

HIV

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HIV Infection Risk, Prevention, and Testing Behaviors Among Persons Who Inject Drugs

**National HIV Behavioral Surveillance
Injection Drug Use
23 U.S. Cities, 2018**

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Lowering the annual number of new HIV infections is a major HIV prevention goal [1]. This goal can be achieved by implementing 3 important strategies for reducing HIV infections: (1) intensifying HIV prevention efforts in communities where HIV is most heavily concentrated, including gay, bisexual, and other men who have sex with men (hereafter referred to as MSM); blacks or African Americans (hereafter referred to as blacks); Hispanics or Latinos; and persons who inject drugs (PWID); (2) expanding efforts to prevent HIV infection by using a combination of effective, evidence-based, scalable approaches (including substance use disorder treatment and access to sterile needles and syringes); and (3) educating the general public about the threat of HIV infection and how to prevent it. State and local health departments, as well as federal agencies, are expected to monitor progress toward HIV prevention goals [1].

The Centers for Disease Control and Prevention's (CDC's) National HIV Behavioral Surveillance (NHBS) serves as a key component of its high-impact prevention (HIP) approach to reducing the spread of HIV in the United States [2]. 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 high-risk populations is critical to achieving the goals of the Ending the HIV Epidemic: A Plan for America initiative [3] and CDC's HIP approach. The new initiative is aimed at reducing new HIV infections by 90% by 2030 by implementing evidence-based strategies for specific populations in geographic areas most affected by HIV. NHBS has previously proven effective at monitoring key indicators, such as risk behaviors, HIV testing, and linkage to care; access to, and use of, prevention interventions, including preexposure prophylaxis (PrEP) and syringe services programs (SSPs); and prevalence of HIV and other infections 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 [4, 5].

This report summarizes findings from the fifth NHBS data collection among PWID, which was conducted in 2018. Data from previous years of data collection among PWID have been published elsewhere [6–9]. This report provides descriptive, unweighted data that can be used to describe HIV infection among PWID and the percentages of PWID reporting specific risk behaviors, HIV testing, and participation in prevention programs. Monitoring these outcomes is useful for assessing risk behaviors 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 [6]:

- This report includes 23 metropolitan statistical areas (MSAs). In 2018, 23 MSAs collected NHBS data among PWID.
- PrEP awareness and PrEP use are included in the HIV prevention tables (Tables 11a/b) for HIV-negative participants.
- Additional outcomes of interest (Table 15) are stratified by sexual behaviors and substance use behaviors to account for the different denominators; sexual behavior data are not available for transgender participants.
- Tables 16a/b were added as a separate measure of opioid use–related outcomes, including medication-assisted treatment (MAT) and nonfatal overdose.
- Report of a visit to health care provider about HIV was changed from within 3 months after diagnosis to within 1 month after diagnosis to reflect the timeframe of an updated national goal for linkage to care (Table 17).
- An addendum is included that contains information used to create the accompanying infographic.

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

report. Additionally, Table 15 is designed as a flexible reporting mechanism to respond to emerging issues; the outcomes presented in this table may vary with each report.

TABLE ORGANIZATION

The tables in this report are ordered by content. Tables 1 and 5–16b are stratified by HIV status; that is, data are presented separately for HIV-negative participants and HIV-positive participants (HIV status was determined from the NHBS HIV test result). A small percentage of the sample (0.8%) could not be classified by HIV status because they had no valid NHBS HIV test result; that is, they did not consent to the HIV test, had an indeterminate result, had discordant rapid test results, or reported a previous HIV-positive test result but had a negative NHBS HIV test result. For data completeness, data from these participants are reported in a “No valid NHBS HIV test results” column (Table 1) or row (Tables 5–16b). **Unless otherwise noted in tables, measurement notes, or the following highlights, the period for all outcomes is in the 12 months before interview.**

HIGHLIGHTS

Demographic Characteristics, HIV Prevalence, and HIV Testing

This report describes data from 11,437 PWID who participated in NHBS in 2018, of whom 69% identified as male, 30% female, and 1% transgender; 39% were white, 33% were black, and 21% were Hispanic or Latino; 36% were aged ≥ 50 years (Table 1). Among all participants, 26% had no health insurance, 21% had not visited a health care provider, and the household income of 75% of participants was at or below the federal poverty level.

In 2018, 6% of participants with a valid NHBS HIV test result tested positive for HIV (Table 2). By gender, HIV prevalence was as follows: 6% among males, 6% among females, and 28% among transgender. By race and ethnicity, HIV prevalence was as follows: 9% among blacks, 8% among Hispanics or Latinos, and 4% among whites.

CDC recommends that persons at increased risk of HIV infection, including PWID, undergo HIV testing at least annually [10]. Among 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, 55% reported that they had been tested for HIV in the 12 months before the interview, and 90% reported that they had ever been tested (Table 3).

Among participants who reported being tested for HIV in the 12 months before the interview, 66% reported their most recent test was performed in a clinical setting while 29% reported being tested in a nonclinical setting, such as an HIV counseling and testing site, an HIV street outreach program or mobile unit, a SSP, or at home (Table 4).

Sexual Behaviors

Among PWID who were HIV-positive, 35% of males and 57% of females reported condomless vaginal sex with a partner of the opposite sex (Tables 5 and 7). Male-male anal sex was common among HIV-positive men (26%) and 20% of HIV-positive men reported condomless anal sex with men (Table 5). Anal sex with men was less common among HIV-negative male PWID (6%). These results are particularly concerning given the increased risk of HIV transmission associated with condomless anal sex among MSM [11].

Condomless sex was common among female PWID: 75% reported condomless vaginal sex and 27% reported condomless anal sex (Table 7). As research suggests [12, 13], partner type may be an important factor in condom use. Among female PWID, condomless sex with a main partner (63%) was more common than condomless sex with a casual partner (35%; Table 8).

Sexual behaviors are an important mode of HIV transmission among male and female PWID. The percentages of PWID who engaged in condomless sex underscore the importance of using effective, evidence-based scalable combination HIV prevention strategies that include access to and use of condoms, PrEP, and risk-reduction counseling among PWID [14–16].

Injection Drug Use

PWID who engage in frequent or unsafe 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 [17–21]. Approximately 90% of participants reported injecting heroin, and a majority (75%) reported injecting heroin daily (Table 9). Sixty-two percent of HIV-positive PWID reported daily

heroin injection; among HIV-negative PWID, 76% reported daily heroin injection. Slightly more than half of participants (54%) reported injecting speedball (heroin and cocaine together). About 35% of participants reported injecting methamphetamines. Among HIV-negative participants, report of methamphetamine injection decreased with increasing age; the lowest percentage reporting methamphetamine injection was among black PWID (11%).

One-time use of sterile needles and syringes remains the safest, most effective way to limit HIV transmission during drug injection [22]. Approximately 1 in 3 PWID reported using a syringe that had been used by someone else (i.e., receptive syringe sharing); receptive syringe sharing was reported by 1 in 4 HIV-positive PWID and 1 in 3 HIV-negative PWID (Table 10). Among HIV-negative PWID, the percentage reporting receptive syringe sharing was highest among white PWID (42%) and among young PWID aged 18–24 years and decreased with increasing age. Additionally, 43% of PWID reported giving a syringe they had already used to someone else (i.e., distributive syringe sharing); a greater percentage of HIV-negative PWID reported distributive syringe sharing (44%) than HIV-positive PWID (25%).

Receipt of HIV Prevention

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. 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 [23]. More than half (53%) of participants reported receiving syringes from SSPs (Table 11a); however, the percentage of HIV-negative PWID who received syringes from SSPs varied greatly by city, from 1% to 93% (Table 11b). In 2014, CDC released clinical guidance recommending the use of PrEP for persons at increased risk of acquiring HIV [24]. In 2018, one-quarter (26%) of HIV-negative PWID were aware of PrEP, and a small percentage of HIV-negative PWID (1%) reported taking PrEP to prevent HIV infection (Table 11a). PrEP use was as high as 2%–4% in 5 cities (11b).

Sexually Transmitted Infections and Hepatitis C Virus Infections

Sexually transmitted infections (STIs) can increase the likelihood of acquiring and transmitting HIV [25]. The percentage of PWID who reported a diagnosis of any bacterial STI (e.g., chlamydia, gonorrhea, or syphilis) was higher among those who were HIV-positive (12%) than among those who were HIV-negative (5%; Table 12).

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 [26]. Lifetime testing for HCV among all PWID was high (80%; Table 13). Furthermore, substantial percentages of participants reported a diagnosis of hepatitis C (54% of HIV-positive PWID, 43% of HIV-negative PWID). Diagnoses of STIs and HCV infection may be more common among PWID known to be HIV-positive because of increased screening for this group. Moreover, HIV-positive PWID may be more likely to be coinfecting with HCV [27].

Substance Use

Table 14 presents data on noninjection use of drugs. HIV-negative PWID reported more noninjection use (79%) than HIV-positive PWID (72%). Marijuana was used the most by PWID, followed by crack, heroin, and downers, such as benzodiazepines. More than half (57%) of HIV-negative PWID and half of HIV-positive PWID reported marijuana use.

Additional Outcomes

Table 15 presents data on additional outcomes related to the risk of HIV transmission and acquisition among PWID. Outcomes reported in Table 15 are of current relevance to HIV prevention among PWID and may not be reported in future reports.

Although exposure to HIV through injection practices is a primary concern, sexual risk factors also play an important role in transmission to and from PWID. Exchange sex and condomless sex with an HIV-discordant partner were common. More than a quarter (27%) of PWID reported exchange sex with a casual partner. Exchange sex with a casual partner was more often reported by HIV-positive PWID (37%). Giving or receiving money or drugs in exchange for sex is a recognized risk factor for HIV infection [28]. Condomless sex with an HIV-

discordant partner at last sex was reported by 33% of HIV-negative PWID and 30% of HIV-positive PWID.

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. Among all participants, 43% had received substance use disorder treatment.

Access to safe syringe disposal (such as through SSPs) can decrease the number of used syringes in the community and reduce accidental needle sticks. Only 21% of PWID reported disposing of 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.

Substance use disorder is a recurring, lifelong health condition that may result in long periods of injection drug use. Among all participants, the median number of years between the year of their first injection and the NHBS interview was 17 years. Among HIV-negative participants aged 50 years or older, the median time since first injection was 35 years.

Opioid Use

Opioid use continues to be a major public health concern in the United States. It is estimated that 130 Americans die every day from prescription or illicit opioid overdose [29]. MAT is an effective, evidence-based treatment for opioid use disorder that decreases opioid use, opioid-related overdoses, and infectious disease transmission [30–32]. Tables 16a/b present data on opioid use–related outcomes, including MAT and nonfatal opioid overdoses among participants who reported injection or noninjection use of heroin or other opioids not prescribed for them (includes 96% of all participants).

Overall, being “hooked on” prescription opioids before initiating injection drug use was common (40%), suggesting that use of prescription opioids preceded injection drug use for many participants. Among HIV-negative participants, report of being “hooked on” prescription opioids was most frequent among participants aged 25–29 years (62%), followed by 30–39 years (56%). More than one-quarter of participants reported experiencing an overdose. The percentage reporting an overdose was highest among HIV-negative participants aged 18–24 years (40%) and decreased with increasing age. More than half of participants (54%) reported having used MAT in the

12 months before the interview; however, more than one-quarter of participants reported an unmet need for MAT.

Receipt of HIV Care

Achieving viral suppression through antiretroviral treatment can improve clinical outcomes and reduce the likelihood of HIV transmission [33]. In 2015, a national goal for linkage to care changed from increasing the percentage of persons with newly diagnosed HIV linked to care within 3 months of diagnosis to increasing the percentage linked to care within 1 month of diagnosis [1]. In 2018, among self-reported HIV-positive PWID, 90% reported having ever visited a health care provider for HIV, 47% reported that they did so within 1 month after diagnosis, and 74% reported visiting a health care provider for HIV care in the 6 months before interview. Current use of antiretroviral therapy was reported by 70% of self-reported HIV-positive PWID: 74% of blacks, 70% of Hispanics or Latinos, and 61% of whites (Table 17).

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 2018 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) presented physical evidence of recent injection (e.g., track marks) or 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, in-person survey is administered by a trained interviewer using a portable computer. 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 [34, 35] and by applicable institutional review boards (IRBs) in each participating city.

PARTICIPATING CITIES

State and local health departments eligible to participate in NHBS are among those whose jurisdictions include an MSA or a specified division with high prevalence of HIV. In 2018, NHBS was conducted in 23 MSAs (see list at the end of the report), which represented approximately 59% of all persons living with HIV infection in urban areas with a population of at least 500,000 at year-end 2016 [36].

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

2018 NHBS cycle were recruited by using respondent-driven sampling (RDS) [37, 38]. 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

Persons who brought a valid coupon to an NHBS field site were escorted to a private area for eligibility screening. For those who met eligibility requirements, trained interviewers obtained informed consent and conducted face-to-face interviews, which 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 hepatitis C virus 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–\$35 (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. A non-reactive rapid test result was considered HIV-negative; a reactive rapid test result was considered HIV-positive if supported by a second rapid test or supplemental laboratory-based testing. Participants received \$10–\$35 for HIV testing (amount determined locally).

Participants who agreed to recruit others received an additional incentive of \$10–\$20 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 2018 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 total, 14,716 persons were recruited to participate in NHBS in 2018. Of those, 3,182 were excluded from the survey because they did not meet NHBS eligibility criteria, did not provide consent, or their data were lost during electronic upload. An additional 97 interviews were excluded from this report due to incomplete survey data or survey responses of questionable validity.

