

# HIV | SURVEILLANCE REPORT

SPECIAL REPORT

## HIV Infection Risk, Prevention, and Testing Behaviors Among Persons Who Inject Drugs National HIV Behavioral Surveillance, 20 U.S. Cities, 2022



Centers for Disease  
Control and Prevention  
National Center for HIV,  
Viral Hepatitis, STD, and  
TB Prevention

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# Commentary



Lowering the annual number of new HIV infections is a major HIV prevention goal [1]. The Ending the HIV Epidemic in the U.S. Initiative (EHE) is aimed at reducing new HIV infections by 90% by 2030 [2, 3]. EHE focuses on scaling up science-based strategies across four pillars:

- (1) **Diagnose** all people with HIV as early as possible;
- (2) **Treat** people with HIV rapidly and effectively to reach sustained viral suppression;
- (3) **Prevent** new HIV transmissions by using proven interventions, including preexposure prophylaxis (PrEP) and syringe services programs (SSPs);
- (4) **Respond** quickly to potential HIV outbreaks to get vital prevention and treatment services to people who need them.

It is critical to prioritize HIV prevention efforts to reduce HIV-related health disparities and inequities among populations disproportionately affected by HIV, including gay, bisexual, and other men who have sex with men (hereafter referred to as MSM); Black or African American (hereafter referred to as Black) women; transgender women; youth aged 13–24 years; and persons who inject drugs (PWID) [1]. State and local health departments, as well as federal agencies, are expected to monitor progress toward HIV prevention goals [1].

National HIV Behavioral Surveillance (NHBS) provides data for monitoring behaviors among populations at risk of acquiring or transmitting HIV infection and identifies the populations for whom scientifically proven, cost-effective, and scalable interventions are most appropriate. Monitoring key indicators among members of populations disproportionately affected by HIV is vital to achieving the goals of EHE [2, 3] and the Centers for Disease Control and Prevention (CDC)'s high-impact prevention approach [4]. NHBS has previously proven effective at monitoring key indicators, such as behavioral risk factors, HIV testing, linkage to care, and HIV-related health disparities; access to and use of prevention interventions, including PrEP and SSPs; and prevalence of HIV in areas with high HIV prevalence among 3 populations at high risk of HIV infection: MSM, PWID, and heterosexually active persons at increased risk for HIV infection [5–7].

PWID who share syringes or other injection equipment for injection drug use are at increased risk of acquiring and transmitting HIV and other bloodborne infections, including hepatitis B virus infection and hepatitis C virus (HCV) infection [8–12]. Approximately 11% of the HIV infections diagnosed in 2021 were attributed to injection drug use, including those attributed to the combination of injection drug use and male-to-male sexual contact [13]. HIV transmission among PWID remains an urgent concern, as evidenced by numerous recent HIV outbreaks among PWID across the United States [14–16] and the increased availability of illicit fentanyl, which is associated with more frequent injection and risk of syringe sharing [14, 15, 17]. Additionally, there is evidence of decreased access to harm reduction and HIV prevention services, such as SSPs, among PWID [15,

16, 18–21]. SSPs are an essential public health service and are associated with an estimated 50% reduction in HIV and HCV incidence [18, 22]. However, several key challenges to implementing and scaling up SSPs exist, including service disruptions during the COVID-19 pandemic [18–20], local policies restricting SSP operations [15, 16, 18], and limited funding [18, 21]. This report summarizes findings from the 2022 NHBS data collection cycle among PWID. Data from previous PWID cycles of NHBS have been published elsewhere [23–27].

The report provides descriptive, unweighted data that can be used to describe HIV infection among PWID and the percentages reporting specific behavioral risk factors, HIV testing, and participation in prevention programs. Estimates presented in this report may have been affected by the COVID-19 pandemic. Monitoring these outcomes is useful for assessing behavioral risk factors and the use of prevention efforts over time and for identifying new HIV prevention opportunities for this population.

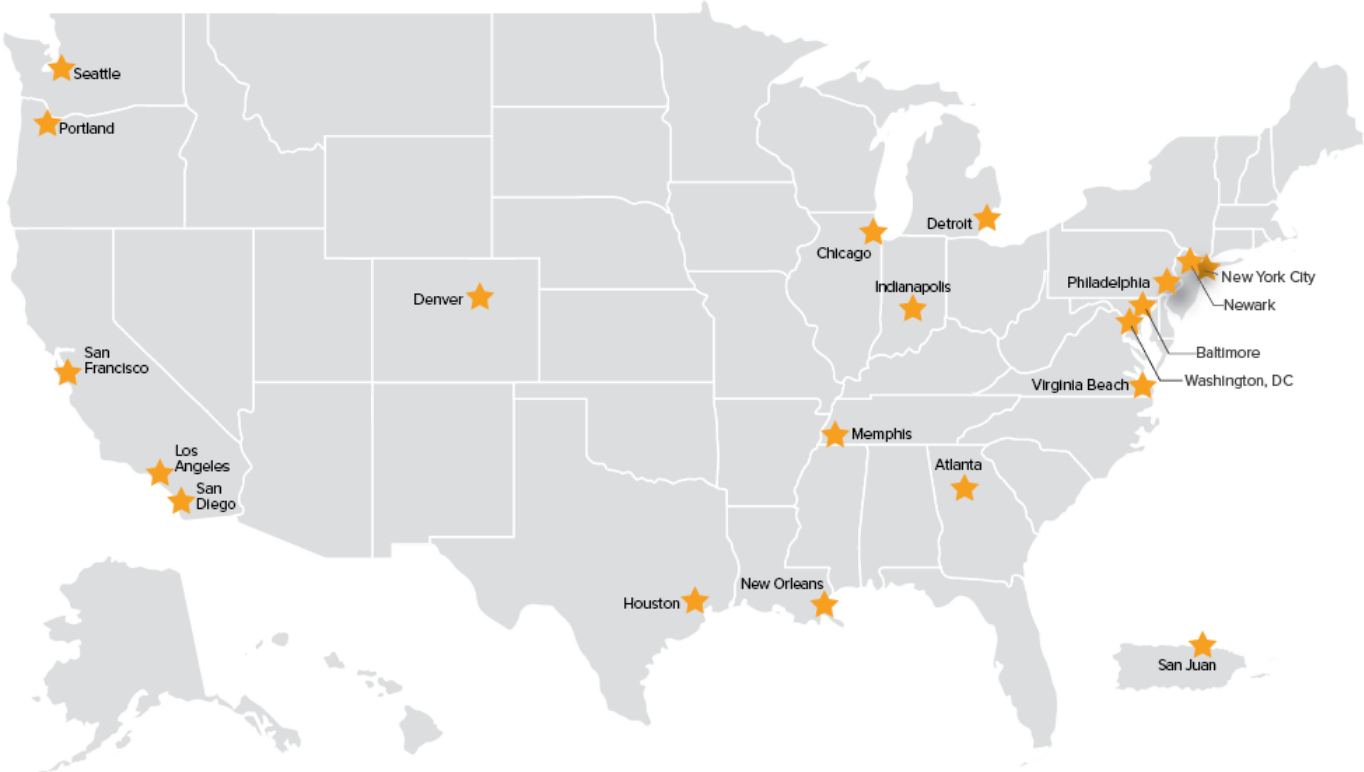
## REPORT CHANGES

CDC routinely assesses NHBS reports to ensure the content and methods meet the information needs of the nation. The following reporting changes were made from the previous NHBS report on PWID [23]:

- This report includes 20 metropolitan statistical areas (MSAs; Figure 1). In 2018, 23 MSAs collected NHBS data among PWID.
- In 2022, to reduce COVID-19 transmission, interviews were conducted by videoconference instead of in person, face-to-face. The participant was in a private space at the field site and the interviewer was in a separate room at the field site or an off-site location. The interviewer and participant were connected on computers via a private videoconference session.
- The eligibility criteria for NHBS participation were modified in 2022. Previously, potential participants were eligible to participate if they self-reported injecting drugs in the past 12 months and had physical evidence of recent injection or demonstrated knowledge of injection drug use. In 2022, participants were not asked for physical evidence of recent injection. Instead, potential participants were eligible to participate if they self-reported injecting drugs in the past 12 months and demonstrated knowledge of injection drug use.
- Table 2 was added to present social determinants of health among PWID.
- A new indicator, “unprotected sex with an HIV-discordant partner at last sex,” was developed and presented for the first time in a report on PWID. This indicator accounts for sex without the participant’s use of either condoms or HIV medications (i.e., PrEP among those without HIV or antiretrovirals among those with HIV) with a sex partner of different or unknown HIV status.
- An addendum is included that contains information used to create the accompanying infographic (Table A1; Figure 14).

Some modifications to “measure definitions” are made routinely to more accurately describe the outcome or characteristic of interest; measure definitions are described in the appendix of this report.

Figure 1. National HIV Behavioral Surveillance project areas—United States, 2022



## HIGHLIGHTS

### Demographic Characteristics, Social Determinants of Health, and HIV Prevalence

This report describes data from 7,095 PWID who participated in NHBS in 2022, of whom 67% identified as male, 32% female, and 1% transgender (Figure 2); 40% were Black, 18% were Hispanic or Latino, and 35% were White (Figure 3); 43% were aged  $\geq 50$  years (Figure 4); 70% reported having a disability (Table 1).

Figure 2. Gender distribution of persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022

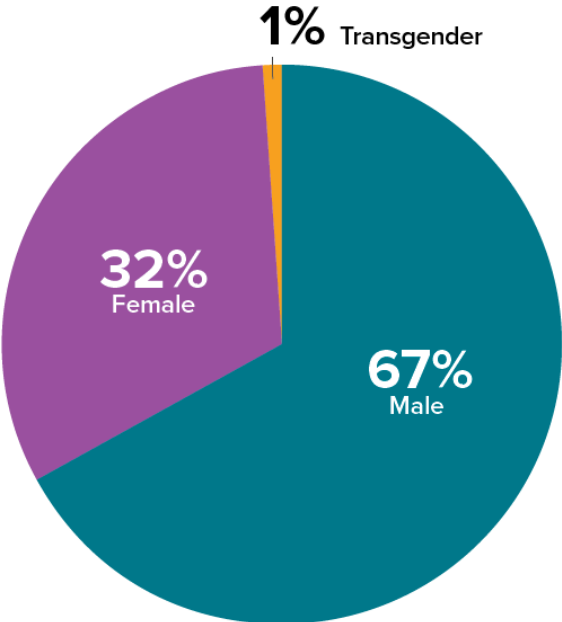
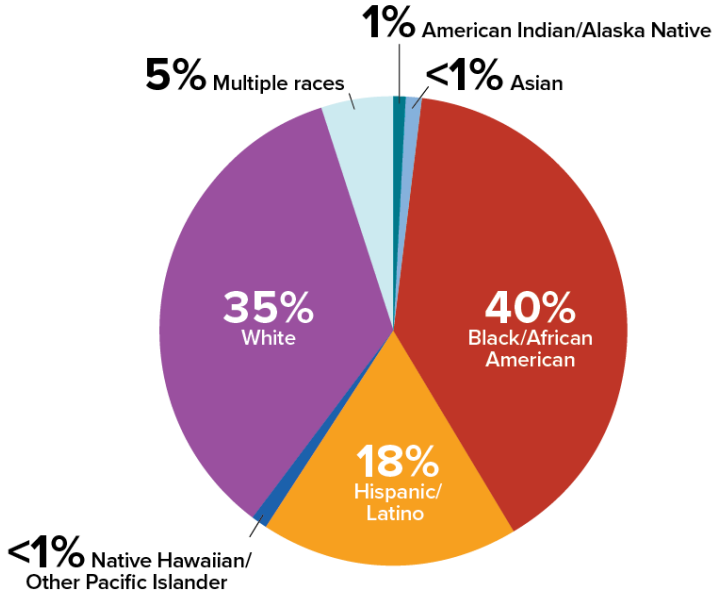
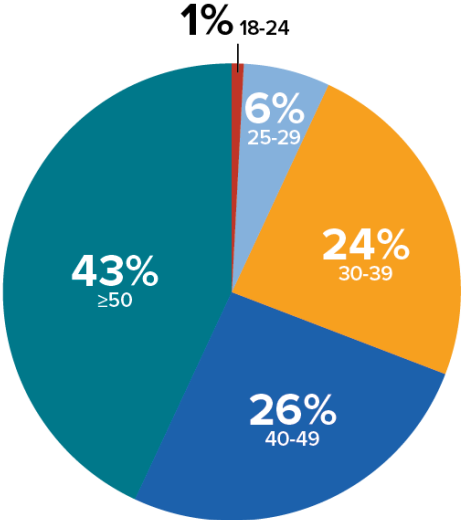


Figure 3. Race/ethnicity distribution of persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022



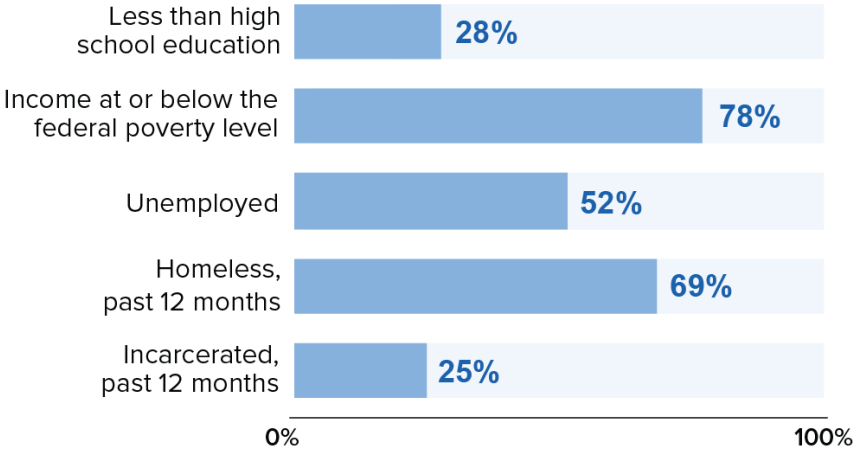


**Figure 4. Age distribution of persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

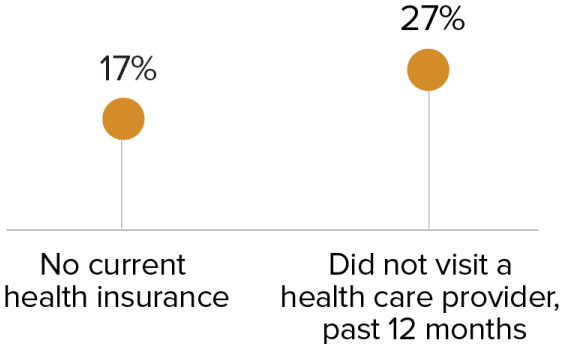


Social determinants of health (SDOH) refer to the conditions in which people are born, grow, work, live, and age that influence health outcomes [28]. Addressing SDOH and structural inequities are integral to the 2022–2025 National HIV/AIDS Strategy [1]. Detrimental SDOH were common among PWID: 28% had less than a high school education, 78% had a household income at or below the federal poverty level, and 52% reported being unemployed (Figure 5); 17% had no health insurance and 27% had not visited a health care provider during the 12 months before interview (Figure 6); 69% experienced homelessness and 25% were incarcerated during the 12 months before interview (Table 2).

**Figure 5. Social determinants of health among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

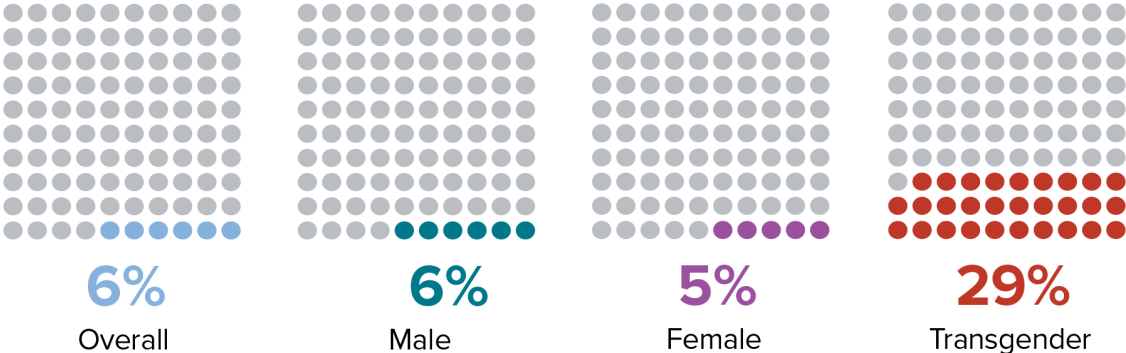


**Figure 6. Health care insurance and use among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**



In 2022, 6% of participants with a valid NHBS HIV test result tested positive for HIV (Table 3). By gender, HIV prevalence was as follows: 6% among males, 5% among females, and 29% among transgender persons (Figure 7); however, HIV prevalence among PWID who are transgender should be interpreted with caution due to small sample size. By race and ethnicity, HIV prevalence was as follows: 6% among Black persons, 7% among Hispanic or Latino persons, 7% among multiracial persons, and 5% among White persons.

**Figure 7. Prevalence of HIV overall and by gender among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

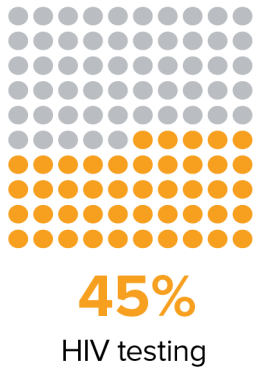


*Note.* Transgender sample size is small and should be interpreted with caution.

CDC recommends that persons at increased risk of HIV infection, including PWID, get tested for HIV at least annually [29]. Of participants who did not report a previous HIV-positive test result or who had received their first HIV-positive test result less than 12 months before the interview, 45% reported that they had been tested for HIV during the 12 months before interview (Figure 8) and 90% reported that they had ever been tested (Table 4).

