



Department of  
**Health**

# Memphis National HIV Behavioral Surveillance (NHBS) Profile, 2016–2018

HET4, MSM5 and IDU5 Cycles

Tennessee Department of Health | March 2020



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## Executive summary

In 2003 the Centers for Disease Control and Prevention (CDC) initiated the National HIV Behavioral Surveillance (NHBS) program to help US jurisdictions with high burden of HIV better understand health behaviors and access to prevention services among persons at increased risk for HIV infection.<sup>1</sup> The program is focused on three different populations at increased risk for HIV, in recurring annual cycles: gay, bisexual and other men who have sex with men (“MSM cycle”), persons who inject drugs (PWID, referred to as the injection drug use or “IDU cycle”) and heterosexually active persons at increased risk for HIV infection (“HET cycle”). Findings are used to inform local and national HIV prevention strategies and activities.

The Memphis NHBS program is funded through and managed by the Tennessee Department of Health (TDH) and began in 2016; it is called TRUST Memphis, which stands for “talk, respect, understand, support and take action.”

Between 2016 and 2018, TRUST Memphis completed data collection for the fourth HET cycle of the national NHBS project, also known as “HET4,” the fifth MSM cycle MSM (“MSM5”) and the fifth IDU cycle (“IDU5”). The goal for each cycle was to engage at least 500 participants.

Two recruitment strategies were used, depending on the NHBS cycle. Venue-based sampling (VBS) was used during the MSM5 cycle. Venues frequented by MSM in the local community (e.g., bars, clubs, organizations and street locations) were selected by the TRUST Memphis team and venues for recruitment (with specific day/time slots) were chosen randomly each month. The HET4 and IDU5 cycles utilized respondent-driven sampling (RDS). For this approach, the TRUST Memphis team selected between six and thirty-one initial participants who complete the survey and recruit their peers to participate. Peer recruitment of additional participants continued until the participation goal (i.e., 500) was reached.

During each cycle, TRUST Memphis conducted interviews using a standardized, anonymous “core” survey designed by CDC to collect information on HIV-related risk behaviors, HIV testing and the use of HIV prevention services. TRUST Memphis also included “local” survey questions, chosen by TDH staff, which captured Memphis priority topics. Answers to the survey were self-reported by participants. HIV testing was offered during every cycle. Additionally, single-site gonorrhea, chlamydia and syphilis testing was offered during HET4 and MSM5 and rapid hepatitis C virus (HCV) antibody testing was offered during IDU5.

Select descriptive data and key findings from all three cycles completed in Memphis are summarized in this report. Please note that percentages in charts and figures may be rounded to the nearest integer and totals may therefore not equal 100%.

## ***Key findings***

- All NHBS cycles conducted by the Memphis project site highlighted the needs of persons at risk for HIV infection including more frequent HIV testing, improved access to health insurance and medical care and access to sexual health and HIV prevention education on condoms and PrEP.
- The HET4 cycle included a large number of non-Hispanic black individuals and a majority of cisgender women. MSM5 participants reported the highest levels of academic achievement and full-time employment, as well as the lowest percentage of homelessness in the previous 12 months compared to participants of the two other cycles. IDU5 participants were majority non-Hispanic black and cisgender male. IDU5 participants most frequently reported being homeless in the past 12 months.
- MSM5 participants most frequently reported HIV testing ever and in the past year. HET4 and IDU5 participants reported similar frequencies of HIV testing.
- Less than one out of five IDU5 participants reported having been tested for sexually transmitted infections (STIs) in the past 12 months.
- Over half of IDU5 participants had ever been tested for HCV, of which 37% had a HCV diagnosis compared to 4% and 2% of MSM5 and HET4 participants, respectively.
- Condomless sex in the past 12 months was reported most frequently among HET4 participants (62%) and sex exchange in the past 12 months was reported most frequently among IDU5 participants (38%).
- There was a stark difference across the cycles in awareness and use of PrEP to prevent HIV infection: Over 70% of MSM5 participants had heard of PrEP and 12% had taken PrEP to reduce their risk of acquiring HIV in the past 12 month. Only 4% of HET4 and 6% of IDU5 participants had heard of PrEP and less than 1% had used PrEP in HET4 and IDU5 cycles.
- Access to health insurance and medical care varied greatly between all three cycles. MSM5 participants reported the highest percentages having any health insurance (74%) and having private health insurance (42%) while IDU5 participants reported having access to health insurance the least often of all three Memphis NHBS cycles (26%).
- Experiencing physical or sexual assault differed between cisgender men and women; cisgender women often reported physical or sexual assault more frequently compared to cisgender men.
- Similar percentages of participants from each cycle reported consuming alcohol and binge drinking. Similar percentages of HET4 and MSM5 participants reported ever injecting drugs (2% and 1% respectively) and using non-injection drugs (52% and 40% respectively) in the past 12 months.
- IDU5 participants reported mental health symptoms “often” or “sometimes” over half of the time, while the majority of MSM5 and HET4 participants reported experiencing mental health symptoms “rarely.”

## Background

Memphis is Tennessee's largest city and is located in Shelby County, which is located in the Southwest corner of Tennessee and borders the Mississippi River, eastern Arkansas and northern Mississippi. The TRUST Memphis NHBS team consists of Shelby County Health Department and Tennessee Department of Health (TDH) employees.

**Population:** In 2018, Shelby County was home to 935,764 people, which accounts for approximately 14% of the 6,770,010 people living in Tennessee.<sup>2</sup> With a growth rate of 1%, below to the national rate of 3%, the population of Shelby County increased by 8,082 people between 2010 and 2018.<sup>2,3</sup> Shelby County is made up of many small neighborhoods, including Downtown Memphis, neighborhoods in North and East Memphis, as well as suburban areas outside of the city.

**Age:** The median age of residents of Shelby County in 2018 was 36 years, slightly below that of the US median age (38 years) and TN median age (39). The age distribution in Shelby County roughly reflects that of the US population in general.<sup>2</sup>

**Race and ethnicity:** In 2018, 54% of the population in Shelby County was non-Hispanic Black, followed by 35% Non-Hispanic White and 7% Hispanic. Other racial groups make up the remaining 4% of the population, with the largest being non-Hispanic Asian (3%).<sup>2</sup> Shelby County has a much higher percentage of non-Hispanic black residents and lower percentage of non-Hispanic white residents compared to Tennessee overall (74% and 17%) of the population, respectively).

**Income and poverty:** The median household income in Shelby County in 2018 was \$ 47,500, compared to the national median income of \$57,662.<sup>4</sup> Tennessee continues to experience racial and ethnic disparities in household income in 2018, with non-Hispanic white households reporting higher median income (\$56,408) compared to non-Hispanic black and Hispanic households (\$36,533 and \$42,489, respectively). The overall poverty rate in Tennessee in 2018 was 15.3%<sup>2</sup>

**Viral hepatitis (VH):** In Shelby County, the number and rate of newly reported cases of confirmed and probable acute hepatitis C virus (HCV) and chronic HCV increased from 2014 to 2018. In 2018, there were 7 (0.75 per 100,000 persons) acute HCV infections and 2,299 (245.7 per 100,000 persons) chronic HCV infections. Throughout 2014–2018 among those with a reported race and/or ethnicity, non-Hispanic black persons had the highest rates of acute HCV and chronic HCV compared to non-Hispanic white and Hispanic individuals.

**Sexually transmitted infections (STIs):** In Tennessee, the number and rate of reported cases of chlamydia, gonorrhea and primary and secondary (P&S) syphilis increased from 2014–2018. In 2018, Shelby County had the highest rate of chlamydia (1,044.1 per 100,000 persons) and gonorrhea infections (465.3 per 100,000 persons) in Tennessee. The Memphis Metropolitan



Statistical Area (MSA) was ranked number one for rates of chlamydia and gonorrhea among US MSAs.<sup>5,6</sup> Male-to-male sexual contact (MMS) was the most frequently reported transmission risk among persons diagnosed with P&S syphilis in Tennessee (60.2%). Additionally, 34% of persons diagnosed with P&S syphilis were co-infected with HIV in 2018.

***Opioid use:*** In 2018, 123 people died from an opioid overdose in Shelby County at a rate of 13.8 per 100,000 persons. Deaths from all drug overdoses in the area rose to 207 in 2017 before falling to 156 in 2018. The number of drug overdose deaths involving opioids in Tennessee increased over 50% from 2014–2018 with over 1,300 persons dying as a result of an opioid overdose in 2018.<sup>7</sup>

## Participant characteristics

### Demographics

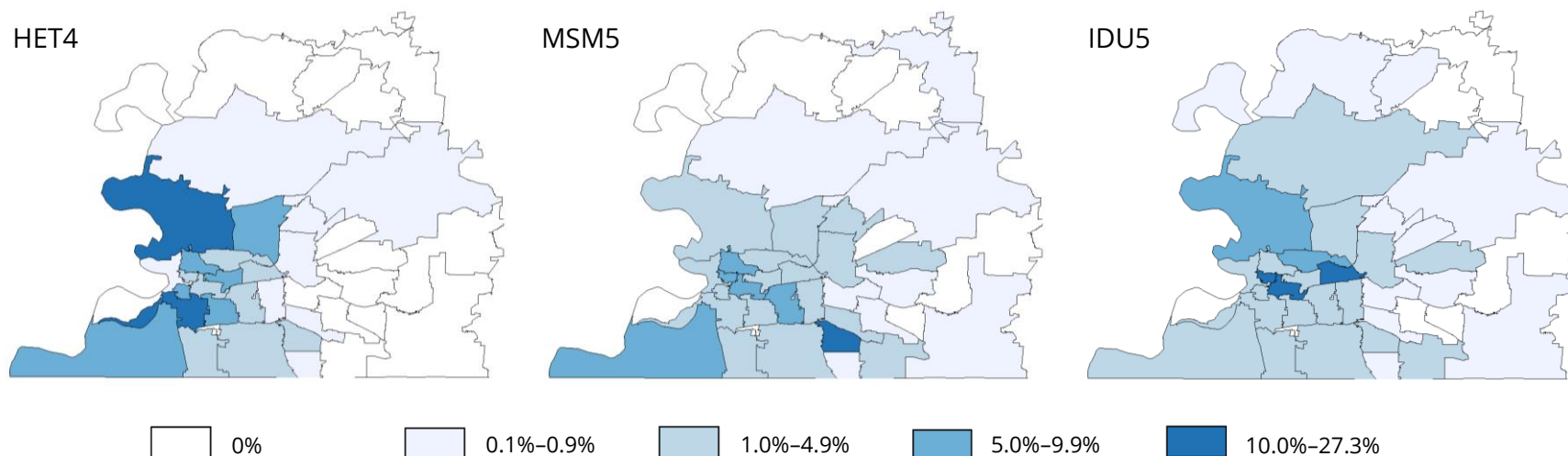
**Table 1. Demographic characteristics of HET4 (n=543), MSM5 (n=356) and IDU5 (n=564) participants**

	HET4 participants		MSM5 participants		IDU5 participants	
	No.	%	No.	%	No.	%
<b>Gender</b>						
Cisgender male	240	44.2	356	100.0	395	70.0
Cisgender female	303	55.8	0	0.0	163	28.9
Transgender person	0	0.0	0	0.0	6	1.1
<b>Age group (years)</b>						
18–24	129	23.8	102	28.7	38	6.7
25–34	144	26.5	136	38.2	142	25.2
35–44	105	19.3	49	13.8	141	25.0
45–54	116	21.4	53	14.9	145	25.7
≥55	49	9.0	16	4.5	98	17.4
<b>Race/ethnicity</b>						
Non-Hispanic Black	535	98.5	283	79.5	232	41.1
Non-Hispanic White	5	0.9	55	15.4	317	56.2
Hispanic	1	0.2	14	3.9	10	1.8
Non-Hispanic Other	2	0.4	4	1.1	5	0.9
<b>Income/Federal poverty level (FPL)</b>						
< 100% FPL	442	81.4	118	33.1	415	73.6
100-199% FPL	62	11.4	86	24.2	98	17.4
> 200% FPL	20	3.7	147	41.3	32	5.7
Missing	19	3.5	5	1.4	19	3.4
<b>Education</b>						
Less than high school	186	34.3	20	5.6	180	31.9
High school or GED	288	53.0	119	33.4	268	47.5
Some college	65	12.0	148	41.6	105	18.6
College graduate or higher	4	0.7	69	19.4	9	1.6
<b>Employment</b>						
Full-time	81	14.9	217	61.0	50	8.9
Part-time	116	21.4	51	14.3	56	9.9
Unable to work or unemployed	275	50.6	65	18.3	419	74.3
Other	71	13.1	23	6.5	39	6.9
<b>Homeless, past 12 months</b>						
Yes	85	15.7	30	8.4	387	68.6
No	458	84.3	326	91.6	175	31.0
Unknown	0	0.0	0	0.0	2	0.4
<b>Incarceration, past 12 months</b>						
Yes	120	22.1	32	9.0	284	50.4
No	423	77.9	323	90.7	278	49.3
Unknown	0	0.0	1	0.3	2	0.4
<b>Overall</b>	<b>543</b>	<b>100.0</b>	<b>356</b>	<b>100.0</b>	<b>564</b>	<b>100.0</b>

The three NHBS cycles represent unique populations within the Memphis, Shelby County area. In the HET4 and MSM5 cycles, the majority of participants identified as non-Hispanic black. In the MSM5 cycle, all participants were cisgender men due to the eligibility criteria and had higher levels of education, income and full-time employment compared to HET4 and IDU5. Over half of the HET4 participants were cisgender women while nearly three-fourths of the IDU5 participants were cisgender men. Participants from IDU5 also reported being non-Hispanic white and being homeless or incarcerated in the last 12 months more frequently than participants in HET4 and MSM5. Six transgender participants were included in the IDU5 cycle while no transgender participants were in HET4 and MSM5 due to exclusion criteria. The six transgender individuals accounted for 4 non-Hispanic black and 2 non-Hispanic white participants between the ages of 32 and 53.

## Location

**Figure 1: Percent of HET4 (A; n=543), MSM5 (B; n=356) and IDU5 (C; n=564) participants by zip code**

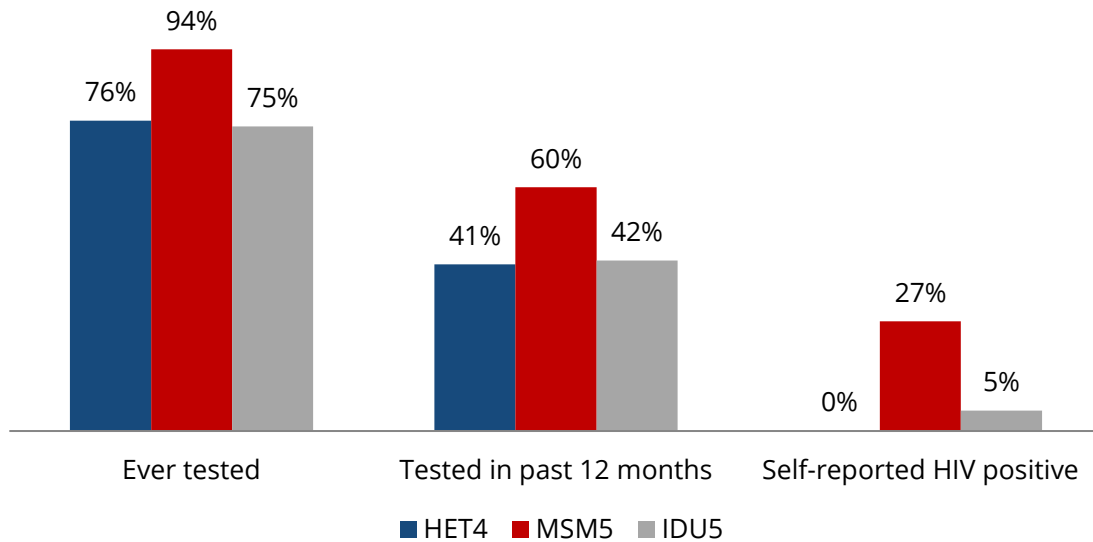


Similarly to key demographics, the three NHBS cycles represent unique geographic populations within the Memphis, Shelby County area (see Appendix A for select neighborhoods in Shelby County). In the HET4 cycle, the largest percentages of participants came from Frayser and Raleigh as well as Whitehaven and South Memphis neighborhoods as indicated by the dark blue shading. MSM5 participants were more spread out with over 10% coming from near the Hickory Hill and Germantown neighborhoods. Participants from IDU5 also frequently reported from Frayser in addition to Midtown, Uptown, and Berclair areas of Memphis. In HET4 and IDU5 cycle, participants often came from Shelby County neighborhoods where field sites were located.