The full analysis sample for this report includes 2018 NHBS cycle participants who consented to and completed the survey (n=11,437, Table 1). 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.

SUPPLEMENTAL MATERIAL

Infographic: HIV infection risk, prevention, and testing behaviors among persons who inject drugs—National HIV Behavioral Surveillance, 2018 ([PDF file is attached](http://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-special-report-number-24-infographic.pdf); also available at <http://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-special-report-number-24-infographic.pdf>).

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Table 1. Selected characteristics of persons who inject drugs—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	HIV-negative ^a		HIV-positive ^b		No valid NHBS HIV test result ^c		Total	
	No.	%	No.	%	No.	%	No.	%
Gender								
Male	7,326	69.0	500	68.4	65	73.0	7,891	69.0
Female	3,221	30.3	204	27.9	24	27.0	3,449	30.2
Transgender	70	0.7	27	3.7	0	0.0	97	0.8
Age at interview (yr)								
18–24	403	3.8	9	1.2	1	1.1	413	3.6
25–29	1,152	10.9	54	7.4	6	6.7	1,212	10.6
30–39	2,861	26.9	138	18.9	25	28.1	3,024	26.4
40–49	2,430	22.9	201	27.5	22	24.7	2,653	23.2
≥50	3,771	35.5	329	45.0	35	39.3	4,135	36.2
Race/ethnicity								
American Indian/Alaska Native	126	1.2	6	0.8	1	1.1	133	1.2
Asian	37	0.3	4	0.5	0	0.0	41	0.4
Black/African American	3,410	32.1	335	45.8	30	33.7	3,775	33.0
Hispanic/Latino ^d	2,170	20.4	188	25.7	22	24.7	2,380	20.8
Native Hawaiian/Other Pacific Islander	14	0.1	2	0.3	0	0.0	16	0.1
White	4,287	40.4	171	23.4	31	34.8	4,489	39.2
Multiple races	566	5.3	25	3.4	5	5.6	596	5.2
Education								
Less than high school	3,000	28.3	240	32.8	35	39.3	3,275	28.6
High school diploma or equivalent	4,379	41.2	310	42.4	27	30.3	4,716	41.2
Some college or technical degree	2,809	26.5	155	21.2	20	22.5	2,984	26.1
College degree or more	426	4.0	26	3.6	7	7.9	459	4.0
Household income^e								
At or below the federal poverty level	7,909	74.5	596	81.5	63	70.8	8,568	74.9
Above the federal poverty level	2,637	24.8	134	18.3	24	27.0	2,795	24.4
Health insurance								
Yes	7,782	73.3	580	79.3	71	79.8	8,433	73.7
No	2,789	26.3	151	20.7	18	20.2	2,958	25.9
Visited a health care provider, past 12 months								
Yes	8,355	78.7	642	87.8	74	83.1	9,071	79.3
No	2,259	21.3	88	12.0	15	16.9	2,362	20.7
Homeless,^f past 12 months								
Yes	7,276	68.5	464	63.5	62	69.7	7,802	68.2
No	3,340	31.5	267	36.5	27	30.3	3,634	31.8

Table 1. Selected characteristics of persons who inject drugs—National HIV Behavioral Surveillance, 23 U.S. cities, 2018 (cont)

	HIV-negative ^a		HIV-positive ^b		No valid NHBS HIV test result ^c		Total	
	No.	%	No.	%	No.	%	No.	%
Incarcerated,^g past 12 months								
Yes	3,848	36.2	223	30.5	30	33.7	4,101	35.9
No	6,762	63.7	508	69.5	59	66.3	7,329	64.1
City								
Atlanta, GA	335	3.2	41	5.6	6	6.7	382	3.3
Baltimore, MD	511	4.8	57	7.8	7	7.9	575	5.0
Boston, MA	418	3.9	37	5.1	4	4.5	459	4.0
Chicago, IL	501	4.7	5	0.7	8	9.0	514	4.5
Dallas, TX	495	4.7	23	3.1	2	2.2	520	4.5
Denver, CO	567	5.3	14	1.9	6	6.7	587	5.1
Detroit, MI	544	5.1	12	1.6	4	4.5	560	4.9
Houston, TX	447	4.2	61	8.3	0	0.0	508	4.4
Los Angeles, CA	517	4.9	9	1.2	2	2.2	528	4.6
Memphis, TN	522	4.9	30	4.1	5	5.6	557	4.9
Miami, FL	441	4.2	77	10.5	3	3.4	521	4.6
Nassau-Suffolk, NY	144	1.4	3	0.4	4	4.5	151	1.3
New Orleans, LA	534	5.0	22	3.0	4	4.5	560	4.9
New York City, NY	469	4.4	49	6.7	2	2.2	520	4.5
Newark, NJ	466	4.4	52	7.1	5	5.6	523	4.6
Philadelphia, PA	580	5.5	39	5.3	1	1.1	620	5.4
Portland, OR	519	4.9	8	1.1	8	9.0	535	4.7
San Diego, CA	242	2.3	6	0.8	1	1.1	249	2.2
San Francisco, CA	406	3.8	50	6.8	1	1.1	457	4.0
San Juan, PR	434	4.1	57	7.8	9	10.1	500	4.4
Seattle, WA	525	4.9	25	3.4	4	4.5	554	4.8
Virginia Beach, VA	524	4.9	10	1.4	2	2.2	536	4.7
Washington, DC	476	4.5	44	6.0	1	1.1	521	4.6
Total	10,617	100	731	100	89	100	11,437	100

Abbreviation: NHBS, National HIV Behavioral Surveillance.

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

^a Participants with a valid negative NHBS HIV test result.

^b Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing.

^c 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.

^d Hispanics/Latinos can be of any race.

^e Poverty level is based on household income and household size.

^f Living on the street, in a shelter, in a single-room-occupancy hotel, or in a car.

^g Having been held in a detention center, jail, or prison for more than 24 hours.

Table 2. HIV prevalence among persons who inject drugs, by gender—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	Male		Female			Transgender			Full sample			
	HIV-positive ^a		Total	HIV-positive ^a		Total	HIV-positive ^a		Total	HIV-positive ^a		Total
	No.	%	No.	No.	%	No.	No.	%	No.	No.	%	No.
Age at interview (yr)												
18–24	5	2.1	235	4	2.4	167	0	0.0	10	9	2.2	412
25–29	36	4.6	787	16	3.9	410	2	22.2	9	54	4.5	1,206
30–39	91	4.6	1,967	39	3.9	1,003	8	27.6	29	138	4.6	2,999
40–49	127	7.1	1,793	67	8.2	818	7	35.0	20	201	7.6	2,631
≥50	241	7.9	3,044	78	7.6	1,027	10	34.5	29	329	8.0	4,100
Race/ethnicity												
American Indian/Alaska Native	3	4.1	74	2	3.6	56	1	50.0	2	6	4.5	132
Asian	4	14.3	28	0	0.0	13	0	—	0	4	9.8	41
Black/African American	229	8.4	2,739	94	9.7	974	12	37.5	32	335	8.9	3,745
Hispanic/Latino ^b	142	8.1	1,755	40	6.9	577	6	23.1	26	188	8.0	2,358
Native Hawaiian/Other Pacific Islander	2	28.6	7	0	0.0	9	0	—	0	2	12.5	16
White	102	3.6	2,851	63	4.0	1,575	6	18.8	32	171	3.8	4,458
Multiple races	18	4.9	367	5	2.3	219	2	40.0	5	25	4.2	591
City												
Atlanta, GA	27	9.8	276	13	13.3	98	1	50.0	2	41	10.9	376
Baltimore, MD	43	10.8	400	12	7.3	164	2	50.0	4	57	10.0	568
Boston, MA	24	8.3	290	13	8.1	160	0	0.0	5	37	8.1	455
Chicago, IL	1	0.3	317	4	2.2	184	0	0.0	5	5	1.0	506
Dallas, TX	11	3.3	336	12	6.7	180	0	0.0	2	23	4.4	518
Denver, CO	12	2.8	431	2	1.4	145	0	0.0	5	14	2.4	581
Detroit, MI	5	1.4	355	7	3.5	200	0	0.0	1	12	2.2	556
Houston, TX	43	10.8	398	15	14.2	106	3	75.0	4	61	12.0	508
Los Angeles, CA	7	2.0	350	2	1.2	173	0	0.0	3	9	1.7	526
Memphis, TN	21	5.4	386	6	3.8	160	3	50.0	6	30	5.4	552
Miami, FL	51	12.8	399	26	21.8	119	0	—	0	77	14.9	518
Nassau-Suffolk, NY	2	2.1	94	1	1.9	52	0	0.0	1	3	2.0	147
New Orleans, LA	16	4.2	382	4	2.4	167	2	28.6	7	22	4.0	556
New York City, NY	33	8.4	395	10	8.8	114	6	66.7	9	49	9.5	518
Newark, NJ	27	8.7	311	24	11.8	203	1	25.0	4	52	10.0	518
Philadelphia, PA	31	7.4	419	7	3.6	197	1	33.3	3	39	6.3	619
Portland, OR	3	0.9	321	4	2.0	199	1	14.3	7	8	1.5	527
San Diego, CA	3	1.6	184	2	3.2	63	1	100	1	6	2.4	248
San Francisco, CA	37	12.0	309	11	8.0	137	2	20.0	10	50	11.0	456
San Juan, PR	49	11.9	412	7	9.3	75	1	25.0	4	57	11.6	491
Seattle, WA	16	4.8	332	9	4.3	211	0	0.0	7	25	4.5	550
Virginia Beach, VA	7	2.0	357	3	1.7	176	0	0.0	1	10	1.9	534
Washington, DC	31	8.3	372	10	7.0	142	3	50.0	6	44	8.5	520
Total	500	6.4	7,826	204	6.0	3,425	27	27.8	97	731	6.4	11,348

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

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

^a Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing.^b Hispanics/Latinos can be of any race.

Table 3. HIV testing among persons who inject drugs—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	Ever tested		Tested in past 12 months ^a		Total No.
	No.	%	No.	%	
Gender					
Male	6,707	89.0	4,100	54.4	7,540
Female	3,041	92.1	1,843	55.8	3,303
Transgender	65	82.3	45	57.0	79
Age at interview (yr)					
18–24	302	74.0	237	58.1	408
25–29	999	84.4	695	58.7	1,184
30–39	2,654	90.2	1,723	58.6	2,941
40–49	2,330	92.9	1,402	55.9	2,507
≥50	3,528	90.9	1,931	49.7	3,882
Race/ethnicity					
American Indian/Alaska Native	120	93.8	70	54.7	128
Asian	35	94.6	22	59.5	37
Black/African American	3,230	91.6	1,945	55.2	3,526
Hispanic/Latino ^b	2,047	90.7	1,271	56.3	2,257
Native Hawaiian/Other Pacific Islander	10	66.7	8	53.3	15
White	3,839	87.7	2,350	53.6	4,380
Multiple races	525	91.8	316	55.2	572
City					
Atlanta, GA	322	91.5	203	57.7	352
Baltimore, MD	499	93.3	354	66.0	535
Boston, MA	416	93.5	252	56.6	445
Chicago, IL	472	93.8	305	60.6	503
Dallas, TX	432	85.7	211	41.9	504
Denver, CO	496	86.6	340	59.3	573
Detroit, MI	462	83.5	189	34.2	553
Houston, TX	412	90.0	230	50.2	458
Los Angeles, CA	472	90.4	289	55.4	522
Memphis, TN	395	73.7	224	41.8	536
Miami, FL	426	88.9	354	73.9	479
Nassau-Suffolk, NY	130	87.2	63	42.3	149
New Orleans, LA	475	87.6	334	61.6	542
New York City, NY	468	97.5	350	72.9	480
Newark, NJ	454	94.0	258	53.4	483
Philadelphia, PA	578	95.7	431	71.4	604
Portland, OR	445	84.6	206	39.2	526
San Diego, CA	222	90.2	105	42.7	246
San Francisco, CA	395	95.0	287	69.0	416
San Juan, PR	416	89.8	182	39.3	463
Seattle, WA	490	90.9	277	51.4	539
Virginia Beach, VA	465	88.1	198	37.5	528
Washington, DC	471	96.9	346	71.2	486
Total	9,813	89.8	5,988	54.8	10,922

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.

^a "Past 12 months" refers to the 12 months before interview.

^b Hispanics/Latinos can be of any race.

Table 4. 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, 23 U.S. cities, 2018

	Clinical setting ^a		Nonclinical setting ^b		Total No.
	No.	%	No.	%	
Gender					
Male	2,713	66.2	1,170	28.5	4,100
Female	1,234	67.0	528	28.6	1,843
Transgender	21	46.7	20	44.4	45
Age at interview (yr)					
18–24	165	69.6	60	25.3	237
25–29	472	67.9	187	26.9	695
30–39	1,177	68.3	467	27.1	1,723
40–49	914	65.2	426	30.4	1,402
≥50	1,240	64.2	578	29.9	1,931
Race/ethnicity					
American Indian/Alaska Native	48	68.6	18	25.7	70
Asian	14	63.6	6	27.3	22
Black/African American	1,244	64.0	601	30.9	1,945
Hispanic/Latino ^c	826	65.0	392	30.8	1,271
Native Hawaiian/Other Pacific Islander	6	75.0	1	12.5	8
White	1,618	68.9	611	26.0	2,350
Multiple races	208	65.8	87	27.5	316
City					
Atlanta, GA	124	61.1	60	29.6	203
Baltimore, MD	250	70.6	91	25.7	354
Boston, MA	164	65.1	72	28.6	252
Chicago, IL	221	72.5	74	24.3	305
Dallas, TX	143	67.8	60	28.4	211
Denver, CO	246	72.4	84	24.7	340
Detroit, MI	156	82.5	26	13.8	189
Houston, TX	173	75.2	40	17.4	230
Los Angeles, CA	176	60.9	110	38.1	289
Memphis, TN	190	84.8	16	7.1	224
Miami, FL	164	46.3	171	48.3	354
Nassau-Suffolk, NY	58	92.1	5	7.9	63
New Orleans, LA	240	71.9	73	21.9	334
New York City, NY	249	71.1	88	25.1	350
Newark, NJ	115	44.6	136	52.7	258
Philadelphia, PA	223	51.7	201	46.6	431
Portland, OR	176	85.4	24	11.7	206
San Diego, CA	75	71.4	24	22.9	105
San Francisco, CA	177	61.7	74	25.8	287
San Juan, PR	104	57.1	69	37.9	182
Seattle, WA	205	74.0	47	17.0	277
Virginia Beach, VA	154	77.8	33	16.7	198
Washington, DC	185	53.5	140	40.5	346
Total	3,968	66.3	1,718	28.7	5,988

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.

