PUBLIC HEALTH CENTER

REPORT

ON THE 2023 SURVEY WITH LINKED BIOLOGICAL AND BEHAVIORAL COMPONENTS AMONG PEOPLE WHO INJECT DRUGS IN UKRAINE

KYIV 2026

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Abbreviations and Acronyms

AIDS – Acquired Immunodeficiency Syndrome
ART – antiretroviral therapy
AUDIT-C – Alcohol Use Disorders Identification Test – Consumption
CDC – United States Centers for Disease Control and Prevention
CI – confidence interval
DBS – dried blood spot
GAD-7 – Generalized Anxiety Disorder 7-item scale
GAM – UNAIDS Global AIDS Monitoring
HBV – hepatitis B virus
HCV – hepatitis C virus
HIV – human immunodeficiency virus
HTS – HIV testing services
LAg – limited avidity antigen assay
MAT – medication-assisted treatment
MoH – Ministry of Health of Ukraine
NGO – non-governmental organization
PEP – post-exposure prophylaxis
PEPFAR – President's Emergency Plan for AIDS Relief
PHC – State Institution "Public Health Center of the Ministry of Health of Ukraine"
PHQ-9 – Patient Health Questionnaire 9-item scale
PrEP – pre-exposure prophylaxis
PWID – people who inject drugs
RDS – respondent-driven sampling
SE – standard error
SLBBC – Survey with Linked Biological and Behavioral Components
SOP – standard operating procedure
STI – sexually transmitted infection
TB – tuberculosis
UAH – Ukrainian hryvnia
USD – United States dollars

Definitions of terms

Behavioral component of the survey – a survey of HIV-related risk behaviors conducted through face-to-face interviews involving direct communication between the interviewer and the respondent.

Biological component of the survey – the collection of data on HIV infection status, including capillary blood sampling for rapid HIV testing, testing for antibodies to HCV and syphilis, and preparation of dried blood spots (DBS).

Field phase of the survey – the stage of the survey during which primary data collection is carried out through respondent interviews and biological testing.

Survey with linked biological and behavioral components – a cross-sectional survey in which behavioral and biological data are collected from the same respondent at the same time and location.

Participant – an individual who completed all stages of the survey, including providing informed consent and participating in both the behavioral and biological components.

Primary respondents (seeds) (in Respondent-Driven Sampling, RDS) – survey participants initially recruited by NGOs according to predefined criteria, who initiate recruitment chains by enrolling other respondents.

Recruiter (in RDS recruitment) – a survey participant who, after completing the interview, receives recruitment coupons and uses them to invite other members of the target population to participate.

Recruit (in RDS recruitment) – an individual who has been invited to participate by a recruiter but has not yet enrolled in the survey.

Sample population (sample) – a subset of the general population selected according to predefined criteria, whose characteristics are intended to reflect those of the overall population and enable valid population-level inference.

Secondary respondents (in RDS recruitment) – survey participants who enroll in the study using a recruitment coupon received from another participant who has completed all survey components.

Survey site – a specially equipped facility with separate rooms designated for the implementation of all survey components.

Wave (in RDS recruitment) – the recruitment distance of a participant from the primary respondent (seed). A PWID recruited directly by a seed belongs to the first wave.

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- External independent consultants and PHC staff for Monitoring data collection and compliance with ethical principles
- PHC HIV Reference Laboratory for Dry blood spots (DBS) testing, training for medical specialist and rapid tests quality control assurance.

Background

Surveys with linked biological and behavioral components among populations at risk of HIV are a core component of second-generation HIV surveillance in Ukraine and have become an essential element of the national response to the HIV/AIDS epidemic.

Since 2007, surveys among people who inject drugs (PWID) in Ukraine have been conducted every two to three years. After the 2020 round, despite the full-scale war context, the next round was conducted as planned in 2023. Prior to 2019, surveys among PWID in Ukraine were conducted nationwide, covering all administrative regions. To ensure sustainability amid economic constraints, the Strategic Plan for SLBBC, adopted in 2019, reduced the number of surveyed cities (to 12 in 2020 and 10 in 2023) to optimize resource use. Beginning in 2023, a revised methodology was adopted, categorizing participating cities into two groups. The first group, the sentinel group, includes cities consistently surveyed across rounds to support longitudinal monitoring of key indicators. The second group consists of additional cities selected based on programmatic or contextual priorities, which may vary from round to round, allowing for greater flexibility in addressing emerging needs.

The 2023 round of SLBBC among PWID was planned and implemented by the Public Health Center of the Ministry of Health of Ukraine (PHC), with funding from the President's Emergency Plan for AIDS Relief (PEPFAR) through "Strengthening HIV Treatment, Laboratory Services, Medication Assisted Therapy, and Program Monitoring in Ukraine" (SILTP) project.

Methods

Survey Objective and Target Group

The survey design, methodology, and instruments were approved by the national SLBBC working group led by the PHC. The study aim was to provide a comprehensive assessment of the HIV burden and associated risk factors among PWID, and to generate evidence to support the planning and implementation of prevention and epidemic control interventions.

The objectives of SLBBC PWID 2023 included:
- Assessment of the prevalence of HIV, antibodies to hepatitis C, and syphilis
- Assessment of HIV-related risk behaviors
- Estimation of HIV incidence
- Assessment of HIV viral suppression
- Estimation of coverage with HIV prevention, care, and treatment services, including HIV testing services (HTS)
- Assessment of knowledge related to HIV transmission routes and prevention measures
- Estimation of the PWID population size
- Assessment of the HIV treatment cascade
- Provision of data for modeling and national/international reporting (e.g., Global AIDS Monitoring [GAM]).

The target population for the survey was people who inject drugs and who met the inclusion and exclusion criteria described below.

Inclusion criteria:
- Injection of drugs in the last 30 days, verified through self-report and confirmed by a healthcare worker via inspection of injection marks
- Aged 14 years or older at the time of participation, verified by self-report and visual inspection by the coupon manager
- Minimum one month of residence, work, or presence in the survey location, confirmed through self-report
- Ability to provide informed consent to all survey components.

Exclusion criteria:
- Repeat participation within the same survey round, identified via self-report or visual detection by the coupon manager
- Refusal to participate in one or more survey components, including failure to sign the informed consent form
- Alcohol or drug intoxication rendering the individual unable to understand the survey or posing a threat to their own safety or that of others (assessed visually).

Study Design

SLBBC PWID 2023, as all other SLBBC, was designed as a cross-sectional survey. Each participating city first underwent a formative assessment to gather contextual information, assess potential challenges, and inform the feasibility of participant recruitment. During this phase, 4–6 key informant interviews were conducted per city with knowledgeable representatives of populations at risk of HIV, non-governmental organizations (NGO) staff, social and outreach workers, and

staff from medication-assisted treatment (MAT) clinics. The survey instruments were pilot-tested prior to the field implementation.

Respondent-Driven Sampling (RDS), a chain-referral method tailored to reach populations without a sampling frame (World Health Organization, 2017), was used to recruit participants. Initial participants ("seeds") were selected during the formative phase based on the size of their personal networks (at least seven other PWID) and their heterogeneity in terms of sex, age, residence, HIV status, NGO affiliation, injection experience, and drug of choice. Each seed, after completing the survey, received up to three coupons to invite peers who met the eligibility criteria. Coupon holders who completed the survey were, in turn, invited to recruit up to three additional peers.

After completing all components of the study, each participant received primary compensation in Ukrainian hryvnias (UAH) equivalent of $8.5 U.S. dollars (USD). In addition, they were offered the opportunity to recruit peers into the study. For each peer who successfully participated in all components of the study, the recruiter received a secondary compensation in UAH equivalent of $5.5 USD. Participants could receive up to three such secondary compensations, depending on the number of their recruits who completed the study. Coupons included a unique ID and detailed logistical information, and were designed to prevent counterfeiting. Recruitment continued until the targeted sample size for each city was reached.

RDS methodology, when properly implemented, allows statistical adjustment for the biases inherent in non-random sampling and varying network sizes.

Survey Sample and Geography

To ensure a consistent and efficient framework for monitoring epidemiological trends, SLBBC PWID 2023 adopted a sentinel surveillance approach. This strategic shift moves away from rotating city selection and focuses instead on repeated data collection from a fixed sample of sites. The sentinel model allows for more reliable tracking of changes over time, while optimizing resource use and maintaining scientific rigor. A core group of sentinel cities was selected the national SLBBC Working Group to reflect geographic and epidemiologic diversity (hereinafter referred to as 'sentinel cluster'):
- Kyiv
- Dnipro
- Odesa
- Kharkiv
- Cherkasy
- Lviv.

An additional set of four cities was included based on programmatic and epidemiologic relevance:
- Vinnytsia (replacing Kherson due to wartime logistics and infrastructure disruptions)
- Zaporizhzhia
- Chernihiv
- Rivne.

The geographic distribution of survey sites is shown in Figure A.

Figure A. Cities included in the survey.

Sample Size

The target sample size for the survey was calculated based on data from the previous rounds of the survey. Specifically, the average HIV prevalence in the sentinel cluster was expected to be approximately 21%, and the prevalence of viral suppression was estimated at 44%, using weighted data from the 2020 round for five cities and the 2017 round for Lviv.

Using a simple asymptotic confidence interval formula, assuming a 0.05 probability of type I error, and a desired precision level of ±7% around the 44% estimate for viral suppression, the required total sample size for the sentinel cluster (see the definition in the previous section) was calculated to be 2,914.

To support trend analysis over time, the sample was distributed evenly across all participating cities, yielding a rounded target of 500 participants per city. This figure also corresponds to the standard sample size used in the U.S. National HIV Behavioral Surveillance (NHBS) surveys among PWID (Centers for Disease Control and Prevention, 2024). At the city level, assuming a design effect of 3.0 and accounting for 5% missing data (e.g., due to incomplete or erroneous data entry), a sample size of 500 provides approximately 16% precision for the most conservative estimate (e.g., 50±8%). Higher or lower proportions would result in narrower confidence intervals.

The same target sample size of 500 was applied to each of the additional cities outside the sentinel cluster. The target and achieved sample sizes are presented in Table B.

Table B. Planned and achieved sample sizes

Site*	Planned	Achieved
Vinnytsia	500	500
Dnipro	**500**	**500**
Zaporizhzhia	500	500
Kyiv	**500**	**500**
Lviv	**500**	**500**
Odesa	**500**	**500**
Rivne	500	502
Kharkiv	**500**	**500**
Cherkasy	**500**	**500**
Chernihiv	500	500
Total	5,000	5,002

*The cities belonging to the sentinel cluster are highlighted in bold.

Duration of Data Collection

The field phase was conducted between September 12 and October 21, 2023. The number of active survey days per city ranged from 17 to 32 (Table C).

Table C. Field stage dates

Site	Start	End	Days
Cherkasy	15.09.2023	13.10.2023	21
Chernihiv	18.09.2023	18.10.2023	21
Dnipro	13.09.2023	19.10.2023	32
Kharkiv	15.09.2023	21.10.2023	27
Kyiv	17.09.2023	07.10.2023	17
Lviv	13.09.2023	11.10.2023	20
Odesa	20.09.2023	20.10.2023	21
Rivne	18.09.2023	18.10.2023	24
Vinnytsia	12.09.2023	20.10.2023	25
Zaporizhzhia	20.09.2023	12.10.2023	18

Data Collection Procedures

Data collection was done at specially designated sites in each participating city. Data collection site selection was informed by the formative assessment and prioritized accessibility, confidentiality, and proximity to services. Additional considerations included secure storage for test kits and supplies.

Each participant underwent the following procedures:
- Screening for eligibility
- Informed consent
- A face-to-face behavioral interview conducted using an electronic questionnaire on a tablet
- Biological testing included pre-test and post-test counseling in accordance with the National Protocol on HIV Testing Services, the collection of a K3-EDTA capillary blood sample using microcontainer tubes, followed by testing for serological markers of HIV (screening rapid test, second-line rapid test, third-line rapid test), hepatitis C, and syphilis (both - using rapid tests) in accordance with the national testing protocols.

For HIV screening, the HIV-1/2 Rapid Test for Antibody to HIV, Colloidal Gold Device, Beijing Wantai Biological Pharmacy Enterprise Co., Ltd., China, was used. The HIV-1/2.0 test, First Response v.3.0 Cards Kit, Premier Medical Corporation Private Limited, India, was used as the second-line test. The HIV-1/2 test, Bioline 3.0, Abbott Diagnostics, Korea, was used as the third-line test.

The Hepatitis C Rapid Diagnostic Test Rapid Anti-HCV Test (Set No. 40), InTec PRODUCTS, Inc., China, was used to test for the presence of antibodies to HCV. To test for antibodies to syphilis (indicating prior exposure to the infection), the Syphilis Rapid Diagnostic Test Anti-TP / First Response® Syphilis Anti-TP Card Test, Premier Medical Corporation Private Limited, India, was used.

Additionally, dry blood spot (DBS) samples were collected from all HIV-positive participants, including those who self-reported being HIV positive and on antiretroviral therapy, and from 10% of HIV-negative participants, selected for quality control purposes. Prepared DBS samples were sent to the PHC HIV/AIDS Reference Laboratory in Kyiv for viral load and recent infection testing.

Participants who tested HIV-positive received information about their final results from medical staff and, if they were unaware of their HIV status, were referred to the nearest HIV clinic or antiretroviral therapy (ART) center on the same day. Participants who tested positive for HCV or syphilis antibodies were also referred to the appropriate clinics for confirmatory testing and, if necessary, treatment.

Data Quality Assurance

Quality control procedures were implemented at every stage. Standard operating procedures (SOP) were developed to guide all fieldwork. Field teams received standardized training on the protocol and SOP. Special emphasis was placed on laboratory procedures, including correct use of rapid tests.

Rapid test kits and supplies were centrally procured, stored, and monitored. PHC and external consultants conducted monitoring visits at each site (Table D). Teams reported daily recruitment progress and submitted weekly updates on sample collection, adverse events, and logistical challenges. Dry blood spot (DBS) quality was assessed by the PHC Reference Laboratory, and external quality control kits were distributed. Accuracy in external quality assessment was 100%. Only 0.88% of DBS samples were rejected due to quality issues.

Table D. Number of monitoring visits at each site

Site	Internal	External	Total
Cherkasy	2	1	3
Chernihiv	1	1	2
Dnipro	1	2	2
Kharkiv	2	1	3
Kyiv	1	1	2
Lviv	1	1	2
Odesa	3	1	4
Rivne	1	1	2
Vinnytsia	2	1	3
Zaporizhzhia	0	1	1
All Sites	**14**	**11**	**24**

National coordinators performed consistency checks across datasets, verified recruitment order and identifiers, and conducted logical validation between biological and behavioral data sets. Discrepancies were resolved through review of paper records. A final quality review meeting was held with PHC, CDC, and PEPFAR representatives.

Results of Preliminary RDS Diagnostics

During the implementation of the field stage, regular statistical diagnostics of the quality of Respondent-Driven Sampling (RDS) recruitment were conducted. The following parameters were analyzed: the average size of participants' social networks across waves, the number of participants recruited during each wave, the number of recruits per seed, coupon return rates, convergence by key variables (such as sex, age, HIV status, ART status, and NGO client status), population homophily, and potential recruitment bottlenecks.

By the end of the data collection phase, convergence was achieved for all cities with respect to all key characteristics.

A typical issue observed across sites was elevated homophily among younger participants (under the age of 25), with values exceeding the recommended threshold of 1.3. This suggests a tendency for younger individuals to recruit peers within the same age group, which may have limited the diversity of this subgroup within the overall sample.

Survey Limitations

1. Due to procurement issues, the delivery of rapid tests for hepatitis C virus (HCV) antibodies was delayed. As a result, not all participants underwent HCV testing, and since the subset of those tested was not random, the testing results should not be considered representative of the entire sample.
2. In Kyiv, a large majority of participants were recruited from a single seed. As a result, the sample primarily represented the northern part of the Right Bank and limited coverage of the Left Bank. Although additional seeds were introduced to improve geographic balance, recruitment concluded before these measures could meaningfully diversify the sample.
3. There was an overrepresentation of patients of medication-assisted treatment (MAT) in Kyiv, Rivne, and Chernihiv. Since survey sites were not located near MAT clinics, this likely reflects stronger social network ties among MAT patients, which the RDS methodology could not fully counterbalance. These networks may also have facilitated quicker responses to survey site relocations in these cities, which occurred following neighborhood complaints.
4. In Cherkasy and Dnipro, the proportion of women among participants was markedly higher than in the previous survey rounds. RDS statistical diagnostics did not identify methodological issues that would explain this anomaly. A plausible explanation is increased commercial sex in cities with a significant presence of active-duty military, combined with a high prevalence of injecting drug use among women engaged in commercial sex. This interpretation is supported by the finding that many female PWID in both cities reported engaging in commercial sex.
5. The proportion of young participants (under age 25) was very small. Efforts to introduce additional seeds in this age group were unsuccessful. This,

however, may reflect a broader trend observed across survey rounds, where the representation of younger participants has been steadily declining.

The survey results should not be considered representative of the entire PWID population in Ukraine but only reflect the urban populations in the cities where the study was conducted. As such, generalizations to broader populations should be made with caution.

Data Management and Analysis

All data from screening, behavioral, and biological components, as well as coupon distribution and compensation, were uploaded to a central server via tablets and compiled into a data set file. Laboratory results, initially stored in Excel *.xlsx format, were exported to *.sav format and merged with the main dataset. Data management procedures included thorough cleaning, recoding, validation, and consistency checks. No-response categories such as 'do not remember' or 'refuse to answer' were treated as missing. For questions with skipped patterns (e.g., pre-exposure prophylaxis use, asked only among those aware of it), missing responses were recoded into valid categories (e.g., 'did not use'), as appropriate.

All data analyses were conducted using R statistical computing environment version 4.5.0 (R Core Team, 2025). The site-level datasets (n = 10) were converted into RDS format using the RDS package (Handcock et al., 2024), and weights were computed using Gile's successive sampling (SS) estimator (Gile, 2011). The latest available population size estimates for each city (based on the 2017 survey) (Sazonova et al., 2019) were used as input parameters for the weighting procedure (Table E).

Table E. Population size estimates for the cities participating in the survey

City	PWID population size estimate (2017)
Vinnytsia	5,400
Dnipro	20,100
Zaporizhzhia	7,900
Kyiv	33,700
Lviv	6,400
Odesa	21,700
Rivne	3,500
Kharkiv	9,900
Cherkasy	4,600
Chernihiv	4,400

Additional weighting was performed to correct for oversampling of MAT patients that occurred in several cities. MAT correction weights were calculated based on the official program statistics on MAT coverage in the city as of the end of October 2023 (public and private providers combined). The correction weights were applied to three sites where the difference between the programmatic and survey-based estimates exceeded 10% (Kyiv, Rivne, Chernihiv). As a result, the proportion of survey participants that receive MAT currently in these cities became equal to the program estimate and therefore cannot be considered a survey-based estimate. On the other hand, the other indicators that are associated with MAT (e.g. HIV prevalence, HIV risk) become more reliable.

Descriptive statistics included unweighted counts (n), weighted population proportions with 95% confidence intervals (CI), and either means with standard errors or medians with interquartile ranges, depending on the distribution of the

data. All statistics, except raw counts, were calculated using combined RDS and MAT correction weights, and implemented using the xlogit method available in the 'survey' package.

HIV incidence was estimated using recent infection testing algorithm based on the Limiting Antigen Avidity (LAg) assay results and HIV viral load. Individuals testing recent by the LAg assay were classified according to a pre-defined normalized optical density (ODn) threshold and viral load criteria to improve specificity. Incidence rates were calculated using the 'inctools' package in R (Grebe et al., 2019), which implements the biomarker-based formula incorporating the mean duration of recent infection (MDRI), false-recent rate (FRR), and assay performance characteristics (Table F). The 'incprops' function was used to estimate the annualized incidence and 95% confidence intervals, both weighted (using combined weights) and unweighted.

Table F. HIV Incidence Estimation Parameters ('incprops' function).

Variable	Interpretation	Value (weighted|unweighted)
PrevH	HIV prevalence	0.173 | 0.16
RSE_PrevH	Relative standard error of the HIV prevalence estimate	0.045 | 0.032
PrevR	Proportion of persons found to be 'recent' by biomarker assay among total persons found positive for HIV	0.014 | 0.029
RSE_PrevR	Relative Standard Error of estimate for population proportion of those testing positive for HIV who have been infected recently	0.286 | 0.205
Boot	Indicates whether variance should be estimated via empirical bootstrap (TRUE) or Delta method (FALSE)	TRUE
BS_Count	Number of bootstrap samples used to estimate confidence intervals	1000
BMest	Biomarker estimation by one the 3 options 'same.test', 'FRR.indep', 'MDRI.FRR.indep'	same.test
MDRI	Mean duration of recent infection (in days)	161
RSE_MDRI	Relative standard error of the MDRI	0.0412
FRR	False recent rate (proportion of long-term infections misclassified as recent)	0.009
RSE_FRR	Relative standard error of the FRR	0.09
BigT	Time cutoff used to censor true recent infections from false recents (in days); default is 730	730

Analytical outputs in this report include one-way frequency tables, two-way cross-tabulations disaggregated by key sociodemographic and programmatic variables, and visualizations. Associations in cross-tabulations were assessed using Pearson's chi-square test, Student's t-test, or one-way ANOVA, as appropriate to the data type and distribution.

For trend analysis, a subset of data from the 2023 round was merged with datasets from earlier rounds (2007–2020). A total of five cities participated in all eight rounds (Cherkasy, Kyiv, Odesa, Kharkiv, Dnipro) and therefore were included in the trend analysis. All estimates were calculated using Gile's SS weights based on the population size estimates relevant to each survey year. In addition, due to the varying sample sizes by city in previous rounds, equalizing weights were applied to stabilize the contribution of each site to the combined estimates (Dumchev et al., 2024).

Data access

If there is a justified need to conduct a more in-depth analysis of the results of this study, a request can be submitted to access the study materials, including the

protocol, questionnaire, and dataset. The terms and procedures for acquiring and sharing research materials and data held by the Public Health Center (PHC) are outlined in the Research section of the PHC website: https://www.phc.org.ua/doslidzhennya.

Ethical Considerations

Data collection adhered to international ethical standards. The protocol and instruments were approved by the Public Health Center's Ethics Committee. Participation was voluntary and based on informed consent. Participants were given information about the study's purpose, procedures and contact information for the Ethics Committee and principal investigator. All staff signed confidentiality agreements and were trained in research ethics. Participants received compensation for completing study components and for recruiting peers. Those diagnosed with HIV, HCV, or syphilis received counseling, referral for confirmatory testing and care.

This project was reviewed in accordance with the U.S. Centers for Disease Control and Prevention (CDC) human research protection procedures and was determined to be research, but CDC investigators did not interact with human subjects or have access to identifiable data or specimens for research purposes.

Results

1. Sociodemographic Information

The mean age of PWID respondents across all sites was 39.5 years (Table 1.1). The largest age group was 35–44 years (54%) (Table 1.2). PWID under the age of 25 accounted for only 3.2%, which represents a continuation of the historical trend showing a sharp decline in the proportion of young PWID (a nearly tenfold decrease since 2007). In contrast, the share of older PWID has increased: the proportion of those aged 45 and older has tripled, and those aged 35–44 has doubled since 2007 (Figure 1.4).

The average age at which PWID first used non-injecting drugs was 16.9 years, and the average age of initiation into injecting drug use was 21.3 years (Table 1.1).

Table 1.1: Sociodemographic Characteristics

	n	Mean	CI	Median	IQR
Age, years	5,002	39.5	(39.2–39.8)	40	(35–44)
Age of first non-injecting drug use	4,566	16.9	(16.7–17.1)	16	(14–18)
Years since the start of non-injecting drug use	4,566	22.6	(22.2–22.9)	23	(17–28)
Age of first injecting drug use	4,977	21.3	(21.0–21.5)	20	(17–25)
Years since the start of injecting drug use	4,977	18.3	(17.9–18.6)	19	(11–25)
Personal monthly income, UAH	4,639	9,726.7	(9331.5–10122.0)	8,000	(5000–12000)

Women made up one-fifth (20.5%) of PWID (Table 1.2). Notably, the 2023 round recorded an unusually high proportion of women in Dnipro (41.5%) and Cherkasy (32.5%) (Figure 1.1). Compared to men, women were more frequently represented in younger age groups and less so among PWID aged 35 and older (Figure 1.2).

Family status varied: 44.5% of PWID did not have a partner, 16.8% were married and living with their spouse, and 28.2% were single but had a partner. Income levels were generally low. Educational attainment among PWID was generally low: 43.3% had completed secondary education, 38.5% had basic secondary education, and 18.2% had not completed secondary school. More than half (53.2%) of PWID had sporadic or irregular employment as their main source of income. One in six (16.0%) were unemployed, while only one-fifth (21.3%) held permanent jobs.

Homelessness in the past 12 months was rare, with only 1.7% of PWID experiencing this. However, 18.1% had experienced homelessness at some point in their lives. A total of 13.4% of PWID reported a monthly income below the official subsistence minimum at the time of the survey (UAH 2,684). Over half (55.8%) had a monthly income under UAH 10,000, and only 9.3% earned more than UAH 20,000. The median income was UAH 8,000.

The majority (76.9%) of PWID had injected drugs for 11 years or more.

Table 1.2: Descriptive Statistics for Sociodemographics

		n	%	CI
Sex				
	male	4,042	79.5	(77.7–81.1)
	female	960	20.5	(18.9–22.3)
Age				
	<25	131	3.2	(2.4–4.2)
	25-34	1,006	19.8	(18.3–21.4)
	35-44	2,588	54.0	(51.9–56.1)
	45+	1,277	23.0	(21.4–24.7)
Family status				
	married or living together	917	16.8	(15.4–18.3)
	married but have another partner	235	4.6	(3.7–5.6)
	not married but have a partner	1,288	28.2	(26.3–30.1)
	married but not living together	311	6.0	(5.1–6.9)
	not married and do not have a partner	2,251	44.5	(42.4–46.6)
Partnership status				
	live alone	2,562	50.5	(48.4–52.6)
	live with partner	2,440	49.5	(47.4–51.6)
Education				
	incompl. high school	850	18.2	(16.6–19.8)
	high school	1,878	38.5	(36.4–40.6)
	>high school	2,273	43.3	(41.3–45.4)
Current occupation				
	school student	0	0.0	
	college/uni student	16	0.3	(0.1–0.7)
	permanent job	1,137	21.3	(19.7–23.1)
	sporadic jobs	2,609	53.2	(51.1–55.3)
	unemployed	737	16.0	(14.3–17.8)
	housewife	99	1.6	(1.2–2.2)
	disabled	263	4.9	(4.0–6.0)
	military	34	0.5	(0.3–0.7)
	other	102	2.2	(1.7–2.9)
Homelessness				
	never	4,243	81.9	(80.2–83.5)
	yes, 12m+ ago	685	16.4	(14.9–18.1)
	yes, in the past 12m	53	1.7	(1.2–2.3)
Homeless in 12 months (of those ever)				
	no	685	90.8	(87.4–93.3)
	yes	53	9.2	(6.7–12.6)
Monthly income category				
	<3K	691	13.8	(12.3–15.4)
	3-10K	2,056	42.8	(40.6–44.9)
	10-20K	1,479	34.2	(32.1–36.4)
	≥20K	413	9.3	(8.1–10.6)

		n	%	CI
Monthly income relative to 2023 subsistence minimum				
	<2684	670	13.4	(11.9–15.1)
	≥2684	3,969	86.6	(84.9–88.1)
Years since the start of injecting drug use				
	≤2	200	3.9	(3.2–4.8)
	3-5	294	7.2	(6.1–8.4)
	6-10	564	12.0	(10.7–13.3)
	≥11	3,919	76.9	(75.1–78.6)

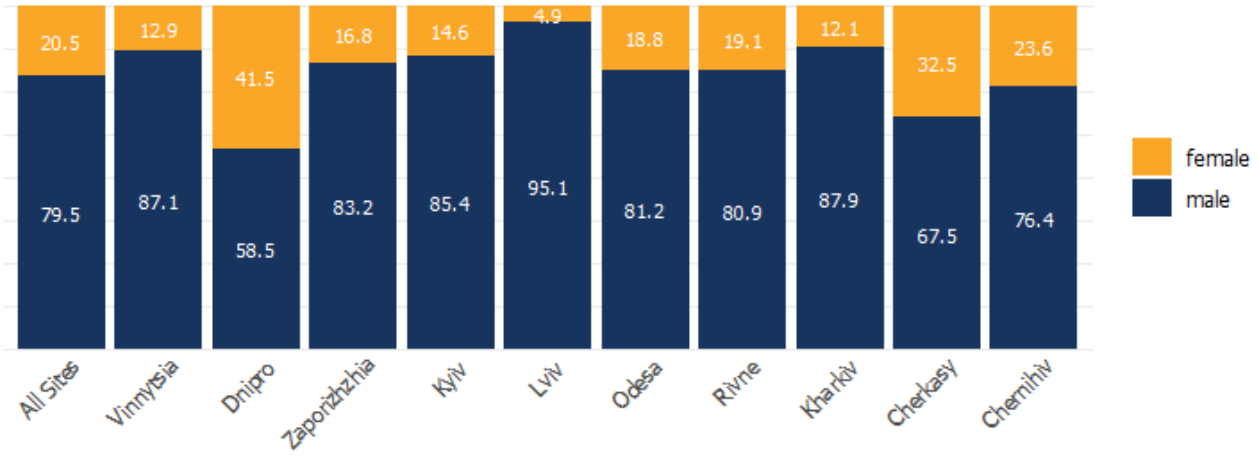

Figure 1.1: Distribution of Sex by Survey Site

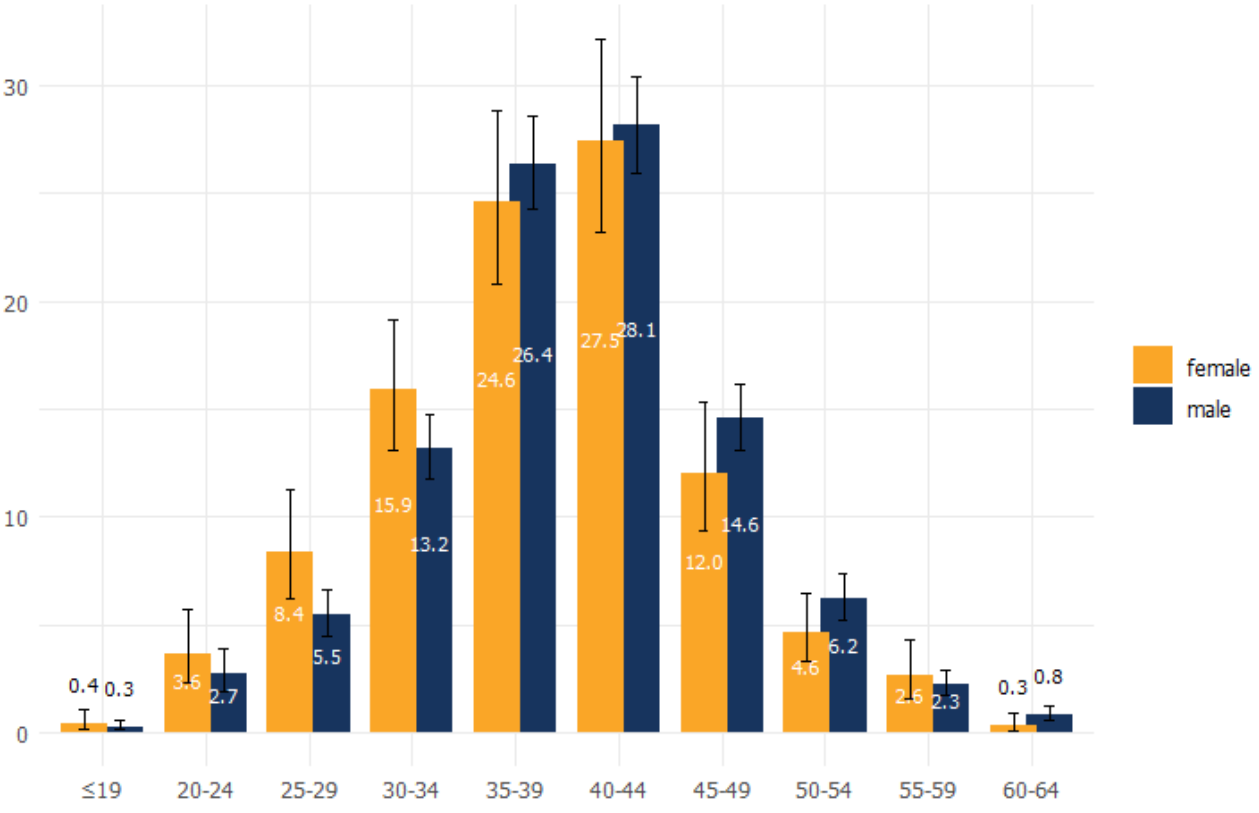

Figure 1.2: Distribution of Age by Sex

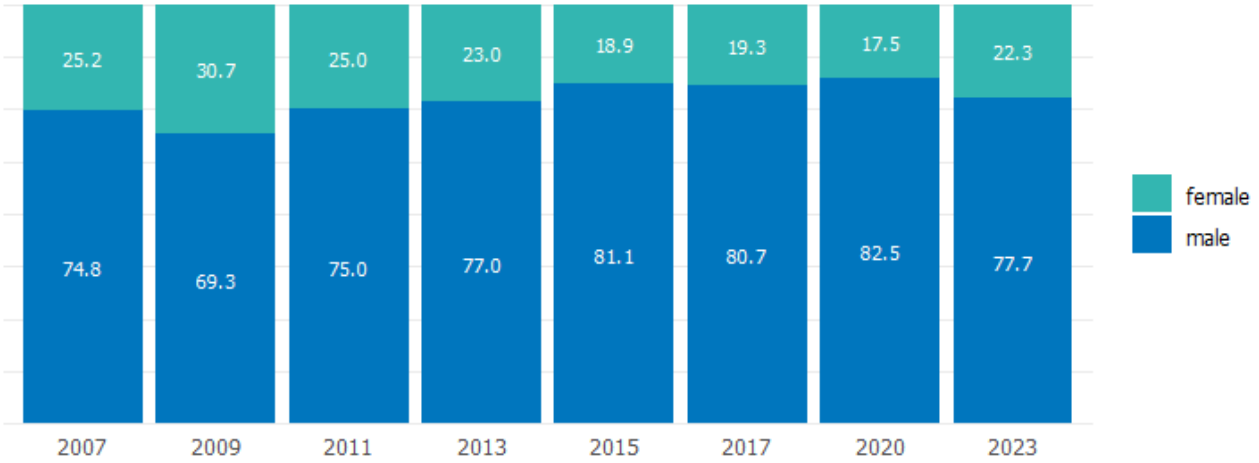

Figure 1.3: Trend in Sex Distribution by Survey Round in 5 Sites

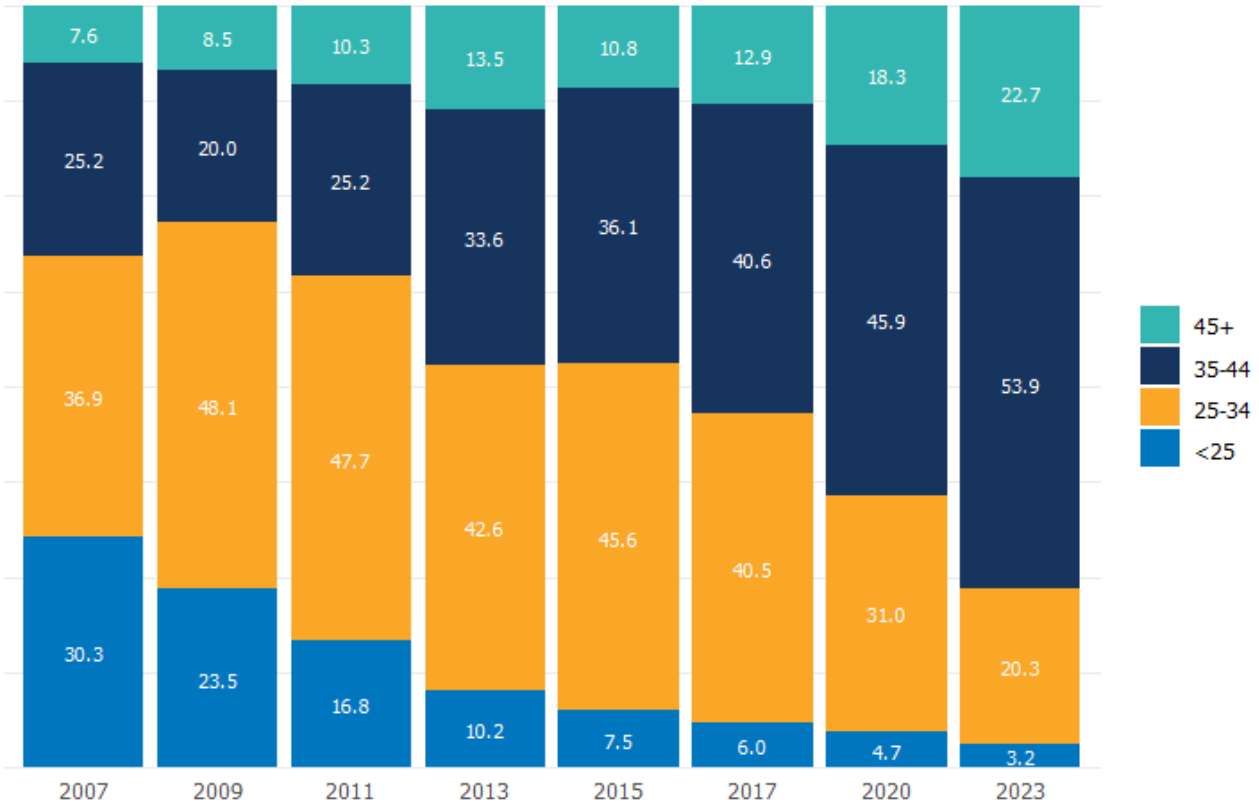

Figure 1.4: Trend in Age Groups by Survey Round in 5 Sites

Regarding housing conditions, more than half (53.6%) of PWID lived in their own homes, 28.3% lived with friends or relatives, and 14% rented accommodation (Table 1.3).

Table 1.3: Accommodation in the past 12 months

	n	%	CI
own place	2,672	53.6	(51.5–55.7)
friends or relatives	1,529	28.3	(26.5–30.1)
renting	617	14.0	(12.6–15.5)
varying	241	5.1	(4.3–6.0)
on the street (homeless)	55	1.7	(1.2–2.4)
in a refugee shelter	61	0.9	(0.6–1.3)

2. Drug Use

Opioids remain the most commonly injected type of drugs in Ukraine (Figure 2.1). Among them, the most frequently used substance is commonly referred to as "street methadone". "Street methadone" is a collective name for mixtures of different synthetic opioids combined with non-identified adulterants, which is illegally marketed in Ukraine. Although its exact composition has not been systematically studied, it is presumed to be primarily based on synthetic opioids (i.e. methadone) and often contains a range of adulterants intended to enhance its effects. For consistency with previous reports, this substance is referred to as "street methadone" throughout this report.

Six out of ten PWID (59.8%) had injected street methadone within the 12 months prior to the survey, while 55.1% had injected it within the past 30 days. This makes it the dominant substance among PWID in 2023.

In second place, with a prevalence more than two times lower, was pharmaceutical methadone in tablet form, acquired on the black market (i.e., not prescribed through MAT programs). Over a quarter of PWID (26.5%) injected it in the past year, and just over one in five (21.3%) had used it in the past month. The third most commonly injected substance was pharmaceutical methadone obtained in MAT programs. It was used by approximately one in seven PWID — 15.1% used it in the past 12 months, and 13.8% in the past 30 days. Study design doesn't allow to define proportion in the exact origin of injected pharmaceutical methadone: whether it came from public or private MAT programs or pharmacies.

Following methadone, the next three substances in terms of prevalence were synthetic cathinones, often marketed as "bath salts" (17.9% over 12 months; 10.5% over 30 days), amphetamine (14.2% and 7.9%, respectively), and methamphetamine solution (10% and 7.4%). Acetylated opium (extracted and prepared from locally grown poppy straw in home conditions) was used in the past 30 days by 5.5%, which represents a notable decline (see below). Over-the-counter pharmacy medications (including antihistamines [e.g. diphenhydramine/dimedrol], hypnotics [zopiclone], barbiturates [phenobarbital], benzodiazepines [alprazolam, diazepam]) are sometimes mixed with opioids in one syringe to boost the effect. Their injecting use was assessed in a single questionnaire category. For the past year, these drugs were injected by 4.7% of PWID, and for the past 30 days by 2.5%. The use of other drugs was relatively rare.

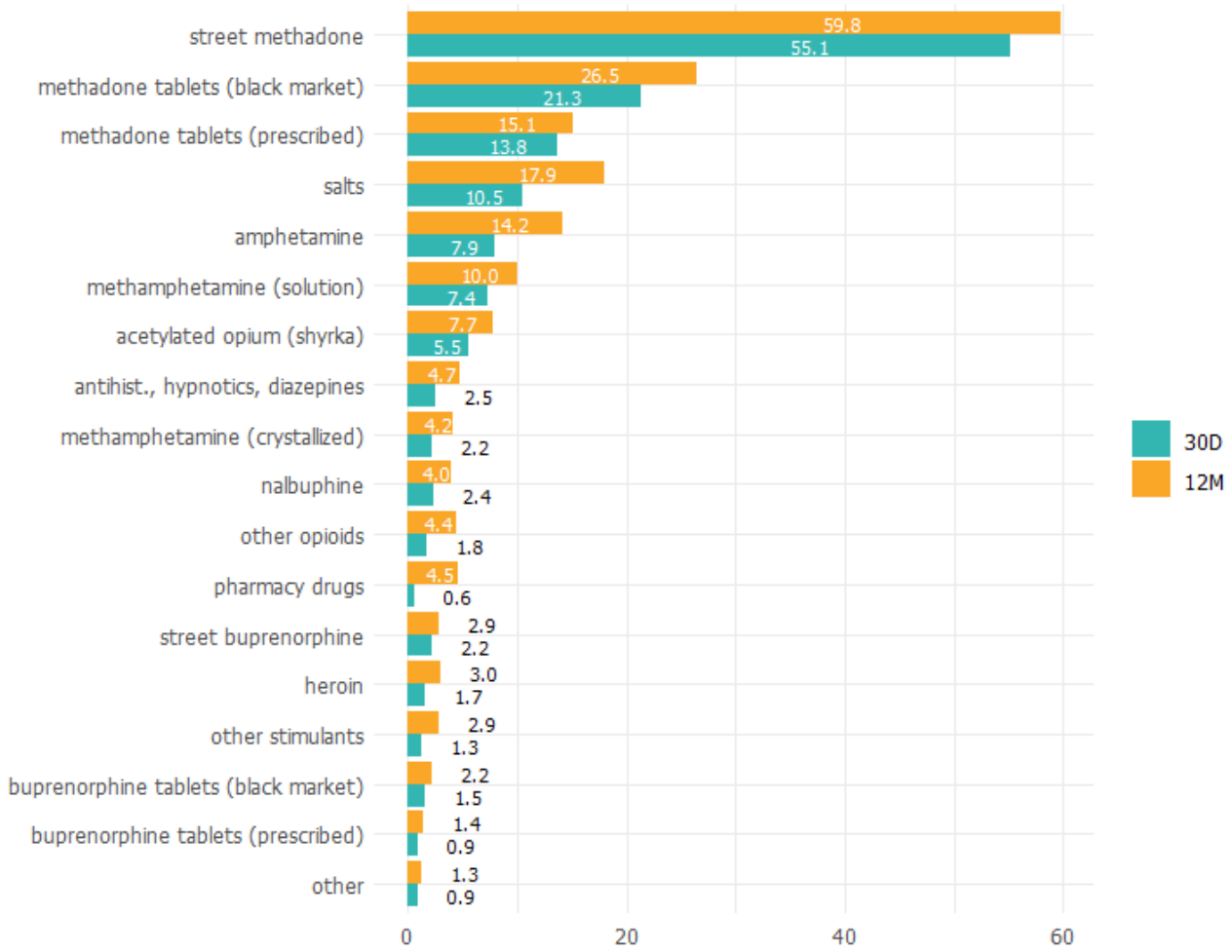

Figure 2.1: Injecting Drug Use in the Past 12 Months and 30 Days

The definitions of substances presented in Figure 2.1 and other below are as follows:

- *'street methadone' – a synthetic opioid, most likely methadone, with an unknown amount of varying adulterants, produced illegally in clandestine laboratories, and distributed through stashes*
- *'methadone tablets (black market)' – pharmaceutical methadone in tablets, obtained from the black market*
- *'methadone tablets (prescribed)' – pharmaceutical methadone in tablets, obtained in private and public MAT programs and in pharmacies*
- *'antihist., hypnotics, diazepines' – pharmaceutical medications, including antihistamines [e.g. diphenhydramine], hypnotics [Zopiclone], barbiturates [phenobarbital], benzodiazepines [alprazolam, diazepam]), mostly used mixed with opioids*
- *'pharmacy drugs' – other medications obtained in pharmacies, including Baclofen, Phenibut, Concerta, Dexedrine, Adderall, Lyrica*
- *'street buprenorphine' – pharmaceutical buprenorphine [e.g. Subutex], illegally brought into Ukraine*

- *'buprenorphine from black market' – pharmaceutical buprenorphine in tablets, obtained from the black market*
- *'prescribed buprenorphine' – pharmaceutical buprenorphine in tablets, obtained in private and public MAT programs and in pharmacies*

The most commonly injected drugs varied across sites (Figure 2.2). The highest prevalence of any stimulant use was in Vinnytsia (49.7%), and the lowest in Kharkiv (10.5%) and Kyiv (11.2%, which was affected by oversampling of MAT clients).

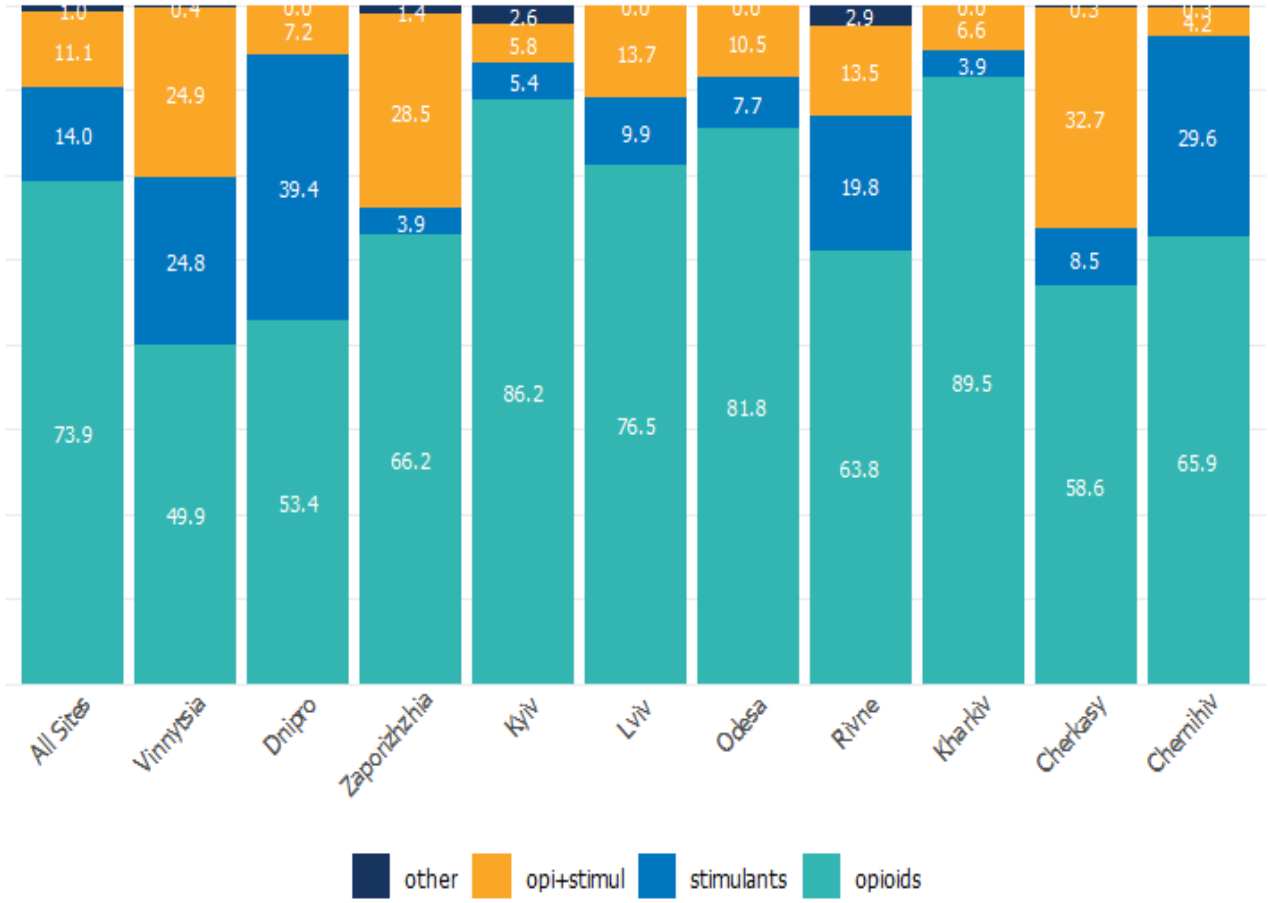

Figure 2.2: Types of Injecting Drugs in the Past 30 Days by Survey Site

Among drugs used via non-injecting routes (Figure 2.3), marijuana was the most commonly used, with over one-third of PWID using in the past 12 months. Other non-injected substances included synthetic cathinones ("bath salts") at 11.7%, and "pharmacy drugs" (over-the-counter medications with psychoactive effects) at 9%, amphetamine at 8.7%, street methadone at 6.9%, and illegally obtained non-street methadone at 5.3%.

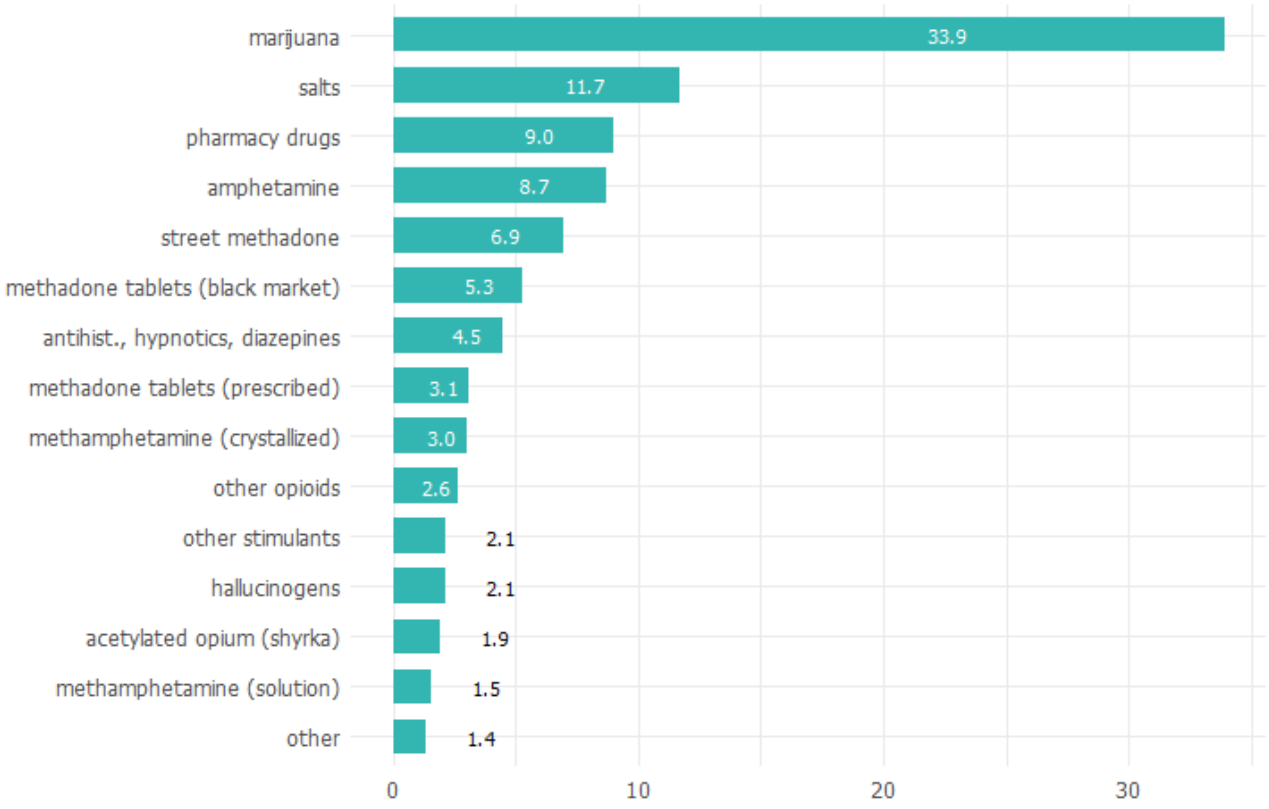

Figure 2.3: Non-injecting Drug Use in the Past 12 Months

When examining trends in injection drug use from a historical perspective for the same drug type categories (Figure 2.4), it becomes evident that 'pure' opioid use has remained the dominant practice on Ukraine's injection drug scene, with the exception of the 2009 round. The prevalence of opioid use has shown cyclical patterns of increase and decline, with notable peaks in the 2013 and 2023 rounds, when approximately three out of four PWID used opioids without stimulants in the past 30 days. The prevalence of combined opioid and stimulant use has fluctuated between 10.3% and 22.0% of PWID across survey rounds Interestingly, with the exception of the 2011 round, 'pure' stimulant use has historically been less prevalent than combined use. However, in the two most recent survey rounds, the trend appears to be shifting, with mixed opioid-stimulant use surpassing the use of stimulants alone.