Among participants who reported being tested for HIV during the 12 months before interview, 65% reported their most recent test was performed in a clinical setting while 30% reported being tested in a nonclinical setting, such as an HIV counseling and testing site, an HIV street outreach program or mobile unit, an SSP, or at home (Table 5).

**Figure 8. HIV testing in the 12 months before interview among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**



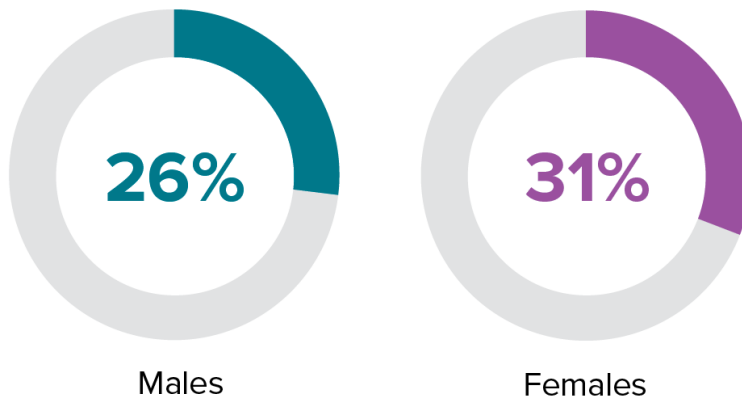
## Sexual Behaviors

Condomless sex during the 12 months before interview was common among male and female PWID. Among male PWID, 63% reported condomless vaginal sex and 22% reported condomless anal sex with female sex partners, and 5% reported condomless anal sex with male sex partners; among female PWID, 72% reported condomless vaginal sex and 25% reported condomless anal sex with male sex partners (Tables 6 and 7). Among PWID who tested HIV-positive, 32% of males and 51% of females reported condomless vaginal sex, and 14% of males and 20% of females reported condomless anal sex with a partner of the opposite sex. It is unknown whether participants were trying to conceive.

Male-male anal sex was common among men who tested HIV-positive (38%), and 32% of men who tested HIV-positive reported condomless anal sex with men. These results are particularly concerning given the increased risk of HIV transmission associated with condomless anal sex among MSM and low use of PrEP among PWID [30–32].

Overall, 26% of male PWID and 31% of female PWID reported unprotected sex with an HIV-discordant partner at last sex (Figure 9). “Unprotected sex” refers to sex without the participant’s use of either condoms or HIV medications (i.e., HIV PrEP or antiretrovirals). “HIV-discordant partner” refers to a sex partner of different or unknown HIV status. For both male and female PWID, the percentage reporting unprotected sex with an HIV-discordant partner at last sex was lower among participants who tested HIV-positive (males: 10%; females: 11%) as compared to participants who tested HIV-negative (males: 27%; females: 33%).

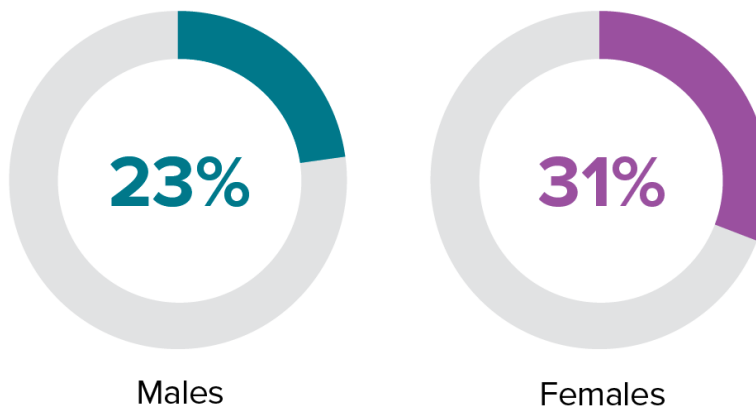
**Figure 9. Unprotected sex with HIV-discordant partner at last sex by gender among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**



*Note.* “Unprotected sex” refers to sex without the participant’s use of either condoms or HIV medications (i.e., HIV PrEP or antiretrovirals). “HIV-discordant partner” refers to a sex partner of different or unknown HIV status.

Giving or receiving money or drugs in exchange for sex is a recognized risk factor for HIV infection [29]. Many persons who exchange sex for money or drugs experience stigma and low access to care, which can present a challenge in preventing HIV [33, 34]. Among male PWID, 23% reported giving money or drugs to a female casual partner in exchange for sex or giving or receiving money or drugs from a male casual partner in exchange for sex during the 12 months before interview (Figure 10). Among female PWID, 31% reported receiving money or drugs from a male casual partner in exchange for sex during the 12 months before interview.

**Figure 10. Exchange sex in the 12 months before interview by gender among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**



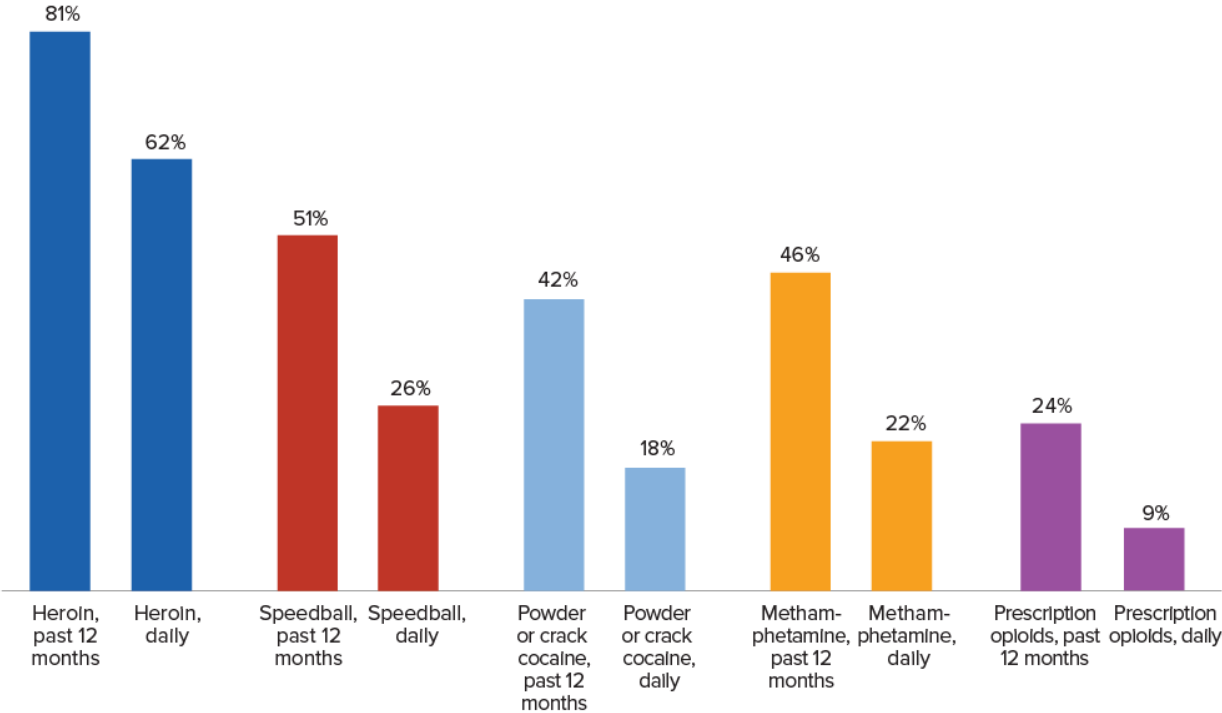
*Note.* Among males, “exchange sex” refers to giving money or drugs to a female casual partner in exchange for sex, or giving or receiving money or drugs from a male casual partner in exchange for sex. Among females, “exchange sex” refers to receiving money or drugs from a male casual partner in exchange for sex.

## Injection Drug Use

Among all participants, approximately 81% reported injecting heroin during the 12 months before interview and a majority (62%) reported injecting heroin daily (Figure 11; Table 8). Daily heroin injection was more common among PWID who tested HIV-negative (63%) as compared to PWID who tested HIV-positive (47%). Slightly more than half of participants (51%) reported injecting speedball (heroin and cocaine together), 46% reported injecting methamphetamine, 42% reported injecting powder or crack cocaine, and 24% reported injecting prescription opioids during the 12 months before interview. A higher percentage of PWID who tested HIV-positive (53%) reported injecting methamphetamine during the 12 months before

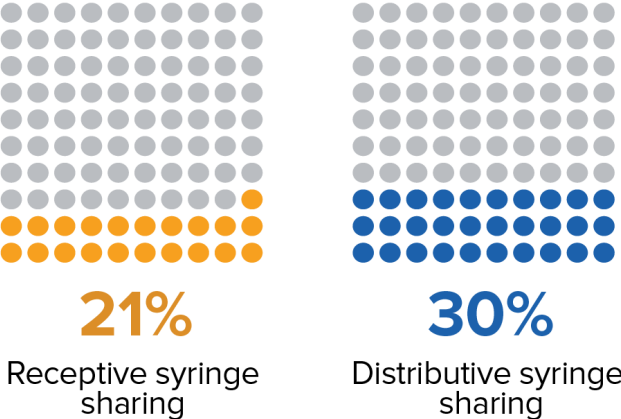
interview as compared to PWID who tested HIV-negative (46%). Frequency of reported fentanyl injection cannot be determined as fentanyl use was not measured during the 2022 NHBS data collection cycle.

**Figure 11. Frequency of injection drug use in the 12 months before interview among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**



One-time use of sterile needles and syringes remains the safest, most effective way to limit HIV transmission during drug injection [35]. Approximately 21% of PWID reported using a syringe that had been used by someone else (i.e., receptive syringe sharing); a lower percentage of PWID who tested HIV-positive (18%) reported receptive syringe sharing as compared to PWID who tested HIV-negative (21%) (Figure 12; Table 9). Participants aged 25–29 years reported the highest percentage of receptive syringe sharing (HIV-negative: 31%; HIV-positive: 27%) when compared with other age groups. Additionally, 30% of PWID reported giving a syringe they had already used to someone else (i.e., distributive syringe sharing); a greater percentage of PWID who tested HIV-negative reported distributive syringe sharing (31%) than PWID who tested HIV-positive (18%).

**Figure 12. Receptive and distributive syringe sharing in the 12 months before interview among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

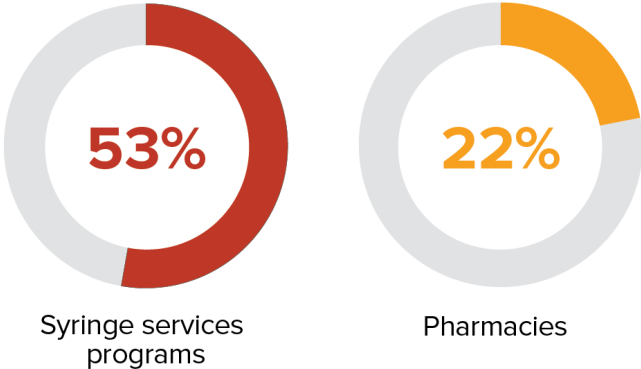


*Note.* Receptive syringe sharing refers to using a needle that had already been used by someone else for injection. Distributive syringe sharing refers to a participant giving their needle to someone else to use after they had already used it for injection.

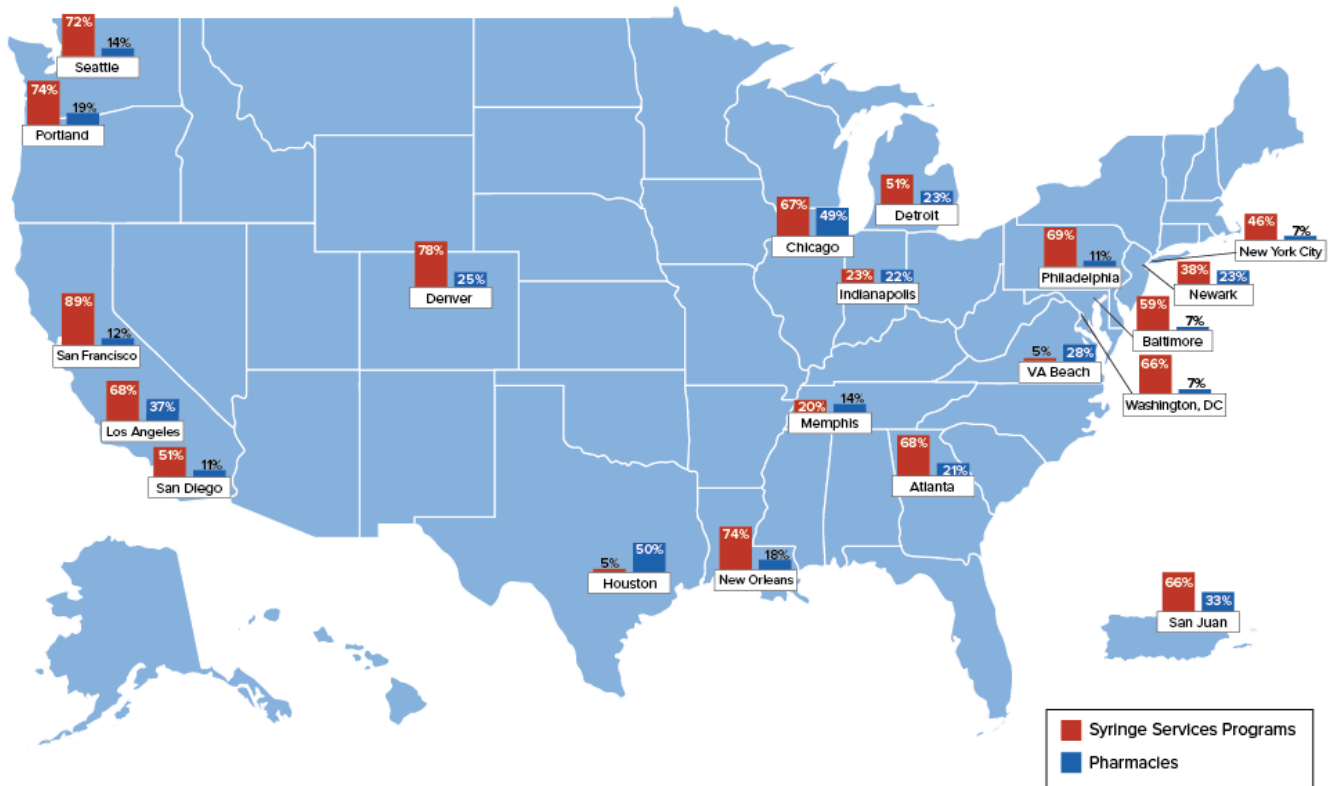
**HIV Prevention Activities**

SSPs are community-based prevention programs that can provide a range of services, including linkage to substance use disorder treatment; access to and disposal of sterile syringes and injection equipment; and vaccination, testing, and linkage to care and treatment for infectious diseases [22]. Receiving sterile syringes from SSPs reduces barriers to safer injection practices among PWID and increases access to other prevention services, including substance use disorder treatment [36]. More than half (53%) of participants reported receiving syringes from SSPs (Figure 13; Table 10a); however, the percentage of PWID who received syringes from SSPs varied greatly by city, from 5% to 89% (Figure 14; Table A1). Geographical differences may be due to state and local policies related to SSP operations, community acceptance of SSPs, and limited funding [15, 16, 18, 21]; the COVID-19 pandemic also caused disruptions to SSP operations [18–20].

**Figure 13. Receipt of sterile syringes from syringe services programs or pharmacies in the 12 months before interview among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**



**Figure 14. Receipt of sterile syringes from syringe services programs or pharmacies in the 12 months before interview by city among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

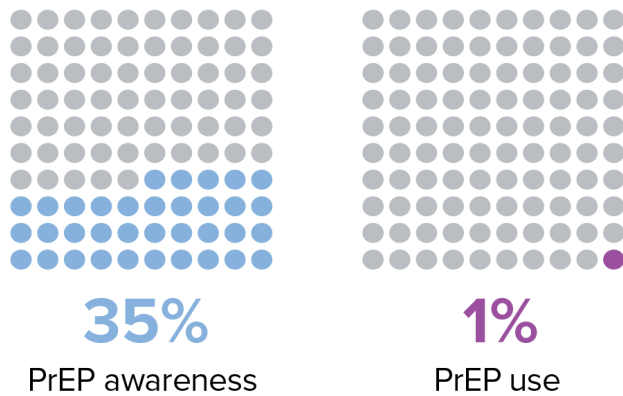


Treatment for substance use disorder is an important method of HIV risk reduction because it can reduce injection-related risk of HIV transmission, and treatment programs can provide access to HIV testing and treatment [15, 18, 37–40]. Among all participants, 32% had received substance use disorder treatment during the 12 months before interview.

Access to safe syringe disposal (such as through SSPs) can decrease the number of used syringes in the community and reduce accidental needle sticks [41, 42]. Only 27% of PWID reported disposing of all their used syringes safely, which could be in part the result of low availability of safe disposal options given that some MSAs participating in NHBS do not have SSPs.

In 2021, CDC released an update to clinical guidance recommending the use of PrEP for persons at increased risk of HIV acquisition, including PWID [43]. In 2022, 35% of PWID who tested HIV-negative were aware of PrEP, and a small percentage of PWID who tested HIV-negative (1%) reported taking PrEP to prevent HIV infection (Figure 15). PrEP use ranged from 0% to 3% across cities (Table 10b).

