

BESURE 2017

HIV Infection Risk, Prevention, and Testing Behaviors Among Men Who Have Sex With Men (MSM)

BALTIMORE HIV BEHAVIORAL SURVEILLANCE
REPORT



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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 three 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); Black or African Americans (hereafter referred to as Black/African Americans); Hispanics or Latinos; and people who inject drugs (PWID); (2) expanding efforts to prevent HIV infection by using a combination of effective, evidence-based, scalable approaches; 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 (CDC) National HIV Behavioral Surveillance (NHBS) serves as a key component of a high-impact prevention 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 identifying the populations for whom scientifically proven, cost-effective, and scalable interventions are most appropriate. NHBS also helps state and local health departments in areas with high HIV prevalence to monitor risk behaviors, HIV testing, use of prevention programs, and HIV prevalence in three populations at high risk of HIV infection: MSM, PWID, and heterosexual adults at increased risk for HIV [3, 4]. Male-to-male sexual contact continues to be the most common route of HIV transmission in the United States among adults and adolescents, accounting for approximately 70 percent of the HIV infections diagnosed in 2017, including those attributed to male-to-male contact and injection drug use [5]. National data from previous MSM cycles of NHBS have been published elsewhere [6–9].

In Baltimore, NHBS is operated as a partnership between Maryland Department of Health (MDH) and Johns Hopkins Bloomberg School of Public Health (JHSPH). The project is locally known as BESURE, The Behavioral Surveillance Research study. BESURE participants are from the Baltimore Metropolitan Statistical Area (MSA), which consists of Baltimore City, Baltimore, Anne Arundel, Carroll, Howard, Harford, and Queen Anne’s counties; however, the vast majority of participants are from Baltimore City.

This report summarizes findings from the fifth BESURE data collection among MSM, which was

conducted in 2017. Previous BESURE MSM data is available [here](#) and by request from Principal Investigators. This report provides descriptive, unweighted data that can be used to describe HIV infection among MSM and the percentages of MSM reporting specific risk behaviors, HIV testing, and participation in prevention programs. Monitoring these outcomes is useful for assessing risk behaviors, the use of prevention efforts over time, and for identifying new HIV prevention opportunities for this population.

TABLE ORGANIZATION

The tables in this report are ordered by content and designed to align with those published by CDC to report national NHBS data. Tables 1 and 5–11 are stratified by HIV status; that is, data are presented separately for HIV-negative participants and HIV-positive participants (HIV status determined from BESURE HIV test result). A small percentage of the sample (10%) could not be classified by HIV status because they had no valid BESURE HIV test result; that is, they did not consent to the HIV test or had an indeterminate result. For data completeness, data from these participants are reported in a “No valid NHBS HIV test result” column (Table 1) or row (Tables 5–11).

HIGHLIGHTS

Demographic Characteristics, HIV Prevalence, and HIV Testing

This report describes data from 417 MSM who participated in BESURE in 2017, of whom 36 percent were aged 29 years or younger, and 16 percent were white, 67 percent Black/African American, eight percent were multiple races, and six percent were Hispanic or Latino (Table 1). Of HIV-positive participants, 31 percent were aged 29 years or younger, seven percent were White, and 82 percent were Black/African American. Overall, 58 percent of participants had more than a high school education and 61 percent had a household income above the federal poverty level; 89 percent of participants had health insurance and 87 percent had visited a health care provider in the 12 months before interview. Fourteen percent of the sample reported being homeless, and four percent reported incarceration in the 12 months before interview. Among HIV-positive participants, 15 percent reported being homeless and four percent incarcerated in the past 12 months.

In 2017, 37 percent of 375 participants with a valid BESURE HIV test result tested positive for HIV (Table 2).

HIV prevalence was similar among all age groups over 25, and notably lower among those 18–24: 17 percent (18–24 years), 42 percent (25–29 years), 36 percent (30–39 years), 40 percent (40–49 years), and 44 percent (50+ years). By race and ethnicity, HIV prevalence was 44 percent among Black/African Americans, a nearly three-fold disparity compared to 18 percent among White people.

CDC recommends that persons at increased risk of HIV infection, including sexually active MSM, 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 interview, 73 percent reported that they had been tested for HIV in the 12 months before interview, and 95 percent reported that they had ever been tested (Table 3). The proportion of BESURE participants reporting an HIV test in the past 12 months has increased from 58 percent in 2008 [6] to 62 percent in 2011 [7] to 68 percent in 2014 [9]. These data are consistent with continued increases in HIV testing among MSM participating in NHBS nationally, with 62 percent in 2008 [6], 66 percent in 2011 [7], 71 percent in 2014 [9], and 77 percent in 2017 reporting an HIV test in the previous 12 months.

Among participants who reported being tested for HIV during the 12 months before interview, 75 percent reported their most recent test was performed in a clinical setting while 16 percent reported being tested in a nonclinical setting such as HIV counseling and testing site, HIV street outreach program or mobile unit, syringe services program, or at home (Table 4).