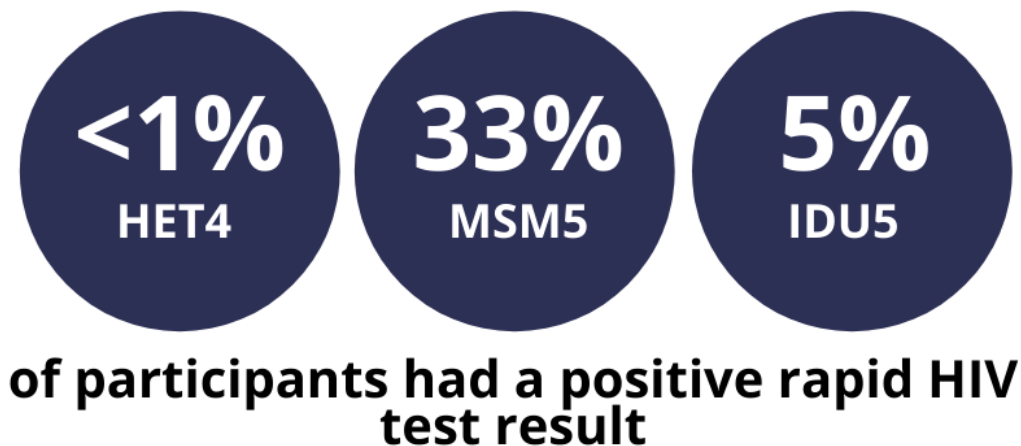
## Core survey

### HIV Testing

**Figure 2. Percent of HET4 (n=543), MSM5 (n=356) and IDU5 (n=564) participants reporting HIV testing behaviors and outcomes**



**Figure 3. Percent of HET4 (n=539), MSM5 (n=297) and IDU5 (n=557) participants with a positive NHBS HIV test result\***

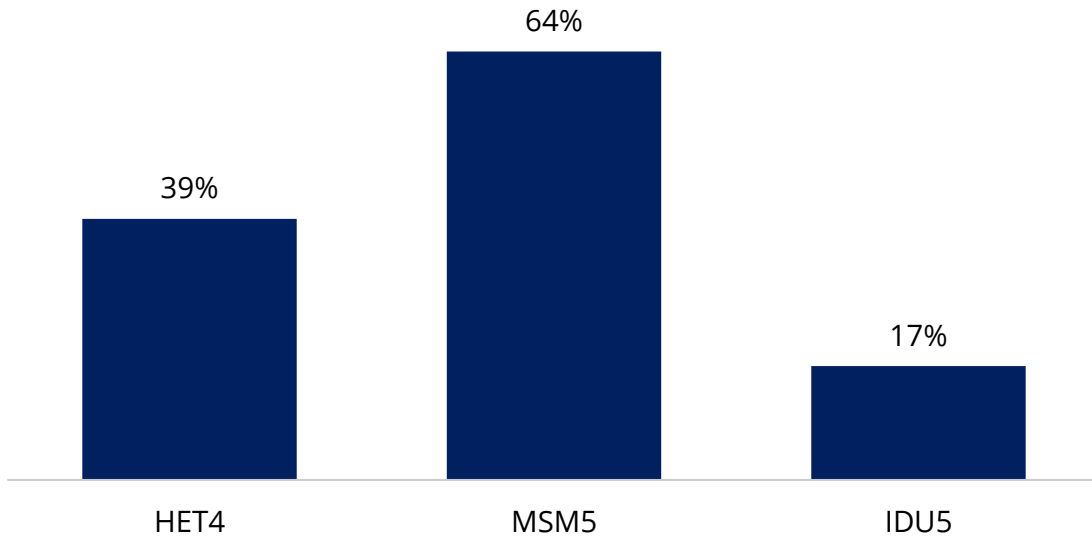


\*Among participants who received an NHBS rapid HIV test. The number of people in each cycle with an NHBS HIV test result is indicated in the figure title.

At least 75% of participants from each cycle reported having ever been tested for HIV (Figure 2). Participants from MSM5 reported most frequently ever being tested for HIV or in the past 12 months. One-third of MSM5 participants, 5% of IDU5 participants and less than 1% of HET4 participants who received an HIV test had a positive result (Figure 3). For more information on HIV testing, see Table 4 in Appendix B.

*Sexually Transmitted Infection (STI) Testing*

**Figure 4. Percent of NHBS participants tested for an STI in the past 12 months**



**Figure 5. Percent of NHBS participants reporting diagnosis of gonorrhea, chlamydia and syphilis in the past 12 months (HET4 n=543, MSM5 n=356 and IDU5 n=564)**

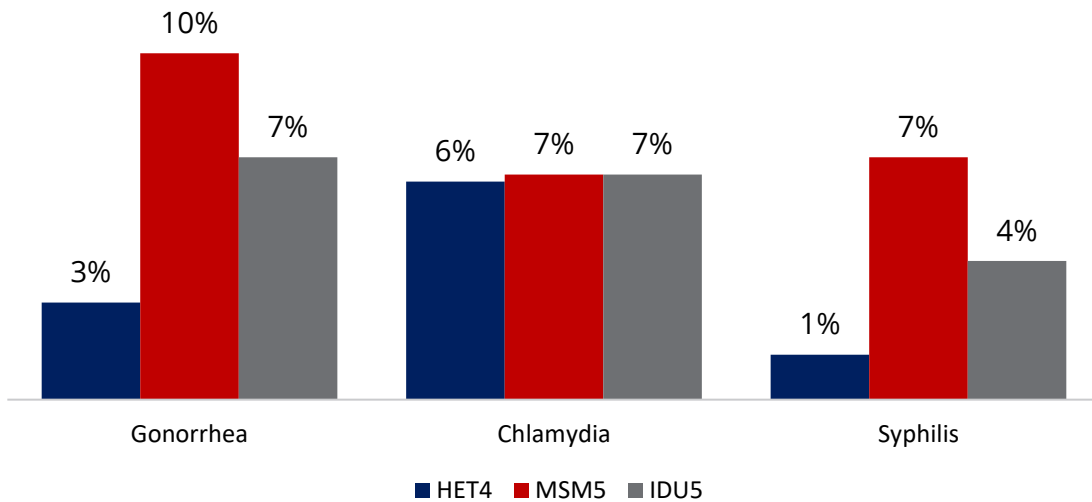
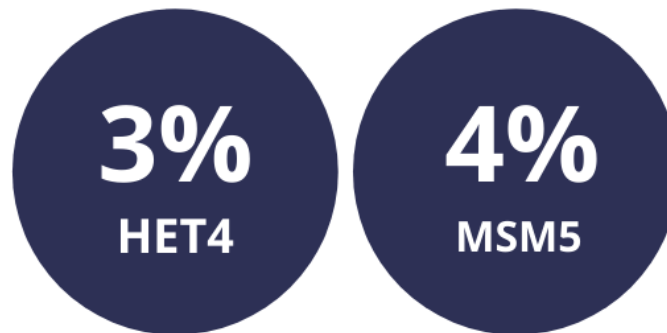


Figure 6. NHBS gonorrhea test results for HET4 (n=187) and MSM5 (n=116)



**of participants tested for gonorrhea had a positive result**

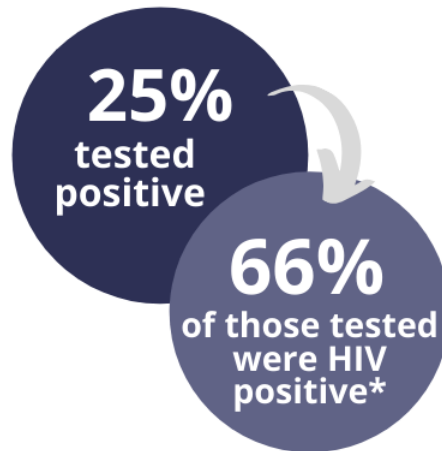
Figure 7. NHBS chlamydia test results for HET4 (n=187) and MSM5 (n=115)



**of participants tested for chlamydia had a positive result**

Figure 8. MSM5 syphilis test results (n=189)

**Of the 189 MSM5 participants that were tested for syphilis**



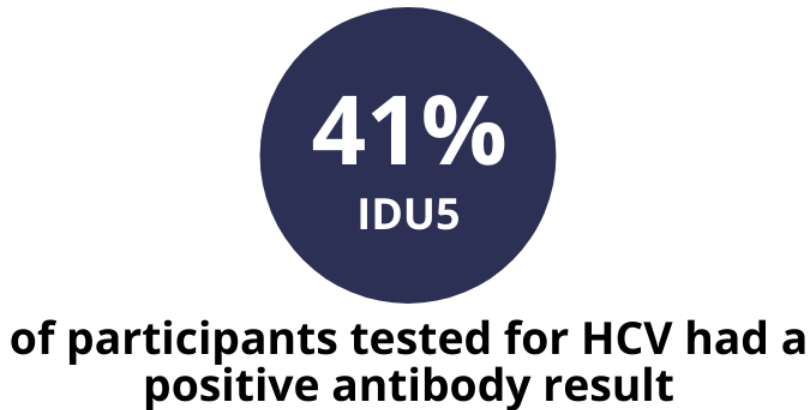
\*Self-reported living with diagnosed HIV

Being tested for or being diagnosed with an STI in the past 12 months differed between cycles, with 64% of MSM5 participants being tested for an STI in the past 12 months compared to 39% and 17% of HET4 and IDU5 participants respectively. While MSM5 participants also have slightly higher percentages of diagnosis with gonorrhea and syphilis in the past 12 months, diagnosis of chlamydia was between 6 and 7% for all cycles. Testing for chlamydia and gonorrhea was done at the NHBS site for both HET4 and MSM5. Two percent of the MSM5 and none of the HET4 participants tested had a positive gonorrhea NHBS result. Four percent of MSM5 and three percent of HET4 participants tested had a positive chlamydia NHBS result. Syphilis testing was done in the HET4 and MSM5 cycles. One-quarter of MSM5 participants who were tested had a positive syphilis result (indicating exposure to syphilis) and two-thirds of participants with a positive syphilis result self-reported living with diagnosed HIV. Seven of 152 (5%) participants tested for syphilis in HET4 had a positive result. For more information on sexually transmitted infections, see Table 5 in Appendix B.

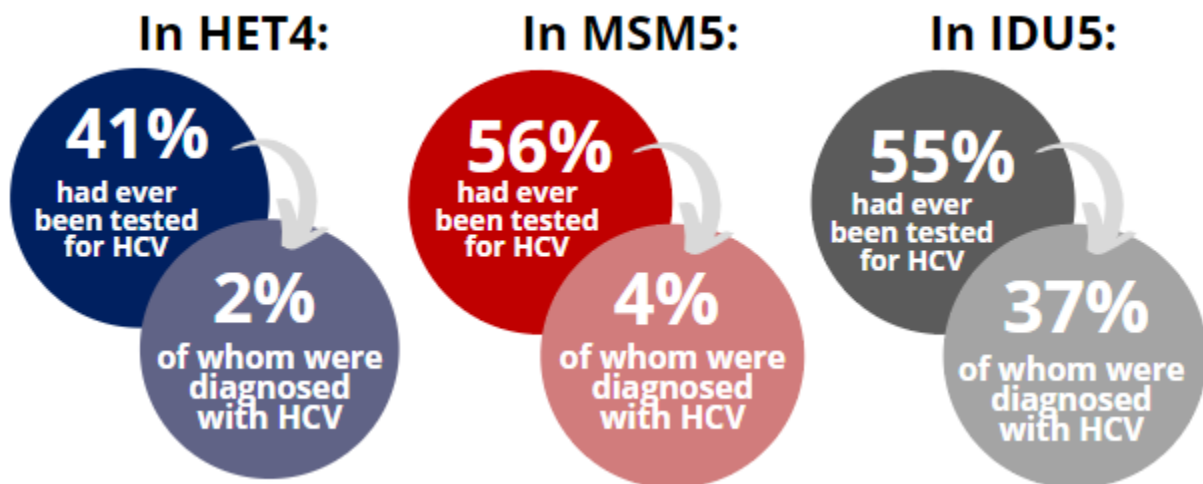


*Hepatitis C Virus (HCV) Testing*

**Figure 9. NHBS HCV test results, IDU5 (n=560)**



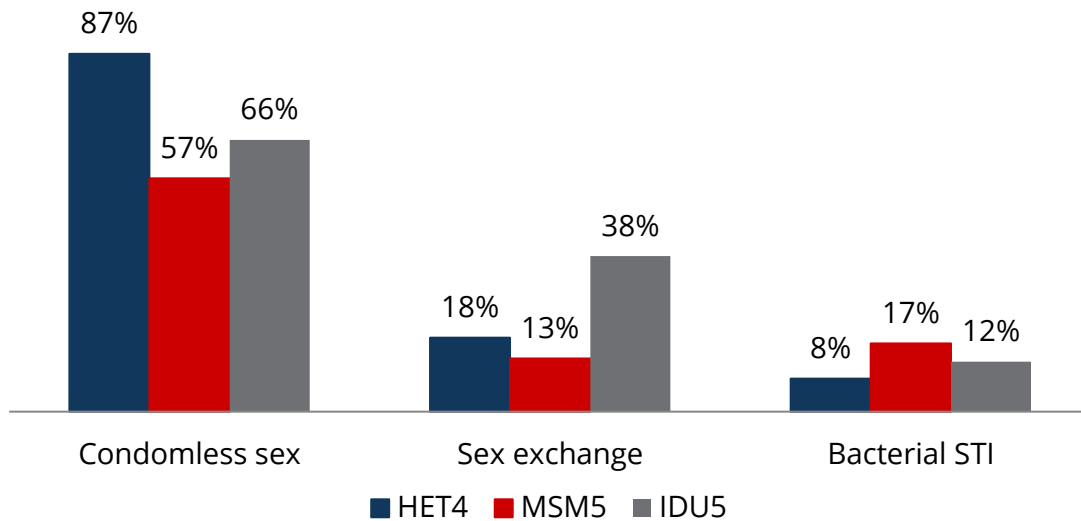
**Figure 10. Percent of NHBS participants ever tested for and diagnosed with HCV (HET4 n=543, MSM5 n=356 and IDU5 n=564)**



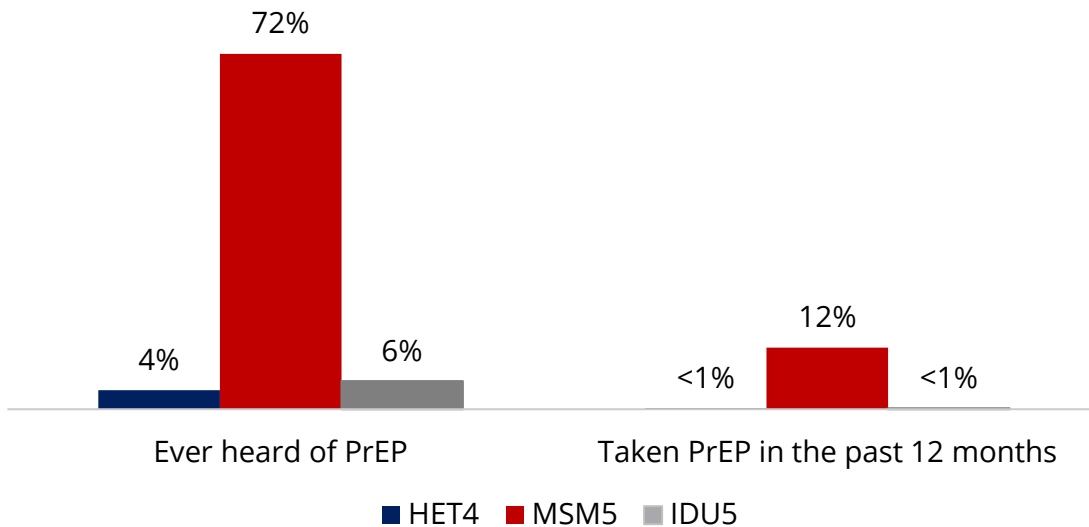
Testing for HCV was done at the NHBS site for IDU5 only. Forty percent of all IDU5 participants tested positive for HCV antibodies. Ever being tested for, or being diagnosed with, HCV also differed between cycles, with 56% of MSM5 and 55% of IDU5 participants ever being tested for HCV compared to 41% of HET4 participants. IDU5 participants reported the highest percentage (21%) of previous HCV diagnosis. For more information on HCV, see Table 6 in Appendix B.