^a 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 drug treatment program.

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

^c Hispanics/Latinos can be of any race.

Table 5. Sexual behavior with female and male sex partners in the 12 months before interview among males who inject drugs—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	With female sex partners								With male sex partners						With males and females—sex of any type ^a		Total males No.
	Vaginal sex		Condomless vaginal sex		Anal sex		Condomless anal sex		Oral or anal sex		Anal sex		Condomless anal sex		No.	%	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
HIV-negative^b	5,890	80.4	5,086	69.4	2,404	32.8	1,914	26.1	602	8.2	412	5.6	320	4.4	455	6.2	7,326
Age at interview (yr)																	
18–24	201	87.4	178	77.4	84	36.5	67	29.1	34	14.8	24	10.4	19	8.3	23	10.0	230
25–29	660	87.9	597	79.5	283	37.7	239	31.8	85	11.3	52	6.9	41	5.5	62	8.3	751
30–39	1,605	85.6	1,427	76.1	690	36.8	578	30.8	168	9.0	116	6.2	97	5.2	124	6.6	1,876
40–49	1,342	80.6	1,179	70.8	608	36.5	477	28.6	144	8.6	102	6.1	72	4.3	111	6.7	1,666
≥50	2,082	74.3	1,705	60.8	739	26.4	553	19.7	171	6.1	118	4.2	91	3.2	135	4.8	2,803
Race/ethnicity																	
American Indian/Alaska Native	55	77.5	48	67.6	26	36.6	19	26.8	8	11.3	6	8.5	6	8.5	6	8.5	71
Asian	20	83.3	20	83.3	9	37.5	8	33.3	3	12.5	1	4.2	1	4.2	2	8.3	24
Black/African American	2,015	80.3	1,675	66.7	691	27.5	519	20.7	182	7.3	130	5.2	96	3.8	145	5.8	2,510
Hispanic/Latino ^c	1,271	78.8	1,102	68.3	692	42.9	547	33.9	158	9.8	108	6.7	88	5.5	118	7.3	1,613
Native Hawaiian/Other Pacific Islander	3	60.0	3	60.0	2	40.0	2	40.0	0	0.0	0	0.0	0	0.0	0	0.0	5
White	2,253	82.0	1,990	72.4	856	31.1	716	26.0	211	7.7	140	5.1	109	4.0	153	5.6	2,749
Multiple races	270	77.4	246	70.5	125	35.8	101	28.9	40	11.5	27	7.7	20	5.7	31	8.9	349
HIV-positive^d	302	60.4	173	34.6	128	25.6	79	15.8	151	30.2	132	26.4	101	20.2	52	10.4	500
Age at interview (yr)																	
18–24	3	60.0	2	40.0	1	20.0	1	20.0	3	60.0	3	60.0	2	40.0	1	20.0	5
25–29	21	58.3	14	38.9	5	13.9	4	11.1	19	52.8	18	50.0	16	44.4	8	22.2	36
30–39	49	53.8	36	39.6	24	26.4	16	17.6	45	49.5	42	46.2	33	36.3	12	13.2	91
40–49	70	55.1	40	31.5	33	26.0	20	15.7	45	35.4	36	28.3	27	21.3	13	10.2	127
≥50	159	66.0	81	33.6	65	27.0	38	15.8	39	16.2	33	13.7	23	9.5	18	7.5	241
Race/ethnicity																	
American Indian/Alaska Native	3	100	2	66.7	1	33.3	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	4	100	4	100	4	100	0	0.0	4
Black/African American	144	62.9	80	34.9	57	24.9	30	13.1	51	22.3	45	19.7	31	13.5	21	9.2	229
Hispanic/Latino ^c	97	68.3	51	35.9	51	35.9	32	22.5	36	25.4	34	23.9	21	14.8	16	11.3	142
Native Hawaiian/Other Pacific Islander	2	100	2	100	2	100	2	100	0	0.0	0	0.0	0	0.0	0	0.0	2
White	53	52.0	35	34.3	17	16.7	15	14.7	48	47.1	41	40.2	37	36.3	15	14.7	102
Multiple races	3	16.7	3	16.7	0	0.0	0	0.0	12	66.7	8	44.4	8	44.4	0	0.0	18
No valid NHBS HIV test result^e	46	70.8	33	50.8	22	33.8	12	18.5	7	10.8	6	9.2	6	9.2	3	4.6	65
Total	6,238	79.1	5,292	67.1	2,554	32.4	2,005	25.4	760	9.6	550	7.0	427	5.4	510	6.5	7,891

Abbreviation: NHBS, National HIV Behavioral Surveillance.

^a Participants who reported oral, vaginal, or anal sex with at least 1 female partner and oral or anal sex with at least 1 male partner in the 12 months before interview.^b Participants with a valid negative NHBS HIV test result.^c Hispanics/Latinos can be of any race.^d Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing.^e 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 6. Sexual behavior with female sex partners in the 12 months before interview among males who inject drugs, by partner type—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	Main female partner				Casual female partner				Main and casual female partners—sex of any type ^a		Total males No.
	Vaginal or anal sex		Condomless vaginal or anal sex		Vaginal or anal sex		Condomless vaginal or anal sex		No.	%	
	No.	%	No.	%	No.	%	No.	%			
HIV-negative^b	4,068	55.5	3,648	49.8	3,738	51.0	2,831	38.6	1,969	26.9	7,326
Age at interview (yr)											
18–24	146	63.5	135	58.7	142	61.7	106	46.1	91	39.6	230
25–29	462	61.5	427	56.9	465	61.9	375	49.9	274	36.5	751
30–39	1,143	60.9	1,065	56.8	1,037	55.3	803	42.8	579	30.9	1,876
40–49	926	55.6	848	50.9	824	49.5	627	37.6	423	25.4	1,666
≥50	1,391	49.6	1,173	41.8	1,270	45.3	920	32.8	602	21.5	2,803
Race/ethnicity											
American Indian/Alaska Native	31	43.7	30	42.3	38	53.5	32	45.1	16	22.5	71
Asian	17	70.8	17	70.8	13	54.2	12	50.0	10	41.7	24
Black/African American	1,441	57.4	1,228	48.9	1,244	49.6	888	35.4	694	27.6	2,510
Hispanic/Latino ^c	853	52.9	790	49.0	812	50.3	610	37.8	404	25.0	1,613
Native Hawaiian/Other Pacific Islander	2	40.0	2	40.0	2	40.0	2	40.0	1	20.0	5
White	1,532	55.7	1,401	51.0	1,431	52.1	1,135	41.3	725	26.4	2,749
Multiple races	189	54.2	178	51.0	195	55.9	151	43.3	116	33.2	349
HIV-positive^d	180	36.0	110	22.0	203	40.6	103	20.6	88	17.6	500
Age at interview (yr)											
18–24	2	40.0	0	0.0	3	60.0	2	40.0	2	40.0	5
25–29	11	30.6	9	25.0	15	41.7	7	19.4	5	13.9	36
30–39	30	33.0	24	26.4	38	41.8	23	25.3	19	20.9	91
40–49	39	30.7	22	17.3	50	39.4	26	20.5	19	15.0	127
≥50	98	40.7	55	22.8	97	40.2	45	18.7	43	17.8	241
Race/ethnicity											
American Indian/Alaska Native	3	100	2	66.7	2	66.7	1	33.3	2	66.7	3
Asian	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4
Black/African American	96	41.9	53	23.1	92	40.2	44	19.2	50	21.8	229
Hispanic/Latino ^c	48	33.8	28	19.7	66	46.5	35	24.6	18	12.7	142
Native Hawaiian/Other Pacific Islander	2	100	2	100	0	0.0	0	0.0	0	0.0	2
White	28	27.5	22	21.6	42	41.2	22	21.6	17	16.7	102
Multiple races	3	16.7	3	16.7	1	5.6	1	5.6	1	5.6	18
No valid NHBS HIV test result^e	32	49.2	25	38.5	31	47.7	17	26.2	17	26.2	65
Total	4,280	54.2	3,783	47.9	3,972	50.3	2,951	37.4	2,074	26.3	7,891

Abbreviation: NHBS, National HIV Behavioral Surveillance.

^a Participants who reported oral, vaginal, or anal sex with at least 1 female main partner and at least 1 female casual partner in the 12 months before interview.

^b Participants with a valid negative NHBS HIV test result.

^c Hispanics/Latinos can be of any race.

^d Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing.

^e 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 in the 12 months before interview among females who inject drugs—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	Vaginal sex		Condomless vaginal sex		Anal sex		Condomless anal sex		Total females
	No.	%	No.	%	No.	%	No.	%	No.
HIV-negative^a	2,684	83.3	2,448	76.0	1,063	33.0	884	27.4	3,221
Age at interview (yr)									
18–24	145	89.0	137	84.0	58	35.6	48	29.4	163
25–29	364	92.4	343	87.1	166	42.1	147	37.3	394
30–39	887	92.0	817	84.8	382	39.6	317	32.9	964
40–49	644	85.8	590	78.6	264	35.2	222	29.6	751
≥50	644	67.9	561	59.1	193	20.3	150	15.8	949
Race/ethnicity									
American Indian/Alaska Native	38	70.4	34	63.0	14	25.9	13	24.1	54
Asian	9	69.2	9	69.2	3	23.1	3	23.1	13
Black/African American	678	77.0	592	67.3	238	27.0	189	21.5	880
Hispanic/Latino ^b	428	79.7	398	74.1	193	35.9	153	28.5	537
Native Hawaiian/Other Pacific Islander	8	88.9	8	88.9	6	66.7	6	66.7	9
White	1,334	88.2	1,232	81.5	529	35.0	448	29.6	1,512
Multiple races	187	87.4	174	81.3	79	36.9	71	33.2	214
HIV-positive^c	156	76.5	116	56.9	67	32.8	47	23.0	204
Age at interview (yr)									
18–24	3	75.0	3	75.0	2	50.0	0	0.0	4
25–29	15	93.8	11	68.8	6	37.5	3	18.8	16
30–39	36	92.3	27	69.2	14	35.9	8	20.5	39
40–49	59	88.1	47	70.1	30	44.8	25	37.3	67
≥50	43	55.1	28	35.9	15	19.2	11	14.1	78
Race/ethnicity									
American Indian/Alaska Native	2	100	1	50.0	1	50.0	1	50.0	2
Asian	0	.	0	.	0	.	0	.	0
Black/African American	64	68.1	45	47.9	22	23.4	18	19.1	94
Hispanic/Latino ^b	32	80.0	23	57.5	14	35.0	8	20.0	40
Native Hawaiian/Other Pacific Islander	0	.	0	.	0	.	0	.	0
White	53	84.1	45	71.4	27	42.9	18	28.6	63
Multiple races	5	100	2	40.0	3	60.0	2	40.0	5
No valid NHBS HIV test result^d	17	70.8	12	50.0	6	25.0	3	12.5	24
Total	2,857	82.8	2,576	74.7	1,136	32.9	934	27.1	3,449

Abbreviation: NHBS, National HIV Behavioral Surveillance.

^a Participants with a valid negative NHBS HIV test result.

^b Hispanics/Latinos can be of any race.

^c Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing.