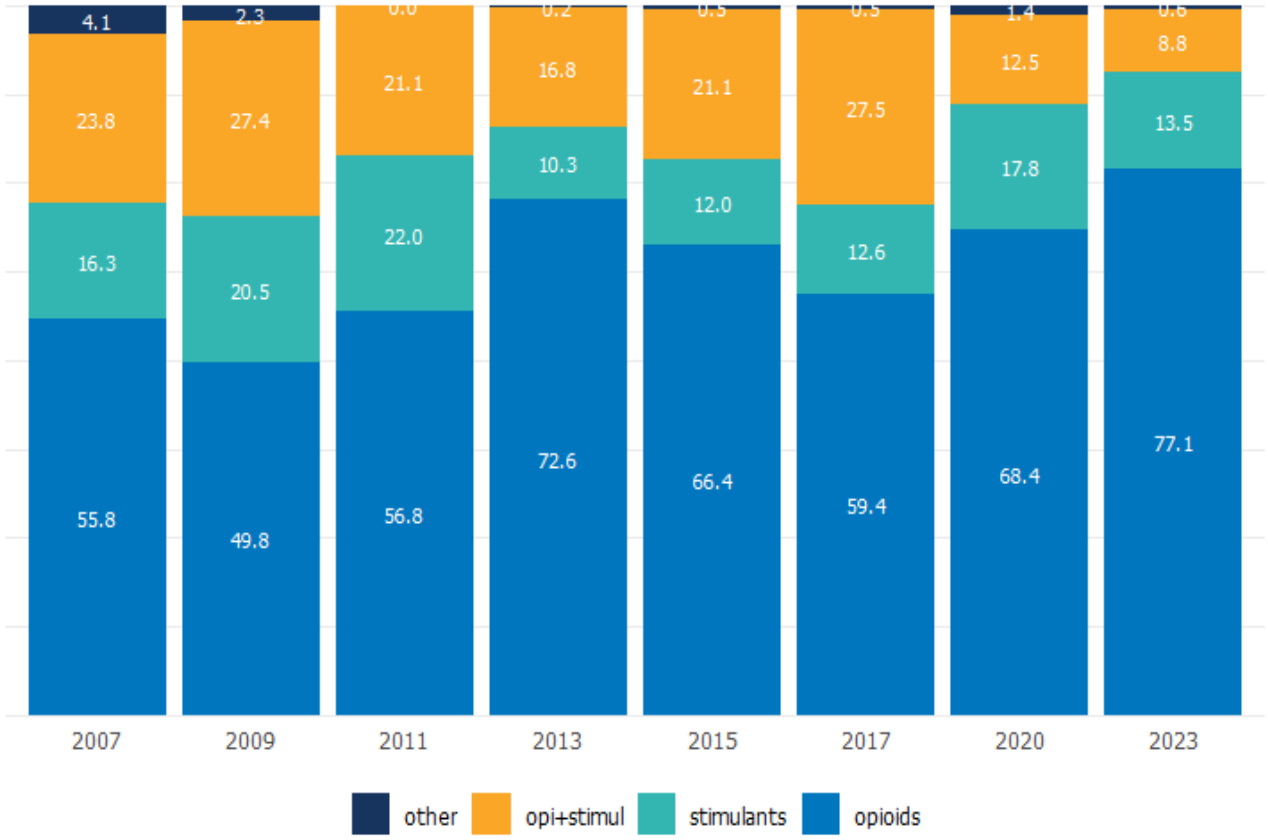

Figure 2.4: Trends in Injecting Drugs Types in the Past 30 Days by Survey Round in 5 Sites

Beneath the apparent stability in the overall prevalence of injection drug use by drug type lies a dramatic shift in the popularity of specific substances within those types. When opioids are examined separately (Figure 2.5), data from four rounds 2015 to 2023 show that street methadone has largely replaced liquid opium extract ('shirka'), which had been the leading injected opioid in 2015 and before that. Moreover, although the prevalence of street methadone use did not increase between the 2020 and 2023 rounds, there was a substantial rise in the use of both legal and illegally obtained pharmaceutical tableted methadone during that period. As a result, synthetic opioids in various forms have firmly established themselves as the most commonly injected drugs in Ukraine.

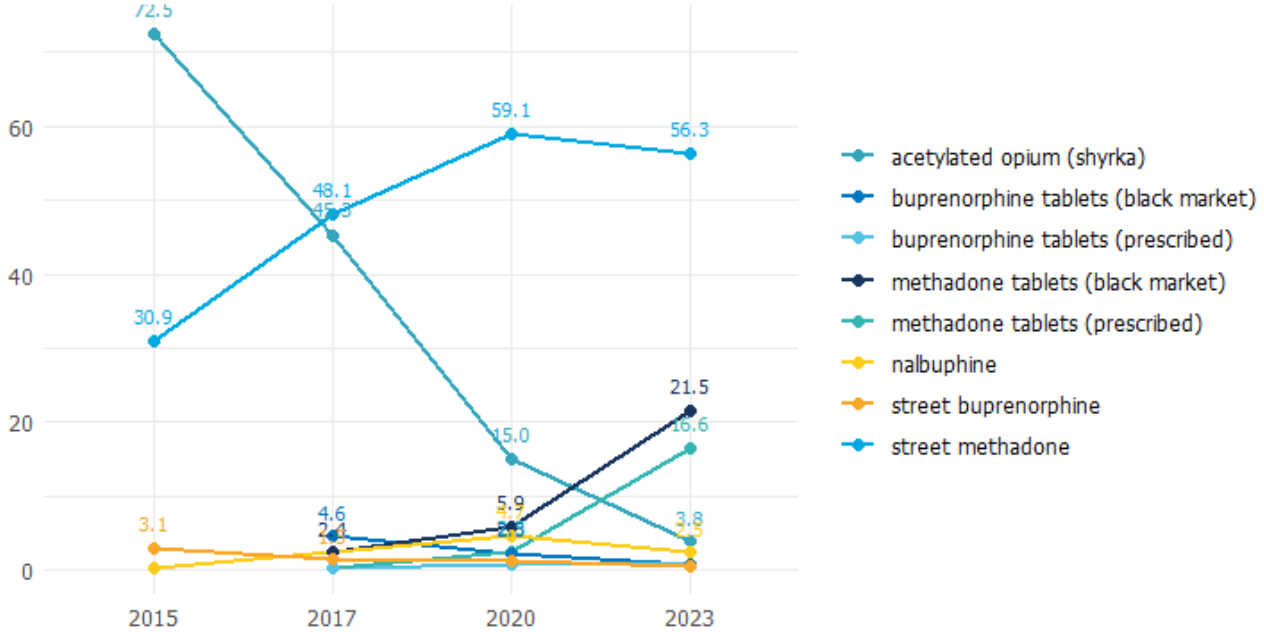

Figure 2.5: Trends in Injecting Opioids in the Past 30 Days by Survey Round in 5 Sites

The overall rate of injection stimulant use (which may occur either on its own or in parallel with opioids and other types of drugs) (Figure 2.6) nearly halved between 2017 and 2023, decreasing from 40.1% to 22.3%. Amphetamine injection peaked in 2017 at 25.1%, followed by a nearly fourfold decline to 6.6% in 2023. In contrast, injection use of synthetic cathinones ('bath salts') increased from 4.2% in 2015 to a peak of 12.9% in 2020, before declining slightly to 9% in 2023.

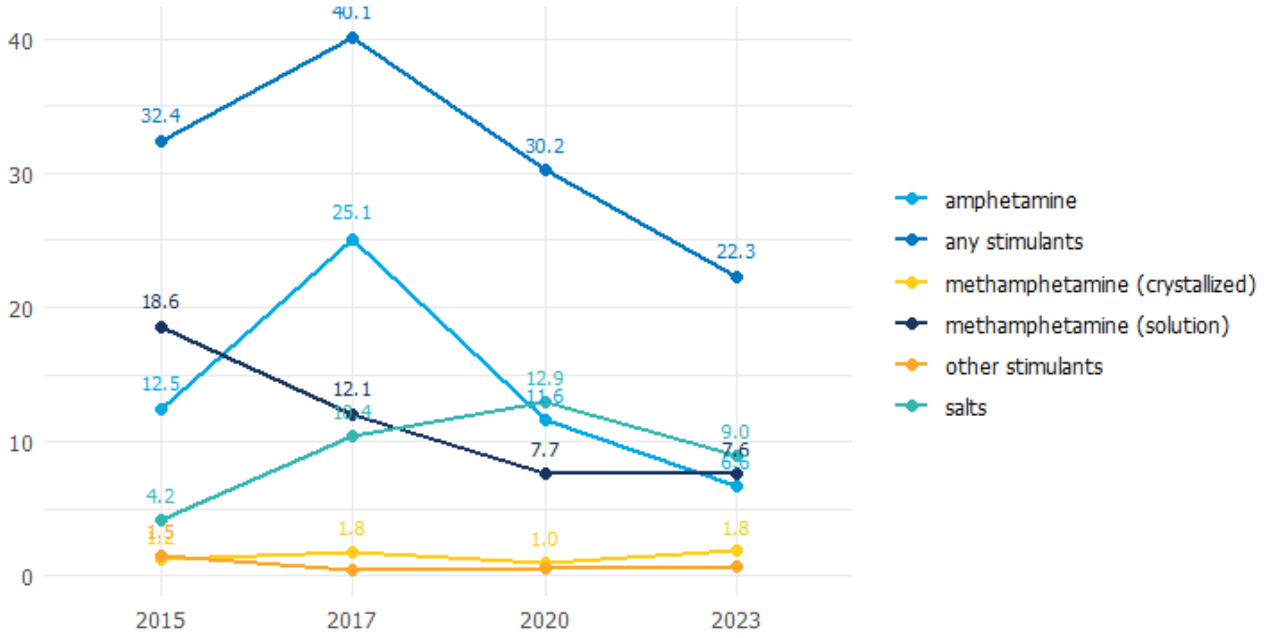

Figure 2.6: Trends in Injecting Stimulants in the Past 30 Days by Survey Round in 5 Sites

Other injected drugs, which are commonly used mixed in one syringe with opioids, despite temporary increases in popularity during the 2017 and 2020 survey rounds (Figure 2.7), did not play a significant role in the 2023 round.

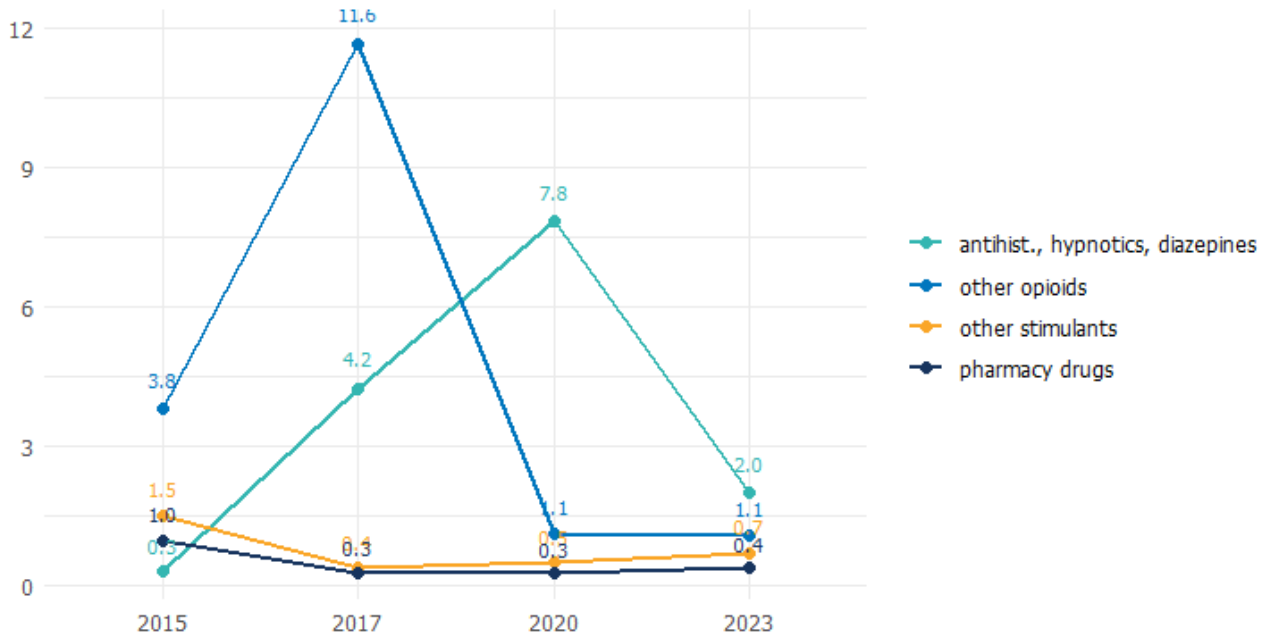

Figure 2.7: Trends in Injecting Other Drugs in the Past 30 Days by Survey Round in 5 Sites

Survey participants were also asked to identify which injected drug they consider their primary drug. This reflects not the actual injection practices, but the subjective preference of a particular drug to PWID. As shown in Figure 2.8, five out of six PWID consider their primary drug to be an opioid, while only one in six names a stimulant as their main drug. Drug preference does not always correspond directly to injection behavior, as PWID may resort to other available substances when their drug of choice is unavailable. However, a notable correlation exists: the tendency toward stimulant preference in Dnipro, Chernihiv, Vinnytsia, and Rivne is also reflected in past 30-day injection patterns (see Figure 2.2). The reasons for this regional variation in drug preference warrant further investigation.

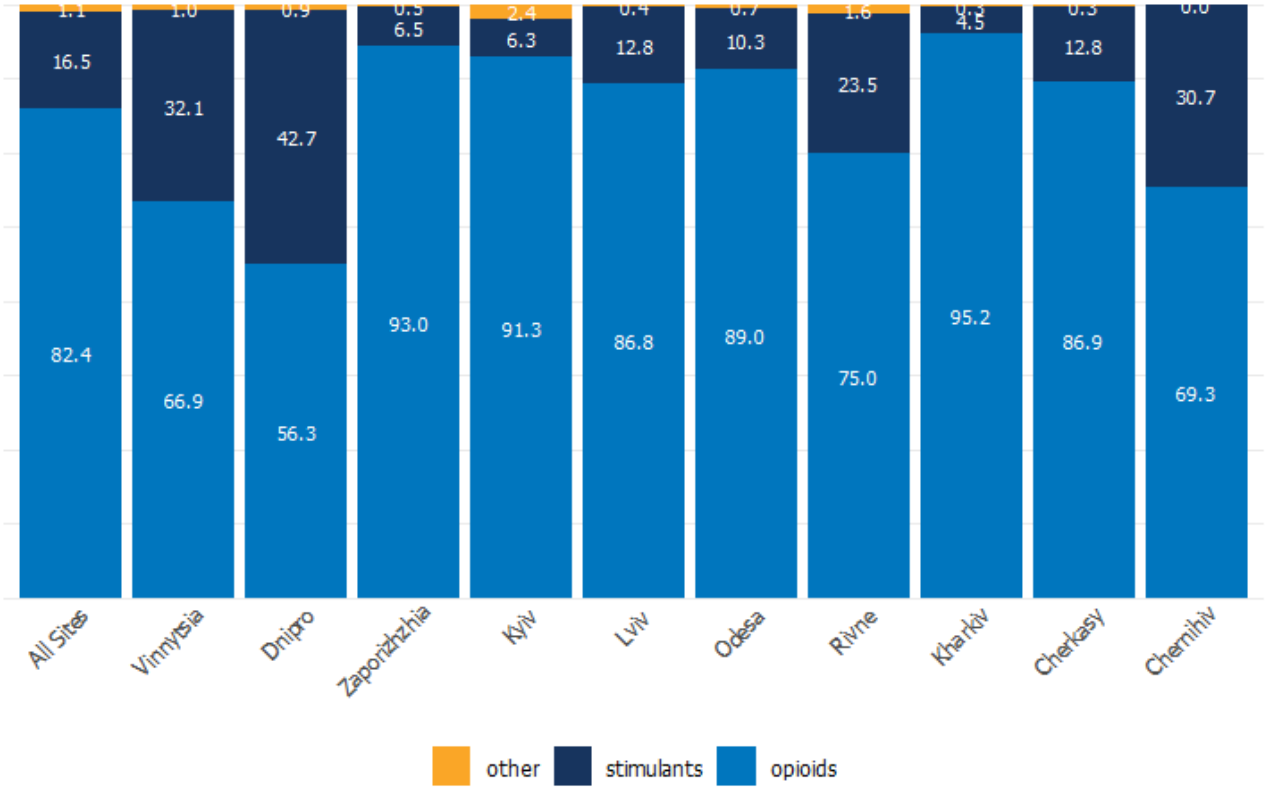

Figure 2.8: Injecting Drug Preference by Survey Site

Past-30-day 'pure' opioid injecting was more common among PWID with a history of incarceration (83.9%), those in the older age group (79.9%), PWID with more than 11 years of injection experience (77.2%), unemployed PWID (77.6%), persons with disabilities (75.9%), and men (75.4%) (Table 2.1). In contrast, 'pure' stimulant use is more prevalent among PWID with less than two years of injection experience (31.6%), the youngest PWID (25.4%), those with full-time employment (20.5%), and women (20.4%). Mixed drug use is more common among the least economically secure PWID (14.7%) and those under 25 years of age (14.3%).

Table 2.1: Types of Injecting Drugs in the Past 30 Days by Sociodemographic Characteristics

			Past 30 days injecting 4 categories								
		N	opioids		stimulants		opi+stimul		other		p-value
			n	% (CI)	n	% (CI)	n	% (CI)	n	% (CI)	
Total	All Sites	5,002	3,579	73.9 (72.1–75.7)	677	14.0 (12.7–15.5)	716	11.1 (10.0–12.2)	30	1.0 (0.5–2.0)	1.0000
Sex											
	male	4,042	2,939	75.4 (73.3–77.3)	497	12.4 (11.0–14.0)	581	11.1 (10.0–12.4)	25	1.1 (0.5–2.4)	0.0004
	female	960	640	68.4 (64.2–72.3)	180	20.4 (17.1–24.1)	135	10.7 (8.6–13.3)	5	0.5 (0.1–2.2)	
Age											
	<25	131	73	60.3 (47.0–72.2)	39	25.2 (16.5–36.5)	18	14.3 (7.6–25.2)	1	0.2 (0.0–1.4)	0.0000
	25-34	1,006	622	64.9 (60.8–68.9)	203	19.7 (16.6–23.2)	174	14.7 (11.9–18.0)	7	0.7 (0.2–2.2)	

	N	Past 30 days injecting 4 categories								
		opioids		stimulants		opi+stimul		other		
		n	% (CI)	n	% (CI)	n	% (CI)	n	% (CI)	p-value
35-44	2,588	1,891	75.5 (73.0–77.9)	333	13.1 (11.4–15.1)	356	10.2 (8.9–11.7)	8	1.2 (0.4–3.4)	
45+	1,277	993	79.9 (76.5–82.9)	102	9.9 (7.4–13.1)	168	9.5 (7.8–11.4)	14	0.7 (0.4–1.5)	
Years since the start of injecting drug use										
≤2	200	106	55.6 (45.6–65.2)	69	31.6 (23.6–40.8)	19	9.9 (5.1–18.5)	6	2.9 (0.7–10.7)	0.0000
3-5	294	180	62.7 (54.7–70.1)	77	27.3 (20.8–34.8)	35	9.7 (6.2–15.0)	2	0.3 (0.1–1.3)	
6-10	564	359	66.2 (60.7–71.3)	118	19.8 (16.0–24.4)	84	13.8 (10.2–18.4)	3	0.2 (0.0–0.6)	
≥11	3,919	2,917	77.2 (75.1–79.0)	410	11.1 (9.7–12.6)	574	10.8 (9.7–12.0)	18	1.0 (0.4–2.5)	
Partnership status										
live alone	2,562	1,867	76.6 (74.3–78.9)	338	12.9 (11.2–14.9)	342	10.1 (8.7–11.7)	15	0.4 (0.2–0.8)	0.0016
live with partner	2,440	1,712	71.2 (68.4–73.8)	339	15.2 (13.3–17.4)	374	12.1 (10.5–13.8)	15	1.6 (0.6–3.8)	
Current employment status										
full-time	1,137	793	70.4 (66.5–74.0)	208	20.5 (17.3–24.1)	127	8.5 (6.8–10.6)	9	0.6 (0.2–1.5)	0.0000
part-time or temporary	2,609	1,898	75.2 (72.7–77.6)	290	11.5 (9.9–13.4)	409	12.0 (10.5–13.7)	12	1.3 (0.5–3.5)	
unemployed	737	541	77.6 (73.2–81.5)	93	11.3 (8.6–14.7)	100	10.9 (8.3–14.1)	3	0.2 (0.1–0.9)	
disabled	263	204	75.9 (66.5–83.4)	28	13.7 (7.8–23.0)	29	10.1 (6.1–16.2)	2	0.3 (0.1–1.5)	
other	251	139	60.9 (51.9–69.3)	58	24.0 (17.1–32.6)	50	13.0 (9.0–18.5)	4	2.1 (0.4–9.6)	
Monthly income category										
<3K	691	484	73.3 (67.3–78.6)	59	8.8 (6.0–12.9)	140	14.7 (11.6–18.4)	8	3.2 (0.7–12.7)	0.0130
3-10K	2,056	1,468	74.2 (71.4–76.7)	262	12.6 (10.8–14.7)	313	12.5 (10.7–14.6)	13	0.7 (0.3–1.6)	
10-20K	1,479	1,083	75.2 (71.8–78.3)	219	15.8 (13.2–18.8)	174	8.5 (7.0–10.3)	3	0.5 (0.1–3.1)	
≥20K	413	291	73.7 (67.8–78.9)	73	15.9 (12.0–20.8)	48	9.5 (6.6–13.4)	1	0.9 (0.1–6.1)	
Ever incarcerated										
no	3,419	2,358	69.9 (67.6–72.1)	551	17.8 (16.0–19.7)	491	11.6 (10.2–13.0)	19	0.8 (0.2–2.5)	0.0000
yes	1,483	1,177	83.9 (81.2–86.4)	124	6.5 (5.0–8.4)	174	8.4 (6.8–10.3)	8	1.2 (0.4–3.2)	

Table 2.2: Types of Injecting Drugs in the Past 30 Days by Selected Subgroups

	N	Past 30 days injecting 4 categories: opioids n	opioids % (CI)	stimulants n	stimulants % (CI)	opi+stimul n	opi+stimul % (CI)	other n	other % (CI)	p-value
Client of NGO working with PWID										
no	3,304	2,241	72.1 (69.8–74.3)	555	16.3 (14.5–18.1)	485	10.4 (9.2–11.8)	23	1.2 (0.5–2.8)	0.0000
yes	1,651	1,309	79.0 (76.2–81.6)	117	8.6 (6.9–10.7)	218	12.0 (10.1–14.3)	7	0.4 (0.1–1.2)	
Treated with MAT currently (of all)										
no	3,969	2,672	71.5 (69.4–73.5)	652	16.1 (14.6–17.8)	624	11.4 (10.3–12.7)	21	1.0 (0.4–2.3)	0.0000
yes	946	849	90.1 (87.1–92.5)	21	1.9 (1.1–3.3)	67	6.9 (4.9–9.6)	9	1.1 (0.5–2.8)	
HIV test result										
positive	802	634	77.5 (72.8–81.6)	75	13.1 (9.6–17.5)	90	9.2 (6.9–12.1)	3	0.2 (0.1–0.9)	0.1245
negative	4,200	2,945	73.2 (71.2–75.1)	602	14.2 (12.8–15.8)	626	11.4 (10.3–12.7)	27	1.1 (0.5–2.4)	
Injecting drug type of choice										
opioids	4,133	3,525	88.4 (87.0–89.6)	25	0.7 (0.4–1.3)	572	10.5 (9.3–11.7)	11	0.5 (0.2–1.2)	0.0000
stimulants	814	32	5.1 (2.7–9.5)	645	81.1 (76.8–84.8)	137	13.8 (11.1–16.9)	0	0.0	
other	33	15	39.3 (15.9–69.0)	5	9.2 (1.9–35.2)	5	14.7 (4.5–38.7)	8	36.7 (10.3–74.7)	

All else being equal, a higher frequency of injections increases the risk of acquiring or transmitting HIV. The most commonly reported injection frequency is one injection per day, corresponding to seven injections per week and 30 days of injecting per month (Table 2.3). When stratified by the type of drugs injected in the past 30 days, PWID who reported 'pure' stimulant use injected fewer times than 'pure' opioid users. Contrary to other studies, in this study PWID who inject stimulants had lower injection frequency (both over the past month and in the last 24 hours) compared to opioid users.

Table 2.3: Injecting frequency

	Past 30 days injecting 4 categories: opioids n	opioids %	stimulants n	stimulants %	opi+stimul n	opi+stimul %	other n	other %	p-value
Injecting frequency: last 24 hrs									
0 times	543	14.0	251	32.9	108	12.0	15	38.4	0.0000
1 time	2,171	58.9	337	54.3	453	58.7	12	55.9	
2-3 times	781	24.4	73	11.0	125	24.1	3	5.7	
4+ times	84	2.7	16	1.7	30	5.2	0	0.0	
N	3,579		677		716		30		
Injecting frequency: last 24 hrs (among those who did)									
1 time	2,171	68.5	337	81.0	453	66.7	12	90.8	0.0261
2-3 times	781	28.3	73	16.4	125	27.4	3	9.2	
4+ times	84	3.2	16	2.6	30	5.9	0	0.0	
N	3,036		426		608		15		
Injecting frequency: last week									
0 times	57	1.3	34	4.5	7	0.8	7	27.9	0.0000
1-6 times	1,449	43.6	489	74.3	352	42.6	14	55.5	
every day	2,072	55.1	153	21.2	357	56.6	8	16.6	
N	3,578		676		716		29		
Injecting frequency: last 30 days									
1-9 times	488	15.9	193	29.5	56	11.1	12	34.9	0.0000
10-19 times	640	19.7	230	33.7	127	16.3	5	38.2	
20-29 times	654	20.0	128	19.5	188	23.5	4	13.8	
every day	1,796	44.4	126	17.3	345	49.1	6	13.0	
N	3,578		677		716		27		
Injecting frequency: main drug last 30 days									
0-9 times	339	9.8	183	29.1	40	5.4	11	35.5	0.0000
10-19 times	649	20.0	226	33.9	138	19.5	6	35.8	

	Past 30 days injecting 4 categories								
	opioids		stimulants		opi+stimul		other		
	n	%	n	%	n	%	n	%	p-value
20-29 times	625	19.4	115	17.4	173	21.1	3	11.5	
every day	1,944	50.8	140	19.6	359	54.0	9	17.2	
N	3,557		664		710		29		

On average, PWID who reported opioids as their main drug of choice had lower income levels than those who report stimulants (Table 2.4).

Table 2.4: Injecting drug type of choice by Income Category

	Injecting drug type of choice					
	opioids		stimulants		other	
	n	%	n	%	n	%
Monthly income category						
<3K	606	14.2	71	9.5	8	35.8
3-10K	1,728	43.6	312	39.3	10	26.9
10-20K	1,198	33.6	271	38.7	8	19.8
≥20K	318	8.5	91	12.4	3	17.5
N	3,850		745		29	

The most common methods of obtaining drugs across most drug types were purchasing from a dealer or buying online (Table 2.5). Purchasing from a dealer was more prevalent among opioid users, with 41% using this method. In contrast, among stimulant users, the primary method of acquisition was online purchase (53.7%). One-quarter of PWID prepared drugs themselves. This practice was significantly more common among those whose primary drug is neither an opioid nor a stimulant (43.9%), and notably less common among those whose main drug is a stimulant (16.1%).

Table 2.5: Sources of drugs by Drug Type of Choice

	Total		Injecting drug type of choice						
	All Sites		opioids		stimulants		other		
	n	%	n	%	n	%	n	%	p-value
prepare myself	1,124	24.7	989	26.2	125	16.1	9	43.9	0.0080
prepared by friends	403	7.7	315	7.2	82	10.3	4	6.2	0.0826
from a dealer	2,325	41.3	1,933	41.0	361	41.7	15	41.9	0.9661
buy on Internet	1,792	37.9	1,371	35.1	413	53.7	8	21.3	0.0000
from a pharmacy	257	9.2	246	10.8	9	1.7	2	1.6	0.0000
from MAT program	204	2.5	200	3.0	2	0.1	2	0.9	0.0000
other	49	1.4	34	1.4	15	1.9	0	0.0	0.6543
N	6,154		5,088		1,007		40		

Regarding changes in drug use over the past 12 months, most PWID felt there were no changes in price, quality, or access to drugs. However, more PWID felt there was an increase in price than felt there was a decline in quality or access to drugs (Figure 2.9).

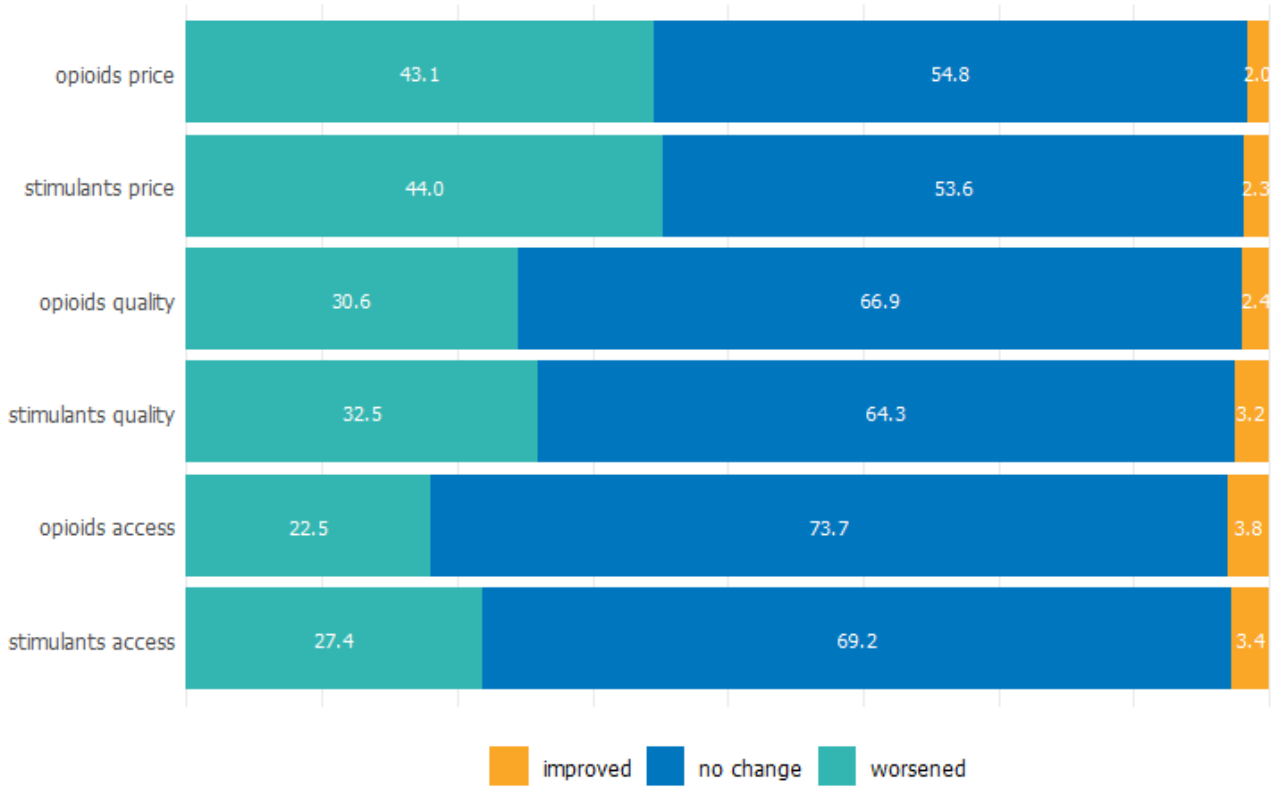

Figure 2.9: Change in the price, quality, and access of drugs by Drug Type of Choice

3. Injecting Risk Behavior

A total of 6.1% of PWID reported not using a sterile needle or syringe during their last injection (Table 3.1). Among other recent high-risk injection practices, the most common was reuse of one's own syringe—one-third of PWID (33.5%) reported doing so in the past 30 days. Sharing a common container (20.4%) and use of front-/back-loaded syringes (19.9%) were also widely reported. Nearly one in ten PWID reported injecting with a prefilled syringe (10.7%) or using a shared syringe (9%) within the past 30 days. One in fifteen PWID (6.7%) stated that they had lent or sold their syringe to someone else after use during the same period. The main sources of syringes used during the last injection were buying from a pharmacy (68.4%) and receiving from NGOs (23.8%). In addition, 2.7% of PWID received sterile injection equipment from friends, 1.9% reused their own injection equipment, 1.4% received it free of charge at a pharmacy, and 0.6% received used injection equipment from friends.

Table 3.1: Prevalence of Injection Risk Practices

	n	%	CI
Used clean syringe for last injection			
yes	4,660	93.9	(92.9–94.7)
Source of syringe for last injection			
bought in pharmacy	3,105	68.4	(66.6–70.2)
got in pharmacy	88	1.4	(1.1–1.9)
got from NGO	1,510	23.8	(22.2–25.4)
got from friend	152	2.7	(2.2–3.3)
got used from friend	28	0.6	(0.3–1.0)
used one used by myself	78	1.9	(1.4–2.5)
got pre-loaded	25	1.0	(0.6–1.7)
other	9	0.2	(0.1–0.5)
Used shared syringe in the past 30 days			

		n	%	CI
	yes	407	9.0	(7.8–10.2)
Used pre-filled syringe in the past 30 days				
	yes	473	10.7	(9.5–12.0)
Used front-/back-loaded syringe in the past 30 days				
	yes	905	19.9	(18.3–21.5)
Used shared container in the past 30 days				
	yes	864	20.4	(18.8–22.0)
Used own previously used syringe in the past 30 days				
	yes	1,614	33.5	(31.5–35.4)
Gave someone a used syringe in the past 30 days				
	yes	393	6.7	(5.9–7.7)
Any inj. risk (shared syringe, pre-filled, front-/back-load, container) in the past 30 days				
	yes	1,598	35.5	(33.5–37.5)

The prevalence of specific high-risk injection practices varied considerably across cities in the 2023 survey round (Figure 3.1). The use of a shared syringe during injection was most commonly reported in Cherkasy (20.6%), Zaporizhzhia (17.4%), and Kyiv (13.5%). Injection with a prefilled syringe was most frequently reported in Dnipro (26.2%) and Cherkasy (25.4%).

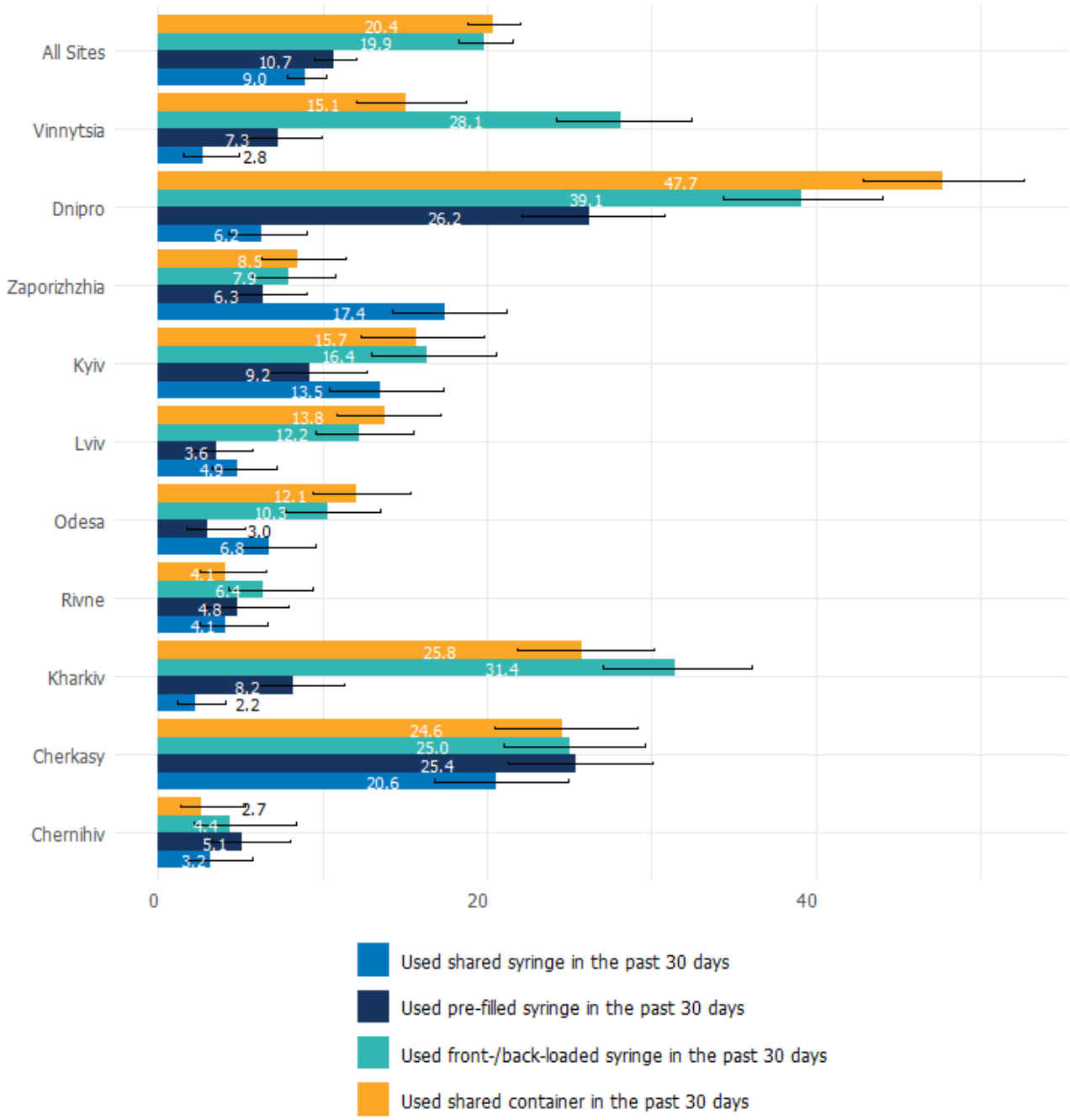

Figure 3.1: Prevalence of Key Injection Risk Practices by Survey Site

Historical trends in risky injection behavior are shown in Figure 3.2. Overall, the prevalence of risky injection practices declined substantially between 2015 and 2020 compared to 2007–2013. However, no further improvements were observed between 2020 and 2023.

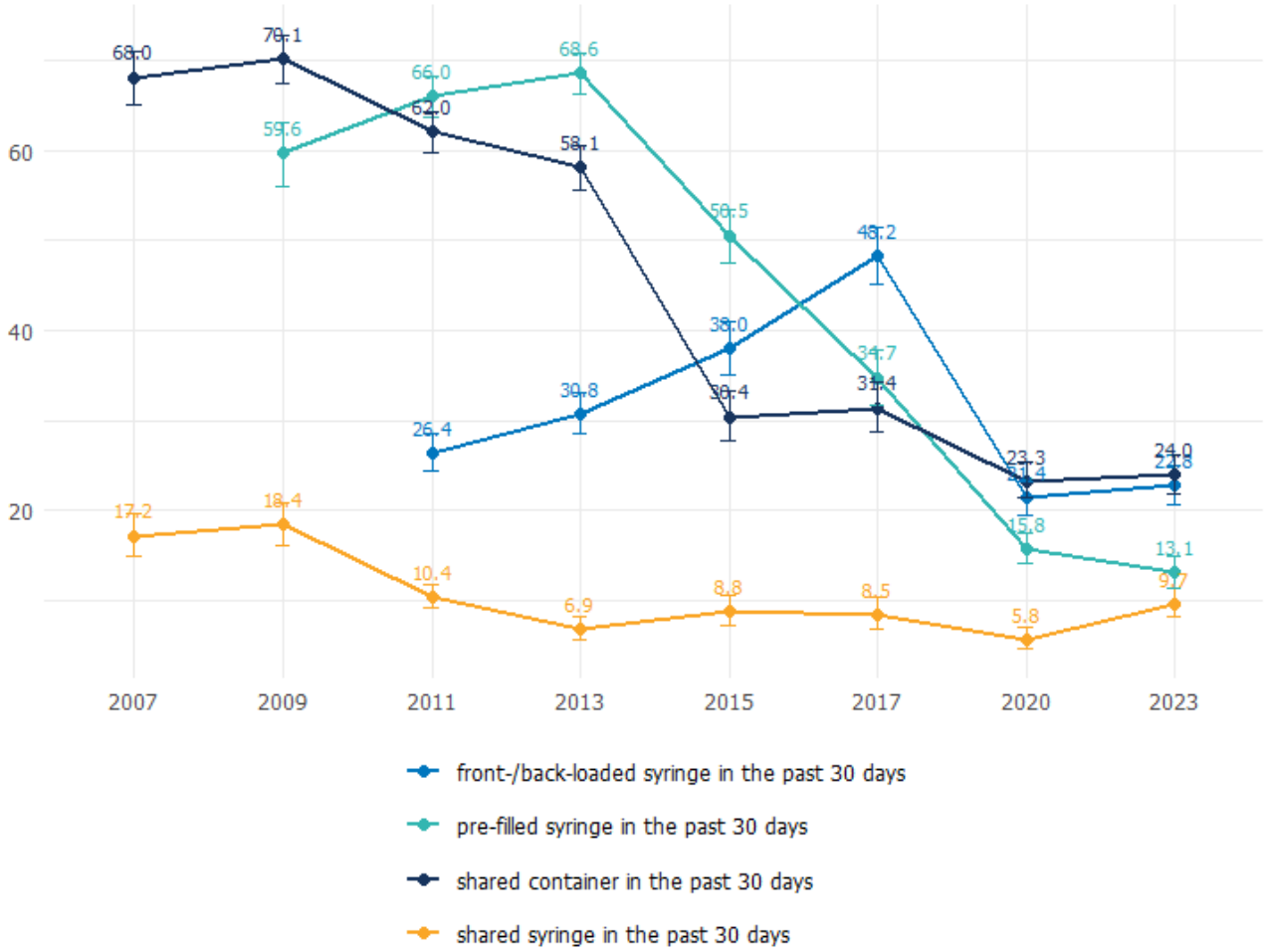

Figure 3.2: Trends in Key Injection Risk Practices by Survey Round in 5 Sites

Risky injection practices were less common among men and PWID who have only recently initiated injection drug use (with less than 3 years of injection experience) (Table 3.2).

Table 3.2: Prevalence of Shared and Pre-filled Syringe Use by Sociodemographic Characteristics

		Used shared syringe in the past 30 days				Used pre-filled syringe in the past 30 days			
		N	n	% (CI)	p-value	N	n	% (CI)	p-value
Total	All Sites	4,970	407	9.0 (7.8–10.2)	1.0000	4,933	473	10.7 (9.5–12.0)	1.0000
Sex	male	4,015	309	8.6 (7.4–10.0)	0.3191	3,982	344	9.5 (8.3–11.0)	0.0007
	female	955	98	10.2 (7.7–13.4)		951	129	15.1 (12.0–18.7)	
Age	<25	131	12	8.8 (3.6–19.8)	0.6796	129	19	14.4 (8.1–24.5)	0.0592
	25-34	999	89	9.4 (7.2–12.2)		998	127	13.7 (11.1–16.8)	
	35-44	2,576	210	9.4 (7.7–11.3)		2,556	214	9.9 (8.3–11.9)	
	45+	1,264	96	7.6 (5.9–9.8)		1,250	113	9.4 (7.3–12.0)	

	Used shared syringe in the past 30 days				Used pre-filled syringe in the past 30 days			
	N	n	% (CI)	p-value	N	n	% (CI)	p-value
Years since the start of injecting drug use								
≤2	200	8	4.5 (1.8–10.5)	0.2850	197	23	11.7 (7.0–19.1)	0.0458
3-5	293	20	12.1 (7.0–20.2)		290	41	14.7 (10.2–20.6)	
6-10	560	38	8.4 (5.5–12.5)		561	70	13.7 (10.4–17.8)	
≥11	3,894	334	8.8 (7.6–10.2)		3,861	336	9.8 (8.5–11.4)	
Partnership status								
live alone	2,546	175	8.6 (7.0–10.5)	0.5182	2,534	225	10.8 (9.1–12.8)	0.8326
live with partner	2,424	232	9.4 (7.8–11.1)		2,399	248	10.6 (8.9–12.5)	
Current employment status								
full-time	1,133	61	6.1 (4.4–8.3)	0.1534	1,134	95	9.9 (7.7–12.7)	0.0938
part-time or temporary	2,592	243	9.9 (8.4–11.8)		2,564	252	10.2 (8.6–12.0)	
unemployed	730	60	8.7 (6.2–12.1)		721	68	11.4 (8.1–15.8)	
disabled	261	13	8.0 (4.0–15.6)		261	17	9.3 (5.1–16.5)	
other	250	29	11.7 (6.1–21.1)		248	40	18.7 (12.9–26.4)	
Monthly income category								
<3K	688	94	10.1 (7.5–13.5)	0.0717	688	98	11.7 (8.8–15.4)	0.7479
3-10K	2,037	172	10.5 (8.6–12.7)		2,007	175	10.1 (8.2–12.2)	
10-20K	1,474	95	7.7 (5.8–10.2)		1,467	114	9.7 (7.6–12.2)	
≥20K	413	17	5.5 (3.0–9.9)		411	32	9.1 (5.8–14.0)	
Ever incarcerated								
no	3,395	302	9.2 (7.9–10.8)	0.5042	3,385	361	11.9 (10.4–13.6)	0.0075
yes	1,481	93	8.3 (6.4–10.8)		1,476	107	8.2 (6.3–10.4)	

Table 3.3: Prevalence of Shared and Pre-filled Syringe Use by Selected Subgroups

	Used shared syringe in the past 30 days				Used pre-filled syringe in the past 30 days			
	N	n	% (CI)	p-value	N	n	% (CI)	p-value
Client of NGO working with PWID								
no	3,281	229	8.3 (6.9–9.8)	0.1270	3,258	306	11.2 (9.7–13.0)	0.1942
yes	1,645	172	10.2 (8.3–12.4)		1,633	162	9.5 (7.7–11.7)	
Treated with MAT currently (of all)								
no	3,946	320	8.8 (7.6–10.3)	0.6229	3,917	427	11.6 (10.2–13.1)	0.0003
yes	942	78	9.6 (7.2–12.6)		939	42	5.6 (3.8–8.3)	
HIV test result								
positive	800	56	8.2 (5.7–11.5)	0.5671	799	61	9.3 (6.6–12.9)	0.3523
negative	4,170	351	9.1 (7.9–10.5)		4,134	412	11.0 (9.7–12.4)	
Past 30 days injecting 4 categories								
opioids	3,563	231	7.5 (6.3–9.0)	0.0000	3,546	258	9.0 (7.6–10.6)	0.0000
stimulants	672	42	8.8 (6.0–12.7)		674	78	14.3 (11.1–18.1)	

	Used shared syringe in the past 30 days				Used pre-filled syringe in the past 30 days			
	N	n	% (CI)	p-value	N	n	% (CI)	p-value
opi+stimul	706	132	18.3 (14.7–22.5)		683	134	18.5 (15.0–22.7)	
other	29	2	13.5 (2.7–46.5)		30	3	3.4 (0.8–13.2)	
Injecting drug type of choice								
opioids	4,108	348	9.0 (7.8–10.4)	0.8520	4,068	371	10.0 (8.7–11.4)	0.0564
stimulants	809	54	8.4 (5.9–11.7)		811	98	14.7 (11.6–18.5)	
other	32	3	11.6 (2.6–38.8)		33	3	7.9 (1.3–36.2)	

Table 3.4: Prevalence of Front-/back-loading and Container Sharing by Sociodemographic Characteristics

	Used front-/back-loaded syringe in the past 30 days				Used shared container in the past 30 days			
	N	n	% (CI)	p-value	N	n	% (CI)	p-value
Total								
All Sites	4,924	905	19.9 (18.3–21.5)	1.0000	4,941	864	20.4 (18.8–22.0)	1.0000
Sex								
male	3,970	713	18.5 (16.9–20.3)	0.0023	3,988	637	18.3 (16.7–20.2)	0.0000
female	954	192	24.9 (21.1–29.2)		953	227	28.2 (24.3–32.4)	
Age								
<25	130	24	17.0 (10.0–27.6)	0.0561	128	24	19.0 (11.3–30.2)	0.0070
25-34	997	207	24.4 (20.7–28.4)		999	227	26.0 (22.4–29.8)	
35-44	2,547	468	18.9 (16.8–21.2)		2,555	429	19.6 (17.4–21.9)	
45+	1,250	206	18.6 (15.5–22.1)		1,259	184	17.6 (14.6–21.0)	
Years since the start of injecting drug use								
≤2	200	23	13.7 (8.2–21.9)	0.3152	199	26	14.1 (8.9–21.8)	0.0015
3-5	294	51	19.1 (13.7–25.8)		292	52	16.5 (12.0–22.2)	
6-10	560	119	22.3 (18.1–27.0)		562	138	27.6 (23.0–32.7)	
≥11	3,849	707	19.9 (18.1–21.8)		3,868	644	19.9 (18.1–21.9)	
Partnership status								
live alone	2,525	428	18.1 (16.0–20.4)	0.0320	2,538	399	18.5 (16.5–20.8)	0.0251
live with partner	2,399	477	21.6 (19.3–24.1)		2,403	465	22.2 (19.9–24.8)	
Current employment status								
full-time	1,133	196	21.9 (18.5–25.7)	0.1810	1,134	196	22.2 (18.8–26.0)	0.3231
part-time or temporary	2,561	467	18.5 (16.4–20.7)		2,569	440	19.4 (17.3–21.6)	
unemployed	716	141	20.6 (16.7–25.3)		722	125	18.8 (15.1–23.2)	
disabled	260	37	17.4 (10.7–26.9)		263	44	24.4 (16.6–34.4)	
other	250	63	27.0 (19.6–35.9)		248	59	24.8 (18.0–33.2)	
Monthly income category								
<3K	688	148	22.4 (18.0–27.5)	0.0400	687	125	20.1 (16.0–25.1)	0.4318
3-10K	1,996	335	17.2 (15.0–19.7)		2,009	320	18.8 (16.4–21.4)	

	Used front-/back-loaded syringe in the past 30 days				Used shared container in the past 30 days			
	N	n	% (CI)	p-value	N	n	% (CI)	p-value
10-20K	1,469	260	19.4 (16.6–22.6)		1,474	268	20.6 (17.8–23.8)	
≥20K	413	92	25.0 (19.3–31.7)		411	67	16.0 (12.0–20.9)	
Ever incarcerated								
no	3,382	613	20.4 (18.5–22.5)	0.4910	3,386	612	21.2 (19.3–23.3)	0.2032
yes	1,473	289	19.2 (16.5–22.2)		1,477	243	18.9 (16.2–22.0)	

Table 3.5: Prevalence of Front-/back-loading and Container Sharing by Selected Subgroups