## Sexual Health History

**Figure 11. Percent of cisgender male and female NHBS participants reporting HIV risk behaviors in the past 12 months (HET4 n=543, MSM5 n=356 and IDU5 n=558)**



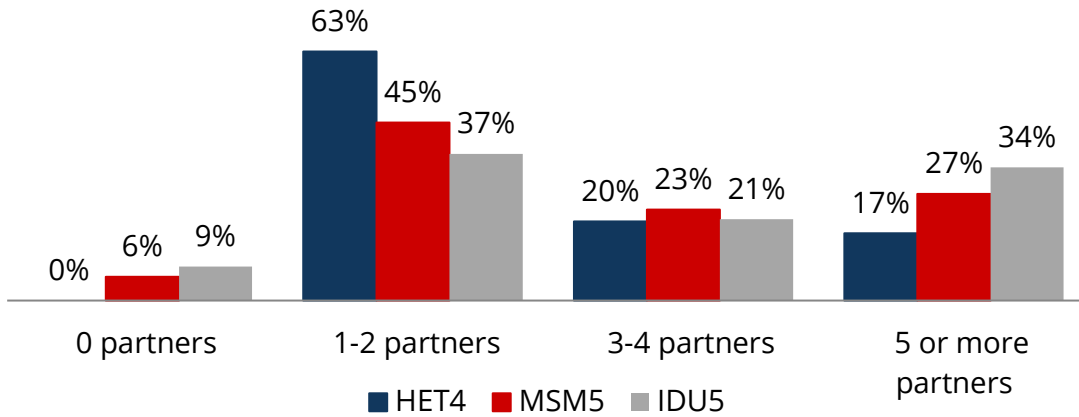
**Figure 12. Percent of cisgender male and female NHBS participants reporting HIV risk behaviors in the past 12 months (HET4 n=543, MSM5 n=356 and IDU5 n=558)**



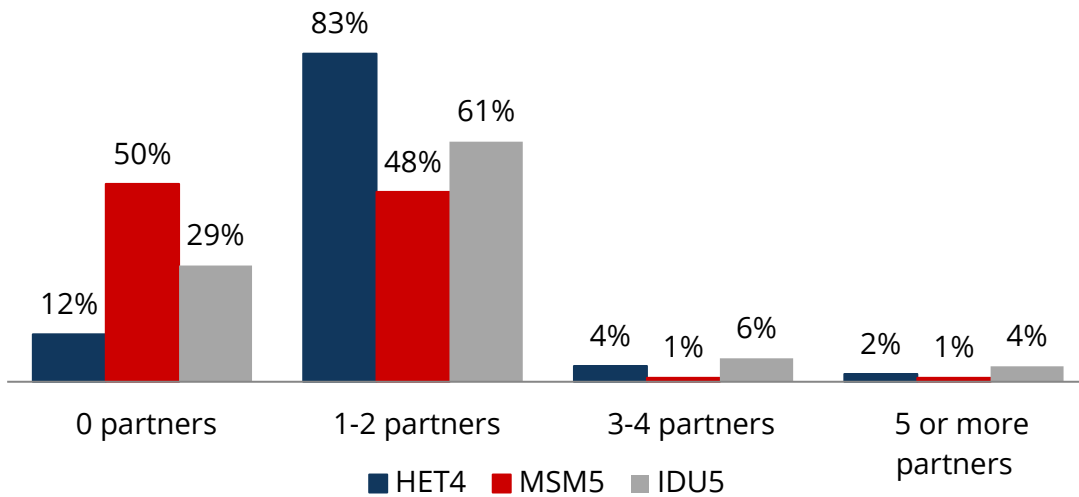
Surveys captured several factors that can increase a person’s risk for HIV when engaging in sexual contact, including: condomless sex, exchanging sex for money or drugs (sex exchange) and having a bacterial STI (i.e. diagnosis with gonorrhea, chlamydia, or syphilis). Participants from HET4 had the highest percentage of condomless sex in the past 12 months (87%). Participants from IDU5 had the highest percentage of sex exchange in the past 12 months (38%). Participants from MSM5 had the highest percentage of having a bacterial STI in the past 12 months (17%). Very few participants had heard of or used PrEP in the HET4 and IDU5 cycles, while 72% and 12% of MSM5 participants had heard of or used PrEP in the last 12 months, respectively. For more information on sexual health history among cisgender men and women, see Tables 4, 7 and 8 in Appendix B.

*Sexual partners*

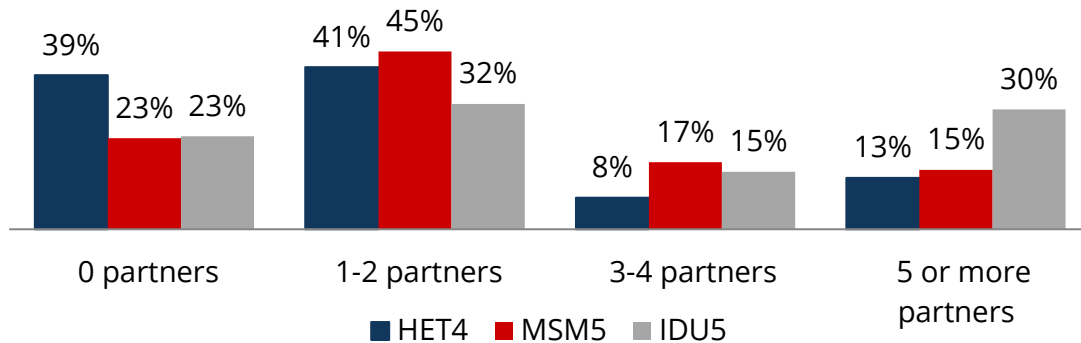
**Figure 13. Percent of cisgender male and female NHBS participants reporting number of total sexual partners in the past 12 months (HET4 n=543, MSM5 n=356 and IDU5 n=558)**



**Figure 14. Percent of cisgender male and female NHBS participants reporting number of main sexual partners in the past 12 months (HET4 n=543, MSM5 n=356 and IDU5 n=558)**



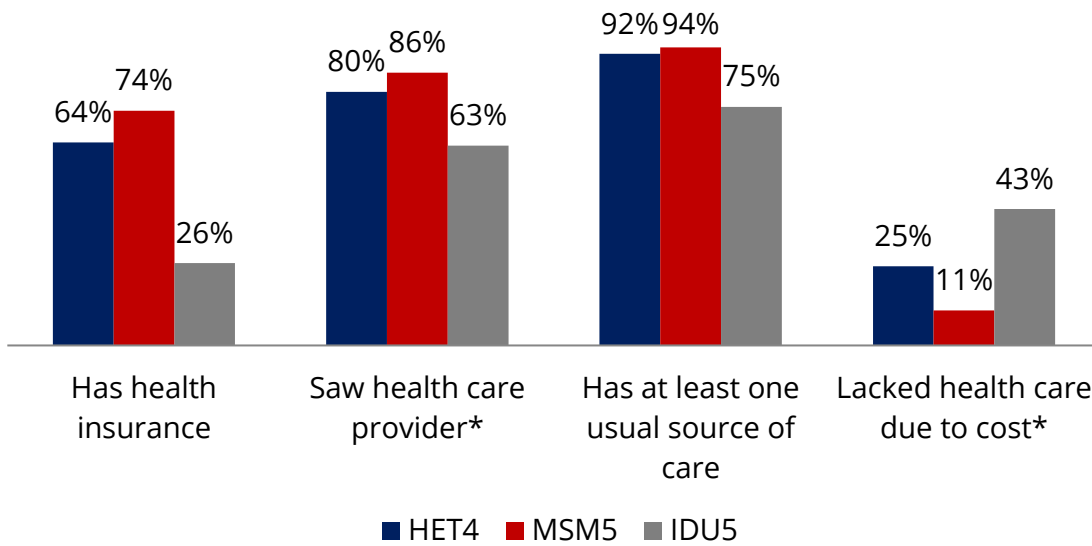
**Figure 15. Percent of cisgender male and female NHBS participants reporting number of casual sexual partners in the past 12 months (HET4 n=543, MSM5 n=356 and IDU5 n=558)**



Number of sexual partners was measured in terms of total number of partners, number of main partners and number of casual partners in the last year (see Glossary for more information on types of sexual partners). HET4 participants were required to have at least one “opposite sex partner” in the last 12 months and consequently did not have any participants reporting zero partners (see Technical Notes for more information on eligibility criteria). For HET4 participants, the majority (83%) reported having 1-2 main partners with approximately 80% reporting zero or 1-2 casual partners. Half of MSM5 participants reported zero main partners while 45% reported having 1-2 casual partners in the past 12 months. IDU5 participants reported the highest percentages of 5 or more total partners (34%) and 5 or more casual partners (30%) in the past 12 months. For more information on sexual partners, see Table 8 in Appendix B.

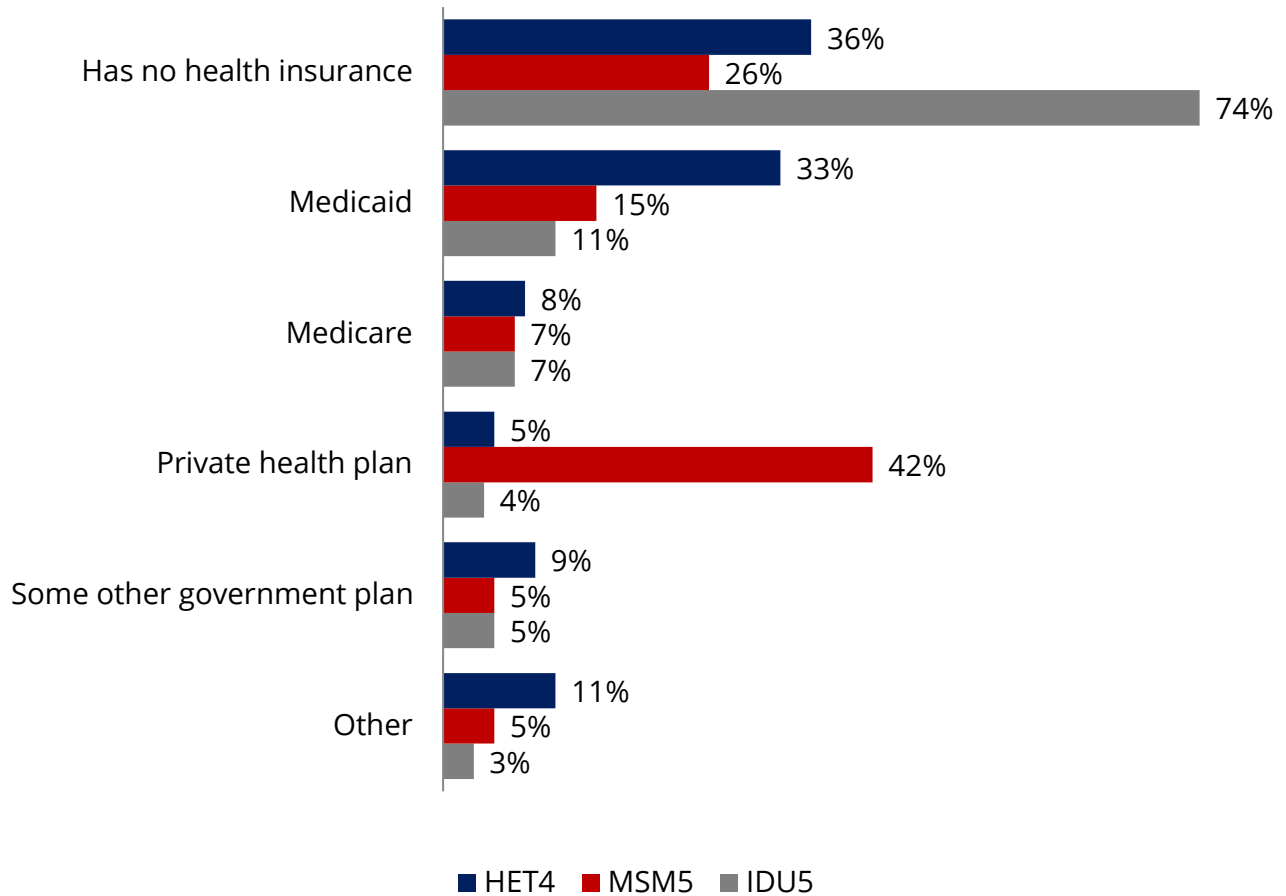
Health Care

Figure 16. Percent of NHBS participants reporting health care outcomes (HET4 n=543, MSM5 n=356 and IDU5 n=564)



\*In the last 12 months

**Figure 17. Percent of NHBS participants by current health insurance\* (HET4 n=543, MSM5 n=356 and IDU5 n=564)**

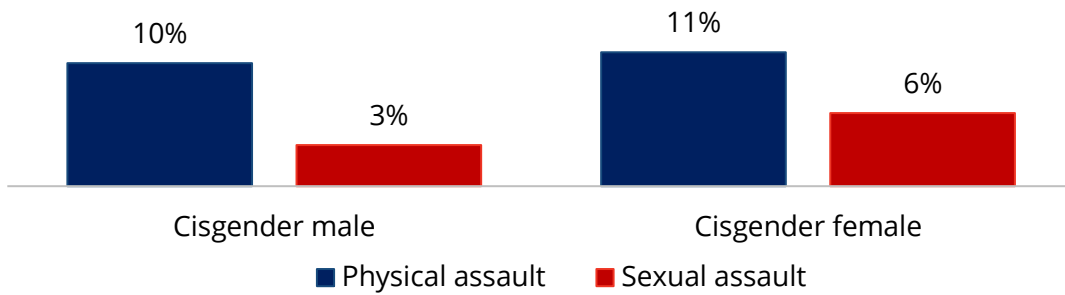


\*Health insurance plans are not mutually exclusive and participants may have selected more than one plan

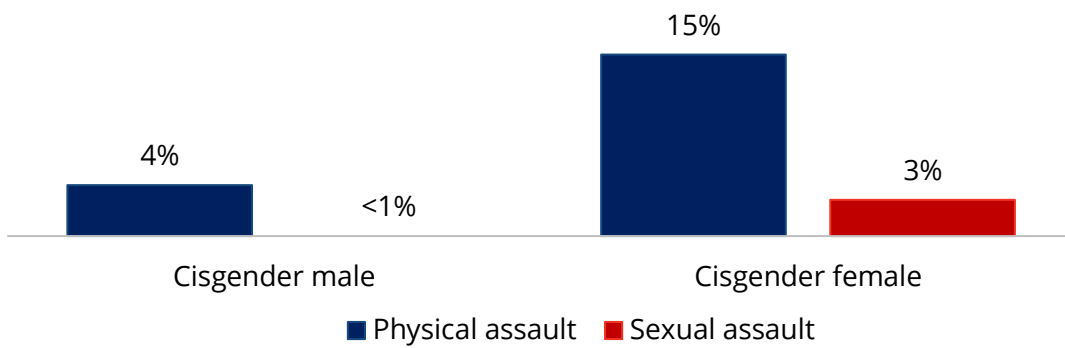
Access to health insurance and medical care varied greatly between HET4, MSM5 and IDU5 cycles. MSM5 participants generally reported the highest percentages of accessing health care in the last year, having any health insurance and having private health insurance. HET4 participants reported the second-highest percentages of having health insurance and receiving medical care in the past 12 months. One-third of HET4 participants reported having Medicaid, higher than both MSM5 and IDU5. Nearly one-half of IDU5 participants reported being unable to get necessary medical care due to cost in the last year and only 26% had some form of health insurance. For more information on health care, see Table 13 in Appendix B.