Sexual Behaviors

Among MSM, more HIV-negative participants reported condomless sex with female partners (19% vaginal, 9% anal) than HIV-positive participants (4% vaginal, 6% anal) (Table 5). Condomless anal sex with male partners was reported similarly by HIV-positive MSM (57%) and HIV-negative MSM (57%). HIV-positive participants reported condomless anal sex with main male partners (38%) and casual male partners (30%) at a similar rate to HIV-negative participants (main: 34%; casual: 32%) (Table 6). Among MSM whose last sex partner was male, 24 percent of HIV-positive and 21 percent of HIV-negative participants reported having both insertive and receptive condomless anal sex in the three months before the interview (Table 7).

Although other prevention methods may have been used such as preexposure prophylaxis (PrEP), and serosorting, the reporting of condomless vaginal or anal sex with female partners and condomless anal sex with male partners (Tables 5–7) is a concern. Despite the

existence of other HIV prevention options, correct and consistent condom use is one of the primary means of protection from HIV and other infections [11, 12]. That participants report engaging in condomless sex underscores the importance of using effective, evidence-based scalable combination HIV prevention strategies among MSM at increased risk for HIV infection that include access to and use of condoms, PrEP, risk-reduction counseling, and HIV testing [2, 13].

Receipt of HIV Prevention

The receipt of free condoms and participation in HIV individual- or group-level behavioral interventions are reported in Table 8. Overall, 59 percent of participants reported receiving free condoms and 30 percent reported participating in an HIV behavioral intervention. The percentages of MSM who received condoms was higher among HIV-positive respondents (65%) than among HIV-negative participants (57%). The percentage of MSM who reported participating in an HIV behavioral intervention was highest for HIV-positive participants (35%) in general, and for younger-aged HIV-positive MSM in particular (37% of 25–29 year olds; 38% of 30–39 year olds; 39% of 40–49 year olds) and among Black/African American HIV- Positive MSM (37%) and Hispanic/Latino HIV- negative MSM (53%).

In 2014, CDC released clinical guidance recommending the use of PrEP for persons at increased risk of acquiring HIV, including MSM [13]. The majority of HIV-negative MSM reported previously hearing about PrEP (71%), particularly among younger age groups (18–24 years: 75%; 25–29 years: 92%; 30–39 years: 78%). Among HIV-negative MSM, 12 percent reported taking PrEP at any point in the past 12 months to prevent HIV infection but there were notable racial/ ethnic differences between whites (18%) and Black/African Americans (10%).

Sexually Transmitted Infections

Sexually transmitted infections (STIs) can increase the likelihood of acquiring and transmitting HIV [14]. The percentage of MSM who reported a diagnosis of any bacterial STI (chlamydia, gonorrhea, or syphilis) during the 12 months before the interview was 11 percent overall, and was higher among HIV-positive MSM (19%) than HIV-negative MSM (8%). Percentages of reported lifetime diagnosis of genital warts was also higher among HIV-positive MSM (8%) than among HIV-negative MSM (4%) (Table 9). Since 2000, rates of reported primary and secondary syphilis have been steadily increasing, primarily attributable to increased cases among MSM; nationally MSM who are HIV-positive account for almost half of reported primary and secondary syphilis cases with known HIV-status [15]. 10 percent of HIV-positive MSM in this

study reported being diagnosed with syphilis during the 12 months before interview compared with two percent of HIV-negative MSM.

Drug and Alcohol Use

Drug and alcohol use, particularly binge drinking, injection drug use, and methamphetamine use, have been associated with sexual risk behavior among MSM [16]. Binge drinking prevalence was more common among HIV-negative MSM (37%) than among HIV-positive participants (21%). The most common non-injection drugs reported by HIV-positive MSM were marijuana (38%), crack (9%), cocaine (9%), and ecstasy (8%); for HIV-negative MSM, commonly reported non-injection drugs were marijuana (44%), cocaine (13%), and crack (11%) (Table 10). Non-injection use of prescription opioids was reported by seven percent of HIV-positive and 10 percent of HIV-negative MSM.

Additional Outcomes

Table 11 presents data on additional outcomes related to the risk of HIV transmission and acquisition among MSM. Outcomes reported in Table 11 are of current relevance to HIV among MSM and may not be reported in future reports.

The median number of male sex partners reported in the 12 months before interview was two among HIV-positive participants and two among HIV-negative participants.

Giving or receiving money or drugs in exchange for sex is a recognized risk factor for HIV infection [17]. In 2017, 17 percent of MSM reported giving or receiving

things like money or drugs in exchange for sex with a male casual partner in the 12 months before interview. The percentage of participants reporting exchange of sex with a male casual partner was similar among HIV-positive participants (19%) than HIV-negative MSM (18%).