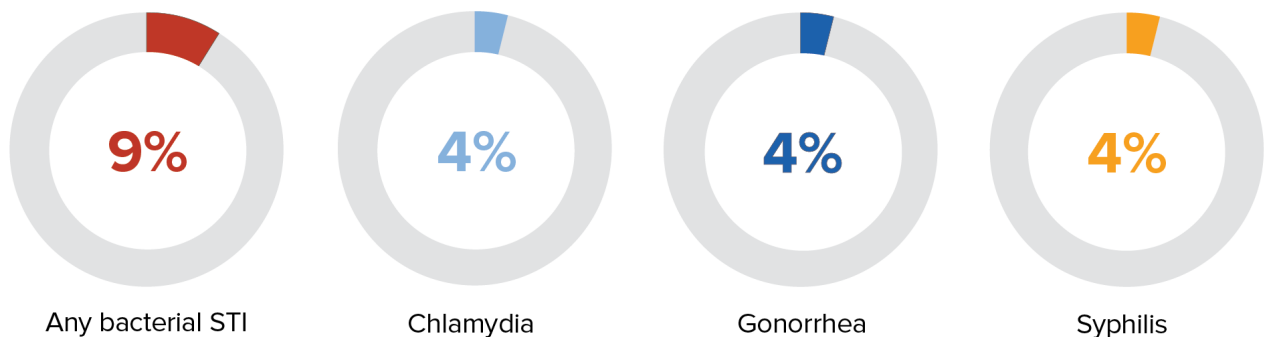
**Figure 15. Preexposure prophylaxis (PrEP) awareness and use in the 12 months before interview among persons who inject drugs and who tested HIV-negative—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**



### Sexually Transmitted Infections and Hepatitis C Virus Infections

STIs can increase the likelihood of acquiring and transmitting HIV [44]. The percentage of PWID who reported a diagnosis of any bacterial STI (e.g., chlamydia, gonorrhea, or syphilis) during the 12 months before interview was 9% overall (Figure 16) and was higher among PWID who tested HIV-positive (24%) than among PWID who tested HIV-negative (8%) (Table 11).

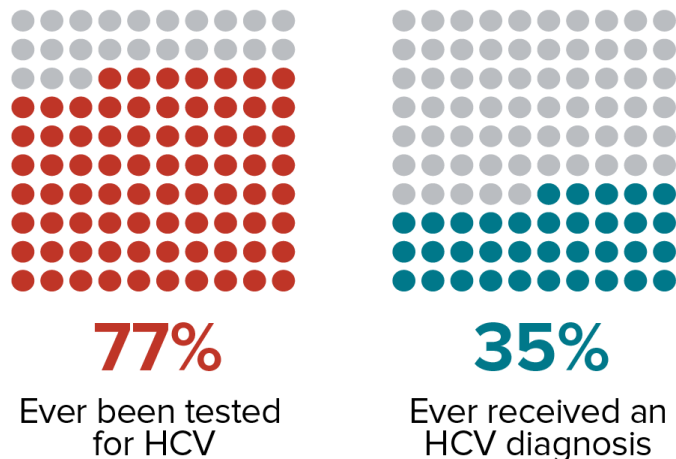
**Figure 16. Diagnosis of sexually transmitted infections (STIs) in the 12 months before interview among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**



HCV testing is recommended at least once for anyone who has ever injected drugs; HCV testing is recommended at least annually for persons who currently inject drugs and who are thus at continued risk of infection [45]. Lifetime testing for HCV among PWID was high (77%) (Figure 17; Table 12). Furthermore, substantial percentages of participants reported a diagnosis of hepatitis C (42% of PWID who tested HIV-positive, 35% of PWID who tested HIV-negative). PWID who tested HIV-positive may be more likely to be infected with HCV than PWID who tested HIV-negative because HCV is commonly transmitted via sharing syringes or other drug injection equipment [46]. Diagnoses of STIs and HCV infection may be more common among PWID known to be HIV-positive because of increased screening in this group.



**Figure 17. Hepatitis C virus (HCV) testing and diagnosis among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**



## Noninjection Drug Use

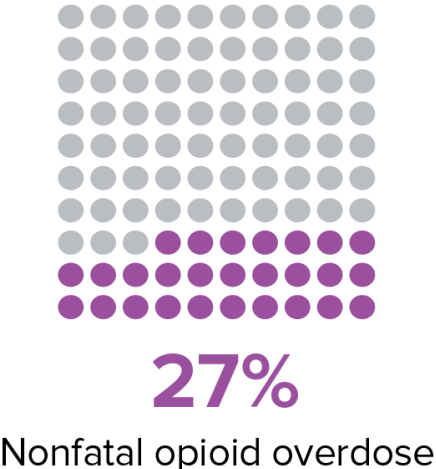
PWID who tested HIV-negative reported more noninjection drug use (82%) compared to PWID who tested HIV-positive (77%) (Table 13). Among PWID who tested HIV-negative, marijuana was used the most (61%), followed by heroin (49%), crack (46%), and methamphetamine (46%). Among PWID who tested HIV-positive, marijuana was used the most (54%), followed by methamphetamine (46%), crack (46%), and heroin (34%).

## Opioid Use-related Outcomes

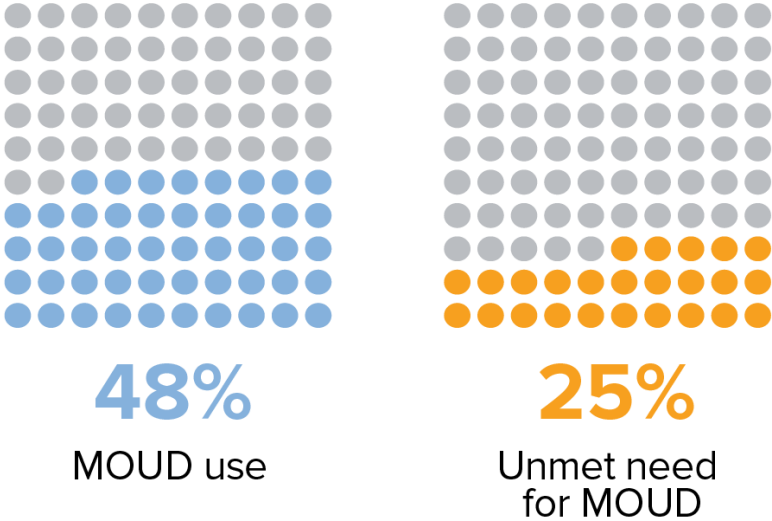
Opioid use continues to be a major public health concern in the United States. It is estimated that approximately 221 Americans die every day from an overdose of prescription or illicit opioids [47]. Medications for opioid use disorder (MOUD), including methadone, buprenorphine, Suboxone, or Subutex, are effective, evidence-based treatments that decrease opioid use, opioid-related overdoses, and infectious disease transmission [38–40]. Tables 14a/b present data on opioid use-related outcomes, including MOUD and nonfatal opioid overdoses, among participants who reported injection or noninjection use of heroin or other opioids not prescribed for them (includes 91% of all participants).

More than one-quarter of participants (27%) reported experiencing an overdose (Figure 18; Table 14a). Across age groups, the percentage reporting experiencing an overdose was highest among participants who tested HIV-negative aged 18–24 years (38%). Among participants who tested HIV-negative, overdose was reported by 24% of Black participants, 26% of Hispanic or Latino participants, and 31% of White participants. A little less than half of participants (48%) reported having used MOUD during the 12 months before interview, and a quarter of participants (25%) reported trying but being unable to obtain medicines to treat drug use during the 12 months before interview (unmet need for MOUD; Figure 19). Among participants who tested HIV-negative, MOUD use was lower among Black (43%) and Hispanic or Latino (46%) participants compared with White participants (56%). Among participants who tested HIV-negative, MOUD use varied from 28% to 66% across cities, and unmet need for MOUD varied from 14% to 36% across cities (Table 14b).

**Figure 18. Nonfatal opioid overdose in the 12 months before interview among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**



**Figure 19. Use of and unmet need for medications for opioid use disorder (MOUD) in the 12 months before interview among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

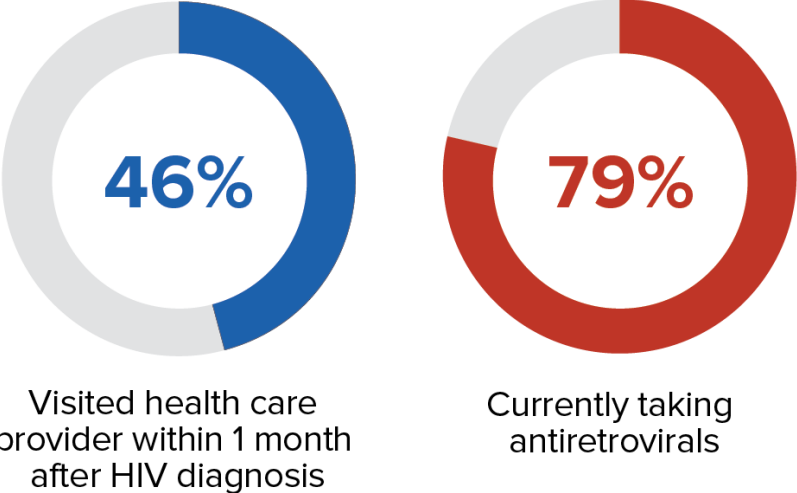


**Receipt of HIV Care and Treatment**

Current CDC treatment guidelines recommend antiretroviral treatment (ART) for all people with HIV [48, 49], which is essential for achieving an undetectable viral load (“viral suppression”). Achieving viral suppression helps people with HIV stay healthy, live longer, and have better quality of life, and prevents transmitting HIV to others [48–50]. Yet, PWID encounter many forms of stigma and discrimination in healthcare settings, which can hinder access to HIV care [51, 52]. The national goal is to link 95% of people with new HIV diagnoses to care within one month of diagnosis by 2025 [1]. Among PWID who self-reported being HIV-positive, 93% reported having ever visited a health care provider about HIV, 46% reported that they did so within one month after diagnosis (Figure 20), and 75% reported visiting a health care provider about HIV in the six months before interview (Table 15). Current use of ART was reported by 79% of PWID

who self-reported being HIV-positive: 80% of Black PWID, 75% of Hispanic or Latino PWID, and 77% of White PWID.

**Figure 20. Receipt of HIV care and treatment among persons who inject drugs and who self-reported being HIV-positive—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**



*Note.* HIV diagnosis could have been at any point in time.

# Technical Notes

NHBS conducts rotating cycles of biobehavioral surveys among MSM, PWID, and heterosexually active persons at increased risk of HIV infection [5]; data are collected in annual cycles from one risk group per year so that each population is surveyed once every 3 years. The same general eligibility criteria are used in each cycle: age 18 years or older, current residence in a participating city, no previous participation in NHBS during the current survey cycle, ability to complete the survey in either English or Spanish, and ability to provide informed consent. In addition to these basic NHBS eligibility criteria, participation in the 2022 NHBS cycle was limited to persons who (1) reported injecting a drug that was not prescribed for them in the past 12 months, and (2) adequately described their injection practices.

A standardized questionnaire is used to collect information about behavioral risks for HIV infection, HIV testing, and use of HIV prevention services. The anonymous survey is administered by a trained interviewer using a portable computer or tablet. All participants are offered an anonymous HIV test, which is linked to the survey data through a unique survey identifier.

Activities for NHBS were approved by CDC [53, 54] and by applicable institutional review boards (IRBs) in each participating city.

## PARTICIPATING CITIES

State and local health departments selected to participate in NHBS are among those whose jurisdictions include an MSA or a specified division with the highest number of HIV infections diagnosed during the 3-year period 2017–2019 reported to CDC. In 2022, NHBS was conducted in 20 MSAs (see list at the end of the report), which represented approximately 44% of all diagnoses reported to CDC in large MSAs (population  $\geq 500,000$ ) in the United States from 2017–2019 [55–57].

Throughout this report, MSAs and divisions are referred to by the name of the principal city.

## SAMPLING METHOD

The stigma associated with injection drug use presents challenges to sampling strategies for surveillance and research efforts among PWID. Participants in the 2022 NHBS cycle were recruited by using respondent-driven sampling [58, 59]. Recruitment started with a limited number of initial participants who were chosen by referrals from people who knew the local population of PWID or through outreach to areas where PWID could be found. Initial participants who completed the eligibility screener and were found eligible were administered the survey, and those who completed the survey were asked to recruit up to 5 persons whom they knew personally and who injected drugs. Those persons, in turn, completed the survey and were asked to recruit others by using a system of coded coupons. This recruitment process continued until the sample size was reached or the sampling period ended. Participants received incentives for participating in the survey and for recruiting others.

## DATA COLLECTION

Each person who brought a valid coupon to an NHBS field site was escorted to a private area with a computer screen connected to a private videoconference session with a trained interviewer for eligibility screening. If the person met eligibility requirements, the interviewer obtained informed consent and conducted the interview via the private videoconference session. The interview took approximately 40 minutes and consisted of questions concerning participants' demographic characteristics, HIV testing history, sexual and substance use behaviors, HCV testing and diagnosis of HCV infection, STI testing and diagnosis, and use of HIV prevention services and programs. In exchange for the time spent taking part in the interview, participants received \$20–\$50 (amount determined locally).

HIV testing was performed for participants who consented; blood specimens were collected for rapid testing in the field or laboratory-based testing. Participants with a nonreactive rapid test result who did not self-report a previous HIV-positive test result were considered HIV-negative; participants who had a reactive rapid test result were considered HIV-positive if supported by a second rapid test, supplemental laboratory-based testing, or self-report of a previous HIV-positive test result. Participants received \$20–\$50 for HIV testing (amount determined locally).

Participants who agreed to recruit others received an additional incentive of \$10–\$25 for each recruit (up to 5) who completed the interview (amount determined locally). Each participating city's goal was to interview 500 PWID who reported injecting a drug that was not prescribed for them in the past 12 months.

## DATA ANALYSIS

This surveillance report presents descriptive data; no statistical tests were performed. In addition, these data are cross-sectional; we did not attempt to infer causal relationships. Reported numbers less than 12, and percentages based on these numbers, should be interpreted with caution because the numbers are considered unreliable.

Data for this report are not weighted. The purpose of this report is to provide a detailed summary of surveillance data collected as part of the NHBS 2022 cycle; unweighted data provide an efficient and transparent way to do so. Further, unweighted analysis allows for detailed reporting of outcomes among small subgroups of the population of interest.

In 2022, 20 MSAs participated in NHBS among PWID. Among the 20 MSAs, 8,563 persons were recruited to participate; 8,403 persons were screened to participate in NHBS. Of those, 1,254 did not meet NHBS eligibility criteria or did not provide consent and were excluded from the survey. An additional 54 interviews were excluded from this report due to incomplete survey data, survey responses of questionable validity, data lost during electronic upload, or missing data for gender.

The full analysis sample for this report includes 7,095 participants from the 2022 NHBS cycle. Additional inclusion criteria were applied for certain analyses of HIV infection, HIV-associated behaviors, and opioid use-related outcomes; details of each analysis sample can be found in the footnotes of each table.

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**Table 1. Selected characteristics of persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

	HIV-negative <sup>a</sup>		HIV-positive <sup>b</sup>		No valid NHBS HIV test result <sup>c</sup>		Total	
	No.	%	No.	%	No.	%	No.	%
<b>Gender</b>								
Male	4,373	66.6	284	68.9	79	68.1	4,736	66.8
Female	2,143	32.6	107	26.0	34	29.3	2,284	32.2
Transgender	51	0.8	21	5.1	3	2.6	75	1.1
<b>Age at interview (yr)</b>								
18–24	96	1.5	4	1.0	1	0.9	101	1.4
25–29	369	5.6	15	3.6	4	3.4	388	5.5
30–39	1,545	23.5	95	23.1	29	25.0	1,669	23.5
40–49	1,739	26.5	104	25.2	31	26.7	1,874	26.4
≥50	2,818	42.9	194	47.1	51	44.0	3,063	43.2
<b>Race/ethnicity</b>								
American Indian/Alaska Native	79	1.2	3	0.7	1	0.9	83	1.2
Asian	23	0.4	4	1.0	0	0.0	27	0.4
Black/African American	2,584	39.3	169	41.0	60	51.7	2,813	39.6
Hispanic/Latino <sup>d</sup>	1,175	17.9	90	21.8	13	11.2	1,278	18.0
Native Hawaiian/other Pacific Islander	22	0.3	1	0.2	2	1.7	25	0.4
White	2,339	35.6	119	28.9	33	28.4	2,491	35.1
Multiple races	321	4.9	25	6.1	7	6.0	353	5.0
<b>Disability</b>								
Yes	4,586	69.8	294	71.4	75	64.7	4,955	69.8
No	1,952	29.7	115	27.9	41	35.3	2,108	29.7
<b>City</b>								
Atlanta, GA	181	2.8	11	2.7	5	4.3	197	2.8
Baltimore, MD	83	1.3	8	1.9	7	6.0	98	1.4
Chicago, IL	44	0.7	0	0.0	1	0.9	45	0.6
Denver, CO	259	3.9	14	3.4	5	4.3	278	3.9
Detroit, MI	201	3.1	6	1.5	5	4.3	212	3.0
Houston, TX	469	7.1	39	9.5	8	6.9	516	7.3
Indianapolis, IN	502	7.6	18	4.4	1	0.9	521	7.3
Los Angeles, CA	504	7.7	24	5.8	2	1.7	530	7.5
Memphis, TN	314	4.8	9	2.2	9	7.8	332	4.7
New Orleans, LA	474	7.2	40	9.7	14	12.1	528	7.4
New York City, NY	76	1.2	9	2.2	6	5.2	91	1.3
Newark, NJ	390	5.9	33	8.0	4	3.4	427	6.0
Philadelphia, PA	561	8.5	37	9.0	5	4.3	603	8.5
Portland, OR	327	5.0	7	1.7	5	4.3	339	4.8
San Diego, CA	159	2.4	5	1.2	6	5.2	170	2.4
San Francisco, CA	456	6.9	51	12.4	17	14.7	524	7.4
San Juan, PR	379	5.8	36	8.7	2	1.7	417	5.9
Seattle, WA	463	7.1	32	7.8	5	4.3	500	7.0
Virginia Beach, VA	504	7.7	20	4.9	7	6.0	531	7.5
Washington, DC	221	3.4	13	3.2	2	1.7	236	3.3
<b>Total</b>	<b>6,567</b>	<b>100</b>	<b>412</b>	<b>100</b>	<b>116</b>	<b>100</b>	<b>7,095</b>	<b>100</b>

Abbreviation: NHBS, National HIV Behavioral Surveillance.