*Sexual and Physical Assault*

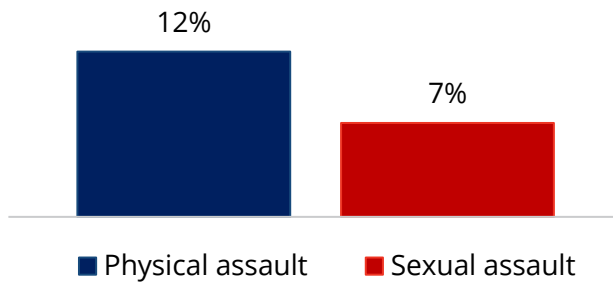
**Figure 18. Percent of HET4 participants (n=543) who reported experiencing physical or sexual assault from their partner by gender of participant**



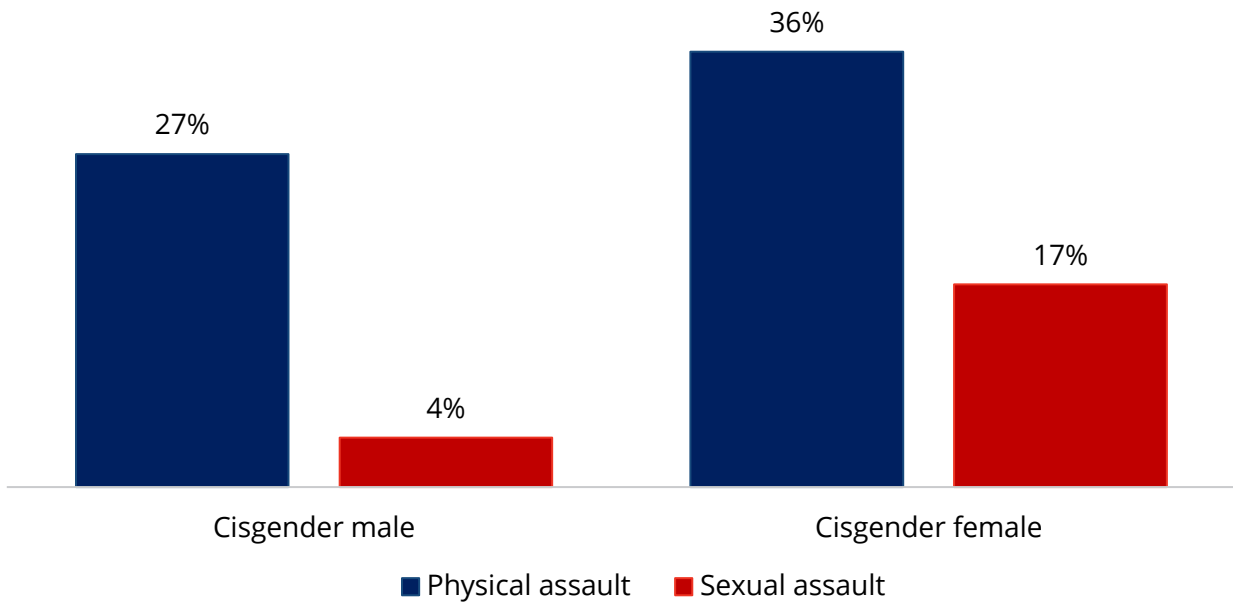
**Figure 19. Percent of HET4 participants (n=543) who reported perpetuating physical or sexual assault on their partner by gender of participant**



**Figure 20. Percent of MSM5 participants (n=356) who reported experiencing physical or sexual assault**



**Figure 21. Percent of IDU5 participants (n=558) who reported experiencing physical or sexual assault by gender of participant**



Experiences of physical and sexual assault were measured in HET4, MSM5 and IDU5. Experiences of any physical and sexual assault were asked the same way in MSM5 and IDU5, while the questions were split up in HET4. HET4 participants reported both experiencing and perpetuating sexual assault less frequently than physical assault. Additionally, cisgender women reported perpetuating both physical and sexual assault more frequently than cisgender men. Overall, a higher percentage of IDU5 participants reported experiencing physical assault compared to MSM5 participants. For more information on sexual and physical assault, see Tables 11 and 12 in Appendix B.



*Alcohol and Drug Use*

Figure 22. Alcohol use among NHBS participants in the past 30 days (HET4 n=543, MSM5 n=356 and IDU5 n=564)

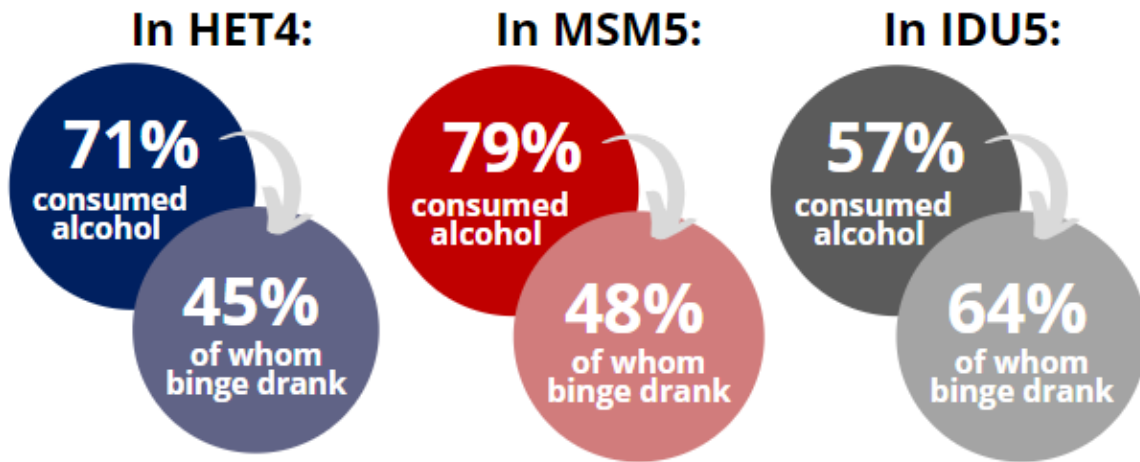
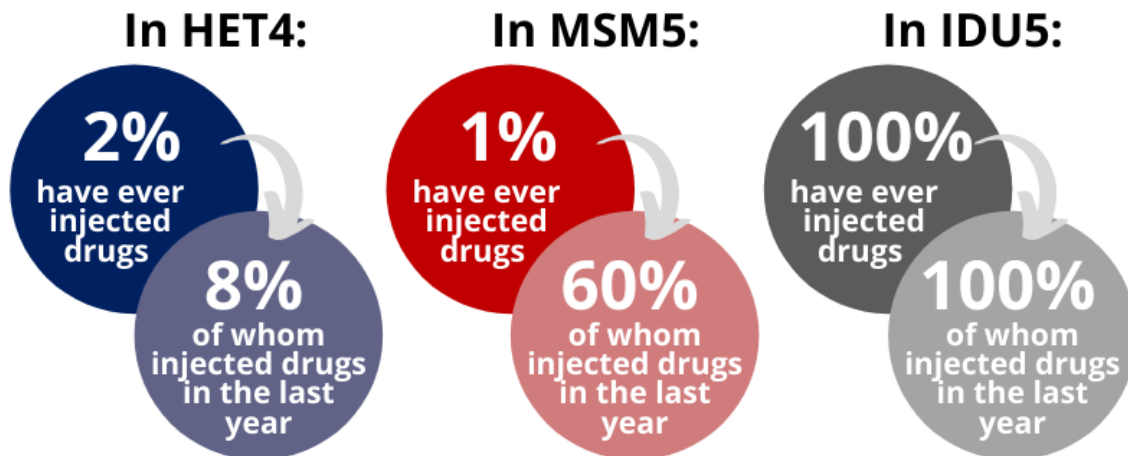
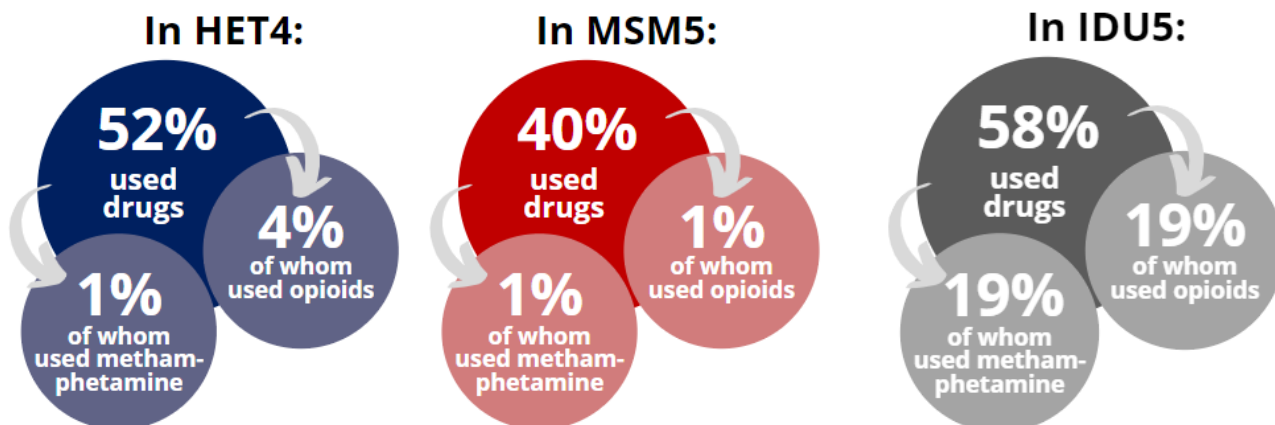


Figure 23. Injection drug use among NHBS participants in the past 12 months (HET4 n=543, MSM5 n=356 and IDU5 n=564)



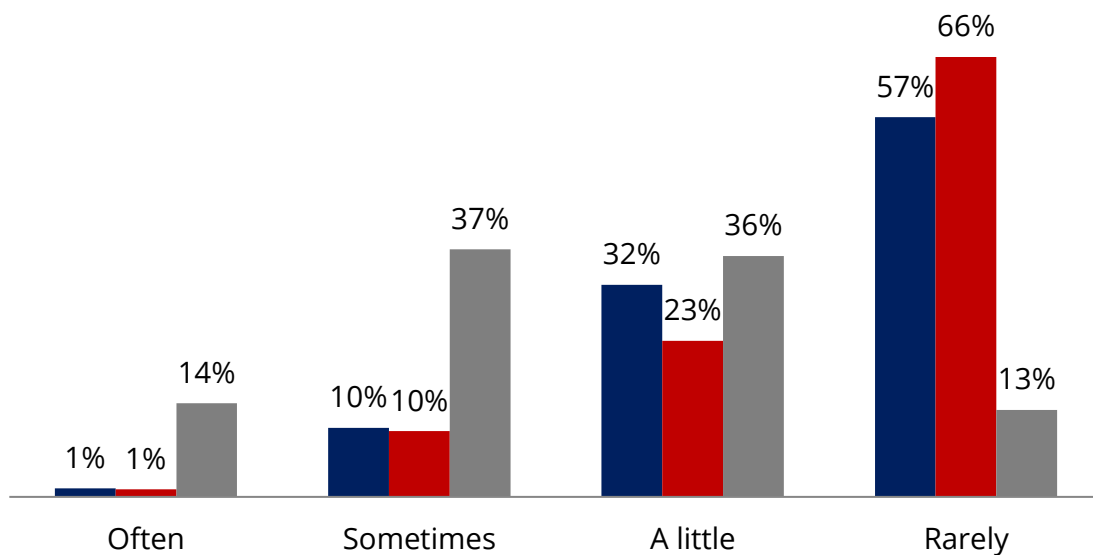
**Figure 24. Non-injection drug use among NHBS participants in the past 12 months (HET4 n=543, MSM5 n=356 and IDU5 n=564)**



Alcohol consumption, injection and non-injection drug use was measured in all three NHBS cycles in Memphis. Levels of consumption of any alcohol and binge drinking were similar in HET4 and MSM5; 45 and 48% of those who drank any alcohol reporting binge drinking in the last month in HET4 and MSM5, respectively. Overall consumption of alcohol was lower in IDU5 but the percentage of drinkers who reported binge drinking was higher than other cycles (64%). Reporting of injection drug use was uncommon in HET4 and MSM while all of the participants in IDU5 had injected drugs in the last year due to eligibility requirements. Use of any drugs through non-injection methods, (e.g., inhalation or injection) ranged from 40% in MSM5 to 58% in IDU5. The percentage of participants who reported non-injection drug use limited to marijuana was 50% in HET4, 51% in MSM5 and 1% in IDU5. For more information on alcohol and drug use, see Table 14 in Appendix B.

## Mental Health

**Figure 25. Percent of NHBS participants reporting frequency of experiencing mental health symptoms (HET4 n=543, MSM5 n=356 and IDU5 n=564)**

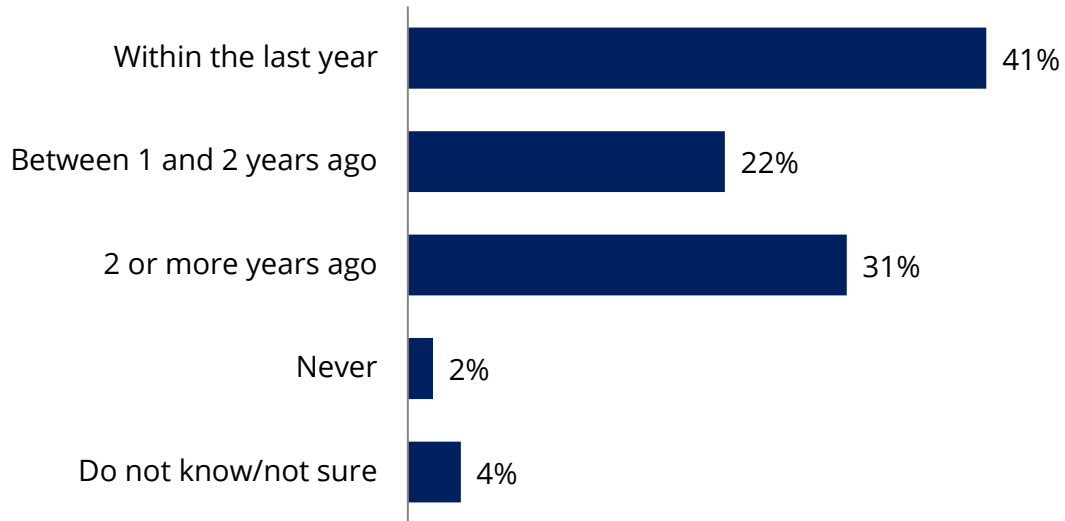


Participants from all three cycles answered six questions based on the Kessler (K6) scale regarding how often they feel various emotions (e.g., sadness, restlessness and hopelessness) on a 5-point Likert scale ranging from “all of the time” to “none of the time” with “all of the time” equating to 0 points and “none of the time” equating to 4 points. Points for the six questions were totaled and divided into four equal categories. Participants from HET4 and MSM5 scored similarly with 66% of MSM5 and 57% of HET4 participants reporting “rarely” experiencing mental health symptoms. IDU5 participants more frequently reported experiencing the measured mental health symptoms “often” or “sometimes”, with only 13% reporting them “rarely.” For more information on mental health, see Table 15 in Appendix B.

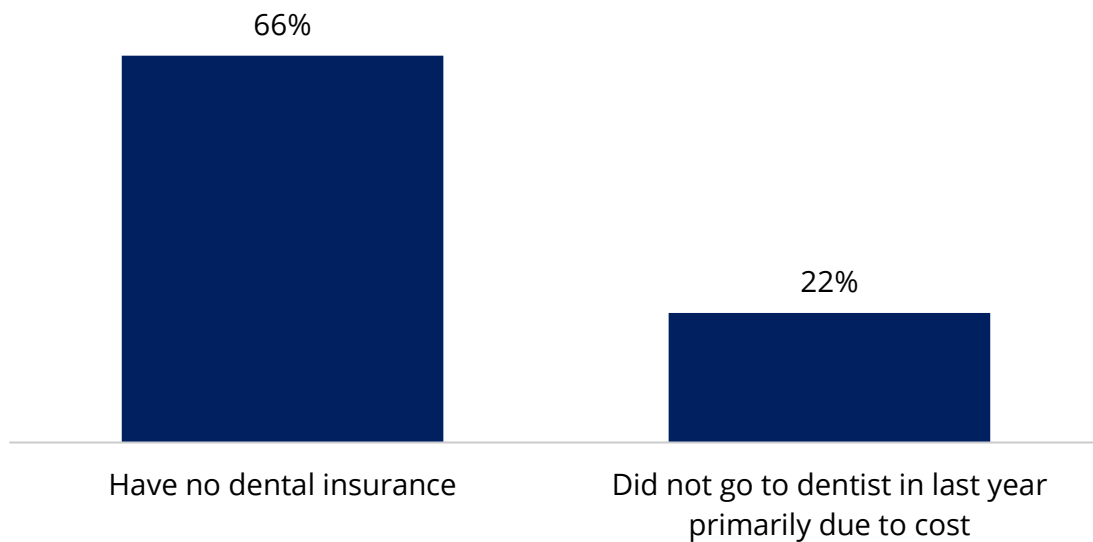
## Local Survey

HET4

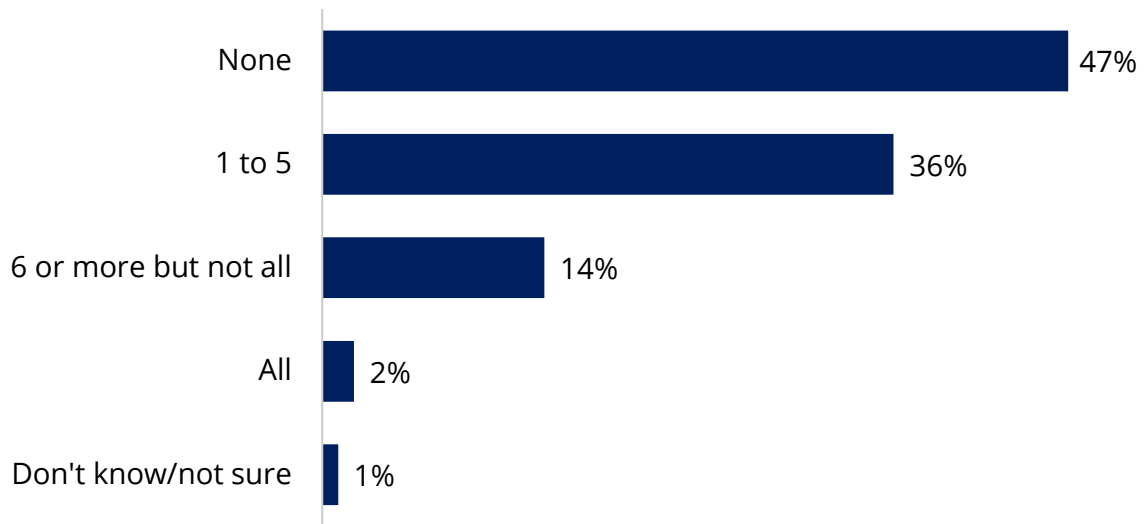
**Figure 26. Time since last visit to a dentist or dental clinic among HET4 participants (n=509)**



**Figure 27. Dental insurance and cost of care in HET4 (n=509)**



**Figure 28. Number of permanent teeth lost because of tooth decay or gum disease among HET4 participants (n=509)**



HET4 participants were asked about their recent dental care history, ability to seek dental services and the consequences of their access to care. Less than half of HET4 participants had seen a dentist or been to a dental clinic in the last year. Two-thirds of participants did not have any form of dental insurance to cover costs and nearly a quarter had not gone to a dentist or dental clinic in the last year primarily due to cost. The majority of participants had lost at least one tooth, with 16% having lost 6 or more teeth due to tooth decay or gum disease. For more information on the HET4 local survey, see Table 16 in Appendix B.