Condomless sex with an HIV-discordant partner at last sex was commonly reported among MSM (17%). About one in five HIV-positive MSM (19%) and 17 percent of HIV-negative MSM reported sex without a condom during the most recent sexual encounter with a partner of different or unknown HIV status.

Receipt of HIV Care and Treatment

Achieving viral suppression through antiretroviral treatment can improve clinical outcomes and reduce the likelihood of transmitting HIV to others [18]. In 2015, a national goal for linkage-to-care changed from increasing the percentage of persons with newly diagnosed HIV linked to care within three months of diagnosis to increasing the percentage of linkage to care within one month of diagnosis [1]. In 2017, among self-reported HIV-positive MSM, 99 percent reported having ever visited a health care provider for HIV, 69 percent reported that they did so within one month after diagnosis, and 93 percent reported visiting a health care provider for HIV care in the six months before interview. Rates were similar among Black/African American and White MSM. Current use of antiretroviral therapy was reported by 91 percent of self-reported HIV-positive MSM; Black/African American men reported higher rates (92%) than White MSM (82%) (Table 12).

Technical Notes

In accordance with the NHBS national protocol, BESURE conducts rotating cycles of biobehavioral surveys among MSM, PWID, and heterosexual adults at increased risk of HIV infection [3]; data are collected in annual cycles from one risk group per year so that each population is surveyed once every three years. The same general eligibility criteria are used in each cycle: age 18 years or older, current residence in Baltimore MSA, no previous participation in BESURE during the current survey cycle, ability to complete the survey in English, and ability to provide informed consent. In addition to these basic NHBS eligibility criteria, participation in the 2017 BESURE cycle was limited to persons who (1) reported sex at birth as male, (2) reported their gender as male, and (3) reported oral or anal sex with a male partner during their lifetime. Only participants who reported having oral or anal sex with another man in the past 12 months were counted toward the required sample size of current MSM.

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 BESURE were approved by CDC and by the Johns Hopkins University and Maryland Department of Health institutional review boards (IRBs).

SAMPLING METHOD

Participants in the 2017 BESURE cycle were recruited using venue-based, time-space sampling (VBS) [21]. The primary steps were identifying venues frequented by MSM, determining the best time for sampling at each venue and the number of sampling events to be conducted each month, and recruiting men at the sampling event [9].

DATA COLLECTION

Persons recruited for the interview 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 30 minutes and consisted of questions concerning participants' demographic characteristics, HIV testing history, sexual and drug use behaviors, STI testing and diagnosis, and use of HIV prevention services and programs. As a token of

appreciation for the time spent taking part in the interview, participants received \$50.

HIV testing was performed for participants who consented; blood specimens were collected for rapid testing in the field and 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 supplemental laboratory-based testing. In exchange for participating in HIV testing, participants received \$25. Participants also received \$15 for participating in STI testing, including gonorrhea, and chlamydia, and an additional \$10 for returning to receive their STI test results.

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. Small numbers, 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 BESURE 2017 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.

Inclusion for this report is limited to participants who (1) were eligible for and consented to the interview and (2) reported having sex with another man in the 12 months before interview. In total, 2,866 men were approached for participation at 21 venues; 712 persons were screened to participate in BESURE in 2017. Of those, 195 persons did not meet BESURE eligibility criteria or did not provide consent and were excluded from the survey. Finally, 100 eligible persons who completed interviews but did not report having sex with a male in the 12 months before interview were excluded from this report.

The full analysis sample for this report includes 2017 BESURE cycle participants who consented to and completed the survey (n=417, Table 1). Additional inclusion criteria were applied for certain analyses of HIV infection and of HIV-associated behaviors; details of each analysis sample can be found in the footnotes of each table.

DATA SUPPRESSION

In order to protect the confidentiality of BESURE study participants, data are suppressed in the following instances:

1) All data describing less than five people; 2) If any cell is suppressed, additional cells are also suppressed as necessary to prevent back calculation of the suppressed cell(s).

SUPPLEMENTAL MATERIAL

Infographic: HIV infection risk, prevention, and testing behaviors among men who have sex with men— National HIV Behavioral Surveillance, Baltimore MD, 2017

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Table 1. Selected characteristics of men who have sex with men—BESURE, 2017