	Used front-/back-loaded syringe in the past 30 days				Used shared container in the past 30 days			
	N	n	% (CI)	p-value	N	n	% (CI)	p-value
Client of NGO working with PWID								
no	3,259	585	20.0 (18.0–22.1)	0.7869	3,268	560	20.4 (18.4–22.4)	0.9985
yes	1,624	311	19.5 (17.0–22.3)		1,632	295	20.4 (17.8–23.2)	
Treated with MAT currently (of all)								
no	3,916	760	20.2 (18.5–22.1)	0.0288	3,921	739	21.0 (19.2–22.9)	0.0051
yes	934	129	15.8 (12.9–19.3)		940	111	15.1 (12.1–18.8)	
HIV test result								
positive	799	156	23.0 (18.8–27.7)	0.1124	801	152	25.7 (21.3–30.7)	0.0067
negative	4,125	749	19.2 (17.6–21.0)		4,140	712	19.3 (17.7–21.0)	
Past 30 days injecting 4 categories								
opioids	3,536	569	17.2 (15.5–19.0)	0.0000	3,543	533	17.2 (15.5–19.1)	0.0000
stimulants	673	122	27.0 (22.1–32.4)		672	152	33.6 (28.5–39.0)	
opi+stimul	685	212	30.7 (26.2–35.6)		696	176	26.5 (22.2–31.2)	
other	30	2	2.6 (0.4–14.6)		30	3	1.8 (0.4–7.2)	
Injecting drug type of choice								
opioids	4,063	731	18.4 (16.8–20.2)	0.0001	4,077	664	18.0 (16.4–19.8)	0.0000
stimulants	808	167	28.0 (23.5–32.9)		810	193	32.7 (28.1–37.7)	
other	33	5	10.7 (3.2–30.3)		33	7	17.0 (5.3–42.8)	

Table 3.6: Frequency of risky injection practices

	n	%	CI
Frequency of injecting with a syringe used by others in the past 30 days			
always	14	6.6	(3.5–11.8)
often	56	10.7	(7.6–15.0)
half	84	15.8	(11.4–21.4)
sometimes	63	14.5	(10.0–20.4)
rarely	109	28.3	(22.6–34.8)
never	76	24.2	(18.4–31.1)
Frequency of injecting with others in the same place in the past 30 days			
always	609	14.9	(13.3–16.6)
often	749	14.7	(13.3–16.2)
half	693	14.6	(13.2–16.1)
sometimes	536	11.9	(10.6–13.3)
rarely	736	15.8	(14.3–17.4)
never	1,506	28.2	(26.3–30.2)
Number of syringes used repeatedly in the past 30 days			

	n	%	CI
1-9	1,139	72.4	(69.0–75.5)
10-29	321	23.3	(20.4–26.5)
30+	53	4.3	(3.0–6.3)
Number of times one syringe used repeatedly in the past 30 days			
1	142	9.5	(7.5–12.0)
2-3	995	62.0	(58.4–65.4)
4-9	250	19.4	(16.7–22.5)
10+	123	9.0	(7.2–11.3)
How the pre-filled syringe was obtained			
from dealer	183	32.1	(26.7–38.1)
from friends	198	46.5	(40.2–52.9)
from stash	74	21.4	(16.5–27.2)
Someone used one syringe for injection before front-/back-loading			
no	4,425	88.1	(86.7–89.3)
yes	490	11.9	(10.7–13.3)

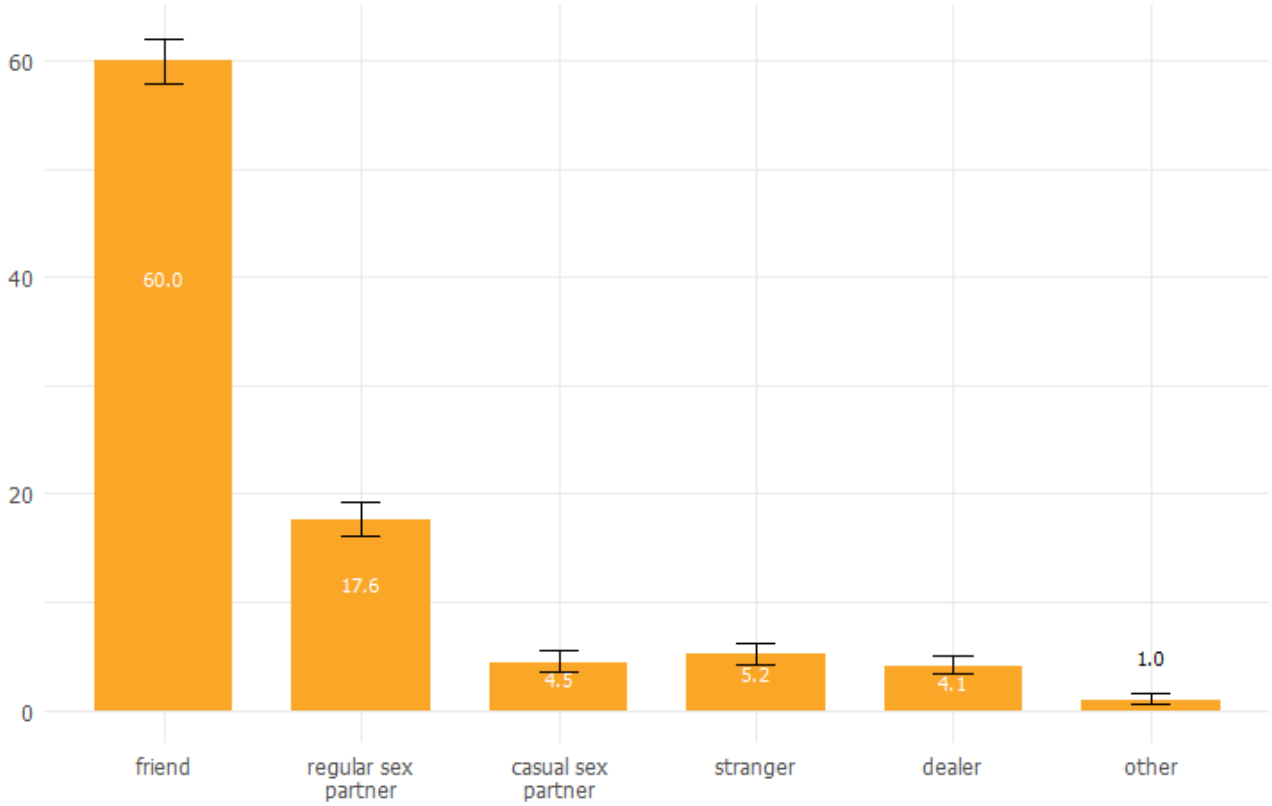

Figure 3.3: With whom injected drugs in the same place

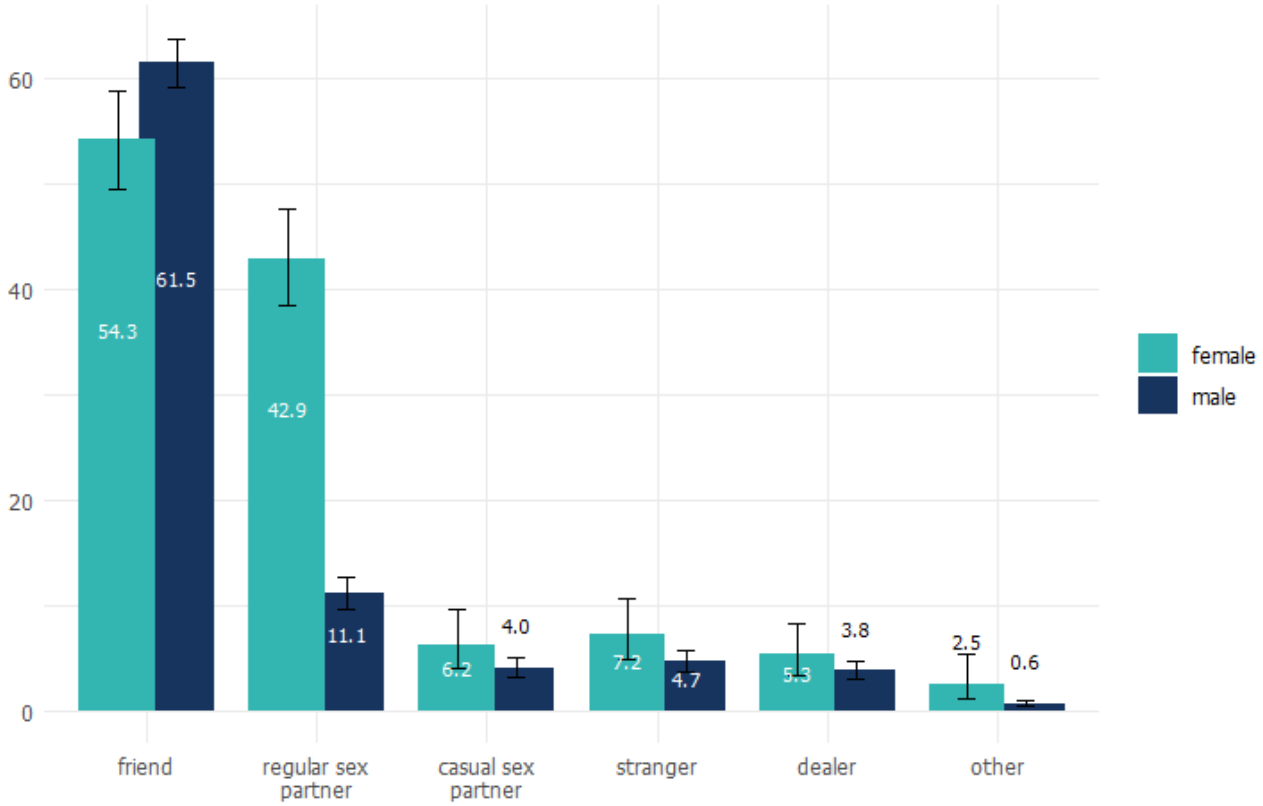

Figure 3.4: With whom injected drugs in the same place by sex

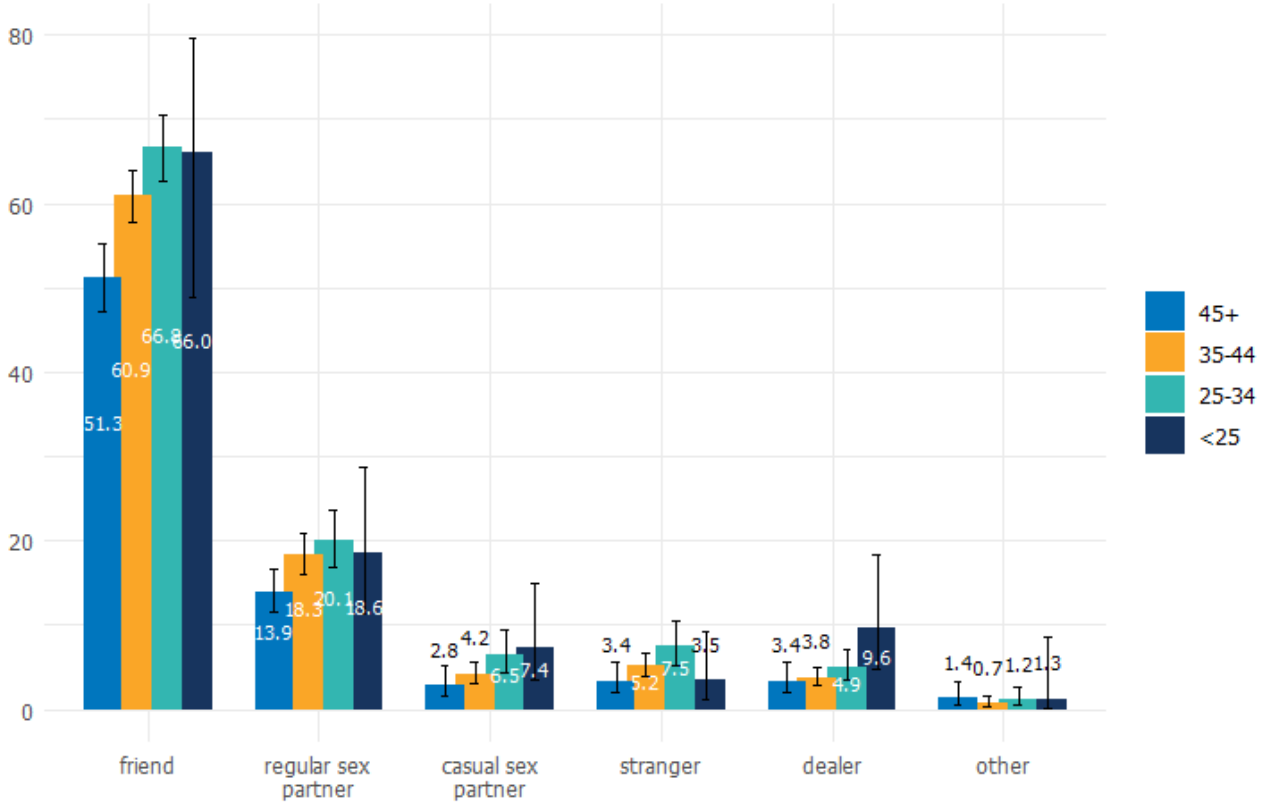

Figure 3.5: With whom injected drugs in the same place by age

4. Sexual Behavior

The vast majority of PWID (96%) reported having had sexual intercourse in their lifetime (93.9% among female PWID and 96.6% among male PWID) (Table 4.1). A total of 86% had sex in the past year, and more than half (58.8%) had sex in the past 30 days (67.7% among women, 56.6% among men). Among PWID who had sex in the past 30 days, 44.5% reported using a condom during their last sexual encounter. Importantly, this proportion was lower among women (39.1%) than among men (46.1%), which may be explained by higher rates of sex with casual partners among male PWID.

Table 4.1: Prevalence of Sexual Practice by Sex

	Total			Sex						
	All Sites			female			male			
	n	%	CI	n	%	CI	n	%	CI	p-value
Had sex: ever										
yes	4,761	96.0	(95.2–96.8)	905	93.9	(91.1–95.9)	3,856	96.6	(95.7–97.3)	0.0095
N	4,956			955			4,001			
Had sex: in the past 12 months										
yes	4,003	86.0	(84.5–87.4)	802	87.1	(82.7–90.6)	3,201	85.7	(84.1–87.2)	0.5232
N	4,744			904			3,840			
Had sex: in the past 30 days										
yes	2,681	58.8	(56.7–60.9)	630	67.7	(62.9–72.2)	2,051	56.6	(54.2–59.0)	0.0001
N	4,712			898			3,814			
Had a sex partner in the past 30 days: regular										
yes	2,220	84.7	(82.6–86.5)	557	88.4	(84.5–91.4)	1,663	83.5	(81.1–85.7)	0.0322
N	2,657			632			2,025			
Had a sex partner in the past 30 days: casual										
yes	513	19.8	(17.6–22.2)	63	11.3	(8.1–15.5)	450	22.4	(19.8–25.3)	0.0000
N	2,638			629			2,009			
Had a sex partner in the past 30 days: commercial (buying - I paid)										
yes	54	1.8	(1.3–2.5)	1	0.2	(0.0–1.3)	53	2.3	(1.6–3.2)	0.0014
N	2,646			633			2,013			
Had a sex partner in the past 30 days: commercial (selling - I was paid)										
yes	70	2.5	(1.8–3.5)	59	7.5	(5.2–10.8)	11	1.0	(0.5–2.0)	0.0000
N	2,646			631			2,015			
Used condom during last sex: if ever had sex										
yes	1,995	44.1	(41.9–46.3)	340	38.1	(33.6–42.7)	1,655	45.6	(43.1–48.2)	0.0052
N	4,489			869			3,620			
Used condom during last sex: if had sex in 12m										
yes	1,783	45.8	(43.4–48.2)	324	40.6	(35.8–45.4)	1,459	47.1	(44.4–49.9)	0.0211
N	3,854			783			3,071			
Used condom during last sex: if had sex in 30d										
yes	1,216	44.5	(41.6–47.4)	259	39.1	(33.9–44.6)	957	46.1	(42.7–49.5)	0.0336
N	2,648			626			2,022			

Frequency of sex in the past week was higher among PWID who used only stimulants (50.9% had at least one contact), compared to combined opioids and stimulants (43.7%), and exclusive opioid use (41.2%) (Figure 4.1).

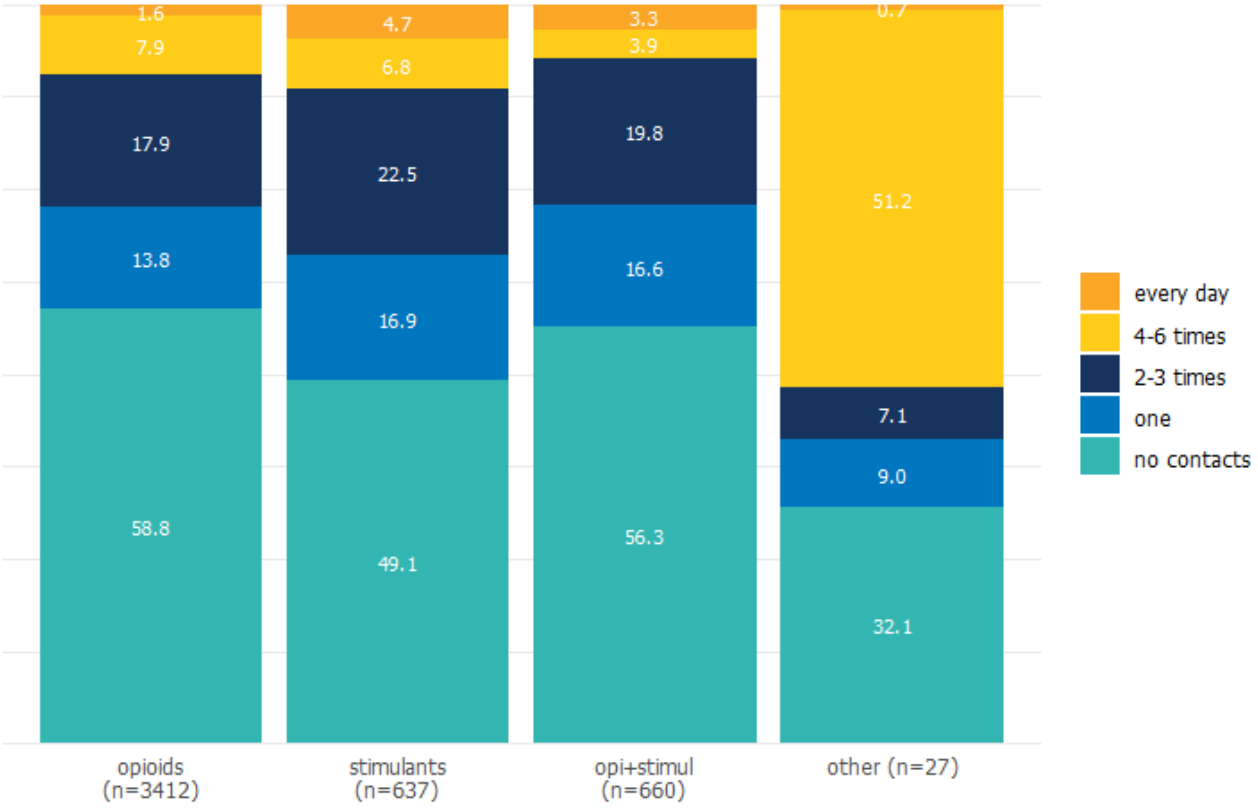

Figure 4.1: Frequency of sex in the past week by Drug Types Used

Most PWID (69.2%) reported that their most recent sexual partner was a regular partner (79.2% among women, 66.7% among men). At the same time, over one-quarter (27.6%) last had sex with a casual partner (14.4% among women, 31% among men). A small proportion last had sex with a partner they paid (1.9%) or a partner who paid them (1.3%) (Table 4.2).

One in five PWID (20.8%) ever paid for sex, which was more common among men (25.3%) than women (3%). A total of 5.5% had ever received money for sex (18.8% among women, 2.1% among men). Experience of same-sex sexual contact was reported by 6.1% of PWID (17.4% among women, 3.2% among men) (Table 4.2).

Table 4.2: Sex Practices by Sex

	Total			Sex						
	All Sites			female			male			
	n	%	CI	n	%	CI	n	%	CI	p-value
Had same-sex sexual experience										
yes	261	6.1	(5.2–7.1)	143	17.4	(14.2–21.2)	118	3.2	(2.5–4.1)	0.0000
N	4,745			903			3,842			
Provided sex services for money										
yes	276	5.5	(4.6–6.5)	191	18.8	(15.6–22.5)	85	2.1	(1.5–2.9)	0.0000
N	4,729			903			3,826			
Paid for sex ever										
yes	961	20.8	(19.2–22.5)	27	3.0	(1.6–5.6)	934	25.3	(23.4–27.3)	0.0000
N	4,708			900			3,808			
Had sex with a sex worker in the past 6 months										
yes	189	20.2	(17.1–23.8)	8	17.5	(5.9–41.8)	181	20.3	(17.1–23.9)	0.7744
N	958			27			931			
Type of partner with whom had last sex										
regular	3,176	69.2	(67.2–71.1)	707	79.2	(75.1–82.8)	2,469	66.7	(64.4–68.9)	0.0000
casual	1,315	27.6	(25.8–29.6)	114	14.4	(11.4–18.0)	1,201	31.0	(28.8–33.2)	

	Total			Sex						
	All Sites			female			male			
	n	%	CI	n	%	CI	n	%	CI	p-value
com. sex (I paid)	83	1.9	(1.4–2.6)	3	0.7	(0.2–3.3)	80	2.2	(1.6–2.9)	
com. sex (I was paid)	65	1.3	(0.9–1.8)	60	5.7	(3.9–8.1)	5	0.2	(0.1–0.5)	
N	4,639			884			3,755			
With whom last had sex										
man	884	19.4	(17.8–21.1)	850	94.2	(91.5–96.0)	34	0.8	(0.5–1.2)	0.0000
woman	3,760	79.8	(78.1–81.5)	31	4.1	(2.6–6.4)	3,729	98.7	(98.1–99.2)	
men and women	18	0.7	(0.4–1.3)	10	1.7	(0.8–3.6)	8	0.5	(0.2–1.1)	
N	4,662			891			3,771			
Type of last sex contact: vaginal										
yes	4,258	93.1	(92.0–94.0)	796	91.0	(87.8–93.5)	3,462	93.6	(92.5–94.5)	0.0628
N	4,616			874			3,742			
Type of last sex contact: anal										
yes	460	10.4	(9.1–11.8)	120	12.1	(9.4–15.4)	340	9.9	(8.5–11.6)	0.1902
N	4,616			874			3,742			
Type of last sex contact: oral										
yes	1,029	22.4	(20.7–24.3)	176	20.7	(17.1–24.9)	853	22.8	(20.9–24.9)	0.3480
N	4,616			874			3,742			

Among PWID who had sex with a regular partner in the past 30 days, 5.2% had more than one such partner (Table 4.3). Among those who had sex with casual partners, 42.7% had more than one partner. Among those who paid partners for sex in the last 30 days, 42.3% had paid more than one person, and among those who received money for sex in the past 30 days, 77.1% received money from more than one partner, with 70.9% of women in this group reporting five or more partners.

Table 4.3: Sex Partners by Sex

	Total			Sex						
	All Sites			female			male			
	n	%	CI	n	%	CI	n	%	CI	p-value
Had a sex partner in the past 30 days: regular										
yes	2,220	84.7	(82.6–86.5)	557	88.4	(84.5–91.4)	1,663	83.5	(81.1–85.7)	0.0322
N	2,657			632			2,025			
Had a sex partner in the past 30 days: casual										
yes	513	19.8	(17.6–22.2)	63	11.3	(8.1–15.5)	450	22.4	(19.8–25.3)	0.0000
N	2,638			629			2,009			
Had a sex partner in the past 30 days: commercial (buying - I paid)										
yes	54	1.8	(1.3–2.5)	1	0.2	(0.0–1.3)	53	2.3	(1.6–3.2)	0.0014
N	2,646			633			2,013			
Had a sex partner in the past 30 days: commercial (selling - I was paid)										
yes	70	2.5	(1.8–3.5)	59	7.5	(5.2–10.8)	11	1.0	(0.5–2.0)	0.0000
N	2,646			631			2,015			
Number of sex partners in the past 30 days: regular										
1	1,841	94.8	(93.0–96.1)	440	95.4	(92.1–97.4)	1,401	94.6	(92.4–96.2)	0.8321
2-4	71	4.9	(3.6–6.6)	18	4.2	(2.3–7.5)	53	5.1	(3.6–7.2)	
5+	4	0.3	(0.1–1.1)	2	0.4	(0.1–1.5)	2	0.3	(0.1–1.6)	
N	1,916			460			1,456			
Number of sex partners in the past 30 days: casual										
1	246	57.4	(50.9–63.6)	27	54.3	(37.7–70.0)	219	57.8	(50.8–64.6)	0.1449
2-4	152	36.0	(30.0–42.4)	15	31.1	(18.3–47.7)	137	36.7	(30.2–43.6)	
5+	27	6.7	(4.1–10.6)	5	14.6	(5.8–32.5)	22	5.5	(3.2–9.4)	
N	425			47			378			
Number of sex partners in the past 30 days: commercial (buying - I paid)										
1	24	57.7	(39.0–74.5)	0	0.0		24	59.6	(40.3–76.3)	0.0603
2-4	12	28.4	(15.3–46.4)	0	0.0		12	29.3	(15.8–47.7)	
5+	3	13.9	(4.2–37.3)	1	100.0		2	11.1	(2.6–37.2)	

	Total			Sex						
	All Sites			female			male			
	n	%	CI	n	%	CI	n	%	CI	p-value
N	39			1			38			
Number of sex partners in the past 30 days: commercial (selling - I was paid)										
1	10	22.8	(10.3–43.2)	2	1.8	(0.4–7.5)	8	77.2	(36.7–95.2)	0.0000
2-4	29	19.6	(12.0–30.5)	29	27.2	(16.4–41.7)	0	0.0		
5+	27	57.5	(40.1–73.3)	25	70.9	(56.0–82.4)	2	22.8	(4.8–63.3)	
N	66			56			10			
Number of sex partners in the past 30 days: total										
1	1,904	82.0	(79.6–84.2)	433	83.6	(79.0–87.4)	1,471	81.5	(78.6–84.1)	0.0000
2-4	303	13.9	(12.0–16.1)	54	8.2	(5.8–11.4)	249	15.7	(13.3–18.4)	
5+	77	4.1	(3.0–5.5)	40	8.2	(5.4–12.2)	37	2.8	(1.8–4.3)	
N	2,284			527			1,757			

Condom use by city and by type of sexual partner is presented in Figure 4.2. In all cities, the highest rate of condom use was observed in cases of sex with paying partners. Condom use was progressively lower in cases of sex with partners to whom PWID had paid for sex, with casual partners, and with regular partners.

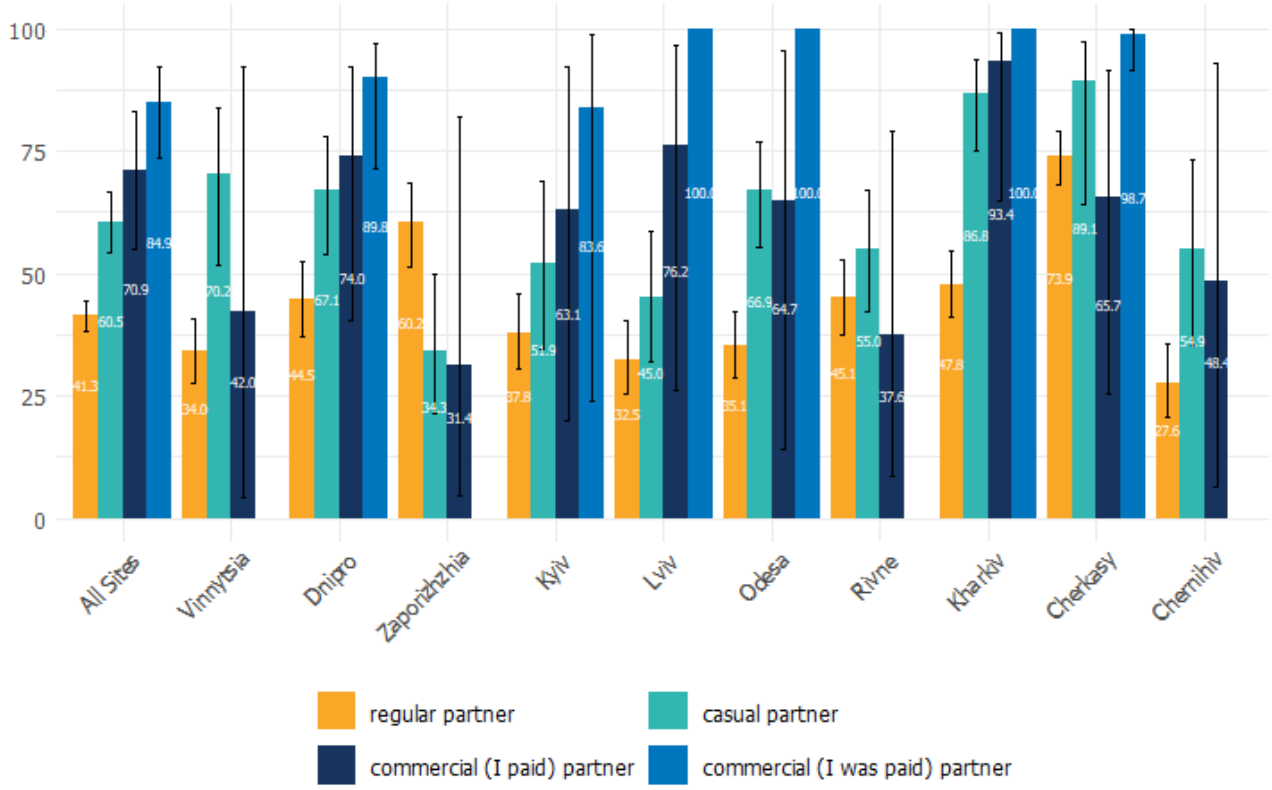

Figure 4.2: Condom Use During Last Sexual Encounter by Type of Partner by Survey Site

Historical trends in condom use during last sex, across the five cities included in most rounds of the PWID surveys (2007–2023), are shown in Figure 4.3. Between 2017 and 2020, a declining trend was observed. Although condom use improved in 2023 compared to 2020, it still remained lower than during the 2007–2013 period.

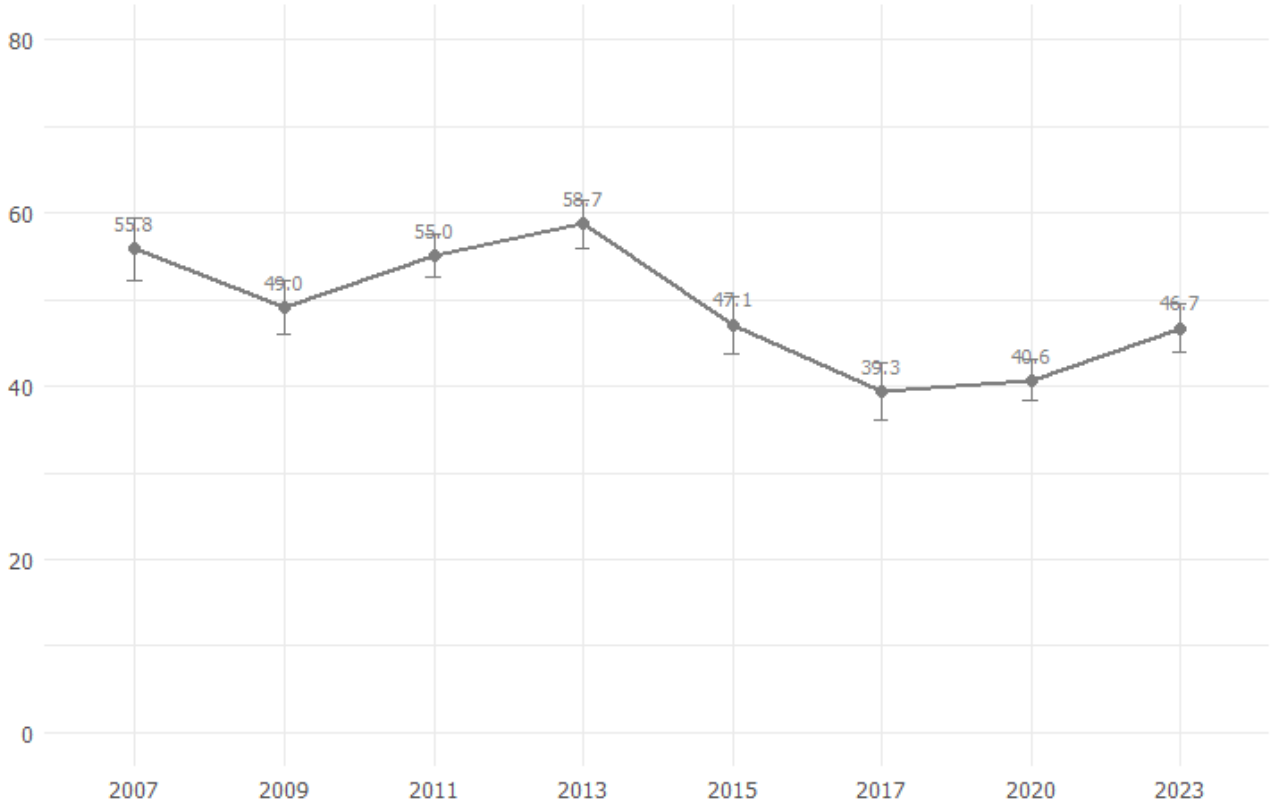

Figure 4.3: Trends in Condom Use During Last Sexual Encounter by Survey Round in 5 Sites

Condom use was less common among PWID living with a partner (36.8%), women (38.1%), PWID aged 45 and older (38.5%) (Table 4.4), and non-NGO clients (40.6%) (Table 4.5).

Table 4.4: Condom Use During Last Sexual Encounter by Sociodemographic Characteristics

		N	Used condom during last sex: if ever had sex				
			no		yes		
			n	% (CI)	n	% (CI)	p-value
Total							
	All Sites	4,489	2,494	55.9 (53.7–58.1)	1,995	44.1 (41.9–46.3)	1.0000
Sex							
	male	3,620	1,965	54.4 (51.8–56.9)	1,655	45.6 (43.1–48.2)	0.0052
	female	869	529	61.9 (57.3–66.4)	340	38.1 (33.6–42.7)	
Age							
	<25	119	57	51.5 (36.5–66.2)	62	48.5 (33.8–63.5)	0.0870
	25-34	930	496	54.4 (49.9–58.9)	434	45.6 (41.1–50.1)	
	35-44	2,333	1,264	54.5 (51.2–57.7)	1,069	45.5 (42.3–48.8)	
	45+	1,107	677	61.5 (57.3–65.5)	430	38.5 (34.5–42.7)	
Years since the start of injecting drug use							
	≤2	182	104	51.7 (40.9–62.5)	78	48.3 (37.5–59.1)	0.1174
	3-5	278	150	47.2 (38.6–55.9)	128	52.8 (44.1–61.4)	
	6-10	519	270	54.7 (48.7–60.6)	249	45.3 (39.4–51.3)	
	≥11	3,494	1,959	57.0 (54.4–59.6)	1,535	43.0 (40.4–45.6)	
Partnership status							

	N	Used condom during last sex: if ever had sex				
		no		yes		
		n	% (CI)	n	% (CI)	p-value
live alone	2,231	1,125	47.9 (44.7–51.2)	1,106	52.1 (48.8–55.3)	0.0000
live with partner	2,258	1,369	63.2 (60.3–66.1)	889	36.8 (33.9–39.7)	
Current employment status						
full-time	1,054	602	55.2 (50.7–59.6)	452	44.8 (40.4–49.3)	0.6972
part-time or temporary	2,342	1,286	55.6 (52.6–58.5)	1,056	44.4 (41.5–47.4)	
unemployed	632	355	58.3 (51.4–64.8)	277	41.7 (35.2–48.6)	
disabled	233	135	59.7 (49.0–69.6)	98	40.3 (30.4–51.0)	
other	226	115	50.8 (41.3–60.2)	111	49.2 (39.8–58.7)	
Monthly income category						
<3K	625	321	54.4 (48.0–60.7)	304	45.6 (39.3–52.0)	0.7301
3-10K	1,787	1,025	56.8 (53.2–60.3)	762	43.2 (39.7–46.8)	
10-20K	1,378	769	56.6 (52.5–60.6)	609	43.4 (39.4–47.5)	
≥20K	396	209	52.7 (45.7–59.6)	187	47.3 (40.4–54.3)	
Ever incarcerated						
no	3,068	1,654	53.9 (51.3–56.5)	1,414	46.1 (43.5–48.7)	0.0223
yes	1,374	805	59.7 (55.4–63.9)	569	40.3 (36.1–44.6)	

Table 4.5: Condom Use During Last Sexual Encounter by Selected Subgroups

	N	Used condom during last sex: if ever had sex				
		no		yes		
		n	% (CI)	n	% (CI)	p-value
Client of NGO working with PWID						
no	2,955	1,757	59.4 (56.6–62.2)	1,198	40.6 (37.8–43.4)	0.0000
yes	1,495	721	48.0 (44.5–51.6)	774	52.0 (48.4–55.5)	
Treated with MAT currently (of all)						
no	3,579	2,011	56.3 (53.8–58.8)	1,568	43.7 (41.2–46.2)	0.4224
yes	849	451	54.1 (49.1–58.9)	398	45.9 (41.1–50.9)	
HIV test result						
positive	726	326	46.0 (40.8–51.2)	400	54.0 (48.8–59.2)	0.0001
negative	3,763	2,168	57.8 (55.4–60.2)	1,595	42.2 (39.8–44.6)	
Past 30 days injecting 4 categories						
opioids	3,239	1,778	55.2 (52.6–57.9)	1,461	44.8 (42.1–47.4)	0.0683
stimulants	605	366	57.8 (52.1–63.3)	239	42.2 (36.7–47.9)	
opi+stimul	619	331	55.4 (49.8–60.8)	288	44.6 (39.2–50.2)	
other	26	19	85.6 (54.3–96.7)	7	14.4 (3.3–45.7)	
Injecting drug type of choice						
opioids	3,708	2,023	55.2 (52.8–57.7)	1,685	44.8 (42.3–47.2)	0.5908
stimulants	736	445	59.1 (53.8–64.1)	291	40.9 (35.9–46.2)	

	N	Used condom during last sex: if ever had sex			
		no		yes	
		n	% (CI)	n	% (CI)	p-value
other	27	15	55.3 (23.4–83.3)	12	44.7 (16.7–76.6)	

A more detailed breakdown of condom use by sex and type of partner is presented in Table 4.6 and Figures 4.4 and 4.5.

Table 4.6: Condom use by type of partner by Sex

	Total			Sex						
	All Sites			female			male			
	n	%	CI	n	%	CI	n	%	CI	p-value
Used condom during last sex: regular partner										
yes	968	41.3	(38.2–44.5)	213	34.4	(29.1–40.2)	755	43.6	(39.8–47.4)	0.0089
N	2,211			555			1,656			
Used condom during last sex: casual partner										
yes	311	60.5	(54.1–66.6)	36	62.6	(46.8–76.1)	275	60.2	(53.2–66.8)	0.7798
N	517			65			452			
Used condom during last sex: commercial (I paid) partner										
yes	37	70.9	(54.8–83.0)	0	0.0		37	72.5	(56.4–84.3)	0.1113
N	56			1			55			
Used condom during last sex: commercial (I was paid) partner										
yes	62	84.9	(73.5–92.0)	56	98.0	(90.4–99.6)	6	62.1	(35.5–83.0)	0.0000
N	76			58			18			
Condom use frequency: regular partner										
always	576	23.7	(21.2–26.4)	106	18.4	(14.1–23.8)	470	25.4	(22.5–28.6)	0.0131
often	236	10.5	(8.8–12.6)	80	13.5	(10.2–17.5)	156	9.6	(7.6–12.0)	
half	110	5.3	(4.2–6.8)	21	3.1	(1.9–5.2)	89	6.1	(4.6–8.0)	
sometimes	88	5.2	(3.7–7.3)	21	4.1	(2.5–6.6)	67	5.6	(3.7–8.3)	
rarely	152	9.0	(7.3–11.0)	35	8.8	(6.0–12.9)	117	9.0	(7.0–11.5)	
never	1,033	46.2	(43.0–49.5)	288	52.0	(46.0–58.0)	745	44.3	(40.6–48.1)	
N	2,195			551			1,644			
Condom use frequency: casual partner										
always	226	43.6	(37.5–49.8)	21	31.2	(18.8–47.2)	205	45.4	(38.9–52.2)	0.0025
often	47	11.3	(7.7–16.3)	7	24.8	(10.4–48.5)	40	9.3	(6.3–13.4)	
half	38	7.1	(4.7–10.6)	5	6.2	(1.9–18.5)	33	7.3	(4.7–11.0)	
sometimes	29	5.4	(3.3–8.8)	8	15.5	(7.4–29.9)	21	3.9	(2.0–7.4)	
rarely	38	8.7	(5.3–13.8)	3	2.2	(0.7–7.3)	35	9.6	(5.9–15.5)	
never	130	23.9	(18.6–30.1)	18	19.9	(10.5–34.5)	112	24.5	(18.7–31.4)	
N	508			62			446			
Condom use frequency: commercial (I paid) partner										
always	30	47.6	(31.7–64.0)	0	0.0		30	48.6	(32.3–65.2)	0.4441
often	8	12.8	(6.2–24.8)	1	100.0		7	11.0	(5.0–22.4)	
half	4	8.5	(2.4–26.2)	0	0.0		4	8.7	(2.5–26.7)	
sometimes	3	10.7	(2.2–38.4)	0	0.0		3	10.9	(2.3–39.0)	
rarely	3	1.3	(0.3–4.6)	0	0.0		3	1.3	(0.4–4.7)	
never	10	19.1	(9.0–35.9)	0	0.0		10	19.5	(9.2–36.5)	
N	58			1			57			
Condom use frequency: commercial (I was paid) partner										
always	40	52.8	(37.4–67.7)	34	61.0	(43.4–76.2)	6	38.6	(16.4–66.8)	0.0003
often	18	21.2	(12.2–34.3)	17	31.5	(17.9–49.1)	1	3.4	(0.5–21.5)	
half	11	8.3	(3.2–20.1)	9	6.1	(2.9–12.3)	2	12.1	(2.2–45.9)	
sometimes	5	10.0	(2.8–30.1)	1	1.4	(0.2–9.5)	4	25.0	(6.6–60.9)	
rarely	3	2.7	(0.8–8.5)	0	0.0		3	7.3	(2.1–22.8)	
never	4	5.0	(1.6–14.4)	0	0.0		4	13.6	(4.2–36.3)	
N	81			61			20			

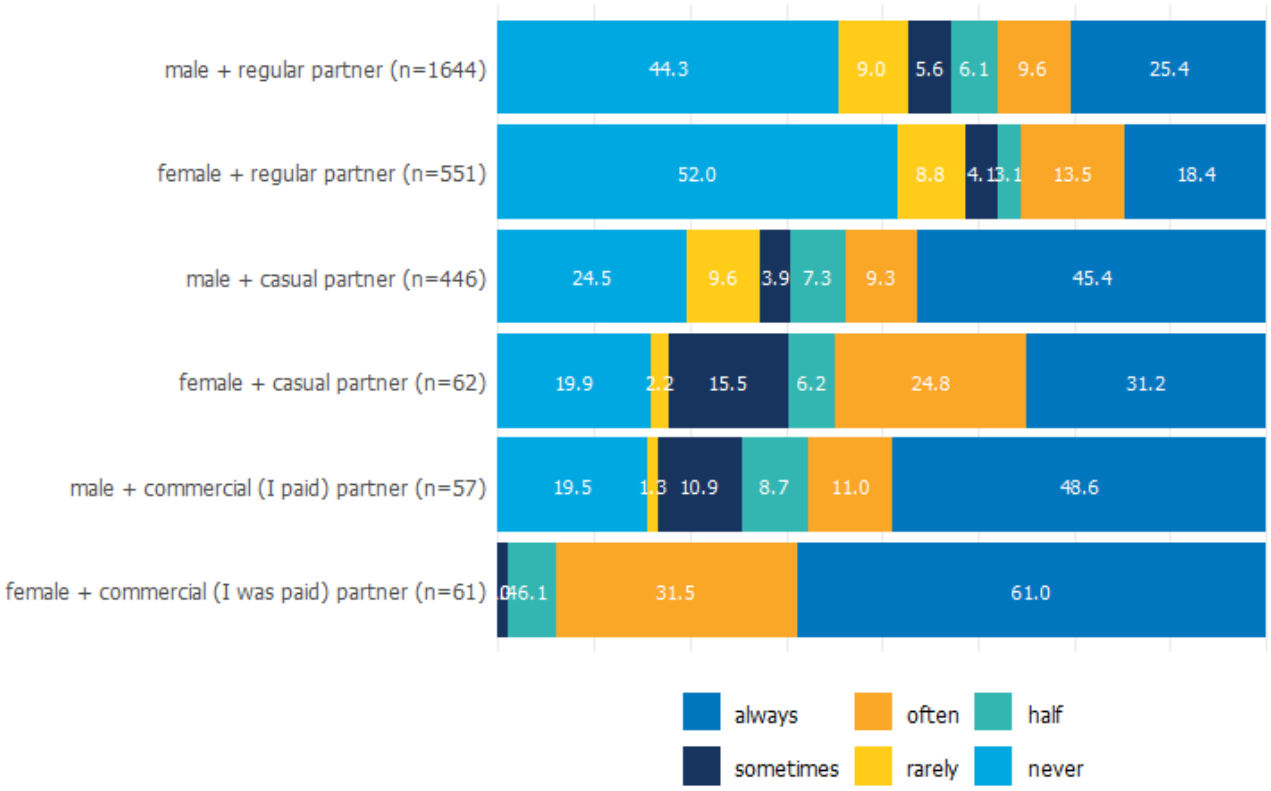

Figure 4.4: Frequency of condom use by type of partner by Sex

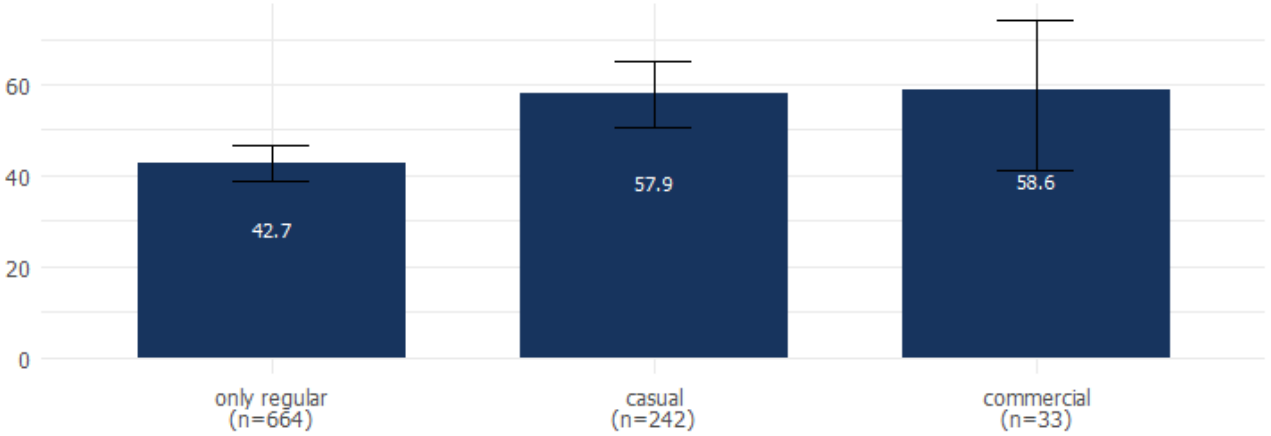

Figure 4.5: Frequency of condom use among men during the last sexual encounter by the riskiest type of partner in the past 30 days

5. HIV, HCV, and Syphilis Testing Results

According to rapid test results, the overall HIV prevalence among PWID was 16.5% [95% CI: 15.0-18.1] (Figure 5.1). The highest prevalence rates were observed among PWID in Odesa (22.1% [18.6-26.0]), Chernihiv (18.4% [14.4-23.3]), Kyiv (17.9% [14.3-22.2]), Dnipro (17.5% [13.9-21.8]), and Cherkasy (17% [13.7-20.9]), while the significantly lower level was recorded in Zaporizhzhia (4.1% [2.6-6.3]).

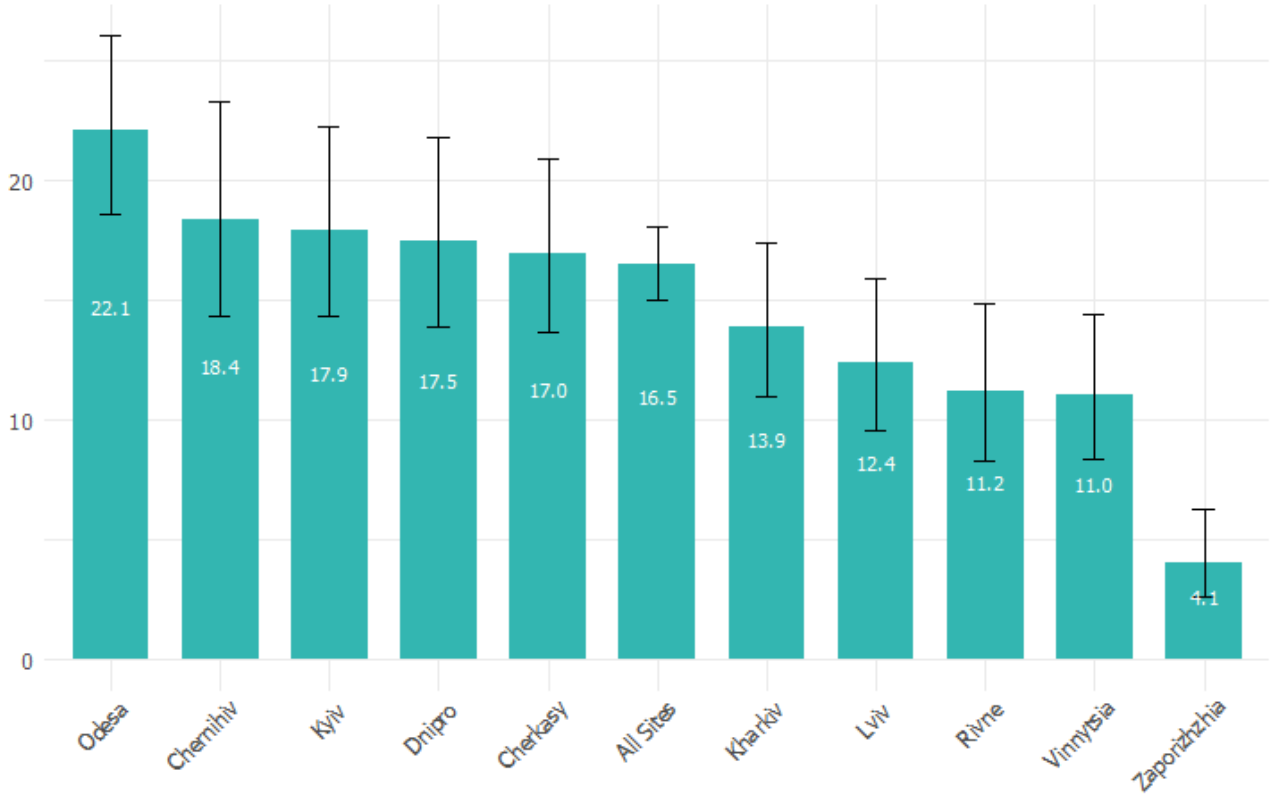

Figure 5.1: HIV Test Result by Survey Site

Higher HIV prevalence was observed among women (20.9%), PWID aged 45 and older (25.4%), persons with disabilities (31.8%), people with the lowest income level (22.8%), and with a history of incarceration (22.7%) (Table 5.1).