Figure 29. Awareness and use of PrEP in MSM5 (n=321)

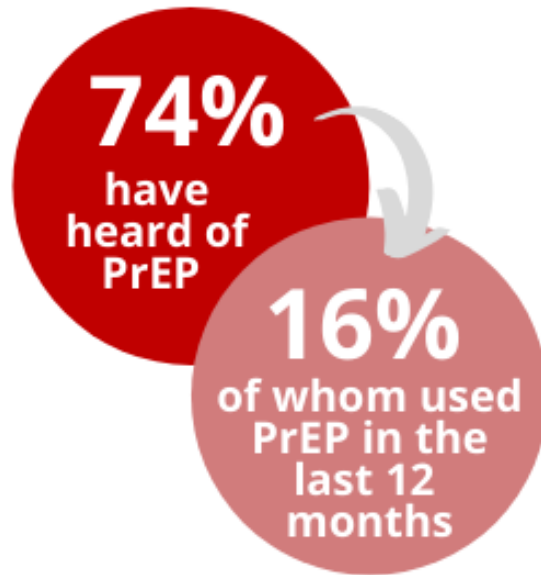
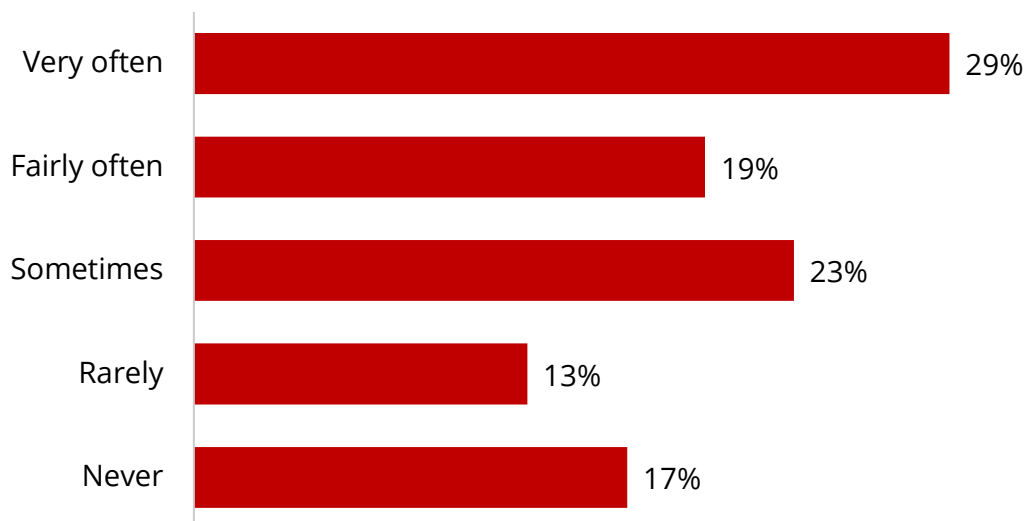
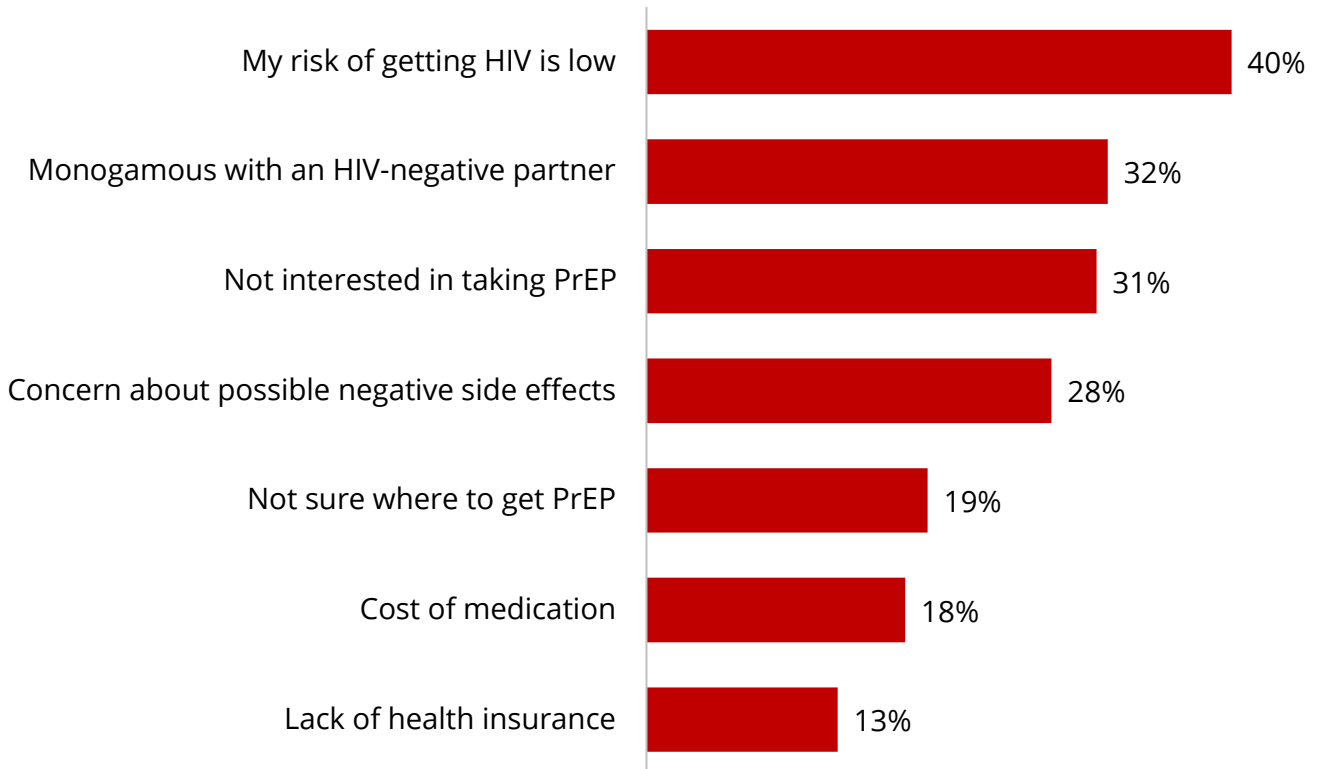


Figure 30. Frequency of contact with local media on PrEP in past 12 months among MSM5 participants who have heard of PrEP before (n=321)



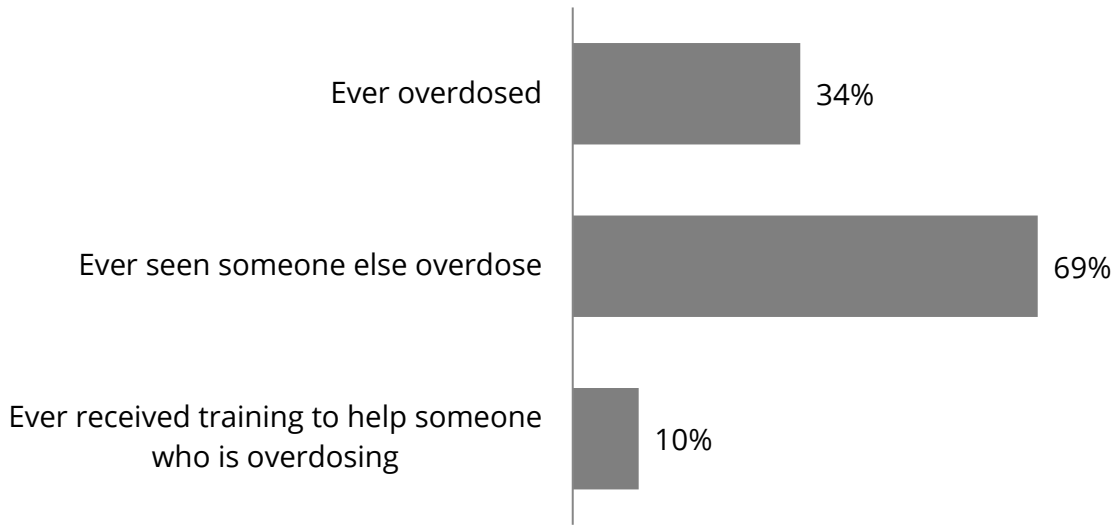
**Figure 31. Top 7 most frequently reported reasons for not being on PrEP among HIV-negative MSM5 participants who have previously heard of PrEP\* (n=130)**



\*Not mutually exclusive; participants could select more than one answer

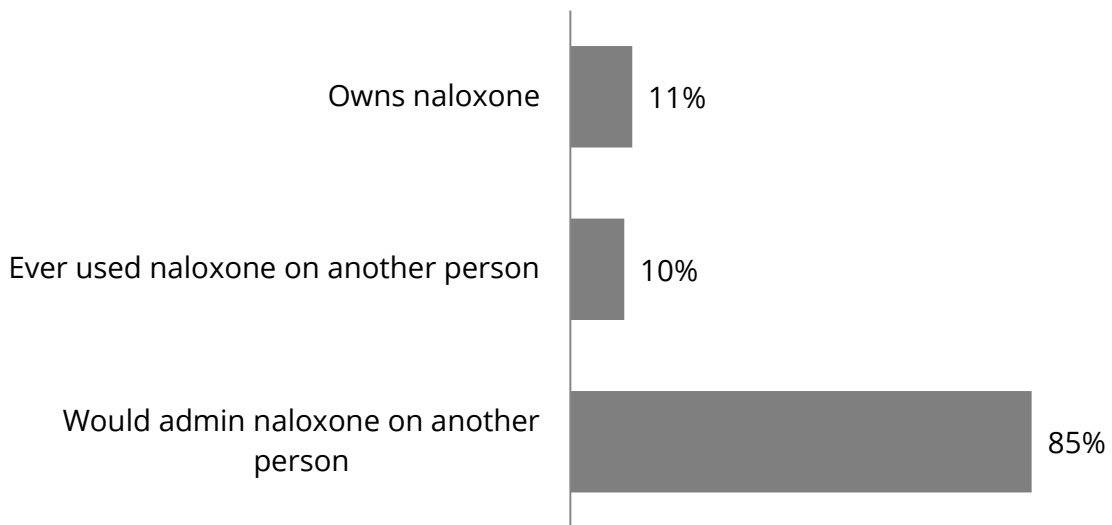
MSM5 participants were asked additional questions about PrEP in the local survey. While nearly three-fourths of the participants had heard of PrEP before the survey, only 38 individuals had used PrEP in the last 12 months. Of participants who had heard of PrEP before the survey (n=130), 71% had seen PrEP mentioned in local media sometimes, fairly often, or very often in the last year. The most frequently reported reasons for participants not using PrEP in the past 12 months, excluding already living with HIV, were belief that risk was low, being in a monogamous sexual relationship with an HIV-negative partner and having no interest in taking PrEP. For more information on the MSM5 local survey, see Table 17 in Appendix B.

**Figure 32. Experiences with drug overdose among IDU5 participants\* (n=544)**



\*Not mutually exclusive; participants could select more than one answer

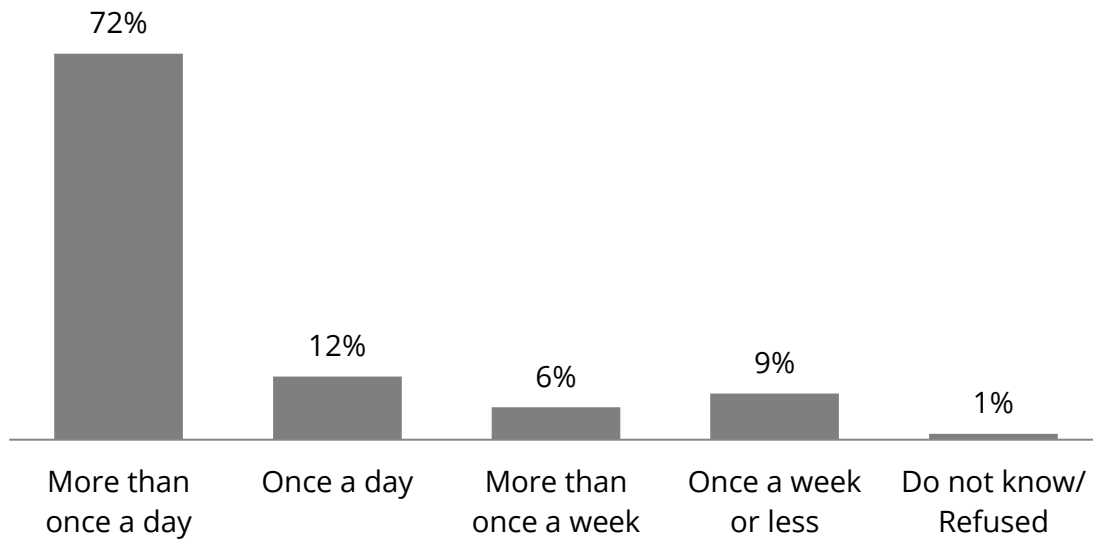
**Figure 33. Experiences with naloxone among IDU5 participants\* (n=544)**



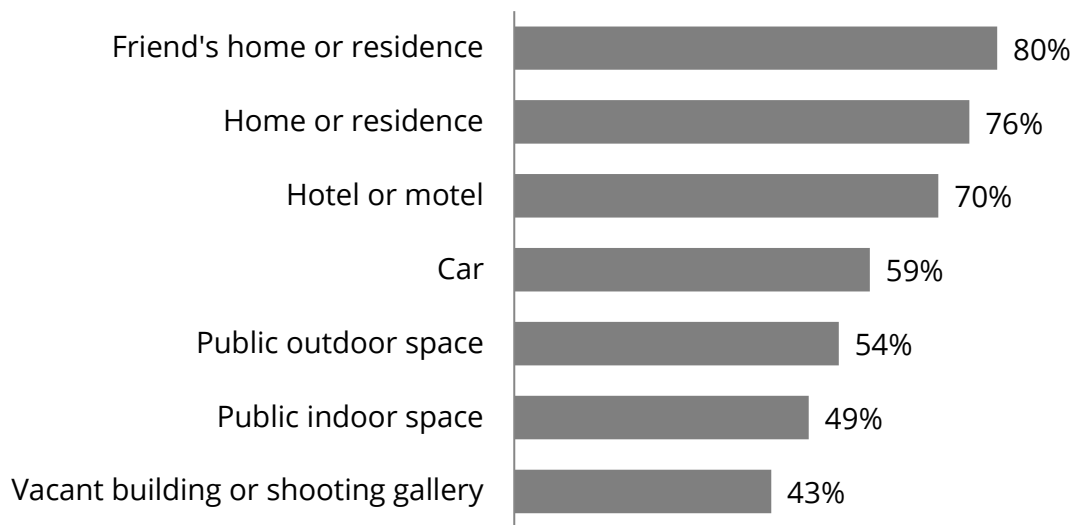
\*Not mutually exclusive; participants could select more than one answer