	HIV-negative ^a		HIV-positive ^b		No valid BESURE HIV test result ^c		Total	
	No.	%	No.	%	No.	%	No.	%
Age at interview (yrs)								
18–24	40	16.9	***	***	***	***	54	12.9
25–29	49	20.7	35	25.4	11	26.2	95	22.8
30–39	74	31.2	42	30.4	11	26.2	127	30.5
40–49	39	16.5	26	18.8	12	28.6	77	18.5
≥50	35	14.8	***	***	***	***	64	15.3
Race/ethnicity								
American Indian/Alaska Native	--	--	***	***	--	--	***	***
Asian	***	***	***	***	***	***	8	1.9
Black/African American	145	61.2	113	81.9	23	54.8	281	67.4
Hispanic/Latino ^d	17	7.2	***	***	***	***	24	5.8
Native Hawaiian/Pacific Islander	--	--	***	***	--	--	***	***
White	45	19.0	10	7.2	10	23.8	65	15.6
Multiple races	24	10.1	7	5.1	***	***	35	8.4
Unknown	***	***	--	--	***	***	***	***
Education								
Less than high school	23	9.7	***	***	***	***	34	8.2
High school diploma or equivalent	75	31.6	***	***	***	***	141	33.8
Some college or technical degree	73	30.8	44	31.9	15	35.7	132	31.7
College degree or more	66	27.8	27	19.6	17	40.5	110	26.4
Household income^e								
At or below the federal poverty level	98	41.4	***	***	***	***	159	38.1
Above the federal poverty level	137	57.8	84	60.9	32	76.2	253	60.7
Unknown	7	1.4	***	***	***	***	7	1.2
Health insurance								
Yes	205	86.5	130	94.2	35	83.3	370	88.7
No	32	13.5	8	5.8	7	16.7	47	11.3
Visited a health care provider, past 12 months								
Yes	196	82.7	130	94.2	35	83.3	361	86.6
No	41	17.3	8	5.8	7	16.7	56	11.4
Homeless,^f past 12 months								
Yes	35	14.8	20	14.5	5	11.9	60	14.4
No	202	85.2	118	85.5	37	88.1	357	85.6
Incarcerated,^g past 12 months								
Yes	11	4.6	***	***	***	***	17	4.1
No	226	95.4	***	***	***	***	400	95.9
Total	237	100.0	138	100.0	42	100.0	417	100.0

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

a Participants with a valid negative BESURE HIV test result.

b Participants with a reactive rapid BESURE HIV test result supported by supplemental laboratory-based testing.

c Participants who did not have a valid positive or negative BESURE HIV test result, including those who did not consent to the HIV test or had an indeterminate laboratory 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.

*** Cells containing fewer than five have been suppressed.

Table 2. HIV prevalence among men who have sex with men—BESURE, 2017

	HIV-positive ^a		Total No.
	No.	%	
Age at interview (yrs)			
18–24	8	16.7	48
25–29	35	41.7	84
30–39	42	36.2	116
40–49	26	40.0	65
≥50	27	43.5	62
Race/ethnicity			
American Indian/Alaska Native	***	***	***
Asian	***	***	7
Black/African American	113	43.8	258
Hispanic/Latino ^b	***	***	21
Native Hawaiian/Pacific Islander	***	***	***
White	10	18.2	55
Multiple races	7	22.6	31
Unknown	--	--	***
Total	138	36.8	375

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

a Participants with a reactive rapid BESURE HIV test result supported by supplemental laboratory-based testing.

b Hispanics/Latinos can be of any race.

*** Cells containing fewer than five have been suppressed

Table 3. HIV testing among men who have sex with men—BESURE, 2017

	Ever tested		Tested in past 12 months ^a		Total No.
	No.	%	No.	%	
Age at interview (yr)					
18–24	44	88.0	36	72.0	50
25–29	69	95.8	59	81.9	72
30–39	90	96.8	71	76.3	93
40–49	53	100.0	36	67.9	53
≥50	38	92.7	22	53.7	41
Race/ethnicity^b					
Asian	5	83.3	***	***	6
Black/African American	188	96.9	143	73.7	194
Hispanic/Latino ^c	21	95.5	17	77.3	22
Native Hawaiian/Pacific Islander	***	***	***	***	***
White	49	89.1	33	60.0	55
Multiple races	28	96.6	25	86.2	29
Unknown	***	***	***	***	***
Total	294	95.1	224	72.5	309

Note. 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 Categories with no data have been omitted from the table.

c Hispanics/Latinos can be of any race.

*** Cells containing fewer than five have been suppressed.

Table 4. Setting of most recent HIV test among men who have sex with men who were tested for HIV in the 12 months before interview—BESURE, 2017

	Clinical setting ^a		Nonclinical setting ^b		Total No.
	No.	%	No.	%	
Age at interview (yrs)					
18–24	23	63.9	7	19.4	36
25–29	39	66.1	14	23.7	59
30–39	60	84.5	***	***	71
40–49	26	72.2	8	22.2	36
≥50	19	86.4	***	***	22
Race/ethnicity					
Asian	***	***	--	--	***
Black/African American	107	74.8	22	15.4	143
Hispanic/Latino ^c	11	64.7	5	29.4	17
Native Hawaiian/Pacific Islander	***	***	--	--	***
White	25	75.8	***	***	33
Multiple races	18	72	***	***	25
Unknown	***	***	--	--	***
Total	167	74.6	36	16.1	224

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, mobile unit, syringe services program, or home.

c Hispanics/Latinos can be of any race.