^d 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 8. Sexual behavior with male sex partners in the 12 months before interview among females who inject drugs, by partner type—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	Main male partner				Casual male partner				Main and casual male partners—sex of any type ^a		Total females
	Vaginal or anal sex		Condomless vaginal or anal sex		Vaginal or anal sex		Condomless vaginal or anal sex		No.	%	
	No.	%	No.	%	No.	%	No.	%			
HIV-negative^b	2,219	68.9	2,065	64.1	1,542	47.9	1,123	34.9	1,133	35.2	3,221
Age at interview (yr)											
18–24	127	77.9	121	74.2	91	55.8	69	42.3	76	46.6	163
25–29	320	81.2	305	77.4	220	55.8	152	38.6	184	46.7	394
30–39	748	77.6	707	73.3	505	52.4	358	37.1	380	39.4	964
40–49	527	70.2	488	65.0	377	50.2	278	37.0	284	37.8	751
≥50	497	52.4	444	46.8	349	36.8	266	28.0	209	22.0	949
Race/ethnicity											
American Indian/Alaska Native	29	53.7	29	53.7	25	46.3	19	35.2	17	31.5	54
Asian	7	53.8	7	53.8	6	46.2	6	46.2	4	30.8	13
Black/African American	525	59.7	467	53.1	415	47.2	294	33.4	271	30.8	880
Hispanic/Latino ^c	348	64.8	329	61.3	250	46.6	184	34.3	183	34.1	537
Native Hawaiian/Other Pacific Islander	7	77.8	7	77.8	2	22.2	2	22.2	2	22.2	9
White	1,152	76.2	1,080	71.4	716	47.4	526	34.8	561	37.1	1,512
Multiple races	150	70.1	145	67.8	126	58.9	91	42.5	94	43.9	214
HIV-positive^d	110	53.9	83	40.7	107	52.5	65	31.9	64	31.4	204
Age at interview (yr)											
18–24	3	75.0	3	75.0	2	50.0	2	50.0	2	50.0	4
25–29	8	50.0	7	43.8	12	75.0	7	43.8	6	37.5	16
30–39	28	71.8	22	56.4	25	64.1	12	30.8	17	43.6	39
40–49	43	64.2	34	50.7	39	58.2	25	37.3	24	35.8	67
≥50	28	35.9	17	21.8	29	37.2	19	24.4	15	19.2	78
Race/ethnicity											
American Indian/Alaska Native	2	100	2	100	2	100	1	50.0	2	100	2
Asian	0	.	0	.	0	.	0	.	0	.	0
Black/African American	44	46.8	31	33.0	45	47.9	24	25.5	27	28.7	94
Hispanic/Latino ^c	18	45.0	13	32.5	23	57.5	14	35.0	8	20.0	40
Native Hawaiian/Other Pacific Islander	0	.	0	.	0	.	0	.	0	.	0
White	42	66.7	35	55.6	33	52.4	26	41.3	24	38.1	63
Multiple races	4	80.0	2	40.0	4	80.0	0	0.0	3	60.0	5
No valid NHBS HIV test result^e	12	50.0	9	37.5	11	45.8	6	25.0	6	25.0	24
Total	2,341	67.9	2,157	62.5	1,660	48.1	1,194	34.6	1,203	34.9	3,449

Abbreviation: NHBS, National HIV Behavioral Surveillance.

^a Participants who reported oral, vaginal, or anal sex with at least 1 male main partner and at least 1 male casual partner in the 12 months before interview.

^b Participants with a valid negative NHBS HIV test result.

^c Hispanics/Latinos can be of any race.

^d Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing.

^e 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. Injection drug use in the 12 months before interview, by selected drugs—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	Heroin		Speedball ^a				Powder or crack cocaine				Methamphetamine				Prescription opioids				Other drug		Total No.			
	Injected, past 12 months		Injected daily		Injected, past 12 months		Injected daily		Injected, past 12 months		Injected daily		Injected, past 12 months		Injected daily		Injected, past 12 months							
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%						
HIV-negative^b	9,574	90.2	8,079	76.1	5,622	53.0	2,753	25.9	4,697	44.2	1,916	18.0	3,707	34.9	1,505	14.2	2,192	20.6	584	5.5	965	9.1	10,617	
Gender																								
Male	6,602	90.1	5,532	75.5	4,074	55.6	2,026	27.7	3,429	46.8	1,417	19.3	2,551	34.8	1,036	14.1	1,555	21.2	407	5.6	709	9.7	7,326	
Female	2,918	90.6	2,504	77.7	1,502	46.6	705	21.9	1,233	38.3	480	14.9	1,113	34.6	444	13.8	620	19.2	171	5.3	246	7.6	3,221	
Transgender	54	77.1	43	61.4	46	65.7	22	31.4	35	50.0	19	27.1	43	61.4	25	35.7	17	24.3	6	8.6	10	14.3	70	
Age at interview (yr)																								
18–24	356	88.3	307	76.2	197	48.9	78	19.4	172	42.7	49	12.2	235	58.3	106	26.3	100	24.8	16	4.0	68	16.9	403	
25–29	1,059	91.9	918	79.7	630	54.7	238	20.7	517	44.9	160	13.9	604	52.4	257	22.3	274	23.8	61	5.3	166	14.4	1,152	
30–39	2,609	91.2	2,254	78.8	1,561	54.6	728	25.4	1,370	47.9	519	18.1	1,334	46.6	523	18.3	678	23.7	161	5.6	378	13.2	2,861	
40–49	2,138	88.0	1,810	74.5	1,342	55.2	732	30.1	1,133	46.6	508	20.9	849	34.9	357	14.7	509	20.9	139	5.7	223	9.2	2,430	
≥50	3,412	90.5	2,790	74.0	1,892	50.2	977	25.9	1,505	39.9	680	18.0	685	18.2	262	6.9	631	16.7	207	5.5	130	3.4	3,771	
Race/ethnicity																								
American Indian/Alaska Native	114	90.5	89	70.6	70	55.6	34	27.0	60	47.6	25	19.8	76	60.3	37	29.4	36	28.6	6	4.8	19	15.1	126	
Asian	33	89.2	31	83.8	18	48.6	7	18.9	14	37.8	8	21.6	15	40.5	7	18.9	7	18.9	1	2.7	5	13.5	37	
Black/African American	3,140	92.1	2,626	77.0	1,861	54.6	1,072	31.4	1,419	41.6	707	20.7	387	11.3	148	4.3	517	15.2	195	5.7	87	2.6	3,410	
Hispanic/Latino ^c	1,863	85.9	1,601	73.8	1,340	61.8	854	39.4	1,003	46.2	560	25.8	643	29.6	289	13.3	373	17.2	126	5.8	196	9.0	2,170	
Native Hawaiian/Other Pacific Islander	10	71.4	8	57.1	7	50.0	4	28.6	7	50.0	2	14.3	9	64.3	2	14.3	6	42.9	2	14.3	0	0.0	14	
White	3,903	91.0	3,330	77.7	2,045	47.7	682	15.9	1,948	45.4	543	12.7	2,255	52.6	887	20.7	1,097	25.6	227	5.3	552	12.9	4,287	
Multiple races	504	89.0	387	68.4	277	48.9	100	17.7	243	42.9	70	12.4	319	56.4	134	23.7	153	27.0	26	4.6	104	18.4	566	
HIV-positive^d	584	79.9	456	62.4	446	61.0	247	33.8	350	47.9	169	23.1	237	32.4	102	14.0	112	15.3	39	5.3	55	7.5	731	
Gender																								
Male	370	74.0	277	55.4	305	61.0	164	32.8	239	47.8	104	20.8	177	35.4	83	16.6	78	15.6	26	5.2	34	6.8	500	
Female	191	93.6	163	79.9	123	60.3	72	35.3	100	49.0	59	28.9	50	24.5	15	7.4	28	13.7	11	5.4	18	8.8	204	
Transgender	23	85.2	16	59.3	18	66.7	11	40.7	11	40.7	6	22.2	10	37.0	4	14.8	6	22.2	2	7.4	3	11.1	27	
Age at interview (yr)																								
18–24	7	77.8	6	66.7	5	55.6	3	33.3	5	55.6	1	11.1	5	55.6	2	22.2	1	11.1	0	0.0	0	0.0	9	
25–29	45	83.3	40	74.1	31	57.4	16	29.6	31	57.4	15	27.8	29	53.7	15	27.8	14	25.9	7	13.0	9	16.7	54	
30–39	112	81.2	93	67.4	88	63.8	48	34.8	77	55.8	42	30.4	75	54.3	29	21.0	20	14.5	3	2.2	19	13.8	138	
40–49	153	76.1	120	59.7	125	62.2	75	37.3	96	47.8	48	23.9	64	31.8	26	12.9	33	16.4	11	5.5	15	7.5	201	
≥50	267	81.2	197	59.9	197	59.9	105	31.9	141	42.9	63	19.1	64	19.5	30	9.1	44	13.4	18	5.5	12	3.6	329	
Race/ethnicity																								
American Indian/Alaska Native	4	66.7	2	33.3	6	100	2	33.3	3	50.0	1	16.7	4	66.7	1	16.7	0	0.0	0	0.0	1	16.7	6	
Asian	0	0.0	0	0.0	1	25.0	0	0.0	0	0.0	0	0.0	4	100	3	75.0	0	0.0	0	0.0	0	0.0	4	
Black/African American	297	88.7	224	66.9	204	60.9	112	33.4	158	47.2	73	21.8	48	14.3	16	4.8	45	13.4	21	6.3	8	2.4	335	
Hispanic/Latino ^c	132	70.2	109	58.0	133	70.7	90	47.9	97	51.6	53	28.2	52	27.7	21	11.2	26	13.8	10	5.3	18	9.6	188	
Native Hawaiian/Other Pacific Islander	2	100	2	100	2	100	1	50.0	1	50.0	1	50.0	2	100	2	100	1	50.0	1	50.0	0	0.0	2	
White	136	79.5	108	63.2	91	53.2	38	22.2	81	47.4	39	22.8	107	62.6	47	27.5	36	21.1	4	2.3	25	14.6	171	
Multiple races	13	52.0	11	44.0	9	36.0	4	16.0	10	40.0	2	8.0	20	80.0	12	48.0	4	16.0	3	12.0	3	12.0	25	
No valid NHBS HIV test result^e	78	87.6	64	71.9	50	56.2	28	31.5	37	41.6	15	16.9	32	36.0	15	16.9	17	19.1	6	6.7	5	5.6	89	
Total	10,236	89.5	8,599	75.2	6,118	53.5	3,028	26.5	5,084	44.5	2,100	18.4	3,976	34.8	1,622	14.2	2,321	20.3	629	5.5	1,025	9.0	11,437	

Abbreviation: NHBS, National HIV Behavioral Surveillance.

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

^a Heroin and cocaine being injected together.

^b Participants with a valid negative NHBS HIV test result.

^c Hispanics/Latinos can be of any race.

^d Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing.

^e 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 10. Sharing of injection equipment in the 12 months before interview among persons who inject drugs—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	Receptive sharing								Distributive sharing		Total No.
	Syringes ^a		Injection equipment ^b		Syringes to divide drugs ^c		Any ^d		Syringes ^e		
	No.	%	No.	%	No.	%	No.	%	No.	%	
HIV-negative^f	3,461	32.6	5,860	55.2	3,736	35.2	6,350	59.8	4,663	43.9	10,617
Gender											
Male	2,261	30.9	3,952	53.9	2,460	33.6	4,287	58.5	3,082	42.1	7,326
Female	1,174	36.4	1,862	57.8	1,245	38.7	2,015	62.6	1,552	48.2	3,221
Transgender	26	37.1	46	65.7	31	44.3	48	68.6	29	41.4	70
Age at interview (yr)											
18–24	192	47.6	269	66.7	189	46.9	290	72.0	240	59.6	403
25–29	507	44.0	744	64.6	495	43.0	812	70.5	650	56.4	1,152
30–39	1,129	39.5	1,782	62.3	1,122	39.2	1,922	67.2	1,484	51.9	2,861
40–49	744	30.6	1,343	55.3	875	36.0	1,448	59.6	1,056	43.5	2,430
≥50	889	23.6	1,722	45.7	1,055	28.0	1,878	49.8	1,233	32.7	3,771
Race/ethnicity											
American Indian/Alaska Native	37	29.4	69	54.8	41	32.5	77	61.1	56	44.4	126
Asian	12	32.4	19	51.4	13	35.1	20	54.1	15	40.5	37
Black/African American	777	22.8	1,569	46.0	1,002	29.4	1,698	49.8	1,127	33.0	3,410
Hispanic/Latino ^g	647	29.8	1,152	53.1	788	36.3	1,255	57.8	974	44.9	2,170
Native Hawaiian/Other Pacific Islander	2	14.3	5	35.7	4	28.6	5	35.7	4	28.6	14
White	1,798	41.9	2,703	63.1	1,697	39.6	2,927	68.3	2,234	52.1	4,287
Multiple races	185	32.7	339	59.9	190	33.6	364	64.3	249	44.0	566
HIV-positive^h	193	26.4	332	45.4	232	31.7	371	50.8	185	25.3	731
Gender											
Male	128	25.6	229	45.8	156	31.2	255	51.0	125	25.0	500
Female	54	26.5	89	43.6	64	31.4	101	49.5	50	24.5	204
Transgender	11	40.7	14	51.9	12	44.4	15	55.6	10	37.0	27
Age at interview (yr)											
18–24	4	44.4	5	55.6	5	55.6	5	55.6	3	33.3	9
25–29	25	46.3	26	48.1	23	42.6	34	63.0	21	38.9	54
30–39	42	30.4	80	58.0	48	34.8	89	64.5	39	28.3	138
40–49	48	23.9	86	42.8	63	31.3	97	48.3	47	23.4	201
≥50	74	22.5	135	41.0	93	28.3	146	44.4	75	22.8	329
Race/ethnicity											
American Indian/Alaska Native	1	16.7	1	16.7	1	16.7	1	16.7	1	16.7	6
Asian	0	0.0	1	25.0	0	0.0	1	25.0	0	0.0	4
Black/African American	77	23.0	149	44.5	102	30.4	162	48.4	81	24.2	335
Hispanic/Latino ^g	45	23.9	85	45.2	57	30.3	96	51.1	46	24.5	188
Native Hawaiian/Other Pacific Islander	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2
White	61	35.7	84	49.1	64	37.4	99	57.9	51	29.8	171
Multiple races	9	36.0	12	48.0	8	32.0	12	48.0	6	24.0	25
No valid NHBS HIV test resultⁱ	22	24.7	37	41.6	20	22.5	39	43.8	23	25.8	89
Total	3,676	32.1	6,229	54.5	3,988	34.9	6,760	59.1	4,871	42.6	11,437

Abbreviation: NHBS, National HIV Behavioral Surveillance.

^a Used a syringe or needle that had already been used by someone else for injection.

^b 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.

^c Divided a drug solution by using a syringe that had already been used by someone else for injection.

^d Used a syringe or 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.

^e Participants who gave their syringe or needle to someone else to use after they had already used it for injection.