Table 5.1: HIV Prevalence by Sociodemographic Characteristics

			HIV test result			
	N	positive		negative		
		n	% (CI)	n	% (CI)	p-value
Total						
All Sites	5,002	802	16.5 (15.0–18.1)	4,200	83.5 (81.9–85.0)	1.0000
Sex						
male	4,042	607	15.4 (13.8–17.1)	3,435	84.6 (82.9–86.2)	0.0042
female	960	195	20.9 (17.5–24.8)	765	79.1 (75.2–82.5)	
Age						
<25	131	9	9.8 (4.1–21.5)	122	90.2 (78.5–95.9)	0.0000
25-34	1,006	75	8.0 (5.9–10.7)	931	92.0 (89.3–94.1)	
35-44	2,588	442	16.3 (14.3–18.5)	2,146	83.7 (81.5–85.7)	
45+	1,277	276	25.4 (21.8–29.3)	1,001	74.6 (70.7–78.2)	
Years since the start of injecting drug use						
≤2	200	11	6.6 (3.1–13.3)	189	93.4 (86.7–96.9)	0.0000
3-5	294	29	8.3 (5.4–12.7)	265	91.7 (87.3–94.6)	
6-10	564	49	9.0 (6.2–12.9)	515	91.0 (87.1–93.8)	
≥11	3,919	710	19.0 (17.2–21.0)	3,209	81.0 (79.0–82.8)	
Partnership status						

	N	HIV test result positive n	positive % (CI)	negative n	negative % (CI)	p-value
live alone	2,562	440	17.5 (15.4–19.9)	2,122	82.5 (80.1–84.6)	0.1972
live with partner	2,440	362	15.5 (13.5–17.7)	2,078	84.5 (82.3–86.5)	
Current employment status						
full-time	1,137	164	14.5 (11.7–17.8)	973	85.5 (82.2–88.3)	0.0001
part-time or temporary	2,609	370	15.6 (13.6–17.8)	2,239	84.4 (82.2–86.4)	
unemployed	737	149	18.6 (14.9–23.0)	588	81.4 (77.0–85.1)	
disabled	263	89	31.8 (23.4–41.6)	174	68.2 (58.4–76.6)	
other	251	29	12.9 (8.2–19.8)	222	87.1 (80.2–91.8)	
Monthly income category						
<3K	691	170	22.8 (18.4–27.8)	521	77.2 (72.2–81.6)	0.0009
3-10K	2,056	326	17.0 (14.7–19.6)	1,730	83.0 (80.4–85.3)	
10-20K	1,479	188	13.3 (10.9–16.1)	1,291	86.7 (83.9–89.1)	
≥20K	413	56	13.0 (9.3–17.9)	357	87.0 (82.1–90.7)	
Ever incarcerated						
no	3,419	444	13.9 (12.3–15.8)	2,975	86.1 (84.2–87.7)	0.0000
yes	1,483	356	22.7 (19.6–26.1)	1,127	77.3 (73.9–80.4)	

Table 5.2: HIV Prevalence by Selected Subgroups

	N	HIV test result positive n	positive % (CI)	negative n	negative % (CI)	p-value
Client of NGO working with PWID						
no	3,304	384	13.4 (11.7–15.3)	2,920	86.6 (84.7–88.3)	0.0000
yes	1,651	411	24.0 (21.3–27.1)	1,240	76.0 (72.9–78.7)	
Treated with MAT currently (of all)						
no	3,969	501	14.7 (13.1–16.4)	3,468	85.3 (83.6–86.9)	0.0000
yes	946	289	27.2 (23.3–31.6)	657	72.8 (68.4–76.7)	
Past 30 days injecting 4 categories						
opioids	3,579	634	17.3 (15.6–19.2)	2,945	82.7 (80.8–84.4)	0.1245
stimulants	677	75	15.4 (11.4–20.5)	602	84.6 (79.5–88.6)	
opi+stimul	716	90	13.7 (10.5–17.8)	626	86.3 (82.2–89.5)	
other	30	3	3.9 (0.8–17.6)	27	96.1 (82.4–99.2)	
Injecting drug type of choice						
opioids	4,133	712	17.1 (15.5–18.8)	3,421	82.9 (81.2–84.5)	0.3420
stimulants	814	80	13.9 (10.4–18.3)	734	86.1 (81.7–89.6)	
other	33	6	13.2 (4.1–35.3)	27	86.8 (64.7–95.9)	

An analysis of HIV prevalence trends from 2007 to 2023 shows that it ranged between 25.2% and 18.1%, with an average of just over 21% during this period

(Figure 5.2). The confidence intervals for most survey rounds overlapped, indicating that there were no statistically significant changes in prevalence between rounds.

It is also important to consider HIV prevalence among the youngest age group (under 25), as this can serve as a proxy indicator of HIV incidence. Between 2007 and 2023, prevalence in this group ranged from 12.9% to 4.1%, with an average of approximately 9%. Although the prevalence decreased from 8.2% [3.3-18.8] in 2017 to 4.1% [1.5-10.7] in 2020, and then rose sharply to 9.8% [4.0-21.9] in 2023, the confidence intervals for these three data points are very wide (due to the small size of this subgroup) and overlap, indicating that these differences are not statistically significant and should be interpreted with caution.

It is also noteworthy that point estimates of HIV prevalence among PWID with less than three years of injection experience did not show such marked fluctuations between 2020 and 2023.

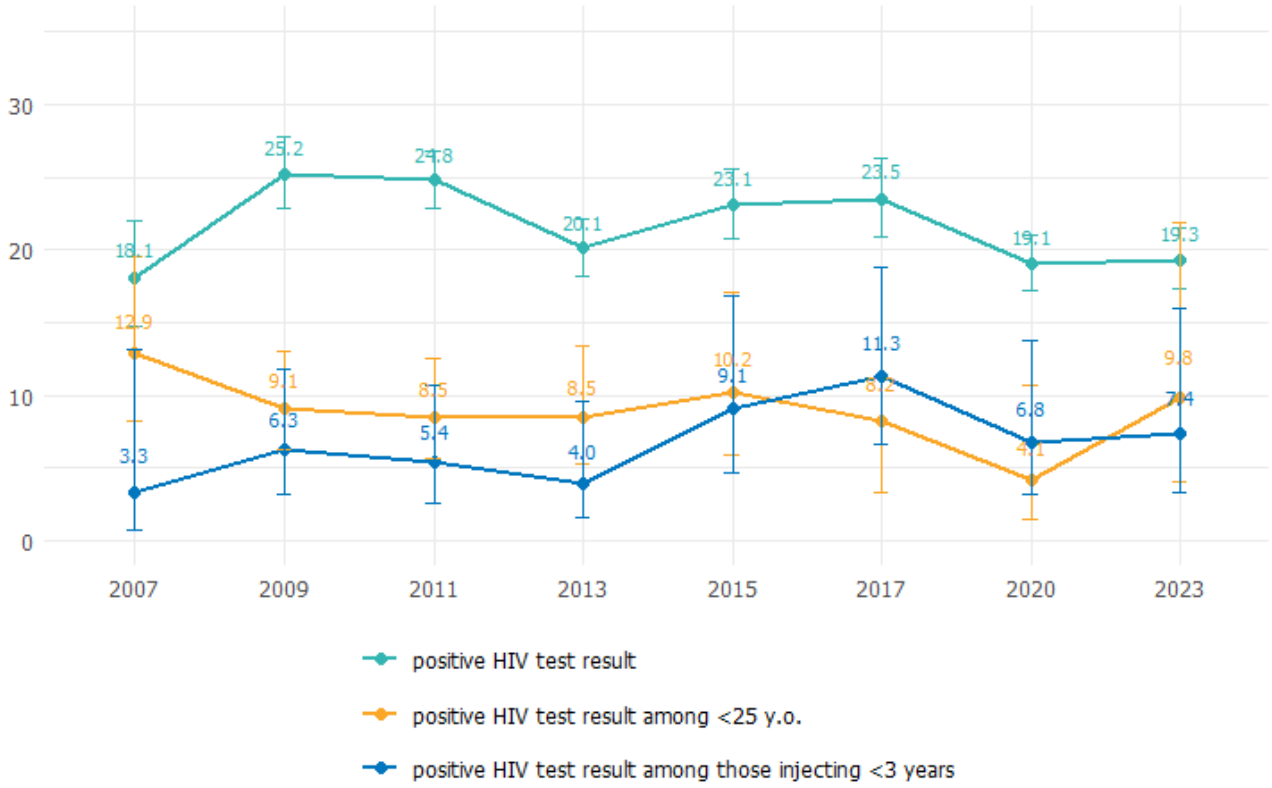

Figure 5.2: Trends in HIV Prevalence by Survey Round in 5 Sites

An analysis of HIV prevalence by site over the period 2007–2023 (Figure 5.3) reveals a more nuanced picture. In Cherkasy, for example, HIV prevalence peaked sharply in 2017 at 41.9% [37.0–47.0], followed by a gradual decline to 17.3% [13.9–21.3] in 2023. At the same time, HIV prevalence among PWID under the age of 25 was 0% in 2017–2020 but rose to 7.9% in 2023, which may indicate a potential increase in HIV incidence. However, the size of the younger subgroup in Cherkasy was very small (n = 8), resulting in wide confidence intervals [1.0–43.4] and leaving open the possibility of random variation in this estimate.

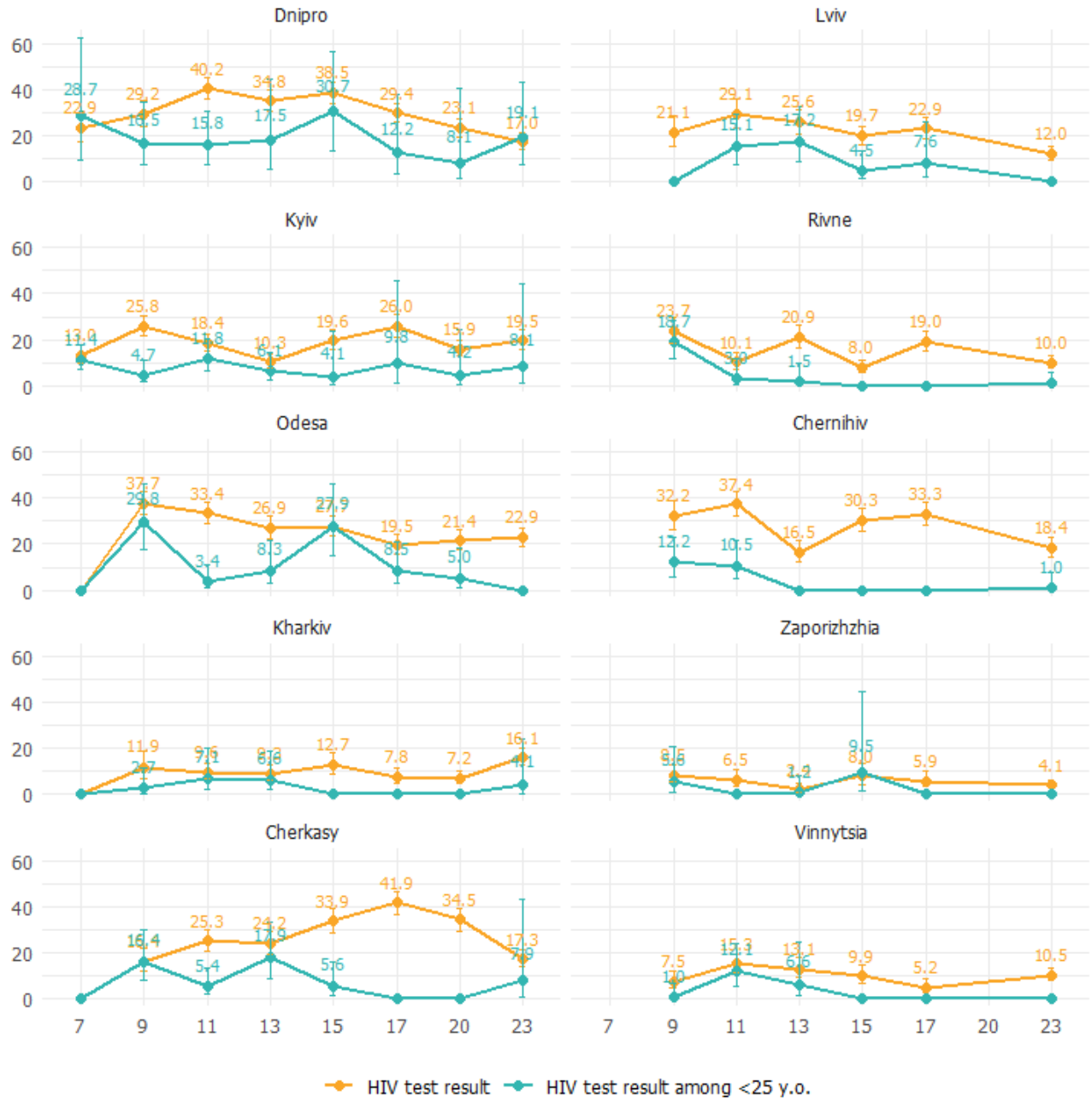

Figure 5.3: Trends in HIV Prevalence by Survey Round by Site

In the 2023 round of the PWID SLBBC, due to procurement and logistical issues with rapid HCV antibody tests, a significant portion (39.6%) of PWID were unable to undergo the testing (Figure 5.4). As a result, only in the city of Rivne did anti-HCV antibody testing coverage approach 100%. Consequently, the anti-HCV antibody testing results presented below (Figure 5.5) should be interpreted with great caution, keeping in mind that they do not include a substantial proportion (14.4%-47.5%, and in the city of Kyiv, the vast majority – 66.9%) of participants in each site.

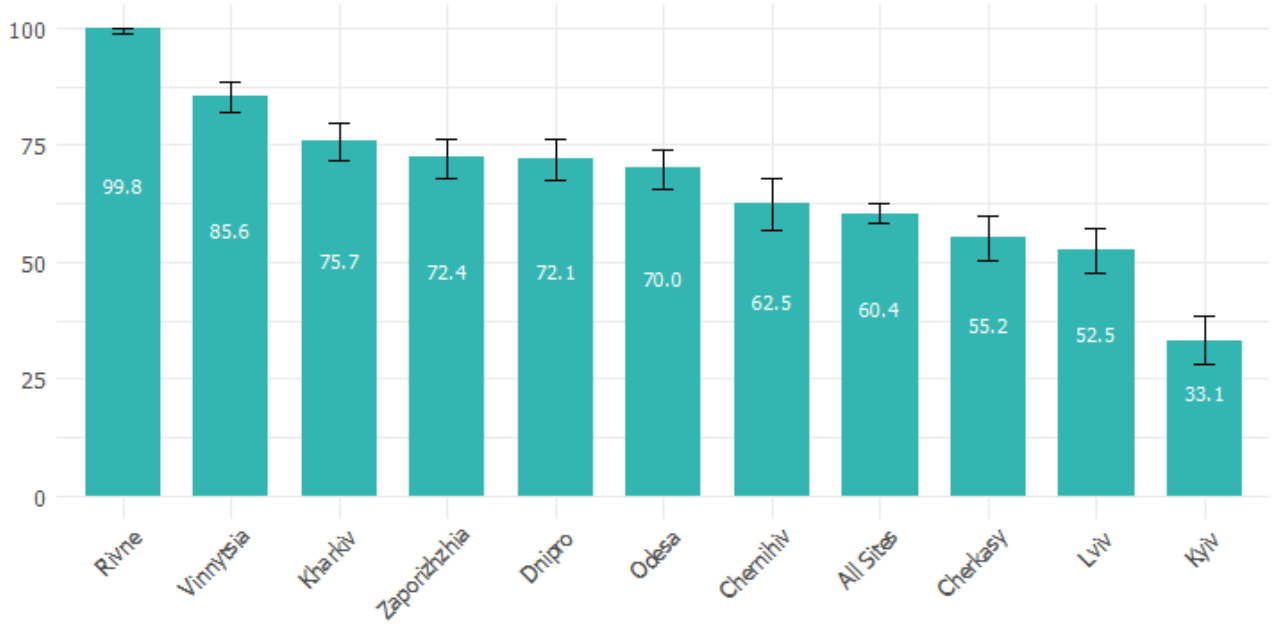

Figure 5.4: Anti-HCV Testing Coverage In the Survey by Survey Site

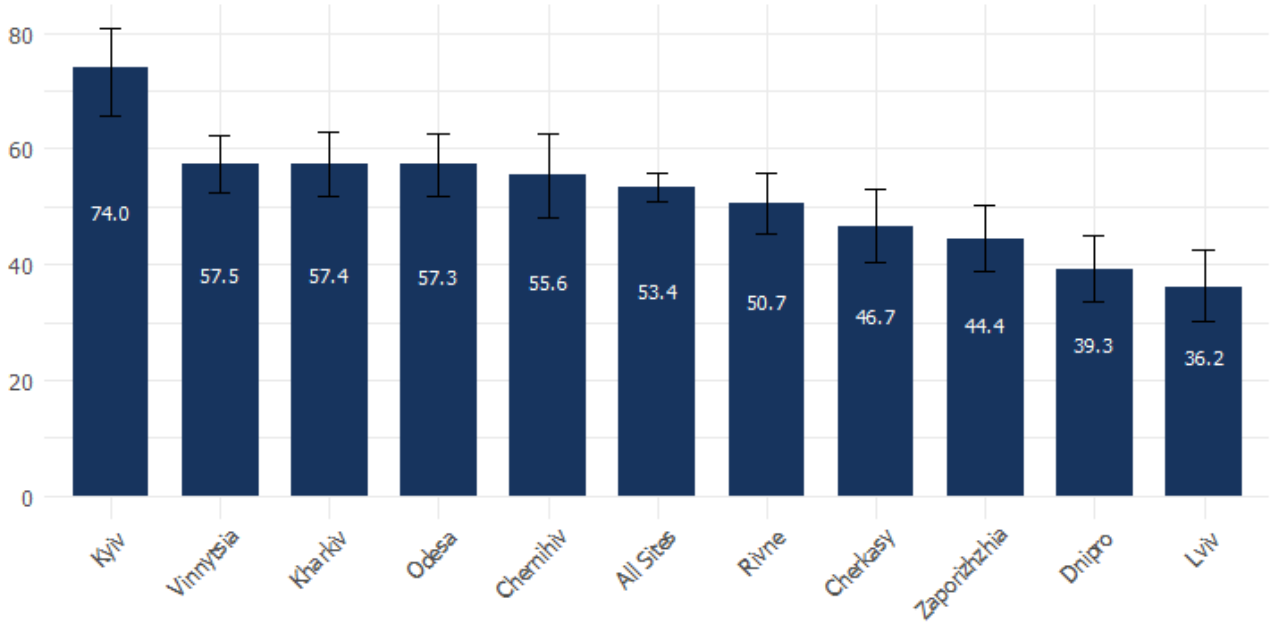

Figure 5.5: Anti-HCV Test Results by Survey Site

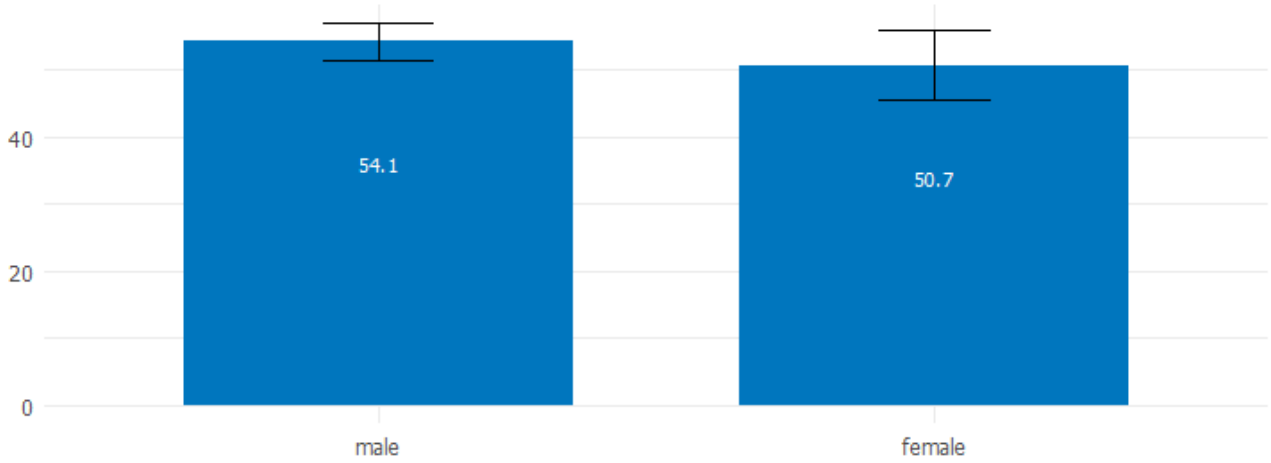

Figure 5.6: Anti-HCV Test Results by Sex

Since 2011, when anti-HCV prevalence was first assessed in the SLBBC, there has been a consistent upward trend among all PWID, from 44.8% in 2011 to 77.1% in 2020 (Figure 5.7). In contrast, a notable decline in anti-HCV prevalence has been observed among younger PWID (under 25 years) starting from 2013, from 51.1% to 28.2% in 2020. While the 2023 round appears to show a reversal of these trends, this may be attributed to uneven testing coverage across survey sites, the smaller proportion of PWID under the age of 25, and the wide confidence intervals.

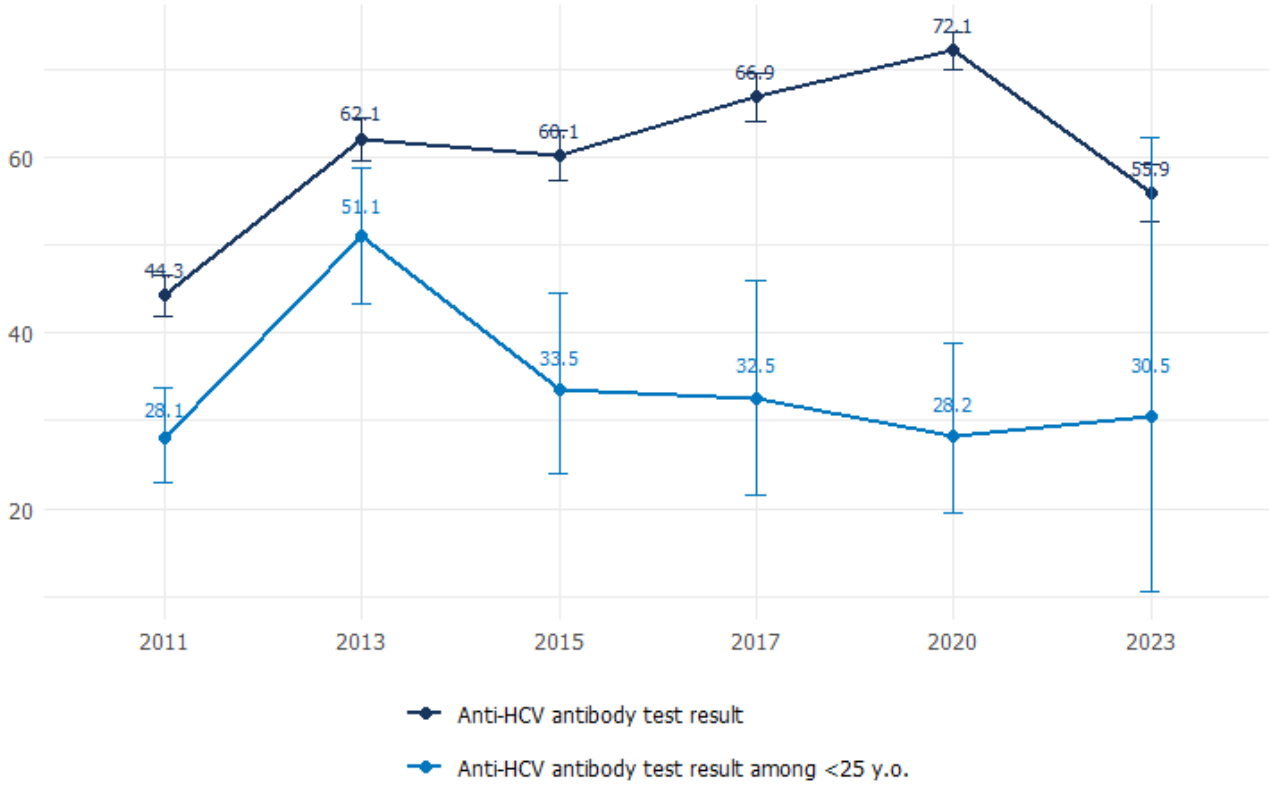

Figure 5.7: Trends in Anti-HCV Prevalence by Survey Round in 5 Sites

The average prevalence of syphilis antibodies in all cities of the study was 3.6%. The highest prevalence was recorded in Dnipro (8.9%) (which may be related to the high proportion of women in this sample), Zaporizhzhia (6.2%) and Chernihiv (5.9%).

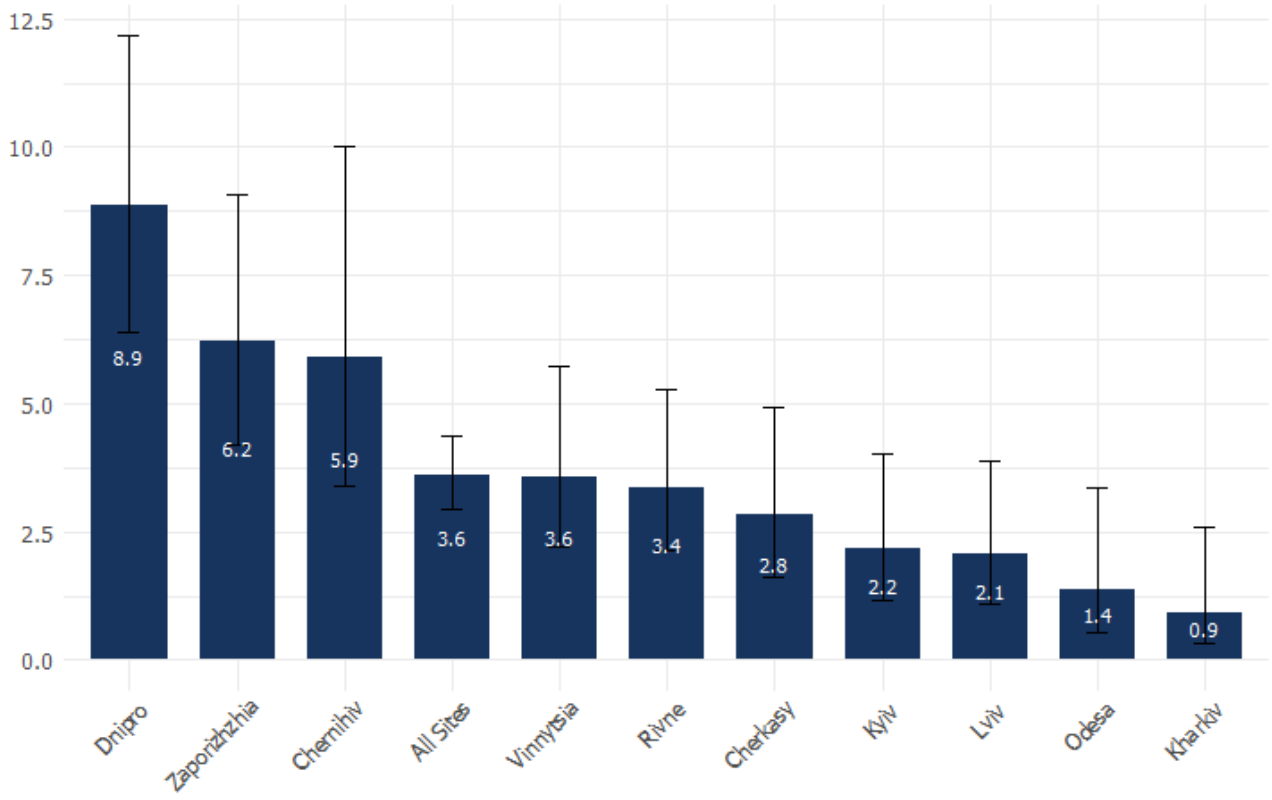

Figure 5.8: Syphilis Test Results by Survey Site

6. HIV Incidence

From a total of 802 PWID who tested positive with HIV rapid test, 788 were tested for recent infection. Of them, 23 (2.9%) were classified as recent.

Incidence calculation using RDS and correction weights yielded an estimate of 0.262 [0-0.658] per 100 person-years. Importantly, relative standard error of the estimate was 77.588, suggesting that the estimate is unreliable. The unweighted calculation yielded an estimate of 0.912 [0.385-1.465], with relative standard error of 30.753.

City-level incidence estimates are provided in Table 6.1. Due to the low number of recent infections, incidence estimates using RDS weights could not be calculated for six cities, and for those that were calculated, large standard errors indicated low reliability.

Table 6.1: HIV Incidence by Survey Site

	HIV positive		Tested for recency	HIV recent		HIV incidence per 100 person-years			
	n	%	n	n	%	estimate	LL	UL	SE
Weighted									
Vinnytsia	52	11.1%	52	1	3.1%	0.65	0.00	2.39	104.60
Dnipro	85	17.5%	85	1	NA				
Zaporizhzhia	21	4.1%	17	0	NA				
Kyiv City	102	19.4%	102	2	1.5%				
Lviv	60	12.4%	60	9	8.8%	2.66	0.44	5.42	47.74
Odesa	117	22.1%	114	1	NA				
Rivne	83	16.3%	83	0	NA				
Kharkiv	77	13.9%	75	1	NA				
Cherkasy	87	17.0%	85	4	3.8%	1.38	0.00	4.60	92.43
Chernihiv	118	22.7%	115	4	2.2%	0.91	0.00	4.38	139.96
Total	**802**	**17.3%**	**788**	**23**	**1.4%**	**0.26**	**0.00**	**0.66**	**77.59**

	HIV positive		Tested for recency	HIV recent		HIV incidence per 100 person-years			
	n	%	n	n	%	estimate	LL	UL	SE
Unweighted									
Vinnytsia	52	10.4%	52	1	1.9%	0.28	0.00	1.38	153.39
Dnipro	85	17.0%	85	1	1.2%	0.13	0.00	1.27	334.77
Zaporizhzhia	21	4.2%	17	0	0.0%				
Kyiv City	102	20.4%	102	2	2.0%	0.64	0.00	2.34	115.71
Lviv	60	12.0%	60	9	15.0%	4.55	1.44	8.01	36.80
Odesa	117	23.4%	114	1	0.9%	0.00	0.00	1.29	0.00
Rivne	83	16.5%	83	0	0.0%				
Kharkiv	77	15.4%	75	1	1.3%	0.19	0.00	1.33	242.53
Cherkasy	87	17.4%	85	4	4.7%	1.90	0.00	4.31	61.58
Chernihiv	118	23.6%	115	4	3.5%	1.88	0.00	4.33	64.05
Total	**802**	**16.0%**	**788**	**23**	**2.9%**	**0.91**	**0.38**	**1.47**	**30.75**

7. HIV Prevention

HIV-negative PWID (negative according to self-report) generally perceived their risk of HIV infection through parenteral or sexual transmission as low (Figure 7.1). On average, only one in six PWID (16.8%) reported a potential risk of HIV infection via parenteral routes in the past month, while 12.2% indicated a possible risk through sexual transmission. In each of the ten survey cities, the perceived parenteral risk was higher than the sexual risk. Notably high figures of both parenteral and sexual perceived risk were observed in Zaporizhzhia (57.8% and 55.6%) and Cherkasy (40.6% and 34.4%), respectively. Given the differences in prevention coverage by city (see Figure 7.3), the elevated risk perception likely reflects not a lack of access to services but rather the effect of prevention interventions that increase the awareness of infection risks.

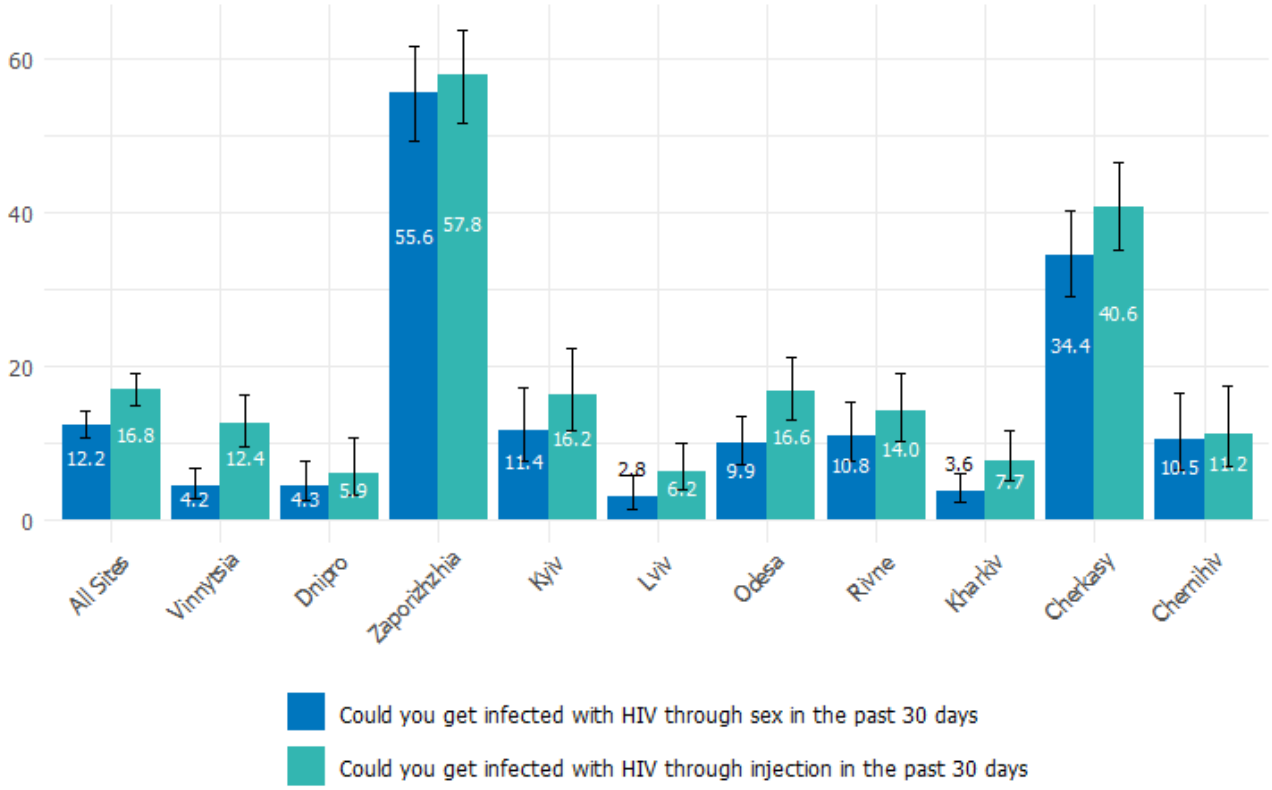

Figure 7.1: Injecting and Sex Risk Perception Among HIV-negative PWID by Survey Site

Nearly one-third (29.6%) of PWID reported being clients of NGOs providing preventive services for PWID (Table 7.2). A higher proportion of NGO clients was

observed among unemployed PWID (41.5%), the least affluent PWID (40.7%), older age groups, PWID with a longer history of injection drug use, and women (32.8%).

Table 7.1: Being a Client of NGO by Sociodemographic Characteristics

		N	Client of NGO working with PWID				
			no		yes		
			n	% (CI)	n	% (CI)	p-value
Total							
	All Sites	4,955	3,304	70.4 (68.6–72.2)	1,651	29.6 (27.8–31.4)	1.0000
Sex							
	male	4,000	2,712	71.3 (69.3–73.2)	1,288	28.7 (26.8–30.7)	0.0752
	female	955	592	67.2 (62.9–71.2)	363	32.8 (28.8–37.1)	
Age							
	<25	131	99	81.9 (72.4–88.6)	32	18.1 (11.4–27.6)	0.0000
	25-34	999	723	74.9 (71.2–78.3)	276	25.1 (21.7–28.8)	
	35-44	2,563	1,704	71.0 (68.4–73.4)	859	29.0 (26.6–31.6)	
	45+	1,262	778	63.6 (59.8–67.3)	484	36.4 (32.7–40.2)	
Years since the start of injecting drug use							
	≤2	200	169	89.2 (82.9–93.3)	31	10.8 (6.7–17.1)	0.0000
	3-5	292	232	81.3 (75.3–86.2)	60	18.7 (13.8–24.7)	
	6-10	559	427	75.7 (70.5–80.2)	132	24.3 (19.8–29.5)	
	≥11	3,879	2,460	67.5 (65.4–69.6)	1,419	32.5 (30.4–34.6)	
Partnership status							
	live alone	2,540	1,720	69.9 (67.3–72.4)	820	30.1 (27.6–32.7)	0.5856
	live with partner	2,415	1,584	70.9 (68.4–73.4)	831	29.1 (26.6–31.6)	
Current employment status							
	full-time	1,129	799	75.8 (72.2–79.0)	330	24.2 (21.0–27.8)	0.0008
	part-time or temporary	2,587	1,738	68.5 (65.9–70.9)	849	31.5 (29.1–34.1)	
	unemployed	726	458	72.0 (67.1–76.5)	268	28.0 (23.5–32.9)	
	disabled	259	144	58.5 (48.5–67.8)	115	41.5 (32.2–51.5)	
	other	249	160	74.3 (66.6–80.8)	89	25.7 (19.2–33.4)	
Monthly income category							
	<3K	685	361	59.3 (53.4–64.9)	324	40.7 (35.1–46.6)	0.0001
	3-10K	2,034	1,374	70.5 (67.7–73.2)	660	29.5 (26.8–32.3)	
	10-20K	1,465	1,034	73.3 (70.0–76.3)	431	26.7 (23.7–30.0)	
	≥20K	410	278	71.6 (65.2–77.2)	132	28.4 (22.8–34.8)	
Ever incarcerated							
	no	3,386	2,348	72.5 (70.4–74.6)	1,038	27.5 (25.4–29.6)	0.0031
	yes	1,474	895	66.5 (62.8–69.9)	579	33.5 (30.1–37.2)	

Table 7.2: Being a Client of NGO by Selected Subgroups

	N	Client of NGO working with PWID				
		no		yes		
		n	% (CI)	n	% (CI)	p-value
Treated with MAT currently (of all)						
no	3,939	2,964	76.4 (74.5–78.2)	975	23.6 (21.8–25.5)	0.0000
yes	934	286	33.3 (28.9–37.9)	648	66.7 (62.1–71.1)	
HIV test result						
positive	795	384	57.0 (52.0–61.8)	411	43.0 (38.2–48.0)	0.0000
negative	4,160	2,920	73.1 (71.2–74.9)	1,240	26.9 (25.1–28.8)	
Past 30 days injecting 4 categories						
opioids	3,550	2,241	68.5 (66.3–70.6)	1,309	31.5 (29.4–33.7)	0.0000
stimulants	672	555	81.8 (77.6–85.4)	117	18.2 (14.6–22.4)	
opi+stimul	703	485	67.4 (62.4–72.1)	218	32.6 (27.9–37.6)	
other	30	23	88.0 (64.0–96.8)	7	12.0 (3.2–36.0)	
Injecting drug type of choice						
opioids	4,091	2,601	68.0 (66.0–70.0)	1,490	32.0 (30.0–34.0)	0.0000
stimulants	810	662	81.1 (77.2–84.5)	148	18.9 (15.5–22.8)	
other	32	24	87.4 (66.6–96.0)	8	12.6 (4.0–33.4)	

Over the past 12 months, 42.7% of PWID received free syringes or needles from NGOs or social workers, 36.6% received free condoms, 38.5% received counseling, 33.1% were tested for HIV, 32.0% were tested for viral hepatitis B or C, 26.0% underwent syphilis antibody testing, and 26.5% received tuberculosis screening (Figure 7.2).

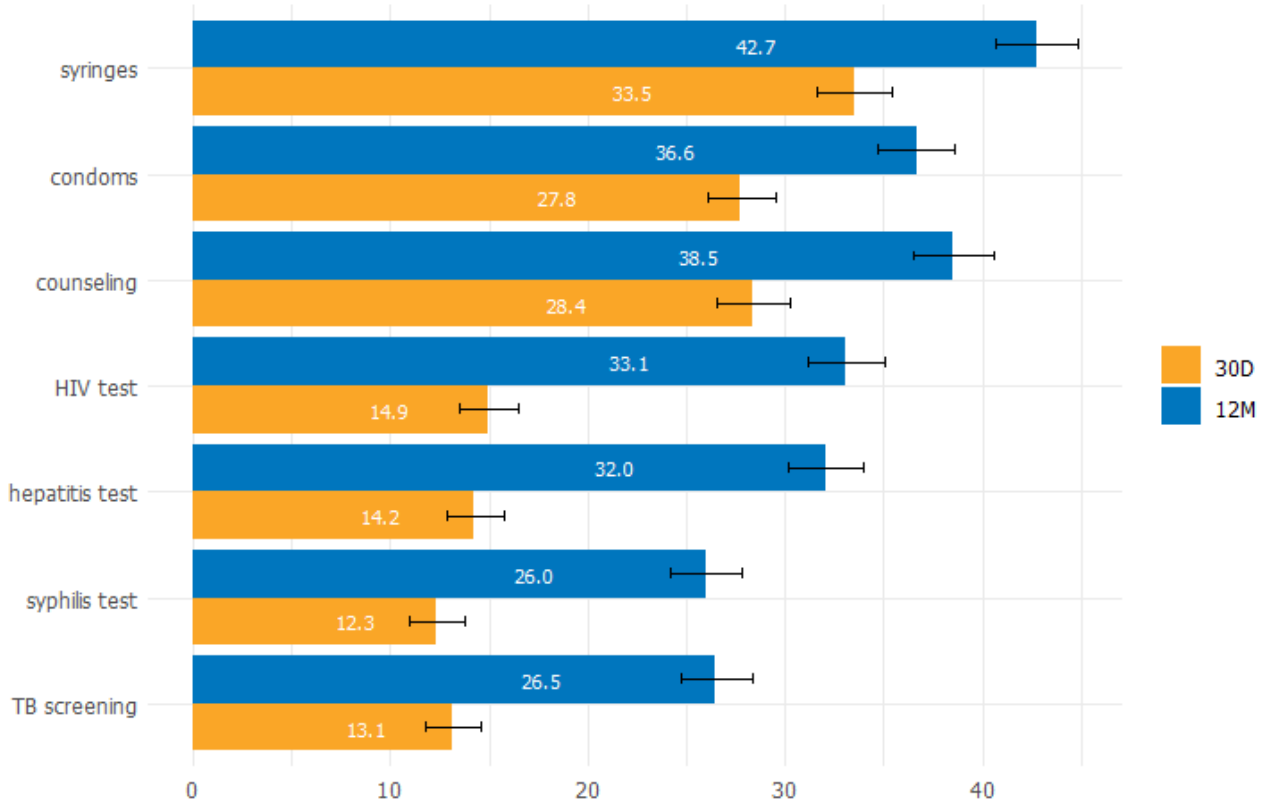

Figure 7.2: Received HIV Prevention Services in the Past 12 Months and 30 days

Coverage of syringe and condom distribution and HIV testing services varied across cities, with the lowest levels observed in Lviv, Vinnytsia, and Dnipro (Figure 7.3).

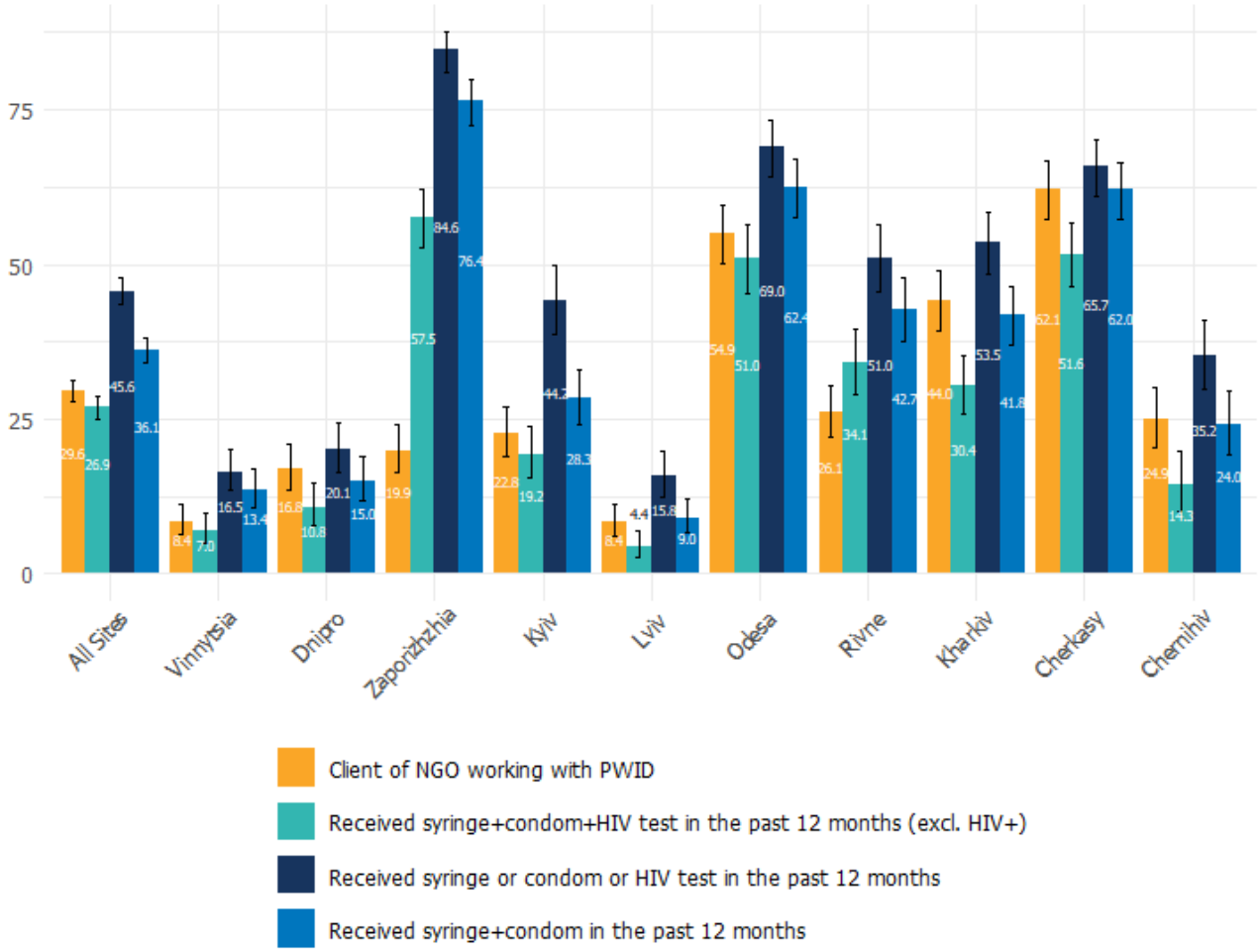

Figure 7.3: Receiving Package of Prevention Services in the Past 12 Months by Survey Site

Figure 7.4 describes the trends in access to three key HIV prevention services in the past 12 months (syringes, condoms, and HIV testing) across six rounds of the surveys conducted between 2011 and 2023 in five sentinel cities.

Between 2011 and 2013, all three indicators showed a substantial increase, reaching their peak in 2013. However, this peak may be partially attributed to the oversampling of NGO clients in the 2013 round (Dumchev et al., 2024). Even when accounting for the potential inflation of the 2013 estimates, a consistent decline in coverage was observed across all three indicators in subsequent rounds. By 2020, the proportion of PWID reporting access to sterile syringes had fallen to 26.3%, condom provision to 22.1%, and HIV testing to 20.2%, indicating a marked deterioration in the availability of prevention services.

Between 2020 and 2023, this downward trend reversed. All three indicators demonstrated notable improvement: access to syringes increased to 43.6%, condom provision to 37.7%, and HIV testing to 35.1%. This recovery reflects a significant achievement of HIV prevention programs and underscores their capacity for resilience and adaptability despite the challenges posed by the full-scale war.

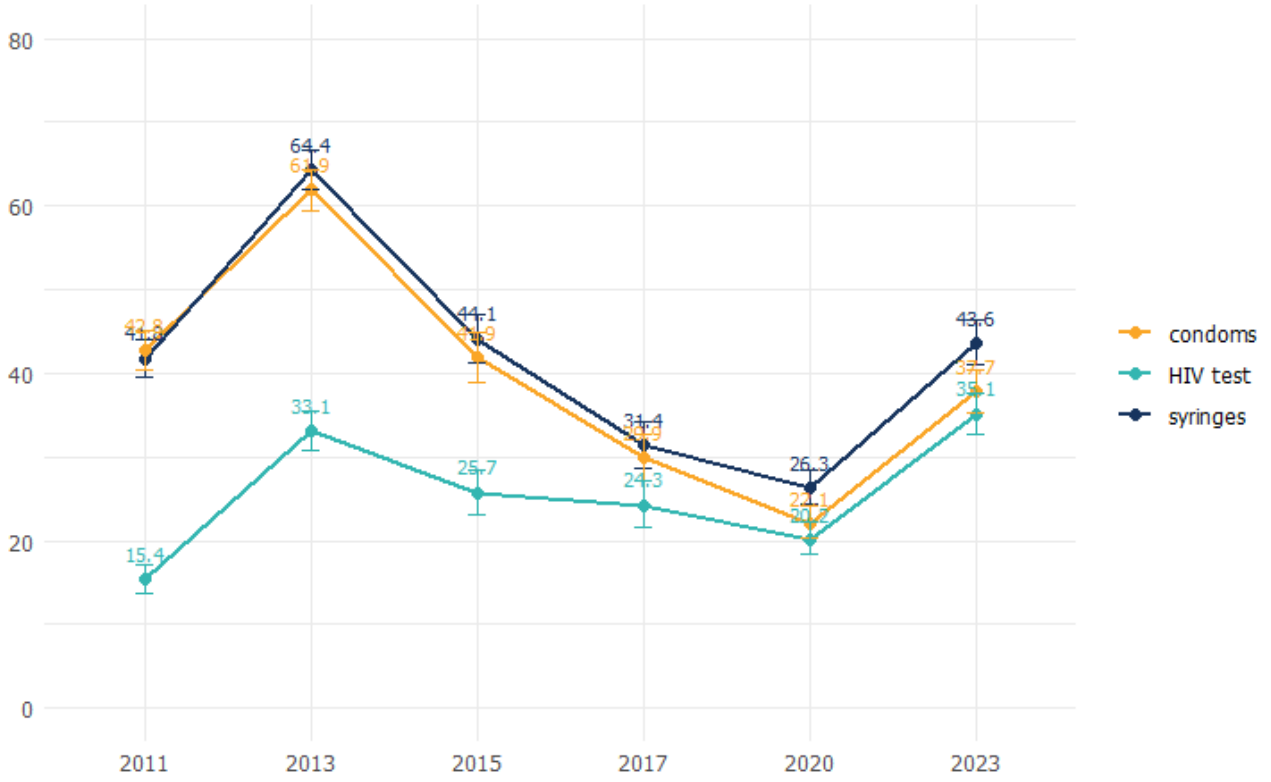

Figure 7.4: Trends in Receiving HIV Prevention Services in the Past 12 Months in 5 Sites

The majority of PWID reported no change in access to prevention services following the onset of the full-scale Russian invasion in February 2022 (Figure 7.5). Only 11.6% indicated that their access to such services had worsened. The highest proportion of PWID reporting deteriorated access was recorded in Zaporizhzhia (19.2%) and Kyiv (18.3%). Conversely, 14.6% of PWID in Cherkasy reported improved access to prevention services during this period.

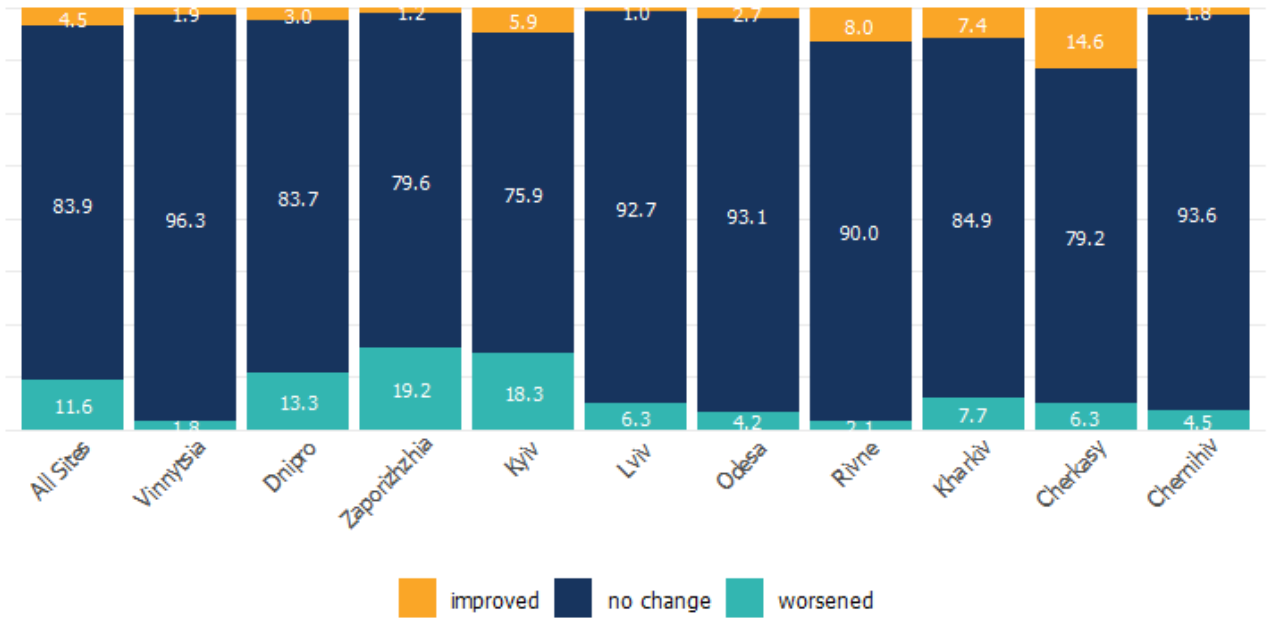

Figure 7.5: Perceived changes in access to HIV prevention since February 2022 by Survey Site

Participants were asked a series of questions to assess their knowledge of current HIV prevention and treatment programs, as well as hepatitis B and C (Table 7.6).

