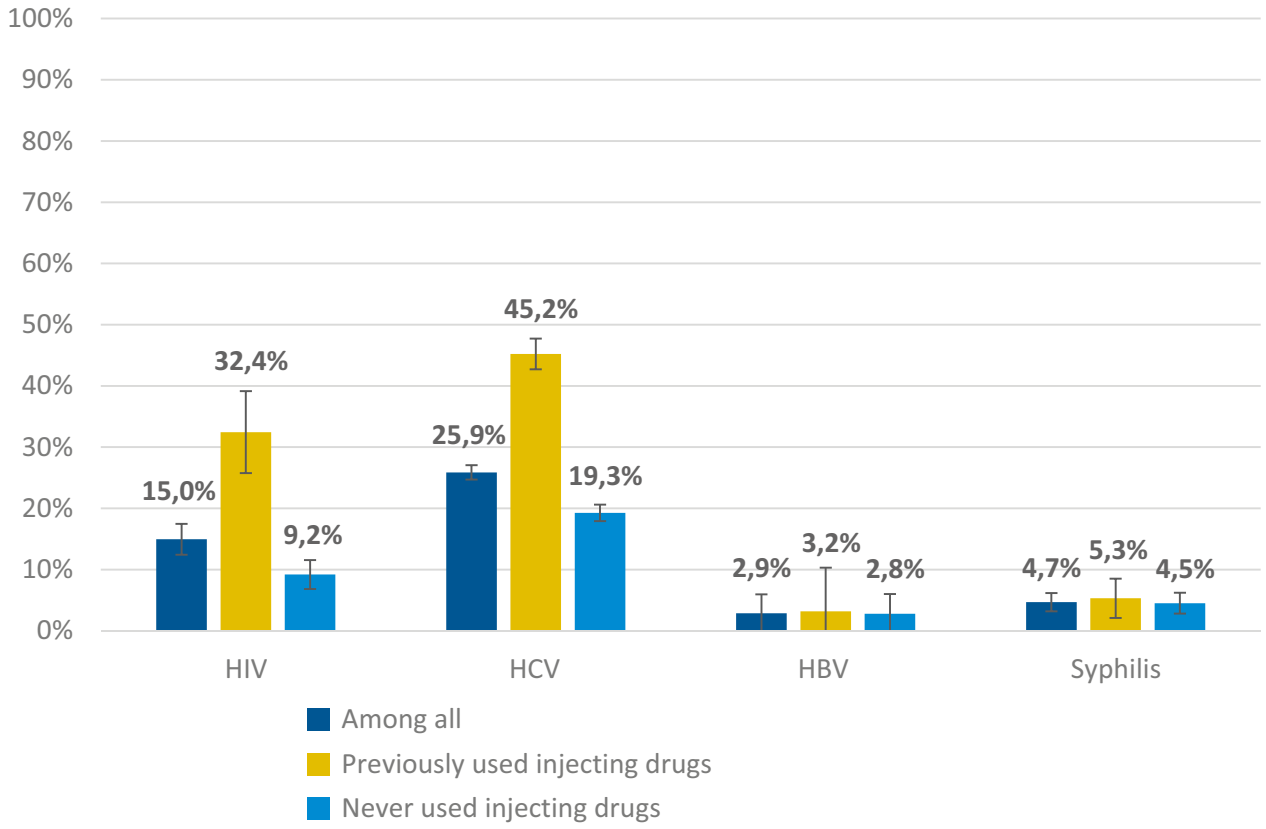
***Table 10.10.** Prevalence of HIV, HCV, HBV, and syphilis among sexual partners of PWID according to rapid testing results (N=769)*

Infections	N	%	CI	
			LL	UL
HIV	115	**15.0**	12.4	17.5
HCV	199	**25.9**	22.8	29.0
HBV	22	**2.9**	1.7	4.0
Syphilis	36	**4.7**	3.2	6.2

N – number of persons in the sample;
CI – 95% confidence interval;
LL – lower limit;
UL – upper limit.

Sexual partners of PWID who had used to inject drugs were three times more often HIV-positive, and 2.5 times more often had hepatitis C ***(Figure 10.2)***. Despite this, 9.2% (CI 6.8%-11.6%) of respondents who had never injected drugs were infected with HIV, and 19.3% (CI 16.0%-22.5%) had hepatitis C.

***Figure 10.2.** Prevalence of the four infections among sexual partners of PWID according to results of rapid testing, broken down by their experience of injecting drugs (N=769).*



In 7.8% of all the couples of PWID and their sexual partners, both partners were HIV-positive, and one fifth of them (19.3%) had hepatitis C. In two thirds (68.7%) of the couples neither of the partners had HIV, and in one third (35.8%) neither had hepatitis C.

In about 6% of couples, only the sexual partner of PWID was infected with HIV or hepatitis C *(Table 10.11)*.

***Table 10.11.** Prevalence of HIV, HCV, HBV, and syphilis among the couples of PWID and their sexual partners that do not inject drugs (N=769)*

	HIV	HCV	HBV	Syphilis
Concordant couples				
Both partners infected	7.8	19.3	0.4	0.3
Both partners negative	68.7	35.8	91.2	92.9
Disconcordant couples				
Only the PWID is infected	16.6	38.9	6.0	2.4
Only the partner is infected	6.9	6.0	2.4	4.4

Note: In the cells, the shares of couples with the corresponding combinations of statuses are indicated.

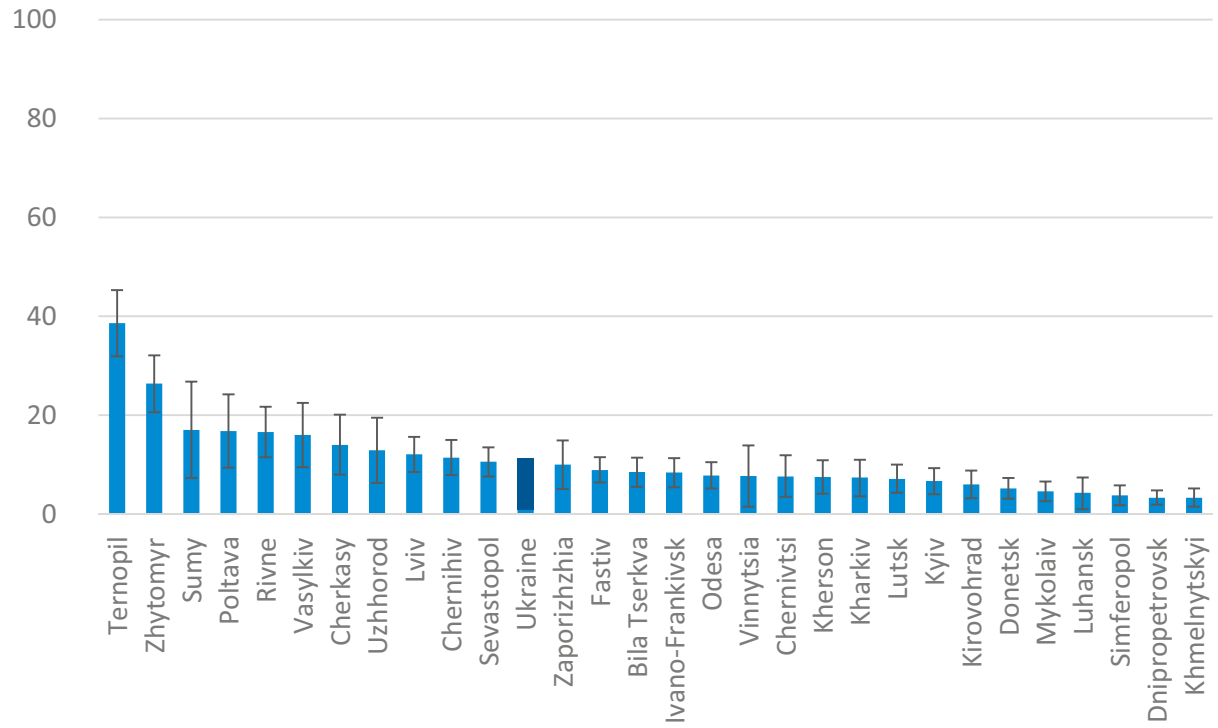
SECTION 11.

Regional differences in the main indicators

Sociodemographic characteristics

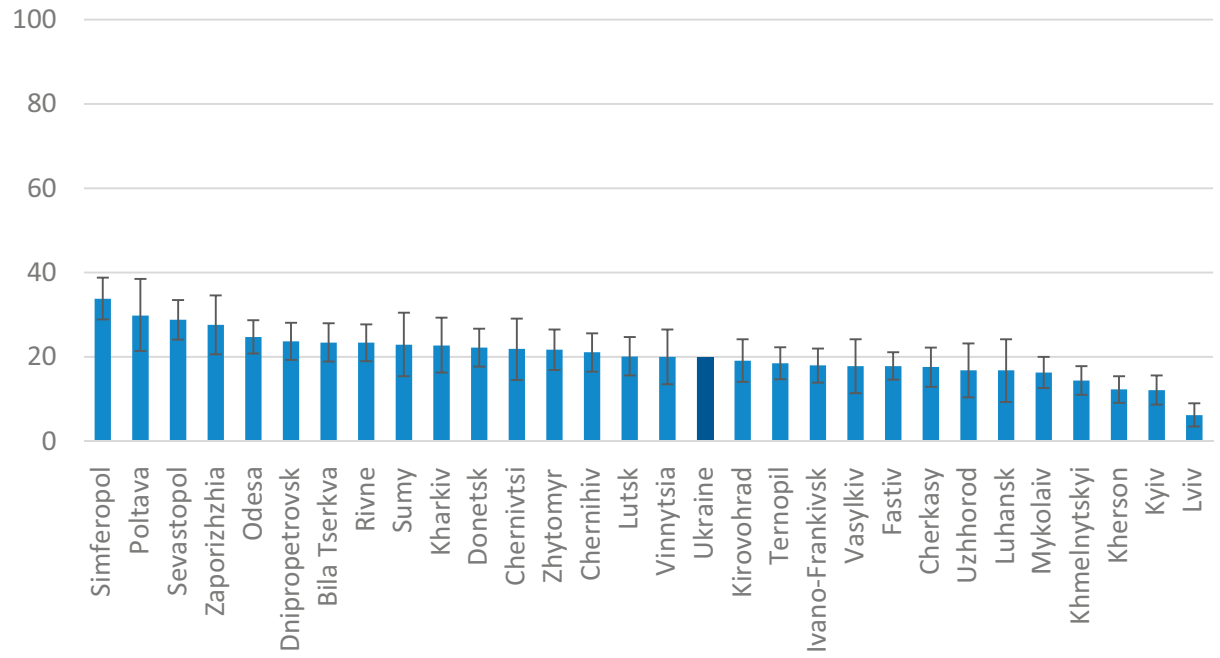
While on average 10.4% of PWID in Ukraine were 25 years old or younger, in Ternopil and Zhytomyr this share was 38.6% (CI 31.9%-45.3%) and 26.4% (CI 31.9%-45.3%) respectively, and in Dnipropetrovsk (CI 1.9%-4.8%) and Khmelnytskyi (1.5%-5.2%) – 3.3% each. In all the other cities the share of young PWID varied from 5% to 20% ***(Figure 11.1)***.

Figure 11.1. *The share of up to 25 years old PWID (%).*



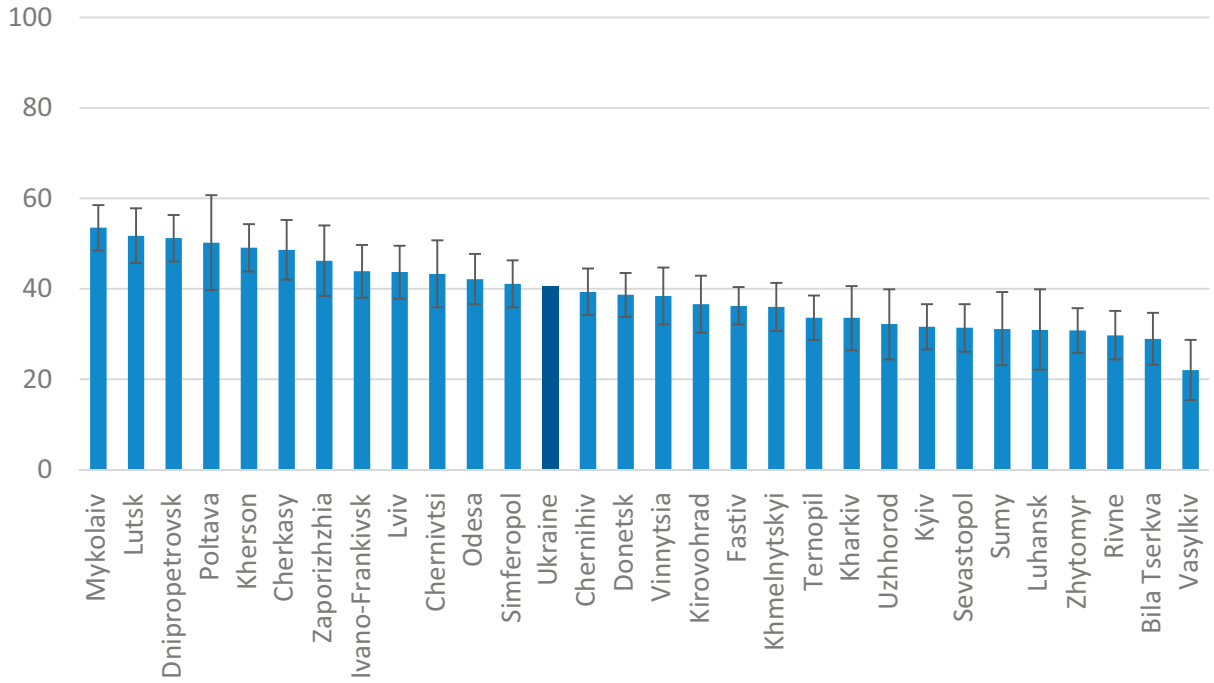
The highest share of female PWID took part in the study in Simferopol (33.8%, CI 28.9%-38.8%), the lowest one – in Lviv (6.2%, CI 3.5-9.0%). In the other cities the share of women using injection drugs varied from 10% to 30%, and on the average in Ukraine – 19.9% ***(Figure 11.2)***.