^f Participants with a valid negative NHBS HIV test result.

^g Hispanics/Latinos can be of any race.

^h Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing.

ⁱ 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 11a. Receipt of HIV prevention materials and services in the 12 months before interview among persons who inject drugs—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	Syringes from SSPs		Syringes from pharmacy		Injection equipment from SSPs		Free condoms ^a		Individual- or group-level intervention ^b		PrEP awareness ^c		PrEP use ^d		Total No.
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
HIV-negative^e	5,605	52.8	3,305	31.1	5,153	48.5	5,521	52.0	3,256	30.7	2,732	25.7	120	1.1	10,617
Gender															
Male	3,793	51.8	2,210	30.2	3,494	47.7	3,755	51.3	2,176	29.7	1,784	24.4	65	0.9	7,326
Female	1,771	55.0	1,076	33.4	1,621	50.3	1,726	53.6	1,054	32.7	912	28.3	49	1.5	3,221
Transgender	41	58.6	19	27.1	38	54.3	40	57.1	26	37.1	36	51.4	6	8.6	70
Age at interview (yr)															
18–24	229	56.8	159	39.5	206	51.1	206	51.1	95	23.6	120	29.8	7	1.7	403
25–29	707	61.4	477	41.4	666	57.8	611	53.0	329	28.6	398	34.5	13	1.1	1,152
30–39	1,730	60.5	1,010	35.3	1,621	56.7	1,554	54.3	858	30.0	907	31.7	37	1.3	2,861
40–49	1,329	54.7	759	31.2	1,226	50.5	1,271	52.3	817	33.6	631	26.0	33	1.4	2,430
≥50	1,610	42.7	900	23.9	1,434	38.0	1,879	49.8	1,157	30.7	676	17.9	30	0.8	3,771
Race/ethnicity															
American Indian/Alaska Native	93	73.8	25	19.8	84	66.7	74	58.7	37	29.4	29	23.0	3	2.4	126
Asian	22	59.5	10	27.0	22	59.5	19	51.4	16	43.2	13	35.1	1	2.7	37
Black/African American	1,173	34.4	652	19.1	1,034	30.3	1,728	50.7	1,066	31.3	743	21.8	25	0.7	3,410
Hispanic/Latino ^f	1,311	60.4	680	31.3	1,225	56.5	1,261	58.1	762	35.1	480	22.1	30	1.4	2,170
Native Hawaiian/Other Pacific Islander	8	57.1	8	57.1	8	57.1	10	71.4	4	28.6	3	21.4	0	0.0	14
White	2,646	61.7	1,713	40.0	2,450	57.1	2,108	49.2	1,191	27.8	1,266	29.5	53	1.2	4,287
Multiple races	347	61.3	214	37.8	325	57.4	315	55.7	178	31.4	196	34.6	8	1.4	566
HIV-positive^g	387	52.9	173	23.7	339	46.4	536	73.3	333	45.6	—	—	—	—	731
Gender															
Male	269	53.8	126	25.2	232	46.4	370	74.0	222	44.4	—	—	—	—	500
Female	103	50.5	41	20.1	93	45.6	146	71.6	95	46.6	—	—	—	—	204
Transgender	15	55.6	6	22.2	14	51.9	20	74.1	16	59.3	—	—	—	—	27
Age at interview (yr)															
18–24	3	33.3	2	22.2	3	33.3	4	44.4	4	44.4	—	—	—	—	9
25–29	39	72.2	16	29.6	35	64.8	43	79.6	23	42.6	—	—	—	—	54
30–39	80	58.0	39	28.3	73	52.9	94	68.1	61	44.2	—	—	—	—	138
40–49	120	59.7	56	27.9	108	53.7	147	73.1	87	43.3	—	—	—	—	201
≥50	145	44.1	60	18.2	120	36.5	248	75.4	158	48.0	—	—	—	—	329
Race/ethnicity															
American Indian/Alaska Native	5	83.3	1	16.7	5	83.3	5	83.3	4	66.7	—	—	—	—	6
Asian	3	75.0	2	50.0	2	50.0	2	50.0	3	75.0	—	—	—	—	4
Black/African American	121	36.1	52	15.5	102	30.4	237	70.7	159	47.5	—	—	—	—	335
Hispanic/Latino ^f	122	64.9	48	25.5	107	56.9	149	79.3	87	46.3	—	—	—	—	188
Native Hawaiian/Other Pacific Islander	2	100	0	0.0	2	100	2	100	2	100	—	—	—	—	2
White	120	70.2	59	34.5	111	64.9	124	72.5	70	40.9	—	—	—	—	171
Multiple races	14	56.0	11	44.0	10	40.0	17	68.0	8	32.0	—	—	—	—	25
No valid NHBS HIV test result^h	52	58.4	23	25.8	50	56.2	47	52.8	30	33.7	—	—	—	—	89
Total	6,044	52.8	3,501	30.6	5,542	48.5	6,104	53.4	3,619	31.6	—	—	—	—	11,437

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

^a Excludes condoms received from friends, relatives, or sex partners.

^b Individual-level intervention defined as a one-on-one conversation with an outreach worker, a counselor, or a prevention program worker about ways to prevent HIV. Group-level intervention defined as a small-group discussion that is part of an organized session about ways to prevent HIV; excludes informal discussions with friends. Conversations that were part of obtaining an HIV test were excluded.

^c 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.

^d Took PrEP at any point in the 12 months before interview to reduce the risk of getting HIV.

^e Participants with a valid negative NHBS HIV test result.

^f Hispanics/Latinos can be of any race.

^g Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing.

^h 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 11b. Receipt of HIV prevention materials and services in the 12 months before interview among persons who inject drugs, by area of residence—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	Syringes from SSPs		Syringes from pharmacy		Injection equipment from SSPs		Free condoms ^a		Individual- or group-level intervention ^b		PrEP awareness ^c		PrEP use ^d		Total No.
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
HIV-negative^c															
Atlanta, GA	218	65.1	104	31.0	182	54.3	186	55.5	94	28.1	72	21.5	0	0.0	335
Baltimore, MD	306	59.9	103	20.2	262	51.3	290	56.8	221	43.2	138	27.0	6	1.2	511
Boston, MA	337	80.6	206	49.3	306	73.2	277	66.3	207	49.5	159	38.0	7	1.7	418
Chicago, IL	312	62.3	267	53.3	280	55.9	269	53.7	201	40.1	132	26.3	5	1.0	501
Dallas, TX	10	2.0	184	37.2	12	2.4	170	34.3	91	18.4	69	13.9	4	0.8	495
Denver, CO	439	77.4	207	36.5	401	70.7	316	55.7	194	34.2	228	40.2	11	1.9	567
Detroit, MI	179	32.9	120	22.1	171	31.4	191	35.1	129	23.7	71	13.1	5	0.9	544
Houston, TX	4	0.9	232	51.9	7	1.6	150	33.6	77	17.2	109	24.4	4	0.9	447
Los Angeles, CA	359	69.4	245	47.4	319	61.7	267	51.6	141	27.3	83	16.1	5	1.0	517
Memphis, TN	9	1.7	148	28.4	1	0.2	66	12.6	60	11.5	31	5.9	1	0.2	522
Miami, FL	178	40.4	25	5.7	171	38.8	239	54.2	111	25.2	132	29.9	0	0.0	441
Nassau-Suffolk, NY	21	14.6	73	50.7	15	10.4	76	52.8	47	32.6	42	29.2	2	1.4	144
New Orleans, LA	308	57.7	89	16.7	281	52.6	290	54.3	89	16.7	201	37.6	6	1.1	534
New York City, NY	349	74.4	168	35.8	331	70.6	302	64.4	259	55.2	172	36.7	20	4.3	469
Newark, NJ	149	32.0	114	24.5	135	29.0	222	47.6	157	33.7	38	8.2	1	0.2	466
Philadelphia, PA	427	73.6	132	22.8	412	71.0	328	56.6	242	41.7	232	40.0	17	2.9	580
Portland, OR	439	84.6	209	40.3	403	77.6	301	58.0	97	18.7	82	15.8	2	0.4	519
San Diego, CA	158	65.3	80	33.1	129	53.3	130	53.7	49	20.2	45	18.6	1	0.4	242
San Francisco, CA	378	93.1	145	35.7	368	90.6	270	66.5	156	38.4	221	54.4	9	2.2	406
San Juan, PR	230	53.0	135	31.1	228	52.5	277	63.8	139	32.0	26	6.0	2	0.5	434
Seattle, WA	445	84.8	140	26.7	420	80.0	332	63.2	136	25.9	139	26.5	5	1.0	525
Virginia Beach, VA	5	1.0	149	28.4	3	0.6	260	49.6	143	27.3	191	36.5	3	0.6	524
Washington, DC	345	72.5	30	6.3	316	66.4	312	65.5	216	45.4	119	25.0	4	0.8	476

Table 11b. Receipt of HIV prevention materials and services in the 12 months before interview among persons who inject drugs, by area of residence—National HIV Behavioral Surveillance, 23 U.S. cities, 2018 (cont)

	Syringes from SSPs		Syringes from pharmacy		Injection equipment from SSPs		Free condoms ^a		Individual- or group-level intervention ^b		PrEP awareness ^c		PrEP use ^d		Total No.
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
HIV-positive^d															
Atlanta, GA	22	53.7	11	26.8	15	36.6	31	75.6	14	34.1	—	—	—	—	41
Baltimore, MD	31	54.4	4	7.0	26	45.6	42	73.7	37	64.9	—	—	—	—	57
Boston, MA	28	75.7	18	48.6	25	67.6	29	78.4	23	62.2	—	—	—	—	37
Chicago, IL	4	80.0	4	80.0	3	60.0	3	60.0	2	40.0	—	—	—	—	5
Dallas, TX	0	0.0	10	43.5	1	4.3	14	60.9	9	39.1	—	—	—	—	23
Denver, CO	12	85.7	8	57.1	10	71.4	14	100	3	21.4	—	—	—	—	14
Detroit, MI	4	33.3	1	8.3	2	16.7	6	50.0	4	33.3	—	—	—	—	12
Houston, TX	0	0.0	30	49.2	0	0.0	42	68.9	22	36.1	—	—	—	—	61
Los Angeles, CA	7	77.8	4	44.4	7	77.8	7	77.8	4	44.4	—	—	—	—	9
Memphis, TN	0	0.0	5	16.7	0	0.0	17	56.7	11	36.7	—	—	—	—	30
Miami, FL	42	54.5	0	0.0	39	50.6	54	70.1	23	29.9	—	—	—	—	77
Nassau-Suffolk, NY	0	0.0	1	33.3	0	0.0	0	0.0	1	33.3	—	—	—	—	3
New Orleans, LA	12	54.5	2	9.1	10	45.5	17	77.3	7	31.8	—	—	—	—	22
New York City, NY	43	87.8	11	22.4	40	81.6	41	83.7	31	63.3	—	—	—	—	49
Newark, NJ	16	30.8	11	21.2	11	21.2	32	61.5	24	46.2	—	—	—	—	52
Philadelphia, PA	38	97.4	4	10.3	36	92.3	30	76.9	21	53.8	—	—	—	—	39
Portland, OR	7	87.5	3	37.5	6	75.0	3	37.5	3	37.5	—	—	—	—	8
San Diego, CA	4	66.7	3	50.0	4	66.7	6	100	2	33.3	—	—	—	—	6
San Francisco, CA	38	76.0	18	36.0	34	68.0	35	70.0	21	42.0	—	—	—	—	50
San Juan, PR	29	50.9	14	24.6	26	45.6	50	87.7	29	50.9	—	—	—	—	57
Seattle, WA	22	88.0	5	20.0	19	76.0	22	88.0	12	48.0	—	—	—	—	25
Virginia Beach, VA	0	0.0	3	30.0	0	0.0	7	70.0	8	80.0	—	—	—	—	10
Washington, DC	28	63.6	3	6.8	25	56.8	34	77.3	22	50.0	—	—	—	—	44

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

^a Excludes condoms received from friends, relatives, or sex partners.

^b Individual-level intervention defined as a one-on-one conversation with an outreach worker, a counselor, or a prevention program worker about ways to prevent HIV. Group-level intervention defined as a small-group discussion that is part of an organized session about ways to prevent HIV; excludes informal discussions with friends. Conversations that were part of obtaining an HIV test were excluded.

^c 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.

^d Took PrEP at any point in the 12 months before interview to reduce the risk of getting HIV.

^e Participants with a valid negative NHBS HIV test result.

^f Hispanics/Latinos can be of any race.

^g Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing.