*** Cells containing fewer than five have been suppressed.

**Table 5. Sexual behavior with female and male sex partners in the 12 months before interview among men who have sex with men—
BESURE, 2017**

	With female sex partners								With male sex partners				Total No.
	Vaginal sex		Condomless vaginal sex		Anal sex		Condomless anal sex		Anal sex		Condomless anal sex		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
HIV-negative^b	65	27.4	45	19.0	33	13.9	22	9.3	197	83.1	135	57.0	237
Age at interview (yr)													
18–24	***	***	***	***	***	***	--	--	35	87.5	25	62.5	40
25–29	***	***	***	***	***	***	***	***	41	83.7	30	61.2	49
30–39	21	28.4	16	21.6	15	20.3	10	13.5	66	89.2	43	58.1	74
40–49	16	41.0	11	28.2	7	17.9	6	15.4	34	87.2	24	61.5	39
≥50	13	37.1	10	28.6	8	22.9	***	***	21	60.0	13	37.1	35
Race/ethnicity^c													
American Indian/Alaska Native	--	--	--	--	--	--	--	--	--	--	--	--	--
Asian	--	--	--	--	--	--	--	--	***	***	***	***	5
Black/African American	46	31.7	35	24.1	24	16.6	18	12.4	122	84.1	75	51.7	145
Hispanic/Latino ^d	6	35.3	6	35.3	***	***	***	***	14	82.4	10	58.8	17
White	7	15.6	***	***	***	***	***	***	34	75.6	29	64.4	45
Multiple races	6	25.0	***	***	***	***	--	--	21	87.5	17	70.8	24
Unknown	--	--	--	--	--	--	--	--	***	***	***	***	***
HIV-positive^e	13	9.4	6	4.3	8	5.8	***	***	127	92.0	78	56.5	138
Age at interview (yr)													
18–24	--	--	--	--	--	--	--	--	8	100.0	6	75.0	8
25–29	***	***	***	***	***	***	***	***	34	97.1	21	60.0	35
30–39	5	11.9	***	***	***	***	--	--	40	95.2	24	57.1	42
40–49	***	***	***	***	***	***	***	***	22	84.6	12	46.2	26
≥50	***	***	***	***	***	***	***	***	23	85.2	15	55.6	27
Race/ethnicity^c													
American Indian/Alaska Native	--	--	--	--	--	--	--	--	***	***	--	--	***
Asian	--	--	--	--	--	--	--	--	***	***	***	***	***
Black/African American	11	9.7	***	***	7	6.2	***	***	103	91.2	63	55.8	113
Hispanic/Latino	--	--	--	--	--	--	--	--	***	***	***	***	***
Native Hawaiian/Pacific Islander	***	***	--	--	***	***	--	--	***	***	***	***	***
White	--	--	--	--	--	--	--	--	9	90.0	8	80.0	10
Multiple races	***	***	***	***	--	--	--	--	7	100.0	***	***	7
No valid BESURE HIV test result^f	7	16.7	***	***	***	***	***	***	40	95.2	32	76.2	42
Total	85	20.4	54	12.9	45	10.8	27	6.5	364	87.3	245	58.8	417

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 BESURE HIV test result.

c Categories with no data have been omitted from the table.

d Hispanics/Latinos can be of any race.

e Participants with a reactive rapid BESURE HIV test result supported by supplemental laboratory-based testing.

f Participants who did not have a valid positive or negative BESURE HIV test result, including those who did not consent to the HIV test or had an indeterminate laboratory result.

*** Cells containing fewer than five have been suppressed.

Table 6. Anal sex with male partners in the 12 months before interview among men who have sex with men, by partner type— BESURE, 2017

	Main male partner				Casual male partner				Main and casual male partners-sex of any type ^a		Total males No.
	Anal sex		Condomless anal sex		Anal sex		Condomless anal sex		No.	%	
	No.	%	No.	%	No.	%	No.	%			
HIV-negative^b	105	44.3	80	33.8	147	62.0	75	31.6	55	23.2	237
Age at interview (yr)											
18–24	24	60.0	19	47.9	24	60.0	12	30.0	13	32.5	40
25–29	25	51.0	17	34.7	31	63.3	19	38.8	15	30.6	49
30–39	31	41.9	25	33.8	52	70.3	23	31.1	17	23	74
40–49	17	43.6	14	35.9	26	66.7	13	33.3	9	23.1	39
≥50	8	22.9	5	14.3	14	40.0	8	22.9	***	***	35
Race/ethnicity^c											
Asian	***	***	***	***	***	***	***	***	***	***	***
Black/African American	64	44.1	45	31	92	63.4	40	27.6	34	23.4	145
Hispanic/Latino ^d	7	41.2	6	35.3	***	***	***	***	***	***	17
White	19	42.2	16	35.6	24	53.3	19	42.2	9	20.0	45
Multiple races	12	50	10	41.7	16	66.7	9	37.5	7	29.2	24
Unknown	***	***	***	***	--	--	--	--	--	--	***
HIV-positive^e	89	64.5	53	38.4	75	54.3	41	29.7	37	26.8	138
Age at interview (yrs)											
18–24	5	62.5	***	***	6	75.0	***	***	***	***	8
25–29	24	68.6	15	42.9	18	51.4	9	25.7	8	22.9	35
30–39	31	73.8	17	40.5	23	54.8	14	33.3	14	33.3	42
40–49	16	61.5	8	30.8	13	50	7	26.9	7	26.9	26
≥50	13	48.1	***	***	15	55.6	***	***	***	***	27
Race/ethnicity											
American Indian/Alaska Native	--	--	--	--	***	***	--	--	--	--	***
Asian	***	***	***	***	***	***	***	***	***	***	***
Black/African American	72	63.7	41	36.3	56	49.6	30	26.5	25	22.1	113
Hispanic/Latino	***	***	***	***	***	***	--	--	--	--	***
Native Hawaiian/Pacific Islander	***	***	***	***	***	***	***	***	***	***	***
White	6	60.0	6	60.0	8	80.0	7	70.0	5	50.0	10
Multiple Races	5	71.4	***	***	7	100.0	***	***	5	71.4	7
No valid BESURE HIV test result^f	25	59.5	19	45.2	28	66.7	20	47.6	13	31.0	42
Total	219	52.5	152	36.5	250	60.0	136	32.6	105	25.2	417