Figure 11.2. *Share of women among PWID (%).*



The share of PWID with imprisonment experience varied from 50% to 30% in all the cities where the study was conducted, and the lowest figure was in Vasylkiv (22.0%, CI 15.4%-28.7%). In Ukraine, on average, this share was 40.6%.

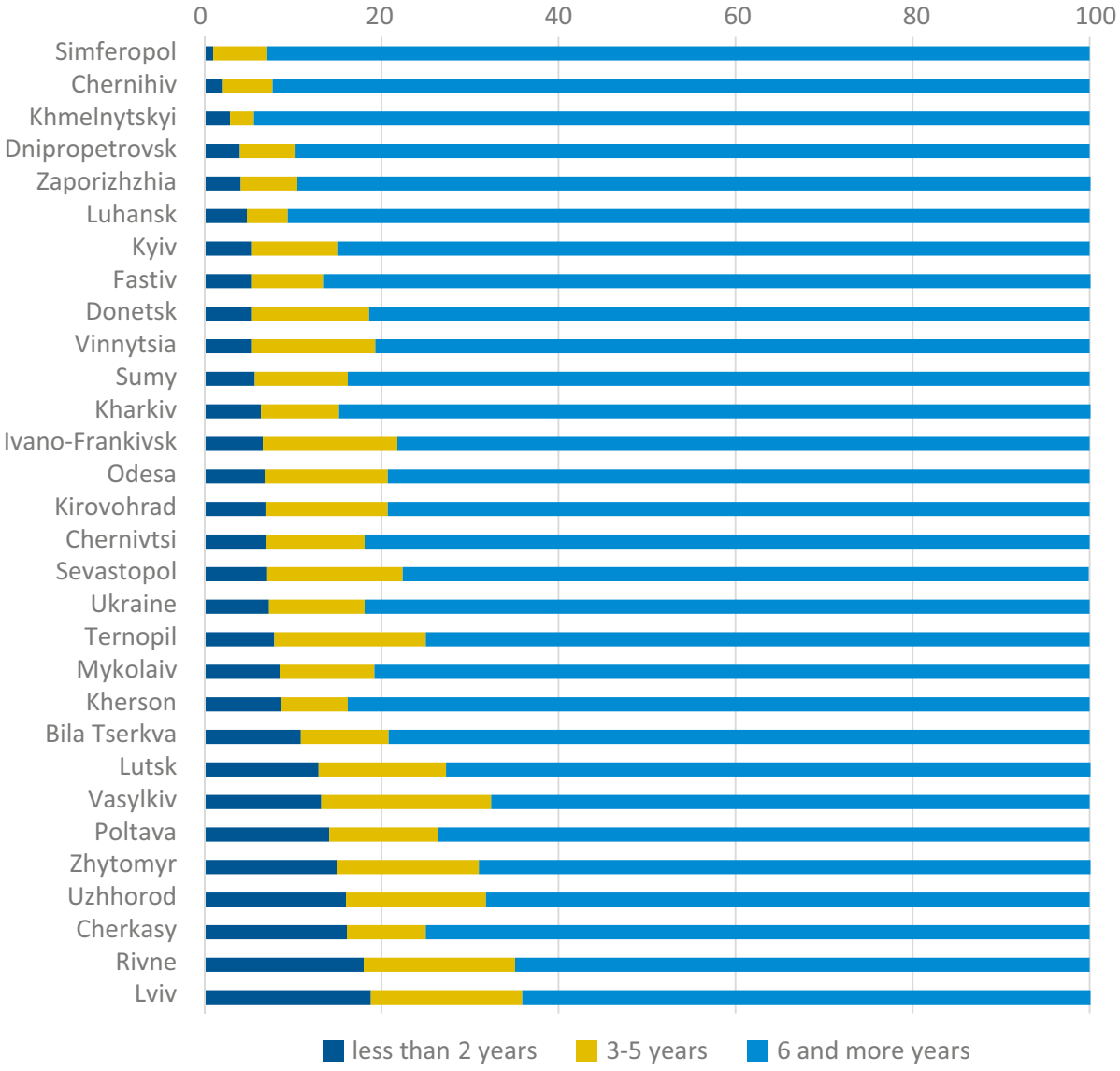
Figure 11.3. *The share of PWID with an imprisonment experience (%).*



Drug stage

In the cities of the study, the share of PWID with experience of injection drug use up to 2 years was, on the average, 7.3%, varying from 1% to 20%. The smallest share of new injected drug users was observed in Simferopol (1.0%, CI 0.1%-1.9%) and Chernihiv (2.0%, CI 0.7%-3.2%). The highest share of PWID with the experience of up to two years inclusive (over 15%) was in Uzhhorod, Cherkasy, Rivne, and Lviv ***(Figure 11.4)***.

Figure 11.4. *PWID distribution broken down by the experience of injecting drugs (%).*



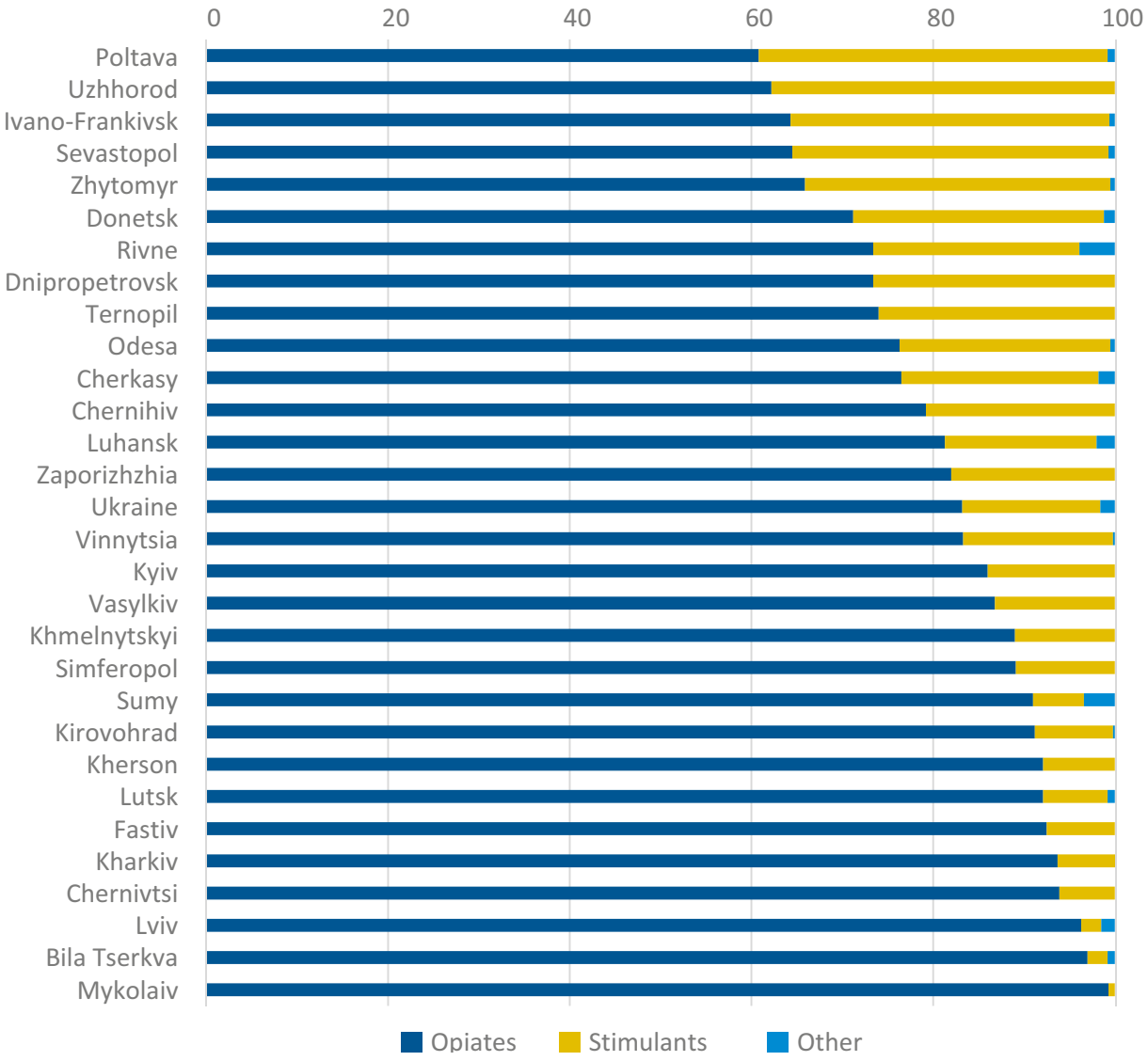
The highest total share of PWID who had been using injected drugs for up to 5 years was in Rivne, Kherson, Cherkasy, and Vasylkiv, where it reached above 30%. The share of drug users with a small experience of less than 10% was observed in Donetsk, Chernihiv, Vinnytsia, and Ternopil. In Ukraine, on the average, the share of PWID with the experience of injecting drugs for up to five years inclusive was 18.1%.

In Ukraine, on the average, five out of six PWID listed an opioid as their main drug, and one of six selected a stimulant as the main drug used ***(Figure 11.5)***.

At the same time the share of stimulant users was more than double average in Poltava (38.4%, CI 26.4%-50.4%), Uzhhorod (37.8%, CI 26.5%-49.1%), Ivano-Frankivsk (35.1%, CI 30.1%-40.2%), Sevastopol (34.8%, CI 29.7%-40.0%), and Zhytomyr (33.6%, CI 28.2%-39.1%). The share of stimulant users less than 5% was observed in Bila Tserkva (2.2%, CI 0.6%-3.7%), Lviv (2.2%, CI 0.6%-3.9%), and Mykolaiv (2.2%, CI 0.6%-3.9%).

On the average, 0.6% of PWID selected a non-stimulant and non-opiate drug as the main one. Less than 5% of PWID selected another main drug in Vinnytsia, Kirovohrad, Zhytomyr, Odesa, Sevastopol, Lutsk, Bila Tserkva, Poltava, Donetsk, Lviv, Cherkasy, Luhansk, Sumy, and Rivne. In all the other this category was selected by no-one.

***Figure 11.5.** Distribution of PWID by types of the main drug used (%).*



Seven out of ten of all PWID in Ukraine named liquid opium extract as their main drug. in Lviv 69.9% of PWID selected street methadone, or buprenorphine (CI 64.0%-75.9%) of the other injected drugs. In Vasylkiv, this drug was the main for two of five PWID (37.6%, CI 29.2%-45.9%), and in Ivano-Frankivsk for every third PWID (29.2%, CI 24.2%-34.1%). In all the other cities its share was less than 20% ***(Table 11.1)***.

Desomorphine was much more popular as the main drug in Rivne (35.7%, CI 30.5%-41.0%) and Kyiv (28.5%, CI 24.0%-33.0%) than elsewhere; the same is true for heroin in Lviv (13.2%, CI 8.5%-18.0%).

***Table 11.1.** Distribution of PWID by the main drug used: opioids.*

City	N	Liquid opium extract			Street methadone / buprenorphine			Desomorphine			Heroin			Other opiates		
		%	CI		%	CI		%	CI		%	CI		%	CI	
			LL	UL		LL	UL		LL	UL		LL	UL		LL	UL
Ukraine	**9405**	**69.5**	–	–	**8.4**	–	–	**2.4**	–	–	**0.5**	–	–	**2.1**	–	–
Simferopol	400	**88.5**	85.3	91.7	**–**	–	–	**0.6**	0.0	1.3	**–**	–	–	**–**	–	–
Vinnytsia	250	**72.6**	65.3	79.9	**9.2**	3.8	14.6	**–**	–	–	**1.5**	0.1	2.9	**–**	–	–
Lutsk	350	**79.1**	72.7	85.6	**3.7**	1.7	5.7	**0.9**	0.0	1.8	**–**	–	–	**8.4**	2.2	14.5
Dnipropetrovsk	500	**72.1**	66.8	77.4	**0.4**	0.1	0.9	**0.4**	0.1	0.9	**0.6**	0.1	1.3	**–**	–	–
Donetsk	446	**59.7**	53.0	66.3	**2.1**	0.7	3.5	**9.1**	6.4	11.8	**–**	–	–	**0.3**	0.0	0.6
Zhytomyr	350	**62.3**	56.7	68.0	**2.4**	0.8	4.0	**–**	–	–	**0.7**	0.1	1.7	**0.5**	0.0	1.0
Uzhhorod	150	**39.1**	28.4	49.9	**2.5**	0.4	4.7	**8.5**	3.8	13.2	**1.7**	0.1	3.6	**–**	–	–
Zaporizhzhia	150	**63.0**	55.9	70.3	**16.6**	10.1	22.9	**–**	–	–	**–**	–	–	**2.4**	0.1	5.3
Ivano-Frankivsk	350	**26.5**	21.0	31.9	**29.2**	24.2	34.1	**0.7**	0.0	1.3	**–**	–	–	**8.0**	5.2	10.7
Bila Tserkva	350	**92.9**	90.3	95.4	**3.2**	1.5	4.9	**–**	–	–	**0.6**	0.1	1.4	**0.3**	0.1	0.8
Vasylkiv	150	**48.4**	40.3	56.6	**37.6**	29.2	45.9	**–**	–	–	**0.8**	0.1	2.0	**–**	–	–
Fastiv	400	**77.1**	73.2	81.1	**14.2**	10.9	17.4	**–**	–	–	**0.4**	0.0	0.8	**0.5**	0.1	1.1
Kirovohrad	300	**87.4**	83.8	91.0	**0.4**	0.0	0.8	**–**	–	–	**0.3**	0.1	0.8	**3.1**	1.1	5.2
Luhansk	150	**76.8**	70.3	83.4	**–**	–	–	**0.6**	0.1	1.5	**3.9**	0.6	7.1	**–**	–	–
Lviv	401	**12.7**	8.3	17.2	**69.9**	64.0	75.9	**0.4**	0.1	0.9	**13.2**	8.5	18.0	**–**	–	–
Mykolaiv	500	**98.6**	97.6	99.6	**0.3**	0.1	0.8				**0.3**	0.1	1.0	**–**	–	–

Продовження Таблиця 11.1.