<sup>a</sup> Participants with a negative NHBS HIV test result who did not self-report a previous HIV-positive test result.

<sup>b</sup> Participants who had a reactive rapid NHBS HIV test result that was supported by a second rapid test, supplemental laboratory-based testing, or self-report of a previous HIV-positive test result.

<sup>c</sup> Participants who did not have a valid positive or negative NHBS HIV test result, including those who did not consent to the HIV test, had an indeterminate laboratory result, had discordant rapid test results, or reported a previous HIV-positive test result but had a negative NHBS HIV test result.

<sup>d</sup> Hispanic/Latino persons can be of any race.

**Table 2. Social determinants of health among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

	Less than high school education		Income at or below the federal poverty level <sup>a</sup>		Unemployed		No current health insurance		Did not visit a health care provider, past 12 months		Homeless <sup>b</sup> , past 12 months		Incarcerated <sup>c</sup> , past 12 months		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
	<b>Gender</b>														
Male	1,312	27.7	3,597	76.0	2,488	52.5	882	18.6	1,376	29.1	3,324	70.2	1,314	27.7	4,736
Female	679	29.7	1,839	80.5	1,189	52.1	334	14.6	507	22.2	1,499	65.6	445	19.5	2,284
Transgender	22	29.3	66	88.0	39	52.0	7	9.3	13	17.3	53	70.7	15	20.0	75
<b>Age at interview (yr)</b>															
18–24	39	38.6	73	72.3	74	73.3	25	24.8	37	36.6	78	77.2	40	39.6	101
25–29	103	26.5	299	77.1	281	72.4	97	25.0	136	35.1	328	84.5	158	40.7	388
30–39	421	25.2	1,280	76.7	1,109	66.4	304	18.2	516	30.9	1,349	80.8	604	36.2	1,669
40–49	555	29.6	1,426	76.1	1,068	57.0	354	18.9	531	28.3	1,367	72.9	485	25.9	1,874
≥50	895	29.2	2,424	79.1	1,184	38.7	443	14.5	676	22.1	1,754	57.3	487	15.9	3,063
<b>Race/ethnicity</b>															
American Indian/Alaska Native	28	33.7	64	77.1	41	49.4	11	13.3	21	25.3	64	77.1	22	26.5	83
Asian	5	18.5	22	81.5	19	70.4	4	14.8	8	29.6	20	74.1	5	18.5	27
Black/African American	923	32.8	2,261	80.4	1,297	46.1	572	20.3	688	24.5	1,709	60.8	584	20.8	2,813
Hispanic/Latino <sup>d</sup>	442	34.6	1,057	82.7	759	59.4	241	18.9	457	35.8	938	73.4	310	24.3	1,278
Native Hawaiian/other Pacific Islander	4	16.0	19	76.0	19	76.0	5	20.0	4	16.0	21	84.0	7	28.0	25
White	523	21.0	1,799	72.2	1,389	55.8	341	13.7	645	25.9	1,854	74.4	728	29.2	2,491
Multiple races	77	21.8	256	72.5	177	50.1	46	13.0	70	19.8	253	71.7	113	32.0	353
<b>NHBS HIV test result</b>															
HIV-negative <sup>e</sup>	1,852	28.2	5,066	77.1	3,457	52.6	1,167	17.8	1,814	27.6	4,561	69.5	1,653	25.2	6,567
HIV-positive <sup>f</sup>	124	30.1	344	83.5	203	49.3	40	9.7	57	13.8	243	59.0	94	22.8	412
Not valid <sup>g</sup>	37	31.9	92	79.3	56	48.3	16	13.8	25	21.6	72	62.1	27	23.3	116
<b>City</b>															
Atlanta, GA	47	23.9	151	76.6	90	45.7	123	62.4	60	30.5	162	82.2	69	35.0	197
Baltimore, MD	31	31.6	79	80.6	47	48.0	3	3.1	8	8.2	46	46.9	18	18.4	98
Chicago, IL	15	33.3	35	77.8	23	51.1	2	4.4	14	31.1	22	48.9	10	22.2	45
Denver, CO	52	18.7	215	77.3	157	56.5	17	6.1	87	31.3	239	86.0	130	46.8	278
Detroit, MI	68	32.1	159	75.0	92	43.4	18	8.5	55	25.9	132	62.3	56	26.4	212
Houston, TX	132	25.6	370	71.7	231	44.8	273	52.9	158	30.6	349	67.6	135	26.2	516
Indianapolis, IN	137	26.3	395	75.8	281	53.9	53	10.2	143	27.4	346	66.4	150	28.8	521
Los Angeles, CA	132	24.9	430	81.1	274	51.7	48	9.1	154	29.1	409	77.2	121	22.8	530
Memphis, TN	111	33.4	265	79.8	203	61.1	205	61.7	124	37.3	222	66.9	107	32.2	332

**Table 2. Social determinants of health among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022 (cont)**

	Less than high school education		Income at or below the federal poverty level <sup>a</sup>		Unemployed		No current health insurance		Did not visit a health care provider, past 12 months		Homeless <sup>b</sup> , past 12 months		Incarcerated <sup>c</sup> , past 12 months		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
New Orleans, LA	203	38.4	413	78.2	246	46.6	63	11.9	139	26.3	365	69.1	132	25.0	528
New York City, NY	43	47.3	74	81.3	64	70.3	10	11.0	20	22.0	68	74.7	31	34.1	91
Newark, NJ	135	31.6	352	82.4	275	64.4	59	13.8	95	22.2	269	63.0	72	16.9	427
Philadelphia, PA	159	26.4	448	74.3	378	62.7	38	6.3	139	23.1	460	76.3	159	26.4	603
Portland, OR	54	15.9	263	77.6	203	59.9	28	8.3	74	21.8	247	72.9	87	25.7	339
San Diego, CA	34	20.0	148	87.1	122	71.8	16	9.4	50	29.4	151	88.8	46	27.1	170
San Francisco, CA	88	16.8	352	67.2	307	58.6	41	7.8	123	23.5	409	78.1	108	20.6	524
San Juan, PR	162	38.8	384	92.1	270	64.7	107	25.7	212	50.8	288	69.1	42	10.1	417
Seattle, WA	131	26.2	386	77.2	198	39.6	27	5.4	96	19.2	311	62.2	147	29.4	500
Virginia Beach, VA	204	38.4	379	71.4	172	32.4	79	14.9	120	22.6	262	49.3	104	19.6	531
Washington, DC	75	31.8	204	86.4	83	35.2	13	5.5	25	10.6	119	50.4	50	21.2	236
<b>Total</b>	<b>2,013</b>	<b>28.4</b>	<b>5,502</b>	<b>77.5</b>	<b>3,716</b>	<b>52.4</b>	<b>1,223</b>	<b>17.2</b>	<b>1,896</b>	<b>26.7</b>	<b>4,876</b>	<b>68.7</b>	<b>1,774</b>	<b>25.0</b>	<b>7,095</b>

Abbreviation: NHBS, National HIV Behavioral Surveillance.

Note. "Past 12 months" refers to the 12 months before interview.

<sup>a</sup> Poverty level is based on household income and household size.

<sup>b</sup> Living on the street, in a shelter, in a single-room–occupancy hotel, or in a car.

<sup>c</sup> Having been held in a detention center, jail, or prison for more than 24 hours.

<sup>d</sup> Hispanic/Latino persons can be of any race.

<sup>e</sup> Participants with a negative NHBS HIV test result who did not self-report a previous HIV-positive test result.

<sup>f</sup> Participants who had a reactive rapid NHBS HIV test result that was supported by a second rapid test, supplemental laboratory-based testing, or self-report of a previous HIV-positive test result.

<sup>g</sup> Participants who did not have a valid positive or negative NHBS HIV test result, including those who did not consent to the HIV test, had an indeterminate laboratory result, had discordant rapid test results, or reported a previous HIV-positive test result but had a negative NHBS HIV test result.

**Table 3. HIV prevalence among persons who inject drugs, by gender—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

	Male			Female			Transgender			Full sample		
	HIV-positive <sup>a</sup>		Total No.	HIV-positive <sup>a</sup>		Total No.	HIV-positive <sup>a</sup>		Total No.	HIV-positive <sup>a</sup>		Total No.
	No.	%		No.	%		No.	%		No.	%	
<b>Age at interview (yr)</b>												
18–24	1	1.8	56	2	4.9	41	1	33.3	3	4	4.0	100
25–29	10	4.5	223	4	2.6	153	1	12.5	8	15	3.9	384
30–39	68	6.5	1,052	18	3.2	569	9	47.4	19	95	5.8	1,640
40–49	69	5.8	1,180	30	4.7	644	5	26.3	19	104	5.6	1,843
≥50	136	6.3	2,146	53	6.3	843	5	21.7	23	194	6.4	3,012
<b>Race/ethnicity</b>												
American Indian/Alaska Native	2	3.8	52	1	3.4	29	0	0.0	1	3	3.7	82
Asian	1	5.0	20	0	0.0	4	3	100	3	4	14.8	27
Black/African American	111	5.8	1,925	49	6.1	809	9	47.4	19	169	6.1	2,753
Hispanic/Latino <sup>b</sup>	63	6.9	918	22	6.6	335	5	41.7	12	90	7.1	1,265
Native Hawaiian/other Pacific Islander	1	9.1	11	0	0.0	11	0	0.0	1	1	4.3	23
White	94	6.2	1,514	23	2.5	919	2	8.0	25	119	4.8	2,458
Multiple races	12	6.0	199	12	8.7	138	1	11.1	9	25	7.2	346
<b>City</b>												
Atlanta, GA	8	5.8	137	1	1.9	53	2	100	2	11	5.7	192
Baltimore, MD	5	7.7	65	3	11.5	26	0	—	0	8	8.8	91
Chicago, IL	0	0.0	25	0	0.0	18	0	0.0	1	0	0.0	44
Denver, CO	12	6.0	199	1	1.5	66	1	12.5	8	14	5.1	273
Detroit, MI	3	2.2	136	3	4.2	71	0	—	0	6	2.9	207
Houston, TX	25	7.1	351	14	9.1	154	0	0.0	3	39	7.7	508
Indianapolis, IN	14	4.7	299	4	1.8	217	0	0.0	4	18	3.5	520
Los Angeles, CA	17	5.0	343	6	3.4	178	1	14.3	7	24	4.5	528
Memphis, TN	8	4.1	195	1	0.8	127	0	0.0	1	9	2.8	323
New Orleans, LA	26	7.5	345	11	6.8	162	3	42.9	7	40	7.8	514
New York City, NY	5	6.8	74	1	12.5	8	3	100	3	9	10.6	85
Newark, NJ	18	6.9	261	15	9.3	161	0	0.0	1	33	7.8	423
Philadelphia, PA	23	5.8	396	11	5.7	194	3	37.5	8	37	6.2	598
Portland, OR	6	3.0	203	1	0.8	125	0	0.0	6	7	2.1	334
San Diego, CA	4	3.3	122	1	2.4	41	0	0.0	1	5	3.0	164
San Francisco, CA	37	10.7	346	8	5.4	148	6	46.2	13	51	10.1	507
San Juan, PR	28	8.4	334	8	10.3	78	0	0.0	3	36	8.7	415
Seattle, WA	24	7.8	308	7	3.8	184	1	33.3	3	32	6.5	495
Virginia Beach, VA	14	3.9	360	6	3.7	164	0	—	0	20	3.8	524
Washington, DC	7	4.4	158	5	6.7	75	1	100	1	13	5.6	234
<b>Total</b>	<b>284</b>	<b>6.1</b>	<b>4,657</b>	<b>107</b>	<b>4.8</b>	<b>2,250</b>	<b>21</b>	<b>29.2</b>	<b>72</b>	<b>412</b>	<b>5.9</b>	<b>6,979</b>

Abbreviation: NHBS, National HIV Behavioral Surveillance [footnotes only].

Note. Data include all participants with a valid NHBS HIV test result.

<sup>a</sup> Participants who had a reactive rapid NHBS HIV test result that was supported by a second rapid test, supplemental laboratory-based testing, or self-report of a previous HIV-positive test result.

<sup>b</sup> Hispanic/Latino persons can be of any race.

**Table 4. HIV testing among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

	Ever tested		Tested in past 12 months <sup>a</sup>		Total No.
	No.	%	No.	%	
<b>Gender</b>					
Male	4,013	89.2	1,999	44.4	4,500
Female	1,989	90.2	1,007	45.6	2,206
Transgender	54	87.1	38	61.3	62
<b>Age at interview (yr)</b>					
18–24	69	69.7	44	44.4	99
25–29	307	81.0	166	43.8	379
30–39	1,406	87.7	760	47.4	1,603
40–49	1,656	92.5	840	46.9	1,790
≥50	2,618	90.4	1,234	42.6	2,897
<b>Race/ethnicity</b>					
American Indian/Alaska Native	72	88.9	40	49.4	81
Asian	18	78.3	7	30.4	23
Black/African American	2,424	90.3	1,288	48.0	2,683
Hispanic/Latino <sup>b</sup>	1,069	89.1	516	43.0	1,200
Native Hawaiian/other Pacific Islander	18	78.3	10	43.5	23
White	2,130	88.8	1,012	42.2	2,398
Multiple races	303	90.2	160	47.6	336
<b>City</b>					
Atlanta, GA	169	90.4	106	56.7	187
Baltimore, MD	87	94.6	58	63.0	92
Chicago, IL	37	84.1	17	38.6	44
Denver, CO	235	88.7	110	41.5	265
Detroit, MI	182	87.5	65	31.3	208
Houston, TX	441	89.8	191	38.9	491
Indianapolis, IN	414	81.2	223	43.7	510
Los Angeles, CA	475	92.2	218	42.3	515
Memphis, TN	271	84.2	187	58.1	322
New Orleans, LA	438	87.4	250	49.9	501
New York City, NY	81	96.4	50	59.5	84
Newark, NJ	382	95.7	259	64.9	399
Philadelphia, PA	532	91.9	330	57.0	579
Portland, OR	284	84.8	83	24.8	335
San Diego, CA	142	85.0	54	32.3	167
San Francisco, CA	448	94.1	226	47.5	476
San Juan, PR	342	88.8	153	39.7	385
Seattle, WA	420	89.7	157	33.5	468
Virginia Beach, VA	459	89.5	168	32.7	513
Washington, DC	217	95.6	139	61.2	227
<b>Total</b>	<b>6,056</b>	<b>89.5</b>	<b>3,044</b>	<b>45.0</b>	<b>6,768</b>

Note. CDC recommends that all persons who inject drugs be tested for HIV at least annually. Data include all participants who did not report a previous HIV-positive test result and participants who received their first HIV-positive test result less than 12 months before interview.

<sup>a</sup> “Past 12 months” refers to the 12 months before interview.

<sup>b</sup> Hispanic/Latino persons can be of any race.

**Table 5. Setting of most recent HIV test among persons who inject drugs and who were tested for HIV in the 12 months before interview—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

	Clinical setting <sup>a</sup>		Nonclinical setting <sup>b</sup>		Total No.
	No.	%	No.	%	
<b>Gender</b>					
Male	1,296	64.8	592	29.6	1,999
Female	665	66.0	295	29.3	1,007
Transgender	26	68.4	11	28.9	38
<b>Age at interview (yr)</b>					
18–24	31	70.5	13	29.5	44
25–29	103	62.0	57	34.3	166
30–39	486	63.9	240	31.6	760
40–49	553	65.8	236	28.1	840
≥50	814	66.0	352	28.5	1,234
<b>Race/ethnicity</b>					
American Indian/Alaska Native	25	62.5	15	37.5	40
Asian	5	71.4	2	28.6	7
Black/African American	882	68.5	313	24.3	1,288
Hispanic/Latino <sup>c</sup>	280	54.3	224	43.4	516
Native Hawaiian/other Pacific Islander	7	70.0	3	30.0	10
White	670	66.2	298	29.4	1,012
Multiple races	112	70.0	39	24.4	160
<b>City</b>					
Atlanta, GA	53	50.0	47	44.3	106
Baltimore, MD	51	87.9	5	8.6	58
Chicago, IL	13	76.5	3	17.6	17
Denver, CO	68	61.8	33	30.0	110
Detroit, MI	46	70.8	13	20.0	65
Houston, TX	153	80.1	27	14.1	191
Indianapolis, IN	161	72.2	37	16.6	223
Los Angeles, CA	130	59.6	80	36.7	218
Memphis, TN	94	50.3	77	41.2	187
New Orleans, LA	203	81.2	35	14.0	250
New York City, NY	23	46.0	25	50.0	50
Newark, NJ	121	46.7	138	53.3	259
Philadelphia, PA	195	59.1	128	38.8	330
Portland, OR	67	80.7	13	15.7	83
San Diego, CA	34	63.0	19	35.2	54
San Francisco, CA	169	74.8	43	19.0	226
San Juan, PR	57	37.3	93	60.8	153
Seattle, WA	120	76.4	25	15.9	157
Virginia Beach, VA	145	86.3	9	5.4	168
Washington, DC	84	60.4	48	34.5	139
<b>Total</b>	<b>1,987</b>	<b>65.3</b>	<b>898</b>	<b>29.5</b>	<b>3,044</b>

Abbreviation: HMO, health maintenance organization [footnotes only].

*Note.* Data report setting of most recent HIV test. Data include participants who reported an HIV test during the 12 months before interview. Percentages may not add to 100 because of missing data and “Other” locations, which could not be classified as clinical/nonclinical settings.

<sup>a</sup> Clinical settings include private doctor’s office (including HMO), emergency department, hospital (inpatient), public health clinic or community health center, family planning or obstetrics clinic, correctional facility, or substance use disorder treatment program.

<sup>b</sup> Nonclinical settings include HIV counseling and testing site, HIV street outreach program or mobile unit, syringe services program, or home.

<sup>c</sup> Hispanic/Latino persons can be of any race.