Table 12. Diagnosis of sexually transmitted infections among persons who inject drugs—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	Diagnosis during the 12 months preceding interview								Diagnosis, ever				Total No.
	Any bacterial STI ^a		Chlamydia		Gonorrhea		Syphilis		Genital warts		Genital herpes		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
HIV-negative^b	560	5.3	285	2.7	267	2.5	165	1.6	359	3.4	440	4.1	10,617
Gender													
Male	298	4.1	128	1.7	156	2.1	94	1.3	173	2.4	215	2.9	7,326
Female	255	7.9	152	4.7	108	3.4	69	2.1	182	5.7	224	7.0	3,221
Transgender	7	10.0	5	7.1	3	4.3	2	2.9	4	5.7	1	1.4	70
Age at interview (yr)													
18–24	38	9.4	26	6.5	19	4.7	1	0.2	7	1.7	20	5.0	403
25–29	75	6.5	44	3.8	44	3.8	9	0.8	19	1.6	44	3.8	1,152
30–39	159	5.6	99	3.5	66	2.3	37	1.3	96	3.4	103	3.6	2,861
40–49	129	5.3	65	2.7	69	2.8	38	1.6	107	4.4	97	4.0	2,430
≥50	159	4.2	51	1.4	69	1.8	80	2.1	130	3.4	176	4.7	3,771
Race/ethnicity													
American Indian/Alaska Native	8	6.3	8	6.3	3	2.4	1	0.8	3	2.4	6	4.8	126
Asian	2	5.4	2	5.4	0	0.0	0	0.0	0	0.0	2	5.4	37
Black/African American	183	5.4	76	2.2	90	2.6	71	2.1	84	2.5	118	3.5	3,410
Hispanic/Latino ^c	127	5.9	61	2.8	57	2.6	48	2.2	54	2.5	93	4.3	2,170
Native Hawaiian/Other Pacific Islander	4	28.6	1	7.1	3	21.4	0	0.0	1	7.1	1	7.1	14
White	208	4.9	119	2.8	101	2.4	43	1.0	189	4.4	194	4.5	4,287
Multiple races	28	4.9	18	3.2	13	2.3	2	0.4	28	4.9	26	4.6	566
HIV-positive^d	87	11.9	36	4.9	43	5.9	49	6.7	48	6.6	81	11.1	731
Gender													
Male	57	11.4	18	3.6	29	5.8	36	7.2	23	4.6	44	8.8	500
Female	26	12.7	17	8.3	11	5.4	13	6.4	21	10.3	33	16.2	204
Transgender	4	14.8	1	3.7	3	11.1	0	0.0	4	14.8	4	14.8	27
Age at interview (yr)													
18–24	3	33.3	1	11.1	1	11.1	2	22.2	0	0.0	3	33.3	9
25–29	15	27.8	5	9.3	7	13.0	10	18.5	1	1.9	3	5.6	54
30–39	15	10.9	8	5.8	7	5.1	7	5.1	16	11.6	16	11.6	138
40–49	27	13.4	14	7.0	14	7.0	14	7.0	12	6.0	23	11.4	201
≥50	27	8.2	8	2.4	14	4.3	16	4.9	19	5.8	36	10.9	329
Race/ethnicity													
American Indian/Alaska Native	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	6
Asian	2	50.0	2	50.0	1	25.0	1	25.0	1	25.0	1	25.0	4
Black/African American	30	9.0	10	3.0	13	3.9	16	4.8	18	5.4	30	9.0	335
Hispanic/Latino ^c	16	8.5	7	3.7	5	2.7	12	6.4	12	6.4	25	13.3	188
Native Hawaiian/Other Pacific Islander	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2
White	34	19.9	14	8.2	20	11.7	18	10.5	14	8.2	21	12.3	171
Multiple races	5	20.0	3	12.0	4	16.0	2	8.0	3	12.0	4	16.0	25
No valid NHBS HIV test result^e	6	6.7	2	2.2	4	4.5	2	2.2	8	9.0	7	7.9	89
Total	653	5.7	323	2.8	314	2.7	216	1.9	415	3.6	528	4.6	11,437

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

^aAny bacterial STI includes having received a diagnosis of gonorrhea, chlamydia, or syphilis in the 12 months before interview.^bParticipants with a valid negative NHBS HIV test result.^cHispanics/Latinos can be of any race.^dParticipants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing.^eParticipants 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. Lifetime testing for, and diagnosis of, hepatitis C among persons who inject drugs—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	HCV testing		HCV diagnosis ^a		Total No.
	No.	%	No.	%	
HIV-negative^b	8,459	79.7	4,612	43.4	10,617
Gender					
Male	5,778	78.9	3,147	43.0	7,326
Female	2,623	81.4	1,438	44.6	3,221
Transgender	58	82.9	27	38.6	70
Age at interview (yr)					
18–24	261	64.8	98	24.3	403
25–29	893	77.5	393	34.1	1,152
30–39	2,308	80.7	1,203	42.0	2,861
40–49	1,947	80.1	1,053	43.3	2,430
≥50	3,050	80.9	1,865	49.5	3,771
Race/ethnicity					
American Indian/Alaska Native	110	87.3	61	48.4	126
Asian	27	73.0	15	40.5	37
Black/African American	2,535	74.3	1,205	35.3	3,410
Hispanic/Latino ^c	1,716	79.1	999	46.0	2,170
Native Hawaiian/Other Pacific Islander	9	64.3	2	14.3	14
White	3,587	83.7	2,073	48.4	4,287
Multiple races	470	83.0	254	44.9	566
HIV-positive^d	591	80.8	392	53.6	731
Gender					
Male	405	81.0	266	53.2	500
Female	164	80.4	112	54.9	204
Transgender	22	81.5	14	51.9	27
Age at interview (yr)					
18–24	8	88.9	6	66.7	9
25–29	46	85.2	26	48.1	54
30–39	113	81.9	64	46.4	138
40–49	161	80.1	103	51.2	201
≥50	263	79.9	193	58.7	329
Race/ethnicity					
American Indian/Alaska Native	6	100	5	83.3	6
Asian	3	75.0	1	25.0	4
Black/African American	249	74.3	155	46.3	335
Hispanic/Latino ^c	154	81.9	109	58.0	188
Native Hawaiian/Other Pacific Islander	2	100	1	50.0	2
White	156	91.2	109	63.7	171
Multiple races	21	84.0	12	48.0	25
No valid NHBS HIV test result^e	67	75.3	39	43.8	89
Total	9,117	79.7	5,043	44.1	11,437

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

^a Self-reported diagnosis.

^b Participants with a valid negative NHBS HIV test result.

^c Hispanics/Latinos can be of any race.

^d Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing.

^e 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 14. 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, 23 U.S. cities, 2018

	Used drug	
	No.	%
HIV-negative^a		
Binge drinking (past 30 days) ^b	2,875	27.1
Any noninjection drugs (excludes binge drinking)	8,392	79.0
Cocaine	3,672	34.6
Crack	4,682	44.1
Downers ^c	4,455	42.0
Ecstasy	1,287	12.1
Heroin	4,680	44.1
Marijuana	6,032	56.8
Methamphetamine	3,599	33.9
Prescription opioids ^d	3,552	33.5
HIV-positive^e		
Binge drinking (past 30 days) ^b	164	22.4
Any noninjection drugs (excludes binge drinking)	529	72.4
Cocaine	215	29.4
Crack	319	43.6
Downers ^c	224	30.6
Ecstasy	72	9.8
Heroin	250	34.2
Marijuana	364	49.8
Methamphetamine	215	29.4
Prescription opioids ^d	175	23.9
No valid NHBS HIV test result^f		
Binge drinking (past 30 days) ^b	20	22.5
Any noninjection drugs (excludes binge drinking)	63	70.8
Cocaine	28	31.5
Crack	30	33.7
Downers ^c	32	36.0
Ecstasy	9	10.1
Heroin	31	34.8
Marijuana	41	46.1
Methamphetamine	29	32.6
Prescription opioids ^d	27	30.3

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 = 10,617; HIV-positive participants: n = 731; participants without a valid NHBS HIV test result: n = 89. Responses are not mutually exclusive; percentages may not add to 100.

^a Participants with a valid negative NHBS HIV test result.

^b 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.

^c Benzodiazepines, such as Valium, Ativan, or Xanax.

^d Painkillers, such as Oxycontin, Vicodin, morphine, or Percocet.

^e Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing.

^f 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 15. Additional outcomes among persons who inject drugs—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	Sexual behaviors						Substance use behaviors					
	Number of opposite sex partners Median (Q1–Q3)	Exchange sex ^a		Condomless sex with an HIV-discordant partner at last sex ^b		Total No.	Substance use disorder treatment ^c		Safe syringe disposal only ^d		Years since first injection Median (Q1–Q3)	Total No.
		No.	%	No.	%		No.	%	No.	%		
HIV-negative^e	2(1-4)	2,777	26.3	3,445	32.7	10,547	4,602	43.3	2,154	20.3	17(7-31)	10,617
Gender												
Male	2(1-3)	1,648	22.5	2,420	33.0	7,326	3,097	42.3	1,420	19.4	19(8-33)	7,326
Female	2(1-5)	1,129	35.1	1,025	31.8	3,221	1,479	45.9	719	22.3	14(6-25)	3,221
Transgender ^f	—	—	—	—	—	—	26	37.1	15	21.4	15(7-27)	70
Age at interview (yr)												
18–24	2(1-5)	80	20.4	160	40.7	393	196	48.6	77	19.1	4(2-7)	403
25–29	2(1-5)	253	22.1	425	37.1	1,145	545	47.3	252	21.9	7(4-10)	1,152
30–39	2(1-4)	686	24.2	1,001	35.2	2,840	1,328	46.4	610	21.3	11(5-16)	2,861
40–49	2(1-4)	714	29.5	757	31.3	2,417	1,023	42.1	516	21.2	19(11-26)	2,430
≥50	1(0-3)	1,044	27.8	1,102	29.4	3,752	1,510	40.0	699	18.5	35(25-43)	3,771
Race/ethnicity												
American Indian/Alaska Native	2(1-4)	27	21.6	36	28.8	125	36	28.6	48	38.1	21(8-31)	126
Asian	2(1-4)	9	24.3	13	35.1	37	15	40.5	12	32.4	13(4-20)	37
Black/African American	2(1-4)	1,141	33.7	1,087	32.1	3,390	1,339	39.3	481	14.1	28(13-40)	3,410
Hispanic/Latino ^g	1(1-3)	561	26.1	640	29.8	2,150	991	45.7	466	21.5	17(7-27)	2,170
Native Hawaiian/Other Pacific Islander	2(1-3)	2	14.3	7	50.0	14	5	35.7	4	28.6	15(5-23)	14
White	2(1-4)	883	20.7	1,475	34.6	4,261	1,965	45.8	992	23.1	12(6-22)	4,287
Multiple races	2(1-5)	152	27.0	185	32.9	563	246	43.5	150	26.5	13(6-24)	566

Table 15. Additional outcomes among persons who inject drugs—National HIV Behavioral Surveillance, 23 U.S. cities, 2018 (cont)

	Sexual behaviors						Substance use behaviors					
	Number of opposite sex partners Median (Q1–Q3)	Exchange sex ^a		Condomless sex with an HIV-discordant partner at last sex ^b		Total No.	Substance use disorder treatment ^c		Safe syringe disposal only ^d		Years since first injection Median (Q1–Q3)	Total No.
		No.	%	No.	%		No.	%	No.	%		
HIV-positive^h	1(0-3)	263	37.4	210	29.8	704	304	41.6	169	23.1	23(11-35)	731
Gender												
Male	1(0-3)	165	33.0	136	27.2	500	203	40.6	105	21.0	24(12-37)	500
Female	2(1-8)	98	48.0	74	36.3	204	85	41.7	59	28.9	22(10-32)	204
Transgender ^f	—	—	—	—	—	—	16	59.3	5	18.5	21(11-31)	27
Age at interview (yr)												
18–24	2(1-10)	5	55.6	3	33.3	9	4	44.4	0	0.0	5(4-7)	9
25–29	2(0-6)	26	50.0	19	36.5	52	27	50.0	18	33.3	8(5-10)	54
30–39	1(0-4)	55	42.3	54	41.5	130	63	45.7	35	25.4	13(8-17)	138
40–49	1(0-4)	73	37.6	67	34.5	194	73	36.3	45	22.4	21(12-27)	201
≥50	1(0-3)	104	32.6	67	21.0	319	137	41.6	71	21.6	36(28-42)	329
Race/ethnicity												
American Indian/Alaska Native	10(4-20)	3	60.0	1	20.0	5	3	50.0	4	66.7	33(17-41)	6
Asian	0(0-0)	0	0.0	3	75.0	4	0	0.0	2	50.0	6(2.5-19)	4
Black/African American	1(0-4)	124	38.4	82	25.4	323	131	39.1	59	17.6	28(16-39)	335
Hispanic/Latino ^g	1(0-3)	60	33.0	55	30.2	182	92	48.9	41	21.8	21(11-33)	188
Native Hawaiian/Other Pacific Islander	1(1-1)	0	0.0	0	0.0	2	0	0.0	2	100	26(22-29)	2
White	1(0-3.5)	67	40.6	66	40.0	165	71	41.5	54	31.6	17(9-28)	171
Multiple races	0(0-1)	9	39.1	3	13.0	23	7	28.0	7	28.0	10(6-25)	25
No valid NHBS HIV test resultⁱ	1(0-4)	19	21.3	28	31.5	89	39	43.8	26	29.2	22(9-32)	89
Total	2(1-4)	3,059	27.0	3,683	32.5	11,340	4,945	43.2	2,349	20.5	17(8-31)	11,437

Abbreviations: Q, quartile; NHBS, National HIV Behavioral Surveillance; SSP, syringe services program [footnotes only].

Note. NHBS sexual behavior questions assume anatomy based on reported gender (male or female). These questions are not asked of transgender participants. Consequently, transgender participants are not included in calculation of sexual behavior outcomes in this table.

^a For females, “exchange sex” refers to receiving money or drugs from a male casual partner in exchange for sex. For 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.

^b “Condomless sex” refers to whether the participant reported engaging in vaginal or anal sex without a condom at any time during his or her most recent sexual encounter with an opposite-sex partner. “HIV-discordant partner” refers to a partner of different or unknown HIV status.

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

^d 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.

^e Participants with a valid negative NHBS HIV test result.

^f Sexual behavior data not available for transgender participants.

^g Hispanics/Latinos can be of any race.

^h Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing.