The lowest levels of awareness regarding HIV-related issues were observed in relation to the protective effect of correct condom use, the "Undetectable = Untransmittable" (U=U) principle, post-exposure prophylaxis (PEP), and the importance of initiating antiretroviral therapy without delay. PWID living with HIV have demonstrated higher levels of knowledge in every HIV-related knowledge question.

The lowest levels of awareness regarding hepatitis B were observed in relation to mother-to-child transmission, the possibility of transmission through air, food, or skin contact, and the misconception that treatment initiation can be delayed. For hepatitis C, the least understood topics included the role of correct condom use in preventing infection, the possibility of mother-to-child transmission, and the availability of effective treatment.

Table 7.3: Percentage of correct responses to knowledge questions by HIV status

	Total	HIV test result		
	All Sites %	negative %	positive %	p-value
HIV knowledge				
HIV may be avoided	85.5	84.8	89.5	0.0053
proper condom use may prevent HIV	47.8	46.2	55.6	0.0011
undetectable=untransmittable	52.9	50.7	64.1	0.0000
PEP reduces the risk of HIV	53.4	51.4	63.2	0.0000
ART should be started immediately	77.7	76.1	85.9	0.0000
ART may be postponed if one feels healthy	56.5	54.9	64.7	0.0005
ART may be stopped if one feels healthy	60.2	58.4	69.0	0.0002
HIV is transmitted through blood and sex	87.2	86.4	91.2	0.0050
HIV is transmitted via air, food, or skin	69.8	68.8	75.2	0.0159
HBV knowledge				
proper condom use may prevent HBV	78.2	77.9	79.9	0.3935
treatment should be started immediately	80.1	80.0	80.7	0.7664
treatment may be postponed if one feels healthy	59.4	58.5	63.6	0.0668
HBV is 100% transmitted from mother to child	16.3	16.3	16.4	0.9865
HBV is transmitted through blood and sex	81.9	81.6	83.2	0.4832
HBV is transmitted via air, food, or skin	55.8	55.7	56.0	0.9235
treatment may be stopped if one feels healthy	60.4	59.4	65.2	0.0393
HCV knowledge				
proper condom use may prevent HCV	7.8	7.7	8.4	0.6633
treatment should be started immediately	79.6	78.9	82.9	0.0658
treatment may be postponed if one feels healthy	58.9	57.9	63.7	0.0359
HCV is 100% transmitted from mother to child	14.4	14.2	15.4	0.5693
HCV is transmitted through blood and sex	84.4	83.9	87.4	0.0808
there is no treatment for HCV	55.3	53.7	63.1	0.0010
HCV is transmitted via air, food, or skin	69.2	67.8	76.7	0.0005
treatment may be stopped if one feels healthy	62.8	61.9	67.4	0.0461

8. HIV Testing

The vast majority (78.6%) of PWID knew where to access HIV testing services (Table 8.1). Five out of six PWID (83.6%) stated that they had been tested for HIV at least once in their lifetime. Nearly half (47.5%) of all PWID (including those with known positive HIV status) had undergone HIV testing within the past 12 months, and 28.6% had been tested within the last six months. Variation across the survey sites in lifetime HIV testing was moderate, whereas testing coverage in the past 6 months ranged more than three-fold, from 10.5% in Dnipro to 36.3% in Odesa (Figure 8.1).

Among those who had ever been tested, only 2% did not receive their test results. The Global AIDS Monitoring (GAM) indicator for HIV testing and status awareness (the proportion of those who either know about their HIV-positive status or have been tested with negative result in the past 12 months) was 55.6% for the entire sample. Lifetime experience with HIV self-testing was reported by just 0.9% of PWID.

Table 8.1: HIV Testing Knowledge and Uptake

		n	%	CI
Know where to get HIV test				
	yes	3,971	78.6	(76.7–80.4)
Tested for HIV ever				
	yes	4,139	83.6	(81.9–85.1)
Tested for HIV in the past 12 months				
	yes	1,651	47.5	(44.9–50.0)
Tested for HIV in the past 6 months				
	yes	1,027	28.8	(26.5–31.3)
Received the result of HIV test (of those tested)				
	yes	3,998	98.0	(97.4–98.4)
Willing to disclose HIV test result (of those who got result)				
	yes	3,915	98.8	(98.3–99.2)
Self-reported HIV status (of all tested)				
	positive	607	15.5	(14.0–17.2)
	negative	3,407	84.5	(82.8–86.0)
HIV testing and status awareness (GAM)				
	yes	1,889	55.6	(53.1–58.2)
Ever did a HIV self-test				
	yes	22	0.9	(0.5–1.6)
Regular sex partner tested for HIV				
	yes	1,431	64.9	(62.0–67.8)
Regular sex partner HIV test result				
	positive	174	13.5	(11.1–16.3)
	negative	1,208	84.2	(81.3–86.7)
	cannot disclose	38	2.3	(1.5–3.4)

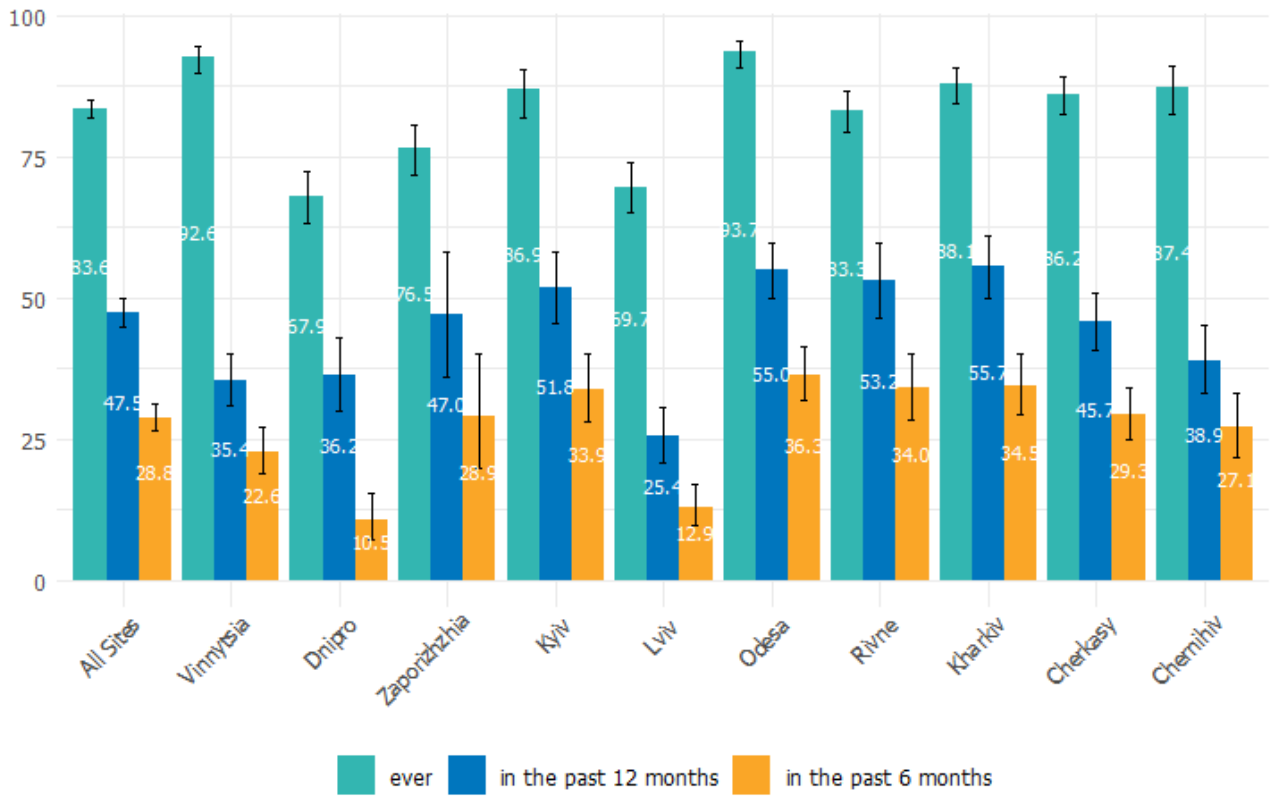

Figure 8.1: HIV Testing Uptake by Survey Site

Nearly half of PWID reported having been tested for HIV since the onset of the full-scale war, while 44.7% were tested for HCV and 29.5% for syphilis (Figure 8.2). Among those tested, the majority received testing services from NGO rather than public health facilities. Only a negligible proportion reported self-testing or being tested through other channels.

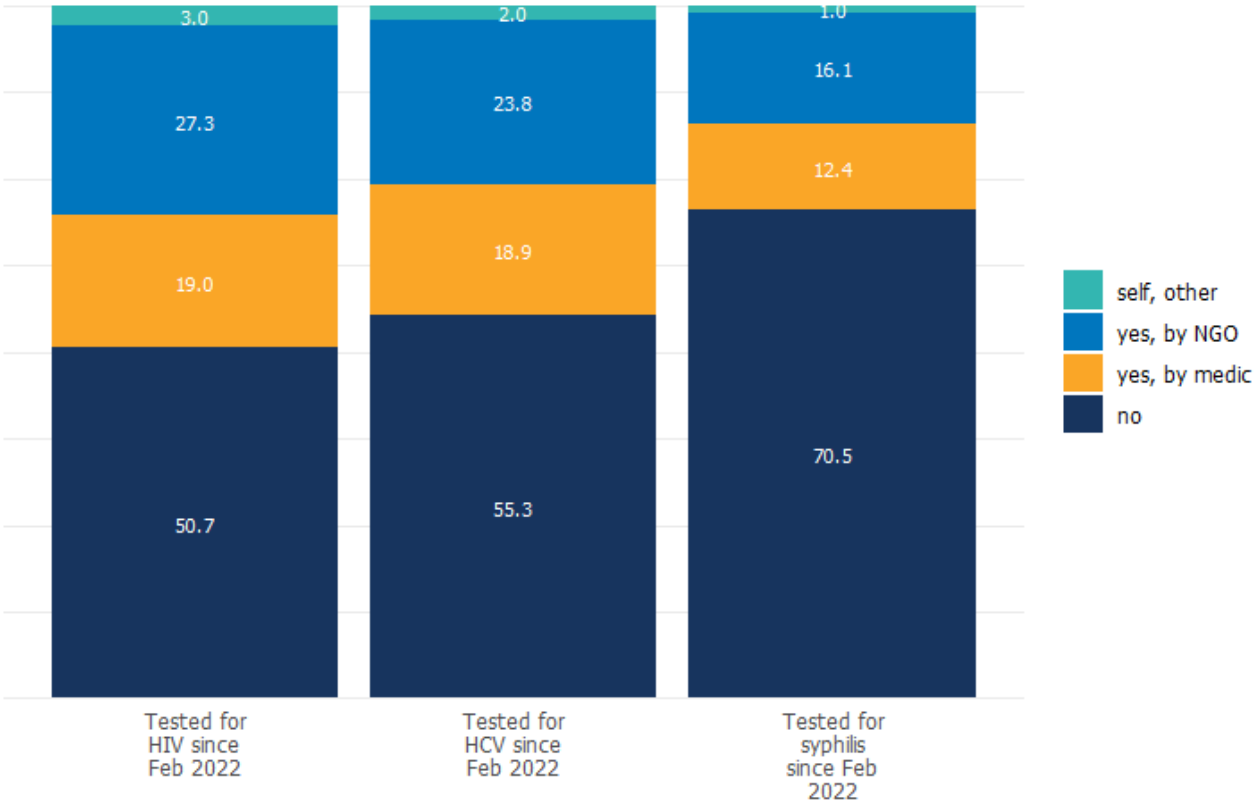

Figure 8.2: Testing for HIV, HCV, syphilis since February 2022

The distribution of testing providers varied by survey site. In Vinnytsia, Dnipro, and Rivne, testing by healthcare facilities was more commonly reported, whereas in the remaining cities, NGO-based testing predominated (Figure 8.3).

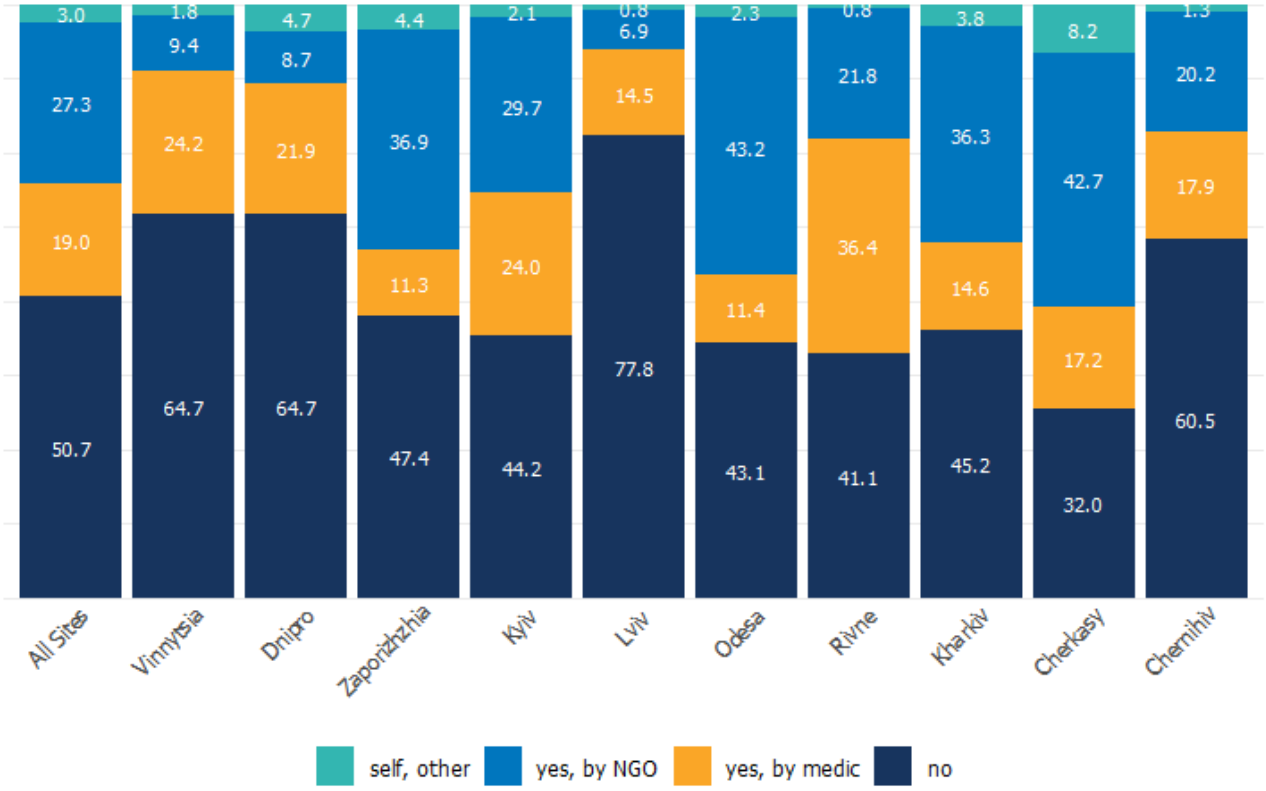

Figure 8.3: HIV Testing Since February 2022 by Survey Site

Table 8.2: Testing for HIV in the past 12 months (among all) by Sociodemographic Characteristics

		N	Tested for HIV in the past 12 months				
			no		yes		
			n	% (CI)	n	% (CI)	p-value
Total							
	All Sites	3,543	1,892	52.5 (50.0–55.1)	1,651	47.5 (44.9–50.0)	1.0000
Sex							
	male	2,850	1,516	51.8 (49.0–54.7)	1,334	48.2 (45.3–51.0)	0.3026
	female	693	376	55.2 (49.5–60.8)	317	44.8 (39.2–50.5)	
Age							
	<25	68	36	51.3 (35.9–66.4)	32	48.7 (33.6–64.1)	0.0781
	25-34	685	366	55.4 (50.2–60.4)	319	44.6 (39.6–49.8)	
	35-44	1,866	964	49.9 (46.3–53.6)	902	50.1 (46.4–53.7)	
	45+	924	526	56.8 (52.1–61.3)	398	43.2 (38.7–47.9)	
Years since the start of injecting drug use							
	≤2	128	73	56.5 (42.8–69.2)	55	43.5 (30.8–57.2)	0.4608
	3-5	175	99	58.8 (49.4–67.6)	76	41.2 (32.4–50.6)	
	6-10	385	205	54.3 (47.1–61.2)	180	45.7 (38.8–52.9)	
	≥11	2,851	1,512	51.6 (48.7–54.5)	1,339	48.4 (45.5–51.3)	
Partnership status							
	live alone	1,774	930	50.0 (46.4–53.6)	844	50.0 (46.4–53.6)	0.0540
	live with partner	1,769	962	55.0 (51.4–58.6)	807	45.0 (41.4–48.6)	

	N	Tested for HIV in the past 12 months				
		no		yes		
		n	% (CI)	n	% (CI)	p-value
Current employment status						
full-time	853	479	55.3 (50.1–60.4)	374	44.7 (39.6–49.9)	0.3803
part-time or temporary	1,834	994	50.8 (47.4–54.2)	840	49.2 (45.8–52.6)	
unemployed	476	228	53.9 (46.5–61.2)	248	46.1 (38.8–53.5)	
disabled	197	99	47.9 (36.1–59.9)	98	52.1 (40.1–63.9)	
other	181	90	59.9 (49.5–69.4)	91	40.1 (30.6–50.5)	
Monthly income category						
<3K	550	267	49.4 (42.3–56.6)	283	50.6 (43.4–57.7)	0.7258
3-10K	1,383	730	52.5 (48.5–56.5)	653	47.5 (43.5–51.5)	
10-20K	1,101	635	54.0 (49.4–58.5)	466	46.0 (41.5–50.6)	
≥20K	324	172	53.6 (45.9–61.2)	152	46.4 (38.8–54.1)	
Ever incarcerated						
no	2,317	1,289	54.6 (51.5–57.6)	1,028	45.4 (42.4–48.5)	0.0550
yes	1,215	600	49.2 (44.7–53.8)	615	50.8 (46.2–55.3)	

Table 8.3: Testing for HIV in the past 12 months (among all) by Selected Subgroups

	N	Tested for HIV in the past 12 months				
		no		yes		
		n	% (CI)	n	% (CI)	p-value
Client of NGO working with PWID						
no	2,145	1,362	60.9 (57.4–64.3)	783	39.1 (35.7–42.6)	0.0000
yes	1,373	519	37.5 (34.0–41.1)	854	62.5 (58.9–66.0)	
Treated with MAT currently (of all)						
no	2,728	1,599	56.3 (53.3–59.1)	1,129	43.7 (40.9–46.7)	0.0000
yes	783	281	34.4 (29.8–39.4)	502	65.6 (60.6–70.2)	
HIV test result						
positive	675	371	57.4 (51.9–62.7)	304	42.6 (37.3–48.1)	0.0565
negative	2,868	1,521	51.4 (48.5–54.3)	1,347	48.6 (45.7–51.5)	
Past 30 days injecting 4 categories						
opioids	2,592	1,305	49.8 (46.9–52.8)	1,287	50.2 (47.2–53.1)	0.0077
stimulants	448	288	65.6 (59.5–71.2)	160	34.4 (28.8–40.5)	
opi+stimul	482	288	59.2 (52.8–65.3)	194	40.8 (34.7–47.2)	
other	21	11	35.7 (8.9–75.9)	10	64.3 (24.1–91.1)	
Injecting drug type of choice						
opioids	2,956	1,529	51.3 (48.5–54.0)	1,427	48.7 (46.0–51.5)	0.0079
stimulants	551	346	62.1 (56.1–67.7)	205	37.9 (32.3–43.9)	
other	25	11	29.0 (10.0–60.0)	14	71.0 (40.0–90.0)	

9. HIV Treatment

Figure 9.1 presents the level of awareness of HIV-positive status among PWID who tested positive during the survey. Across most survey sites, the majority of HIV-positive PWID were aware of their positive status, with an overall average of 69%. However, 21.1% of PWID incorrectly believed they were HIV-negative, and 9.9% had never been tested before the survey.

The lowest level of status awareness was observed in Zaporizhzhia, where only 17.4% of HIV-positive PWID knew they were living with HIV. However, these results should be interpreted with caution due to the small number of HIV-positive cases at the site (n=21), which results in wide confidence intervals and a high probability of random error, leading to unreliable estimates.

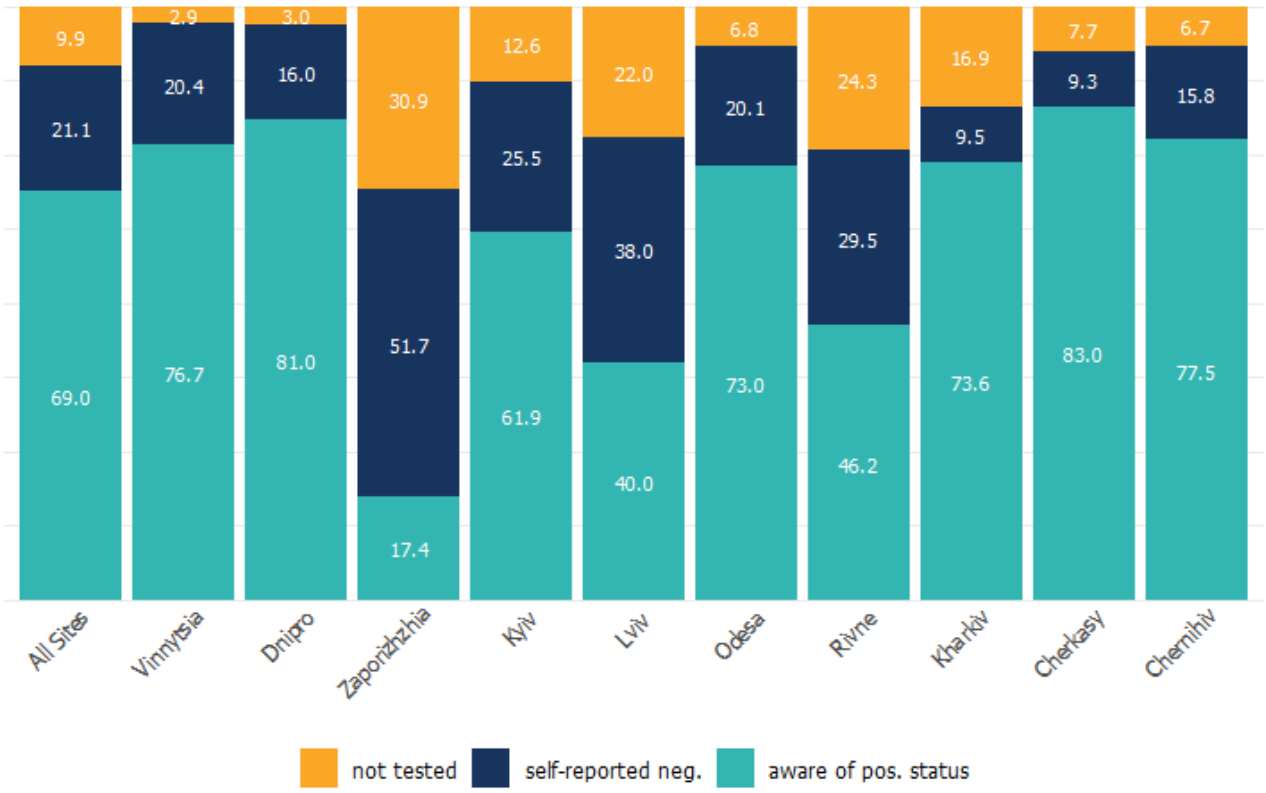

Figure 9.1: HIV Status Awareness Among HIV+ by Survey Site

Figures 9.2-9.3 present the conditional HIV care cascades. For the first indicator, the denominator is the total number of HIV-positive PWID; for each subsequent indicator, the denominator is the preceding step. Cascades are shown both including and excluding the HIV diagnosis indicator (i.e., confirmed diagnosis and registration in an HIV clinic). As in previous years, the greatest gap in the cascade remains at the stage of awareness of HIV-positive status. In 2023, just over two-thirds (68.9% [64.0-73.6]) of HIV-positive PWID in the sample were aware of their status. Among those who were aware of their HIV-positive status, 92.1% [87.1-95.2] reported having a confirmed diagnosis, and 86.7% [81.6-90.6] reported receiving antiretroviral therapy (ART). Of those who were aware of their status and on ART, 78.1% [72.4-82.9] achieved viral suppression.

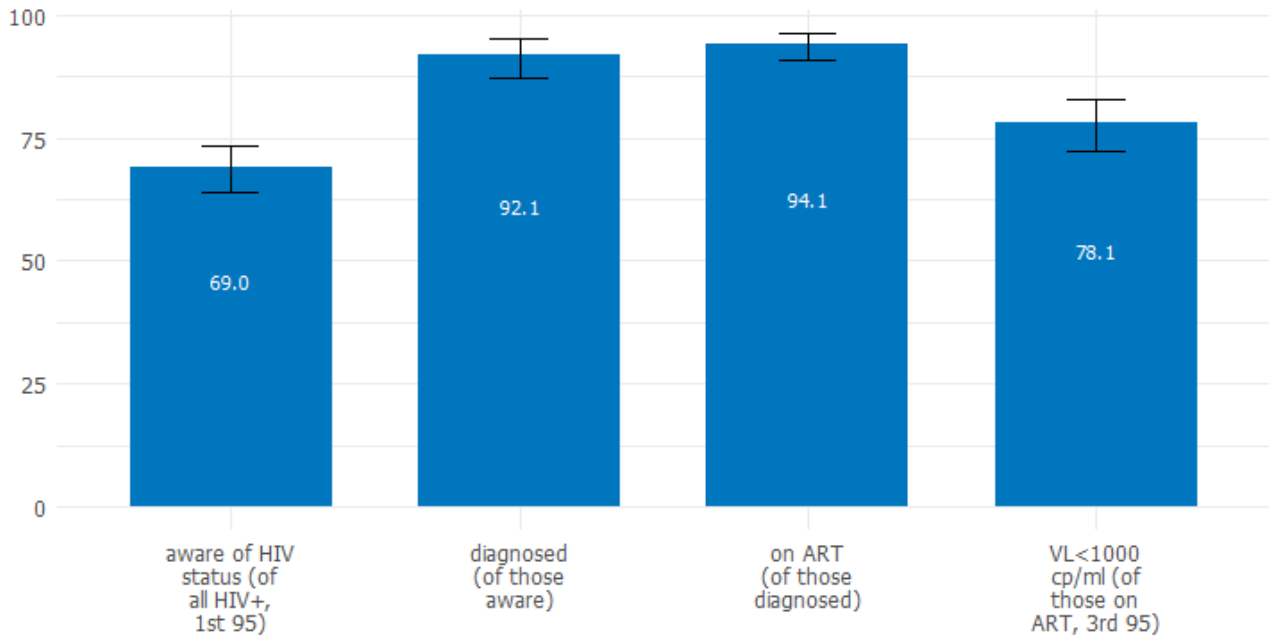

Figure 9.2: HIV Treatment Cascade (Conditional, Four-stage)

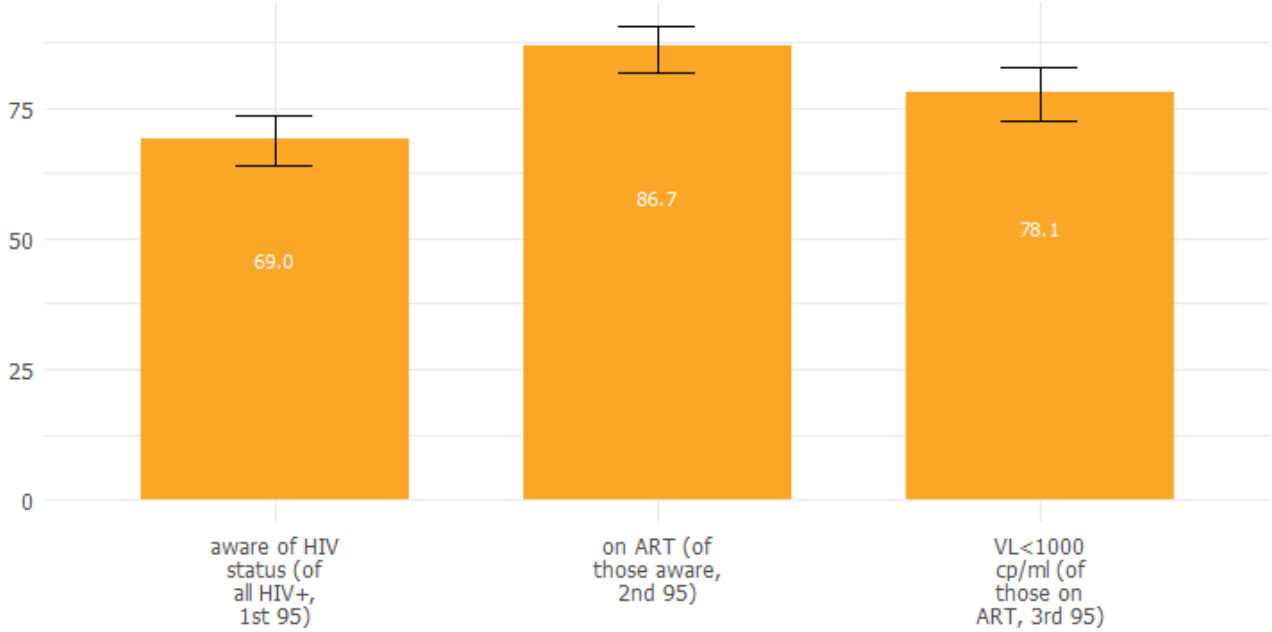

Figure 9.3: HIV Treatment Cascade (Conditional, 95-95-95)

When these indicators are calculated unconditionally (using the total number of HIV-positive PWID as the denominator for each step) the cascade indicates that nearly 60% of all PWID living with HIV were receiving antiretroviral therapy (ART), and 46.7% had achieved viral suppression (Figure 9.4). There was substantial variation in these indicators across the survey sites (Figure 9.5). All cities did not reach the target for HIV awareness, with the gap particularly pronounced in Zaporizhzhia, Lviv, and Rivne. The largest shortfall in ART coverage was observed in Vinnytsia and Kyiv, while the lowest levels of viral suppression were recorded in Chernihiv, Kyiv, and Lviv.

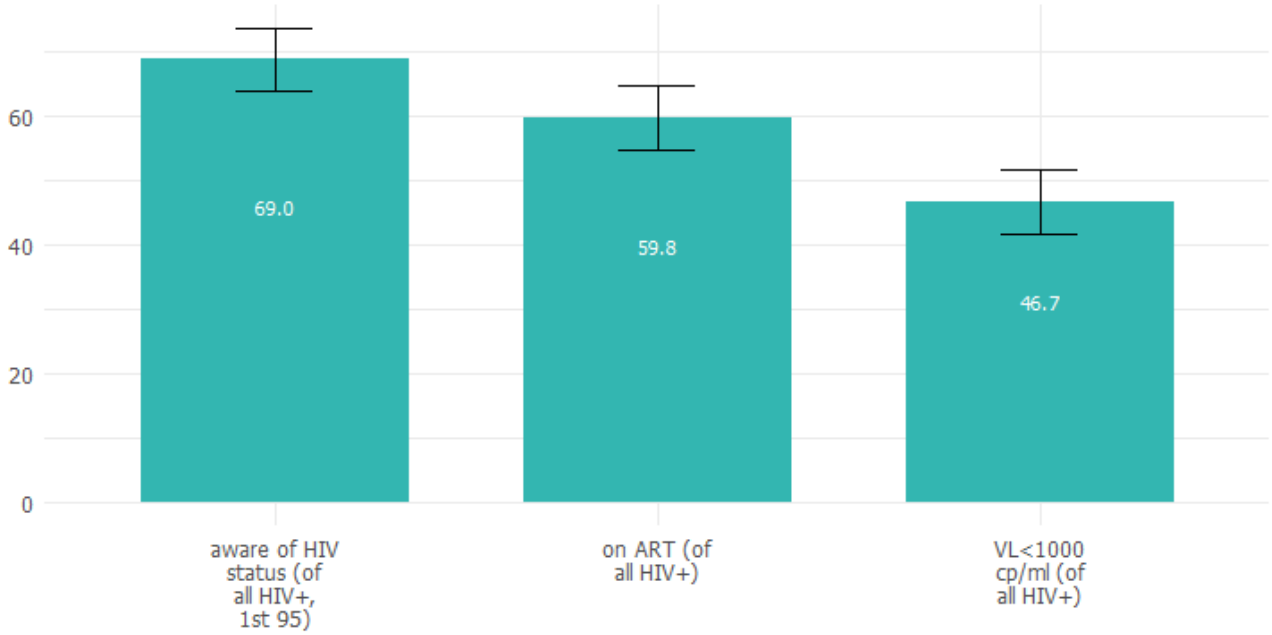

Figure 9.4: HIV Treatment Cascade (Unconditional)

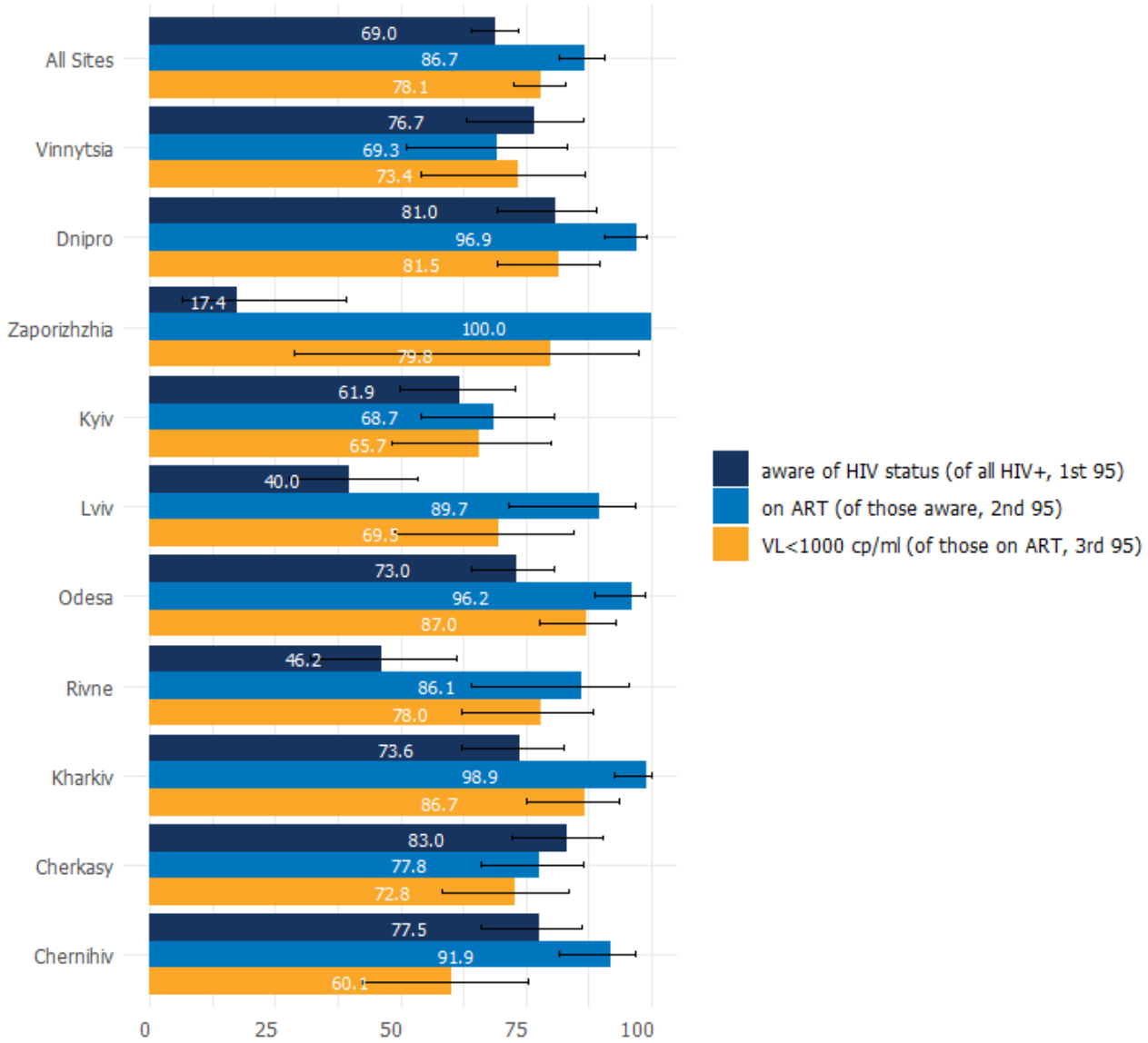

Figure 9.5: HIV Treatment Cascade (Conditional, 95-95-95) by Survey Site

Historic trends in HIV treatment cascade indicators are shown in Figure 9.6. A substantial fluctuation was observed in 2013, likely due to the oversampling of NGO clients in larger cities in that round (Dumchev et al., 2024). Aside from this, the cascade has shown notable improvement over time, with HIV status awareness increasing from 13.6% [8.0-22.0] in 2007 to 67.9% [61.3-73.8], and ART coverage among those aware of HIV status from 28.8% [23.5-34.8] to 86.7% [80.7-91.0] in 2020, with a modest improvement in the latest round to 87.2% [81.5-91.3]. Viral suppression, however, after an improvement from 65.1% [51.5-76.6] in 2017 to 82.2% [75.3-87.6] in 2020, declined to 78.9% [72.2-84.3] in 2023, possibly reflecting disruptions in HIV care related to the full-scale war (although the difference between the last two rounds is not statistically significant).

Figure 9.6: Trends in HIV Treatment Cascade (Conditional, 95-95-95) by Survey Round in 5 Sites

The analysis of factors associated with HIV treatment cascade indicators (Tables 9.7 - 9.6) revealed several notable patterns. Being a medication-assisted treatment (MAT) patient and being an NGO client were positively associated with awareness of HIV-positive status. The association with MAT may be explained by the clinical standard, which requires annual HIV testing for all HIV-negative MAT patients. However, these factors did not show a similar effect on ART uptake or viral suppression. The discrepancy with official MAT program statistics (reporting 98% ART coverage) (Public Health Center of the Ministry of Health of Ukraine, 2024b) may reflect either overreporting of ART coverage by MAT clinics or the fact that the questionnaire did not distinguish between official (government-sponsored) MAT programs and private providers, who may not consistently follow the clinical standard emphasizing linkage to HIV treatment.

PWID living with a partner were less likely to achieve viral suppression. Drug use characteristics (such as type of drug used, preference, and duration of use) were not significantly associated with any of the cascade indicators.

Table 9.1: HIV Treatment Cascade (Conditional, 95-95-95) by Sociodemographic Characteristics

		Cascade: aware of HIV status (of all HIV+, 1st 95)				Cascade: on ART (of those aware, 2nd 95)				Cascade: VL<1000 cp/ml (of those on ART, 3rd 95)			
		N	n	% (CI)	p-value	N	n	% (CI)	p-value	N	n	% (CI)	p-value
Total													
	All Sites	802	564	69.0 (64.0–73.6)	1.0000	564	499	86.7 (81.6–90.6)	1.0000	499	374	78.1 (72.4–82.9)	1.0000
Sex													
	male	607	409	64.2 (58.2–69.8)	0.0003	409	359	84.6 (77.8–89.5)	0.1232	359	270	77.1 (70.1–82.8)	0.5942

	Cascade: aware of HIV status (of all HIV+, 1st 95)				Cascade: on ART (of those aware, 2nd 95)				Cascade: VL<1000 cp/ml (of those on ART, 3rd 95)			
	N	n	% (CI)	p-value	N	n	% (CI)	p-value	N	n	% (CI)	p-value
female	195	155	82.6 (74.7–88.4)		155	140	91.4 (83.6–95.7)		140	104	80.1 (69.6–87.7)	
Age												
<25	9	7	89.9 (51.6–98.7)	0.0047	7	6	98.1 (84.8–99.8)	0.5909	6	6	100.0	0.4464
25-34	75	57	77.2 (60.6–88.2)		57	48	83.6 (64.9–93.3)		48	36	75.7 (53.7–89.3)	
35-44	442	286	61.0 (54.2–67.4)		286	256	88.0 (80.4–93.0)		256	197	80.5 (72.3–86.7)	
45+	276	214	77.7 (68.4–84.8)		214	189	85.2 (76.1–91.3)		189	135	74.3 (64.8–81.9)	
Years since the start of injecting drug use												
≤2	11	7	81.1 (47.1–95.4)	0.2030	7	7	100.0	0.7495	7	5	69.6 (27.9–93.2)	0.5830
3-5	29	13	48.1 (28.1–68.8)		13	11	80.7 (41.1–96.2)		11	7	60.9 (29.8–85.1)	
6-10	49	32	67.8 (49.0–82.2)		32	25	82.7 (55.4–94.8)		25	21	85.3 (56.2–96.3)	
≥11	710	511	69.8 (64.3–74.7)		511	455	86.8 (81.4–90.9)		455	340	78.2 (72.1–83.2)	
Partnership status												
live alone	440	295	65.7 (58.5–72.2)	0.1461	295	264	85.2 (76.7–90.9)	0.4787	264	207	85.2 (77.8–90.4)	0.0073
live with partner	362	269	72.8 (65.7–78.9)		269	235	88.3 (81.8–92.7)		235	167	71.0 (62.3–78.4)	
Current employment status												
full-time	164	121	69.1 (57.3–78.9)	0.8883	121	107	87.6 (73.4–94.8)	0.3756	107	77	77.0 (64.6–86.0)	0.5951
part-time or temporary	370	242	67.3 (60.0–73.8)		242	213	84.7 (76.4–90.5)		213	163	77.1 (67.8–84.4)	
unemployed	149	111	72.6 (60.3–82.3)		111	100	87.4 (74.4–94.3)		100	79	85.4 (73.5–92.5)	
disabled	89	68	68.8 (50.5–82.6)		68	63	97.2 (92.1–99.0)		63	43	75.3 (58.3–86.9)	
other	29	22	77.3 (53.3–91.0)		22	16	78.3 (50.3–92.8)		16	12	65.7 (32.5–88.4)	
Monthly income category												
<3K	170	135	75.8 (64.0–84.6)	0.0342	135	119	92.1 (85.6–95.8)	0.7042	119	96	89.5 (81.9–94.1)	0.0034
3-10K	326	224	72.6 (65.2–79.0)		224	201	87.6 (79.3–92.9)		201	138	67.0 (56.7–75.9)	
10-20K	188	122	57.2 (46.4–67.4)		122	109	86.0 (71.9–93.6)		109	84	84.4 (74.2–91.0)	
≥20K	56	40	65.2 (46.8–80.0)		40	34	85.3 (64.5–94.9)		34	27	80.5 (51.1–94.3)	
Ever incarcerated												
no	444	316	70.6 (64.0–76.5)	0.4607	316	271	84.0 (76.2–89.6)	0.1299	271	200	76.6 (68.9–82.8)	0.5328
yes	356	247	67.0 (59.1–74.0)		247	227	90.4 (84.1–94.3)		227	173	79.9 (71.0–86.6)	

Table 9.2: HIV Treatment Cascade (Conditional, 95-95-95) by Selected Subgroups

	Cascade: aware of HIV status (of all HIV+, 1st 95)				Cascade: on ART (of those aware, 2nd 95)				Cascade: VL<1000 cp/ml (of those on ART, 3rd 95)			
	N	n	% (CI)	p-value	N	n	% (CI)	p-value	N	n	% (CI)	p-value
Client of NGO working with PWID												
no	384	228	57.6 (50.3–64.6)	0.0000	228	201	84.6 (75.7–90.7)	0.3852	201	144	76.0 (67.4–82.9)	0.4163
yes	411	333	84.9 (79.9–88.9)		333	295	88.5 (82.2–92.8)		295	229	80.3 (72.4–86.4)	
Treated with MAT currently (of all)												
no	501	325	65.5 (59.4–71.2)	0.0011	325	285	85.3 (78.5–90.3)	0.3741	285	216	75.7 (68.5–81.6)	0.0955
yes	289	231	80.9 (73.7–86.5)		231	206	89.0 (82.3–93.3)		206	153	85.2 (75.2–91.6)	
HIV test result												
positive	802	564	69.0 (64.0–73.6)		564	499	86.7 (81.6–90.6)		499	374	78.1 (72.4–82.9)	
negative	0	0	0.0		0	0	0.0		0	0	0.0	
Past 30 days injecting 4 categories												
opioids	634	463	71.1 (65.6–76.1)	0.3079	463	418	88.0 (82.3–92.0)	0.4840	418	319	79.2 (73.0–84.3)	0.4498
stimulants	75	48	62.1 (44.7–76.8)		48	42	83.7 (62.5–94.1)		42	29	78.2 (61.0–89.2)	
opi+stimul	90	51	60.7 (46.7–73.2)		51	38	78.3 (58.0–90.4)		38	25	64.6 (40.4–83.1)	
other	3	2	79.0 (20.3–98.2)		2	1	84.1 (22.6–99.0)		1	1	100.0	
Injecting drug type of choice												
opioids	712	507	69.8 (64.5–74.6)	0.8526	507	450	87.3 (82.0–91.2)	0.4640	450	343	78.8 (72.7–83.9)	0.5375
stimulants	80	51	65.7 (49.3–79.0)		51	44	81.8 (61.0–92.8)		44	29	75.6 (58.9–87.0)	
other	6	5	70.7 (18.6–96.2)		5	4	95.5 (66.3–99.6)		4	2	52.8 (8.6–93.0)	

Table 9.3: ART adherence (among those on ART)

		n	%	CI
When did you last miss ART dose				
	last week	29	6.4	(4.0–9.9)
	1-2 weeks ago	31	6.8	(4.5–10.3)
	3-4 weeks ago	22	5.4	(3.3–8.7)
	1-3 months ago	37	9.4	(6.1–14.2)
	never	389	72.0	(66.2–77.2)
What was the reason for missing the last ART dose				
	forgot	66	56.2	(44.0–67.7)
	did not have meds	33	26.9	(17.2–39.5)
	was under influence	8	9.6	(4.2–20.4)
	did not want others to see	3	1.8	(0.5–6.6)
	other	6	5.5	(2.3–12.7)
Reasons for not taking ART				
	not sure it is needed	34	30.2	(20.4–42.3)
	no time to visit clinic	27	19.2	(11.7–29.9)
	no motivation to visit clinic	31	32.1	(21.5–44.9)
	missed a visit, hard to come back	22	19.2	(11.1–31.3)
	too sick to visit clinic	16	15.7	(8.2–27.9)
	drug use	35	35.0	(24.1–47.7)
	side effects or complications	18	22.0	(13.1–34.6)
	no understanding of how to take it	17	13.3	(6.8–24.3)
	lost or sold all ARVs	14	11.9	(5.7–23.3)
	alcohol use	21	21.8	(13.2–33.9)

		n	%	CI
	waited too long and left	10	9.9	(4.2–21.4)
Time on ART				
	≤3m	18	15.4	(8.2–26.8)
	4-24m	40	32.9	(22.8–45.0)
	25-60m	36	25.4	(16.3–37.2)
	5y+	41	26.3	(18.0–36.7)

10. PrEP

The survey showed that awareness and uptake of HIV pre-exposure prophylaxis (PrEP) among PWID remains low. Overall, the vast majority of PWID (79.3%) were unaware of what PrEP is, and the current use was 3.6% (Figure 10.1). Across the sites, the highest levels of awareness about PrEP were observed in Dnipro (34.1%), Odesa and Kharkiv (28.1%), and Zaporizhzhia (22.4%). In contrast, awareness was very low in Vinnytsia (2.0%) and Rivne (6.7%). The highest reported levels of PrEP use were in Dnipro (9.4%), Zaporizhzhia (7.8%), and Cherkasy (4.9%).

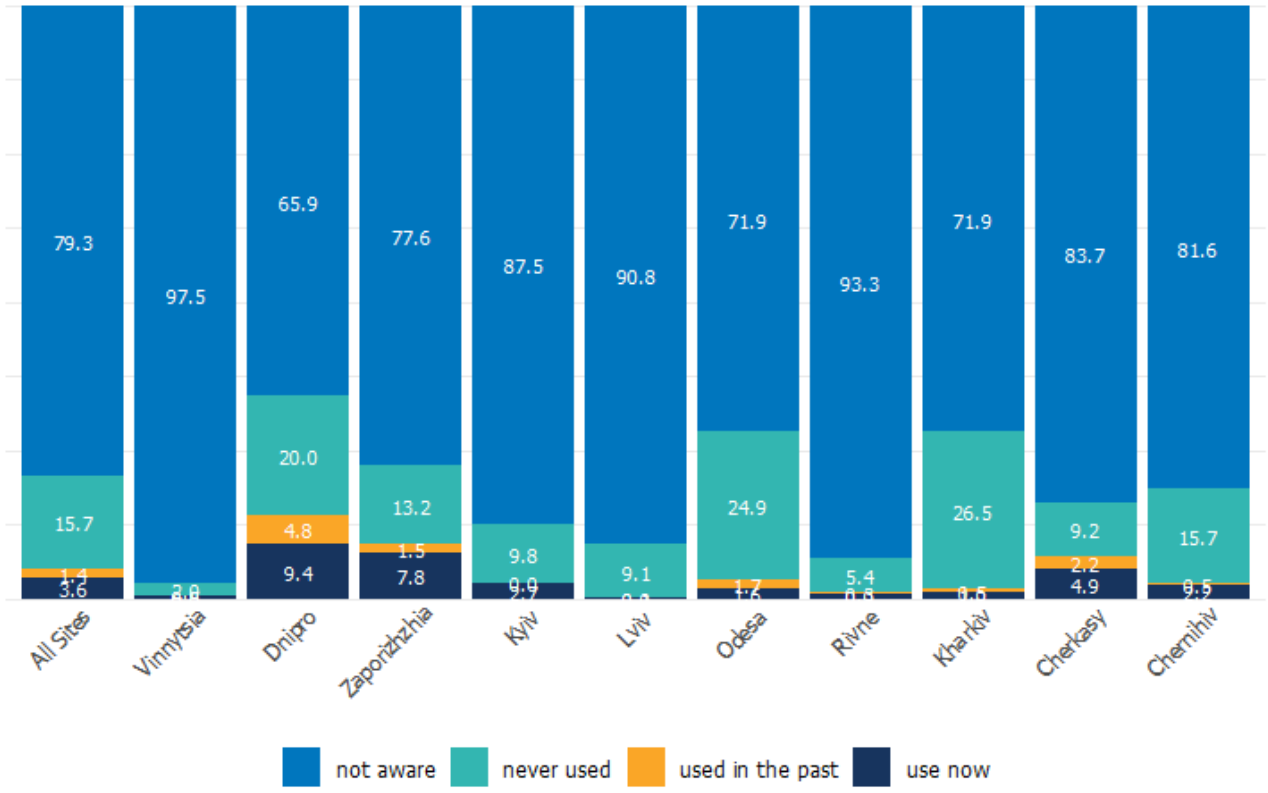

Figure 10.1: PrEP Uptake in the Past 12 Months by Survey Site

PrEP uptake increased insignificantly from 2.2% in the 2020 round to 3.8% in 2023. However, when limited to those who were aware of PrEP, the difference between the two rounds was no longer observed (Figure 10.2). The proportion of PWID who had used PrEP in the past also increased, from 0.3% in 2020 to 1.6% in 2023 (Figure 10.3).