**Table 6. Sexual behavior with female and male sex partners among males who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

	With female sex partners in past 12 months								With male sex partners in past 12 months						With female or male sex partners				Total males		
	Number of female sex partners	Vaginal sex		Condomless vaginal sex		Anal sex		Condomless anal sex		Oral or anal sex		Anal sex		Condomless anal sex		Unprotected sex with HIV-discordant partner at last sex <sup>a</sup>		Exchange sex in past 12 months <sup>b</sup>			
		Median (Q1–Q3)	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		No.	%
			No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		No.	%
<b>HIV-negative<sup>c</sup></b>	1(1–3)	3,323	76.0	2,857	65.3	1,271	29.1	990	22.6	312	7.1	210	4.8	150	3.4	1,169	26.7	963	22.0	4,373	
<b>Age at interview (yr)</b>																					
18–24	1(1–3)	44	80.0	38	69.1	18	32.7	13	23.6	6	10.9	5	9.1	2	3.6	19	34.5	8	14.5	55	
25–29	2(1–4)	177	83.1	156	73.2	70	32.9	56	26.3	30	14.1	22	10.3	15	7.0	77	36.2	44	20.7	213	
30–39	2(1–3)	802	81.5	710	72.2	327	33.2	271	27.5	86	8.7	60	6.1	49	5.0	303	30.8	161	16.4	984	
40–49	1(1–3)	863	77.7	757	68.1	345	31.1	270	24.3	86	7.7	55	5.0	39	3.5	279	25.1	225	20.3	1,111	
≥50	1(0–3)	1,437	71.5	1,196	59.5	511	25.4	380	18.9	104	5.2	68	3.4	45	2.2	491	24.4	525	26.1	2,010	
<b>Race/ethnicity</b>																					
American Indian/Alaska Native	1(0–2)	34	68.0	29	58.0	9	18.0	8	16.0	5	10.0	2	4.0	1	2.0	14	28.0	7	14.0	50	
Asian	1(0–2)	13	68.4	9	47.4	3	15.8	3	15.8	1	5.3	1	5.3	1	5.3	6	31.6	3	15.8	19	
Black/African American	1(1–4)	1,395	76.9	1,169	64.4	515	28.4	378	20.8	99	5.5	61	3.4	44	2.4	479	26.4	536	29.5	1,814	
Hispanic/Latino <sup>d</sup>	2(1–3)	645	75.4	550	64.3	332	38.8	253	29.6	76	8.9	60	7.0	40	4.7	239	28.0	179	20.9	855	
Native Hawaiian/other Pacific Islander	2(1–3)	8	80.0	7	70.0	5	50.0	5	50.0	0	0.0	0	0.0	0	0.0	5	50.0	1	10.0	10	
White	1(1–3)	1,079	76.0	962	67.7	357	25.1	300	21.1	106	7.5	70	4.9	50	3.5	371	26.1	197	13.9	1,420	
Multiple races	1(0–4)	135	72.2	121	64.7	49	26.2	42	22.5	24	12.8	16	8.6	14	7.5	50	26.7	38	20.3	187	
<b>HIV-positive<sup>e</sup></b>	1(0–2)	148	52.1	91	32.0	67	23.6	41	14.4	128	45.1	109	38.4	92	32.4	28	9.9	86	30.3	284	
<b>Age at interview (yr)</b>																					
18–24	0(0–0)	0	0.0	0	0.0	0	0.0	0	0.0	1	100	1	100	1	100	0	0.0	1	100	1	
25–29	1(0–3)	6	60.0	2	20.0	3	30.0	1	10.0	6	60.0	4	40.0	4	40.0	1	10.0	2	20.0	10	
30–39	1(0–2.5)	36	52.9	28	41.2	22	32.4	20	29.4	35	51.5	31	45.6	25	36.8	8	11.8	19	27.9	68	
40–49	0(0–2)	33	47.8	21	30.4	14	20.3	9	13.0	37	53.6	34	49.3	30	43.5	8	11.6	21	30.4	69	
≥50	1(0–2)	73	53.7	40	29.4	28	20.6	11	8.1	49	36.0	39	28.7	32	23.5	11	8.1	43	31.6	136	
<b>Race/ethnicity</b>																					
American Indian/Alaska Native	0(0–0)	0	0.0	0	0.0	0	0.0	0	0.0	2	100	2	100	2	100	1	50.0	0	0.0	2	
Asian	0(0–0)	0	0.0	0	0.0	0	0.0	0	0.0	1	100	1	100	1	100	0	0.0	0	0.0	1	
Black/African American	1(0–3)	77	69.4	45	40.5	33	29.7	19	17.1	29	26.1	23	20.7	17	15.3	14	12.6	38	34.2	111	
Hispanic/Latino <sup>d</sup>	1(0–3)	33	52.4	17	27.0	18	28.6	11	17.5	30	47.6	25	39.7	17	27.0	3	4.8	25	39.7	63	
Native Hawaiian/other Pacific Islander	0(0–0)	0	0.0	0	0.0	0	0.0	0	0.0	1	100	1	100	1	100	0	0.0	0	0.0	1	
White	0(0–1)	33	35.1	24	25.5	13	13.8	9	9.6	55	58.5	48	51.1	46	48.9	10	10.6	19	20.2	94	
Multiple races	0.5(0–5.5)	5	41.7	5	41.7	3	25.0	2	16.7	10	83.3	9	75.0	8	66.7	0	0.0	4	33.3	12	
<b>No valid NHBS HIV test result<sup>f</sup></b>	1(1–3)	59	74.7	44	55.7	21	26.6	14	17.7	12	15.2	9	11.4	7	8.9	16	20.3	16	20.3	79	
<b>Total</b>	<b>1(1–3)</b>	<b>3,530</b>	<b>74.5</b>	<b>2,992</b>	<b>63.2</b>	<b>1,359</b>	<b>28.7</b>	<b>1,045</b>	<b>22.1</b>	<b>452</b>	<b>9.5</b>	<b>328</b>	<b>6.9</b>	<b>249</b>	<b>5.3</b>	<b>1,213</b>	<b>25.6</b>	<b>1,065</b>	<b>22.5</b>	<b>4,736</b>	

Abbreviations: Q, quartile; NHBS, National HIV Behavioral Surveillance.

Note. “Past 12 months” refers to the 12 months before interview.

<sup>a</sup> “Unprotected sex” refers to sex without the participant’s use of either condoms or HIV medications (i.e., HIV preexposure prophylaxis or antiretrovirals). “HIV-discordant partner” refers to a sex partner of different or unknown HIV status.

<sup>b</sup> “Exchange sex” refers to giving money or drugs to a female casual partner in exchange for sex, or giving or receiving money or drugs from a male casual partner in exchange for sex.

<sup>c</sup> Participants with a negative NHBS HIV test result who did not self-report a previous HIV-positive test result.

<sup>d</sup> Hispanic/Latino persons can be of any race.

<sup>e</sup> Participants who had a reactive rapid NHBS HIV test result that was supported by a second rapid test, supplemental laboratory-based testing, or self-report of a previous HIV-positive test result.

<sup>f</sup> Participants who did not have a valid positive or negative NHBS HIV test result, including those who did not consent to the HIV test, had an indeterminate laboratory result, had discordant rapid test results, or reported a previous HIV-positive test result but had a negative NHBS HIV test result.



**Table 7. Sexual behavior with male sex partners among females who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

	Number of male sex partners in past 12 months		Condomless vaginal sex in past 12 months				Condomless anal sex in past 12 months				Unprotected sex with HIV-discordant partner at last sex <sup>a</sup>		Exchange sex in past 12 months <sup>b</sup>		Total females
	Median (Q1–Q3)		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
<b>HIV-negative<sup>c</sup></b>	1(1–4)		1,711	79.8	1,575	73.5	644	30.1	553	25.8	697	32.5	666	31.1	2,143
<b>Age at interview (yr)</b>															
18–24	2(1–5)		35	89.7	31	79.5	12	30.8	10	25.6	16	41.0	13	33.3	39
25–29	2(1–5)		133	89.3	129	86.6	54	36.2	47	31.5	52	34.9	41	27.5	149
30–39	2(1–4)		472	85.7	446	80.9	183	33.2	157	28.5	199	36.1	176	31.9	551
40–49	2(1–4)		534	87.0	494	80.5	233	37.9	205	33.4	207	33.7	208	33.9	614
≥50	1(0–3)		537	68.0	475	60.1	162	20.5	134	17.0	223	28.2	228	28.9	790
<b>Race/ethnicity</b>															
American Indian/Alaska Native	1(1–3)		21	75.0	21	75.0	7	25.0	7	25.0	8	28.6	7	25.0	28
Asian	1(1–3.5)		4	100	2	50.0	1	25.0	0	0.0	0	0.0	0	0.0	4
Black/African American	1(1–4)		572	75.3	514	67.6	217	28.6	171	22.5	241	31.7	267	35.1	760
Hispanic/Latino <sup>d</sup>	2(1–5)		253	80.8	229	73.2	106	33.9	96	30.7	97	31.0	106	33.9	313
Native Hawaiian/other Pacific Islander	3(1–8)		9	81.8	9	81.8	2	18.2	2	18.2	3	27.3	4	36.4	11
White	1(1–3)		746	83.3	710	79.2	269	30.0	242	27.0	310	34.6	245	27.3	896
Multiple races	2(1–4)		102	81.0	86	68.3	41	32.5	34	27.0	36	28.6	37	29.4	126
<b>HIV-positive<sup>e</sup></b>	2(1–5)		76	71.0	54	50.5	28	26.2	21	19.6	12	11.2	41	38.3	107
<b>Age at interview (yr)</b>															
18–24	1.5(1–2)		2	100	2	100	2	100	2	100	0	0.0	0	0.0	2
25–29	7(2.5–10)		3	75.0	3	75.0	1	25.0	1	25.0	1	25.0	3	75.0	4
30–39	4(1.5–26)		14	77.8	13	72.2	5	27.8	5	27.8	5	27.8	8	44.4	18
40–49	3(1–9)		23	76.7	16	53.3	10	33.3	6	20.0	1	3.3	12	40.0	30
≥50	1(0–3)		34	64.2	20	37.7	10	18.9	7	13.2	5	9.4	18	34.0	53
<b>Race/ethnicity</b>															
American Indian/Alaska Native	1(1–1)		0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1
Asian	0(0–0)		0	—	0	—	0	—	0	—	0	—	0	—	0
Black/African American	1(0–4)		29	59.2	18	36.7	12	24.5	8	16.3	6	12.2	17	34.7	49
Hispanic/Latino <sup>d</sup>	3(2–20)		21	95.5	13	59.1	9	40.9	7	31.8	3	13.6	12	54.5	22
Native Hawaiian/other Pacific Islander	0(0–0)		0	—	0	—	0	—	0	—	0	—	0	—	0
White	1.5(1–10)		20	87.0	18	78.3	3	13.0	2	8.7	2	8.7	8	34.8	23
Multiple races	2(0–12)		6	50.0	5	41.7	4	33.3	4	33.3	1	8.3	4	33.3	12
<b>No valid NHBS HIV test result<sup>f</sup></b>	1(1–3)		26	76.5	20	58.8	5	14.7	3	8.8	5	14.7	9	26.5	34
<b>Total</b>	<b>1(1–4)</b>		<b>1,813</b>	<b>79.4</b>	<b>1,649</b>	<b>72.2</b>	<b>677</b>	<b>29.6</b>	<b>577</b>	<b>25.3</b>	<b>714</b>	<b>31.3</b>	<b>716</b>	<b>31.3</b>	<b>2,284</b>

Abbreviations: Q, quartile; NHBS, National HIV Behavioral Surveillance.

Note. “Past 12 months” refers to the 12 months before interview.

<sup>a</sup> “Unprotected sex” refers to sex without the participant’s use of either condoms or HIV medications (i.e., HIV preexposure prophylaxis or antiretrovirals). “HIV-discordant partner” refers to a sex partner of different or unknown HIV status.

<sup>b</sup> “Exchange sex” refers to receiving money or drugs from a male casual partner in exchange for sex.

<sup>c</sup> Participants with a negative NHBS HIV test result who did not self-report a previous HIV-positive test result.

<sup>d</sup> Hispanic/Latino persons can be of any race.

<sup>e</sup> Participants who had a reactive rapid NHBS HIV test result that was supported by a second rapid test, supplemental laboratory-based testing, or self-report of a previous HIV-positive test result.

<sup>f</sup> Participants who did not have a valid positive or negative NHBS HIV test result, including those who did not consent to the HIV test, had an indeterminate laboratory result, had discordant rapid test results, or reported a previous HIV-positive test result but had a negative NHBS HIV test result.



**Table 9. Sharing of injection equipment in the 12 months before interview among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

	Receptive sharing								Distributive sharing		Total No.
	Syringes <sup>a</sup>		Injection equipment <sup>b</sup>		Syringes to divide drugs <sup>c</sup>		Any <sup>d</sup>		Syringes <sup>e</sup>		
	No.	%	No.	%	No.	%	No.	%	No.	%	
<b>HIV-negative<sup>f</sup></b>	1,370	20.9	2,824	43.0	1,704	25.9	3,153	48.0	2,024	30.8	6,567
<b>Gender</b>											
Male	842	19.3	1,819	41.6	1,087	24.9	2,024	46.3	1,293	29.6	4,373
Female	509	23.8	980	45.7	596	27.8	1,098	51.2	707	33.0	2,143
Transgender	19	37.3	25	49.0	21	41.2	31	60.8	24	47.1	51
<b>Age at interview (yr)</b>											
18–24	23	24.0	44	45.8	31	32.3	52	54.2	33	34.4	96
25–29	115	31.2	180	48.8	119	32.2	212	57.5	156	42.3	369
30–39	415	26.9	789	51.1	484	31.3	873	56.5	612	39.6	1,545
40–49	349	20.1	762	43.8	435	25.0	845	48.6	538	30.9	1,739
≥50	468	16.6	1,049	37.2	635	22.5	1,171	41.6	685	24.3	2,818
<b>Race/ethnicity</b>											
American Indian/Alaska Native	13	16.5	34	43.0	24	30.4	41	51.9	24	30.4	79
Asian	4	17.4	12	52.2	10	43.5	16	69.6	2	8.7	23
Black/African American	488	18.9	966	37.4	614	23.8	1,077	41.7	680	26.3	2,584
Hispanic/Latino <sup>g</sup>	207	17.6	469	39.9	301	25.6	540	46.0	357	30.4	1,175
Native Hawaiian/other Pacific Islander	6	27.3	10	45.5	5	22.7	11	50.0	6	27.3	22
White	578	24.7	1,155	49.4	657	28.1	1,276	54.6	845	36.1	2,339
Multiple races	71	22.1	168	52.3	88	27.4	180	56.1	104	32.4	321
<b>HIV-positive<sup>h</sup></b>	76	18.4	152	36.9	84	20.4	183	44.4	76	18.4	412
<b>Gender</b>											
Male	42	14.8	99	34.9	44	15.5	116	40.8	42	14.8	284
Female	27	25.2	43	40.2	33	30.8	55	51.4	28	26.2	107
Transgender	7	33.3	10	47.6	7	33.3	12	57.1	6	28.6	21
<b>Age at interview (yr)</b>											
18–24	1	25.0	2	50.0	2	50.0	2	50.0	2	50.0	4
25–29	4	26.7	5	33.3	1	6.7	7	46.7	5	33.3	15
30–39	24	25.3	41	43.2	26	27.4	47	49.5	22	23.2	95
40–49	20	19.2	37	35.6	21	20.2	46	44.2	18	17.3	104
≥50	27	13.9	67	34.5	34	17.5	81	41.8	29	14.9	194
<b>Race/ethnicity</b>											
American Indian/Alaska Native	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3
Asian	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4
Black/African American	34	20.1	63	37.3	39	23.1	76	45.0	34	20.1	169
Hispanic/Latino <sup>g</sup>	17	18.9	37	41.1	24	26.7	42	46.7	18	20.0	90
Native Hawaiian/other Pacific Islander	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1
White	18	15.1	41	34.5	19	16.0	52	43.7	21	17.6	119
Multiple races	7	28.0	11	44.0	2	8.0	13	52.0	3	12.0	25
<b>No valid NHBS HIV test result<sup>i</sup></b>	10	8.6	36	31.0	21	18.1	40	34.5	22	19.0	116
<b>Total</b>	<b>1,456</b>	<b>20.5</b>	<b>3,012</b>	<b>42.5</b>	<b>1,809</b>	<b>25.5</b>	<b>3,376</b>	<b>47.6</b>	<b>2,122</b>	<b>29.9</b>	<b>7,095</b>

Abbreviation: NHBS, National HIV Behavioral Surveillance.

<sup>a</sup> Used a needle that had already been used by someone else for injection.

<sup>b</sup> Used a cooker (e.g., spoon, bottle cap) or cotton (to filter particles from drug solution) that had already been used by someone else or shared water for rinsing.

<sup>c</sup> Divided a drug solution by using a syringe that had already been used by someone else for injection.

<sup>d</sup> Used a needle that had already been used by someone else for injection, used a cooker or cotton that had already been used by someone else, shared water for rinsing, or divided a drug solution by using a syringe that had already been used by someone else for injection.

<sup>e</sup> A participant giving their needle to someone else to use after they had already used it for injection.

<sup>f</sup> Participants with a negative NHBS HIV test result who did not self-report a previous HIV-positive test result.

<sup>g</sup> Hispanic/Latino persons can be of any race.

<sup>h</sup> Participants who had a reactive rapid NHBS HIV test result that was supported by a second rapid test, supplemental laboratory-based testing, or self-report of a previous HIV-positive test result.

<sup>i</sup> Participants who did not have a valid positive or negative NHBS HIV test result, including those who did not consent to the HIV test, had an indeterminate laboratory result, had discordant rapid test results, or reported a previous HIV-positive test result but had a negative NHBS HIV test result.