**Figure 34. Frequency of all injection drug use among IDU5 participants (n=544)**

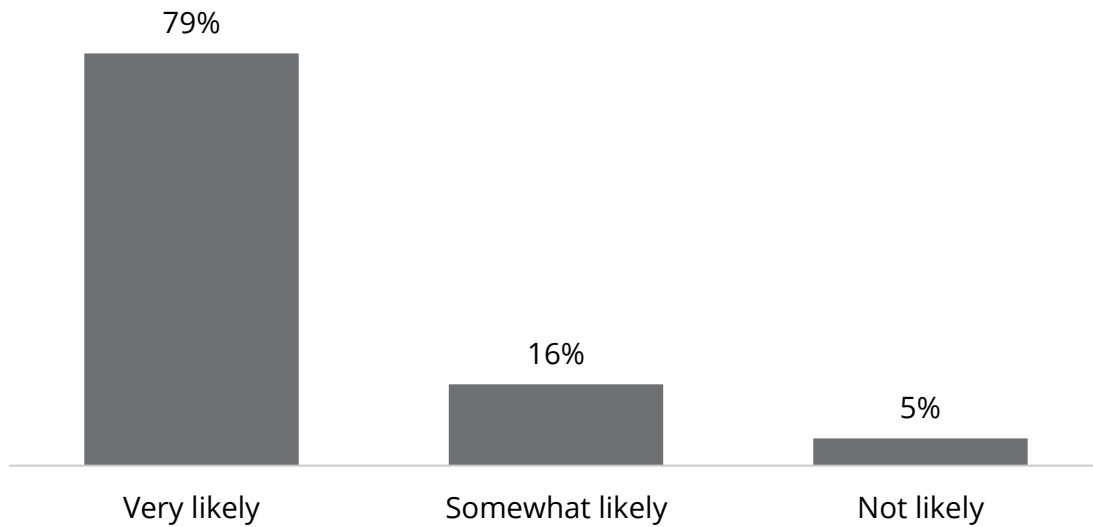


**Figure 35. Locations where IDU5 participants injected drugs in the past 12 months\* (n=544)**

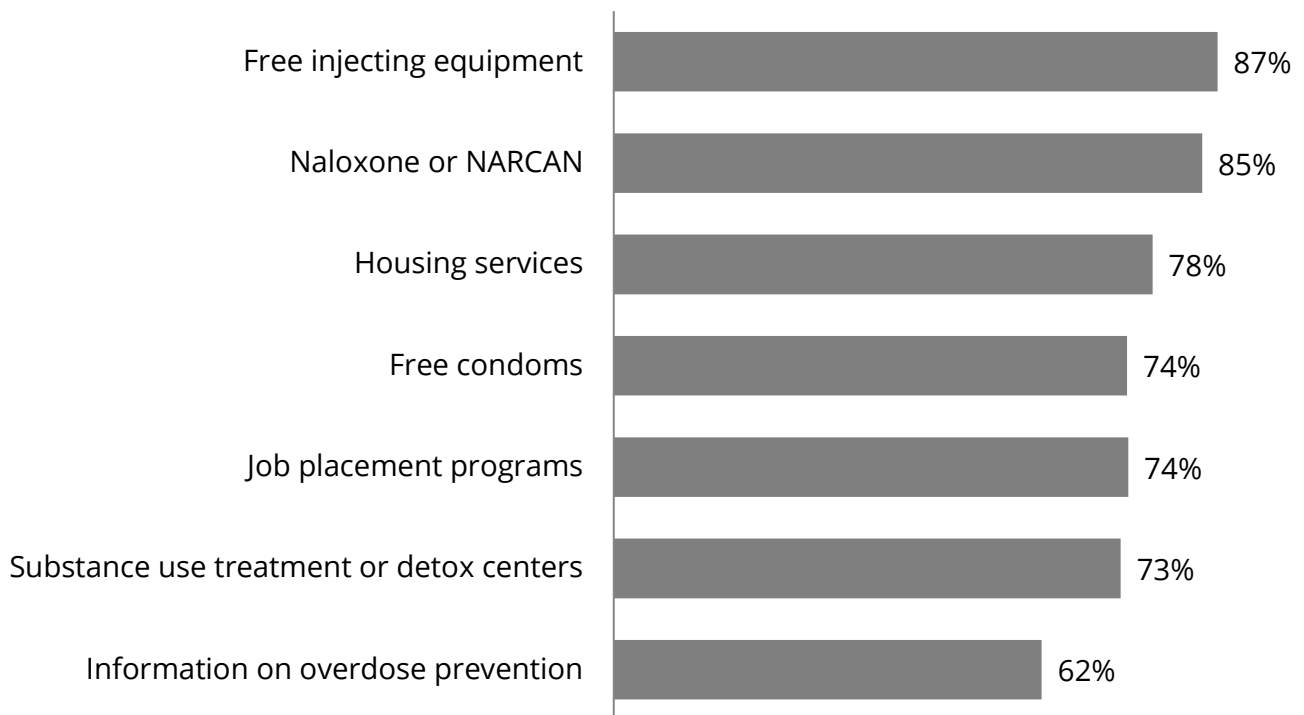


\*Not mutually exclusive; participants could select more than one answer

**Figure 36. Likelihood of utilizing syringe services programs among IDU5 participants (n=544)**



**Figure 37. Services that would encourage utilization of syringe services programs among IDU5 participants\* (n=557)**



\*Not mutually exclusive; participants could select more than one answer

IDU5 participants were asked additional survey questions on experiences with overdosing, injection practices, naloxone and willingness to use a syringe services program (SSP). While 34% had ever overdosed before and 69% had seen someone else overdose, only 10% of IDU5 participants had ever received training on how to help someone experiencing an overdose.

Similarly, the vast majority would be willing to use naloxone on someone but only 11% possessed naloxone at the time of the survey. IDU5 participants were largely injecting drugs more than once a day and the most common locations of drug use were residences, hotels or motels, or cars. Lastly, 79% said they would be very likely to utilize an SSP and would be interested in receiving free injecting equipment, naloxone, free condoms and housing services. For more information on the IDU5 local survey, see Tables 18 and 19 in Appendix B.

## Technical notes

**Rounding:** Data labels in figures were rounded to the nearest integer and totals may therefore not equal 100%. Data rounded to the nearest tenth can be found in Appendix B.

**Sample size (n=):** The number of participants per cycle included in each chart or individual percentage calculation is included in all titles. The “n=” refers to that number of participants. This number may vary between charts due to missing data or to specify how many of the total is being evaluated.

**Eligibility Criteria:** All cycles of NHBS require participants to be at least 18 years old, a resident of the given metropolitan statistical area (MSA) and have not already participated in the survey. Participants from these three years were required to complete the survey in English; no interviewers spoke Spanish during these cycles.

- **In HET cycles,** eligibility criteria include being a cisgender man or woman (i.e. not transgender), being no older than 60 years of age and reporting vaginal or anal sex with an opposite sex partner in the past 12 months. To be included in the final analytical dataset, HET participants must have not injected drugs without a prescription in the past 12 months and have low socioeconomic status (SES). Low SES is defined as having income that does not exceed Health and Human Services (HHS) federal poverty level or educational attainment not greater than a high school degree.
- **In MSM cycles,** eligibility criteria include being a cisgender man who has ever had oral or anal sex with another cisgender man.
- **In IDU5 cycles,** eligibility criteria include having injected drugs without a prescription in the past 12 months.

**Federal poverty level:** A measure of income issued by the Department of Health and Human Services (HHS). Federal poverty levels are used to determine eligibility for certain social service programs and benefits, including Medicaid. The federal poverty level is based on total yearly income and number of family members or dependents.

**HIV Testing:** All participants of the HET4, MSM5 and IDU5 cycles were offered rapid HIV testing. If an initial HIV rapid test came back as positive and the participant did not self-report living with HIV, a second rapid test would be run on-site to confirm the results. Both tests used blood from a finger stick.

**Chlamydia, gonorrhea and syphilis (STI) testing:** Chlamydia, gonorrhea and syphilis testing was offered in HET4 and MSM5. Urine was collected for chlamydia and gonorrhea testing and a blood draw was collected for syphilis testing. All urine and blood samples were sent to the Shelby County Health Department Laboratory; participants were asked to call the NHBS site after two weeks to receive their results. Positive chlamydia and gonorrhea test results indicated active infection. Positive syphilis results indicated exposure to syphilis and participants who tested

positive were encouraged to seek confirmatory testing at their local health department to determine if they were actively infected.

***HCV antibody (Ab) testing:*** HCV Ab testing was offered during the IDU5 cycle. Similarly to the rapid HIV test, the HCV Ab test used blood from a finger stick and the results were read after 20 minutes. The test itself tested for the presence of HCV antibodies, which indicates exposure to HCV, including those who had resolved an infection spontaneously or who had undergone treatment and were cured of HCV. Individuals who tested positive for HCV antibodies were encouraged to seek confirmatory testing with their doctor or at a local health department to determine if they were actively infected.

***Sexual and physical assault:*** Experiences of any physical and sexual assault were asked the same way in MSM5 and IDU5 (e.g. “In the past 12 months has anyone slapped, punched, shoved, kicked, shaken or otherwise physically hurt you? “), while the questions were split up in HET4 to ask specifically about experiencing versus perpetuating or engaging in physical or sexual assault with a romantic or sexual partner (e.g. “In the past 12 months, have you slapped, punched, shoved, kicked, shaken or otherwise physically hurt a partner?” and “In the past 12 months has a partner slapped, punched, shoved, kicked, shaken or otherwise physically hurt you?”).

## Acknowledgements

The authors would like to thank the central office and Memphis NHBS staff, without whom, this project would not be possible. Additionally, we would like to thank Dr. Paul Denning and the Centers for Disease Control and Prevention for providing funding, management and support.

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## Glossary

**Binge drinking:** for women, consuming 4 or more drinks in about 2 hours. For men, consuming 5 or more drinks in about 2 hours.

**Casual partner:** an individual one has sex with but does not feel committed to or doesn't know very well.

**Cisgender:** all persons whose sex assigned at birth is the same as their current gender.

**Injection drug use:** use of a needle to inject drugs (other than those prescribed) in the veins, under the skin, or in the muscle.

**Main partner:** an individual one has sex with and who one feels committed to above anyone else. This is a partner who could be called a girlfriend, boyfriend, spouse, significant other, or life partner.

**Non-injection drug use:** consumption of drugs (other than those prescribed) through means other than injection such as by inhalation or ingestion.

**Opioid:** A class of drug used to reduce pain. The opioids asked about in NHBS include heroin and oral pain killers such as Oxycontin or Vicodin.

**Pre-exposure prophylaxis:** Abbreviated as "PrEP," pre-exposure prophylaxis is a medication HIV-negative individuals to reduce their risk of becoming infected.

**Transgender:** adjective describing persons whose gender is different than the sex they were assigned at birth. Transgender persons may be men or women, but for the purpose of this report, transgender individuals are categorized separately from non-transgender (or cisgender) men and women.

## **Abbreviations**

AIDS: Acquired Immunodeficiency Syndrome

CDC: Centers for Disease Control and Prevention

GED: General Education Development

FPL: Federal Poverty Level

HHS: Health and Human Services

HIV: Human Immunodeficiency Virus

IDU: Injection Drug Use

MSM: Men who have sex with men

PrEP: Pre-exposure prophylaxis

PWID: Persons Who Inject Drugs

TDH: Tennessee Department of Health



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3. US Census Bureau, Population Division. Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2010 to July 1, 2018 (NST-EST2018-01). In: National Population Totals and Components of Change: 2010-2018. Washington, DC: US Census Bureau; 2019.
4. United States Census Bureau. Quick Facts-Shelby County, Tennessee. Washington, DC: US Census Bureau; 1 July 2018, <https://www.census.gov/quickfacts/shelbycountytennessee>
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6. Centers for Disease Control and Prevention, Division of STD Prevention. Sexually Transmitted Disease Surveillance 2018: Table 17. Gonorrhea — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs) in Alphabetical Order, United States, 2014–2018, Atlanta, GA: Centers for Disease Control and Prevention; 20 August 2019, <https://www.cdc.gov/std/stats18/tables/17.htm>.
7. Tennessee Department of Health, Tennessee Drug Overdose Dashboard. Nashville, TN: Tennessee Department of Health; 2018, <https://www.tn.gov/health/health-program-areas/pdo/pdo/data-dashboard.html>.

## Appendix A: NHBS participation by Zip Code

Figure 38. Select neighborhoods in Shelby County along ZIP Code lines

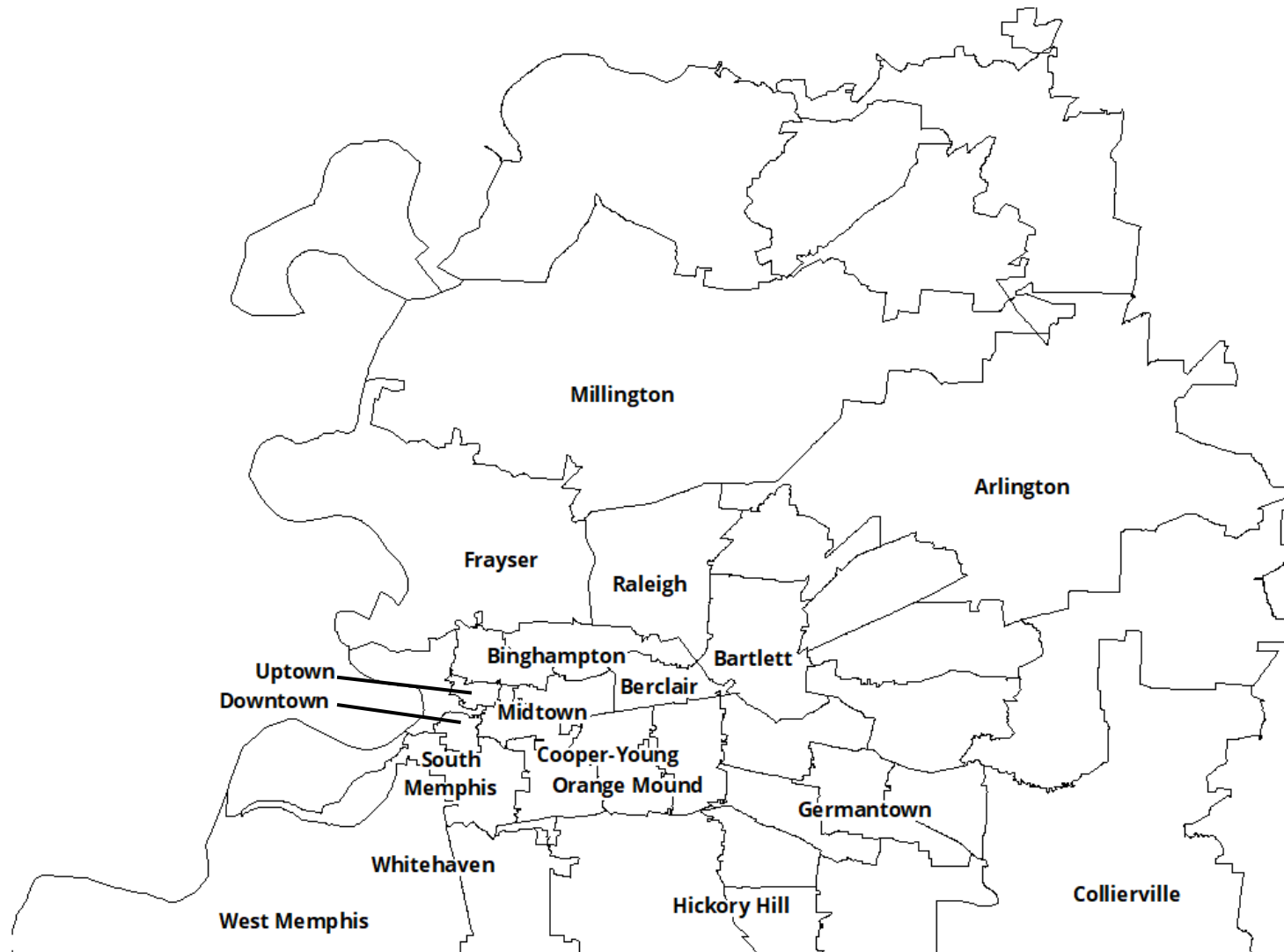


Figure 39. Percent of HET4 Participants by ZIP Code (n=543)