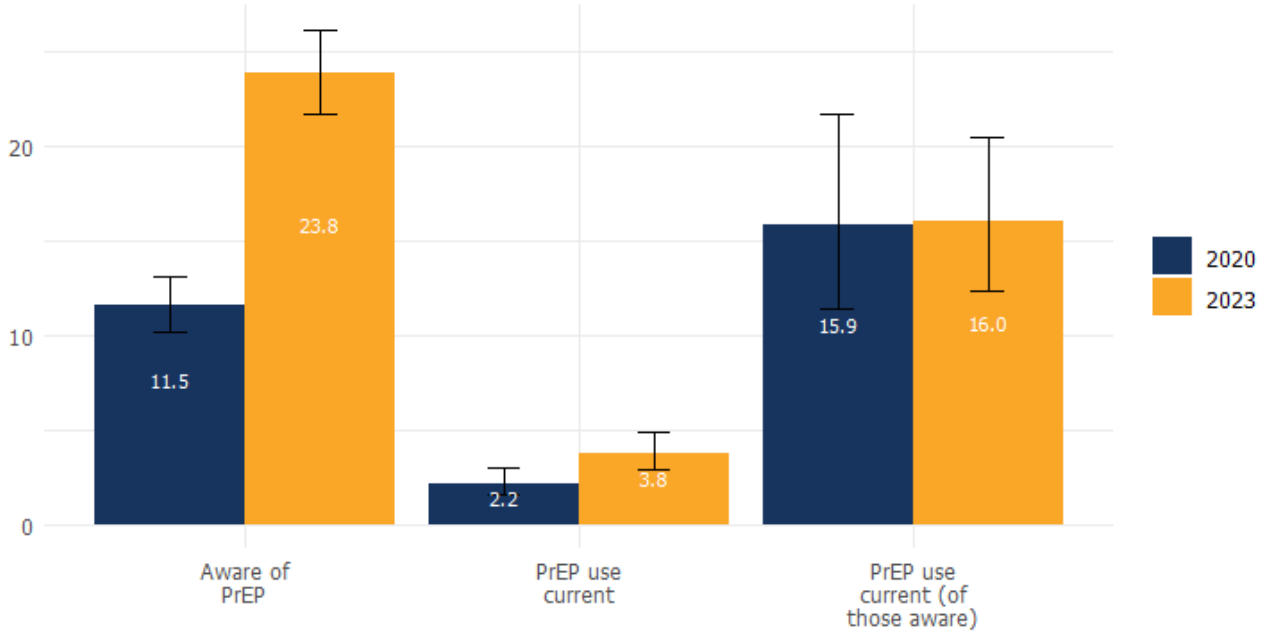

Figure 10.2: Change in PrEP Awareness and Uptake from 2020 to 2023 in 5 Sites

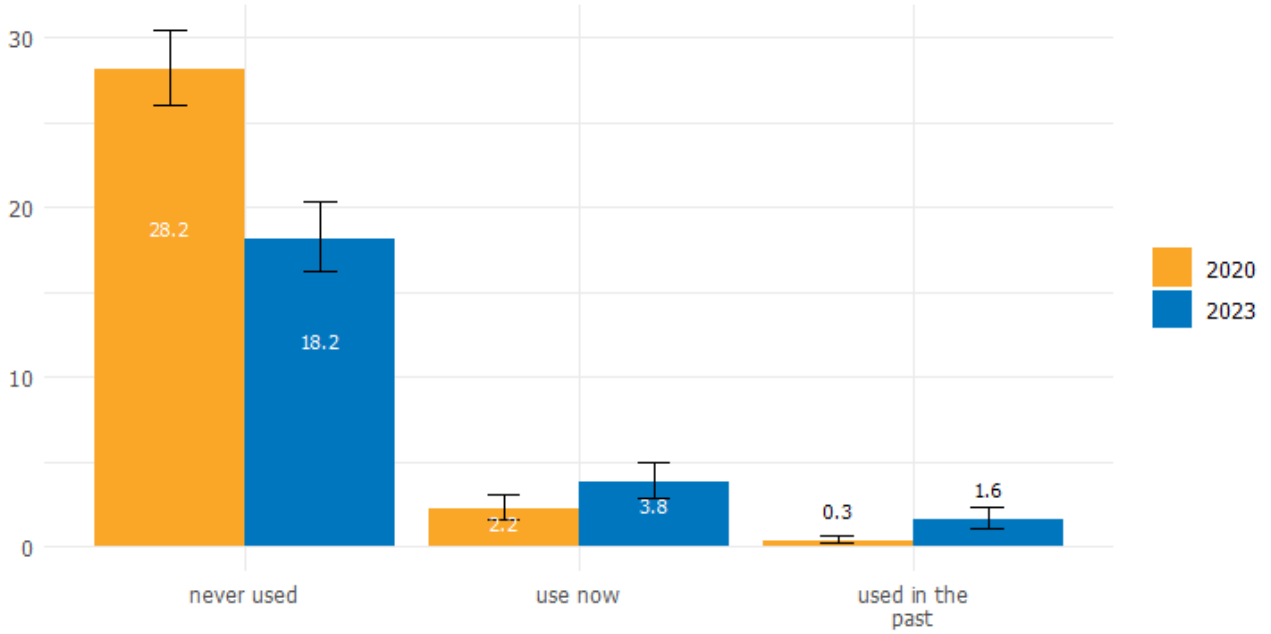

Figure 10.3: Change in PrEP Uptake from 2020 to 2023 in 5 Sites

Higher levels of PrEP awareness were reported by NGO clients (36.7% compared to 13.9 among non-clients), and women (29.3% compared to 18.4% among men) (Tables 10.1-10.2). PrEP use was also more common among NGO clients (6.9% compared to 2.2% among non-clients) and women (5.6% compared to 3.1% among men). Surprisingly, a higher level of PrEP use was reported by HIV-positive PWID (4.7% compared to 3.4% among HIV-negative) (Table 10.2), which may reflect either a misunderstanding among some PWID about what PrEP is (potentially confusing it with ART), social desirability bias (Latkin et al., 2016), or seroconversion among those taking PrEP but remaining at high risk.

Table 10.1: PrEP Current Use by Sociodemographic Characteristics

		PrEP uptake in the past 12 months								
	N	use now		used in the past		never used		not aware		
		n	% (CI)	n	% (CI)	n	% (CI)	n	% (CI)	p-value
Total										
All Sites	4,967	146	3.6 (2.9–4.5)	52	1.4 (0.9–2.1)	706	15.7 (14.2–17.2)	4,063	79.3 (77.6–81.0)	1.0000
Sex										
male	4,009	95	3.1 (2.4–4.1)	27	1.0 (0.6–1.6)	533	14.4 (12.8–16.1)	3,354	81.6 (79.7–83.3)	0.0000
female	958	51	5.6 (3.7–8.4)	25	3.1 (1.7–5.6)	173	20.6 (17.2–24.4)	709	70.7 (66.3–74.7)	
Age										
<25	130	2	1.9 (0.5–7.5)	1	0.5 (0.1–3.5)	21	16.8 (9.8–27.1)	106	80.8 (70.2–88.3)	0.1304
25-34	1,002	32	4.0 (2.7–6.0)	9	0.7 (0.3–1.6)	135	12.7 (10.4–15.5)	826	82.6 (79.4–85.3)	
35-44	2,565	73	3.7 (2.7–5.2)	31	1.9 (1.1–3.1)	354	15.6 (13.5–17.9)	2,107	78.8 (76.2–81.3)	
45+	1,270	39	3.2 (2.0–5.0)	11	1.0 (0.5–2.2)	196	18.3 (15.4–21.6)	1,024	77.5 (74.0–80.7)	
Years since the start of injecting drug use										
≤2	200	3	2.6 (0.8–7.8)	0	0.0	15	8.2 (4.4–14.7)	182	89.3 (82.2–93.7)	0.1279
3-5	292	7	5.2 (2.0–12.8)	3	1.2 (0.4–3.9)	34	9.6 (6.3–14.4)	248	83.9 (76.8–89.1)	
6-10	564	17	4.7 (2.7–8.1)	5	1.1 (0.4–2.9)	78	15.9 (12.1–20.7)	464	78.2 (73.0–82.7)	
≥11	3,887	117	3.3 (2.6–4.3)	44	1.5 (1.0–2.4)	574	16.6 (14.9–18.4)	3,152	78.5 (76.5–80.5)	
Partnership status										
live alone	2,548	68	3.8 (2.8–5.2)	18	1.2 (0.6–2.4)	307	14.0 (12.2–16.1)	2,155	80.9 (78.5–83.1)	0.2173
live with partner	2,419	78	3.4 (2.4–4.8)	34	1.6 (1.0–2.5)	399	17.3 (15.2–19.7)	1,908	77.7 (75.1–80.1)	
Current employment status										
full-time	1,132	32	3.1 (2.0–4.8)	19	1.9 (1.1–3.2)	195	19.5 (16.3–23.0)	886	75.6 (71.8–79.0)	0.0000
part-time or temporary	2,587	64	3.1 (2.2–4.4)	18	0.9 (0.5–1.7)	339	15.4 (13.3–17.7)	2,166	80.6 (78.1–82.9)	
unemployed	730	23	3.9 (2.1–7.0)	9	2.7 (1.1–6.6)	101	12.6 (9.9–15.9)	597	80.8 (76.1–84.7)	
disabled	262	4	1.4 (0.3–5.5)	2	0.8 (0.2–3.8)	38	15.2 (10.1–22.3)	218	82.6 (75.2–88.1)	
other	251	23	13.1 (7.1–23.0)	4	1.3 (0.3–5.0)	32	11.7 (7.8–17.1)	192	73.9 (64.7–81.4)	
Monthly income category										
<3K	688	21	1.7 (1.1–2.8)	17	2.2 (1.0–4.7)	98	17.2 (12.5–23.1)	552	78.9 (72.9–83.8)	0.0815
3-10K	2,032	59	3.7 (2.5–5.3)	12	0.8 (0.3–1.9)	294	15.8 (13.7–18.1)	1,667	79.7 (77.0–82.2)	
10-20K	1,472	36	2.8 (1.7–4.4)	14	1.1 (0.6–2.0)	212	15.4 (12.9–18.2)	1,210	80.8 (77.7–83.5)	
≥20K	413	18	6.8 (3.9–11.8)	3	2.3 (0.6–8.2)	58	13.4 (9.8–18.1)	334	77.5 (71.1–82.8)	
Ever incarcerated										
no	3,401	98	3.8 (2.8–4.9)	37	1.6 (1.0–2.6)	482	15.9 (14.1–17.8)	2,784	78.8 (76.6–80.8)	0.2726
yes	1,478	33	2.7 (1.6–4.4)	13	0.9 (0.5–1.7)	211	15.1 (12.7–17.8)	1,221	81.3 (78.3–84.0)	

Table 10.2: PrEP Current Use by Selected Subgroups

		PrEP uptake in the past 12 months								
	N	use now		used in the past		never used		not aware		
		n	% (CI)	n	% (CI)	n	% (CI)	n	% (CI)	p-value
Client of NGO working with PWID										
no	3,282	40	2.2 (1.5–3.4)	22	1.0 (0.6–1.8)	332	10.7 (9.1–12.5)	2,888	86.1 (84.0–87.9)	0.0000
yes	1,640	105	6.9 (5.3–9.0)	30	2.4 (1.4–4.1)	366	27.4 (24.4–30.5)	1,139	63.3 (59.9–66.5)	
Treated with MAT currently (of all)										
no	3,944	99	3.5 (2.7–4.5)	45	1.4 (0.9–2.1)	523	14.8 (13.3–16.6)	3,277	80.3 (78.3–82.1)	0.0750

	N	PrEP uptake in the past 12 months: use now n	use now % (CI)	used in the past n	used in the past % (CI)	never used n	never used % (CI)	not aware n	not aware % (CI)	p-value
yes	937	42	4.5 (2.8–7.2)	7	1.6 (0.6–4.4)	169	20.1 (16.6–24.2)	719	73.8 (69.3–77.8)	
HIV test result										
positive	796	36	4.7 (2.8–7.7)	6	0.6 (0.2–1.7)	171	24.6 (20.7–28.9)	583	70.2 (65.5–74.5)	0.0000
negative	4,171	110	3.4 (2.6–4.4)	46	1.6 (1.0–2.4)	535	13.9 (12.4–15.6)	3,480	81.1 (79.2–82.9)	
Past 30 days injecting 4 categories										
opioids	3,555	87	3.1 (2.3–4.3)	33	1.4 (0.8–2.3)	552	15.8 (14.3–17.6)	2,883	79.6 (77.6–81.5)	0.3397
stimulants	675	22	5.2 (3.2–8.3)	7	1.6 (0.7–3.6)	91	17.0 (13.2–21.6)	555	76.2 (71.2–80.6)	
opi+stimul	707	34	4.4 (3.0–6.5)	12	1.4 (0.7–2.9)	61	11.2 (8.3–14.9)	600	83.0 (79.0–86.4)	
other	30	3	8.5 (1.7–33.8)	0	0.0	2	32.4 (5.7–79.3)	25	59.0 (20.0–89.2)	
Injecting drug type of choice										
opioids	4,101	118	3.2 (2.5–4.2)	41	1.3 (0.8–2.1)	599	15.6 (14.1–17.2)	3,343	79.9 (78.0–81.6)	0.3478
stimulants	811	24	4.6 (2.9–7.3)	10	1.7 (0.8–3.5)	103	15.3 (12.0–19.4)	674	78.3 (73.9–82.2)	
other	33	2	11.9 (1.9–49.2)	0	0.0	3	30.8 (6.5–74.0)	28	57.3 (23.4–85.5)	

Table 10.3: PrEP Awareness and Uptake

	n	%	CI
PrEP uptake in the past 12 months			
use now	146	3.6	(2.9–4.5)
used in the past	52	1.4	(0.9–2.1)
never used	706	15.7	(14.2–17.2)
not aware	4,063	79.3	(77.6–81.0)
Aware of PrEP			
no	4,063	79.0	(77.3–80.7)
yes	917	21.0	(19.3–22.7)
PrEP use current			
no	4,821	96.4	(95.5–97.1)
yes	146	3.6	(2.9–4.5)
PrEP use current (of those aware)			
no	758	82.5	(78.5–85.9)
yes	146	17.5	(14.1–21.5)

The most common reason for discontinuing PrEP among those who had previously taken it was the belief that they were no longer at risk of HIV infection (51.9%), followed by inconvenient dosing schedules (17.6%), loss of interest (13.2%), and concerns about being recorded in official databases (11.1%) (Table 10.4). Among those who were aware of PrEP but had never taken it, the main reasons for not using it were the perception of no risk of infection (45.1%), concerns about side effects (13%), loss of interest (11%), lack of knowledge about where to access it (8.8%), and reluctance to be entered into official records (8.6%). The most cited motivator for taking PrEP among PWID was its ability to prevent HIV infection (55.7%). In contrast, the least appealing aspects were the need to obtain the medication from a healthcare facility (45.5%) and the requirement to continue regular condom use (47.1%).

Table 10.4: PrEP Non-uptake Reasons

	n	%	CI
Why you took PrEP but not taking it now			
ashamed to talk about it	4	3.5	(1.2–10.1)
do not feel at risk of HIV	29	51.9	(32.5–70.6)
unavailable at location	1	0.7	(0.1–5.0)

	n	%	CI
do not know where to get	0	0.0	
afraid of side effects	5	7.0	(2.4–18.6)
no longer interested	7	13.2	(5.8–27.5)
harder to get it	0	0.0	
the schedule is inconvenient	5	17.6	(6.1–41.3)
getting to the clinic is inconvenient	2	4.7	(1.1–17.8)
the clinic working hours are inconvenient	2	4.7	(1.1–17.8)
the queues are too long	0	0.0	
do not want to test for HIV regularly	2	3.5	(0.8–13.4)
doubt the safety and effectiveness	2	3.5	(0.8–13.4)
others can think I am HIV-infected	2	3.5	(0.8–13.4)
do not want to be in the database	3	11.1	(3.1–33.1)
other	4	15.6	(4.8–40.2)
Why do you not take PrEP			
ashamed to talk about it	10	1.5	(0.6–3.5)
do not feel at risk of HIV	279	45.1	(40.2–50.2)
unavailable at location	16	1.7	(1.0–2.8)
do not know where to get	86	8.8	(6.6–11.7)
afraid of side effects	99	13.0	(9.9–17.0)
not interested in it any more	72	11.0	(8.1–14.9)
harder to get it	1	0.1	(0.0–0.6)
do not have an ID	5	0.8	(0.3–2.2)
the schedule is inconvenient	12	2.1	(1.1–4.3)
getting to the clinic is inconvenient	16	2.0	(1.2–3.6)
the clinic working hours are inconvenient	9	1.4	(0.7–2.9)
the queues are too long	9	1.9	(0.8–4.3)
do not want to test for HIV regularly	31	4.6	(2.9–7.1)
doubt the safety and effectiveness	46	7.9	(5.7–11.0)
others can think I am HIV-infected	28	4.4	(2.8–6.8)
do not what to get in the database	50	8.6	(6.1–12.1)
other	85	16.5	(12.7–21.1)
Would you take PrEP if			
it could protect from HIV	2,423	55.7	(53.5–57.9)
it should be taken daily	2,064	48.3	(46.0–50.5)
it could be obtained from HIV clinic	1,931	45.5	(43.2–47.7)
it could be obtained from NGO	2,060	48.3	(46.1–50.5)
it could be taken as injection bi-monthly	2,091	49.1	(46.8–51.3)
medical exam should be done every 3 months	2,085	49.9	(47.7–52.1)
condom should be used every time	2,002	47.1	(44.9–49.4)

11. MAT

All results in this section should be interpreted in light of the oversampling of medication-assisted treatment (MAT) patients in several of the survey cities. To account for this, additional weights were applied in Kyiv, Rivne, and Chernihiv to align the estimated MAT coverage with programmatic benchmarks (see Methods). As a result, the weighted estimates of MAT coverage in these cities reflect the known population proportions, and other MAT-related indicators are also directly influenced by this adjustment.

The majority of PWID were fully or partially (“heard something”) aware of the existence of the medication-assisted treatment (MAT) program for treatment of opioid dependence (Figure 11.1). The lowest awareness level was observed in Zaporizhzhia (48.3%) and Dnipro (57.9%), the highest was in Kharkiv (89.5%) and Vinnytsia (86.3%).

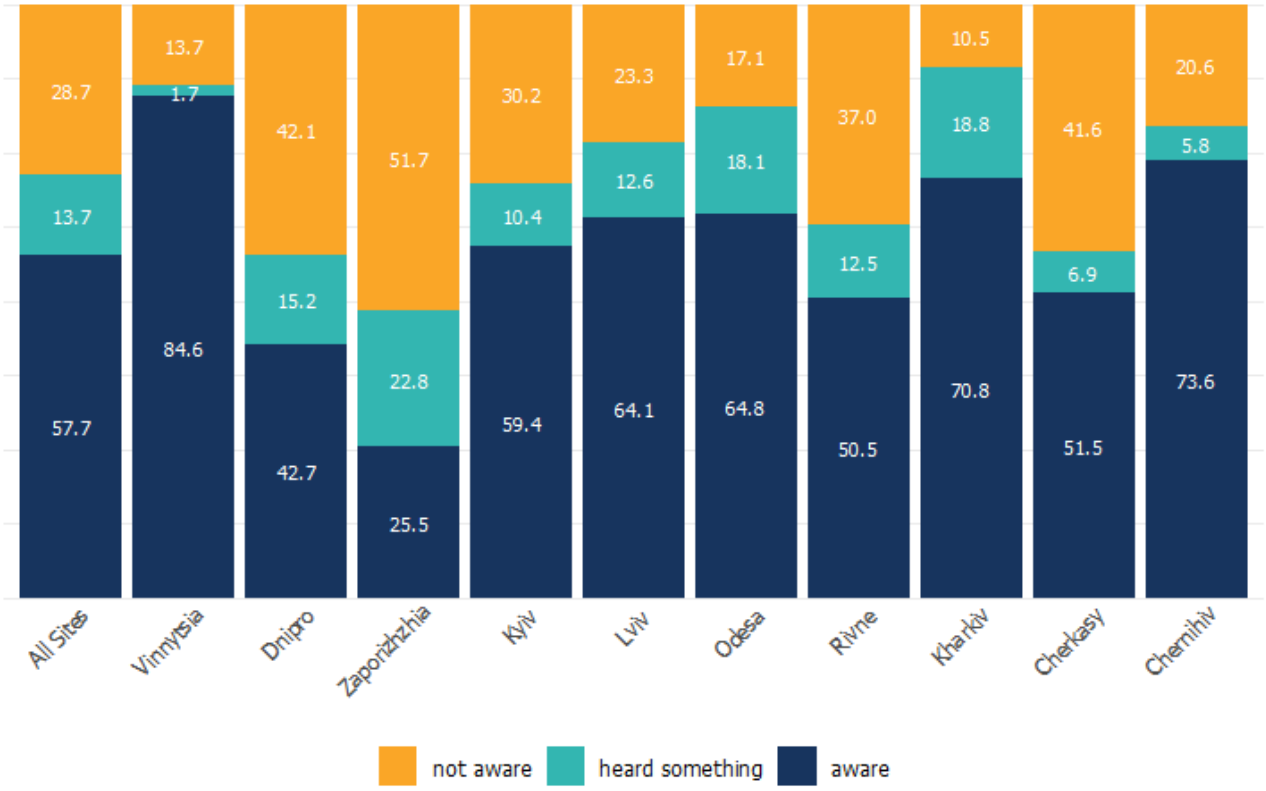

Figure 11.1: MAT Awareness by Survey Site

Figure 11.2 highlights substantial geographic differences in engagement with MAT. Across all sites combined, 62.5% of PWID either did not know where to access MAT or reported no interest in initiating it. Another 20.2% knew where to access MAT and intended to initiate it but had never used it before, 3.8% had used MAT in the past, and 13.4% were currently receiving it.

The proportion of PWID unaware of MAT access or not interested in starting it was highest in Vinnytsia (84.4%) and Chernihiv (78.9%), followed by Dnipro (74.0%) and Rivne (72.4%). Even in sites like Kyiv (55.5%) and Kharkiv (55.9%), where this proportion was comparatively lower, over half of PWID still lacked either awareness or motivation to seek treatment. Odesa showed the lowest proportion in this group (53.8%), though this still indicates a significant unmet need. Among those who intended to initiate MAT but had never used it, the highest proportions were observed in Lviv (30.4%), Odesa (29.7%), and Kharkiv (27.1%). This indicates that while some awareness and willingness to engage with MAT exist, actual uptake remains limited. Current MAT use was most prevalent in Kyiv (22.1%) and Cherkasy (18.0%), followed by Odesa (13.7%) and Kharkiv (12.0%). In other sites, current use ranged from just 2.2% in Dnipro to 11.7% in Zaporizhzhia. Past use of MAT was uncommon across all sites, generally below 8%, with slightly higher levels in Zaporizhzhia (7.3%) and Kyiv (5.1%).

If sites adjusted for MAT coverage are not taken into account (Kyiv, Rivne, Chernihiv), current MAT use was most prevalent in Cherkasy (18.0%), followed by Odesa (13.7%) and Kharkiv (12.0%). In other cities, current use ranged from just 2.2% in Dnipro to 11.7% in Zaporizhzhia. Past use of MAT was uncommon across all sites, generally below 8%, with slightly higher levels in Zaporizhzhia (7.3%).

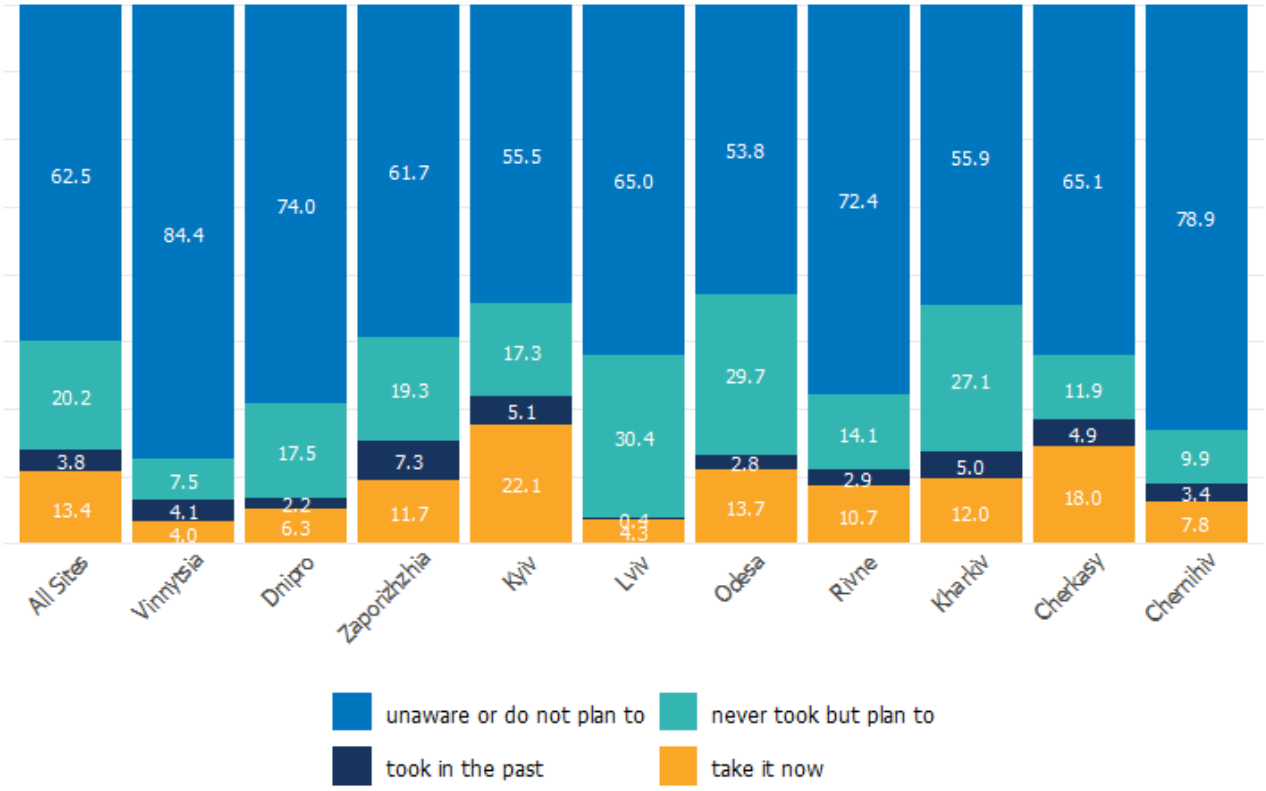

Figure 11.2: MAT Current Uptake by Survey Site

Figure 11.3 shows the trends in lifetime and current use of MAT in Ukraine from 2009 to 2023. Lifetime MAT use increased steadily from 1.0% [0.5-2.1] in 2009 to 19.8% [17.9-21.8] in 2023. This upward trend was particularly pronounced between 2020 and 2023, when the proportion rose sharply from 8.4% [7.3-9.6] to 19.8% [17.9-21.8].

Current MAT use also grew over time, rising from 1.2% [0.8-1.9] in 2015 (the first year it was measured) to 15.4% [13.9-17.0] in 2023. This indicator showed relatively modest gains through 2020 but nearly doubled in the most recent period, increasing from 4.6% [3.9-5.4] in 2020 to 15.4% [13.9-17.0] in 2023. These results indicate sustained and accelerating progress in MAT coverage over the past decade, particularly in the years following 2020, despite the challenges related to COVID-19 and the full-scale war. The war context may, in fact, have facilitated the transition of patients from private to public MAT programs during the initial volatile years of the invasion (Morozova et al., 2023).

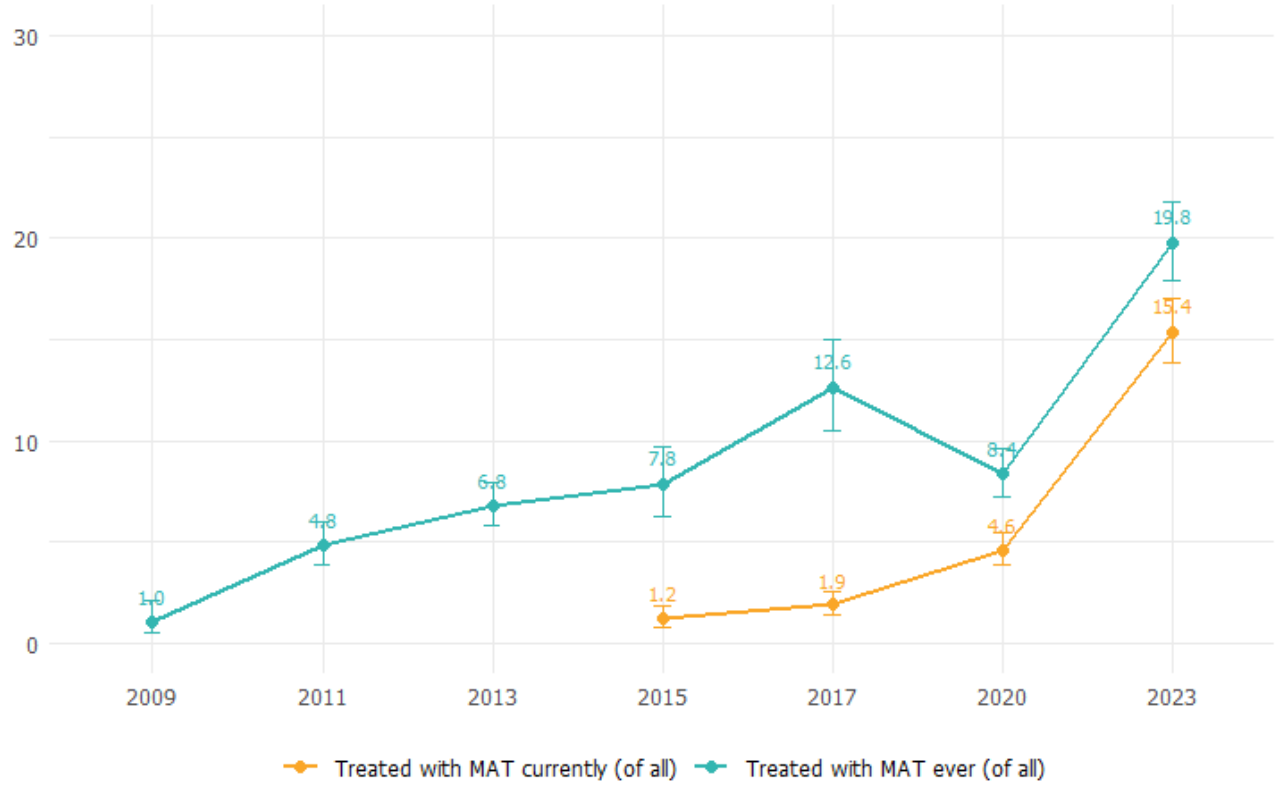

Figure 11.3: Trends in MAT Lifetime and Current Uptake by Survey Round in 5 Sites

Among the main reasons for discontinuing MAT among those who had previously participated in the program were unwillingness to attend a healthcare facility, perception of MAT as ineffective, belief that MAT was not necessary for the individual, and lack of motivation to stop using drugs (Table 11.1).

Table 11.1: MAT experience

	n	%	CI
Reason for MAT discontinuation			
moved to another city	19	10.2	(5.9–17.2)
clinic closed after Feb 2022	14	10.2	(4.3–22.5)
weak or no effect	41	20.1	(13.4–29.1)
side effects	28	14.1	(9.0–21.5)
do not want to visit clinic	51	20.6	(14.1–29.1)
do not want to quit drugs	31	13.4	(8.3–20.8)
hard to get to the clinic	19	6.2	(3.6–10.4)
do not need it	32	16.6	(10.4–25.7)
do not like the attitude of physician	18	7.8	(4.1–14.3)
How did the injection frequency change during MAT			
intensified	38	23.2	(15.5–33.2)
did not change	103	52.3	(42.6–61.8)
decreased	68	24.5	(18.1–32.3)
Whether bought bupr. or methadone while not being a patient in the past 12 months			
yes, methadone	2,043	44.5	(42.3–46.6)
yes, buprenorphine	202	2.5	(2.1–3.1)
did not buy	2,680	53.0	(50.9–55.1)
Where bought bupr. or methadone while not being a patient in the past 12 months			
did not buy	2,680	53.6	(51.4–55.7)
bought from black market	2,058	41.2	(39.1–43.3)
bought from private clinic	139	5.3	(4.2–6.6)
Way of using bupr. or methaone bought from others			
injecting	1,905	85.3	(82.9–87.5)
injecting mixed	164	7.2	(5.9–8.8)
swallow or subling.	119	6.2	(4.7–8.3)
snort	29	1.2	(0.7–2.1)

The lowest proportion of PWID who were enrolled in MAT at the time of the survey was observed among those who initiated injecting drug use less than 3 years ago (1.1%) and among young people (2.6%) (Table 11.2). Higher MAT coverage was reported among unemployed PWID (17.3%) and those with a history of incarceration (17.1%). The highest proportion of former MAT clients (i.e., those who had discontinued the program) was recorded among persons with disabilities (6.2%) and those in the lowest income category (5.7%).

Table 11.2: MAT Awareness and Uptake by Sociodemographic Characteristics

		MAT uptake (of all)								
	N	take it now		took in the past		never took but plan to		unaware or do not plan to		p-value
		n	% (CI)	n	% (CI)	n	% (CI)	n	% (CI)	
Total										
All Sites	4,915	946	13.4 (12.2–14.7)	179	3.8 (3.1–4.7)	873	20.2 (18.5–22.1)	2,917	62.5 (60.4–64.5)	1.0000
Sex										
male	3,966	784	13.9 (12.6–15.3)	149	3.9 (3.1–4.9)	717	20.2 (18.3–22.2)	2,316	62.0 (59.7–64.3)	0.6252
female	949	162	11.6 (9.2–14.5)	30	3.5 (2.0–6.1)	156	20.4 (16.5–24.9)	601	64.4 (59.7–68.9)	
Age										
<25	130	6	2.6 (0.7–9.2)	1	0.4 (0.0–2.6)	17	17.3 (9.1–30.6)	106	79.7 (66.5–88.6)	0.0000
25-34	993	128	9.6 (7.3–12.4)	25	1.8 (1.1–3.0)	181	19.8 (16.7–23.4)	659	68.8 (64.7–72.6)	
35-44	2,543	541	14.4 (12.8–16.2)	97	4.3 (3.2–5.8)	461	20.9 (18.3–23.7)	1,444	60.4 (57.3–63.3)	
45+	1,249	271	16.0 (13.5–18.8)	56	5.0 (3.5–6.9)	214	19.4 (16.5–22.7)	708	59.6 (55.7–63.4)	
Years since the start of injecting drug use										
≤2	197	10	1.1 (0.4–3.1)	1	0.2 (0.0–1.4)	22	9.3 (5.5–15.1)	164	89.4 (83.5–93.4)	0.0000
3-5	289	21	3.7 (2.1–6.6)	4	2.1 (0.6–6.6)	45	17.9 (12.5–25.0)	219	76.3 (68.8–82.4)	
6-10	558	64	9.1 (6.4–12.8)	9	1.1 (0.5–2.4)	103	19.8 (15.6–24.7)	382	70.0 (64.6–74.9)	
≥11	3,847	848	15.7 (14.3–17.3)	163	4.6 (3.7–5.8)	700	21.1 (19.1–23.4)	2,136	58.5 (56.1–60.9)	
Partnership status										
live alone	2,514	489	14.0 (12.3–15.8)	80	3.7 (2.7–5.0)	465	21.2 (18.7–24.0)	1,480	61.2 (58.2–64.0)	0.4901
live with partner	2,401	457	12.9 (11.3–14.7)	99	4.0 (3.0–5.3)	408	19.2 (16.9–21.8)	1,437	63.9 (61.0–66.7)	
Current employment status										
full-time	1,130	209	11.0 (9.0–13.4)	37	4.0 (2.5–6.3)	186	18.0 (15.1–21.4)	698	67.0 (63.0–70.7)	0.0660
part-time or temporary	2,548	441	13.5 (11.8–15.3)	79	3.9 (2.9–5.3)	507	21.6 (19.5–24.0)	1,521	61.0 (58.2–63.7)	
unemployed	722	189	17.3 (14.0–21.3)	31	3.2 (2.1–5.0)	108	20.4 (15.1–26.9)	394	59.0 (52.8–65.0)	
disabled	260	71	15.9 (10.8–22.8)	22	6.2 (3.5–10.7)	36	18.5 (9.5–32.7)	131	59.4 (48.4–69.6)	
other	251	36	8.9 (5.4–14.3)	10	1.9 (1.0–3.7)	34	14.6 (9.5–21.8)	171	74.6 (66.6–81.2)	
Monthly income category										
<3K	683	172	16.2 (12.8–20.4)	33	5.7 (3.7–8.6)	94	18.1 (13.2–24.4)	384	60.0 (53.7–65.9)	0.1401
3-10K	2,014	390	12.7 (11.0–14.7)	77	3.8 (2.8–5.2)	393	21.7 (19.0–24.6)	1,154	61.8 (58.6–64.9)	
10-20K	1,451	246	14.4 (12.2–17.0)	45	3.3 (2.0–5.3)	275	21.1 (18.0–24.5)	885	61.2 (57.3–65.0)	
≥20K	411	71	12.1 (8.6–16.7)	9	2.1 (0.9–4.9)	65	15.6 (11.3–21.0)	266	70.2 (63.9–75.9)	
Ever incarcerated										
no	3,369	553	11.6 (10.3–13.0)	109	3.5 (2.7–4.7)	565	18.3 (16.6–20.3)	2,142	66.6 (64.3–68.8)	0.0000
yes	1,462	379	17.1 (14.7–19.7)	63	4.4 (3.2–6.1)	295	24.5 (20.7–28.7)	725	54.1 (49.9–58.2)	

Table 11.3: MAT Awareness and Uptake by Selected Subgroups

	N	MAT uptake (of all) take it now		took in the past		never took but plan to		unaware or do not plan to		p-value
		n	% (CI)	n	% (CI)	n	% (CI)	n	% (CI)	
Client of NGO working with PWID										
no	3,250	286	6.3 (5.4–7.4)	93	3.4 (2.5–4.5)	563	18.0 (15.9–20.2)	2,308	72.3 (69.8–74.7)	0.0000
yes	1,623	648	30.5 (27.5–33.6)	83	4.9 (3.7–6.5)	299	25.4 (22.4–28.6)	593	39.2 (35.9–42.6)	
Treated with MAT currently (of all)										
no	3,969	0	0.0	179	4.4 (3.6–5.5)	873	23.4 (21.4–25.5)	2,917	72.2 (70.0–74.3)	0.0000
yes	946	946	100.0	0	0.0	0	0.0	0	0.0	
HIV test result										
positive	790	289	22.4 (18.8–26.3)	40	6.4 (4.2–9.9)	131	21.2 (17.2–25.8)	330	50.0 (44.9–55.1)	0.0000
negative	4,125	657	11.7 (10.5–13.0)	139	3.3 (2.6–4.2)	742	20.0 (18.1–22.1)	2,587	64.9 (62.7–67.1)	
Past 30 days injecting 4 categories										
opioids	3,521	849	16.4 (14.8–18.0)	138	4.4 (3.4–5.5)	655	21.9 (19.7–24.2)	1,879	57.4 (54.9–59.9)	0.0000
stimulants	673	21	1.8 (1.0–3.1)	18	2.4 (1.3–4.2)	77	11.7 (8.8–15.2)	557	84.2 (80.3–87.4)	
opi+stimul	691	67	8.5 (6.0–11.9)	23	2.6 (1.6–4.1)	139	21.8 (17.8–26.4)	462	67.1 (62.1–71.8)	
other	30	9	15.4 (4.7–40.3)	0	0.0	2	1.8 (0.3–9.3)	19	82.8 (57.6–94.4)	
Injecting drug type of choice										
opioids	4,053	920	16.0 (14.6–17.5)	146	4.0 (3.2–5.1)	764	22.0 (20.0–24.2)	2,223	58.0 (55.6–60.3)	0.0000
stimulants	808	19	1.4 (0.8–2.4)	27	2.8 (1.8–4.5)	103	11.6 (9.1–14.5)	659	84.2 (80.9–87.0)	
other	33	3	1.9 (0.4–8.7)	4	6.4 (1.5–23.4)	4	19.7 (5.3–51.7)	22	72.1 (42.1–90.2)	

A separate question assessed whether PWID had purchased MAT medications (methadone or buprenorphine tablets) in the past 12 months while not being enrolled in a MAT program. This question was answered by all PWID, including those currently receiving MAT, as they could be out of treatment in the preceding year. Overall, more than 45% of PWID reported purchasing MAT medications during this time (Figure 11.4). The highest proportions were observed in Kyiv (66.8%) and Kharkiv (65.6%), while the lowest was recorded in Dnipro (19.7%). In most cases, PWID reported purchasing methadone. Buprenorphine purchases were relatively uncommon, except in Rivne and Lviv, where 20.1% and 12.2% of PWID, respectively, reported having bought buprenorphine. In most cases, PWID obtained MAT medications from the black market (41.2%), while a smaller proportion reported that they were temporarily attending private MAT clinics and had been receiving MAT medications there (5.3%). The latter was primarily driven by participants in Kyiv, where 14.1% reported obtaining MAT medications from private clinics. In most other sites, this practice was rare, with the exception of Odesa (Figure 11.4).

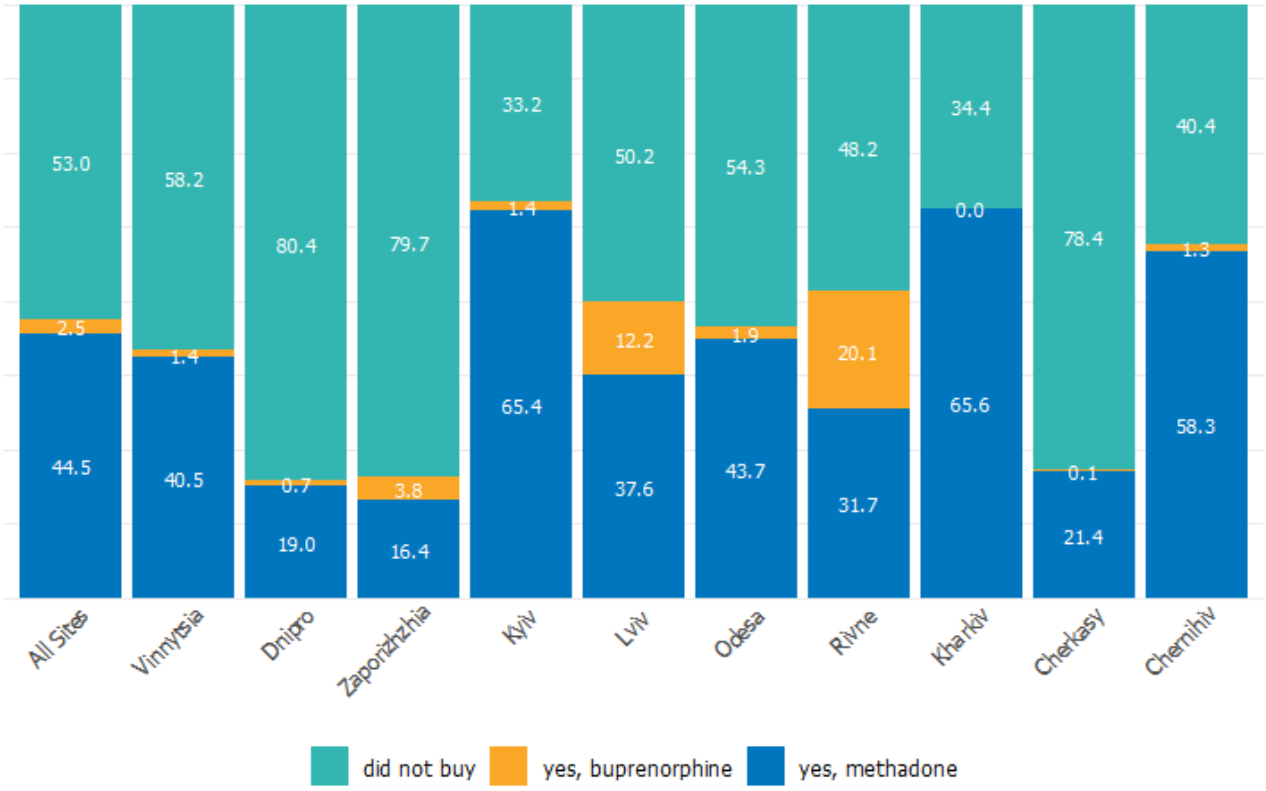

Figure 11.4: Buying MAT medications while not being a patient by Survey Site

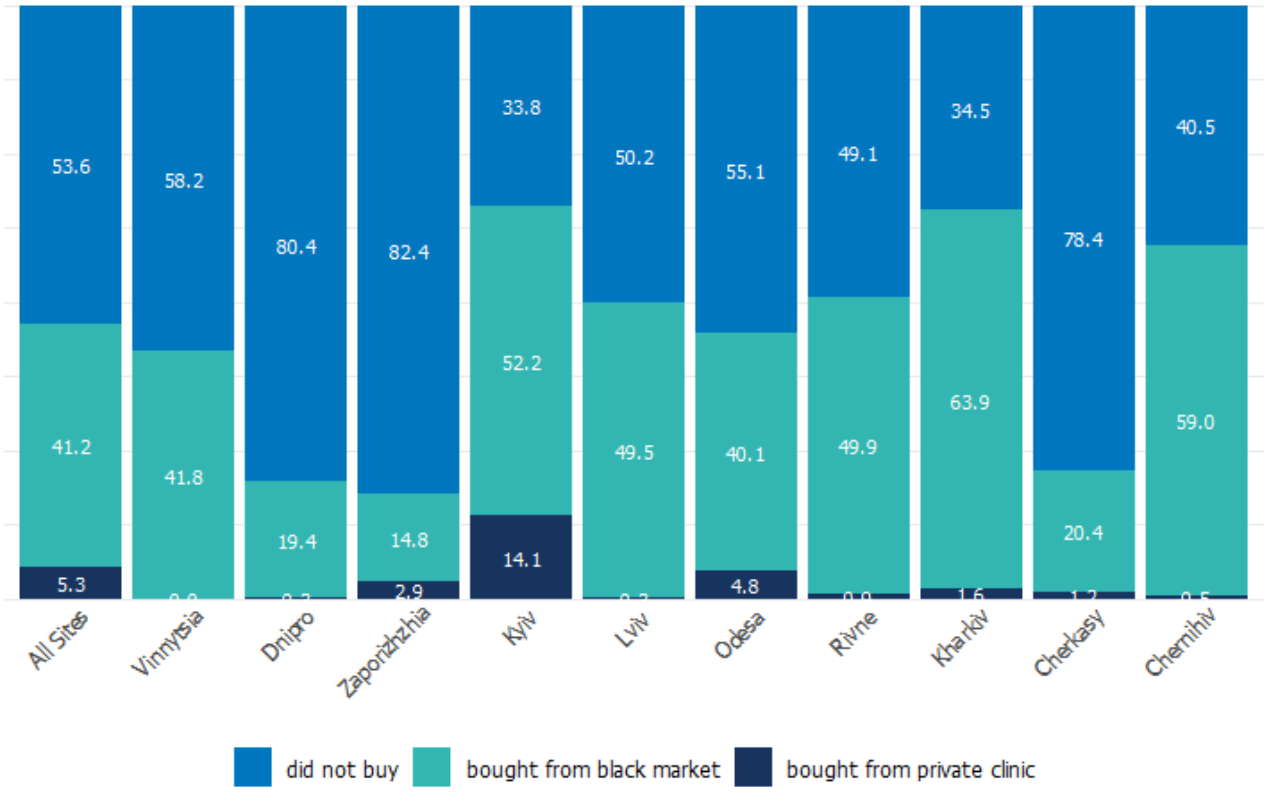

Figure 11.5: Source of buying MAT medications while not being a patient by Survey Site

The most common route of administration for MAT medications purchased outside of formal MAT programs was injection (Figure 11.6).

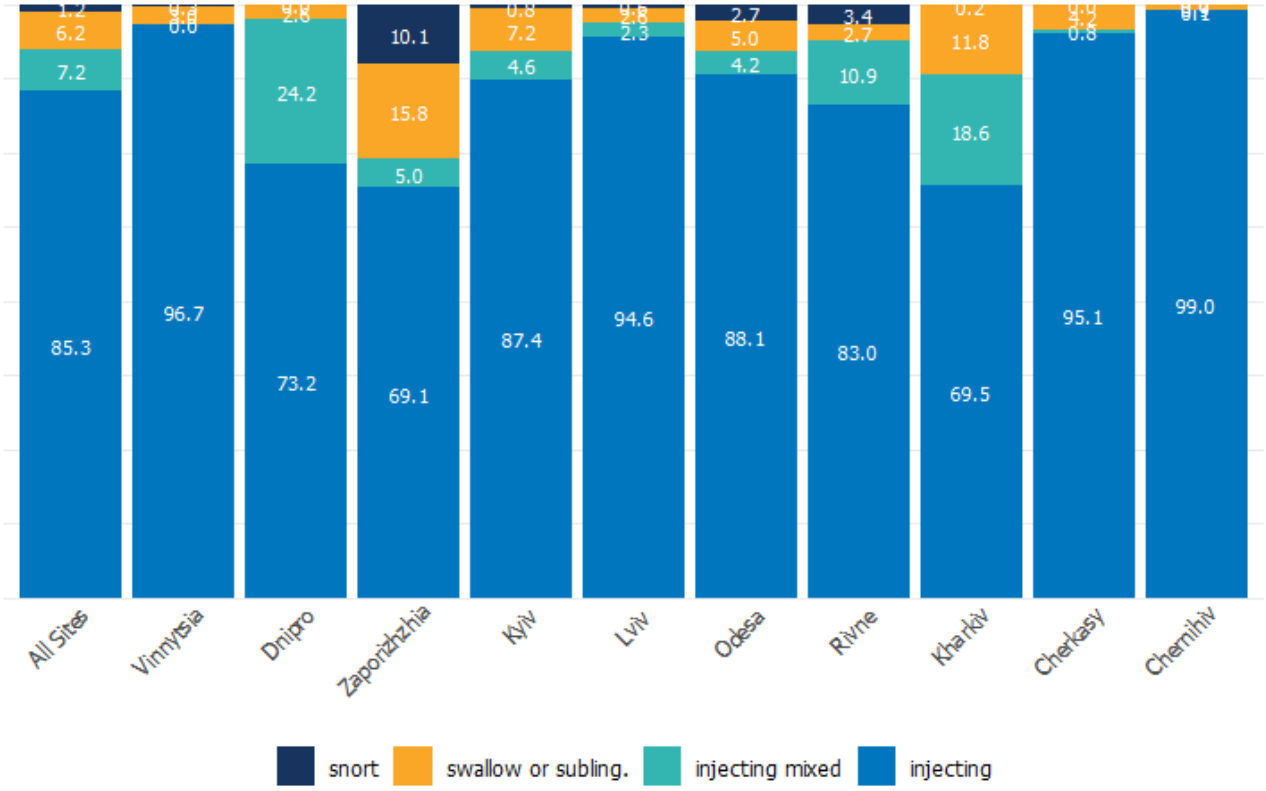

Figure 11.6: Route of administration of MAT medications bought from others by Survey Site

12. Overdose and Naloxone

Nearly 40% of PWID reported having ever experienced a non-fatal drug overdose (from any substance) (Figure 12.1). Site-specific estimates ranged from 25.4% in Cherkasy to 62.5% in Zaporizhzhia. In the past 12 months, 6.2% of PWID reported an overdose, with the lowest proportion in Cherkasy (3.2%) and the highest in Zaporizhzhia (7.7%).