**Table 10a. HIV prevention activities in the 12 months before interview among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

	Receipt of syringes from SSPs		Receipt of syringes from pharmacy		Receipt of injection equipment from SSPs		Substance use disorder treatment <sup>a</sup>		Safe syringe disposal only <sup>b</sup>		PrEP awareness <sup>c</sup>		PrEP use <sup>d</sup>		Receipt of free condoms <sup>e</sup>		Total No.
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
<b>HIV-negative<sup>f</sup></b>	3,455	52.6	1,446	22.0	3,195	48.7	2,106	32.1	1,718	26.2	2,314	35.2	80	1.2	3,306	50.3	6,567
<b>Gender</b>																	
Male	2,320	53.1	952	21.8	2,136	48.8	1,386	31.7	1,129	25.8	1,463	33.5	41	0.9	2,265	51.8	4,373
Female	1,102	51.4	484	22.6	1,031	48.1	696	32.5	573	26.7	817	38.1	32	1.5	1,009	47.1	2,143
Transgender	33	64.7	10	19.6	28	54.9	24	47.1	16	31.4	34	66.7	7	13.7	32	62.7	51
<b>Age at interview (yr)</b>																	
18–24	41	42.7	26	27.1	38	39.6	39	40.6	15	15.6	36	37.5	3	3.1	43	44.8	96
25–29	201	54.5	87	23.6	193	52.3	128	34.7	95	25.7	150	40.7	6	1.6	199	53.9	369
30–39	947	61.3	351	22.7	891	57.7	519	33.6	474	30.7	707	45.8	26	1.7	794	51.4	1,545
40–49	1,023	58.8	376	21.6	927	53.3	579	33.3	509	29.3	653	37.6	31	1.8	905	52.0	1,739
≥50	1,243	44.1	606	21.5	1,146	40.7	841	29.8	625	22.2	768	27.3	14	0.5	1,365	48.4	2,818
<b>Race/ethnicity</b>																	
American Indian/Alaska Native	50	63.3	10	12.7	46	58.2	20	25.3	35	44.3	26	32.9	2	2.5	35	44.3	79
Asian	10	43.5	7	30.4	7	30.4	10	43.5	6	26.1	9	39.1	1	4.3	8	34.8	23
Black/African American	916	35.4	480	18.6	812	31.4	787	30.5	394	15.2	877	33.9	20	0.8	1,239	47.9	2,584
Hispanic/Latino <sup>g</sup>	718	61.1	302	25.7	668	56.9	404	34.4	315	26.8	273	23.2	9	0.8	713	60.7	1,175
Native Hawaiian/other Pacific Islander	15	68.2	3	13.6	15	68.2	8	36.4	11	50.0	8	36.4	0	0.0	13	59.1	22
White	1,543	66.0	555	23.7	1,465	62.6	773	33.0	846	36.2	984	42.1	42	1.8	1,127	48.2	2,339
Multiple races	192	59.8	84	26.2	172	53.6	97	30.2	105	32.7	132	41.1	6	1.9	164	51.1	321
<b>HIV-positive<sup>h</sup></b>	227	55.1	105	25.5	223	54.1	125	30.3	143	34.7	—	—	—	—	279	67.7	412
<b>Gender</b>																	
Male	161	56.7	79	27.8	161	56.7	84	29.6	109	38.4	—	—	—	—	183	64.4	284
Female	56	52.3	25	23.4	53	49.5	35	32.7	27	25.2	—	—	—	—	76	71.0	107
Transgender	10	47.6	1	4.8	9	42.9	6	28.6	7	33.3	—	—	—	—	20	95.2	21
<b>Age at interview (yr)</b>																	
18–24	3	75.0	0	0.0	2	50.0	2	50.0	0	0.0	—	—	—	—	3	75.0	4
25–29	10	66.7	2	13.3	9	60.0	4	26.7	4	26.7	—	—	—	—	12	80.0	15
30–39	57	60.0	23	24.2	59	62.1	37	38.9	35	36.8	—	—	—	—	65	68.4	95
40–49	60	57.7	34	32.7	58	55.8	28	26.9	38	36.5	—	—	—	—	64	61.5	104
≥50	97	50.0	46	23.7	95	49.0	54	27.8	66	34.0	—	—	—	—	135	69.6	194
<b>Race/ethnicity</b>																	
American Indian/Alaska Native	2	66.7	0	0.0	2	66.7	2	66.7	2	66.7	—	—	—	—	3	100	3
Asian	1	25.0	0	0.0	1	25.0	1	25.0	3	75.0	—	—	—	—	3	75.0	4
Black/African American	70	41.4	33	19.5	69	40.8	42	24.9	36	21.3	—	—	—	—	114	67.5	169
Hispanic/Latino <sup>g</sup>	56	62.2	26	28.9	57	63.3	34	37.8	36	40.0	—	—	—	—	71	78.9	90
Native Hawaiian/other Pacific Islander	1	100	1	100	1	100	0	0.0	1	100	—	—	—	—	1	100	1
White	87	73.1	35	29.4	83	69.7	36	30.3	55	46.2	—	—	—	—	72	60.5	119
Multiple races	10	40.0	10	40.0	10	40.0	10	40.0	9	36.0	—	—	—	—	14	56.0	25
<b>No valid NHBS HIV test result<sup>i</sup></b>	62	53.4	24	20.7	54	46.6	32	27.6	29	25.0	—	—	—	—	78	67.2	116
<b>Total</b>	<b>3,744</b>	<b>52.8</b>	<b>1,575</b>	<b>22.2</b>	<b>3,472</b>	<b>48.9</b>	<b>2,263</b>	<b>31.9</b>	<b>1,890</b>	<b>26.6</b>	—	—	—	—	<b>3,663</b>	<b>51.6</b>	<b>7,095</b>

Abbreviations: SSPs, syringe services programs; PrEP, preexposure prophylaxis; NHBS, National HIV Behavioral Surveillance.

<sup>a</sup> Participated in a substance use disorder treatment program (including outpatient, inpatient, residential, detox, or 12-step program) in the 12 months before interview.

<sup>b</sup> Syringes were disposed of by putting them in a medical waste container and/or by exchanging them at an SSP, and no unknown or unsafe disposal method was indicated in the 12 months before interview.

<sup>c</sup> Ever heard of PrEP, an antiretroviral medicine taken for months or years by a person who is HIV-negative to reduce the risk of getting HIV.

<sup>d</sup> Took PrEP at any point in the 12 months before interview to reduce the risk of getting HIV.

<sup>e</sup> Excludes condoms received from friends, relatives, or sex partners.

<sup>f</sup> Participants with a negative NHBS HIV test result who did not self-report a previous HIV-positive test result.

<sup>g</sup> Hispanic/Latino persons can be of any race.

<sup>h</sup> Participants who had a reactive rapid NHBS HIV test result that was supported by a second rapid test, supplemental laboratory-based testing, or self-report of a previous HIV-positive test result.

<sup>i</sup> Participants who did not have a valid positive or negative NHBS HIV test result, including those who did not consent to the HIV test, had an indeterminate laboratory result, had discordant rapid test results, or reported a previous HIV-positive test result but had a negative NHBS HIV test result.

Table 10b. HIV prevention activities in the 12 months before interview among persons who inject drugs, by city—National HIV Behavioral Surveillance, 20 U.S. cities, 2022

	Receipt of syringes from SSPs		Receipt of syringes from pharmacy		Receipt of injection equipment from SSPs		Substance use disorder treatment <sup>a</sup>		Safe syringe disposal only <sup>b</sup>		PrEP awareness <sup>c</sup>		PrEP use <sup>d</sup>		Receipt of free condoms <sup>e</sup>		Total No.	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
<b>HIV-negative<sup>f</sup></b>																		
Atlanta, GA	124	68.5	40	22.1	111	61.3	51	28.2	82	45.3	85	47.0	2	1.1	109	60.2	181	
Baltimore, MD	49	59.0	6	7.2	44	53.0	46	55.4	24	28.9	33	39.8	1	1.2	38	45.8	83	
Chicago, IL	30	68.2	22	50.0	26	59.1	18	40.9	10	22.7	20	45.5	0	0.0	17	38.6	44	
Denver, CO	203	78.4	60	23.2	185	71.4	60	23.2	157	60.6	129	49.8	6	2.3	145	56.0	259	
Detroit, MI	104	51.7	46	22.9	106	52.7	72	35.8	44	21.9	51	25.4	2	1.0	93	46.3	201	
Houston, TX	18	3.8	231	49.3	14	3.0	94	20.0	20	4.3	165	35.2	5	1.1	129	27.5	469	
Indianapolis, IN	116	23.1	111	22.1	96	19.1	185	36.9	80	15.9	174	34.7	5	1.0	174	34.7	502	
Los Angeles, CA	341	67.7	185	36.7	335	66.5	132	26.2	107	21.2	156	31.0	4	0.8	268	53.2	504	
Memphis, TN	62	19.7	40	12.7	38	12.1	71	22.6	24	7.6	42	13.4	9	2.9	71	22.6	314	
New Orleans, LA	349	73.6	83	17.5	311	65.6	140	29.5	98	20.7	236	49.8	7	1.5	274	57.8	474	
New York City, NY	37	48.7	6	7.9	42	55.3	43	56.6	27	35.5	34	44.7	1	1.3	50	65.8	76	
Newark, NJ	145	37.2	91	23.3	128	32.8	140	35.9	66	16.9	83	21.3	1	0.3	203	52.1	390	
Philadelphia, PA	381	67.9	63	11.2	374	66.7	263	46.9	173	30.8	316	56.3	18	3.2	327	58.3	561	
Portland, OR	246	75.2	61	18.7	223	68.2	104	31.8	151	46.2	96	29.4	2	0.6	144	44.0	327	
San Diego, CA	82	51.6	17	10.7	77	48.4	32	20.1	55	34.6	32	20.1	3	1.9	73	45.9	159	
San Francisco, CA	413	90.6	45	9.9	404	88.6	70	15.4	223	48.9	249	54.6	7	1.5	287	62.9	456	
San Juan, PR	251	66.2	121	31.9	234	61.7	124	32.7	72	19.0	34	9.0	0	0.0	306	80.7	379	
Seattle, WA	335	72.4	63	13.6	292	63.1	145	31.3	232	50.1	157	33.9	4	0.9	251	54.2	463	
Virginia Beach, VA	25	5.0	139	27.6	24	4.8	214	42.5	14	2.8	146	29.0	0	0.0	209	41.5	504	
Washington, DC	144	65.2	16	7.2	131	59.3	102	46.2	59	26.7	76	34.4	3	1.4	138	62.4	221	
<b>HIV-positive<sup>g</sup></b>																		
Atlanta, GA	5	45.5	1	9.1	6	54.5	1	9.1	3	27.3	—	—	—	—	6	54.5	11	
Baltimore, MD	6	75.0	0	0.0	7	87.5	6	75.0	2	25.0	—	—	—	—	6	75.0	8	
Chicago, IL	0	—	0	—	0	—	0	—	0	—	—	—	—	—	0	—	0	
Denver, CO	11	78.6	8	57.1	10	71.4	2	14.3	10	71.4	—	—	—	—	11	78.6	14	
Detroit, MI	1	16.7	2	33.3	1	16.7	2	33.3	1	16.7	—	—	—	—	3	50.0	6	
Houston, TX	5	12.8	24	61.5	4	10.3	10	25.6	3	7.7	—	—	—	—	21	53.8	39	
Indianapolis, IN	5	27.8	5	27.8	6	33.3	6	33.3	5	27.8	—	—	—	—	10	55.6	18	
Los Angeles, CA	16	66.7	9	37.5	16	66.7	6	25.0	9	37.5	—	—	—	—	17	70.8	24	
Memphis, TN	2	22.2	1	11.1	1	11.1	3	33.3	0	0.0	—	—	—	—	7	77.8	9	
New Orleans, LA	32	80.0	5	12.5	27	67.5	15	37.5	13	32.5	—	—	—	—	32	80.0	40	
New York City, NY	2	22.2	0	0.0	3	33.3	1	11.1	3	33.3	—	—	—	—	4	44.4	9	
Newark, NJ	17	51.5	6	18.2	16	48.5	16	48.5	7	21.2	—	—	—	—	21	63.6	33	
Philadelphia, PA	28	75.7	1	2.7	30	81.1	15	40.5	16	43.2	—	—	—	—	30	81.1	37	
Portland, OR	3	42.9	1	14.3	3	42.9	3	42.9	5	71.4	—	—	—	—	5	71.4	7	
San Diego, CA	1	20.0	0	0.0	1	20.0	1	20.0	1	20.0	—	—	—	—	2	40.0	5	
San Francisco, CA	39	76.5	13	25.5	40	78.4	7	13.7	32	62.7	—	—	—	—	30	58.8	51	
San Juan, PR	22	61.1	17	47.2	23	63.9	15	41.7	6	16.7	—	—	—	—	34	94.4	36	
Seattle, WA	22	68.8	6	18.8	21	65.6	6	18.8	24	75.0	—	—	—	—	19	59.4	32	
Virginia Beach, VA	1	5.0	5	25.0	0	0.0	5	25.0	0	0.0	—	—	—	—	12	60.0	20	
Washington, DC	9	69.2	1	7.7	8	61.5	5	38.5	3	23.1	—	—	—	—	9	69.2	13	

Abbreviations: SSPs, syringe services programs; PrEP, preexposure prophylaxis; NHBS, National HIV Behavioral Surveillance.

<sup>a</sup> Participated in a substance use disorder treatment program (including outpatient, inpatient, residential, detox, or 12-step program) in the 12 months before the interview.

<sup>b</sup> Syringes were disposed of by putting them in a medical waste container and/or by exchanging them at an SSP, and no unknown or unsafe disposal method was indicated in the 12 months before the interview.

<sup>c</sup> Ever heard of PrEP, an antiretroviral medicine taken for months or years by a person who is HIV-negative to reduce the risk of getting HIV.

<sup>d</sup> Took PrEP at any point during the 12 months before interview to reduce the risk of getting HIV.

<sup>e</sup> Excludes condoms received from friends, relatives, or sex partners.

<sup>f</sup> Participants with a negative NHBS HIV test result who did not self-report a previous HIV-positive test result.

<sup>g</sup> Participants who had a reactive rapid NHBS HIV test result that was supported by a second rapid test, supplemental laboratory-based testing, or self-report of a previous HIV-positive test result.

**Table 11. Diagnosis of sexually transmitted infections among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

	Diagnosis in the 12 months before interview								Diagnosis, ever				Total No.
	Any bacterial STI <sup>a</sup>		Chlamydia		Gonorrhea		Syphilis		Genital warts		Genital herpes		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
<b>HIV-negative<sup>b</sup></b>	493	7.5	260	4.0	227	3.5	175	2.7	224	3.4	278	4.2	6,567
<b>Gender</b>													
Male	246	5.6	115	2.6	126	2.9	81	1.9	114	2.6	119	2.7	4,373
Female	238	11.1	143	6.7	98	4.6	88	4.1	106	4.9	156	7.3	2,143
Transgender	9	17.6	2	3.9	3	5.9	6	11.8	4	7.8	3	5.9	51
<b>Age at interview (yr)</b>													
18–24	14	14.6	10	10.4	6	6.3	7	7.3	5	5.2	4	4.2	96
25–29	38	10.3	25	6.8	15	4.1	9	2.4	4	1.1	14	3.8	369
30–39	156	10.1	83	5.4	77	5.0	53	3.4	37	2.4	60	3.9	1,545
40–49	111	6.4	66	3.8	52	3.0	39	2.2	69	4.0	79	4.5	1,739
≥50	174	6.2	76	2.7	77	2.7	67	2.4	109	3.9	121	4.3	2,818
<b>Race/ethnicity</b>													
American Indian/Alaska Native	7	8.9	1	1.3	3	3.8	5	6.3	3	3.8	5	6.3	79
Asian	1	4.3	1	4.3	1	4.3	0	0.0	0	0.0	1	4.3	23
Black/African American	189	7.3	111	4.3	94	3.6	53	2.1	69	2.7	82	3.2	2,584
Hispanic/Latino <sup>c</sup>	88	7.5	40	3.4	35	3.0	41	3.5	31	2.6	36	3.1	1,175
Native Hawaiian/other Pacific Islander	2	9.1	1	4.5	1	4.5	1	4.5	0	0.0	1	4.5	22
White	174	7.4	91	3.9	83	3.5	54	2.3	103	4.4	132	5.6	2,339
Multiple races	31	9.7	14	4.4	9	2.8	20	6.2	16	5.0	20	6.2	321
<b>HIV-positive<sup>d</sup></b>	100	24.3	41	10.0	43	10.4	65	15.8	32	7.8	35	8.5	412
<b>Gender</b>													
Male	69	24.3	30	10.6	34	12.0	46	16.2	25	8.8	25	8.8	284
Female	22	20.6	8	7.5	6	5.6	12	11.2	5	4.7	9	8.4	107
Transgender	9	42.9	3	14.3	3	14.3	7	33.3	2	9.5	1	4.8	21
<b>Age at interview (yr)</b>													
18–24	1	25.0	1	25.0	1	25.0	0	0.0	0	0.0	0	0.0	4
25–29	5	33.3	3	20.0	3	20.0	5	33.3	0	0.0	1	6.7	15
30–39	33	34.7	14	14.7	13	13.7	26	27.4	7	7.4	7	7.4	95
40–49	32	30.8	12	11.5	16	15.4	20	19.2	9	8.7	10	9.6	104
≥50	29	14.9	11	5.7	10	5.2	14	7.2	16	8.2	17	8.8	194
<b>Race/ethnicity</b>													
American Indian/Alaska Native	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3
Asian	3	75.0	2	50.0	3	75.0	1	25.0	0	0.0	0	0.0	4
Black/African American	22	13.0	8	4.7	5	3.0	16	9.5	4	2.4	9	5.3	169
Hispanic/Latino <sup>c</sup>	27	30.0	14	15.6	14	15.6	16	17.8	7	7.8	6	6.7	90
Native Hawaiian/other Pacific Islander	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1
White	36	30.3	13	10.9	17	14.3	24	20.2	20	16.8	15	12.6	119
Multiple races	11	44.0	4	16.0	4	16.0	7	28.0	1	4.0	5	20.0	25
<b>No valid NHBS HIV test result<sup>e</sup></b>	17	14.7	7	6.0	12	10.3	8	6.9	7	6.0	7	6.0	116
<b>Total</b>	<b>610</b>	<b>8.6</b>	<b>308</b>	<b>4.3</b>	<b>282</b>	<b>4.0</b>	<b>248</b>	<b>3.5</b>	<b>263</b>	<b>3.7</b>	<b>320</b>	<b>4.5</b>	<b>7,095</b>

Abbreviations: STI, sexually transmitted infection; NHBS, National HIV Behavioral Surveillance.