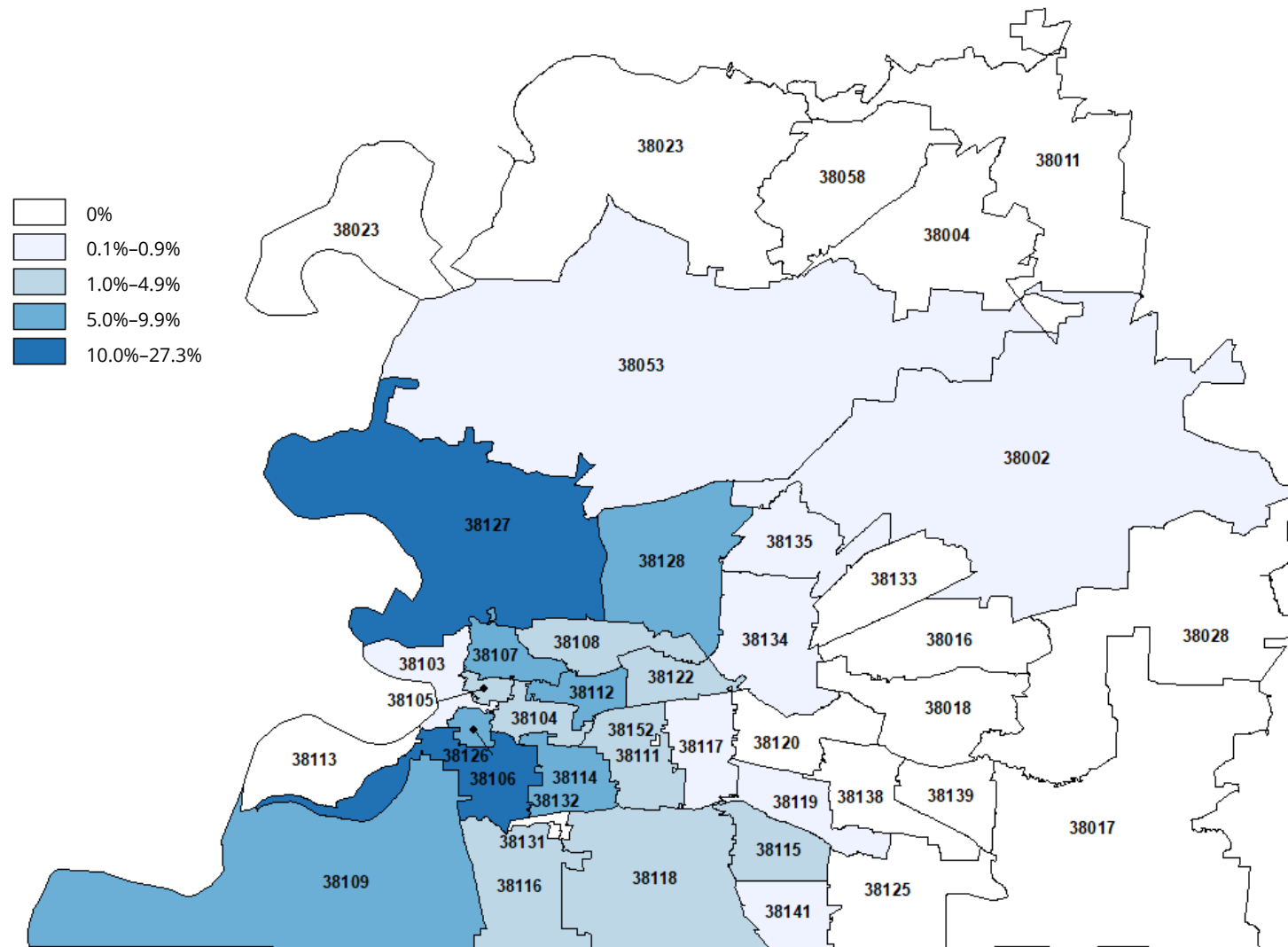


Figure 40. Percent of MSM5 Participants by ZIP Code (n=356)

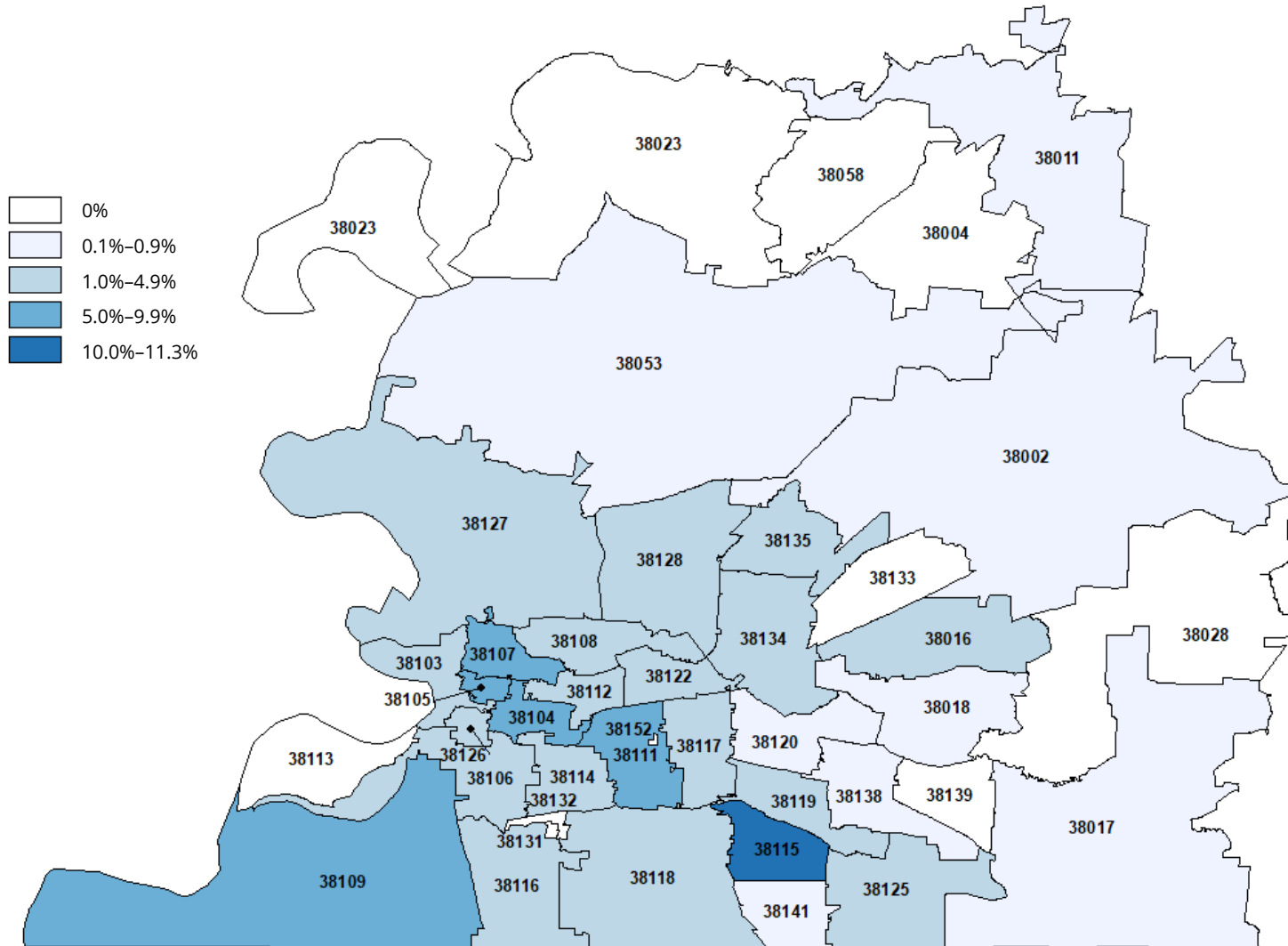
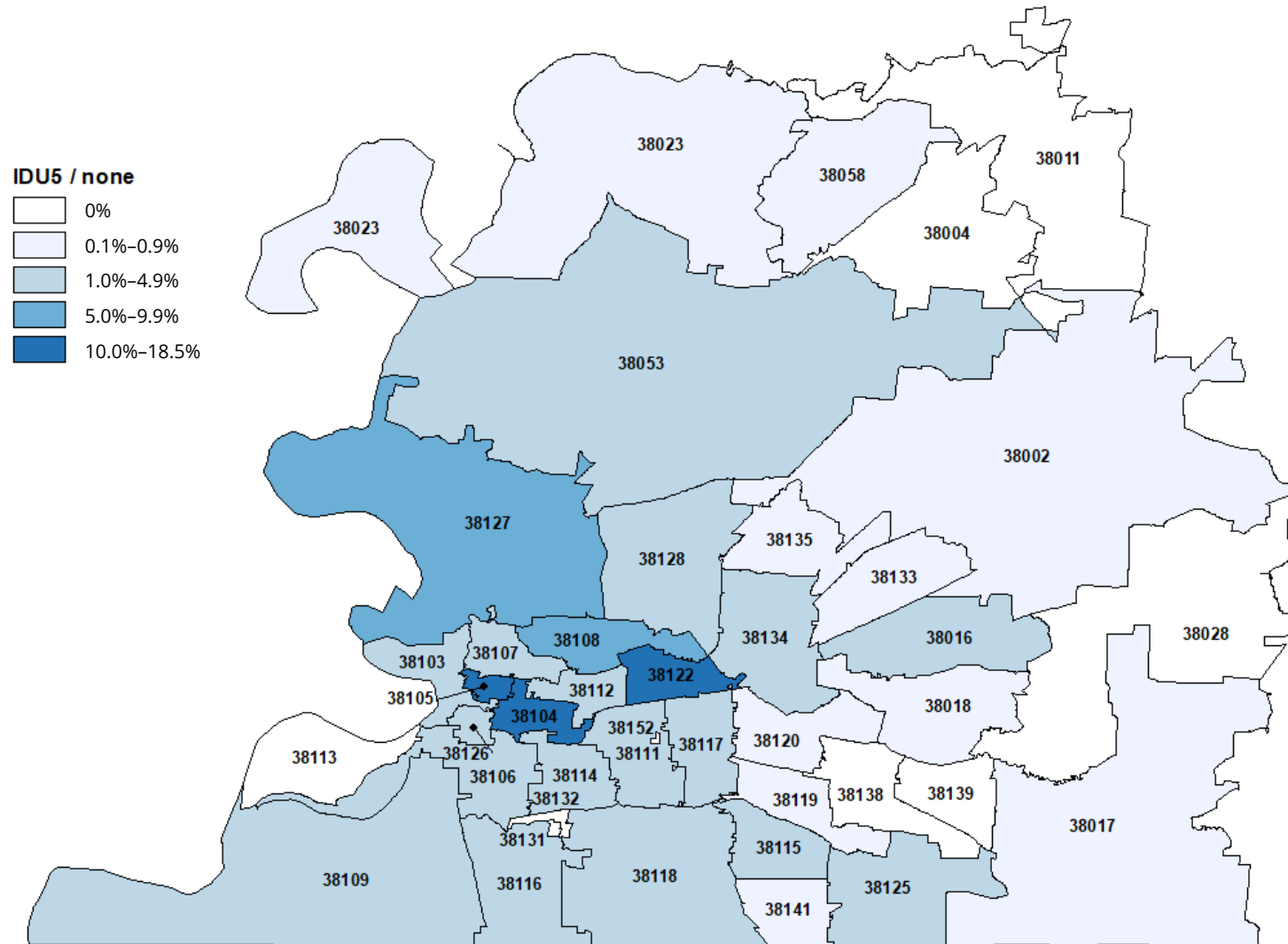


Figure 41. Percent of IDU5 Participants by ZIP Code (n=564)



## Appendix B: HET4, MSM5 and IDU5 data tables

**Table 2. Demographics**

	HET4 Participants		MSM5 Participants		IDU5 Participants	
	N	%	N	%	N	%
<b>Gender</b>						
Cisgender male	240	44.2	356	100.0	395	70.0
Cisgender female	303	55.8	0	0.0	163	28.9
Transgender person	0	0.0	0	0.0	6	1.1
<b>Age group (years)</b>						
18-24	174	32.0	102	28.7	38	6.7
25-34	300	55.2	136	38.2	142	25.2
35-44	130	23.9	49	13.8	141	25.0
45-54	87	16.0	53	14.9	145	25.7
≥55	65	12.0	16	4.5	98	17.4
<b>Race/ethnicity</b>						
Non-Hispanic Black	535	98.5	283	79.5	232	41.1
Non-Hispanic White	5	0.9	55	15.4	317	56.2
Hispanic	1	0.2	14	3.9	10	1.8
Non-Hispanic Other	2	0.4	4	1.1	5	0.9
<b>Income/FPL</b>						
< 100% FPL	442	81.4	118	33.1	415	73.6
100-199% FPL	62	11.4	86	24.2	98	17.4
> 200% FPL	20	3.7	147	41.3	32	5.7
Missing	19	3.5	5	1.4	19	3.4
<b>Education</b>						
Less than HS	186	34.3	20	5.6	180	31.9
High school or GED	288	53.0	119	33.4	268	47.5
Some College	65	12.0	148	41.6	105	18.6
College graduate or higher	4	0.7	69	19.4	9	1.6
Missing	0	0.0	0	0.0	2	0.4
<b>Overall</b>	<b>543</b>	<b>100.0</b>	<b>356</b>	<b>100.0</b>	<b>564</b>	<b>100.0</b>

**Table 3. Demographics continued**

	HET4 participants		MSM5 participants		IDU5 participants	
	No.	%	No.	No.	%	No.
<b>Employment</b>						
Full-time	81	14.9	217	61.0	50	8.9
Part-time	116	21.4	51	14.3	56	9.9
Unable to work or unemployed	275	50.6	65	18.3	419	74.3
Other	71	13.1	23	6.5	39	6.9
<b>Sexual orientation</b>						
Heterosexual	497	91.5	6	1.7	467	82.8
Bisexual	42	7.7	85	23.9	80	14.2
Homosexual	3	0.6	263	73.9	15	2.7
Unknown	1	0.2	2	0.6	2	0.4
<b>Homeless, past 12 months</b>						
Yes	85	15.7	30	8.4	387	68.6
No	458	84.3	326	91.6	175	31.0
Unknown	0	0.0	0	0.0	2	0.4
<b>Incarceration, past 12 months</b>						
Yes	120	22.1	32	9.0	284	50.4
No	423	77.9	323	90.7	278	49.3
Unknown	0	0.0	1	0.3	2	0.4
<b>Overall</b>	<b>543</b>	<b>100.0</b>	<b>356</b>	<b>100.0</b>	<b>564</b>	<b>100.0</b>

**Table 4. HIV and PrEP**


	HET4 participants		MSM5 participants		IDU5 participants	
	No.	%	No.	No.	%	No.
<b>Ever tested for HIV</b>						
Yes	415	76.4	333	93.5	423	75.0
No	128	23.6	23	6.5	139	34.8
Unknown	0	0.0	0	0.0	2	0.4
<b>Tested for HIV in past 12 months*</b>						
Yes	223	41.1	199	76.5	227	42.2
No	320	58.9	61	23.5	309	57.4
Unknown	0	0.0	0	0.0	2	0.4
<b>Self-reported HIV positive (SRP)</b>						
Yes	0	0.0	96	27.0	26	4.6
No	543	100.0	260	73.0	538	95.4
Unknown	0	0.0	0	0.0		0.0
<b>NHBS HIV test result</b>						
Positive	2	0.4	99	27.8	30	5.3
Negative	537	98.9	198	55.6	527	93.4
Unknown/no test	4	0.7	59	16.6	7	1.2
<b>Ever heard of PrEP</b>						
Yes	21	3.9	255	71.6	31	5.5
No	522	96.1	93	26.1	503	89.2
Unknown	0	0.0	8	2.2	30	5.3
<b>Taken PrEP in the past 12 months</b>						
Yes	1	0.2	44	12.4	1	0.2
No	542	99.8	312	87.6	563	99.8
<b>Overall</b>	<b>543</b>	<b>100.0</b>	<b>356</b>	<b>100.0</b>	<b>564</b>	<b>100.0</b>

\*Among those not self-reporting an HIV-positive status (HET4 n=543, MSM5 n=260, IDU5 n=538)



**Table 5. STI Testing**

	HET4 participants		MSM5 participants		IDU5 participants	
	No.	%	No.	No.	%	No.
<b>Tested for STI in past 12 months</b>						
Yes	209	38.5	226	63.5	97	17.2
No	334	61.5	129	36.2	463	82.1
Unknown	0	0.0	1	0.3	4	0.7
<b>Diagnosed with</b>						
Genital Warts, ever	6	1.1	9	2.5	12	2.1
Genital Herpes, ever	10	1.8	18	5.1	22	3.9
Gonorrhea, past 12 months	15	2.8	35	9.8	37	6.6
Chlamydia, past 12 months	34	6.3	23	6.5	37	6.6
Syphilis, past 12 months	7	1.3	25	7.0	22	3.9
<b>NHBS chlamydia test result</b>						
Positive	6	1.1	5	1.4		
Negative	156	28.7	95	26.7		
Unknown/no test	381	70.2	255	71.6		
<b>NHBS gonorrhea test result</b>						
Positive	0	0.0	2	0.6		
Negative	163	30.0	99	27.8		
Unknown/no test	380	70.0	255	71.6		
<b>NHBS syphilis test result</b>						
Positive	7	1.3	47	13.2		
Negative	133	24.5	105	29.5		
Unknown/no test	403	74.2	204	57.3		
<b>Overall</b>	<b>543</b>	<b>100.0</b>	<b>356</b>	<b>100.0</b>	<b>564</b>	<b>100.0</b>