a Participants who reported oral 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 BESURE HIV test result.

c Categories with no data have been omitted from the table.

d Hispanics/Latinos can be of any race.

e Participants with a reactive rapid BESURE HIV test result supported by supplemental laboratory-based testing.

f Participants who did not have a valid positive or negative BESURE HIV test result, including those who did not consent to the HIV test, had an indeterminate laboratory result, or reported a previous HIV-positive test result but had a negative BESURE HIV test result.

*** Cells containing fewer than five have been suppressed.

Table 7. Anal sex with the most recent sex partner during the 3 months before interview among men whose last sex partner was male — BESURE, 2017

	Insertive ^a anal sex only				Receptive ^b anal sex only				Both insertive ^a and receptive ^b anal sex				No anal sex in the past 3 months ^{c,d}		
	Total ^c		Condomless ^e		Total ^c		Condomless ^f		Total		Condomless ^g		No.	%	Total No.
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	Total No.
HIV-negative^h	47	23.3	27	13.4	25	12.4	13	6.4	58	28.7	37	18.3	72	36.5	202
Age at interview (yr)															
18–24	***	***	***	***	6	16.2	***	***	16	43.2	9	24.3	11	29.7	37
25–29	***	***	***	***	7	15.6	***	***	14	31.1	12	26.7	16	35.6	45
30–39	21	31.8	13	19.7	6	9.1	***	***	16	24.2	11	16.7	23	34.8	66
40–49	9	30.0	6	20.0	***	***	***	***	***	***	***	***	7	23.3	30
≥50	5	20.8	***	***	***	***	***	***	***	***	***	***	15	62.5	24
Race/ethnicityⁱ															
Asian	--	--	--	--	***	***	***	***	***	***	***	***	***	***	***
Black/African American	31	26.1	15	12.6	16	13.4	9	7.6	32	26.9	17	14.3	40	33.6	119
Hispanic/Latino ^j	***	***	***	***	***	***	***	***	***	***	***	***	***	***	15
White	***	***	***	***	***	***	***	***	12	30.8	11	28.2	20	51.3	39
Multiple races	9	39.1	6	26.1	***	***	***	***	7	30.4	5	21.7	6	26.1	23
Unknown	--	--	--	--	--	--	--	--	--	--	--	--	***	***	***
HIV-positive^k	33	25.2	22	16.8	23	17.6	13	9.9	47	35.9	30	22.9	27	20.6	131
Age at interview (yr)															
18–24	***	***	***	***	***	***	***	***	***	***	***	***	--	--	8
25–29	7	21.2	6	18.2	***	***	***	***	16	48.5	10	30.3	6	18.2	33
30–39	13	32.5	10	25.0	9	22.5	6	15.0	12	30.0	6	15.0	6	15.0	40
40–49	6	25.0	***	***	***	***	***	***	8	33.3	6	25.0	6	25.0	24
≥50	***	***	***	***	6	23.1	***	***	***	***	***	***	9	34.6	26
Race/ethnicityⁱ															
Asian	--	--	--	--	***	***	***	***	***	***	--	--	--	--	***
Black/African American	27	24.8	19	17.4	16	14.7	7	6.4	40	36.7	26	23.9	25	22.9	109
Hispanic/Latino	***	***	--	--	--	--	--	--	***	***	***	***	***	***	***
White	***	***	***	***	***	***	***	***	***	***	***	***	***	***	9
Multiple races	***	***	***	***	--	--	--	--	***	***	***	***	--	--	7
No valid BESURE HIV test result^l	7	18.4	6	15.8	9	23.7	6	15.8	8	21.1	***	***	--	--	38
Total	87	23.5	55	14.8	57	15.4	32	8.6	113	30.5	71	19.1	113	30.5	371

Note. Outcomes are only reported for men whose most recent sex partner was male. Men whose most recent sex partner was female (n=37) or when the partner's gender was unavailable (n=2) were excluded.