<sup>a</sup>Any bacterial STI includes having received a diagnosis of gonorrhea, chlamydia, or syphilis in the 12 months before interview.

<sup>b</sup>Participants with a negative NHBS HIV test result who did not self-report a previous HIV-positive test result.

<sup>c</sup>Hispanic/Latino persons can be of any race.

<sup>d</sup>Participants who had a reactive rapid NHBS HIV test result that was supported by a second rapid test, supplemental laboratory-based testing, or self-report of a previous HIV-positive test result.

<sup>e</sup>Participants who did not have a valid positive or negative NHBS HIV test result, including those who did not consent to the HIV test, had an indeterminate laboratory result, had discordant rapid test results, or reported a previous HIV-positive test result but had a negative NHBS HIV test result.

**Table 12. Lifetime testing for hepatitis C virus and diagnosis of hepatitis C virus infection among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

	HCV testing		HCV diagnosis <sup>a</sup>		Total No.
	No.	%	No.	%	
<b>HIV-negative<sup>b</sup></b>	5,056	77.0	2,305	35.1	6,567
<b>Gender</b>					
Male	3,433	78.5	1,579	36.1	4,373
Female	1,579	73.7	707	33.0	2,143
Transgender	44	86.3	19	37.3	51
<b>Age at interview (yr)</b>					
18–24	58	60.4	12	12.5	96
25–29	270	73.2	112	30.4	369
30–39	1,207	78.1	540	35.0	1,545
40–49	1,336	76.8	605	34.8	1,739
≥50	2,185	77.5	1,036	36.8	2,818
<b>Race/ethnicity</b>					
American Indian/Alaska Native	64	81.0	29	36.7	79
Asian	18	78.3	7	30.4	23
Black/African American	1,828	70.7	613	23.7	2,584
Hispanic/Latino <sup>c</sup>	895	76.2	445	37.9	1,175
Native Hawaiian/other Pacific Islander	17	77.3	8	36.4	22
White	1,956	83.6	1,079	46.1	2,339
Multiple races	255	79.4	116	36.1	321
<b>HIV-positive<sup>d</sup></b>	337	81.8	174	42.2	412
<b>Gender</b>					
Male	237	83.5	122	43.0	284
Female	84	78.5	44	41.1	107
Transgender	16	76.2	8	38.1	21
<b>Age at interview (yr)</b>					
18–24	3	75.0	1	25.0	4
25–29	12	80.0	3	20.0	15
30–39	76	80.0	31	32.6	95
40–49	84	80.8	40	38.5	104
≥50	162	83.5	99	51.0	194
<b>Race/ethnicity</b>					
American Indian/Alaska Native	2	66.7	1	33.3	3
Asian	4	100	0	0.0	4
Black/African American	131	77.5	65	38.5	169
Hispanic/Latino <sup>c</sup>	72	80.0	43	47.8	90
Native Hawaiian/other Pacific Islander	1	100	0	0.0	1
White	104	87.4	58	48.7	119
Multiple races	22	88.0	7	28.0	25
<b>No valid NHBS HIV test result<sup>e</sup></b>	91	78.4	29	25.0	116
<b>Total</b>	<b>5,484</b>	<b>77.3</b>	<b>2,508</b>	<b>35.3</b>	<b>7,095</b>

Abbreviations: HCV, hepatitis C virus; NHBS, National HIV Behavioral Surveillance.

<sup>a</sup> Having ever been told that they had hepatitis C infection by a doctor, nurse, or other health care provider.

<sup>b</sup> Participants with a negative NHBS HIV test result who did not self-report a previous HIV-positive test result.

<sup>c</sup> Hispanic/Latino persons can be of any race.

<sup>d</sup> Participants who had a reactive rapid NHBS HIV test result that was supported by a second rapid test, supplemental laboratory-based testing, or self-report of a previous HIV-positive test result.

<sup>e</sup> Participants who did not have a valid positive or negative NHBS HIV test result, including those who did not consent to the HIV test, had an indeterminate laboratory result, had discordant rapid test results, or reported a previous HIV-positive test result but had a negative NHBS HIV test result.

**Table 13. Noninjection drug use in the 12 months before interview and binge drinking in the 30 days before interview among persons who inject drugs—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

	Used drug	
	No.	%
<b>HIV-negative<sup>a</sup></b>		
Binge drinking (past 30 days) <sup>b</sup>	976	14.9
Any noninjection drugs (excludes binge drinking)	5,376	81.9
Cocaine	2,537	38.6
Crack	3,018	46.0
Downers <sup>c</sup>	2,557	38.9
Ecstasy	1,143	17.4
Heroin	3,218	49.0
Marijuana	3,970	60.5
Methamphetamine	2,986	45.5
Prescription opioids <sup>d</sup>	2,534	38.6
<b>HIV-positive<sup>e</sup></b>		
Binge drinking (past 30 days) <sup>b</sup>	46	11.2
Any noninjection drugs (excludes binge drinking)	315	76.5
Cocaine	122	29.6
Crack	188	45.6
Downers <sup>c</sup>	122	29.6
Ecstasy	83	20.1
Heroin	139	33.7
Marijuana	221	53.6
Methamphetamine	191	46.4
Prescription opioids <sup>d</sup>	116	28.2
<b>No valid NHBS HIV test result<sup>f</sup></b>		
Binge drinking (past 30 days) <sup>b</sup>	20	17.2
Any noninjection drugs (excludes binge drinking)	76	65.5
Cocaine	33	28.4
Crack	44	37.9
Downers <sup>c</sup>	32	27.6
Ecstasy	16	13.8
Heroin	45	38.8
Marijuana	60	51.7
Methamphetamine	40	34.5
Prescription opioids <sup>d</sup>	35	30.2

Disclaimer: The use of trade names is for identification only and does not imply endorsement by the Department of Health and Human Services or the Centers for Disease Control and Prevention.

Abbreviation: NHBS, National HIV Behavioral Surveillance.

Note. Denominator is the total number of participants in the category; HIV-negative participants: n = 6,567; HIV-positive participants: n = 412; participants without a valid NHBS HIV test result: n = 116. Responses are not mutually exclusive; percentages may not add to 100.

<sup>a</sup> Participants with a negative NHBS HIV test result who did not self-report a previous HIV-positive test result.

<sup>b</sup> Defined as 5 or more drinks within about 2 hours (males) or 4 or more drinks within about 2 hours (females) in the 30 days before interview.

<sup>c</sup> Benzodiazepines, such as Klonopin, Valium, Ativan, or Xanax.

<sup>d</sup> Painkillers, such as Oxycontin, Vicodin, morphine, or Percocet.

<sup>e</sup> Participants who had a reactive rapid NHBS HIV test result that was supported by a second rapid test, supplemental laboratory-based testing, or self-report of a previous HIV-positive test result.

<sup>f</sup> Participants who did not have a valid positive or negative NHBS HIV test result, including those who did not consent to the HIV test, had an indeterminate laboratory result, had discordant rapid test results, or reported a previous HIV-positive test result but had a negative NHBS HIV test result.



**Table 14a. Opioid use–related outcomes among persons who injected or used opioids—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

	MOUD						Total No.
	Used MOUD <sup>a</sup>		Unmet need for MOUD <sup>b</sup>		Nonfatal opioid overdose <sup>c</sup>		
	No.	%	No.	%	No.	%	
<b>HIV-negative<sup>d</sup></b>	2,925	48.3	1,503	24.8	1,666	27.5	6,055
<b>Gender</b>							
Male	1,929	47.8	1,013	25.1	1,106	27.4	4,035
Female	970	49.1	475	24.0	545	27.6	1,976
Transgender	26	59.1	15	34.1	15	34.1	44
<b>Age at interview (yr)</b>							
18–24	32	36.0	21	23.6	34	38.2	89
25–29	167	49.0	96	28.2	109	32.0	341
30–39	759	52.2	356	24.5	488	33.6	1,454
40–49	795	50.2	423	26.7	448	28.3	1,583
≥50	1,172	45.3	607	23.5	587	22.7	2,588
<b>Race/ethnicity</b>							
American Indian/Alaska Native	24	34.8	19	27.5	24	34.8	69
Asian	10	52.6	5	26.3	9	47.4	19
Black/African American	1,055	42.8	644	26.1	597	24.2	2,465
Hispanic/Latino <sup>e</sup>	491	45.5	295	27.4	282	26.2	1,078
Native Hawaiian/other Pacific Islander	12	54.5	7	31.8	8	36.4	22
White	1,166	55.8	449	21.5	645	30.8	2,091
Multiple races	154	53.5	80	27.8	94	32.6	288
<b>HIV-positive<sup>f</sup></b>	144	44.3	61	18.8	76	23.4	325
<b>Gender</b>							
Male	89	41.6	35	16.4	52	24.3	214
Female	50	51.5	21	21.6	21	21.6	97
Transgender	5	35.7	5	35.7	3	21.4	14
<b>Age at interview (yr)</b>							
18–24	0	0.0	1	33.3	0	0.0	3
25–29	2	16.7	3	25.0	4	33.3	12
30–39	33	43.4	15	19.7	18	23.7	76
40–49	32	42.7	14	18.7	17	22.7	75
≥50	77	48.4	28	17.6	37	23.3	159
<b>Race/ethnicity</b>							
American Indian/Alaska Native	1	50.0	1	50.0	2	100	2
Asian	0	—	0	—	0	—	0
Black/African American	62	42.2	28	19.0	26	17.7	147
Hispanic/Latino <sup>e</sup>	33	42.9	19	24.7	20	26.0	77
Native Hawaiian/other Pacific Islander	0	—	0	—	0	—	0
White	43	51.2	11	13.1	23	27.4	84
Multiple races	5	33.3	2	13.3	5	33.3	15
<b>No valid NHBS HIV test result<sup>g</sup></b>	46	46.0	21	21.0	24	24.0	100
<b>Total</b>	<b>3,115</b>	<b>48.1</b>	<b>1,585</b>	<b>24.5</b>	<b>1,766</b>	<b>27.3</b>	<b>6,480</b>

Disclaimer: The use of trade names is for identification only and does not imply endorsement by the Department of Health and Human Services or the Centers for Disease Control and Prevention.

Abbreviations: MOUD, medications for opioid use disorder; NHBS, National HIV Behavioral Surveillance.

Note. Data include all participants who reported any injection or noninjection use of opioids in the 12 months before interview. Opioids include heroin and painkillers.

<sup>a</sup> Used medicines, such as methadone, buprenorphine, Suboxone, or Subutex, to treat drug use in the 12 months before interview.

<sup>b</sup> Tried but unable to obtain medicines, such as methadone, buprenorphine, Suboxone, or Subutex, to treat drug use in the 12 months before interview.

<sup>c</sup> Passed out, turned blue, or stopped breathing from using heroin or painkillers in the 12 months before interview.

<sup>d</sup> Participants with a negative NHBS HIV test result who did not self-report a previous HIV-positive test result.

<sup>e</sup> Hispanic/Latino persons can be of any race.

<sup>f</sup> Participants who had a reactive rapid NHBS HIV test result that was supported by a second rapid test, supplemental laboratory-based testing, or self-report of a previous HIV-positive test result.

<sup>g</sup> Participants who did not have a valid positive or negative NHBS HIV test result, including those who did not consent to the HIV test, had an indeterminate laboratory result, had discordant rapid test results, or reported a previous HIV-positive test result but had a negative NHBS HIV test result.

**Table 14b. Opioid use–related outcomes among persons who injected or used opioids, by city—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

	MOUD						Total No.
	Used MOUD <sup>a</sup>		Unmet need for MOUD <sup>b</sup>		Nonfatal opioid overdose <sup>c</sup>		
	No.	%	No.	%	No.	%	
<b>HIV-negative<sup>d</sup></b>							
Atlanta, GA	55	31.6	58	33.3	70	40.2	174
Baltimore, MD	53	64.6	25	30.5	23	28.0	82
Chicago, IL	26	59.1	10	22.7	13	29.5	44
Denver, CO	132	57.9	51	22.4	65	28.5	228
Detroit, MI	102	51.8	50	25.4	50	25.4	197
Houston, TX	130	32.8	90	22.7	94	23.7	396
Indianapolis, IN	190	40.1	91	19.2	153	32.3	474
Los Angeles, CA	202	48.6	117	28.1	119	28.6	416
Memphis, TN	100	36.6	53	19.4	84	30.8	273
New Orleans, LA	197	44.1	123	27.5	144	32.2	447
New York City, NY	49	65.3	17	22.7	28	37.3	75
Newark, NJ	200	52.5	102	26.8	67	17.6	381
Philadelphia, PA	341	61.9	161	29.2	167	30.3	551
Portland, OR	124	44.8	52	18.8	75	27.1	277
San Diego, CA	51	40.5	37	29.4	31	24.6	126
San Francisco, CA	180	45.7	54	13.7	78	19.8	394
San Juan, PR	107	28.3	94	24.9	66	17.5	378
Seattle, WA	278	66.0	98	23.3	117	27.8	421
Virginia Beach, VA	265	52.9	140	27.9	149	29.7	501
Washington, DC	143	65.0	80	36.4	73	33.2	220
<b>HIV-positive<sup>e</sup></b>							
Atlanta, GA	3	37.5	1	12.5	2	25.0	8
Baltimore, MD	8	100	3	37.5	0	0.0	8
Chicago, IL	0	—	0	—	0	—	0
Denver, CO	3	37.5	1	12.5	4	50.0	8
Detroit, MI	4	66.7	2	33.3	2	33.3	6
Houston, TX	10	30.3	7	21.2	6	18.2	33
Indianapolis, IN	3	18.8	1	6.3	6	37.5	16
Los Angeles, CA	2	14.3	3	21.4	7	50.0	14
Memphis, TN	4	57.1	1	14.3	0	0.0	7
New Orleans, LA	11	36.7	5	16.7	6	20.0	30
New York City, NY	2	33.3	1	16.7	0	0.0	6
Newark, NJ	24	72.7	9	27.3	7	21.2	33
Philadelphia, PA	21	58.3	8	22.2	6	16.7	36
Portland, OR	2	66.7	1	33.3	1	33.3	3
San Diego, CA	2	50.0	0	0.0	1	25.0	4
San Francisco, CA	10	33.3	2	6.7	5	16.7	30
San Juan, PR	10	27.8	6	16.7	9	25.0	36
Seattle, WA	9	52.9	2	11.8	4	23.5	17
Virginia Beach, VA	7	41.2	4	23.5	5	29.4	17
Washington, DC	9	69.2	4	30.8	5	38.5	13

Disclaimer: The use of trade names is for identification only and does not imply endorsement by the Department of Health and Human Services or the Centers for Disease Control and Prevention.

Abbreviations: MOUD, medications for opioid use disorder; NHBS, National HIV Behavioral Surveillance [footnotes only].

Note. Data include all participants who reported any injection or noninjection use of opioids in the 12 months before interview. Opioids include heroin and painkillers.

<sup>a</sup> Used medicines, such as methadone, buprenorphine, Suboxone, or Subutex, to treat drug use in the 12 months before interview.

<sup>b</sup> Tried but unable to obtain medicines, such as methadone, buprenorphine, Suboxone, or Subutex, to treat drug use in the 12 months before interview.

<sup>c</sup> Passed out, turned blue, or stopped breathing from using heroin or painkillers in the 12 months before interview.

<sup>d</sup> Participants with a negative NHBS HIV test result who did not self-report a previous HIV-positive test result.

<sup>e</sup> Participants who had a reactive rapid NHBS HIV test result that was supported by a second rapid test, supplemental laboratory-based testing, or self-report of a previous HIV-positive test result.