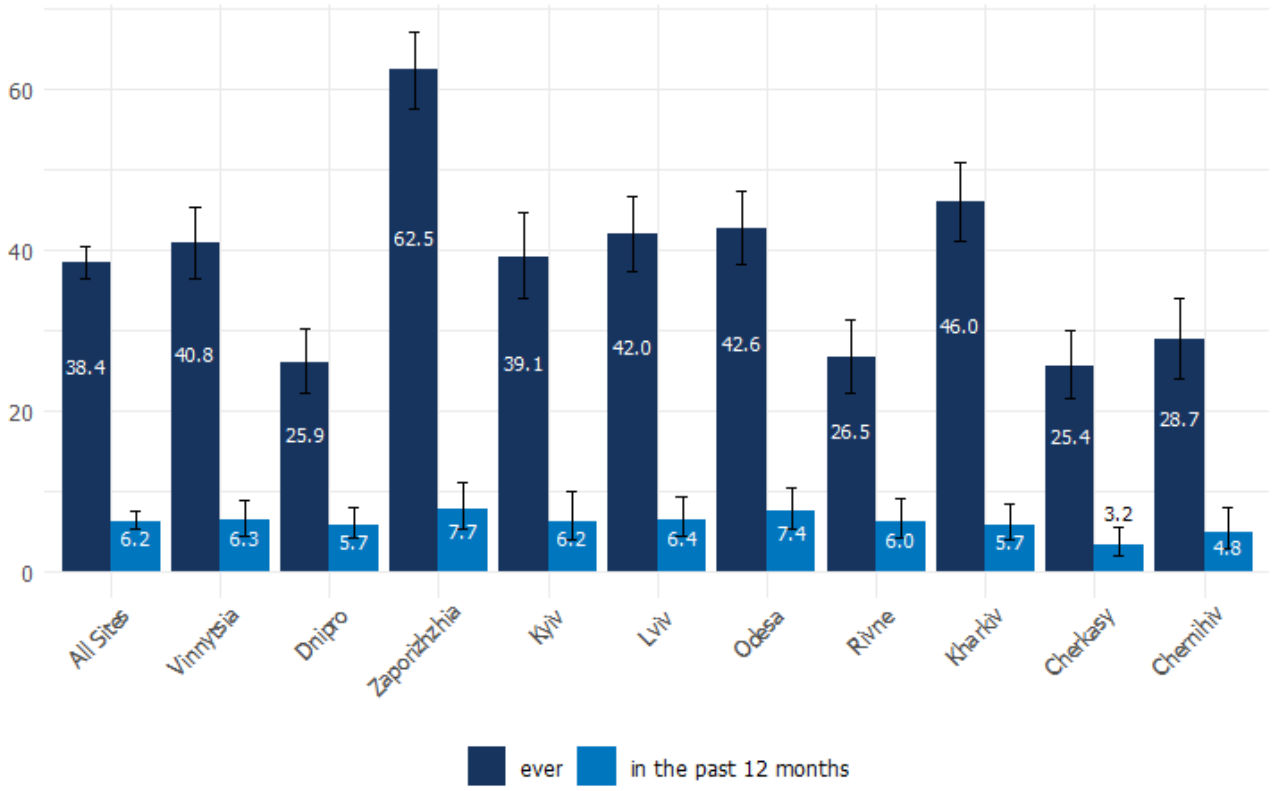

Figure 12.1: Overdose Experience Ever and in the Past 12 Months by Survey Site

Trend analysis of overdose experience over the past 12 months, based on eight survey rounds from 2007 to 2023, indicated a more than fifty percent decline in the proportion of PWID reporting recent overdose experience—from 14.3% in 2007 to 6.7% in 2023. Despite this downward trend, the prevalence of overdose was never negligible. Moreover, there appears to have been a temporary increase in overdose prevalence between 2013 and 2020, peaking at 10.6% in 2017. This may be associated with changes in the opioid drug scene in Ukraine, specifically the period when methadone became the dominant injectable opioid, quickly replacing opium extract (“shirka”).

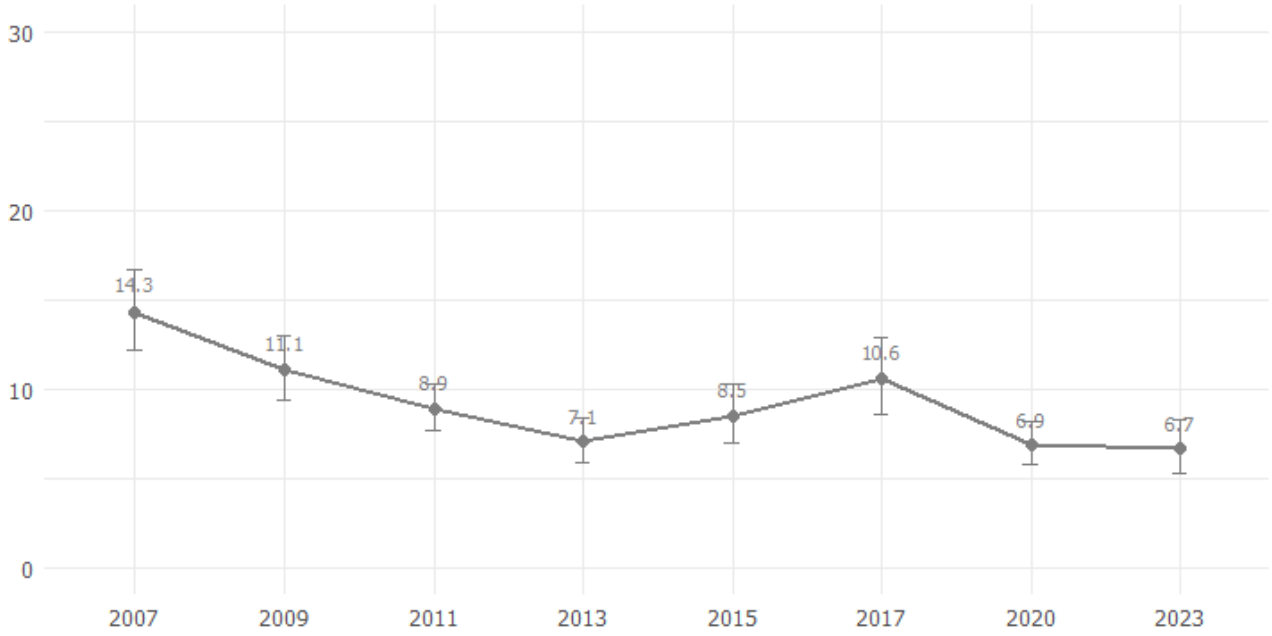

Figure 12.2: Trends in Overdose Experience in the Past 12 Months by Survey Round in 5 Sites

Recent overdose (within the past 12 months) was more frequent and persons with disabilities (10.8%) and among PWID who use both opioids and stimulants (11%) (Tables 12.1 and 12.2).

Table 12.1: Overdose Experience in the Past 12 Months by Sociodemographic Characteristics

		N	Experienced overdose in the past 12 months				
			no		yes		
			n	% (CI)	n	% (CI)	p-value
Total							
	All Sites	4,894	4,606	93.8 (92.6–94.8)	288	6.2 (5.2–7.4)	1.0000
Sex							
	male	3,959	3,716	93.6 (92.2–94.7)	243	6.4 (5.3–7.8)	0.4385
	female	935	890	94.6 (91.9–96.4)	45	5.4 (3.6–8.1)	
Age							
	<25	128	119	85.1 (59.8–95.7)	9	14.9 (4.3–40.2)	0.0944
	25-34	993	933	94.6 (92.5–96.1)	60	5.4 (3.9–7.5)	
	35-44	2,536	2,368	93.2 (91.7–94.4)	168	6.8 (5.6–8.3)	
	45+	1,237	1,186	95.7 (93.5–97.2)	51	4.3 (2.8–6.5)	
Years since the start of injecting drug use							
	≤2	196	185	92.9 (85.5–96.7)	11	7.1 (3.3–14.5)	0.0687
	3-5	290	267	88.4 (77.0–94.5)	23	11.6 (5.5–23.0)	
	6-10	558	528	96.2 (94.1–97.5)	30	3.8 (2.5–5.9)	
	≥11	3,827	3,606	94.0 (92.8–95.0)	221	6.0 (5.0–7.2)	
Partnership status							
	live alone	2,500	2,358	94.5 (93.2–95.6)	142	5.5 (4.4–6.8)	0.1864
	live with partner	2,394	2,248	93.1 (91.0–94.7)	146	6.9 (5.3–9.0)	
Current employment status							

	N	Experienced overdose in the past 12 months				
		no		yes		
		n	% (CI)	n	% (CI)	p-value
full-time	1,123	1,067	94.3 (92.1–95.9)	56	5.7 (4.1–7.9)	0.0059
part-time or temporary	2,542	2,404	94.8 (93.6–95.9)	138	5.2 (4.1–6.4)	
unemployed	718	648	89.2 (83.7–93.0)	70	10.8 (7.0–16.3)	
disabled	258	247	95.7 (90.6–98.1)	11	4.3 (1.9–9.4)	
other	248	235	92.7 (85.9–96.3)	13	7.3 (3.7–14.1)	
Monthly income category						
<3K	688	654	93.9 (89.9–96.3)	34	6.1 (3.7–10.1)	0.8985
3-10K	1,985	1,868	93.9 (92.2–95.2)	117	6.1 (4.8–7.8)	
10-20K	1,453	1,366	93.1 (90.3–95.2)	87	6.9 (4.8–9.7)	
≥20K	412	386	94.4 (91.0–96.6)	26	5.6 (3.4–9.0)	
Ever incarcerated						
no	3,342	3,170	94.4 (92.9–95.6)	172	5.6 (4.4–7.1)	0.0959
yes	1,468	1,358	92.5 (90.3–94.2)	110	7.5 (5.8–9.7)	

Table 12.2: Overdose Experience in the Past 12 Months by Selected Subgroups

	N	Experienced overdose in the past 12 months				
		no		yes		
		n	% (CI)	n	% (CI)	p-value
Client of NGO working with PWID						
no	3,227	3,040	93.5 (92.0–94.8)	187	6.5 (5.2–8.0)	0.3448
yes	1,629	1,532	94.5 (92.9–95.8)	97	5.5 (4.2–7.1)	
Treated with MAT currently (of all)						
no	3,882	3,664	94.0 (92.7–95.1)	218	6.0 (4.9–7.3)	0.0907
yes	935	869	91.7 (88.6–94.0)	66	8.3 (6.0–11.4)	
HIV test result						
positive	794	747	95.1 (92.9–96.6)	47	4.9 (3.4–7.1)	0.1839
negative	4,100	3,859	93.5 (92.1–94.7)	241	6.5 (5.3–7.9)	
Past 30 days injecting 4 categories						
opioids	3,496	3,314	94.4 (92.9–95.5)	182	5.6 (4.5–7.1)	0.0057
stimulants	671	633	95.2 (93.2–96.7)	38	4.8 (3.3–6.8)	
opi+stimul	698	633	89.0 (85.3–91.9)	65	11.0 (8.1–14.7)	
other	29	26	82.7 (48.3–96.1)	3	17.3 (3.9–51.7)	
Injecting drug type of choice						
opioids	4,036	3,799	93.7 (92.3–94.8)	237	6.3 (5.2–7.7)	0.8670
stimulants	805	756	94.3 (92.2–95.9)	49	5.7 (4.1–7.8)	
other	33	32	93.2 (61.6–99.2)	1	6.8 (0.8–38.4)	

Among PWID who had ever experienced an overdose, the vast majority reported more than one event (Table 12.3). Nearly half indicated having had 2–4 overdoses,

and at least one in five (22.1%) reported five or more lifetime overdoses. The most commonly reported drug associated with overdose was methadone, mentioned in 57.9% of cases. However, stimulant-related overdoses also played a substantial role, accounting for 23.6% of reported overdoses, with substantial variation across sites—the highest proportion of stimulant-related overdoses was in Rivne (54.4%) and Chernihiv (43.1%). In most instances of overdose following the injection of multiple substances, methadone was among the drugs used. The same pattern was observed in overdoses involving the combined use of drugs and alcohol.

One-third of PWID (33.2%) had never heard of naloxone. Another 43.3% had heard of it but had no experience using it. Approximately one-quarter of PWID reported that either they or their friends had used naloxone, although the question wording did not allow to distinguish whether they used naloxone on themselves or someone else.

Table 12.3: Overdose Experience

	n	%	CI
Experienced overdose ever			
yes	1,921	38.4	(36.4–40.5)
Number of overdoses in lifetime			
1	556	28.2	(25.3–31.2)
2-4	888	49.8	(46.4–53.1)
5+	370	22.1	(19.2–25.2)
Experienced overdose in the past 12 months			
yes	288	6.2	(5.2–7.4)
Experienced overdose in the past 12 months (of those ever)			
yes	288	16.4	(13.9–19.2)
Number of overdoses in the past 12 months			
1	178	56.3	(46.5–65.6)
2-4	81	35.0	(25.9–45.3)
5+	12	8.7	(4.4–16.7)
Drug overdosed with (if used only one drug)			
methadone	94	57.9	(47.1–68.1)
other opioid	15	12.9	(6.6–23.7)
stimulant	40	23.6	(16.4–32.7)
other	7	5.6	(1.8–16.5)
Drugs overdosed with (if used a combination)			
methadone+stimulant	20	58.8	(33.5–80.1)
methadone+barbit. or dimedr.	9	18.3	(6.4–42.3)
methadone+other	9	10.3	(4.1–23.7)
other	11	12.6	(5.2–27.5)
Drug overdosed with (if combined drug with alcohol)			
methadone	47	59.6	(45.0–72.6)
other opioid	11	10.9	(5.4–20.6)
stimulant	16	15.5	(8.4–26.9)
other	9	14.1	(6.3–28.5)
Naloxone knowledge and experience			
never heard	1,635	33.2	(31.1–35.2)
aware but not used	2,359	43.3	(41.2–45.4)
used myself	524	11.6	(10.4–13.0)
my friends used	393	10.2	(9.0–11.4)
me and my friends used	81	1.8	(1.3–2.3)

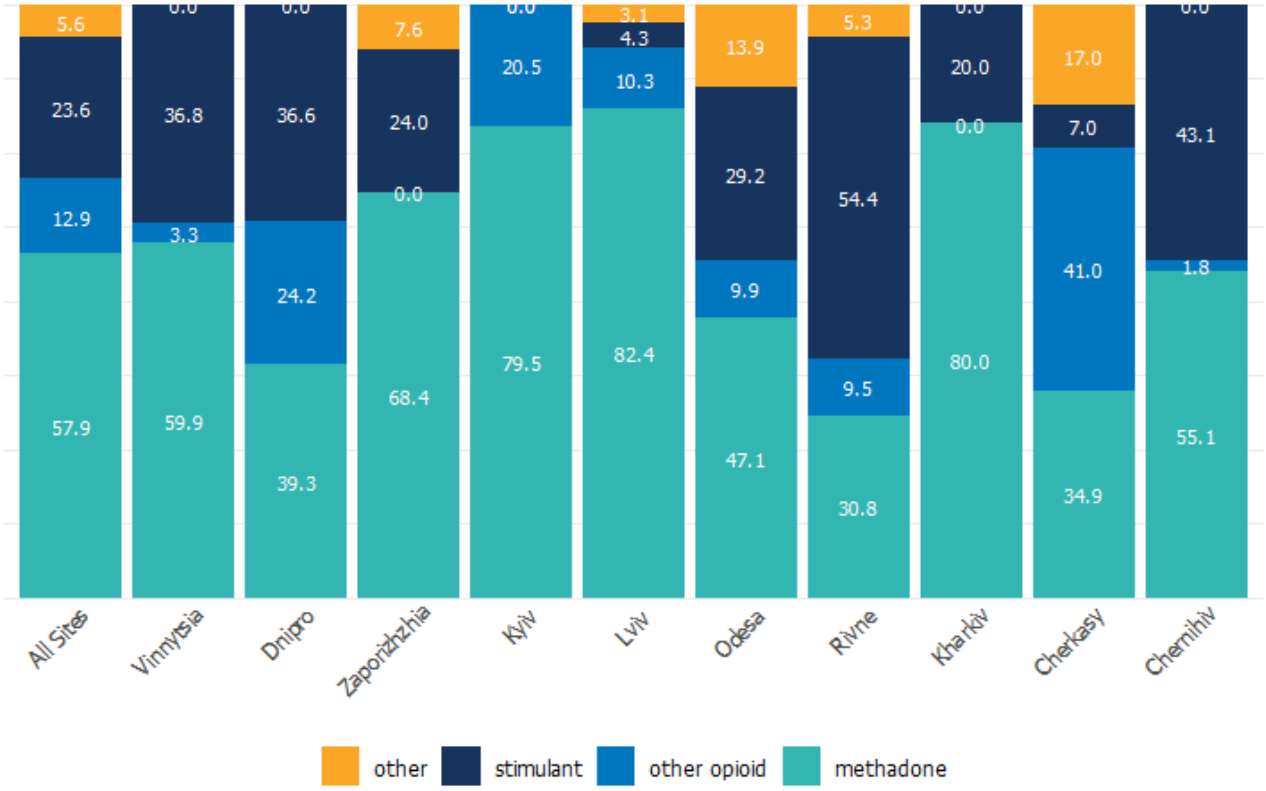

Figure 12.3: Drugs causing overdoses (if used only one drug) by Survey Site

Personal experience with naloxone use (either receiving or giving) was most frequently reported in Kyiv (16.9%), Zaporizhzhia (16.6%), Odesa (16.3%), Cherkasy (13.8%), and Kharkiv (12.9%) (Figure 12.4).

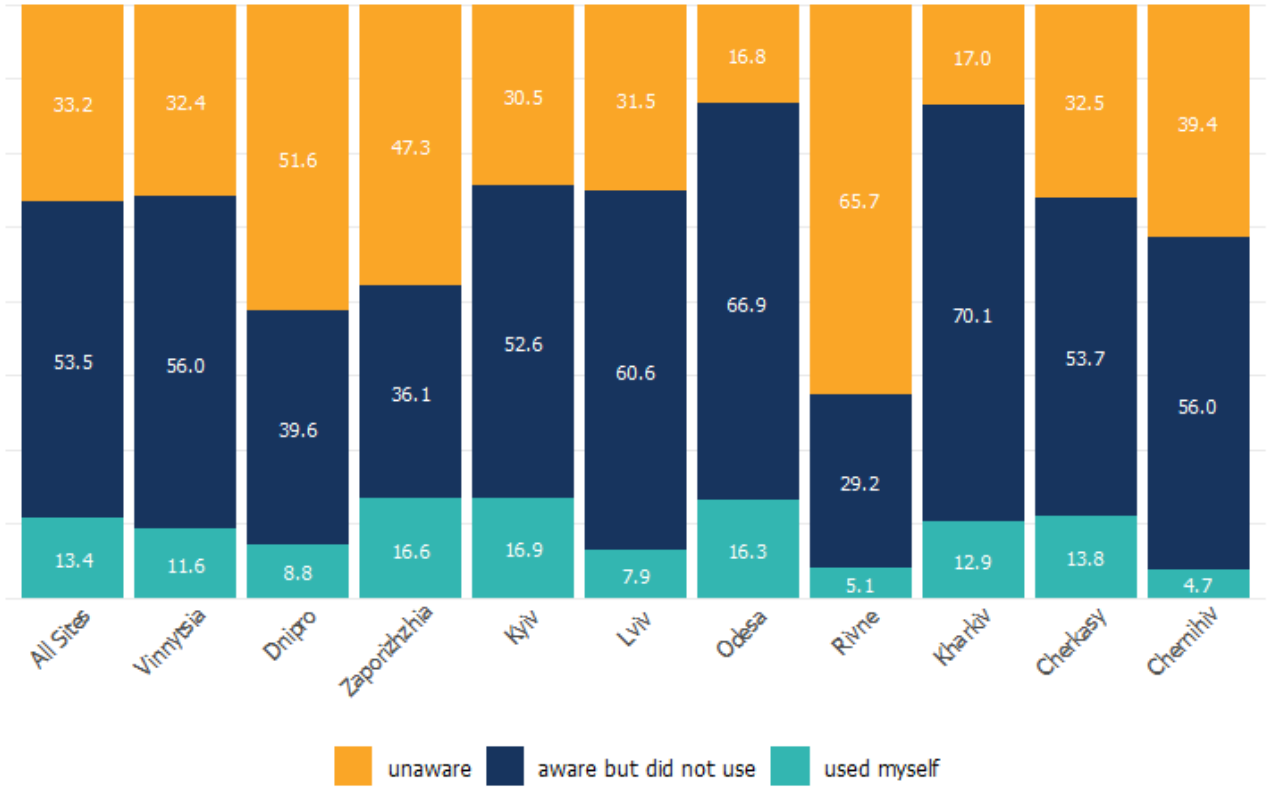

Figure 12.4: Naloxone Use by Survey Site

Awareness of naloxone was higher among men, older and more experienced PWID, PWID with a history of incarceration, clients of NGOs, MAT patients, people living with HIV, and those who use stimulants (Table 12.4).

Table 12.4: Naloxone Experience by Sociodemographic Characteristics

			Naloxone knowledge and experience (3 categories)					
	N	unaware		aware but did not use		used myself		p-value
		n	% (CI)	n	% (CI)	n	% (CI)	
Total								
All Sites	4,992	1,635	33.2 (31.1–35.2)	2,752	53.5 (51.4–55.6)	605	13.4 (12.1–14.8)	1.0000
Sex								
male	4,032	1,245	30.9 (28.7–33.2)	2,283	55.6 (53.3–58.0)	504	13.5 (12.0–15.0)	0.0001
female	960	390	41.9 (37.3–46.6)	469	45.1 (40.6–49.7)	101	13.0 (10.0–16.7)	
Age								
<25	130	72	59.1 (45.5–71.4)	50	34.5 (23.4–47.7)	8	6.4 (2.6–14.5)	0.0001
25-34	1,005	354	36.9 (32.8–41.3)	539	51.1 (46.8–55.4)	112	12.0 (9.5–14.9)	
35-44	2,582	801	31.3 (28.5–34.2)	1,440	54.4 (51.4–57.5)	341	14.3 (12.4–16.4)	
45+	1,275	408	30.7 (27.1–34.6)	723	55.9 (51.9–59.8)	144	13.4 (11.0–16.3)	
Years since the start of injecting drug use								
≤2	199	126	61.5 (51.2–70.8)	68	36.6 (27.4–46.9)	5	1.9 (0.7–5.5)	0.0000
3-5	294	143	51.7 (43.3–59.9)	135	41.5 (33.8–49.6)	16	6.9 (3.4–13.5)	
6-10	563	230	39.7 (34.3–45.3)	284	50.8 (45.0–56.5)	49	9.6 (6.9–13.2)	
≥11	3,912	1,125	28.9 (26.6–31.2)	2,256	56.1 (53.6–58.5)	531	15.1 (13.5–16.8)	
Partnership status								

	N	Naloxone knowledge and experience (3 categories) unaware n	% (CI)	aware but did not use n	% (CI)	used myself n	% (CI)	p-value
live alone	2,558	907	34.3 (31.5–37.2)	1,364	54.0 (51.0–56.9)	287	11.7 (10.1–13.6)	0.0667
live with partner	2,434	728	32.0 (29.2–35.0)	1,388	53.0 (49.9–56.0)	318	15.0 (13.0–17.3)	
Current employment status								
full-time	1,137	368	35.6 (31.5–39.8)	648	52.5 (48.2–56.8)	121	11.9 (9.5–14.8)	0.1506
part-time or temporary	2,601	836	30.5 (27.9–33.1)	1,453	56.0 (53.2–58.8)	312	13.5 (11.7–15.5)	
unemployed	735	256	36.2 (30.4–42.4)	375	48.7 (42.6–54.8)	104	15.2 (11.7–19.4)	
disabled	263	67	33.4 (23.1–45.5)	155	53.5 (42.9–63.8)	41	13.1 (8.4–19.9)	
other	251	106	42.4 (33.5–51.8)	118	44.5 (35.7–53.6)	27	13.2 (7.3–22.6)	
Monthly income category								
<3K	691	237	36.0 (30.0–42.4)	375	51.4 (45.2–57.5)	79	12.6 (9.4–16.7)	0.1525
3-10K	2,048	619	30.7 (27.7–33.8)	1,205	57.1 (53.8–60.3)	224	12.2 (10.3–14.4)	
10-20K	1,479	475	31.2 (27.6–35.1)	793	52.6 (48.6–56.5)	211	16.2 (13.6–19.2)	
≥20K	413	115	29.5 (23.5–36.2)	242	57.4 (50.4–64.1)	56	13.2 (9.3–18.3)	
Ever incarcerated								
no	3,416	1,280	38.8 (36.3–41.3)	1,822	50.5 (48.0–53.0)	314	10.7 (9.3–12.4)	0.0000
yes	1,483	346	22.1 (18.7–26.0)	884	60.1 (56.0–64.1)	253	17.8 (15.1–20.8)	

Table 12.5: Naloxone Experience by Selected Subgroups

	N	Naloxone knowledge and experience (3 categories) unaware n	% (CI)	aware but did not use n	% (CI)	used myself n	% (CI)	p-value
Client of NGO working with PWID								
no	3,295	1,322	40.3 (37.7–43.0)	1,661	48.8 (46.1–51.4)	312	10.9 (9.4–12.6)	0.0000
yes	1,650	301	16.3 (14.1–18.8)	1,065	64.6 (61.4–67.7)	284	19.1 (16.5–21.9)	
Treated with MAT currently (of all)								
no	3,960	1,463	36.3 (34.1–38.7)	2,085	52.1 (49.8–54.5)	412	11.5 (10.2–13.1)	0.0000
yes	946	143	13.5 (10.6–17.1)	626	61.7 (57.0–66.2)	177	24.8 (20.9–29.1)	
HIV test result								
positive	802	188	27.4 (22.9–32.4)	478	54.8 (49.7–59.8)	136	17.8 (14.3–21.9)	0.0043
negative	4,190	1,447	34.3 (32.1–36.6)	2,274	53.2 (50.9–55.5)	469	12.5 (11.1–14.0)	
Past 30 days injecting 4 categories								
opioids	3,575	1,047	29.2 (26.9–31.6)	2,090	56.9 (54.3–59.4)	438	13.9 (12.3–15.7)	0.0000
stimulants	677	337	55.4 (50.2–60.4)	292	38.0 (33.3–43.0)	48	6.6 (4.7–9.2)	
opi+stimul	710	236	31.1 (26.7–35.8)	360	51.0 (45.9–56.1)	114	18.0 (14.2–22.4)	
other	30	15	36.2 (11.5–71.2)	10	46.4 (14.6–81.4)	5	17.4 (4.5–48.5)	
Injecting drug type of choice								
opioids	4,124	1,231	29.2 (27.1–31.4)	2,357	56.1 (53.7–58.4)	536	14.7 (13.2–16.4)	0.0000
stimulants	813	381	52.8 (47.9–57.6)	370	40.4 (35.8–45.1)	62	6.8 (5.1–9.1)	

	N	Naloxone knowledge and experience (3 categories) unaware n	% (CI)	aware but did not use n	% (CI)	used myself n	% (CI)	p-value
other	33	11	26.0 (8.7–56.2)	18	67.7 (37.9–87.8)	4	6.4 (1.4–24.0)	

13. Physical and Mental Health

Self-reported disease history and treatment experience (among those who had the respective disease) is presented in Table 13.1.

Table 13.1: Disease and treatment history

		n	%	CI
Had a disease				
	hepatitis B	1,025	17.6	(16.2–19.1)
	hepatitis C	1,959	39.2	(37.1–41.3)
	syphilis	163	2.7	(2.3–3.3)
	gonorrhea	243	4.5	(3.8–5.3)
	chlamydia	191	4.3	(3.6–5.2)
	herpes	677	13.3	(12.1–14.7)
	human papillomavirus	134	2.5	(2.0–3.2)
	tuberculosis	515	9.3	(8.2–10.5)
Treated for: hepatitis B				
	treated successfully	678	63.3	(58.8–67.6)
	treated unsuccessfully	98	10.9	(8.2–14.4)
	did not complete	55	6.1	(4.3–8.6)
	treated now	21	2.0	(1.0–4.0)
	never treated	161	17.7	(14.4–21.7)
Treated for: hepatitis C				
	treated successfully	695	30.1	(27.2–33.2)
	treated unsuccessfully	241	11.0	(9.2–13.0)
	did not complete	106	5.7	(4.4–7.5)
	treated now	106	5.9	(4.4–7.9)
	never treated	776	47.2	(43.9–50.6)
Treated for: syphilis				
	treated successfully	127	76.0	(66.3–83.6)
	treated unsuccessfully	16	10.4	(6.1–17.0)
	did not complete	2	3.5	(0.8–13.7)
	treated now	2	1.6	(0.3–7.1)
	never treated	9	8.6	(4.2–16.8)
Treated for: tuberculosis				
	treated successfully	437	86.9	(82.4–90.4)
	treated unsuccessfully	34	7.0	(4.6–10.5)
	did not complete	12	1.3	(0.7–2.5)
	treated now	16	4.4	(2.4–8.1)
	never treated	2	0.3	(0.1–1.4)

Table 13.2: Mental health screening scores

	n	Mean	CI	Median	IQR
AUDIT-C alcohol risk score ≥5	4,874	1.2	(1.2–1.2)	1	(1–1)
PHQ-9 depression result	5,002	2.2	(2.2–2.3)	2	(1–3)
GAD-7 anxiety result	5,002	1.9	(1.9–1.9)	2	(1–2)

To screen for potential alcohol misuse, the Alcohol Use Disorders Identification Test-Consumption (AUDIT-C) scale was used. A score greater than 5 is considered indicative of hazardous alcohol consumption among men. Overall, at least one in six PWID (17.2%) was at risk of alcohol-related harm based on this threshold. Across study sites, hazardous alcohol use was most frequently reported in Rivne (29.1%), Dnipro (26.7%), and Kyiv (24.1%) (Figure 13.1).

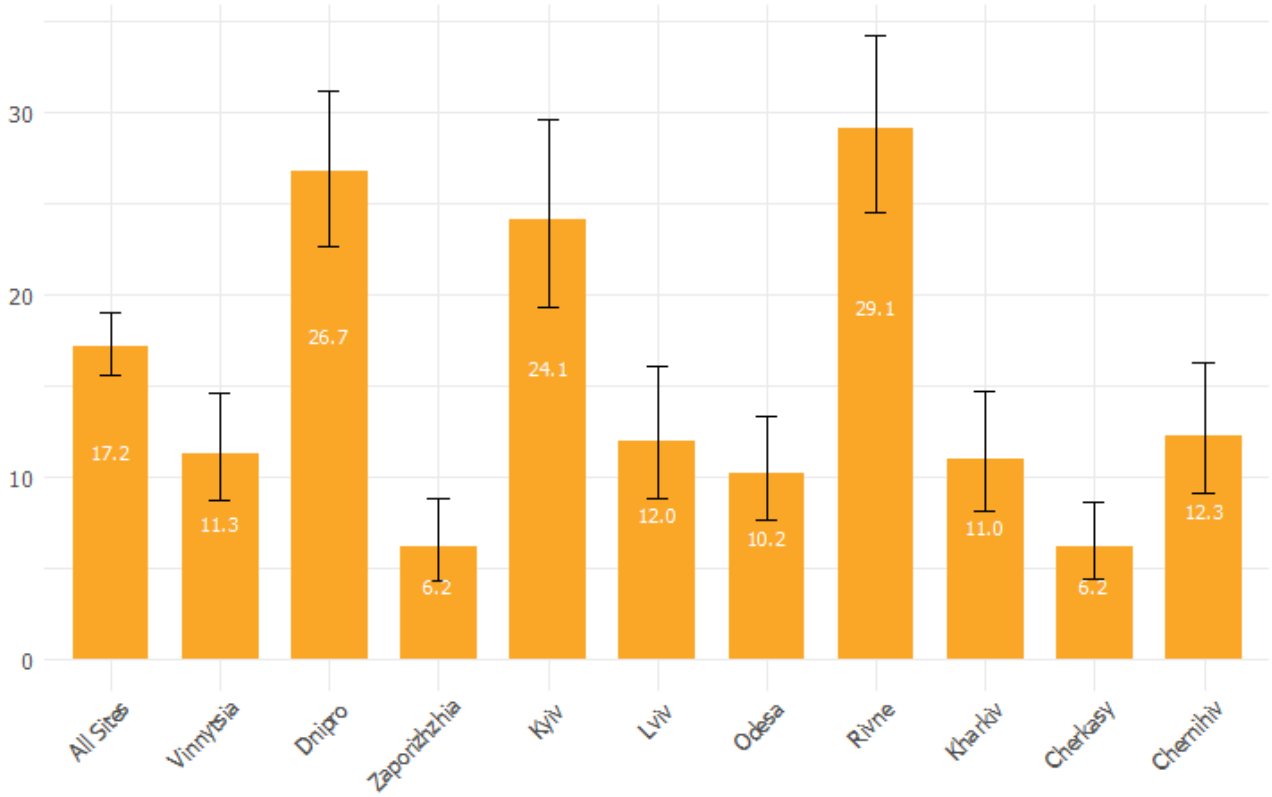

Figure 13.1: Risky alcohol use (AUDIT-C score > 5) by Survey Site

Problematic alcohol use was most prevalent among younger PWID (35.5%) and declined significantly with age. It was also more common among unemployed PWID (22.1%) (Table 13.3). Elevated rates were also observed among PWID who engaged in polydrug use (23.9%) or used stimulants (22.6%) (Table 13.4). In contrast, alcohol misuse was less common among clients of NGOs and those enrolled in MAT programs (11.3% and 11.5%, respectively).

Table 13.3: Risky alcohol use (AUDIT-C score > 5) by Sociodemographic Characteristics

		N	AUDIT-C alcohol risk score ≥5				
			no		yes		
			n	% (CI)	n	% (CI)	p-value
Total							
	All Sites	4,874	4,184	82.8 (81.0–84.4)	690	17.2 (15.6–19.0)	1.0000
Sex							
	male	3,929	3,356	82.7 (80.6–84.6)	573	17.3 (15.4–19.4)	0.8353
	female	945	828	83.1 (79.3–86.3)	117	16.9 (13.7–20.7)	
Age							
	<25	127	96	64.5 (47.4–78.5)	31	35.5 (21.5–52.6)	0.0001
	25-34	985	816	79.2 (75.2–82.6)	169	20.8 (17.4–24.8)	
	35-44	2,512	2,158	82.9 (80.4–85.2)	354	17.1 (14.8–19.6)	
	45+	1,250	1,114	88.3 (85.4–90.6)	136	11.7 (9.4–14.6)	
Years since the start of injecting drug use							
	≤2	194	145	73.2 (63.6–81.0)	49	26.8 (19.0–36.4)	0.0000
	3-5	285	230	73.5 (63.6–81.4)	55	26.5 (18.6–36.4)	

	N	AUDIT-C alcohol risk score ≥5				
		no		yes		
		n	% (CI)	n	% (CI)	p-value
6-10	555	450	75.4 (69.9–80.2)	105	24.6 (19.8–30.1)	
≥11	3,818	3,339	85.3 (83.3–87.0)	479	14.7 (13.0–16.7)	
Partnership status						
live alone	2,486	2,113	82.6 (80.2–84.8)	373	17.4 (15.2–19.8)	0.8450
live with partner	2,388	2,071	83.0 (80.2–85.4)	317	17.0 (14.6–19.8)	
Current employment status						
full-time	1,119	963	84.8 (81.5–87.5)	156	15.2 (12.5–18.5)	0.0070
part-time or temporary	2,544	2,194	83.3 (80.9–85.4)	350	16.7 (14.6–19.1)	
unemployed	707	594	77.9 (71.2–83.4)	113	22.1 (16.6–28.8)	
disabled	259	236	91.0 (84.5–95.0)	23	9.0 (5.0–15.5)	
other	241	194	75.2 (66.3–82.4)	47	24.8 (17.6–33.7)	
Monthly income category						
<3K	674	597	87.8 (83.8–90.9)	77	12.2 (9.1–16.2)	0.2159
3-10K	2,004	1,747	83.3 (80.5–85.7)	257	16.7 (14.3–19.5)	
10-20K	1,444	1,221	82.5 (78.7–85.7)	223	17.5 (14.3–21.3)	
≥20K	406	345	81.2 (74.6–86.4)	61	18.8 (13.6–25.4)	
Ever incarcerated						
no	3,344	2,871	82.3 (80.2–84.2)	473	17.7 (15.8–19.8)	0.6368
yes	1,441	1,226	83.2 (79.6–86.4)	215	16.8 (13.6–20.4)	

Table 13.4: Risky alcohol use (AUDIT-C score > 5) by Selected Subgroups

	N	AUDIT-C alcohol risk score ≥5				
		no		yes		
		n	% (CI)	n	% (CI)	p-value
Client of NGO working with PWID						
no	3,222	2,708	80.1 (77.8–82.3)	514	19.9 (17.7–22.2)	0.0000
yes	1,610	1,440	88.7 (86.4–90.7)	170	11.3 (9.3–13.6)	
Treated with MAT currently (of all)						
no	3,881	3,293	81.8 (79.7–83.7)	588	18.2 (16.3–20.3)	0.0015
yes	912	819	88.5 (85.0–91.3)	93	11.5 (8.7–15.0)	
HIV test result						
positive	777	695	85.1 (80.4–88.8)	82	14.9 (11.2–19.6)	0.2644
negative	4,097	3,489	82.3 (80.4–84.2)	608	17.7 (15.8–19.6)	
Past 30 days injecting 4 categories						
opioids	3,482	3,055	84.8 (82.7–86.8)	427	15.2 (13.2–17.3)	0.0019
stimulants	668	533	77.4 (72.8–81.5)	135	22.6 (18.5–27.2)	
opi+stimul	696	572	76.1 (71.1–80.5)	124	23.9 (19.5–28.9)	
other	28	24	83.2 (50.6–96.0)	4	16.8 (4.0–49.4)	
Injecting drug type of choice						

	N	AUDIT-C alcohol risk score ≥5				
		no		yes		
		n	% (CI)	n	% (CI)	p-value
opioids	4,017	3,508	84.4 (82.4–86.2)	509	15.6 (13.8–17.6)	0.0062
stimulants	805	638	76.6 (72.1–80.5)	167	23.4 (19.5–27.9)	
other	32	24	71.3 (42.0–89.5)	8	28.7 (10.5–58.0)	

To assess symptoms of depression, the Patient Health Questionnaire (PHQ-9) scale was used. The results showed that only 29.9% of PWID had minimal depressive symptoms (Figure 13.2). One-third (34.2%) had mild depression, while 19.8% had moderate depression and 16.0% had severe depression. Across study sites, Zaporizhzhia stood out with the highest prevalence of severe depression among PWID.

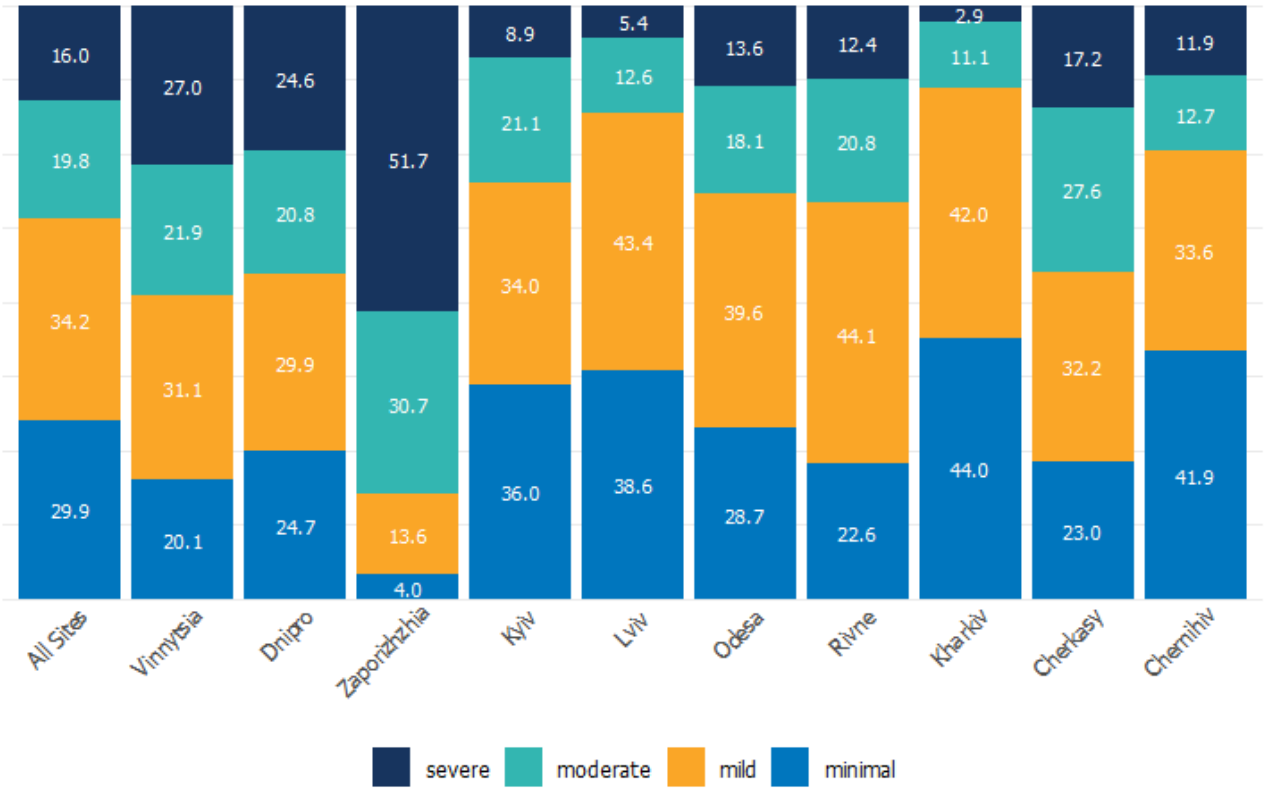

Figure 13.2: Depression symptoms severity (PHQ-9) by Survey Site

Severe depression was less common among younger PWID (10.7%), PWID with a history of incarceration (11.3%), those in the highest income group (12.5%), PWID living with a partner (13.6%), and clients of NGOs (13.9%) (Table 13.3). In contrast, significantly higher rates of severe depression were observed among PWID who engaged in polydrug use (27.2%) (Table 13.4).

Table 13.5: Depression symptoms severity (PHQ-9) by Sociodemographic Characteristics

		N	PHQ-9 depression result								
			minimal		mild		moderate		severe		
			n	% (CI)	n	% (CI)	n	% (CI)	n	% (CI)	p-value
Total	All Sites	5,002	1,398	29.9 (27.9–32.0)	1,730	34.2 (32.3–36.3)	989	19.8 (18.2–21.5)	885	16.0 (14.8–17.4)	1.0000

	N	PHQ-9 depression result								
		minimal		mild		moderate		severe		p-value
		n	% (CI)	n	% (CI)	n	% (CI)	n	% (CI)	
Sex										
male	4,042	1,159	30.7 (28.5–33.1)	1,428	35.0 (32.8–37.3)	771	19.2 (17.5–21.1)	684	15.1 (13.7–16.5)	0.0234
female	960	239	27.0 (22.7–31.7)	302	31.3 (27.3–35.6)	218	21.9 (18.3–26.0)	201	19.8 (16.7–23.3)	
Age										
<25	131	54	47.6 (33.7–62.0)	38	23.6 (14.7–35.4)	21	18.1 (10.5–29.5)	18	10.7 (5.8–18.9)	0.0128
25-34	1,006	322	32.8 (28.8–37.1)	351	34.2 (30.3–38.4)	182	16.9 (13.9–20.5)	151	16.0 (13.1–19.4)	
35-44	2,588	694	29.0 (26.2–32.0)	921	35.2 (32.3–38.2)	500	19.3 (17.1–21.7)	473	16.5 (14.7–18.4)	
45+	1,277	328	27.2 (23.6–31.1)	420	33.4 (29.8–37.2)	286	23.6 (20.3–27.2)	243	15.8 (13.5–18.4)	
Years since the start of injecting drug use										
≤2	200	74	37.1 (28.1–47.1)	61	28.2 (19.4–39.0)	32	16.8 (10.7–25.2)	33	17.9 (11.5–26.8)	0.0016
3-5	294	110	44.5 (36.0–53.3)	100	29.3 (22.8–36.6)	47	13.5 (9.3–19.3)	37	12.7 (8.7–18.2)	
6-10	564	186	33.5 (28.2–39.2)	190	32.1 (27.1–37.5)	98	20.2 (15.6–25.8)	90	14.2 (11.0–18.1)	
≥11	3,919	1,026	27.9 (25.6–30.3)	1,369	35.3 (33.0–37.7)	809	20.5 (18.7–22.5)	715	16.3 (14.8–17.9)	
Partnership status										
live alone	2,562	672	28.8 (25.9–31.9)	911	34.1 (31.4–36.9)	472	18.7 (16.5–21.1)	507	18.4 (16.5–20.5)	0.0142
live with partner	2,440	726	31.1 (28.3–34.0)	819	34.4 (31.6–37.4)	517	20.9 (18.6–23.4)	378	13.6 (12.0–15.4)	
Current employment status										
full-time	1,137	396	33.8 (29.8–38.0)	382	35.3 (31.1–39.8)	198	17.1 (14.2–20.5)	161	13.8 (11.4–16.6)	0.0968
part-time or temporary	2,609	690	28.6 (26.1–31.3)	943	35.5 (32.8–38.2)	520	20.8 (18.6–23.2)	456	15.1 (13.5–16.9)	
unemployed	737	188	31.2 (25.1–37.9)	235	29.0 (24.0–34.5)	158	20.1 (15.9–25.2)	156	19.7 (16.0–24.1)	
disabled	263	57	25.6 (16.0–38.3)	98	39.3 (30.0–49.4)	55	20.1 (13.7–28.3)	53	15.1 (10.5–21.2)	
other	251	67	29.2 (20.8–39.3)	71	28.6 (21.4–37.1)	58	19.7 (13.5–27.8)	55	22.5 (16.0–30.8)	
Monthly income category										
<3K	691	136	20.7 (15.7–26.8)	253	39.2 (33.2–45.5)	172	23.0 (18.5–28.1)	130	17.1 (13.4–21.6)	0.0054
3-10K	2,056	525	29.1 (25.9–32.5)	720	33.9 (31.0–36.9)	423	20.1 (17.7–22.7)	388	16.9 (14.9–19.1)	
10-20K	1,479	471	32.6 (28.9–36.5)	525	35.3 (31.6–39.3)	251	17.9 (15.1–21.1)	232	14.2 (12.0–16.6)	
≥20K	413	164	38.7 (32.2–45.5)	130	30.6 (24.4–37.6)	66	18.3 (13.0–25.0)	53	12.5 (9.0–17.1)	
Ever incarcerated										
no	3,419	975	30.1 (27.8–32.5)	1,137	33.2 (30.9–35.6)	646	18.6 (16.8–20.6)	661	18.1 (16.5–19.8)	0.0012
yes	1,483	414	30.5 (26.5–34.8)	571	36.9 (33.1–41.0)	297	21.3 (18.2–24.7)	201	11.3 (9.3–13.6)	

Table 13.6: Depression symptoms severity (PHQ-9) by Selected Subgroups

	N	PHQ-9 depression result								
		minimal		mild		moderate		severe		p-value
		n	% (CI)	n	% (CI)	n	% (CI)	n	% (CI)	
Client of NGO working with PWID										
no	3,304	917	31.2 (28.6–33.9)	1,113	32.8 (30.4–35.4)	632	19.4 (17.4–21.5)	642	16.6 (15.1–18.3)	0.0291
yes	1,651	474	27.7 (24.8–30.7)	606	37.9 (34.6–41.2)	345	20.5 (17.9–23.4)	226	13.9 (11.7–16.4)	

	N	PHQ-9 depression result								
		minimal		mild		moderate		severe		
		n	% (CI)	n	% (CI)	n	% (CI)	n	% (CI)	p-value
Treated with MAT currently (of all)										
no	3,969	1,089	30.2 (27.9–32.5)	1,334	33.8 (31.6–36.1)	790	19.5 (17.8–21.4)	756	16.5 (15.1–18.0)	0.2173
yes	946	295	30.3 (26.2–34.8)	370	37.3 (32.9–41.9)	171	19.7 (16.2–23.8)	110	12.7 (9.9–16.1)	
HIV test result										
positive	802	225	28.5 (23.9–33.7)	273	32.4 (28.0–37.2)	168	22.8 (18.8–27.3)	136	16.3 (13.2–20.0)	0.4162
negative	4,200	1,173	30.2 (28.0–32.5)	1,457	34.6 (32.4–36.9)	821	19.2 (17.5–21.0)	749	16.0 (14.6–17.5)	
Past 30 days injecting 4 categories										
opioids	3,579	1,058	31.5 (29.1–34.0)	1,309	35.4 (33.0–37.8)	649	19.3 (17.4–21.3)	563	13.8 (12.4–15.4)	0.0002
stimulants	677	211	29.9 (25.1–35.1)	202	32.1 (27.2–37.4)	124	18.3 (14.7–22.5)	140	19.7 (16.2–23.8)	
opi+stimul	716	122	20.8 (16.5–25.8)	212	28.4 (24.1–33.0)	203	23.7 (20.0–27.9)	179	27.2 (22.9–32.0)	
other	30	7	18.3 (4.9–49.0)	7	43.8 (12.7–80.6)	13	34.6 (10.5–70.5)	3	3.3 (0.8–13.1)	
Injecting drug type of choice										
opioids	4,133	1,143	30.3 (28.0–32.7)	1,460	34.3 (32.1–36.5)	824	20.1 (18.3–22.0)	706	15.4 (14.0–16.9)	0.0913
stimulants	814	243	29.6 (25.3–34.4)	253	32.3 (27.7–37.3)	148	18.0 (14.6–22.0)	170	20.0 (16.7–23.7)	
other	33	5	8.7 (2.1–29.9)	12	54.2 (24.9–80.8)	11	27.5 (10.0–56.3)	5	9.7 (2.7–29.2)	

Anxiety levels were measured using the Generalized Anxiety Disorder scale (GAD-7). Four in ten PWID had minimal anxiety, while more than one-third (36.3%) had mild anxiety. At the same time, 6.6% had severe anxiety. As with depressive symptoms, Zaporizhzhia had the highest prevalence of anxiety (Figure 13.3).

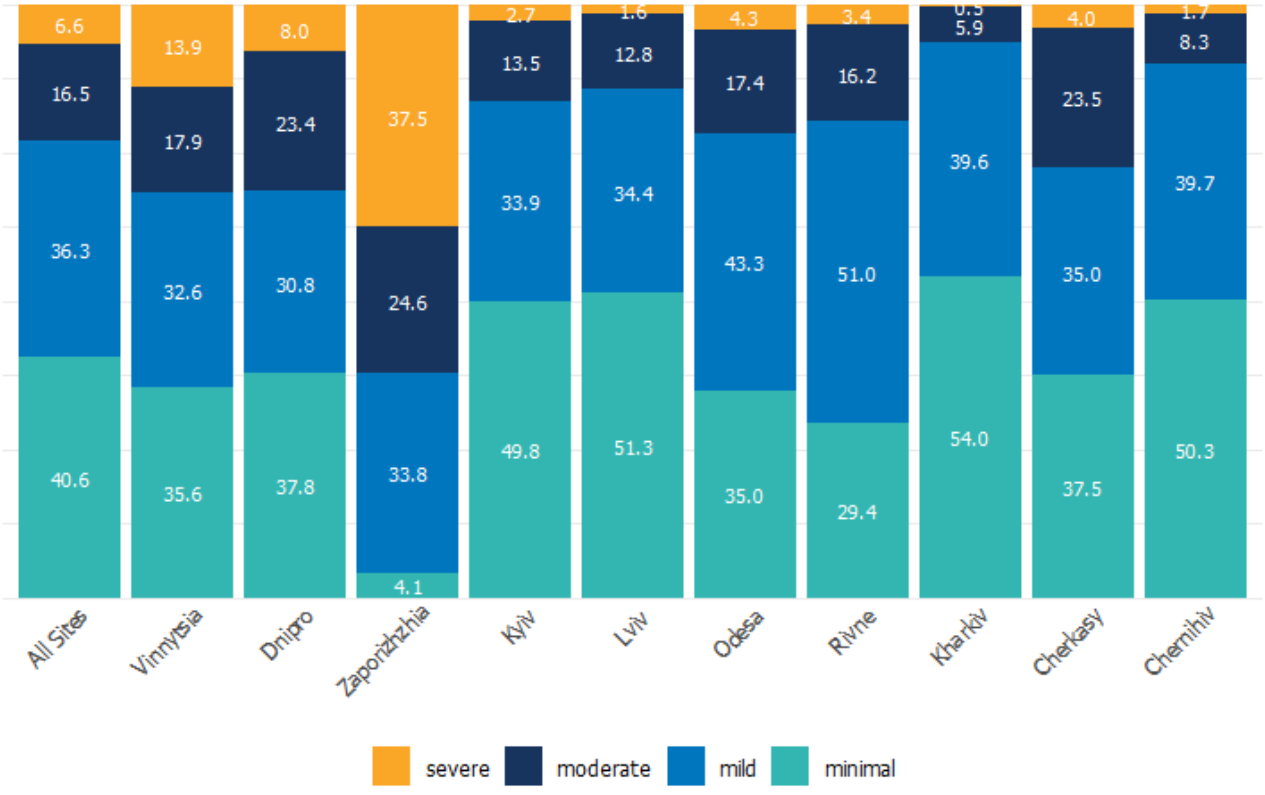

Figure 13.3: Anxiety symptoms severity (GAD-7) by Survey Site

Severe anxiety was more common among women (8.4%) (Table 13.4) and among PWID who were not clients of NGOs (7.7%) (Table 13.4).