City	N	Liquid opium extract			Street methadone / buprenorphine			Desomorphine			Heroin			Other opiates		
		%	CI		%	CI		%	CI		%	CI		%	CI	
			LL	UL		LL	UL		LL	UL		LL	UL		LL	UL
Odesa	450	**69.7**	64.4	74.8	**0.6**	0.1	1.3	**6.0**	2.7	9.3	**0.1**	0.1	0.3	**–**	–	–
Poltava	150	**60.8**	48.9	72.8	**–**	–	–	**–**	–	–	**–**	–	–	**–**	–	–
Rivne	400	**36.5**	31.1	41.9	**0.6**	0.1	1.7	**28.5**	24.0	33.0	**1.1**	0.0	2.2	**6.6**	3.8	9.3
Sumy	150	**89.3**	83.7	94.9	**1.7**	0.0	3.4	**–**	–	–	**–**	–	–	**–**	–	–
Ternopil	350	**73.6**	60.7	86.5	**–**	–	–	**–**	–	–	**0.3**	0.1	0.9	**–**	–	–
Kharkiv	200	**44.9**	37.2	52.7	**10.6**	6.1	15.1	**–**	–	–	**1.6**	0.1	3.9	**1.4**	0.1	2.7
Kherson	400	**89.2**	85.4	93.0	**1.6**	0.0	3.3	**0.6**	0.0	1.2	**0.2**	0.0	0.5	**0.4**	0.1	1.1
Khmelnytskyi	450	**71.6**	67.0	76.1	**12.8**	9.3	16.3	**–**	–	–	**4.6**	2.6	6.6	**–**	–	–
Cherkasy	350	**74.4**	67.9	80.9	**0.8**	0.1	1.7	**–**	–	–	**1.4**	0.3	2.5	**–**	–	–
Chernivtsi	150	**33.6**	24.9	42.3	**1.1**	0.1	2.2	**6.4**	2.6	10.2	**2.6**	0.1	5.6	**30.6**	22.0	39.2
Chernihiv	360	**79.0**	73.8	84.2	**0.2**	0.1	0.7	**–**	–	–	**–**	–	–	**–**	–	–
Kyiv	399	**46.1**	39.8	52.4	**1.5**	0.0	3.0	**35.7**	30.5	41.0	**1.4**	0.2	2.6	**1.2**	0.7	3.1
Sevastopol	401	**54.2**	48.6	59.7	**–**	–	–	**9.2**	5.8	12.7	**0.5**	0.1	1.3	**0.5**	0.1	1.4

N – number of respondents in the sample;
% – weighted share according to RDS.
Note: The share of the total population of PWID in the city.

Concerning stimulants, from one to two out of five PWID selected dissolved methamphetamine as their main drug in Poltava, Sevastopol, Donetsk, Dnipropetrovsk, and Cherhnihiv; 15% to 30% of respondents in Vinnytsia, Ivano-Frankivsk, Cherkasy, Ternopil, Uzhhorod, and Zhytomyr preferred powdered amphetamine ***(Table 11.2)***.

Table 11.2. *Distribution of PWID by main drug used: stimulants*

City	N	Dissolved methamphetamine			Amphetamine powder			Other stimulants		
		%	CI		%	CI		%	CI	
			LL	UL		LL	UL		LL	UL
Ukraine	9405	**8.1**	–	–	**5.4**	–	–	**1.6**	–	–
Simferopol	400	**10.6**	7.4	13.8	**0.0**	–	–	**0.3**	0.1	0.6
Vinnytsia	250	**1.1**	0.1	2.2	**15.5**	10.7	20.2	**–**	–	–
Lutsk	350	**0.2**	0.1	0.4	**6.4**	3.3	9.5	**0.5**	0.1	1.3
Dnipropetrovsk	500	**23.8**	18.9	28.8	**1.1**	0.0	2.2	**1.7**	0.4	2.9
Donetsk	446	**25.9**	19.6	32.1	**-**	-	-	**1.7**	0.4	3.0
Zhytomyr	350	**0.9**	0.1	2.0	**32.5**	26.8	38.1	**0.2**	0.1	0.5
Uzhhorod	150	**6.2**	0.4	12.0	**24.2**	14.6	33.8	**7.5**	3.4	11.5
Zaporizhzhia	150	**14.7**	8.8	20.4	**0.9**	0.0	1.8	**2.4**	0.3	4.6
Ivano-Frankivsk	350	**0.5**	0.1	1.2	**17.1**	12.7	21.6	**17.5**	13.6	21.3
Bila Tserkva	350	**–**	–	–	**1.7**	0.8	2.6	**0.5**	0.1	1.4
Vasylkiv	150	**5.0**	1.7	8.3	**8.2**	3.7	12.6	**–**	–	–
Fastiv	400	**1.8**	0.4	3.1	**6.0**	3.8	8.2	**–**	–	–
Kirovohrad	300	**5.9**	3.2	8.6	**1.7**	0.2	3.2	**1.1**	0.1	2.2
Luhansk	150	**9.2**	4.5	13.7	**3.9**	1.6	6.1	**3.6**	0.8	6.5
Lviv	401	**0.9**	0.1	2.4	**0.9**	0.2	1.6	**0.4**	0.1	1.0
Mykolaiv	500	**0.3**	0.0	0.6	**0.5**	0.0	0.9	**–**	–	–
Odesa	450	**14.2**	11.1	17.3	**0.5**	0.0	0.9	**8.6**	4.6	12.6
Poltava	150	**38.4**	27.0	49.7	**–**	–	–	**–**	–	–
Rivne	400	**15.5**	11.2	19.7	**–**	–	–	**7.2**	3.7	10.8
Sumy	150	**2.6**	0.1	5.1	**2.3**	0.1	6.6	**0.7**	0.1	1.5
Ternopil	350	**1.5**	0.2	2.9	**22.3**	11.0	33.7	**2.2**	0.3	4.1
Kharkiv	200	**5.1**	1.1	9.0	**1.2**	0.1	2.4	**–**	–	–
Kherson	400	**3.9**	1.5	6.3	**3.2**	1.1	5.3	**0.8**	0.1	1.6

Continued Table 11.2.

City	N	Dissolved methamphetamine			Amphetamine powder			Other stimulants		
		%	CI		%	CI		%	CI	
			LL	UL		LL	UL		LL	UL
Khmelnytskyi	450	**–**	–	–	**10.4**	7.0	13.7	**0.6**	0.1	1.4
Cherkasy	350	**1.2**	0.1	3.1	**20.6**	14.1	27.0	**–**	–	–
Chernivtsi	150	**4.5**	0.1	9.3	**0.9**	0.1	2.2	**0.8**	0.1	1.7
Chernihiv	360	**20.8**	15.2	26.3	**–**	–	–	**–**	–	–
Kyiv	399	**8.0**	5.3	10.6	**5.6**	2.7	8.5	**0.5**	0.2	1.1
Sevastopol	401	**33.6**	28.5	38.6	**0.5**	0.1	1.1	**0.8**	0.1	1.7

N – number of respondents in the sample;

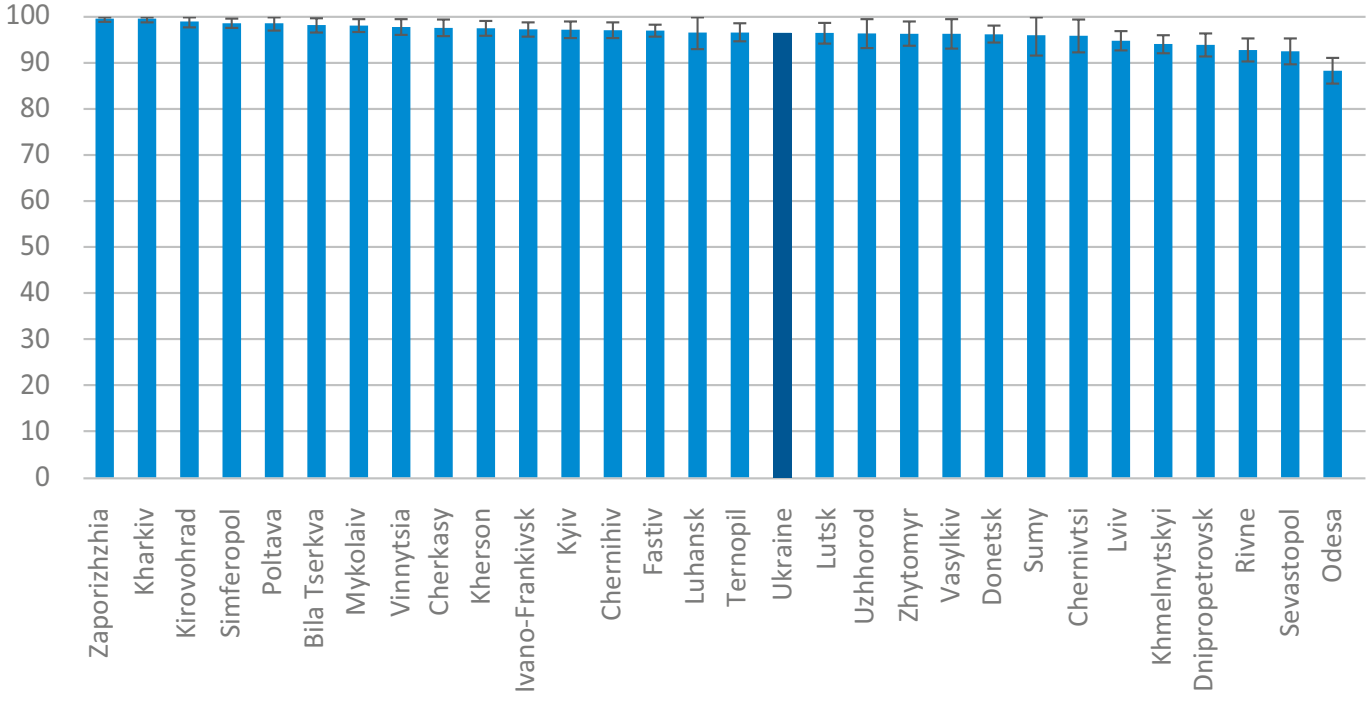
% – weighted share according to RDS.

Note: The share of the total population of PWID in the city.

Risky injection behaviors

The share of PWID who reported having used sterile needle and syringe during the last injection varied from 90% to 99% in all the cities of Ukraine. Only in Odessa it was slightly less than that – 87.8% (CI 84.9%-90.7%), while in Kharkiv and Zaporizhya it exceeded 99% ***(Figure 11.6)***.

Figure 11.6. ***The share of PWID who used sterile needle and syringe during the last injection (%).***



The practice of using someone else's, already used syringe was not very common among the respondents (5.5%), but in Odessa this indicator reached almost 20% (19.2%, CI 15.5%-23.0%), and in Zaporizhya and Dnipropetrovsk – over 10% ***(Figure 11.7)***.

Figure 11.7. *The share of PWID who used a syringe already used by another person, in the last 30 days (%).*

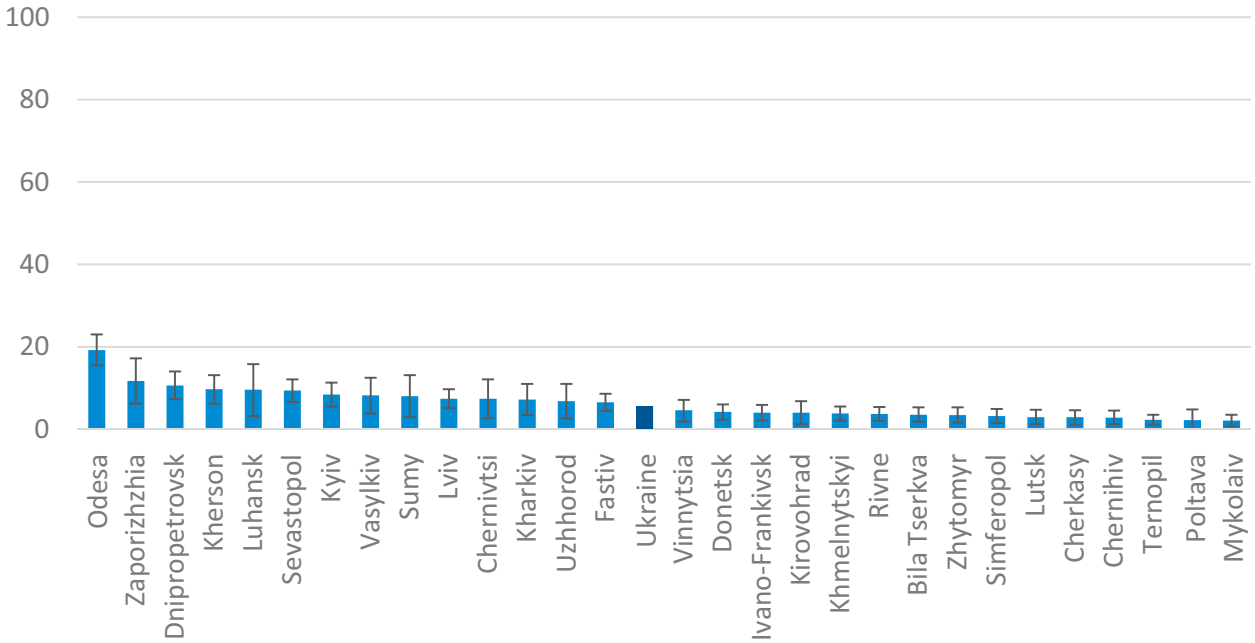
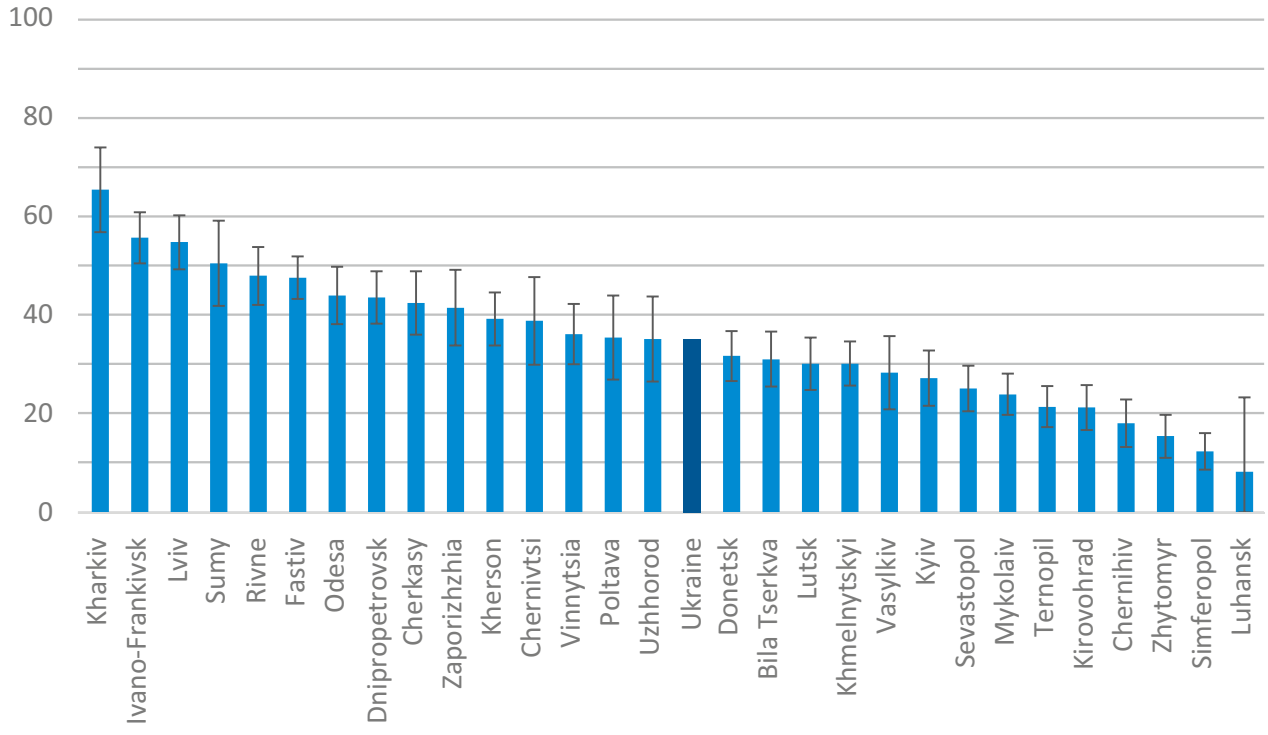