**Table 15. Receipt of HIV care and treatment among persons who inject drugs and who self-reported being HIV-positive—National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

	Visited health care provider about HIV						Currently taking antiretrovirals		Total No.
	Ever		Within 1 month after diagnosis		During past 6 months		No.	%	
	No.	%	No.	%	No.	%	No.	%	
<b>Gender</b>									
Male	237	93.3	122	48.0	190	74.8	203	79.9	254
Female	82	93.2	36	40.9	68	77.3	66	75.0	88
Transgender	13	81.3	6	37.5	12	75.0	12	75.0	16
<b>Age at interview (yr)</b>									
18–24	3	100	2	66.7	1	33.3	1	33.3	3
25–29	12	80.0	8	53.3	8	53.3	7	46.7	15
30–39	68	85.0	44	55.0	58	72.5	56	70.0	80
40–49	83	96.5	48	55.8	67	77.9	71	82.6	86
≥50	166	95.4	62	35.6	136	78.2	146	83.9	174
<b>Race/ethnicity</b>									
American Indian/Alaska Native	2	100	1	50.0	0	0.0	1	50.0	2
Asian	4	100	2	50.0	4	100	4	100	4
Black/African American	132	94.3	57	40.7	104	74.3	112	80.0	140
Hispanic/Latino <sup>a</sup>	75	90.4	40	48.2	60	72.3	62	74.7	83
Native Hawaiian/other Pacific Islander	2	100	2	100	2	100	2	100	2
White	96	90.6	48	45.3	82	77.4	82	77.4	106
Multiple races	20	100	14	70.0	17	85.0	17	85.0	20
<b>City</b>									
Atlanta, GA	8	72.7	6	54.5	6	54.5	7	63.6	11
Baltimore, MD	7	100	5	71.4	5	71.4	6	85.7	7
Chicago, IL	1	100	0	0.0	1	100	0	0.0	1
Denver, CO	11	78.6	6	42.9	9	64.3	6	42.9	14
Detroit, MI	4	80.0	2	40.0	3	60.0	3	60.0	5
Houston, TX	24	92.3	13	50.0	17	65.4	17	65.4	26
Indianapolis, IN	13	100	9	69.2	12	92.3	11	84.6	13
Los Angeles, CA	20	100	12	60.0	17	85.0	16	80.0	20
Memphis, TN	10	100	5	50.0	7	70.0	10	100	10
New Orleans, LA	29	93.5	15	48.4	24	77.4	25	80.6	31
New York City, NY	7	87.5	5	62.5	5	62.5	7	87.5	8
Newark, NJ	28	93.3	17	56.7	26	86.7	27	90.0	30
Philadelphia, PA	25	83.3	14	46.7	21	70.0	19	63.3	30
Portland, OR	5	100	1	20.0	4	80.0	5	100	5
San Diego, CA	6	100	5	83.3	5	83.3	4	66.7	6
San Francisco, CA	46	95.8	15	31.3	42	87.5	44	91.7	48
San Juan, PR	28	87.5	12	37.5	20	62.5	21	65.6	32
Seattle, WA	32	97.0	15	45.5	30	90.9	30	90.9	33
Virginia Beach, VA	18	100	6	33.3	8	44.4	14	77.8	18
Washington, DC	10	100	1	10.0	8	80.0	9	90.0	10
<b>Total</b>	<b>332</b>	<b>92.7</b>	<b>164</b>	<b>45.8</b>	<b>270</b>	<b>75.4</b>	<b>281</b>	<b>78.5</b>	<b>358</b>

Abbreviation: NHBS, National HIV Behavioral Surveillance [footnotes only].

Note. Data include all participants who reported having ever received an HIV-positive test result (which may include those who did not have a valid NHBS HIV test result, positive or negative, or who did not consent to the HIV test). “Past 6 months” refers to the 6 months before interview.

<sup>a</sup> Hispanic/Latino persons can be of any race.

# Appendix: Measurement Notes

## SOCIODEMOGRAPHIC CHARACTERISTICS

Gender: Male, female, or transgender.

Age: Calculated from the reported date of birth; age categories were chosen for epidemiologic relevance and consistency of reporting across all 3 National HIV Behavioral Surveillance (NHBS) populations.

Race/ethnicity: Participants reported 1 or more race categories (American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or other Pacific Islander, and White). Hispanic or Latino ethnicity was asked separately; participants reporting Hispanic or Latino ethnicity were considered Hispanic or Latino, regardless of reported race. Participants reporting multiple races (but not Hispanic or Latino ethnicity) were classified as multiple races.

Disability: Participants who reported difficulty with hearing, seeing, cognition, ambulation, self-care, or independent living, based on responses to the questions that comprise the US Department of Health and Human Services data standard for disability status [1, 2].

City: Throughout this report, eligible metropolitan statistical areas (MSAs) and divisions are referred to by the name of the principal city. State and local health departments eligible to participate in NHBS are those in jurisdictions that include an MSA (or a specified division within an MSA) with high prevalence of HIV. This report presents 2022 data in 20 MSAs (see list at the end of the report).

## SOCIAL DETERMINANTS OF HEALTH

Less than high school education: Reported never attending school or having completed less than grade 12.

Income at or below the federal poverty level: Participants were asked about their combined monthly or yearly household income (in US\$) from all sources for the calendar year before interview. Poverty was determined by using the U.S. Department of Health and Human Services poverty guidelines for 2022. These guidelines are issued yearly for the United States and are one of the indicators used for determining eligibility for many federal and state programs. The 2022 guidelines [3] were used for participants interviewed in 2022. Because the poverty guidelines are not defined for Puerto Rico, the guidelines for the 48 contiguous states and Washington, D.C., were used for this jurisdiction. Participants were asked to identify the range of their income by selecting from a list of income ranges and the number of dependents on that income. If the participant's income range and household size resulted in an ambiguous determination of poverty level, the participant's household income was assumed to be the low point of the income range.

Unemployed: Participants who reported their employment status as “unemployed.”

No current health insurance: Currently not having any form of health insurance.

Did not visit a health care provider: Did not visit a healthcare provider during the 12 months before interview.

Homeless: Living on the street, in a shelter, in a single-room–occupancy hotel, or in a car at any time during the 12 months before interview.

Incarcerated: Having been held in a detention center, jail, or prison, for more than 24 hours during the 12 months before interview.

## HIV STATUS

HIV testing was performed for participants who consented to testing; blood specimens were collected for rapid testing in the field or supplemental laboratory-based testing.

- HIV-negative: Participants with a negative NHBS HIV test result who did not self-report a previous HIV-positive test result.
- HIV-positive: Participants who had a reactive rapid NHBS HIV test result that was supported by a second rapid test, supplemental laboratory-based testing, or self-report of a previous HIV-positive test result.
- No valid NHBS HIV test result: Participants who did not have a valid positive or negative NHBS HIV test result, including those who did not consent to the HIV test, had an indeterminate laboratory result, had discordant rapid test results, or reported a previous HIV-positive test result but had a negative NHBS HIV test result.

## HIV TESTING

Ever tested: Having had an HIV test during one’s lifetime.

Tested in past 12 months: Having had an HIV test during the 12 months before interview.

Clinical setting: Participants reported the location of their most recent HIV test as private doctor’s office (including health maintenance organization), emergency department, hospital (inpatient), public health clinic or community health center, family planning or obstetrics clinic, correctional facility (jail or prison), or substance use disorder treatment program.

Nonclinical setting: Participants reported the location of their most recent HIV test as HIV counseling and testing site, HIV street outreach program or mobile unit, syringe services program, or home.

## SEXUAL BEHAVIORS

Anal sex: Penis inserted into a partner’s anus or butt.

Vaginal sex: Penis inserted into a partner’s vagina.

Oral sex: Mouth on a partner’s penis or vagina.

Condomless sex: Vaginal or anal sex during which a condom either is not used or is not used throughout the sex act.

Number of sex partners: Median number of opposite sex partners during the 12 months before interview; first and third quartiles (25th and 75th percentiles) are also reported.

Exchange sex for males: Refers to giving money or drugs to a female casual partner in exchange for sex, or giving or receiving money or drugs from a male casual partner in exchange for sex.

Exchange sex for females: Refers to receiving money or drugs from a male casual partner in exchange for sex.

Casual partner: Person with whom the participant has sex, but to whom he or she does not feel committed or whom he or she does not know very well.

Unprotected sex with HIV-discordant partner at last sex: “Unprotected sex” refers to sex without the participant’s use of either condoms or HIV medications (i.e., preexposure prophylaxis [PrEP] among those without HIV or antiretrovirals among those with HIV). “HIV-discordant partner” refers to a sex partner of different or unknown HIV status.

## INJECTION DRUG USE AND BEHAVIORS

Participants were asked about their injection of specific drugs (excluding those prescribed for them) during the 12 months before interview.

Years since first injection: Number of years since the participant first injected drugs not prescribed to them, based on the participant’s reported age at first injection.

Injected in the past 12 months: The participant reported injecting the specified drug at least once during the 12 months before interview.

Injected daily: The participant reported injecting the specified drug daily during the 12 months before interview.

Heroin: Injection of heroin by itself.

Speedball: Injection of heroin and cocaine together through a single injection.

Powder or crack cocaine: Injection of crack or powdered cocaine.

Methamphetamine: Injection of methamphetamine.

Prescription opioids: Injection of painkillers not prescribed for the participant, such as Oxycontin, Dilaudid, morphine, Percocet, or Demerol. The use of trade names is for identification only and does not imply endorsement by the Department of Health and Human Services or the Centers for Disease Control and Prevention.

Other drug: Injection of any drug not prescribed for the participant, other than those listed above.

Receptive sharing of syringes: Injecting with a syringe or needle that had already been used by someone else for injection.

Receptive sharing of injection equipment: Using a cooker or cotton (used to filter particles from drug solution) that had already been used by someone else, or using shared water for rinsing or injection.

Receptive sharing of syringes to divide drugs: Dividing a drug solution by using a syringe that had already been used by someone else for injection.

Any receptive sharing: Any combination of the 3 measures listed above (receptive sharing of syringes, receptive sharing of injection equipment, or receptive sharing of syringes to divide drugs).

Distributive syringe sharing: A participant giving their syringe or needle to someone else to use after they had already used it for injection.

## HIV PREVENTION ACTIVITIES

Receipt of syringes from syringe services programs (SSPs): Having received any new, sterile syringes from SSPs during the 12 months before interview.

Receipt of syringes from pharmacy: Having received any new, sterile syringes from a pharmacy during the 12 months before interview.

Receipt of injection equipment from SSPs: Having received injection equipment from SSPs during the 12 months before interview. Injection equipment includes items such as cookers, cotton, or water for rinsing needles; does NOT include syringes or needles.

Substance use disorder treatment: Participated in a substance use disorder treatment program (including outpatient, inpatient, residential, detox, or 12-step program) during the 12 months before interview.

Safe syringe disposal only: Disposed of syringes by putting them in a medical waste container or by exchanging them at an SSP, and no unknown or unsafe disposal method was indicated during the 12 months before interview.

PrEP awareness: Ever heard of PrEP, an antiretroviral medicine taken for months or years by a person who is HIV-negative to reduce the risk of getting HIV.

PrEP use: Took PrEP at any point during the 12 months before interview to reduce the risk of getting HIV.

Receipt of free condoms: Having received free condoms during the 12 months before interview, not including those given by a friend, relative, or sex partner.

## SEXUALLY TRANSMITTED INFECTIONS (STI)

Any bacterial STI: Having received a diagnosis of chlamydia, gonorrhea, or syphilis during the 12 months before interview.

Chlamydia: Having received a diagnosis of chlamydia during the 12 months before interview.

Gonorrhea: Having received a diagnosis of gonorrhea during the 12 months before interview.

Syphilis: Having received a diagnosis of syphilis during the 12 months before interview.

Genital warts: Having received a diagnosis of genital warts during one's lifetime.

Genital herpes: Having received a diagnosis of genital herpes during one's lifetime.

## HEPATITIS C VIRUS INFECTION

Hepatitis C testing: Having had a hepatitis C test during one's lifetime.

Hepatitis C diagnosis: Having ever been told that they had hepatitis C infection by a doctor, nurse, or other health care provider.

## NONINJECTION DRUG USE

Participants were asked about their use of drugs (excluding those prescribed for them) during the 12 months before interview and their use of alcohol during the 30 days before interview. Participants were not limited in the number of substances that they could report. Participants were considered to have used a substance if they reported using that substance with any frequency other than “never.” The use of trade names is for identification only and does not imply endorsement by the Department of Health and Human Services or the Centers for Disease Control and Prevention.

**Binge drinking:** Consumed 5 or more alcoholic drinks (males) or 4 or more alcoholic drinks (females) in about 2 hours during the 30 days before interview.

**Any noninjection drug:** Used any noninjection drug, excluding alcohol, including marijuana, during the 12 months before interview.

**Cocaine:** Used powder cocaine during the 12 months before interview.

**Crack:** Used crack cocaine during the 12 months before interview.

**Downers:** Used downers (benzodiazepines), such as Klonopin, Valium, Ativan, or Xanax, during the 12 months before interview.

**Ecstasy:** Used X or ecstasy during the 12 months before interview.

**Heroin:** Used heroin (smoked or snorted) during the 12 months before interview.

**Marijuana:** Used marijuana during the 12 months before interview.

**Methamphetamine:** Used methamphetamines, including meth, crystal meth, speed, or crank, during the 12 months before interview.

**Prescription opioids:** Used painkillers, such as Oxycontin, Vicodin, morphine, or Percocet, during the 12 months before interview.

## OPIOID USE-RELATED OUTCOMES

Opioid use-related outcomes were assessed for participants who reported injection or noninjection use of heroin or other opioids not prescribed for them during the 12 months before interview. The use of trade names is for identification only and does not imply endorsement by the Department of Health and Human Services or the Centers for Disease Control and Prevention.

**Used medications for opioid use disorder (MOUD):** Having taken medicines, such as methadone, buprenorphine, Suboxone, or Subutex, to treat drug use during the 12 months before interview.

**Unmet need for MOUD:** Participant reported trying but being unable to obtain medicines, such as methadone, buprenorphine, Suboxone, or Subutex, to treat drug use during the 12 months before interview.

**Nonfatal opioid overdose:** Having passed out, turned blue, or stopped breathing from using heroin or painkillers during the 12 months before interview.



## RECEIPT OF HIV CARE

Participants who self-reported being HIV-positive were asked about their receipt of HIV care. Specifically, participants were asked the date of their first HIV-positive test result; if they had ever visited a doctor, nurse, or other health care provider for a medical evaluation or care related to their HIV infection; the date of their first visit to a health care provider for HIV care after learning that they had HIV; the date of their most recent visit to a health care provider for HIV care; and whether they were currently taking any antiretroviral medicines.

- Visited health care provider about HIV, ever: Having ever visited a health care provider for HIV care.
- Visited health care provider about HIV, within 1 month after diagnosis: Having visited a health care provider for HIV care within 1 month after the date of their first HIV-positive test result.
- Visited health care provider about HIV, in the past 6 months: Having visited a health care provider for HIV care during the 6 months before date of interview.
- Currently taking antiretroviral HIV medications: Taking antiretroviral medicines at the time of interview.

## REFERENCES

1. U.S. Census Bureau [Brault M, Stern S, Raglin D]. Evaluation report covering disability. [https://www.census.gov/library/working-papers/2007/acs/2007\\_Brault\\_01.html](https://www.census.gov/library/working-papers/2007/acs/2007_Brault_01.html). Published January 2007. Accessed January 23, 2024.
2. Office of Minority Health. Data collection standards for race, ethnicity, sex, primary language, and disability status. <https://www.minorityhealth.hhs.gov/data-collection-standards-race-ethnicity-sex-primary-language-and-disability-status>. Published October 2011. Accessed January 23, 2024.
3. U.S. Department of Health and Human Services. Prior HHS poverty guidelines and Federal Register references. <https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines/prior-hhs-poverty-guidelines-federal-register-references>. Accessed January 23, 2024.

## PARTICIPATING METROPOLITAN STATISTICAL AREAS, 2022

<b>Principal city</b>	<b>Metropolitan statistical area (division)</b>
Atlanta, Georgia	Atlanta-Sandy Springs-Roswell, Georgia
Baltimore, Maryland	Baltimore-Columbia-Towson, Maryland
Chicago, Illinois	Chicago-Naperville-Elgin, Illinois-Indiana-Wisconsin (Chicago Division)
Denver, Colorado	Denver-Aurora-Lakewood, Colorado
Detroit, Michigan	Detroit-Warren-Dearborn, Michigan (Detroit Division)
Houston, Texas	Houston-The Woodlands-Sugar Land, Texas
Indianapolis, Indiana	Indianapolis-Carmel-Anderson, Indiana
Los Angeles, California	Los Angeles-Long Beach-Anaheim, California (Los Angeles Division)
Memphis, Tennessee	Memphis, Tennessee-Mississippi-Arkansas
New Orleans, Louisiana	New Orleans-Metairie, Louisiana
New York, New York	New York-Newark-Jersey City, New York-New Jersey-Pennsylvania (New York Division)
Newark, New Jersey	New York-Newark-Jersey City, New York-New Jersey-Pennsylvania (Newark Division)
Philadelphia, Pennsylvania	Philadelphia-Camden-Wilmington, Pennsylvania-New Jersey-Delaware-Maryland (Philadelphia Division)
Portland, Oregon	Portland-Vancouver-Hillsboro, Oregon-Washington
San Diego, California	San Diego-Carlsbad, California
San Francisco, California	San Francisco-Oakland-Hayward, California (San Francisco Division)
San Juan, Puerto Rico	San Juan-Carolina-Caguas, Puerto Rico
Seattle, Washington	Seattle-Tacoma-Bellevue, Washington (Seattle Division)
Virginia Beach, Virginia	Virginia Beach-Norfolk-Newport News, Virginia-North Carolina
Washington, District of Columbia	Washington, District of Columbia (DC)-Virginia-Maryland-West Virginia (Washington Division)

**Table A1. Additional injection-related HIV prevention behaviors among persons who inject drugs, by city—  
National HIV Behavioral Surveillance, 20 U.S. cities, 2022**

City	Receipt of syringes from SSPs		Receipt of syringes from pharmacy		Total No.
	No.	%	No.	%	
Atlanta, GA	133	67.5	41	20.8	197
Baltimore, MD	58	59.2	7	7.1	98
Chicago, IL	30	66.7	22	48.9	45
Denver, CO	217	78.1	69	24.8	278
Detroit, MI	107	50.5	48	22.6	212
Houston, TX	23	4.5	258	50.0	516
Indianapolis, IN	122	23.4	116	22.3	521
Los Angeles, CA	358	67.5	196	37.0	530
Memphis, TN	66	19.9	45	13.6	332
New Orleans, LA	390	73.9	94	17.8	528
New York City, NY	42	46.2	6	6.6	91
Newark, NJ	163	38.2	97	22.7	427
Philadelphia, PA	413	68.5	64	10.6	603
Portland, OR	252	74.3	63	18.6	339
San Diego, CA	87	51.2	18	10.6	170
San Francisco, CA	466	88.9	61	11.6	524
San Juan, PR	275	65.9	138	33.1	417
Seattle, WA	361	72.2	69	13.8	500
Virginia Beach, VA	26	4.9	146	27.5	531
Washington, DC	155	65.7	17	7.2	236
<b>Total</b>	<b>3,744</b>	<b>52.8</b>	<b>1,575</b>	<b>22.2</b>	<b>7,095</b>

Abbreviation: SSPs, syringe services programs.