Table 13.7: Anxiety symptoms severity (GAD-7) by Sociodemographic Characteristics

		GAD-7 anxiety result								
	N	minimal		mild		moderate		severe		
		n	% (CI)	n	% (CI)	n	% (CI)	n	% (CI)	p-value
Total										
All Sites	5,002	1,907	40.6 (38.5–42.7)	1,871	36.3 (34.3–38.4)	828	16.5 (15.0–18.1)	396	6.6 (5.8–7.4)	1.0000
Sex										
male	4,042	1,576	41.5 (39.1–43.8)	1,518	36.7 (34.5–39.1)	652	15.7 (14.1–17.5)	296	6.1 (5.3–7.0)	0.0359
female	960	331	37.3 (32.8–42.1)	353	34.9 (30.6–39.3)	176	19.4 (16.0–23.2)	100	8.4 (6.6–10.7)	
Age										
<25	131	63	44.6 (31.6–58.3)	48	44.0 (30.0–59.1)	15	9.2 (5.0–16.5)	5	2.2 (0.8–6.2)	0.3853
25-34	1,006	409	42.6 (38.4–47.0)	380	36.0 (31.9–40.2)	153	15.8 (12.9–19.3)	64	5.6 (4.1–7.5)	
35-44	2,588	964	39.8 (36.7–42.8)	967	36.4 (33.5–39.3)	430	16.8 (14.7–19.2)	227	7.1 (6.0–8.3)	
45+	1,277	471	40.4 (36.4–44.4)	476	35.5 (31.9–39.3)	230	17.3 (14.7–20.3)	100	6.8 (5.3–8.8)	
Years since the start of injecting drug use										
≤2	200	88	44.8 (35.1–55.0)	72	38.8 (29.2–49.4)	27	10.4 (6.4–16.4)	13	6.0 (2.9–12.1)	0.2845
3-5	294	126	44.1 (36.0–52.5)	112	38.3 (30.1–47.3)	41	13.4 (9.4–18.8)	15	4.2 (2.2–7.7)	
6-10	564	238	43.9 (38.2–49.7)	206	36.5 (31.2–42.1)	85	14.7 (11.3–19.1)	35	4.9 (3.2–7.4)	
≥11	3,919	1,451	39.7 (37.3–42.2)	1,471	36.1 (33.8–38.4)	669	17.2 (15.5–19.1)	328	7.0 (6.1–8.0)	
Partnership status										
live alone	2,562	947	39.7 (36.7–42.7)	973	37.1 (34.3–40.0)	410	15.7 (13.8–17.8)	232	7.5 (6.4–8.8)	0.1420
live with partner	2,440	960	41.6 (38.7–44.6)	898	35.5 (32.7–38.5)	418	17.3 (15.1–19.7)	164	5.6 (4.6–6.7)	
Current employment status										
full-time	1,137	502	43.8 (39.5–48.1)	404	36.4 (32.2–40.8)	168	15.0 (12.3–18.1)	63	4.9 (3.6–6.6)	0.6761
part-time or temporary	2,609	957	39.3 (36.6–42.1)	1,008	37.5 (34.8–40.2)	425	16.7 (14.8–18.9)	219	6.5 (5.5–7.6)	
unemployed	737	263	40.6 (34.7–46.9)	281	34.3 (28.9–40.2)	129	16.9 (12.6–22.3)	64	8.1 (5.9–11.1)	
disabled	263	90	39.6 (29.3–51.0)	97	34.3 (25.9–43.9)	51	18.9 (12.7–27.2)	25	7.1 (4.2–11.7)	
other	251	95	43.8 (34.7–53.3)	79	32.1 (24.2–41.2)	53	15.7 (10.6–22.6)	24	8.4 (4.9–14.0)	
Monthly income category										
<3K	691	218	33.2 (27.5–39.5)	297	46.0 (39.9–52.2)	142	16.1 (12.8–20.1)	34	4.7 (2.9–7.5)	0.0002
3-10K	2,056	735	40.4 (37.1–43.8)	793	35.6 (32.7–38.6)	318	15.6 (13.5–18.0)	210	8.4 (7.2–9.9)	
10-20K	1,479	636	43.1 (39.3–47.0)	497	33.8 (30.1–37.8)	251	17.9 (15.0–21.3)	95	5.1 (4.0–6.6)	
≥20K	413	194	47.4 (40.5–54.3)	142	34.3 (27.8–41.4)	58	15.2 (11.0–20.6)	19	3.2 (1.8–5.6)	
Ever incarcerated										
no	3,419	1,300	40.4 (37.9–42.8)	1,221	34.8 (32.5–37.3)	586	17.1 (15.4–18.9)	312	7.7 (6.7–8.9)	0.0059
yes	1,483	595	42.3 (38.2–46.5)	593	38.7 (34.9–42.8)	214	14.7 (12.0–18.0)	81	4.2 (3.2–5.6)	

Table 13.8: Anxiety symptoms severity (GAD-7) by Selected Subgroups

		GAD-7 anxiety result								
	N	minimal		mild		moderate		severe		
		n	% (CI)	n	% (CI)	n	% (CI)	n	% (CI)	p-value
Client of NGO working with PWID										
no	3,304	1,225	40.9 (38.2–43.6)	1,222	35.3 (32.8–37.9)	529	16.1 (14.3–18.1)	328	7.7 (6.8–8.8)	0.0004
yes	1,651	668	40.3 (37.0–43.6)	632	39.2 (35.9–42.5)	287	17.1 (14.7–19.8)	64	3.5 (2.5–4.9)	
Treated with MAT currently (of all)										

		GAD-7 anxiety result							
	N	minimal		mild		moderate		severe	
		n	% (CI)	n	% (CI)	n	% (CI)	n	% (CI)	p-value
no	3,969	1,463	40.1 (37.7–42.4)	1,475	36.4 (34.1–38.7)	679	16.6 (15.0–18.4)	352	6.9 (6.1–7.9)	0.0077
yes	946	426	47.0 (42.4–51.8)	357	35.3 (30.9–39.8)	127	13.8 (10.8–17.4)	36	3.9 (2.6–5.8)	
HIV test result										
positive	802	316	41.5 (36.5–46.7)	315	35.9 (31.3–40.7)	123	17.7 (14.1–21.9)	48	4.9 (3.5–6.8)	0.4237
negative	4,200	1,591	40.4 (38.1–42.8)	1,556	36.4 (34.2–38.7)	705	16.2 (14.6–18.0)	348	6.9 (6.0–7.9)	
Past 30 days injecting 4 categories										
opioids	3,579	1,458	43.0 (40.5–45.5)	1,350	36.6 (34.2–39.0)	504	14.5 (12.8–16.3)	267	5.9 (5.1–6.9)	0.0001
stimulants	677	272	40.1 (35.0–45.5)	211	32.2 (27.5–37.4)	138	20.6 (16.8–25.1)	56	7.0 (5.0–9.6)	
opi+stimul	716	169	26.6 (22.0–31.7)	295	37.1 (32.5–41.9)	179	25.5 (21.3–30.2)	73	10.9 (8.3–14.2)	
other	30	8	26.0 (8.2–58.3)	15	67.6 (35.3–88.9)	7	6.3 (2.0–18.0)	0	0.0	
Injecting drug type of choice										
opioids	4,133	1,562	41.2 (38.9–43.6)	1,594	36.4 (34.2–38.7)	650	15.9 (14.3–17.7)	327	6.5 (5.6–7.4)	0.2043
stimulants	814	326	39.2 (34.5–44.1)	255	34.2 (29.5–39.2)	164	18.9 (15.7–22.7)	69	7.7 (5.8–10.1)	
other	33	10	18.7 (6.7–42.5)	12	57.9 (28.8–82.3)	11	23.5 (8.6–49.9)	0	0.0	

Table 13.9: Health care utilization

	n	%	CI
Had problems with health besides drugs which required medical attention in the past 12 months			
yes	1,595	32.6	(30.5–34.7)
Referred to a health care facility for treatment in the past 12 months			
yes	1,277	24.9	(23.0–26.8)
Referred to a health care facility			
primary care	901	62.6	(57.9–67.1)
hospital, HIV clinic	392	37.2	(32.7–42.0)
private clinic	55	3.3	(2.4–4.6)
private lab	36	1.8	(1.2–2.8)
TB dispensary	18	1.8	(1.0–3.3)
drug clinic	8	0.3	(0.1–0.5)
STI clinic	21	2.0	(1.2–3.3)
ambulance	94	7.6	(5.8–10.0)
mobile clinic	4	0.2	(0.1–0.5)
other	39	2.3	(1.5–3.6)
Last health care facility referred to			
primary care	811	56.7	(52.0–61.3)
hospital, HIV clinic	282	30.7	(26.3–35.6)
private clinic	47	2.9	(2.0–4.2)
private lab	13	0.7	(0.4–1.2)
TB dispensary	16	1.7	(0.9–3.2)
drug clinic	9	0.5	(0.2–1.1)
STI clinic	16	1.8	(1.0–3.2)
ambulance	43	3.9	(2.7–5.6)
mobile clinic	2	0.1	(0.0–0.5)
other	11	1.0	(0.4–2.2)
Received necessary care in health care facility			
yes	1,181	93.2	(91.0–94.9)
Signed a declaration with primary care physician			
yes	3,730	69.5	(67.4–71.4)
How frequently saw the primary care physician			
twice per month or more	247	6.1	(5.0–7.4)
once per month	600	13.2	(11.8–14.7)
3-4 times in 12 months	1,052	30.1	(27.8–32.5)
only once	1,733	50.6	(48.1–53.2)

14. Detention and Incarceration

Nearly one-third (31.7%) of PWID had been incarcerated at some point in their lives (Table 14.1). The majority of those with incarceration experience (55.6%) had used injection drugs while in prison. The most common duration of incarceration was between two and four years.

Nearly two-thirds (63.6%) of PWID had been detained by police at some point in their lives. Specifically, 6.8% reported being detained in 2023 for drug use, and 8.1% during 2022.

Table 14.1: Police Detention and Incarceration Experience

	n	%	CI
Detained by police in 2022 for			
drug use	379	8.1	(7.1–9.2)
drug dealing	113	2.4	(1.9–3.0)
drug storing	321	6.7	(5.7–7.9)
Detained by police in 2023 for			
drug use	326	6.8	(5.9–7.9)
drug dealing	90	1.7	(1.3–2.2)
drug storing	258	5.7	(4.7–6.8)
Stopped, detained, or arrested by police ever			
yes	3,122	63.6	(61.5–65.5)
Ever incarcerated			
yes	1,483	31.7	(29.7–33.8)
Duration of incarceration			
≤6m	148	10.7	(8.5–13.5)
6m-2y	302	21.8	(18.6–25.5)
2-4y	578	36.7	(32.7–40.8)
4y+	437	30.7	(27.0–34.7)
Time since last incarceration			
≤1y	142	8.8	(6.9–11.3)
1-3y	203	12.6	(10.3–15.2)
3-5y	223	14.8	(12.3–17.7)
5-10y	363	23.5	(20.4–27.0)
10y+	534	40.3	(36.1–44.7)
Used injecting drugs during incarceration			
yes	870	55.6	(51.3–59.8)

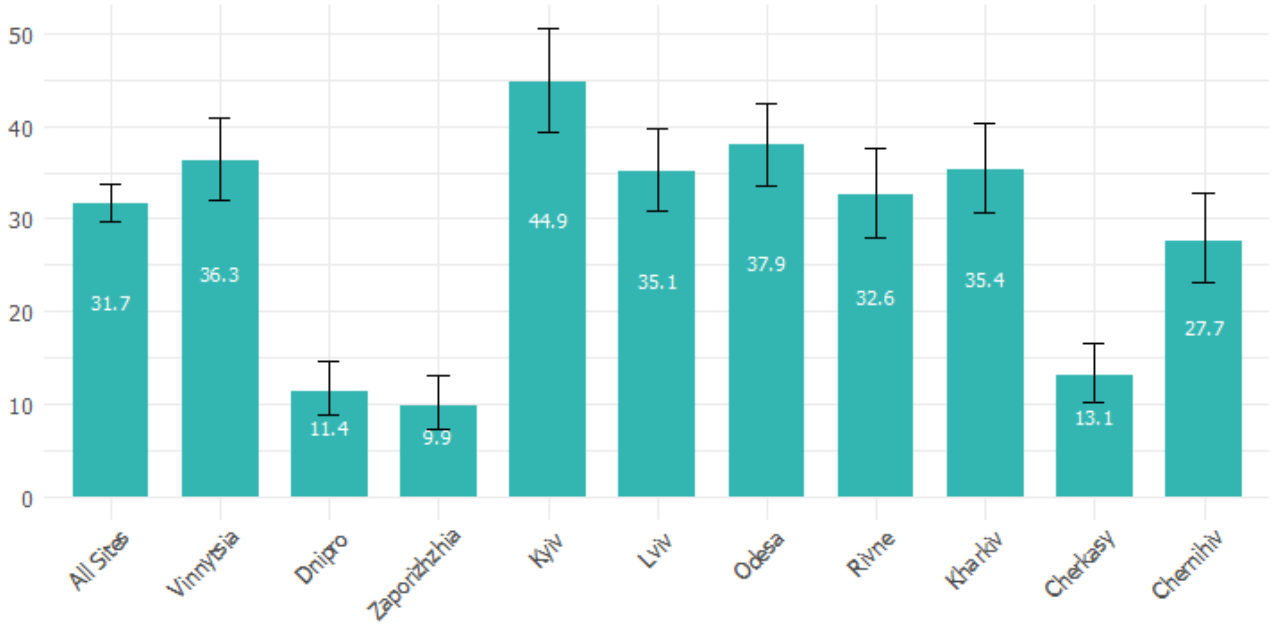

Figure 14.1: Incarceration Lifetime Experience by Survey Site

15. Negative experience

In the six months preceding the 2023 survey among PWID, 29.1% of PWID reported negative experience related to their drug use (Table 15.1), as defined by Global AIDS Monitoring (GAM) indicator 6.5. Specifically, one-quarter (24.6%) of PWID reported being scolded or criticized for drug use, 17.7% were excluded from family activities, and 13.4% experienced blackmail.

In total, four in ten PWID (40.9%) experienced physical violence due to their drug use at some point in their lives, and nearly half of them experienced it in the past 12 months.

Table 15.1: Negative Experience

	n	%	CI
Felt excluded from family activities due to drug use			
no	2,656	55.3	(53.2–57.4)
yes, in the past 6m	996	17.7	(16.2–19.2)
yes, but 6m+ ago	1,324	27.0	(25.3–28.8)
Was scolded because of drug use			
no	2,027	42.0	(39.9–44.2)
yes, in the past 6m	1,347	24.6	(22.8–26.4)
yes, but 6m+ ago	1,581	33.4	(31.5–35.4)
Was blackmailed for drug use			
no	3,470	70.3	(68.4–72.1)
yes, in the past 6m	690	13.4	(12.1–14.9)
yes, but 6m+ ago	787	16.3	(14.9–17.8)
Negative experience in the past 6 months (GAM 6.5)			
no	3,360	70.9	(68.9–72.8)
yes	1,547	29.1	(27.2–31.1)
Ever experienced physical violence			
no	2,681	59.1	(57.0–61.1)
yes	2,247	40.9	(38.9–43.0)
Experienced physical violence in the past 12 months (of those who had ever)			
no	1,275	52.8	(49.8–55.8)
yes	967	47.2	(44.2–50.2)
Witnessed physical violence in the past 12 months			
no	3,282	67.6	(65.6–69.5)
yes	1,663	32.4	(30.5–34.4)

Figure 15.1 illustrates the proportion of PWID who reported experiencing physical violence in the past 12 months and negative experience related to drug use in the past six months, based on the GAM indicator 6.5. The GAM indicator 6.5 captures the percentage of populations at high risk of HIV, such as PWID, who report negative experience related to their drug use in the past six months. This may include verbal abuse, exclusion from family or community activities, blackmail, or mistreatment in services. Among those who ever experienced violence, 47.2% (19.3% of total) reported having experienced physical violence in the past year, while 29.1% reported negative experience due to drug use within the past six months. The highest prevalence of physical violence was observed in Zaporizhzhia, where 84.3% of PWID had such an experience in their lifetime, which suggests that some instances of violence may be war-related. This city also had one of the highest levels of reported negative experience (45.7%). Vinnytsia recorded the highest level of negative experience (63.9%), while the level of physical violence (31.5%) was below average. High levels of recent physical violence were also reported in Kyiv (55.0%), Kharkiv (42.8%), and Odesa (41.7%). In contrast, the lowest prevalence of both physical violence and negative experience related to drug use was recorded in Chernihiv (23.2% and 13.4%, respectively).

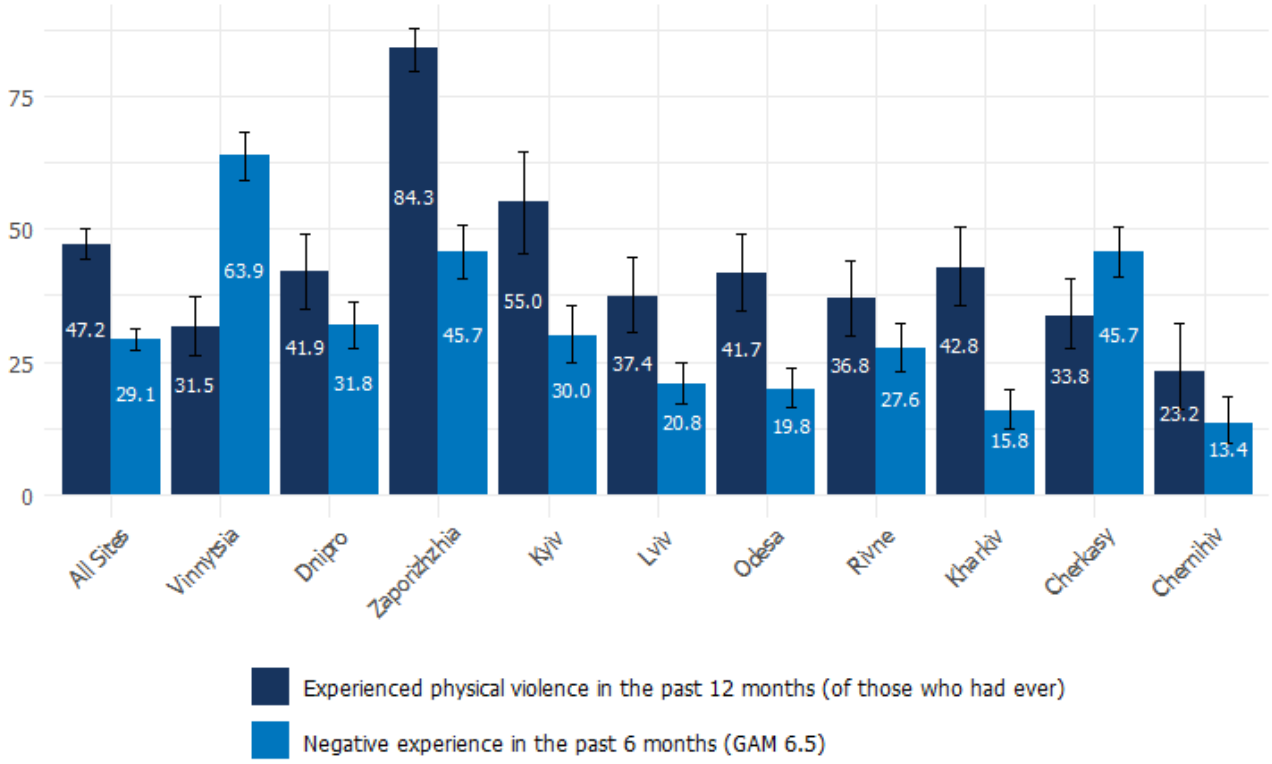

Figure 15.1: Negative Experience Related to Drug Use in the past 6 Months or Physical Violence in the past 12 months by Survey Site

The likelihood of negative experience related to drug use or violence did not differ significantly by sex or family status. However, PWID with disabilities and those in the lowest income category were less likely to report experiences of physical violence. Negative experience, on the other hand, was more commonly reported by younger and less experienced PWID, as well as by those who combined the use of stimulants and opioids. Interestingly, HIV-positive PWID were less likely to report violence compared to their HIV-negative counterparts (35.9% vs. 49.3%).

Table 15.2: Negative Experience Related to Drug Use in the past 6 Months or Physical Violence in the past 12 months by Sociodemographic Characteristics

		Negative experience in the past 6 months (GAM 6.5)				Experienced physical violence in the past 12 months (of those who had ever)			
		N	n	% (CI)	p-value	N	n	% (CI)	p-value
Total									
	All Sites	4,907	1,547	29.1 (27.2–31.1)	1.0000	2,242	967	47.2 (44.2–50.2)	1.0000
Sex									
	male	3,955	1,243	29.3 (27.1–31.6)	0.7233	1,801	757	46.9 (43.7–50.1)	0.7155
	female	952	304	28.5 (24.6–32.7)		441	210	48.4 (41.1–55.7)	
Age									
	<25	129	55	54.9 (41.1–68.0)	0.0000	47	27	54.1 (35.8–71.3)	0.0324
	25-34	992	344	34.0 (29.9–38.3)		442	208	47.8 (41.4–54.2)	
	35-44	2,535	810	29.1 (26.4–31.9)		1,194	530	50.0 (45.8–54.2)	
	45+	1,251	338	21.5 (18.7–24.6)		559	202	39.7 (34.1–45.5)	
Years since the start of injecting drug use									

	Negative experience in the past 6 months (GAM 6.5)				Experienced physical violence in the past 12 months (of those who had ever)			
	N	n	% (CI)	p-value	N	n	% (CI)	p-value
≤2	197	75	40.8 (31.1–51.3)	0.0116	88	43	57.9 (43.6–71.0)	0.4554
3-5	289	89	35.0 (26.6–44.5)		120	58	49.5 (37.7–61.4)	
6-10	557	187	32.2 (27.1–37.8)		248	110	44.5 (36.5–52.8)	
≥11	3,843	1,185	27.3 (25.2–29.5)		1,776	746	46.7 (43.3–50.1)	
Partnership status								
live alone	2,520	777	29.5 (26.8–32.4)	0.6902	1,187	530	49.6 (45.4–53.8)	0.1031
live with partner	2,387	770	28.7 (26.1–31.5)		1,055	437	44.6 (40.5–48.9)	
Current employment status								
full-time	1,130	349	29.7 (26.0–33.8)	0.4128	494	173	35.4 (29.9–41.2)	0.0001
part-time or temporary	2,554	822	28.6 (26.2–31.1)		1,196	578	52.7 (48.7–56.7)	
unemployed	716	218	31.6 (25.6–38.3)		319	129	46.5 (38.9–54.4)	
disabled	257	71	21.9 (15.8–29.6)		113	28	30.1 (17.4–47.0)	
other	247	85	30.9 (22.7–40.5)		118	57	50.7 (38.5–62.8)	
Monthly income category								
<3K	681	261	30.1 (25.2–35.4)	0.6993	290	99	38.7 (29.9–48.4)	0.0039
3-10K	1,992	628	29.9 (26.9–33.2)		898	442	54.3 (49.8–58.8)	
10-20K	1,469	456	28.7 (25.3–32.5)		702	298	43.5 (38.6–48.6)	
≥20K	410	104	25.9 (20.1–32.6)		197	73	45.0 (35.0–55.4)	
Ever incarcerated								
no	3,371	1,088	29.9 (27.6–32.2)	0.1193	1,493	684	48.3 (44.8–51.9)	0.1381
yes	1,470	407	26.3 (22.7–30.2)		710	251	43.3 (37.8–49.0)	

Table 15.3: Negative Experience Related to Drug Use in the past 6 Months or Physical Violence in the past 12 months by Selected Subgroups

	Negative experience in the past 6 months (GAM 6.5)				Experienced physical violence in the past 12 months (of those who had ever)			
	N	n	% (CI)	p-value	N	n	% (CI)	p-value
Client of NGO working with PWID								
no	3,241	1,058	30.0 (27.6–32.5)	0.0992	1,503	698	48.1 (44.5–51.8)	0.1973
yes	1,624	476	26.7 (23.8–29.8)		722	256	43.9 (38.7–49.2)	
Treated with MAT currently (of all)								
no	3,901	1,237	28.5 (26.4–30.7)	0.2158	1,816	813	47.0 (43.8–50.3)	0.6229

	Negative experience in the past 6 months (GAM 6.5)				Experienced physical violence in the past 12 months (of those who had ever)			
	N	n	% (CI)	p-value	N	n	% (CI)	p-value
yes	931	276	31.6 (27.4–36.1)		378	124	44.9 (37.4–52.7)	
HIV test result								
positive	796	214	25.9 (21.9–30.4)	0.1230	321	97	35.9 (28.5–44.0)	0.0027
negative	4,111	1,333	29.8 (27.7–32.0)		1,921	870	49.3 (46.0–52.5)	
Past 30 days injecting 4 categories								
opioids	3,531	1,000	27.4 (25.2–29.8)	0.0005	1,575	649	45.3 (41.8–48.9)	0.0397
stimulants	671	207	29.6 (25.2–34.5)		290	131	49.1 (41.2–57.2)	
opi+stimul	680	330	41.2 (36.3–46.3)		364	179	54.4 (47.5–61.1)	
other	25	10	17.8 (4.4–50.8)		13	8	78.8 (43.6–94.7)	
Injecting drug type of choice								
opioids	4,050	1,265	29.1 (26.9–31.3)	0.6297	1,857	797	46.7 (43.4–50.0)	0.4651
stimulants	808	264	29.9 (25.8–34.4)		359	159	49.1 (41.7–56.5)	
other	32	10	20.2 (6.6–47.5)		17	5	27.6 (7.8–63.0)	

16. The Impact of the Full-scale War

According to the survey results, since the onset of Russia's full-scale invasion in February 2022, at least one in nine PWID changed their place of permanent residence as a result of the war (Table 16.1). An additional 5.7% reported relocating during this period for reasons not directly related to the conflict. Among those who moved after February 2022, the largest share (45.8%) relocated to a different region. One in five (20.9%) moved to another city within the same region, while 14.1% relocated to a different neighborhood within the same city. A smaller proportion (5.8%) moved to a different building within the same neighborhood, and 6.5% reported leaving the country.

Table 16.1: Migration Since February 2022

	n	%	CI
Changed place of residence since Feb 2022			
yes, because of the war	582	11.6	(10.4–13.0)
yes, for other reasons	222	5.7	(4.7–6.8)
no	4,159	82.7	(81.0–84.3)
Where migrated since Feb 2022			
unknown	39	6.9	(4.7–10.1)
other country	43	6.5	(4.4–9.3)
other oblast	249	45.8	(40.0–51.7)
other city	134	20.9	(16.4–26.2)
other district	94	14.1	(11.1–17.8)
other house	40	5.8	(4.0–8.4)
Where lived before Feb 2022 (if changed residence)			
same oblast	538	68.7	(63.5–73.5)
other oblast	207	30.7	(25.9–35.9)
other country	9	0.6	(0.3–1.3)

The highest proportions of PWID who reported being forced to change their place of residence due to the war were found in Kharkiv (33.5%), Chernihiv (16.1%), Rivne (14.9%), and Zaporizhzhia (14.6%) (Figure 16.1). A more detailed breakdown of migration destinations among PWID from specific cities is provided in Table 16.2 and Figure 16.2.

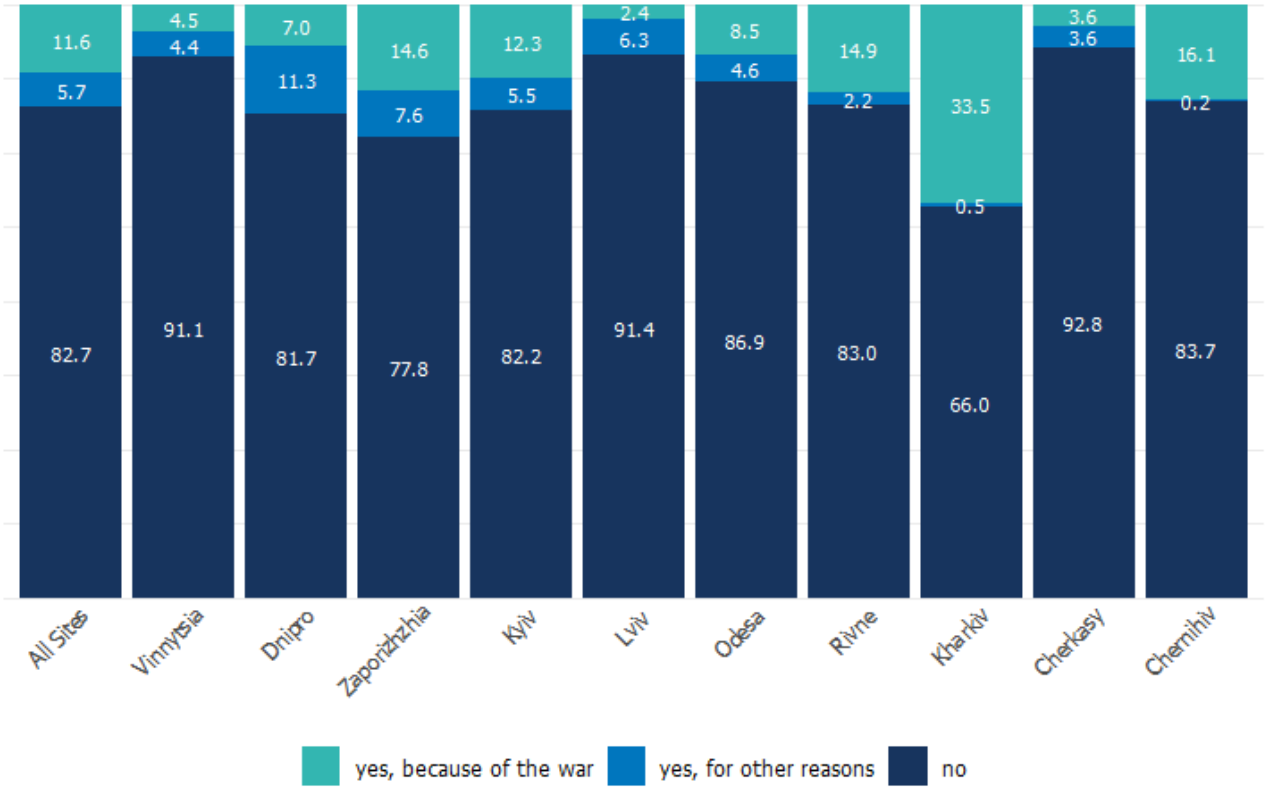

Figure 16.1: Change of Residence Since February 2022 by Survey Site

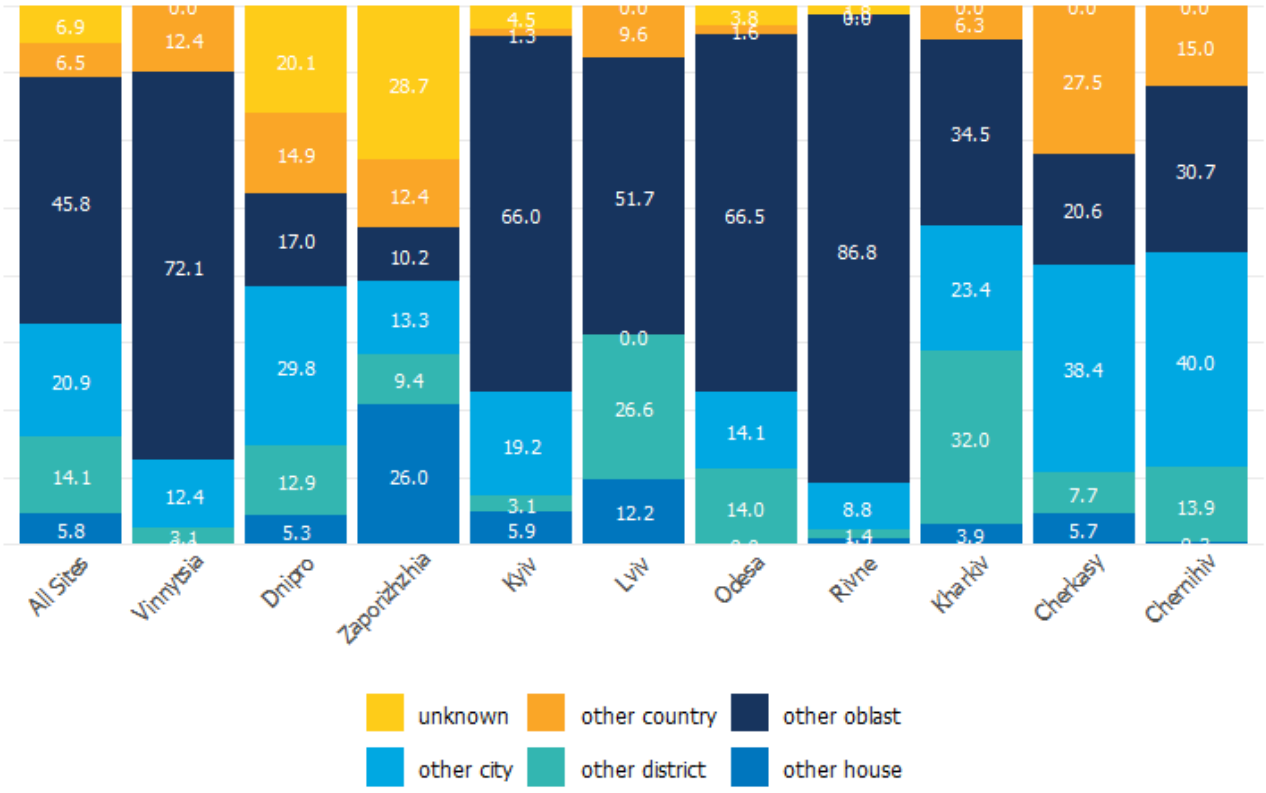

Figure 16.2: Migration Destination by Survey Site

Figure 16.3 presents important context regarding places of residence prior to the full-scale Russian invasion. Among the PWID who changed their place of residence

during the full-scale war, two-thirds (68.7%) were living in the same region at the time of the survey, while nearly one-third (30.7%) had relocated from another region. The proportion of PWID who previously resided in a different region was particularly high in Rivne (81.5%), Odesa (56.8%), and Kyiv (44.5%), and exceeded one-quarter in Vinnytsia (28.1%) and Lviv (26%).

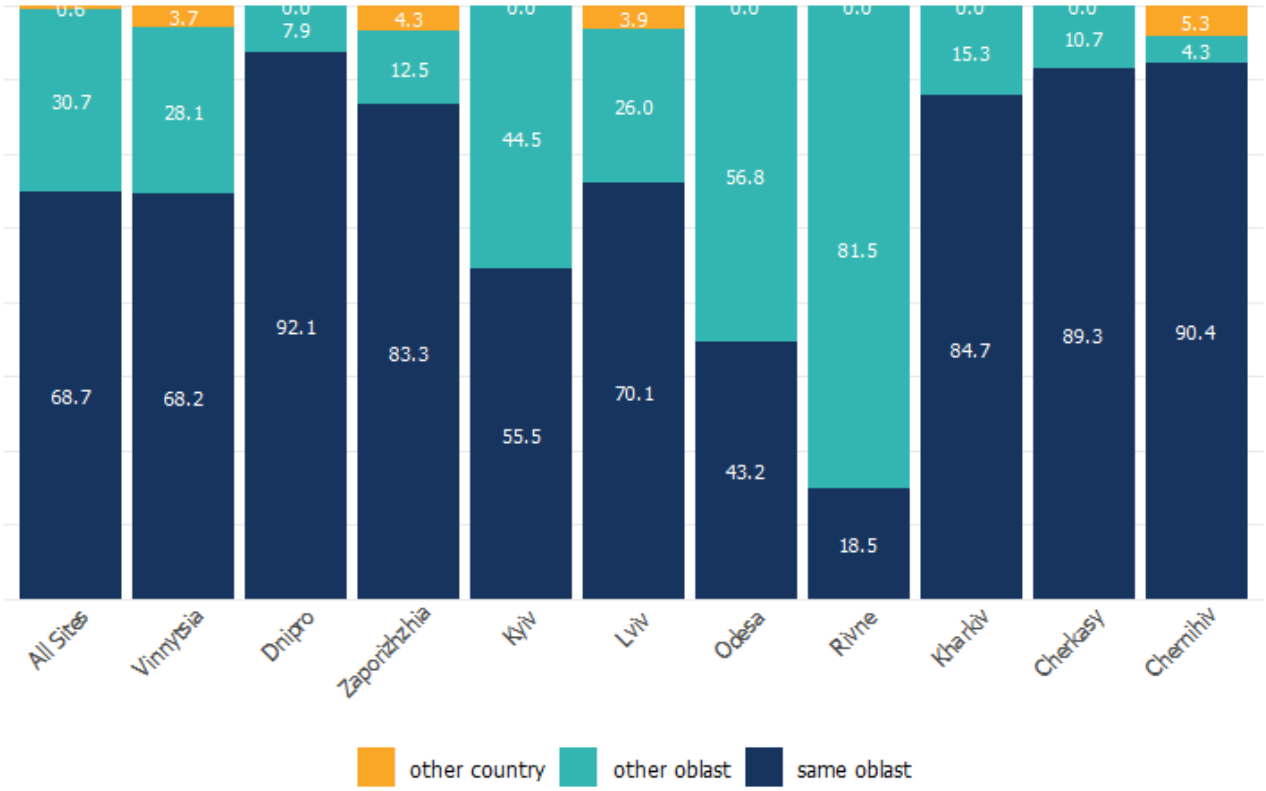

Figure 16.3: Residence Before February 2022 by Survey Site

PWID were also asked to assess how their well-being, access to various prevention and treatment services, and other opportunities had changed since February 2022 (Figure 16.4). For none of the assessed categories did reports of improvement outweigh those of deterioration.

The most negatively perceived changes were related to employment and income opportunities, with 58% of PWID reporting a decline. This was followed by worsening mental health (reported by 54%) and physical health (45.8%), as well as reduced access to their primary drug (28.9%). Despite the ongoing full-scale war, the vast majority of PWID (ranging from 78.4% to 86.2%) reported no change in their access to medical and preventive services.

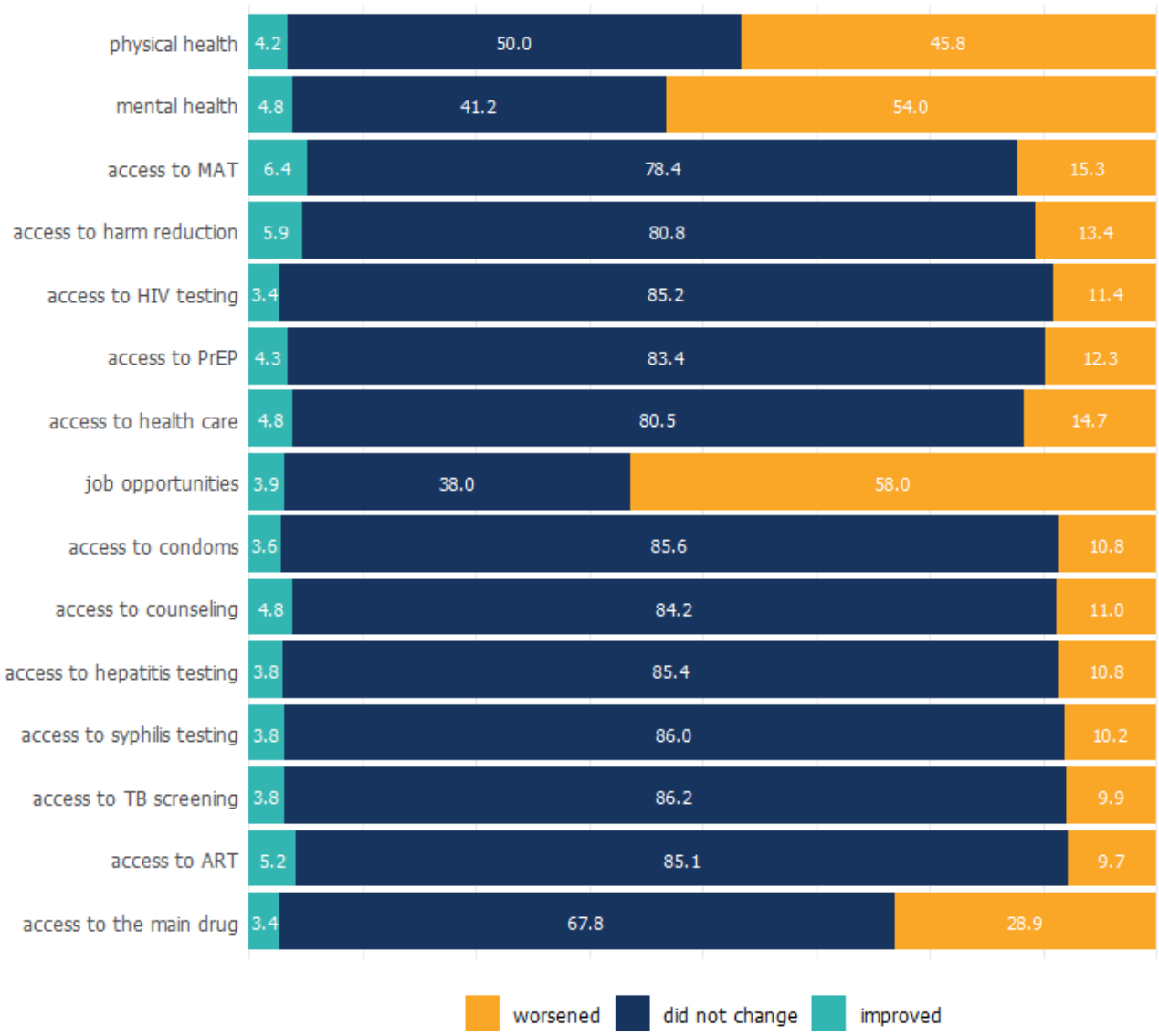

Figure 16.4: Changes Since February 2022

Summary of Findings and Conclusions

The 2023 SLBBC PWID in Ukraine provides a comprehensive snapshot of this population's health and risk environment amid the ongoing full-scale war. Despite significant operational challenges, the survey successfully recruited over 5,000 PWID across 10 cities, generating a rich dataset that enables robust comparisons over time and across cities. Below is the summary of key findings in this study.

Sociodemographic Changes

The aging of the PWID population continues to be a defining demographic trend. The average age of PWID rose to 39.5 years, with those under 25 accounting for only 3.2% of the sample—nearly a tenfold decline since 2007. Simultaneously, the proportion of older PWID has grown markedly, suggesting both population aging and declining initiation into injecting drug use among youth. Women comprised one-fifth (20.5%) of all PWID, with unusually high proportions observed in Dnipro

(41.5%) and Cherkasy (32.5%). Socioeconomic indicators reflect persistent vulnerability: low income, irregular employment, and limited educational attainment remain prevalent.

Drug Use Patterns

Opioids, and particularly synthetic opioids, remain the dominant substances used by PWID. Street methadone was injected by 55.1% of PWID in the past 30 days, making it the most common substance. Pharmaceutical methadone obtained from the black market (21.3%) and from private and public MAT programs (13.8%) also featured prominently. Importantly, while overall opioid use remained stable, there was a shift toward greater use of pharmaceutically produced tableted methadone (both prescribed and from the black market).

Stimulant injection, by contrast, declined substantially since 2017: any stimulant use in the past 30 days declined from 40.1% to 22.3%, amphetamine injecting use fell nearly fourfold to 6.6%, and the use of synthetic cathinones ('bath salts') decreased from 12.9% in 2020 to 9.0%. Mixed opioid-stimulant use in 2023 exceeded 'pure' stimulant use, a reversal of earlier patterns. This may have implications for overdose risk and HIV transmission dynamics.

Regional differences in drug preferences were marked, with stimulant use more prevalent in Dnipro, Rivne, Chernihiv, and Vinnytsia. These patterns warrant further investigation.

Injection Risk Behaviors

Injection-related HIV risk remains a major concern. One-third (35.5%) of PWID engaged in at least one high-risk injecting behavior in the past 30 days. The most common practices included reusing one's own syringe/needle (33.5%), sharing containers (20.4%), and front-/back-loading (19.9%). Although direct syringe sharing was reported by 9.0% of PWID, this still represents a substantial transmission risk. The use of a shared syringe during injection was most commonly observed in Cherkasy (21.6%), Zaporizhzhia (17.4%), and Kyiv (13.5%).

Trend analysis shows that while the prevalence of risk behaviors declined sharply between 2015 and 2020, further progress stalled in 2023. Notably, stimulant and polydrug users exhibited higher rates of risky practices compared to opioid-only users. Risk behaviors were less common among clients of MAT programs, confirming its protective role.

Sexual Risk Behavior

Sexual activity remained common among PWID, with 86.0% reporting sex in the past year and 58.8% in the past 30 days, without significant difference by preferred drug type. Condom use during last sex was 44.5% overall, lower among women (39.1%) and those with regular partners. Condom use was highest with commercial partners (70–85%), but these encounters were rare. Overall, condom use remains insufficient, particularly in regular partnerships.

Encouragingly, condom use improved between 2020 and 2023 after a period of decline, possibly reflecting improved coverage of harm reduction programs.

HIV Prevalence and Incidence

HIV prevalence was 16.5% overall, with marked geographic variation from 4.1% in Zaporizhzhia to 17.0% in Cherkasy, 17.5% in Dnipro, 17.9% in Kyiv, 18.4% in Chernihiv and 22.1% in Odesa. Higher prevalence was observed among women (20.9%), older PWID (25.4% among those older than 45), persons with disabilities (31.8%), and those with a history of incarceration (22.7%).

HIV prevalence in the total PWID population remained relatively stable over time. In the five cities that participated in all eight rounds of the SLBBC, prevalence ranged between 18% and 25%, with no meaningful change observed between 2020 and 2023. However, among PWID under the age of 25, a concerning increase was noted—from 4.1% in 2020 to 9.8% in 2023. Although the number of PWID in this age group was small and the confidence intervals around these estimates were wide, the observed trend warrants further investigation and ongoing monitoring, as it may signal a true rise in HIV incidence despite improved prevention coverage.

HIV incidence estimated using the recent HIV infection testing algorithm was below 1% overall, which is slightly lower than in the 2020 survey round. These results, however, may not be considered reliable as the total number of recently infected individuals was small, and relative standard error was substantially greater than 25% (a reliability threshold suggested by the authors of the method).

HIV Prevention

Perception of the risk of HIV infection through parenteral and sexual transmission among PWID is low (16.8% and 12.2%, respectively, reported such risks during the past month) in all cities except Zaporizhzhia (57.8% and 55.6%) and Cherkasy (40.6% and 34.4%). The lower level of perceived risk of infection is probably associated with insufficient interventions to raise awareness.

Between 2020 and 2023, a notable recovery occurred in the coverage of HIV prevention services. Access to sterile syringes increased from 26.3% to 43.6%, condom provision rose from 22.1% to 37.7%, and HIV testing coverage improved from 20.2% to 35.1%. These gains likely reflect successful adaptation and resilience of harm reduction programs under wartime conditions.

Despite these improvements, significant gaps remain. Over 60% of PWID were either unaware of MAT or expressed no interest in starting it, and only one-third reported receiving any prevention services from NGOs. Gaps were especially wide in cities like Vinnytsia, Dnipro, and Lviv. The largest proportion of PWID who reported that their access to HIV prevention had deteriorated against the backdrop of the full-scale Russian invasion was in Zaporizhzhia and Kyiv (19.2% and 18.3% respectively, compared to 11.6% among all sites).

HIV Testing

HIV status awareness measured by the GAM indicator (testing within past year or known HIV-positive status) was 55.6%. Testing rates were higher among MAT patients and NGO clients. However, self-testing remained negligible (0.9%), and testing coverage varied widely by site. Most testing was performed by NGOs, underlining their central role in sustaining HIV surveillance and diagnosis efforts

among PWID. The exceptions were Vinnytsia, Dnipro, and Rivne, where testing by healthcare facilities was more common.

HIV Treatment

The HIV treatment cascade revealed that 68.7% of HIV-positive PWID were aware of their status, 86.7% of those aware were on ART, and 78.1% of those on ART achieved viral suppression. In terms of the entire HIV-positive population, this translates to 59.2% on ART and 46.7% virally suppressed. While these figures represent improvement over earlier rounds, the awareness gap remains the primary barrier to achieving the 95-95-95 targets. The lowest awareness of HIV status among HIV-positive PWID was in Zaporizhzhia (17.4%), Lviv (40.0%), and Rivne (46.2%). The lowest ART coverage was observed in Kyiv (68.7%) and Vinnytsia (69.3%), while the lowest levels of viral suppression were in Chernihiv (60.1%), Kyiv (65.7%), and Lviv (69.5%).

ART coverage among PWID has markedly improved over time, now surpassing that of the general population, with 86.7% of PWID who are aware of their HIV-positive status reporting ART use, compared to 75% overall (Public Health Center of the Ministry of Health of Ukraine, 2024a). This trend may reflect the effectiveness of targeted testing and linkage-to-care programs for populations at risk of HIV in Ukraine, although the potential for overreporting due to social desirability bias cannot be ruled out.

Viral suppression declined slightly in 2023 (from 82.2% to 78.9%, not statistically significant), possibly reflecting war-related disruptions in HIV care. NGO clients and MAT patients were more likely to know their HIV status. However, these factors did not significantly predict ART adherence or viral suppression, suggesting systemic barriers beyond access to services.

MAT Uptake

MAT coverage has expanded significantly since 2020. Lifetime MAT use increased from 8.4% to 19.8%, and current use more than tripled—from 4.6% to 15.4%. However, these gains are uneven. In cities such as Vinnytsia, current MAT use remained below 5%. More than 60% of all PWID surveyed were either unaware of MAT or not interested in enrolling (most notably in Vinnytsia (84.4%), Chernihiv (78.9%), Dnipro (74.0%) and Rivne (72.4%)).

MAT engagement was associated with lower injection frequency and reduced injection risk. However, nearly half of all PWID reported purchasing methadone or buprenorphine tablets from the black market in the past year, and over 85% of those who did so injected it.

Discontinuation of MAT was most often due to structural barriers (e.g. clinic accessibility) and individual perceptions (e.g. low efficacy or lack of motivation).

Overdose and Naloxone

Self-reported recent overdoses declined to 6.2% in 2023 (ranging from 3.2% in Cherkasy to 7.7% in Zaporizhzhia) — less than half the level in 2007. However, this issue remains urgent: more than one-third of PWID had experienced at least one overdose in their lifetime. Methadone was implicated in over half of recent overdose events. Combined opioid-stimulant use was a strong risk factor. Among

the cities surveyed, Rivne, Chernihiv, Vinnytsia, and Dnipro stand out with the highest proportion of PWID whose overdoses were related to stimulant use (54.4%, 43.1%, 36.8%, and 36.6%, respectively).

Despite naloxone's proven efficacy, one-third of PWID had never heard of it, and only 13.4% reported personal use (most frequently in Kyiv (16.9%), Zaporizhzhia (16.6%), Odesa (16.3%), Cherkasy (13.8%), and Kharkiv (12.9%)). Knowledge was higher among MAT patients and NGO clients, but wide gaps persist, particularly among stimulant users and those without service engagement.

Mental and Physical Health

Rates of depressive and anxiety symptoms were high: one in six PWID screened positive for severe depression, and one in seventeen for severe anxiety. These conditions were substantially more prevalent in Zaporizhzhia, among polydrug users and those not linked to NGOs. Alcohol misuse affected 17.2% of PWID (most frequently in Rivne (29.1%), Dnipro (26.7%), and Kyiv (24.1%)), with particularly high prevalence among youth and stimulant users.

Negative Experience and Violence

Negative experience related to drug use and violence remain prevalent in the lives of PWID in Ukraine. Nearly one-third of PWID reported negative experience in the past six months, and almost one in five reported experiencing physical violence in the past 12 months. Negative experience was more commonly reported among younger PWID, while HIV-negative PWID were more likely to report violence. No significant differences by gender were observed for either indicator.

War-Related Displacement and Social Disruption

The full-scale Russian invasion in February 2022 has had far-reaching effects on the lives of PWID in Ukraine, reshaping both their social environments and access to services. Approximately 12% reported having changed their place of residence due to the war, with displacement most common among PWID in Kharkiv, Chernihiv, Rivne, and Zaporizhzhia. The most adverse effects of the war noted by PWID were the reduction in employment opportunities and deterioration of mental and physical health, followed by reduced access to their drug of choice. Although many displaced PWID were able to re-engage with harm reduction services in new locations, others faced disruptions in MAT continuity, housing instability, and loss of support networks. These shifts have implications for both HIV prevention and treatment efforts, underscoring the need for mobile and adaptive service models that can reach displaced and newly marginalized PWID communities in real time. The long-term impact of forced migration, service fragmentation, and psychosocial stress on HIV outcomes and drug use trajectories requires close monitoring.

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This report is dedicated to our colleague and friend, who gave his all to our cause and country