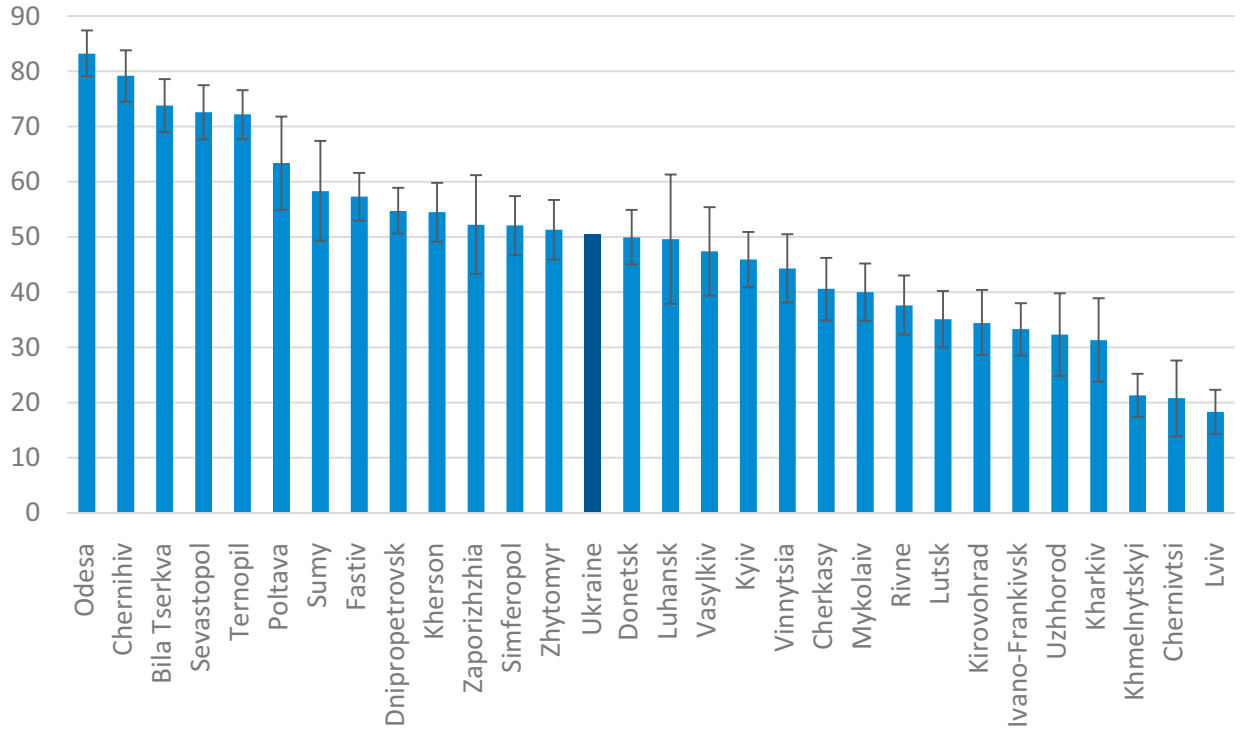
Figure 11.8. *The share of PWID who used their syringe/needle repeatedly to inject another dose of a drug, in the last 30 days (%).*



For Ukraine as the whole, the share of PWID who had used their own syringe for repeated injection of a drug in the last 30 days was 35%. And while in Kharkiv, Ivano-Frankovsk, Lviv, and Sumy this practice was used by more than a half of the respondents (the highest number was registered in Kharkiv – 65.3%, CI 56.7%-73.8%), in Luhansk, on the contrary, the number was less than 10% (8.3%, CI 0.1%-23.3%) ***(Figure 11.8)***.

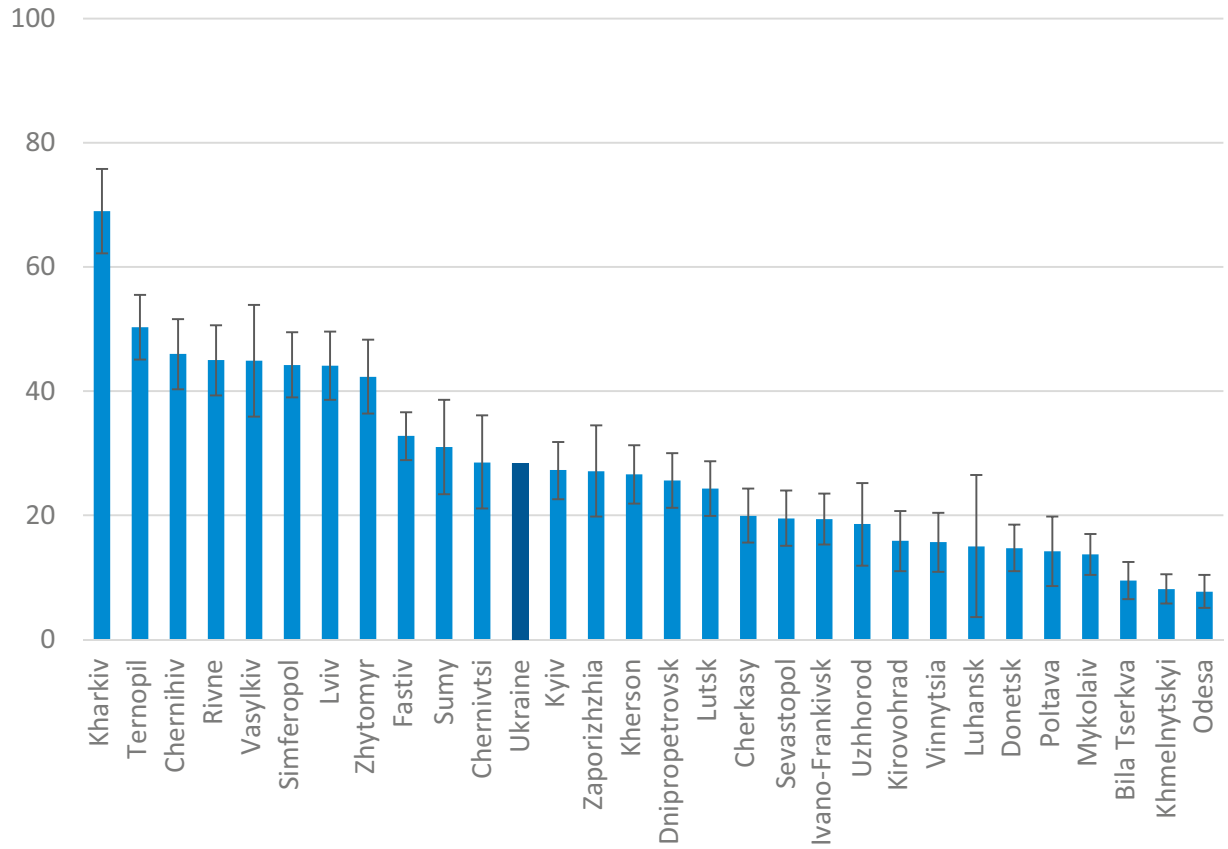
The share of PWID who had received an injection in a pre-filled syringe in the last 30 days without seeing the process of its filling varied from four out of five PWID in Odesa (83.2%, CI 79.1%-87.4%) and Chernihiv (79.2%, CI 74.5%-83.8%) to one out of five in Khmelnytskiy, Chernivtsi, and Lviv (18.3%, CI 14.3%-22.3%) ***(Figure 11.9)***.

Figure 11.9. ***The share of PWID who received an injection in a pre-filled syringe without seeing the process of its filling, in the last 30 days (%).***



The practice of sharing equipment for cooking and distribution of drug substance was the most prevalent in Kharkiv, where it reached 69.0% (CI 62.2%-75.8%), and the least prevalent in Bila Tserkva, Khmelnytskyi, and Odesa – less than 10%. In the rest of the cities, ten to fifty percent of PWID reported having shared dishware or equipment for cooking and distributing drugs at least once in the last 30 days ***(Figure 11.10)***.

***Figure 11.10.** The share of PWID who shared equipment or materials for cooking or distribution of a drug substance in the last 30 days (%).*



Sexual behaviors

While all over Ukraine, on the average, every second PWID used a condom during the last sexual contact (in the last 30 days), actual figures varied from 83.3% (CI 79.7%-86.9%) in Ternopil to 32.3% (CI 21.3%-43.2%) in Chernivtsi ***(Figure 11.11)***.

The biggest share of PWID that had been sexually inactive in the last 90 days was observed in Mykolaiv (35.3%, CI 30.8%-39.7%) and Odesa (33.9%, CI 29.3%-38.5%). The smallest one was in Ternopil – 0.7% (CI 0.1%-1.7%). On the average, 15.9% of all PWID had had no sexual partner in the last 90 days ***(Figure 11.12)***.

At the same time, the share of PWID who had had two or more sexual partners in the last 90 days was 68.6% (CI 63.9%-73.3%) in Ternopil and 66.4% (CI 57.1%-75.7%) in Zhytomyr, and zero in Odesa and Kyiv. On the average, every fourth PWID in Ukraine (25.9%) had had two or more sexual partners in the last 90 days.