 = Not offered

**Table 6. HCV Testing**

	<b>HET4 participants</b>		<b>MSM5 participants</b>		<b>IDU5 participants</b>	
	No.	%	No.	No.	%	No.
<b>Ever tested for HCV</b>						
Yes	219	40.8	198	56.1	312	55.3
No	318	59.2	155	43.9	244	43.3
Unknown	6	1.1	3	0.8	8	1.4
<b>Ever diagnosed with HCV</b>						
Yes	5	0.9	7	2.0	116	20.6
No	214	39.9	191	54.1	195	34.6
Unknown/never tested	324	60.3	158	44.8	253	44.9
<b>NHBS HCV antibody test result</b>						
Positive					223	39.5
Negative					317	56.2
Unknown/no test					4	0.7
<b>Overall</b>	<b>543</b>	<b>100.0</b>	<b>356</b>	<b>100.0</b>	<b>564</b>	<b>100.0</b>

■ = Not offered

**Table 7. Sex exchange and bacterial STI history**

	<b>HET4 Participants</b>		<b>MSM5 Participants</b>		<b>IDU5 Participants</b>	
	No.	%	No.	%	No.	%
<b>Sex exchange, past 12 months</b>						
Yes	97	17.9	46	12.9	211	37.8
No	446	82.1	310	87.1	344	61.6
Unknown	0	0.0	0	0.0	3	0.5
<b>Bacterial STI, past 12 months</b>						
Yes	45	8.3	59	16.6	68	12.2
No	489	90.1	297	83.4	490	87.8
<b>Overall</b>	<b>543</b>	<b>100.0</b>	<b>356</b>	<b>100.0</b>	<b>558</b>	<b>100.0</b>

**Table 8. Condomless sex and number sex partners of cisgender male and female NHBS participants**

	HET4 participants		MSM5 participants		IDU5 participants	
	No.	%	No.	No.	%	No.
<b>Condomless anal or vaginal sex</b>						
Yes	466	85.8	202	56.7	369	66.1
No	77	14.2	154	43.3	189	33.9
<b>Condomless vaginal sex</b>						
Yes	466	85.8	33	9.3	348	62.4
No	77	14.2	323	90.7	210	37.6
<b>Condomless anal sex</b>						
Yes	92	16.9	194	54.5	164	29.4
No	451	83.1	162	45.5	394	70.6
<b>Total number of partners</b>						
0 partners	0	0.0	20	5.6	48	8.6
1-2 partners	342	63.0	160	44.9	207	37.1
3-4 partners	108	19.9	80	22.5	115	20.6
5 or more partners	93	17.1	96	27.0	188	33.7
<b>Total number of main partners</b>						
0 partners	63	11.6	177	49.7	164	29.4
1-2 partners	450	82.9	172	48.3	339	60.8
3-4 partners	22	4.1	5	1.4	33	5.9
5 or more partners	8	1.5	2	0.6	22	3.9
<b>Total number of casual partners</b>						
0 partners	209	38.5	81	22.8	131	23.5
1-2 partners	222	40.9	159	44.7	177	31.7
3-4 partners	43	7.9	61	17.1	81	14.5
5 or more partners	69	12.7	55	15.4	169	30.3
<b>Overall</b>	<b>543</b>	<b>100.0</b>	<b>356</b>	<b>100.0</b>	<b>558</b>	<b>100.0</b>

**Table 9. Condomless sex and number sex partners of cisgender male NHBS participants**

	HET4 participants		MSM5 participants		IDU5 participants	
	No.	%	No.	No.	%	No.
<b>Condomless anal or vaginal sex</b>						
Yes	207	86.3	202	56.7	258	65.3
No	33	13.8	154	43.3	137	34.7
<b>Condomless vaginal sex</b>						
Yes	207	86.3	33	9.3	242	61.3
No	33	13.8	323	90.7	153	38.7
<b>Condomless anal sex</b>						
Yes	39	16.3	194	54.5	119	30.1
No	201	83.8	162	45.5	276	69.9
<b>Total number of partners</b>						
0 partners	0	0.0	20	5.6	32	8.1
1-2 partners	134	55.8	160	44.9	145	36.7
3-4 partners	55	22.9	80	22.5	84	21.3
5 or more partners	51	21.3	96	27.0	134	33.9
<b>Total number of main partners</b>						
0 partners	36	15.0	177	49.7	129	32.7
1-2 partners	190	79.2	172	48.3	231	58.5
3-4 partners	11	4.6	5	1.4	18	4.6
5 or more partners	3	1.3	2	0.6	17	4.3
<b>Total number of casual partners</b>						
0 partners	83	34.6	81	22.8	92	23.3
1-2 partners	96	40.0	159	44.7	120	30.4
3-4 partners	28	11.7	61	17.1	62	15.7
5 or more partners	33	13.8	55	15.4	121	30.6
<b>Overall</b>	<b>240</b>	<b>100.0</b>	<b>356</b>	<b>100.0</b>	<b>395</b>	<b>100.0</b>

**Table 10. Condomless sex and number sex partners of cisgender female NHBS participants**

	HET4 participants		IDU5 participants	
	No.	%	No.	%
<b>Condomless anal or vaginal sex</b>				
Yes	259	85.5	111	68.1
No	44	14.5	52	31.9
<b>Condomless vaginal sex</b>				
Yes	259	85.5	106	65.0
No	44	14.5	57	35.0
<b>Condomless anal sex</b>				
Yes	53	17.5	45	27.6
No	250	82.5	118	72.4
<b>Total number of partners</b>				
0 partners	0	0.0	16	9.8
1-2 partners	208	68.6	62	38.0
3-4 partners	53	17.5	31	19.0
5 or more partners	42	13.9	54	33.1
<b>Total number of main partners</b>				
0 partners	27	8.9	35	21.5
1-2 partners	260	85.8	108	66.3
3-4 partners	11	3.6	15	9.2
5 or more partners	5	1.7	5	3.1
<b>Total number of casual partners</b>				
0 partners	126	41.6	39	23.9
1-2 partners	126	41.6	57	35.0
3-4 partners	15	5.0	19	11.7
5 or more partners	36	11.9	48	29.4
<b>Overall</b>	<b>303</b>	<b>100.0</b>	<b>163</b>	<b>100.0</b>

**Table 11. Physical and sexual assault of cisgender male NHBS participants**

	<b>HET4 participants</b>		<b>MSM5 participants</b>		<b>IDU5 participants</b>	
	No.	%	No.	No.	%	No.
<b>Physical assault by partner</b>						
Yes	24	10.0				
No	216	90.0				
<b>Physical assault by respondent</b>						
Yes	10	4.2				
No	230	95.8				
<b>Sexual assault by partner</b>						
Yes	39	16.3				
No	201	83.8				
<b>Sexual assault by respondent</b>						
Yes	207	86.3				
No	33	13.8				
<b>Physical assault by anyone</b>						
Yes			44	12.4	107	27.1
No			312	87.6	288	72.9
<b>Sexual assault by anyone</b>						
Yes			25	7.0	16	4.1
No			331	93.0	379	95.9
<b>Overall</b>	<b>240</b>	<b>100.0</b>	<b>356</b>	<b>100.0</b>	<b>395</b>	<b>100.0</b>

■ = Not asked

**Table 12. Physical and sexual assault of cisgender female NHBS participants**

	<b>HET4 participants</b>		<b>MSM5 participants</b>		<b>IDU5 participants</b>	
	No.	%	No.	No.	%	No.
<b>Physical assault by partner</b>						
Yes	33	10.9				
No	279	92.1				
<b>Physical assault by respondent</b>						
Yes	18	5.9				
No	285	94.1				
<b>Sexual assault by partner</b>						
Yes	45	14.9				
No	258	85.1				
<b>Sexual assault by respondent</b>						
Yes	9	3.0				
No	294	97.0				
<b>Physical assault by anyone</b>						
Yes					58	35.6
No					105	64.4
<b>Sexual assault by anyone</b>						
Yes					27	16.6
No					136	83.4
<b>Overall</b>	<b>303</b>	<b>100.0</b>	<b>0</b>	<b>0%</b>	<b>163</b>	<b>100.0</b>

■ = Not asked



**Table 13. Healthcare**

	HET4 participants		MSM5 participants		IDU5 participants	
	No.	%	No.	No.	%	No.
<b>Has health insurance</b>						
Yes	349	64.3	263	73.9	145	25.7
No	194	35.7	93	26.1	417	73.9
Unknown	0	0.0	0	0.0	2	0.4
<b>Type of health insurance</b>						
Private health plan	28	5.2	151	42.4	21	3.7
Medicaid	180	33.1	52	14.6	60	10.6
Medicare	44	8.1	26	7.3	39	6.9
Other government plan	51	9.4	19	5.3	28	5.0
Other	57	10.5	19	5.3	15	2.7
<b>Has at least one usual source of care</b>						
Yes	502	92.4	331	93.0	424	75.2
No	41	7.6	25	7.0	140	24.8
<b>Location of usual care</b>						
Clinic or health center	212	39.0	99	27.8	98	17.4
Hospital emergency room	145	26.7	156	43.8	265	47.0
Doctor office or HMO	103	19.0	44	12.4	52	9.2
Other place	4	0.7	2	0.6	9	1.6
There is more than one place	38	7.0	30	8.4	25	4.4
<b>When last visited healthcare provider</b>						
Within last year	435	80.1	306	86.0	354	62.8
More than 1 year ago but less than 2 years ago	76	14.0	31	8.7	97	17.2
2 to 5 years ago	21	3.9	13	3.7	87	15.4
More than five years ago	11	2.0	5	1.4	24	4.3
Unknown	0	0.0	0	0.0	2	0.4
<b>Lacked healthcare due to cost, past 12 months</b>						
Yes	135	24.9	39	11.0	243	43.1
No	408	75.1	317	89.0	321	56.9
<b>Overall</b>	<b>543</b>	<b>100.0</b>	<b>356</b>	<b>100.0</b>	<b>564</b>	<b>100.0</b>

**Table 14. Alcohol and injection drug use**

	HET4 participants		MSM5 participants		IDU5 participants	
	No.	%	No.	No.	%	No.
Had one or more drink, past 30 days						
Yes	383	70.5	280	78.7	323	57.3
No	160	29.5	76	21.3	241	42.7
Binge drank, past 30 days						
Yes	171	31.5	134	37.6	206	36.5
No	371	68.3	221	62.1	346	61.3
Unknown	1	0.2	1	0.3	12	2.1
Ever injected drugs						
Yes	12	2.2	5	1.4	564	100.0
No	531	97.8	351	98.6	0	0.0
Injected drugs, past 12 months						
Yes	1	0.2	3	0.8	564	100.0
No	11	2.0	2	0.6	0	0.0
Used drugs (non-injection), past 12 months						
Yes	280	51.6	144	40.4	328	58.2
No	263	48.4	212	59.6	236	41.8
Used marijuana only (non-injection), past 12 months						
Yes	141	26.0	74	20.8	7	1.2
No	402	74.0	282	79.2	557	98.8
Used any opioid (non-injection), past 12 months						
Yes	11	2.0	2	0.6	62	11.0
No	532	98.0	354	99.4	502	89.0
Used methamphetamine (non-injection), past 12 months						
Yes	2	0.4	1	0.3	63	11.2
No	541	99.6	355	99.7	501	88.8
<b>Overall</b>	<b>543</b>	<b>100.0</b>	<b>356</b>	<b>100.0</b>	<b>564</b>	<b>100.0</b>

**Table 15. Mental health**

	<b>HET4 participants</b>		<b>MSM5 participants</b>		<b>IDU5 participants</b>	
	No.	%	No.	No.	%	No.
Frequency of experiencing mental health symptoms in the past 30 days						
Often	7	1.3	4	1.1	76	13.5
Sometimes	56	10.3	35	9.8	209	37.1
A little	172	31.7	83	23.3	204	36.2
Rarely	308	56.7	234	65.7	75	13.3
<b>Overall</b>	<b>543</b>	<b>100.0</b>	<b>356</b>	<b>100.0</b>	<b>564</b>	<b>100.0</b>

**Table 16. HET4 local survey questions**

	<b>HET4 participants</b>	
	No.	%
<b>Has dental insurance</b>		
Yes	171	33.6
No	334	65.6
Do not know	7	1.4
<b>Time since last visit to a dentist or dental clinic</b>		
Within the last year	208	40.9
Between 1 and 2 years ago	114	22.4
2 or more years ago	159	31.2
Never	9	1.8
Do not know	19	3.7
<b>Main reason for no visit to a dentist in the last year*</b>		
Cost	114	40.4
No reason to go (no problems, no teeth)	72	25.5
Have not thought of it	17	6.0
Do not have/know a dentist	14	5.0
Cannot get to the office/clinic (transportation, appointment availability)	14	5.0
Other reason	44	15.6
Do not know/not sure	6	2.1
Refuse to answer	1	0.4
<b>Number of permanent teeth removed due to tooth decay or gum disease</b>		
None	240	47.2
1 to 5	181	35.6
6 or more but not all	71	13.9
All	10	2.0
Do not know	7	1.4
<b>Overall</b>	<b>509</b>	<b>100.0</b>

\*Among those who have not gone to a dentist or dental clinic in the last 12 months (n=282)

**Table 17. MSM5 local survey questions**

	MSM5 participants	
	No.	%
<b>Heard of PrEP</b>		
Yes	237	73.8
No	84	26.2
<b>Used PrEP, past 12 months*</b>		
Yes	38	16.0
No	199	84.0
<b>Seen PrEP in local media, past 12 months*</b>		
Very often	68	28.7
Fairly often	46	19.4
Sometimes	54	22.8
Rarely	30	12.7
Never	39	16.5
<b>Barriers to taking PrEP **</b>		
My risk of getting HIV is low	52	40.0
Monogamous with an HIV-negative partner	41	31.5
Not interested in taking PrEP	40	30.8
Concern about possible negative side effects	36	27.7
Not sure where to get PrEP	25	19.2
Cost of medication	23	17.7
Lack of health insurance	17	13.1
Work schedule	8	6.2
Lack of transportation to get PrEP	7	5.4
I think others would judge me for taking PrEP	4	3.1
Lack of place to store pills	2	1.5
Being in prison or jail	0	0.0
<b>Overall</b>	<b>321</b>	<b>100.0</b>

\*Among those who have heard of PrEP (n=237)

\*\*Among those who are not taking PrEP and did not self-report being diagnosed with HIV (n=130)

**Table 18. IDU5 local survey questions**

	IDU5 participants	
	No.	%
<b>Ever overdosed</b>		
Yes	183	33.6
No	361	66.4
<b>Ever witnessed someone else overdose</b>		
Yes	374	68.8
No	170	31.3
<b>Ever received training to help someone survive overdose</b>		
Yes	53	9.7
No	490	90.1
Refused to answer	1	0.2
<b>Owns naloxone/NARCAN</b>		
Yes	62	11.4
No	481	88.4
Refused to answer	1	0.2
<b>Ever administered naloxone/NARCAN to someone</b>		
Yes	54	9.9
No	489	89.9
Refused to answer	1	0.2
<b>Would administered naloxone/NARCAN to someone if needed</b>		
Yes	462	84.9
No	80	14.7
Do not know	1	0.2
Refused to answer	1	0.2
<b>Overall</b>	<b>544</b>	<b>100.0</b>

**Table 19. IDU5 local survey questions continued**

	IDU5 participants	
	No.	%
<b>Frequency of all injection drug use, past 30 days</b>		
More than once a day	392	72.1
Once a day	64	11.8
More than once a week	33	6.1
Once a week	47	8.6
Refuse to answer	2	0.4
Do not know	6	1.1
<b>Location of injection drug use, past 12 months</b>		
Friend's home or residence	436	80.1
Home or residence	411	75.6
Hotel or motel	383	70.4
Car	321	59.0
Public outdoor space	293	53.9
Public indoor space	266	48.9
Vacant building or shooting gallery	232	42.6
<b>Likelihood of using a syringe services program</b>		
Not likely	432	79.4
Somewhat likely	86	15.8
Very likely	26	4.8
<b>Services that would improve likelihood of using a syringe services program</b>		
Free injecting equipment, such as cookers or cottons	474	87.1
Naloxone or NARCAN	462	84.9
Assistance finding housing services	423	77.8
Free condoms	404	74.3
Assistance finding job placement programs	403	74.1
Assistance finding substance use treatment or detox centers	398	73.2
Information on overdose prevention	336	61.8
<b>Overall</b>	<b>544</b>	<b>100.0</b>