ⁱ 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 16a. Opioid use–related outcomes among persons who reported injection or noninjection use of opioids—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	Medication-assisted treatment (MAT)								Total No.
	Hooked on opioids before first injection		Used MAT ^a		Unmet need for MAT ^b		Nonfatal opioid overdose ^c		
	No.	%	No.	%	No.	%	No.	%	
HIV-negative^d	4,208	41.2	5,480	53.7	2,876	28.2	2,879	28.2	10,207
Gender									
Male	2,730	38.8	3,689	52.4	1,967	27.9	1,944	27.6	7,044
Female	1,457	47.0	1,763	56.9	895	28.9	916	29.5	3,100
Transgender	21	33.3	28	44.4	14	22.2	19	30.2	63
Age at interview (yr)									
18–24	191	49.4	197	50.9	118	30.5	155	40.1	387
25–29	685	61.6	634	57.0	329	29.6	400	36.0	1,112
30–39	1,552	56.2	1,611	58.3	807	29.2	908	32.9	2,764
40–49	902	38.9	1,226	52.9	670	28.9	677	29.2	2,319
≥50	878	24.2	1,812	50.0	952	26.3	739	20.4	3,625
Race/ethnicity									
American Indian/Alaska Native	46	39.3	58	49.6	33	28.2	44	37.6	117
Asian	18	52.9	19	55.9	8	23.5	12	35.3	34
Black/African American	853	25.7	1,530	46.1	926	27.9	703	21.2	3,319
Hispanic/Latino ^e	783	37.0	1,202	56.8	643	30.4	584	27.6	2,116
Native Hawaiian/Other Pacific Islander	5	38.5	4	30.8	2	15.4	3	23.1	13
White	2,254	55.4	2,372	58.3	1,119	27.5	1,355	33.3	4,070
Multiple races	247	46.5	289	54.4	144	27.1	174	32.8	531
HIV-positive^f	188	28.1	334	50.0	166	24.9	172	25.7	668
Gender									
Male	115	26.0	221	50.0	105	23.8	121	27.4	442
Female	66	32.8	101	50.2	54	26.9	47	23.4	201
Transgender	7	28.0	12	48.0	7	28.0	4	16.0	25
Age at interview (yr)									
18–24	2	28.6	3	42.9	2	28.6	1	14.3	7
25–29	22	44.0	26	52.0	11	22.0	17	34.0	50
30–39	54	43.5	62	50.0	28	22.6	42	33.9	124
40–49	55	29.9	93	50.5	51	27.7	52	28.3	184
≥50	55	18.2	150	49.5	74	24.4	60	19.8	303
Race/ethnicity									
American Indian/Alaska Native	2	33.3	3	50.0	1	16.7	1	16.7	6
Asian	0	0.0	0	0.0	0	0.0	0	0.0	1
Black/African American	80	25.2	142	44.8	79	24.9	66	20.8	317
Hispanic/Latino ^e	47	26.1	100	55.6	48	26.7	44	24.4	180
Native Hawaiian/Other Pacific Islander	0	0.0	0	0.0	0	0.0	1	50.0	2
White	53	36.3	82	56.2	31	21.2	54	37.0	146
Multiple races	6	37.5	7	43.8	7	43.8	6	37.5	16
No valid NHBS HIV test result^g	28	33.3	46	54.8	27	32.1	19	22.6	84
Total	4,424	40.4	5,860	53.5	3,069	28.0	3,070	28.0	10,959

Abbreviation: 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.

^a Used medicines, such as methadone or buprenorphine, to treat drug use in the 12 months before interview.

^b Tried but unable to obtain medicines, such as methadone or buprenorphine, to treat drug use in the 12 months before interview.

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

^d Participants with a valid negative NHBS HIV test result.

^e Hispanics/Latinos can be of any race.

^f Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing.

^g 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 16b. Opioid use–related outcomes among persons who reported injection or noninjection use of opioids, by area of residence—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	Medication-assisted treatment (MAT)								Total No.
	Hooked on opioids before first injection		Used MAT ^a		Unmet need for MAT ^b		Nonfatal opioid overdose ^c		
	No.	%	No.	%	No.	%	No.	%	
HIV-negative^d									
Atlanta, GA	136	41.6	130	39.8	96	29.4	100	30.6	327
Baltimore, MD	222	43.6	356	69.9	132	25.9	167	32.8	509
Boston, MA	242	59.8	300	74.1	126	31.1	198	48.9	405
Chicago, IL	147	29.3	327	65.3	136	27.1	163	32.5	501
Dallas, TX	141	29.0	175	36.0	154	31.7	76	15.6	486
Denver, CO	264	52.1	293	57.8	142	28.0	157	31.0	507
Detroit, MI	186	34.6	290	54.0	151	28.1	104	19.4	537
Houston, TX	142	37.3	118	31.0	87	22.8	60	15.7	381
Los Angeles, CA	146	31.4	283	60.9	108	23.2	123	26.5	465
Memphis, TN	271	55.8	157	32.3	99	20.4	133	27.4	486
Miami, FL	231	53.8	173	40.3	131	30.5	158	36.8	429
Nassau-Suffolk, NY	60	42.3	79	55.6	50	35.2	37	26.1	142
New Orleans, LA	275	52.2	228	43.3	192	36.4	188	35.7	527
New York City, NY	143	30.8	376	80.9	133	28.6	121	26.0	465
Newark, NJ	179	38.6	272	58.6	144	31.0	112	24.1	464
Philadelphia, PA	373	64.6	395	68.5	189	32.8	253	43.8	577
Portland, OR	214	44.5	283	58.8	149	31.0	137	28.5	481
San Diego, CA	79	36.7	119	55.3	57	26.5	51	23.7	215
San Francisco, CA	119	32.6	222	60.8	67	18.4	106	29.0	365
San Juan, PR	172	39.7	155	35.8	101	23.3	62	14.3	433
Seattle, WA	221	43.6	282	55.6	122	24.1	133	26.2	507
Virginia Beach, VA	153	29.3	204	39.1	188	36.0	119	22.8	522
Washington, DC	92	19.3	263	55.3	122	25.6	121	25.4	476
HIV-positive^e									
Atlanta, GA	11	30.6	10	27.8	13	36.1	8	22.2	36
Baltimore, MD	10	17.9	42	75.0	14	25.0	10	17.9	56
Boston, MA	13	37.1	27	77.1	11	31.4	19	54.3	35
Chicago, IL	0	0.0	3	60.0	3	60.0	1	20.0	5
Dallas, TX	5	22.7	9	40.9	4	18.2	3	13.6	22
Denver, CO	2	16.7	10	83.3	2	16.7	4	33.3	12
Detroit, MI	2	18.2	2	18.2	2	18.2	3	27.3	11
Houston, TX	14	28.6	10	20.4	11	22.4	9	18.4	49
Los Angeles, CA	0	0.0	4	66.7	0	0.0	2	33.3	6
Memphis, TN	8	29.6	5	18.5	2	7.4	6	22.2	27
Miami, FL	33	44.0	25	33.3	16	21.3	27	36.0	75
Nassau-Suffolk, NY	1	33.3	1	33.3	0	0.0	2	66.7	3
New Orleans, LA	7	36.8	6	31.6	4	21.1	3	15.8	19
New York City, NY	12	25.0	39	81.3	9	18.8	5	10.4	48
Newark, NJ	12	23.5	30	58.8	16	31.4	10	19.6	51
Philadelphia, PA	23	59.0	22	56.4	14	35.9	21	53.8	39
Portland, OR	1	14.3	5	71.4	2	28.6	1	14.3	7
San Diego, CA	2	40.0	2	40.0	2	40.0	2	40.0	5
San Francisco, CA	3	9.7	14	45.2	5	16.1	5	16.1	31
San Juan, PR	12	21.1	26	45.6	17	29.8	10	17.5	57
Seattle, WA	7	33.3	10	47.6	6	28.6	10	47.6	21
Virginia Beach, VA	4	40.0	4	40.0	1	10.0	3	30.0	10
Washington, DC	6	14.0	28	65.1	12	27.9	8	18.6	43

Abbreviation: 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.

^a Used medicines, such as methadone or buprenorphine, to treat drug use in the 12 months before interview.

^b Tried but unable to obtain medicines, such as methadone or buprenorphine, to treat drug use in the 12 months before interview.

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

^d Participants with a valid negative NHBS HIV test result.

^e Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing.

Table 17. Receipt of HIV care and treatment among self-reported HIV-positive persons who inject drugs—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	Visited health care provider about HIV						Currently taking anti-HIV medicines		Total No.
	Ever		Within 1 month after diagnosis		During past 6 months		No.	%	
	No.	%	No.	%	No.	%	No.	%	
Gender									
Male	359	90.9	183	46.3	294	74.4	278	70.4	395
Female	142	87.7	74	45.7	113	69.8	105	64.8	162
Transgender	18	94.7	11	57.9	17	89.5	18	94.7	19
Age at interview (yr)									
18–24	3	50.0	2	33.3	3	50.0	1	16.7	6
25–29	34	82.9	24	58.5	28	68.3	24	58.5	41
30–39	85	82.5	46	44.7	69	67.0	61	59.2	103
40–49	145	91.2	83	52.2	117	73.6	109	68.6	159
≥50	252	94.4	113	42.3	207	77.5	206	77.2	267
Race/ethnicity									
American Indian/Alaska Native	7	100	5	71.4	7	100	7	100	7
Asian	4	100	3	75.0	3	75.0	3	75.0	4
Black/African American	243	92.0	123	46.6	197	74.6	194	73.5	264
Hispanic/Latino ^a	127	88.2	60	41.7	103	71.5	101	70.1	144
Native Hawaiian/Other Pacific Islander	2	100	0	0.0	2	100	2	100	2
White	115	89.1	64	49.6	95	73.6	79	61.2	129
Multiple races	21	80.8	13	50.0	17	65.4	15	57.7	26
City									
Atlanta, GA	27	79.4	8	23.5	17	50.0	17	50.0	34
Baltimore, MD	41	95.3	23	53.5	34	79.1	35	81.4	43
Boston, MA	18	81.8	14	63.6	17	77.3	17	77.3	22
Chicago, IL	11	100	8	72.7	6	54.5	7	63.6	11
Dallas, TX	13	81.3	8	50.0	9	56.3	9	56.3	16
Denver, CO	13	92.9	9	64.3	10	71.4	8	57.1	14
Detroit, MI	5	62.5	4	50.0	5	62.5	5	62.5	8
Houston, TX	50	100	24	48.0	39	78.0	34	68.0	50
Los Angeles, CA	7	87.5	4	50.0	5	62.5	3	37.5	8
Memphis, TN	23	88.5	16	61.5	20	76.9	21	80.8	26
Miami, FL	44	78.6	24	42.9	35	62.5	34	60.7	56
Nassau-Suffolk, NY	2	100	2	100	1	50.0	2	100	2
New Orleans, LA	17	81.0	12	57.1	12	57.1	10	47.6	21
New York City, NY	42	95.5	16	36.4	38	86.4	39	88.6	44
Newark, NJ	40	97.6	17	41.5	34	82.9	30	73.2	41
Philadelphia, PA	18	90.0	13	65.0	18	90.0	16	80.0	20
Portland, OR	9	90.0	6	60.0	6	60.0	5	50.0	10
San Diego, CA	3	100	2	66.7	2	66.7	1	33.3	3
San Francisco, CA	42	97.7	19	44.2	37	86.0	35	81.4	43
San Juan, PR	34	82.9	12	29.3	25	61.0	22	53.7	41
Seattle, WA	16	88.9	6	33.3	16	88.9	13	72.2	18
Virginia Beach, VA	8	100	4	50.0	8	100	7	87.5	8
Washington, DC	36	97.3	17	45.9	30	81.1	31	83.8	37
Total	519	90.1	268	46.5	424	73.6	401	69.6	576

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.

^a Hispanics/Latinos 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.
- Education: Highest level of education completed.
- Household income: 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 2018. 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 2018 guidelines [1] were used for participants interviewed in 2018. 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.
- Health insurance: Currently having some form of health insurance.

- Homeless: Living on the street, in a shelter, in a single-room-occupancy hotel, or in a car at any time in the 12 months before interview.
- Incarcerated: Having been held in a detention center, jail, or prison, for more than 24 hours in the 12 months before interview.
- 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 included an MSA or a specified division within an MSA with high prevalence of HIV. This report presents 2018 data in 23 MSAs (see list at the end of the report), which represented approximately 59% of all persons living with HIV in urban areas with a population of at least 500,000 in 2016.

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 valid negative NHBS HIV test result.
- HIV-positive: Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing.
- 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 in the 12 months before interview.

- **Clinical setting:** Participants reported the location of their most recent HIV test—private doctor’s office (including health maintenance organizations), emergency department, hospital (inpatient), public health clinic or community health center, family planning or obstetrics clinic, correctional facility (jail or prison), or drug treatment program.
- **Nonclinical setting:** Participants reported the location of their most recent HIV test—HIV counseling and testing site, HIV street outreach program or mobile unit, SSP, or home.
- “Other” locations could not be classified and are excluded from the clinical/nonclinical setting classification.

SEXUAL BEHAVIORS

- **Any sex:** Includes vaginal, oral, or anal sex.
- **Vaginal sex:** Penis inserted into a partner’s vagina.
- **Oral sex:** Mouth on a partner’s vagina or penis.
- **Anal sex:** Penis inserted into a partner’s anus.
- **Condomless sex:** Vaginal or anal sex during which a condom is either not used or is not used at any time throughout the sex act.
- **Main partner:** Person with whom the participant has sex and to whom he or she feels most committed (e.g., girlfriend/boyfriend, wife/husband, significant other, or life partner).
- **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.