***Figure 11.11.** The share of PWID who used a condom during the last sexual contact (in the last 30 days) (%).*

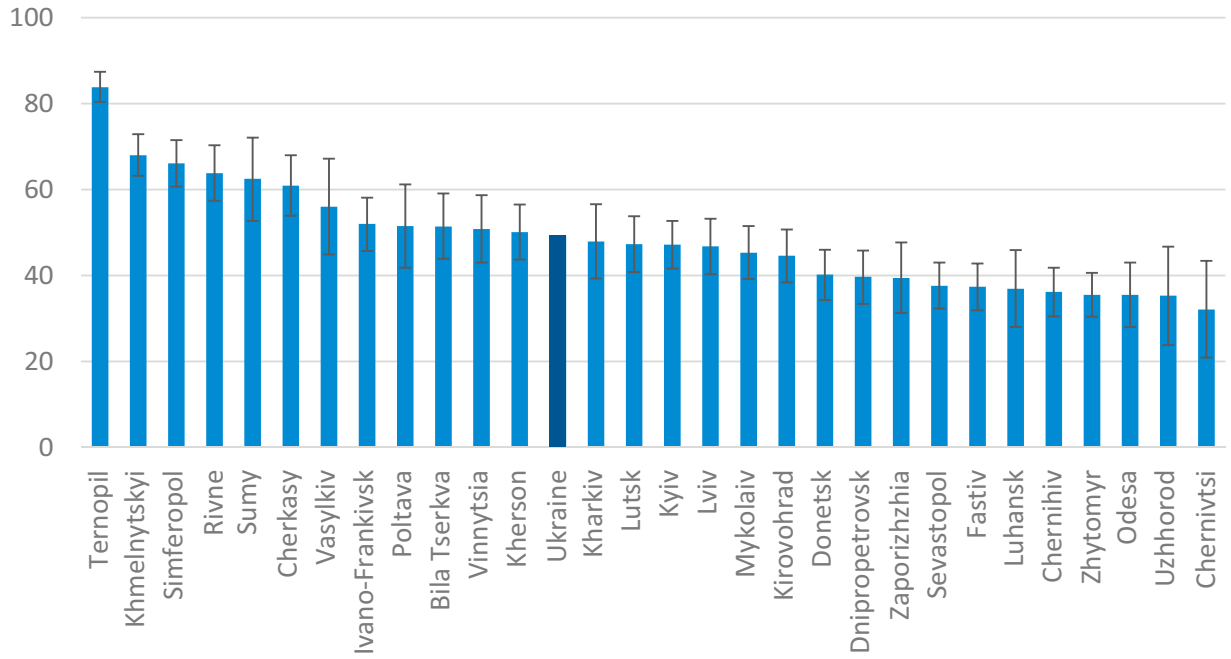
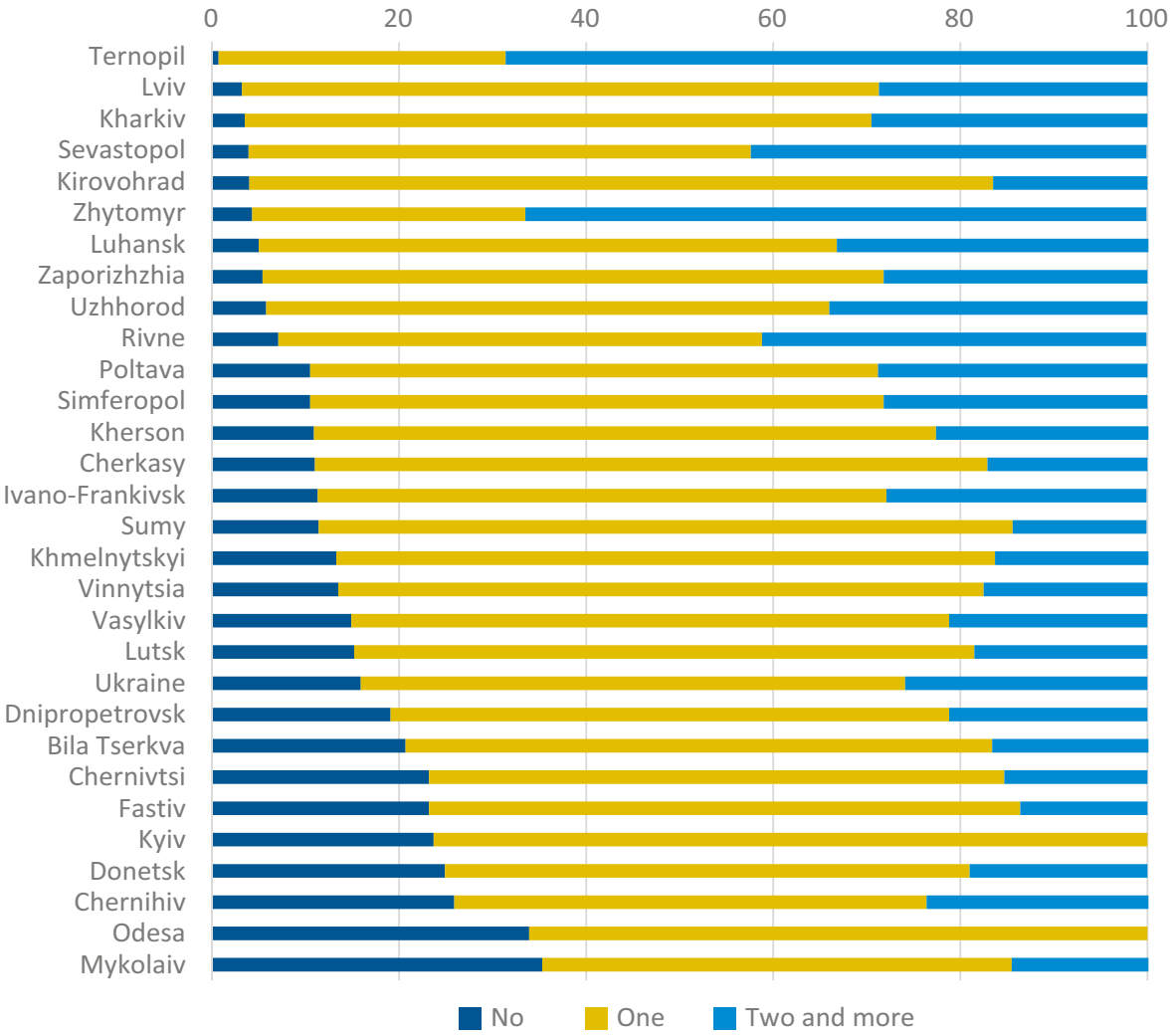
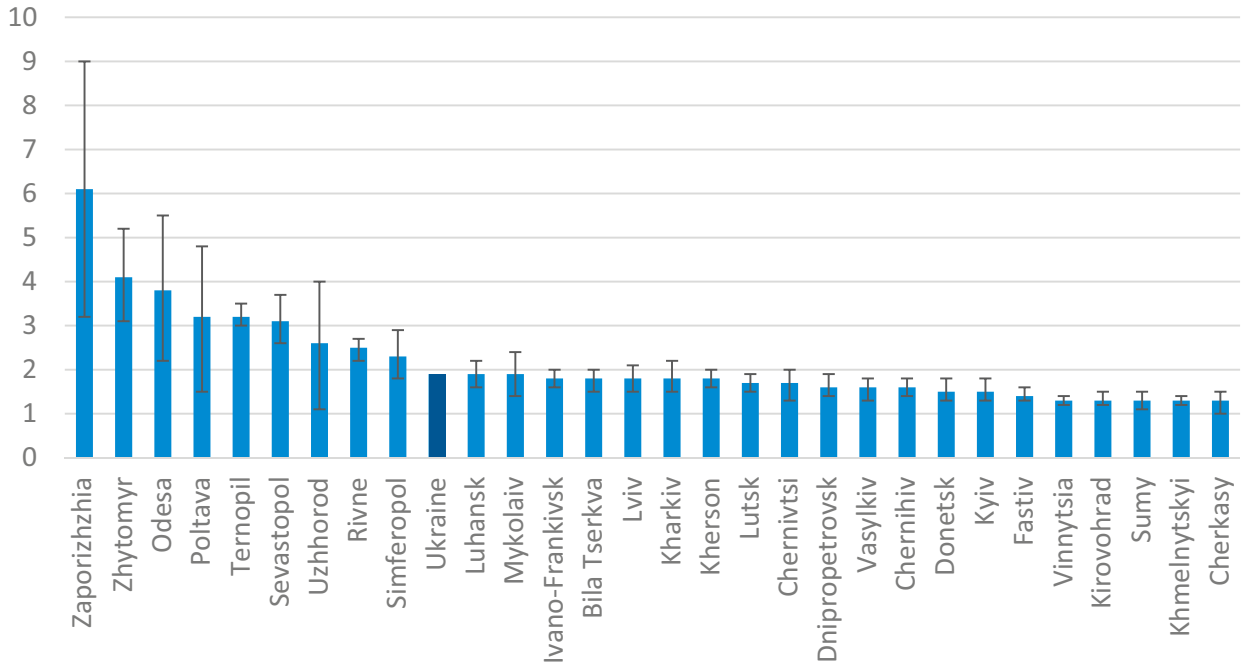


***Figure 11.12.** The number of sexual partners in the last 90 days (%).*



On the average, every PWID in Ukraine had had two sexual partners in the last 90 days. In Zaporizhya this number was 6.1 persons (CI 3.2-9.0), in Zhytomyr – 4.1 persons (CI 3.1-5.2). The smallest average number of sexual partners in the last 90 days was 1.3 persons in Vinnytsia, Kirovohrad, Sumy, Khmelnytskyi, and Cherkasy ***(Figure 11.13)***.

Figure 11.13. ***The average number of sexual partners of PWID in the last 90 days (persons).***



Prevalence of HIV, HCV, HBV, and syphilis

HIV prevalence among PWID in Ukraine was, on the average, 21.9%, while varying in regions from 1.4% (CI 0.1%-3.3%) in Uzhhorod to 39.7% (CI 35.4%-44.7%) in Dnipropetrovsk. The lowest HIV prevalence (less than 10%) was among PWID in Ternopil, Luhansk, Zaporizhzhia, Rivne, and Sumy; the highest (over 30%) – in Donetsk, Cherkasy, Chernihiv, and Simferopol ***(Figure 11.14)***.

Throughout Ukraine, the average of 5.4% of all PWID received positive result of rapid testing for hepatitis B. This figure varied from 15.6% (CI 7.2%-15.0%) in Simferopol and 11.1% (CI 7.2%-15.0%) in Ivano-Frankivsk to 1.5% (CI 0.4%-2.6%) in Zhytomyr ***(Figure 11.15)***.

Figure 11.14. *HIV prevalence among PWID according to results of rapid testing*

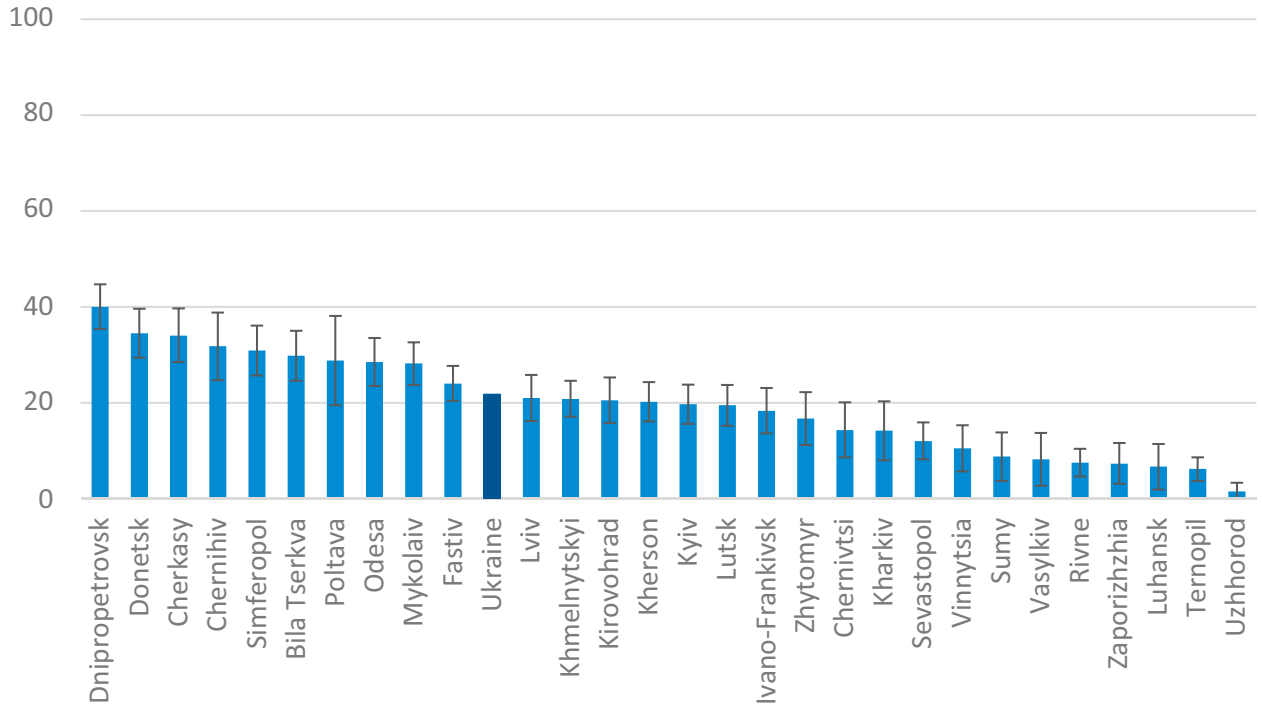
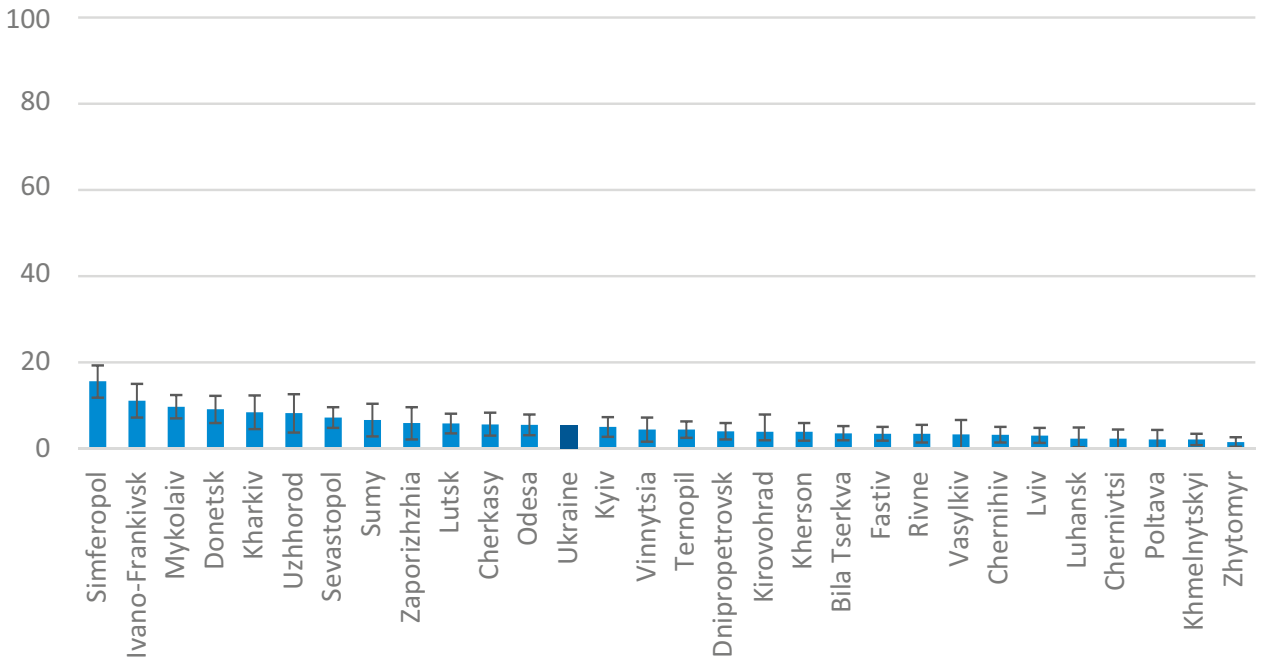
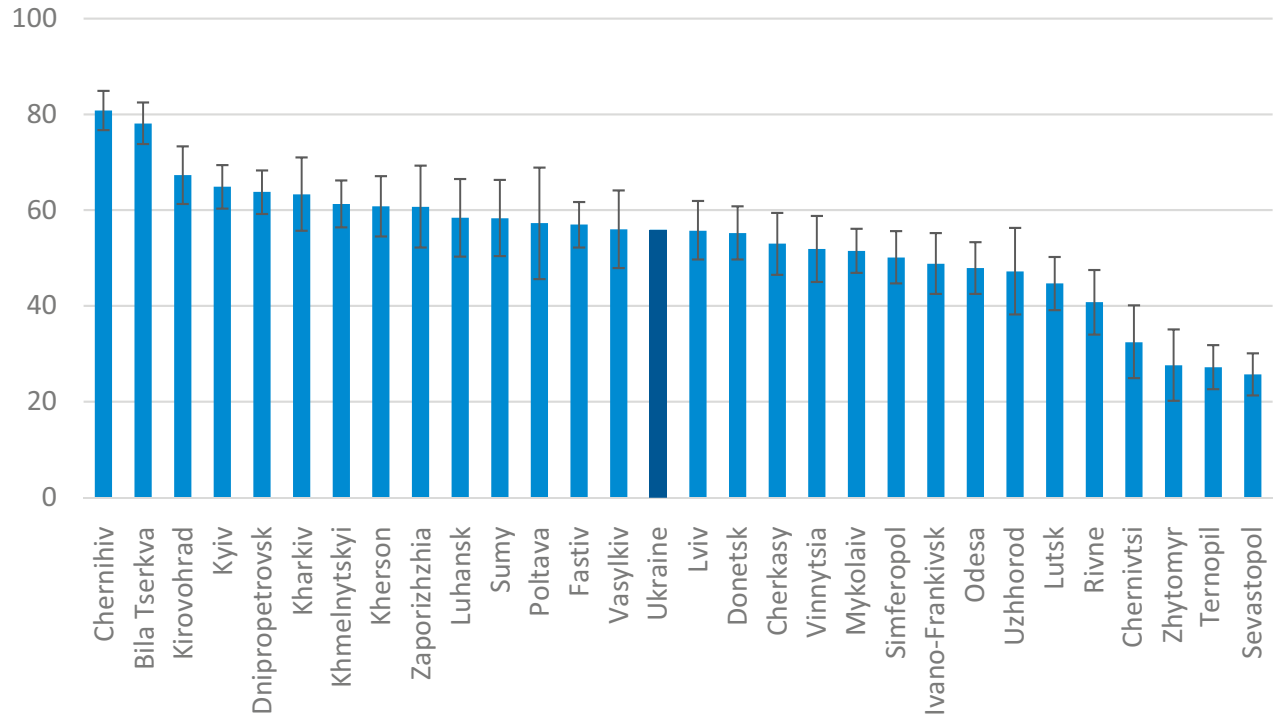