Percentages may not add to 100 because of missing data.

a The participant's most recent sex partner was male and the participant placed his penis in the anus of his sex partner one or more times during the 3 months before interview.

b The participant's most recent sex partner was male and the sex partner placed his penis in the participant's anus one or more times during the 3 months before interview.

c The categories—insertive anal sex, receptive anal sex, both insertive and receptive anal sex, and no anal sex—are mutually exclusive.

d The participant's most recent sex partner was male and the participant reported neither insertive anal sex nor receptive anal sex with the sex partner during the 3 months before interview. Includes participants who had oral sex but not anal sex with the most recent sex partner during the 3 months before interview and those who last had sex more than 3 months before interview.

e The participant did not use a condom during one or more of the times he had insertive anal sex with the most recent sex partner during the 3 months before interview.

f The participant did not use a condom during one or more of the times he had receptive anal sex with the most recent sex partner during the 3 months before interview.

g The participant did not use a condom during one or more of the times he had insertive anal sex or did not use a condom during one or more of the times he had receptive anal sex with the most recent sex partner during the 3 months before interview.

h Participants with a valid negative BESURE HIV test result.

i Categories with no data have been omitted from the table.

j Hispanics/Latinos can be of any race.

k Participants with a reactive rapid BESURE HIV test result supported by supplemental laboratory-based testing.

l Participants who did not have a valid positive or negative BESURE HIV test result, including those who did not consent to the HIV test, had an indeterminate laboratory result, or reported a previous HIV-positive test result but had a negative BESURE HIV test result.

*** Cells containing fewer than five have been suppressed

Table 8. Receipt of HIV prevention materials and services in the 12 months before interview among men who have sex with men—BESURE, 2017

	Free condoms ^a		Individual- or group-level intervention ^b		PrEP awareness ^c		PrEP use ^d		Total No.
	No.	%	No.	%	No.	%	No.	%	
HIV-negative^e	134	56.5	63	26.6	169	71.3	29	12.2	237
Age at interview (yr)									
18–24	20	50.0	10	25.0	30	75.0	5	12.5	40
25–29	31	63.3	16	32.7	45	91.8	11	22.4	49
30–39	45	60.8	22	29.7	58	78.4	7	9.5	74
40–49	21	53.8	10	25.6	21	53.8	***	***	39
≥50	17	48.6	5	14.3	15	42.9	***	***	35
Race/ethnicity^f									
Asian	***	***	--	--	***	***	--	--	***
Black/African American	82	56.6	41	28.3	91	62.8	14	9.7	145
Hispanic/Latino ^g	9	52.9	9	52.9	13	76.5	***	***	17
White	24	53.3	***	***	39	86.7	8	17.8	45
Multiple races	16	66.7	8	33.3	20	83.3	***	***	24
Unknown	***	***	***	***	***	***	--	--	***
HIV-positive^h	89	64.5	48	34.8	--	--	--	--	138
Age at interview (yr)									
18–24	5	62.5	***	***	--	--	--	--	8
25–29	22	62.9	13	37.1	--	--	--	--	35
30–39	29	69.0	16	38.1	--	--	--	--	42
40–49	18	69.2	10	38.5	--	--	--	--	26
≥50	15	55.6	***	***	--	--	--	--	27
Race/ethnicity									
American Indian/Alaska Native	--	--	--	--	--	--	--	--	***
Asian	--	--	--	--	--	--	--	--	***
Black/African American	78	69.0	42	37.2	--	--	--	--	113
Hispanic/Latino	***	***	***	***	--	--	--	--	***
Native Hawaiian/Pacific Islander	--	--	--	--	--	--	--	--	***
White	6	60.0	***	***	--	--	--	--	10
Multiple races	***	***	***	***	--	--	--	--	7
No valid BESURE HIV test resultⁱ	21	50.0	13	31.0	--	--	--	--	42
Total	244	58.5	124	29.7	169	40.5	29	7	417

Abbreviations: 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 BESURE HIV test result.

f Categories with no data have been omitted from the table.

g Hispanics/Latinos can be of any race.

h Participants with a reactive rapid BESURE 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 BESURE HIV test result, including those who did not consent to the HIV test or had an indeterminate laboratory result.