INJECTION DRUG USE AND BEHAVIORS

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

- **Injected in the past 12 months:** The participant reported injecting the specified drug at least once in the 12 months before interview.
- **Injected daily:** The participant reported injecting the specified drug daily in 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.
- **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.
- **Distributive sharing:** A participant giving his or her syringe or needle to someone else to use after he or she had already used it for injection.

RECEIPT OF HIV PREVENTION MATERIALS

- **Syringes from SSPs:** Having received any new, sterile syringes from SSPs in the 12 months before interview.
- **Syringes from pharmacy:** Having received any new, sterile syringes from a pharmacy in the 12 months before interview.
- **Injection equipment from SSPs:** Having received injection equipment from SSPs in the 12 months before interview. Injection equipment includes items such as cookers, cotton, or water for rinsing needles; does NOT include syringes or needles.
- **Free condoms:** Having received free condoms in the 12 months before interview, not including those given by a friend, relative, or sex partner.
- **Individual- or group-level intervention:** A composite measure based on having received individual- or group-level HIV interventions. An

individual-level intervention is a one-on-one conversation with an outreach worker, a counselor, or a prevention program worker about ways to prevent HIV, excluding conversations that were part of HIV testing. A group-level intervention is a small-group discussion (as part of an organized session) about ways to prevent HIV, excluding informal discussions with friends.

- 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 in the 12 months before interview to reduce the risk of getting HIV.

SEXUALLY TRANSMITTED INFECTIONS

- Chlamydia: Having received a diagnosis of chlamydia in the 12 months before interview.
- Gonorrhea: Having received a diagnosis of gonorrhea in the 12 months before interview.
- Syphilis: Having received a diagnosis of syphilis in the 12 months before interview.
- Any bacterial STI: Having received a diagnosis of chlamydia, gonorrhea, or syphilis in 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 he or she had hepatitis C infection by a doctor, nurse, or other health care provider.

NONINJECTION SUBSTANCE USE

Participants were asked about their noninjection use of drugs (excluding those prescribed for them) in 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 they could report. Participants were considered to have used a

substance if they reported using that substance with any frequency other than "never."

- Binge drinking: Consumed 5 or more drinks (males) or 4 or more drinks (females) in about 2 hours in the 30 days before interview.
- Any noninjection drug: Used any noninjection drug, excluding alcohol, in the 12 months before interview.
- Cocaine: Used powdered cocaine in the 12 months before interview.
- Crack: Used crack cocaine in the 12 months before interview.
- Downers: Used downers (benzodiazepines), such as Klonopin, Valium, Ativan, or Xanax, by means other than injection in the 12 months before interview.
- Ecstasy: Used X or ecstasy in the 12 months before interview.
- Heroin: Used heroin (smoked or snorted) in the 12 months before interview.
- Marijuana: Used marijuana in the 12 months before interview.
- Methamphetamine: Used methamphetamines, including meth, crystal meth, speed, or crank, by means other than injection in the 12 months before interview.
- Prescription opioids: Used pain killers, such as Oxycontin, Vicodin, morphine, or Percocet, in the 12 months before interview.

ADDITIONAL OUTCOMES

Table 15 includes outcomes that were of interest at the time of publication but were not included in other tables. Sexual behaviors were not assessed for transgender participants. Sexual behavior outcomes in Table 15 exclude transgender participants.

- Number of sex partners: Median number of opposite sex partners in the 12 months before interview; first and third quartiles (25th and 75th percentiles) are also reported.
- Exchange sex: For females, refers to receiving money or drugs from a male casual partner in exchange for sex in the 12 months before interview. For males, refers to giving money or drugs to a female casual partner in exchange for sex, or giving or receiving money or drugs in exchange

for sex with a male casual partner in the 12 months before interview.

- Condomless sex with an HIV-discordant partner at last sex: A composite measure based on self-reported HIV status of the participant (positive, negative, or unknown), the participant's knowledge of the HIV status of his or her most recent sex partner (positive, negative, or unknown), and whether the participant reported engaging in vaginal or anal sex without a condom during his or her most recent sexual encounter. A partner was considered to be of discordant or unknown HIV status if the participant reported that one member of the partnership was known to be HIV-positive and the other was known to be HIV-negative, or if he or she did not know the HIV status of at least one member of the partnership (participant or partner). The result of the NHBS HIV test completed after the interview was not factored into this measure.
- Substance use disorder treatment: Participated in a substance use treatment program (including outpatient, inpatient, residential, detox, or 12-step program) in 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 in the 12 months before interview.
- Years since first injection: Number of years since the participant first injected drugs not prescribed to him or her, based on the participant's reported age at first injection.

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 in the 12 months before the interview.

- Hooked on opioids before first injection: Participant reported being “hooked on painkillers” before injecting drugs for the very first time.
- Used MAT: Having taken medicines like methadone, buprenorphine, Suboxone, or Subutex to treat drug use in the 12 months before interview.
- Unmet need for MAT: Participant reported trying but being unable to obtain medicines such as

methadone, buprenorphine, Suboxone, or Subutex to treat drug use in the 12 months before interview.

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

RECEIPT OF HIV CARE

Participants who reported having received a positive HIV test result before interview 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 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 his or her 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 in the 6 months before date of interview.
- Currently taking antiretroviral HIV medications: Taking antiretroviral medicines at the time of interview.

REFERENCE

1. Department of Health and Human Services. 2018 poverty guidelines. <https://aspe.hhs.gov/2018-poverty-guidelines>. Published 2018. Accessed February 14, 2020.

Participating Metropolitan Statistical Areas, 2018

Principal city	Metropolitan statistical area division
Atlanta, Georgia	Atlanta–Sandy Springs–Roswell, Georgia
Baltimore, Maryland	Baltimore–Columbia–Towson, Maryland
Boston, Massachusetts	Boston–Cambridge–Newton, Massachusetts–New Hampshire (Boston Division)
Chicago, Illinois	Chicago–Naperville–Elgin, Illinois–Indiana–Wisconsin (Chicago Division)
Dallas, Texas	Dallas–Fort Worth–Arlington, Texas (Dallas Division)
Denver, Colorado	Denver–Aurora–Lakewood, Colorado
Detroit, Michigan	Detroit–Warren–Dearborn, Michigan (Detroit Division)
Houston, Texas	Houston–The Woodlands–Sugar Land, Texas
Los Angeles, California	Los Angeles–Long Beach–Anaheim, California (Los Angeles Division)
Memphis, Tennessee	Memphis, Tennessee–Mississippi–Arkansas
Miami, Florida	Miami–Fort Lauderdale–West Palm Beach, Florida (Miami Division)
Nassau–Suffolk, New York	New York–Newark–Jersey City, New York–New Jersey–Pennsylvania (Nassau Division)
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, DC	Washington, District of Columbia (DC)–Virginia–Maryland–West Virginia (Washington Division)

Addendum: Infographic and National HIV Prevention Progress Indicators

Tables A1 and A2 present results overall for 3 outcomes reported in the infographic accompanying this surveillance report. The measures are equivalent to those presented in Tables 10, 11, and 15 of this report, but aggregated across HIV status and include participants without a valid HIV test result.

Table A3 presents data for indicators used to monitor progress toward HIV prevention goals outlined in the CDC Division of HIV/AIDS Prevention (DHAP) Strategic Plan (<http://www.cdc.gov/hiv/pdf/dhap/cdc-hiv-dhap-external-strategic-plan.pdf>). Similar indicators were published previously in the National HIV Prevention Progress Report, 2015 (<http://www.cdc.gov/hiv/pdf/policies/progressreports/cdc-hiv-nationalprogressreport.pdf>). For consistency with National HIV Prevention Progress reports, data reported in Table A3 are reported for persons who did not report a previous HIV-positive test result and are stratified by the following age categories: 18–24, 25–34, 35–44, 45–54, and ≥ 55 . Numbers and percentages may differ from those for similar outcomes included in this and other reports of NHBS data due to differences in indicator definition, analysis sample, or strata. Data for DHAP Strategic Plan indicators from NHBS will be included in future DHAP HIV Prevention Progress reports. Published DHAP reports of NHBS data are available at <http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>.

Table A1. Additional injection-related indicators among persons who inject drugs, by age and area of residence—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	Receptive syringe sharing ^a		Received syringes from SSPs		Received syringes from pharmacy		Total No.
	No.	%	No.	%	No.	%	
Age at interview (yr)							
18–29	729	44.9	—	—	—	—	1,625
30–39	1,181	39.1	—	—	—	—	3,024
≥40	1,766	26.0	—	—	—	—	6,788
City							
Atlanta, GA	—	—	243	63.6	116	30.4	382
Baltimore, MD	—	—	342	59.5	109	19.0	575
Boston, MA	—	—	368	80.2	225	49.0	459
Chicago, IL	—	—	321	62.5	275	53.5	514
Dallas, TX	—	—	10	1.9	194	37.3	520
Denver, CO	—	—	456	77.7	217	37.0	587
Detroit, MI	—	—	184	32.9	121	21.6	560
Houston, TX	—	—	4	0.8	262	51.6	508
Los Angeles, CA	—	—	367	69.5	249	47.2	528
Memphis, TN	—	—	9	1.6	154	27.6	557
Miami, FL	—	—	222	42.6	25	4.8	521
Nassau-Suffolk, NY	—	—	22	14.6	76	50.3	151
New Orleans, LA	—	—	323	57.7	92	16.4	560
New York City, NY	—	—	394	75.8	181	34.8	520
Newark, NJ	—	—	166	31.7	127	24.3	523
Philadelphia, PA	—	—	466	75.2	136	21.9	620
Portland, OR	—	—	453	84.7	214	40.0	535
San Diego, CA	—	—	162	65.1	84	33.7	249
San Francisco, CA	—	—	417	91.2	163	35.7	457
San Juan, PR	—	—	267	53.4	149	29.8	500
Seattle, WA	—	—	470	84.8	146	26.4	554
Virginia Beach, VA	—	—	5	0.9	153	28.5	536
Washington, DC	—	—	373	71.6	33	6.3	521
Total	3,676	32.1	6,044	52.8	3,501	30.6	11,437

Abbreviation: SSPs, syringe services programs.

Note. Data not presented in the infographic are suppressed.

^a Used a syringe or needle that had already been used by someone else for injection.

Table A2. Exchange sex in the 12 months before interview among persons who inject drugs, by gender—National HIV Behavioral Surveillance, 23 U.S. cities, 2018

	Exchange sex ^a		Total No.
	No.	%	
Gender			
Male	1,824	23.1	7,891
Female	1,235	35.8	3,449
Total	3,059	27.0	11,340

^a For females, “exchange sex” refers to receiving money or drugs from a male casual partner in exchange for sex. For 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.

Table A3. National progress indicators of HIV acquisition risk among persons who inject drugs—National HIV Behavioral Surveillance, 2012, 2015, and 2018

	2012 ^a			2015 ^b			2018		
	Nonsterile injection ^c			Nonsterile injection ^c			Nonsterile injection ^c		
	No.	%	Total No. ^d	No.	%	Total No. ^d	No.	%	Total No. ^d
Gender									
Male	4,094	60.1	6,817	4,283	60.1	7,129	4,389	58.6	7,495
Female	1,675	62.3	2,689	1,718	62.4	2,753	2,053	62.5	3,286
Age at interview (yr)									
18–24	273	74.6	366	438	76.2	575	286	72.0	397
25–34	1,126	72.3	1,557	1,688	71.9	2,349	1,797	69.7	2,577
35–44	1,256	62.9	1,998	1,392	63.6	2,187	1,699	63.6	2,673
45–54	1,833	58.1	3,154	1,447	56.5	2,561	1,407	55.3	2,546
≥55	1,281	52.7	2,431	1,036	46.9	2,210	1,253	48.4	2,588
Race/ethnicity									
American Indian/Alaska Native	55	62.5	88	62	63.3	98	76	60.8	125
Asian	14	51.9	27	19	70.4	27	20	54.1	37
Black/African America	2,279	55.2	4,126	1,655	50.9	3,249	1,738	49.9	3,486
Hispanic/Latino ^e	1,418	61.7	2,297	1,355	61.1	2,219	1,282	57.9	2,214
Native Hawaiian/Other Pacific Islander	11	68.8	16	10	66.7	15	5	35.7	14
White	1,787	68.5	2,609	2,651	68.4	3,873	2,954	68.2	4,332
Multiple races	200	60.8	329	239	62.7	381	363	64.1	566
Total	5,769	60.7	9,506	6,001	60.7	9,882	6,442	59.8	10,781

Abbreviations: NHBS, National HIV Behavioral Surveillance [footnotes only]; MSA, metropolitan statistical area [footnotes only].

^a In 2012, NHBS was conducted in 20 MSAs using respondent-driven sampling. Details of the 2012 sample are reported in: Centers for Disease Control and Prevention. *HIV Infection, Risk, Prevention, and Testing Behaviors among Persons Who Inject Drugs—National HIV Behavioral Surveillance: Injection Drug Use, 20 U.S. Cities, 2012*. HIV Surveillance Special Report 11. Revised edition. <http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>. Published August 2015. Accessed February 12, 2020.

^b In 2015, NHBS was conducted in 20 MSAs using respondent-driven sampling (RDS). Details of the 2015 sample are reported in: Centers for Disease Control and Prevention. *HIV Infection, Risk, Prevention, and Testing Behaviors among Persons Who Inject Drugs—National HIV Behavioral Surveillance: Injection Drug Use, 20 U.S. Cities, 2015*. HIV Surveillance Special Report 18. Revised edition. <http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>. Published May 2018. Accessed February 12, 2020.

^c In the 12 months before interview, 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.

^d Male and female participants who injected drugs in the 12 months before interview and who did not report a previous HIV-positive test result.

^e Hispanics/Latinos can be of any race.