Figure 11.15. *HBV prevalence among PWID according to results of rapid testing*



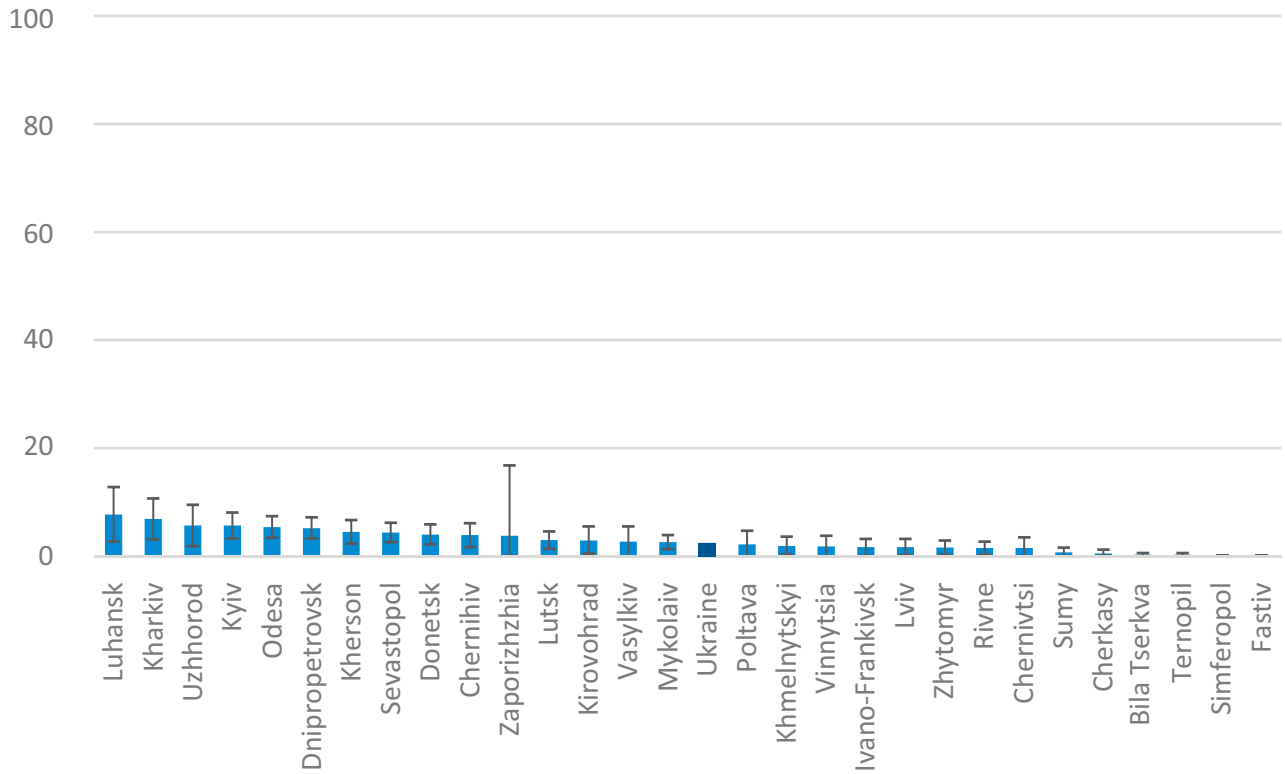
Prevalence of hepatitis C among PWID in Ukraine varied from the lowest values in Sevastopol (25.7%, CI 21.3%-30.1%), Ternopil, and Zhytomyr, to the highest ones in Bila Tserkva and Chernihiv (80.8%, CI 76.7%-84.9%). In the rest of the cities covered by the study, the share of HCV-positive results of rapid tests was from 30% to 70%, the average share for Ukraine being 55.9%.

***Figure 11.16.** HCV prevalence among PWID according to results of rapid testing*



Syphilis prevalence among PWID according to results of rapid testing in Ukraine was 2.5%. The highest values were registered in Luhansk (7.7%, CI 2.7%-12.8%) and Kharkiv (6.9%, CI 3.1%-10.7%); 5% threshold was surpassed in Uzhhorod, Kyiv, Odesa, and Dnipropetrovsk. No positive results of syphilis tests were got in Simferopol and Fastiv, and less than half per cent of all tests were positive in Bila Tserkva and Ternopil ***(Figure 11.17)***.

***Figure 11.17.** Syphilis prevalence among PWID according to results of rapid testing.*



Discussion of results

Sociodemographic profile of PWID

The average age of PWID that took part in the study was almost 34 years, and four out of five persons in the sample were men. This did not differ from what had been observed during the previous studies.

Besides, the shares of young PWID and of women gradually shrank in each following study. The biggest share of young PWID (up to 25 years old) was in Ternopil (38.6%) and Zhytomyr (26.4%), and the smallest one – in Dnipropetrovsk and Khmelnytskyi (3.3% each). The biggest number of women took part in the study in Simferopol (every third respondent was female), the smallest – in Lviv (6.2%).[1] [2]

Also, there has been gradual rise in the age of the first injection, but the initiation of non-injection use remains virtually the same. I. e., the trend of reduction of the proportion of young people among PWID may be caused by the practice of non-injection use of drugs in an earlier age with transition to injection practices after the age of 20.[3] The biggest share of PWID with a short experience of injecting drugs (up to 5 years inclusive) was in Rivne, Kherson, Cherkasy, Chernivtsi, and Vasylkiv, where it included over 30% of the respondents. At the same time, in Donetsk, Chernihiv, Vinnytsia, and Ternopil this indicator did not exceed 10%.

Almost 30% of the PWID had a permanent partner who had never injected drugs; 40.6% of all the respondents had ever been imprisoned, as of 2015. This is somewhat more than in 2011 and 2013. The share of PWID with imprisonment experience is the biggest in Lutsk, Mykolaiv, Dnipropetrovsk, and Poltava where it exceeds 50% of the sample.

---

1 ***Моніторинг поведінки та поширення ВІЛ-інфекції серед споживачів ін'єкційних наркотиків як компонент епіднагляду за ВІЛ другого покоління: аналіт. звіт за результатами біоповедінкового дослідження 2013 року*** */ Балакірєва О.М., Бондар Т.В. та ін. – К.: МБФ «Міжнародний Альянс з ВІЛ/СНІД в Україні», 2014. – 181 с. Доступно за посиланням http://www.aidsalliance.org.ua/ru/library/our/2014/arep14/%D0%9E%D1%82%D1%87%D0%B5%D1%82%20%D0%9F%D0%98%D0%9D.pdf*

2 ***Моніторинг поведінки та поширеності ВІЛ-інфекції серед споживачів ін'єкційних наркотиків як компонент епіднагляду за ВІЛ другого покоління (аналітичний звіт за результатами біоповедінкового дослідження 2011 року)*** */ Балакірєва О.М., Бондар Т.В. та ін. – К.: МБФ «Міжнародний Альянс з ВІЛ/СНІД в Україні», 2012. – 120 с. Доступно за посиланням http://www.aidsalliance.org.ua/ru/library/our/2012/me/idu2011.pdf*

3 *Епідеміологія вживання психоактивних речовин в Україні / Думчев К. – Національна конференція з моніторингу та оцінки, м. Донецьк, Україна (листопад 2013 р.)*

Drug use practices

Opium extract remains the most common injection drug among Ukrainian PWID. Popularity of another common drug, a stimulant – dissolved methamphetamine – has been annually decreasing, and the reason is not a personal choice of PWID, but more structural barriers to purchasing ingredients or prepared drug. To support this hypothesis, we have been able to receive data concerning subjective determination of decrease of accessibility to, quality and price of this drug.

Meanwhile, popularity of such drugs as methadone, buprenorphine, amphetamine has been growing. They are sold mostly through drug caches, which has become ever more common practice due to simplicity of making such a purchase and reduction of the risk of being arrested by the police during sale.[4]

In the previous rounds of bio-behavioral studies among PWID, purchasing a drug in a pre-filled syringe was always statistically connected to incidence of HIV infection, that is why, in this study of 2015, we tried to determine prevalence and frequency of this practice applied to the use of the main drug.[5] [6] According to the study, over 60% of PWID had purchased a prepared main drug in the last 30 days and had no other sources to receive it.

Also, during mapping research of 2014, a rather prevalent practice of repeated use of syringes was noted. That is why we added such a question to the tools of bio-behavioral study of 2015 and came to the conclusion that every third PWID practiced this.[7] One syringe was used, on the average, three times in three days. Of course, such a practice is not a direct proof of a risk of HIV or hepatitis C infection, but there also may not be a full guarantee that other PWID had no access to the used syringe/needle throughout the time of its storing. In Kharkiv, Sumy, Ivano-Frankivsk, and Lviv the share of PWID who used their syringes repeatedly was 50% or more.

In Odesa, the biggest share of PWID reported having used non-sterile equipment during the last injection (11.7%). A double bigger share was the share of people who made an injection from an already used syringe in the last 30 days (19.2%, CI 15.5%-23.0%).

4 ***Картування місць вживання наркотиків та оцінка ризику інфікування ВІЛ.*** */ Сазонова Я. – К.: МБФ «Міжнародний Альянс з ВІЛ/СНІД в Україні», 2014. – 45 с.*

5 ***Моніторинг поведінки та поширення ВІЛ-інфекції серед споживачів ін'єкційних наркотиків як компонент епіднагляду за ВІЛ другого покоління: аналіт. звіт за результатами біоповедінкового дослідження 2013 року*** */ Балакірєва О.М., Бондар Т.В. та ін. – К.: МБФ «Міжнародний Альянс з ВІЛ/СНІД в Україні», 2014. – 181 с. Доступно за посиланням http://www.aidsalliance.org.ua/ru/library/our/2014/arep14/%D0%9E%D1%82%D1%87%D0%B5%D1%82%20%D0%9F%D0%98%D0%9D.pdf*

6 ***Моніторинг поведінки та поширеності ВІЛ-інфекції серед споживачів ін'єкційних наркотиків як компонент епіднагляду за ВІЛ другого покоління (аналітичний звіт за результатами біоповедінкового дослідження 2011 року)*** */ Балакірєва О.М., Бондар Т.В. та ін. – К.: МБФ «Міжнародний Альянс з ВІЛ/СНІД в Україні», 2012. – 120 с. Доступно за посиланням http://www.aidsalliance.org.ua/ru/library/our/2012/me/idu2011.pdf*

7 ***Картування місць вживання наркотиків та оцінка ризику інфікування ВІЛ.*** */ Сазонова Я. – К.: МБФ «Міжнародний Альянс з ВІЛ/СНІД в Україні», 2014. – 45 с.*

The share of PWID who practiced at least one type of risky injection behaviors in the last 30 days still remained significant – 71%, though the decrease in this indicator compared with the previous rounds was substantial (it constituted over 80%)[8][9].

Sexual behaviors

Sexual activity of PWID has not changed compared with the results of the previous surveys in terms of both sexual contacts and number and types of sexual partners. Thus, about one sixth of all the PWID (16.3%) hadn't any sexual contacts in the last three months, and a quarter had two or more partners (25.6%). On the average, one respondent PWID in the sample had one sexual contact in four days.

During the last sexual contact (in the last month, if any), only half of the respondents used a condom (48%). The lowest level of condom use by PWID during the last sexual contact was noted in Chernivtsi (32.1%, CI 20.9%-43.4%), and the highest – in Ternopil (83.8%, CI 80.4%-87.4%). Among PWID who proved their HIV-positive status according to rapid testing, 31% had not used a condom during the last sexual contact, and almost 40% had not used it with their permanent partner. I. e., the population of PWID can remain a source of HIV and other infections through heterosexual contacts.[10]

This share was smaller than in 2013 and 2011 – both overall and broken down by different types of partners.[11][12] 28.5% of respondents who had used a condom, received it free of charge, mostly from a social worker.

Despite the fact, that the main reasons for failure to use condoms were, according to the respondents, "reduction of sensitivity" and trust in the partner ("I am sure that both my partner and me are healthy"). The second largest portion of PWID had not used a condom because it was simply "not near at hand", and because of being under the influence of alcohol or drugs. It indicates to opportunity for interventions by prevention and harm reduction programs.

8 ***Моніторинг поведінки та поширення ВІЛ-інфекції серед споживачів ін'єкційних наркотиків як компонент епіднагляду за ВІЛ другого покоління: аналіт. звіт за результатами біоповедінкового дослідження 2013 року*** */ Балакірєва О.М., Бондар Т.В. та ін. – К.: МБФ «Міжнародний Альянс з ВІЛ/СНІД в Україні», 2014. – 181 с. Доступно за посиланням http://www.aidsalliance.org.ua/ru/library/our/2014/arep14/%D0%9E%D1%82%D1%87%D0%B5%D1%82%20%D0%9F%D0%98%D0%9D.pdf*

9 ***Моніторинг поведінки та поширеності ВІЛ-інфекції серед споживачів ін'єкційних наркотиків як компонент епіднагляду за ВІЛ другого покоління (аналітичний звіт за результатами біоповедінкового дослідження 2011 року)*** */ Балакірєва О.М., Бондар Т.В. та ін. – К.: МБФ «Міжнародний Альянс з ВІЛ/СНІД в Україні», 2012. – 120 с. Доступно за посиланням http://www.aidsalliance.org.ua/ru/library/our/2012/me/idu2011.pdf*

10 *Vitek CR, Čakalo J-I, Kruglov YV, Dumchev KV, Salyuk TO, Božičević I, et al. (2014)* ***Slowing of the HIV Epidemic in Ukraine: Evidence from Case Reporting and Key Population Surveys, 2005–2012.*** *PLoS ONE 9(9): e103657. doi:10.1371/journal.pone.0103657*

11 ***Моніторинг поведінки та поширення ВІЛ-інфекції серед споживачів ін'єкційних наркотиків як компонент епіднагляду за ВІЛ другого покоління: аналіт. звіт за результатами біоповедінкового дослідження 2013 року*** */ Балакірєва О.М., Бондар Т.В. та ін. – К.: МБФ «Міжнародний Альянс з ВІЛ/СНІД в Україні», 2014. – 181 с. Доступно за посиланням http://www.aidsalliance.org.ua/ru/library/our/2014/arep14/%D0%9E%D1%82%D1%87%D0%B5%D1%82%20%D0%9F%D0%98%D0%9D.pdf*

12 ***Моніторинг поведінки та поширеності ВІЛ-інфекції серед споживачів ін'єкційних наркотиків як компонент епіднагляду за ВІЛ другого покоління (аналітичний звіт за результатами біоповедінкового дослідження 2011 року)*** */ Балакірєва О.М., Бондар Т.В. та ін. – К.: МБФ «Міжнародний Альянс з ВІЛ/СНІД в Україні», 2012. – 120 с. Доступно за посиланням http://www.aidsalliance.org.ua/ru/library/our/2012/me/idu2011.pdf*

Among younger male PWID, with a shorter experience of drug use, and stimulant users, the proportion of sexually active people and condom users was higher.

Awareness of routes of HIV transmission

Knowledge about routes of HIV transmission and means of prevention varied from two thirds to 95%. The least aware were the PWID about vertical HIV transmission. The most awareness was demonstrated about transmission through the use of other people's needles or syringes. Women more often provided correct answers about vertical transmission of HIV. The other characteristics of PWID (age, length of drug use, drug type, and prevention program client status) had almost no influence on the knowledge. The portion of PWID who answered correctly the six questions about routes of HIV transmission[13], was 59.2%, and was almost the same as in the previous years.

Knowing all the six routes of HIV transmission contributes toward safe behaviors of PWID, i. e. it is a protective factor concerning sharing a syringe/needle in the last 30 days – OR=0.722 (CI: 0.672-0.777)***, purchasing a drug in a pre-filled syringe in the last 30 days – OR=0.860 (CI: 0.831-0.889)***, sharing materials/equipment for cooking a drug – OR=0.889 (CI: 0.856-0.922)***.

Presence of sexually transmitted infections and other diseases

The portions of PWID reporting of having or having ever had HCV, HBV, pulmonary tuberculosis, or syphilis were 26.4%, 13.6%, 11.8%, and 3.6% respectively, showing no changes compared with the results of the studies conducted in 2013[14] and 2011[15]. At the same rate, the proportion of PWID who had already received treatment for the diseases was the highest (almost 100%) among those who had had syphilis and pulmonary tuberculosis, and the lowest (about 30%) among those aware of having hepatitis C.

It is linked, apparently, to the way of discovering of such diseases in the healthcare system and harm reduction programs and implies that PWID learning of having a hepatitis through testing under harm reduction programs require aid in initiation of the treatment.

13 *These questions include the following: "A healthy-looking person can be HIV-positive", "HIV infection can be contracted through the use of a needle already used by another person", two questions about the myths about HIV transmission routes (via dishware, toilet, swimming pool, sauna), and two questions about the means to prevent HIV infection.*

14 ***Моніторинг поведінки та поширення ВІЛ-інфекції серед споживачів ін'єкційних наркотиків як компонент епіднагляду за ВІЛ другого покоління: аналіт. звіт за результатами біоповедінкового дослідження 2013 року*** */ Балакірєва О.М., Бондар Т.В. та ін. – К.: МБФ «Міжнародний Альянс з ВІЛ/СНІД в Україні», 2014. – 181 с. Доступно за посиланням http://www.aidsalliance.org.ua/ru/library/our/2014/arep14/%D0%9E%D1%82%D1%87%D0%B5%D1%82%20%D0%9F%D0%98%D0%9D.pdf*

15 ***Моніторинг поведінки та поширеності ВІЛ-інфекції серед споживачів ін'єкційних наркотиків як компонент епіднагляду за ВІЛ другого покоління (аналітичний звіт за результатами біоповедінкового дослідження 2011 року)*** */ Балакірєва О.М., Бондар Т.В. та ін. – К.: МБФ «Міжнародний Альянс з ВІЛ/СНІД в Україні», 2012. – 120 с. Доступно за посиланням http://www.aidsalliance.org.ua/ru/library/our/2012/me/idu2011.pdf*

Participation in prevention programs

Clients tend to be somewhat older PWID. The share of women is also higher among the clients. The level of safe behavior – both injection-related and sexual – is better in clients compared with non-clients.

Clients have twice better access to testing programs according to analysis of the indicator "Took a test for HIV in the last 12 months and received a result". The indicators for clients of prevention programs are much better at all the treatment stages compared with non-clients. I. e., in addition to continuing improving access to testing and treatment programs, it is possible to extend program coverage to reach new PWID groups who are now not provided with the services.

Throughout Ukraine, 38.5% of all PWID had a test for HIV and received the result last year. In Bila Tserkva, Kharkiv, Poltava, and Khmelnytskyi this ratio exceeded 60%, while in Simferopol it was as low as 15.4% (CI 11.7%-19.2%).

Prevalence of HIV/Hepatitis B/Hepatitis C/Syphilis

Prevalence of HIV remains virtually unchanged compared with the results of the 2011 and 2013 studies.[16] [17] This may point to stabilization of the epidemic process through decrease of mortality and reduction of the new cases: the HIV prevalence is 3.7% among new PWID, which is in line with the downward trend of this indicator compared with the previous rounds of the study.[18] [19] [20]

Prevalence of hepatitis C remains at the 2013 level, however the rate of those who had known of having hepatitis C before the study and taken treatments was low.

16 ***Моніторинг поведінки та поширеності ВІЛ-інфекції серед споживачів ін'єкційних наркотиків як компонент епіднагляду за ВІЛ другого покоління (аналітичний звіт за результатами біоповедінкового дослідження 2011 року)*** */ Балакірєва О.М., Бондар Т.В. та ін. – К.: МБФ «Міжнародний Альянс з ВІЛ/СНІД в Україні», 2012. – 120 с. Доступно за посиланням http://www.aidsalliance.org.ua/ru/library/our/2012/me/idu2011.pdf*

17 ***Моніторинг поведінки та поширення ВІЛ-інфекції серед споживачів ін'єкційних наркотиків як компонент епіднагляду за ВІЛ другого покоління: аналіт. звіт за результатами біоповедінкового дослідження 2013 року*** */ Балакірєва О.М., Бондар Т.В. та ін. – К.: МБФ «Міжнародний Альянс з ВІЛ/СНІД в Україні», 2014. – 181 с. Доступно за посиланням http://www.aidsalliance.org.ua/ru/library/our/2014/arep14/%D0%9E%D1%82%D1%87%D0%B5%D1%82%20%D0%9F%D0%98%D0%9D.pdf*

18 ***ВІЛ-інфекція в Україні: Інформаційний бюлетень, № 45*** */ Український центр контролю за соціально небезпечними хворобами Міністерства охорони здоров'я України. Доступний за посиланням http://ucdc.gov.ua/uploads/documents/c21991/7f04b7981d5714c98f94ccfb68d154df.pdf*

19 ***Моніторинг поведінки та поширення ВІЛ-інфекції серед споживачів ін'єкційних наркотиків як компонент епіднагляду за ВІЛ другого покоління: аналіт. звіт за результатами біоповедінкового дослідження 2013 року*** */ Балакірєва О.М., Бондар Т.В. та ін. – К.: МБФ «Міжнародний Альянс з ВІЛ/СНІД в Україні», 2014. – 181 с. Доступно за посиланням http://www.aidsalliance.org.ua/ru/library/our/2014/arep14/%D0%9E%D1%82%D1%87%D0%B5%D1%82%20%D0%9F%D0%98%D0%9D.pdf*

20 ***Моніторинг поведінки та поширеності ВІЛ-інфекції серед споживачів ін'єкційних наркотиків як компонент епіднагляду за ВІЛ другого покоління (аналітичний звіт за результатами біоповедінкового дослідження 2011 року)*** */ Балакірєва О.М., Бондар Т.В. та ін. – К.: МБФ «Міжнародний Альянс з ВІЛ/СНІД в Україні», 2012. – 120 с. Доступно за посиланням http://www.aidsalliance.org.ua/ru/library/our/2012/me/idu2011.pdf*

Testing for hepatitis B and syphilis was included in the bio-behavioral study of PWID for the first time. It is also worth noting that the data received might not fully reflect the real picture of prevalence of these diseases, since the positive result for hepatitis B was received for those PWID whose blood contained HBsAg marker, and the positive result for syphilis could include PWID who had been successfully treated in the last year.

Main determinants of prevalence of HIV/Hepatitis B/ Hepatitis C/Syphilis

The strongest predictors of positive results of testing for the four infections were an older age, longer use of drugs, and imprisonment experience. Women had a higher chance of being infected with HIV and syphilis. Higher odds of occurrence of HIV infection among NGO clients indicate to the fact that Alliance's extension of HIV testing programs in 2014-2015 and use of progressive approach to identifying HIV-positive PWID unaware of their status have been now producing the result21.

Talking about risky injection-related practices, repeated use of one's own syringe for another injection was connected to contracting three infections, HIV, HCV, and HBV. With regard to the other practices, injections using other person's or pre-filled syringe increased the chance of contracting HIV. Taking a drug from a shared big syringe also increased the risk of contracting both HIV and hepatitis C.

Having sexual partners of different types and using a condom, on the contrary, had a protective effect in terms of contracting the infections. It is related, apparently, to the fact that it is younger PWID who have different sexual partners and use condoms.

Sexual partners of PWID

In the cities where sexual partners of PWID were surveyed, the average of 20.2% of respondent PWID recruited their sexual partners.

Sexual partners of PWID who did not inject drugs included not only women, but also some men (12.7%, CI 10.4%-15.1%). At the same time, three quarters of the respondents had never injected drugs (75.5%, CI 72.4%-78.5%).

Condom usage among sexual partners of PWID who did not use drugs in contacts with the recruiters did not differ from the condom usage among PWID population in contacts with permanent partners, equaling 48.5% (CI 45.0%-52.0%). At the same time, this proportion was equal among the sexual partners having another partner besides the recruiter, and those who had had sexual contacts with one partner only in the last three months. A quarter of all the respondent sexual partners had had another partner besides the recruiter in the last 90 days (23.3%, CI 20.3%-26.3%).

21 ***Міжнародний Альянс з ВІЛ/СНІД в Україні: Річний звіт, 2015 рік.*** *(готується до публікації – http://www.aph.org.ua/publications-ua/)*

The level of awareness of the routes of HIV transmission among sexual partners of PWID was somewhat lower than among the PWID themselves (29.4%, CI 26.2%-32.6%, of the sexual partners answered correctly all 10 questions compared with 34.8% among PWID). One half to three fifths informed that they knew the symptoms of drug overdose, and 80% noted that an ambulance should be called in case of overdosing. However, all the other ways of providing pre-doctor care were named by less than one fifth of the respondents.

Only 4.6% of sexual partners of PWID were clients of non-governmental organizations (CI 3.1-6.0%); 22.2% (CI 19.3%-25.2%) of the respondents had received condoms through outreach and awareness-raising programs or projects in the last year.

In the last year, 25.7% of sexual partners of PWID (CI 22.7%-28.8%) had taken a test for HIV and received its result, 80% knew where to go to get tested for HIV, and 64.4% (CI 61.0%-67.8%) had done it in their lifetime.

According to the results of rapid testing, 27.8% of all HIV-positive sexual partners of PWID had known of their status prior to the study (CI 19.6%-36.0%). 9.2% (CI 6.8%-11.6%) of respondents who had never injected drugs were infected with HIV, and 19.3% (CI 16.0%-22.5%) had hepatitis C.

Study limitations

Cross-sectional design of the study allowed evaluating main behavioral indictors among PWID at a specific moment, but imposed limitations on determination of factors and cause-and-effect relationships.

All the data concerning HIV-risky or safe behaviors were received from the statements of IDUs during the survey which could lead to respondents' providing socially anticipated response. Considering this, the data on the use of sterile equipment and condoms may be overstated.

According to RDS methodology, convergence is one of the key parameters of the quality of a sample, and it was not achieved for some of the indicators. We are referring, first of all, to the variables where the size of sub-sample was insufficient for analysis (n<50).

In the study rapid combo tests for the 4 infections were used: HIV, HBV, HCV and syphilis. The obtained results may not necessarily reflect the real situation with the prevalence of abovementioned infections, as the algorhythm of establishing the diagnosis of the above infections envisages making another confirmatory testing. Testing for HCV is also a considerable limitation, when the positive result was based on the presence of HBsAg marker in the blood. The syphilis testing results may, to the contrary, exceed the real scope, as the test detected the presence of syphilis antibodies in blood. These antibodies are know to remain in the blood for a year, even following a successful treatment.

Conclusions

General conclusions of the study

- Conducting the study at neutral sites (independent from NGOs or AIDS Centers) enabled reaching a broader group of PWID not very well covered by HIV-related services. This group did not have statistically significant differences in terms of sociodemographic characteristics from groups that had taken part in the previous studies. Such results point to the need of extending prevention and treatment programs.

- During organization and collection of data, high levels of stigmatization of both PLWH and PWID population as a whole among general population, which complicated conducting the study at neutral sites in some of the cities or even rendered it impossible.

Sociodemographic profile of PWID

- Compared with previous studies, the sociodemographic profile of PWID remains almost unchanged. In 2015, four fifths of the sample were male, and approximately 10% was under 25 years old. At the same time, the proportion of women and PWID with a shorter experience of drug use has been gradually decreasing. The biggest share of young PWID was observed in Zhytomyr, Simferopol, Ternopil, and Lviv.

Drug stage

- The average age of initiation of injected drug use is 20 years.

- Opium extract remains the main drug in Ukraine. The share of users of street methadone, amphetamine, and subitex has increased. Subitex is most popular among PWID in Lviv, Ivano-Frankivsk, and Chernivtsi. In Kyiv, the shares of users of street methadone and opium extract are almost the same. Desomorphine as the main drug used is the most common in such cities as Donetsk, Sevastopol, Uzhhorod, and Rivne.

- Stimulant drugs are most popular among teenager PWID.

Risky injection behaviors

- Over 70% of PWID had an injection-related risk of contracting HIV. The most widespread risky injection practices are purchasing drug in a pre-filled syringe and sharing equipment for cooking or distribution of drugs.
- Repeated use of one's own equipment increases the chance of infecting with HIV, HCV, and HBV. Purchasing a drug in a pre-filled syringe increases the risk of contracting HIV, and taking a dose from a shared big syringe – the risk of contracting HIV and hepatitis C.

Risky sexual behaviors

- Using condoms for sexual contacts with permanent and irregular partners was not a regular practice for most PWID. E. g., only a half of the respondents had used a condom during the last sexual contact, which is less than in 2011 and 2013.
- 3.7% of the respondents reported having had a group sex in the last 90 days.

Sexual partners of PWID

- The study of sexual partners of PWID has confirmed that this population encounters a high risk of contracting HIV and high prevalence of HIV infection and hepatitis C, and should be included in the key populations in terms of HIV infection.
- Analysis of the couples (PWID and his/her non-PWID partner) has confirmed that it is PWID who are the drivers of HIV and hepatitis C. In a third of cases, at least one of the partners was tested HIV-positive during the study: In 8% of cases both of the partners were infected, in 17% – only PWID, and in 7% – only PWID's partner. Prevalence of hepatitis C was higher among PWID: in 19% of cases both partners were infected, in 39% – only the PWID, and in 6% – only PWID's partner.

Overlapping with other key populations in terms of HIV infection

- Almost 7% of female PWID included in the study had sold sexual services in the last three months, and 0.5% of male PWID had had male sexual partners in the last year before the study.

Epidemic situation

- Prevalence of HIV and hepatitis C remains high.
- There are signs of stabilization of the epidemic situation among PWID, but this group still remains the driving force behind the epidemic in terms of HIV prevalence, HIV incidence, and influence on HIV prevalence among bridge populations (sexual partners of PWID).
- Low prevalence of HIV among PWID with the experience of drug use of up to three years implies that retaining this indicator at this level was achieved through reduction of the number of new cases.
- Older age, longer term of drug use, and imprisonment experience were the strongest risk factors for contracting HIV, HCV, HBV, and syphilis. Women had a higher chance of being infected with HIV and syphilis as compared with men.

Access to prevention and treatment programs

- Access to HIV testing among HR clients was much higher compared with the non-client population, which was caused by the change of testing strategy in 2015.
- Rates of receiving condoms free of charge and condoms purchasing were low, which may point to the lack of motivation to use condoms during sexual contacts.
- Indicators of the treatment cascade calculated for HIV-positive PWID were twice as high among clients of prevention programs compared with the non-client population.
- Only 30% of PWID are aware of having hepatitis C were receiving or had received treatment. It supports the need to provide support in registration of the patients and initiation of HCV treatment.

Recommendations

The results of the bio-behavioral study should be used not just as the data for monitoring of epidemic situation, change of drug use behaviors, and progress of the country in HIV/AIDS response at the national and regional levels, but also to adjust existing and create new program interventions aimed at reducing risks among PWID, improving access to prevention and treatment programs.

Conducting the study on HIV-service-neutral sites allowed reaching new PWID populations and collecting information about a higher level of existing injection-related and sexual risks in the population, existing gaps in determination of HIV infection, enrolling HIV-infected PWID in treatment programs and ART prescription. Using network recruiting (such as Peer Driven Intervention) will enable reaching new groups under harm reduction programs and will significantly increase the level of safe behavior and access to treatment.[22]

When implementing network methods in programming to improve the coverage of prevention programs, it is worth focusing on PWID who:

- belong to the age group of under 30, or those who have recently started injecting drugs;
- use stimulants;
- live in cities with low levels of prevalence of HIV or hepatitis C;
- have medium or high financial status.

When planning reaching new groups of PWID PLWH who are unaware of their HIV-positive status or not reached by the programs during registration of their status and prescribing of treatment, it is necessary to focus on PWID who:

- belong to opiate users or those practicing mixed use of opiates and stimulants;
- have a long experience of injecting drugs;
- have a high educational and financial level;

22 *Smyrnov P., Broadhead R.S., Datsenko O., Matiyash O. Rejuvenating harm reduction projects for injection drug users: Ukraine's nationwide introduction of peer-driven interventions. – International Journal of Drug Policy 23 (2012) 141–147*

- practice independent cooking of drugs and use drugs together with other PWID;
- live in cities and districts with the highest proportions of PWID PLWH, especially those unaware of their status.

The situation with HIV detection can be improved by simplifying HIV testing, particularly by certifying social worker for testing, and by extending self-testing through provision of access to new easy-to-use tests supplied with a detailed manual. Implementation of self-testing should also be supported through massive informational campaigns to raise awareness of places to go to in case of receiving a positive result, and through reduction of stigma among both PWID and general population with regard to PLWH and PWID.

Special attention must be paid to other infections and diseases occurring as a result of injecting drugs, in particular:

- extending screening for hepatitis, tuberculosis, STIs;
- improvement of access to treatment programs by raising awareness of existing programs and reducing the cost of treatment;
- conducting large-scale campaigns promoting vaccination against hepatitis B, tuberculosis among PWID and their inner circle;
- general improvement of the quality of life of PWID.

A number of programmatic interventions should be strengthened for the treatment of HIV-positive PWID and their partnersm as well as HIV prevention in the population. These are, first and foremost:

- Extending case-management programs (CITI) for PWID through involvement of more NGOs and extension of geography of implementation of this intervention.
- Introducing Pre-Exposure Prophylaxis at pilot sites for discordant couples: PWID and the non-injecting partner.
- Strengthening the component of "positive prophylaxis" in order to reduce risky injection and sexual practices among HIV-positive PWID and their partners.
- Including the group of sexual partners of PWID in the key populations for HIV prevention. The following services should become the main ones: counseling on safe sexual behavior, testing for HIV, hepatitis, and STIs, early HIV detection, supporting HIV-positive people in receiving treatment, provision of treatment services according to the test&treat strategy, raising awareness of actions to be taken in case of drug overdose of the partner.
- Implementation of a series of advocacy and programmatic measures to bring HIV services, and especially treatment services, closer to patients through broadening the circle of agents capable of provision of such services (primary healthcare link, NGOs, pharmacies), simplification of algorithm for registration with dispensaries and initiation of treatment, introducing of test&treat strategy for all key populations and bridge populations.

Study organization

Based on the results of evaluation of the quality of sample in each city where the sampling ended before covering the whole sample, it may be feasible to reduce the number of recruiting coupons to two in order to reach to deeper layers of the target population.

Special attention must be paid to training of coupon manager and social worker in terms of organizing a queue at the site of the study (in presence and remotely, through appointments, etc.), which greatly improves the quality of data and forming of a sample.

To improve the validity of information used to form weights for RDS, primary screening component aimed at checking the fact that the coupon was given by a friend/acquaintance should be strengthened. The questions concerning assessment of one's network should be moved to the beginning of the questionnaire.

The following practices may be introduced for sexual partners of PWID: narrow the group to those who have never injected drugs; introduce screening for drug use through rapid testing; receive them on a separate day, other than days for the main group. Special measures should be taking to promote recruiting this group from the very beginning of the study.

Annex

Key regional level M&E indicators

City	Sample size	HIV-positive by rapid test results			Used sterile needle and syringe during the last injection		
		%	CI		%	CI	
			LL	UL		LL	UL
Simferopol	400	32.3	26.8	37.9	97.8	96.5	99.1
Vinnytsya	250	9.7	5.6	13.8	96.8	94.4	99.2
Lutsk	350	20.1	16.0	24.2	97.2	95.7	98.7
Dnipro	500	39.7	34.5	44.9	93.4	90.8	96
Donetsk	444	33.5	28.1	38.8	95.2	93	97.4
Zhytomyr	350	15.9	10.5	21.2	97.5	96	99
Uzhgorod	150	1.4	0.1	2.8	96.8	94.4	99.3
Zaporizhya	150	8.7	4.0	13.5	99.4	98.4	99.9
Ivano-Frankivsk	350	17.8	13.2	22.4	97.4	95.9	98.8
Bila Tserkva	350	29.9	24.8	35.0	98.4	97.3	99.5
Vasylkiv	150	8.2	2.2	14.2	96.5	93.7	99.1
Fastiv	400	25.5	21.5	29.4	96.0	94.3	97.7
Kirovohrad	300	19.4	15.0	23.8	99.3	98.3	99.9
Luhansk	150	7.5	2.1	13.0	97.4	95	99.9
Lviv	401	21.4	16.4	26.6	94.4	91.8	97

Continuation of Annex 1

City	Used condom during the last sexual contact			Passed HIV testing during the last 12 months and obtained the result		
	%	CI		%	CI	
		LL	UL		LL	UL
Simferopol	65.9	60.5	71.5	15.5	11.6	19.4
Vinnytsya	49.5	41.5	57.5	26.2	20.9	31.5
Lutsk	47.4	40.5	54.2	45.7	39.5	51.9
Dnipro	39.7	33.7	45.8	32.5	27.6	37.4
Donetsk	39.5	33.9	45.2	39.3	33.3	45.2
Zhytomyr	33.2	28.4	37.9	77.2	70.8	83.7
Uzhgorod	35.9	24.4	47.5	28.2	18.9	37.5
Zaporizhya	35.7	28.6	43	43.9	36.6	51.2
Ivano-Frankivsk	53.3	47.2	59.4	44.8	39.4	50.3
Bila Tserkva	52.3	45.4	59.3	30.7	25.6	35.7
Vasylkiv	53.7	43.3	64.3	44.4	37.0	51.9
Fastiv	39.2	33.8	44.8	41.1	36.9	45.4
Kirovohrad	43.6	37.2	49.9	38.3	32.1	44.5
Luhansk	33.3	24.5	42.4	21.1	13.0	29.1
Lviv	47.5	40.1	54.3	32.0	26.3	37.7

Continuation of Annex 1

City	Sample size	HIV-positive by rapid test results			Used sterile needle and syringe during the last injection		
		%	CI		%	CI	
			LL	UL		LL	UL
Mykolayiv	500	27.8	22.8	32.8	98.4	97.4	99.4
Odesa	450	27.5	23.0	32.1	87.8	84.9	90.7
Poltava	150	29.7	19.8	39.6	98.6	96.6	99.9
Rivne	400	6.6	4.2	9.0	93.6	91.5	95.8
Sumy	150	10.2	4.4	16.2	97.3	94.4	99.9
Ternopil	350	6.3	3.9	8.7	96.7	94.7	98.7
Kharkiv	200	13.1	7.3	19.0	99.6	98.7	99.0
Kherson	400	21.2	16.6	25.9	97.4	96	98.9
Khmelnytskyy	450	20.8	17.1	24.5	93.2	91	95.4
Cherkasy	350	36.3	30.7	41.9	97.9	96.3	99.4
Chernivtsi	150	16.2	9.6	22.7	96.9	93.8	99.9
Chernihiv	360	32.4	25.8	39.0	97.0	95.3	98.8
Kyiv	399	20.4	16.0	24.8	97.4	96	98.9
Sevastopol	401	11.9	8.3	15.4	92.9	90.4	95.5

Continuation of Annex 1

City	Used condom during the last sexual contact			Passed HIV testing during the last 12 months and obtained the result		
	%	CI		%	CI	
		LL	UL		LL	UL
Mykolayiv	43.9	38	49.7	62.3	57.8	66.9
Odesa	36.0	28.5	43.5	35.1	30.6	39.7
Poltava	46.0	35.7	56	65.0	55.9	74.3
Rivne	60.2	53.5	67	52.9	48.0	57.8
Sumy	59.7	48.9	70.3	59.9	50.5	69.5
Ternopil	83.3	79.7	86.9	31.5	27.1	36.0
Kharkiv	49.0	40	58	41.2	32.5	49.9
Kherson	50.7	44.5	56.9	32.3	27.6	36.9
Khmelnytskyy	64.5	59.1	69.8	60.1	55.6	64.7
Cherkasy	62.3	55.5	69	38.8	33.4	44.1
Chernivtsi	32.3	21.3	43.2	55.7	47.8	63.8
Chernihiv	36.8	31.2	42.6	40.4	34.1	46.7
Kyiv	45.2	39.5	50.8	36.5	31.3	41.8
Sevastopol	36.9	31.8	42	24.0	19.7	28.3

Monitoring of behavior and HIV prevalence among people who inject drugs and their sexual partners

2015 study results

Authors:
Y. Barska
Y. Sazonova

Cover layout and design:
I.Sukhomlinova

Editing
L. Tonkonog
V. Bozhok

ICF "Alliance of Public Health"
5 Dilova (Dymytrova) Str., building 10A, 9-th floor, 03150, Kyiv, Ukraine
Phone.: (044) 490-5485, Fax: (044) 490-5489
E-mail: office@aph.org.ua
www.aph.org.ua
www.facebook.com/AlliancePublicHealth

For free distribution

Format 00x00/0
Standard printer's sheets. 0,00.
Circulation 00 copies. Order №00/00
Printed in:

UKRAINIANS AND AMERICANS
IN PARTNERSHIP TO FIGHT HIV/AIDS
PEPFAR

METIDA
M&E-related Technical Assistance
and Improved Data Application in HIV

Alliance
for Public Health

Kyiv • 2016