*** Cells containing fewer than five have been suppressed

Table 9. Diagnosis of sexually transmitted infections among men who have sex with men—BESURE, 2017

	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	18	7.6	6	2.5	11	4.6	4	1.7	9	3.8	7	3.0	237
Age at interview (yr)													
18–24	8	20.0	***	***	6	15.0	***	***	***	***	--	--	40
25–29	5	10.2	***	***	***	***	***	***	***	***	--	--	49
30–39	***	***	***	***	***	***	--	--	***	***	***	***	74
40–49	***	***	--	--	***	***	***	***	--	--	--	--	39
≥50	***	***	***	***	--	--	--	--	***	***	***	***	35
Race/ethnicity^c													
Asian	--	--	--	--	--	--	--	--	--	--	***	***	***
Black/African American	11	7.6	***	***	7	4.8	***	***	***	***	5	3.4	145
Hispanic/Latino ^d	***	***	***	***	***	***	--	--	--	--	--	--	17
White	***	***	***	***	***	***	***	***	***	***	***	***	45
Multiple races	***	***	--	--	***	***	--	--	--	--	--	--	24
Unknown	--	--	--	--	--	--	--	--	--	--	--	--	***
HIV-positive^e	26	18.8	11	8.0	11	8.0	14	10.1	11	8.0	***	***	138
Age at interview (yr)													
18–24	***	***	***	***	***	***	--	--	--	--	--	--	8
25–29	6	17.1	***	***	***	***	***	***	***	***	***	***	35
30–39	11	26.2	***	***	***	***	9	21.4	***	***	--	--	42
40–49	***	***	***	***	***	***	--	--	5	19.2	--	--	26
≥50	***	***	***	***	***	***	***	***	***	***	***	***	27
Race/ethnicity													
American Indian/Alaska Native	--	--	--	--	--	--	--	--	--	--	--	--	***
Asian	***	***	***	***	***	***	***	***	--	--	--	--	***
Black/African American	19	16.8	9	8.0	8	7.1	9	8.0	7	6.2	***	***	113
Hispanic/Latino	***	***	--	--	--	--	--	--	--	--	--	--	***
Native Hawaiian/Pacific Islander	--	--	--	--	--	--	--	--	--	--	--	--	***
White	***	***	***	***	***	***	***	***	***	***	***	***	10
Multiple races	***	***	--	--	--	--	***	***	***	***	***	***	7
No valid BESURE HIV test result^f	***	***	***	***	***	***	--	--	***	***	--	--	42
Total	47	11.3	18	4.3	25	6.0	18	4.3	22	5.3	10	2.4	417

Abbreviations: STI, sexually transmitted infection

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

b Participants with a valid negative BESURE HIV test result.

c Categories with no data have been omitted from the table.

d Hispanics/Latinos can be of any race.

e Participants with a reactive rapid BESURE HIV test result supported by supplemental laboratory-based testing.

f Participants who did not have a valid positive or negative BESURE HIV test result, including those who did not consent to the HIV test, or had an indeterminate laboratory result but had a negative BESURE HIV test result.

*** Cells containing fewer than five have been suppressed.

Table 10. Non-injection drug use in the 12 months before interview and binge drinking in the 30 days before interview among men who have sex with men—BESURE, 2017

	Used drug	
	No.	%
HIV-negative^a	237	100.0
Binge drinking (past 30 days) ^b	88	37.1
Any injection drug use	9	3.8
Any non-injection drugs (excludes binge drinking)	114	48.1
Cocaine	30	12.7
Crack	26	11.0
Downers ^c	24	10.1
Ecstasy	8	3.4
Heroin	22	9.3
Marijuana	104	43.9
Methamphetamine	5	2.1
Prescription opioids ^d	24	10.1
HIV-positive^e	138	100.0
Binge drinking (past 30 days) ^b	29	21.0
Any injection drug use	***	***
Any non-injection drugs (excludes binge drinking)	55	39.9
Cocaine	12	8.7
Crack	13	9.4
Downers ^c	5	3.6
Ecstasy	11	8.0
Heroin	***	***
Marijuana	53	38.4
Methamphetamine	6	4.3
Prescription opioids ^d	9	6.5
No valid BESURE HIV test result^{fg}	42	100.0
Binge drinking (past 30 days)	16	38.1
Any injection drug use	***	***
Any non-injection drug use (excluding binge drinking)	19	45.2
Cocaine	9	21.4
Crack	***	***
Downers ^c	***	***
Ecstasy	***	***
Marijuana	17	40.5
Methamphetamine	***	***
Prescription opioids ^d	***	***

Disclaimer: The use of trade names is for identification only and does not imply endorsement by the Johns Hopkins Bloomberg School of Public Health or the Maryland Department of Health.

Note. Denominator is the total number of participants in the category; HIV-negative participants: n = 508; HIV-positive participants: n = 55; participants without a valid BESURE HIV test result: n = 8. Responses are not mutually exclusive; percentages may not add to 100.

a Participants with a valid negative BESURE 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 BESURE HIV test result supported by supplemental laboratory-based testing.

f Participants who did not have a valid positive or negative BESURE HIV test result, including those who did not consent to the HIV test, or had an indeterminate laboratory result.

g Categories with no data have been omitted from the table.

*** Cells containing fewer than five have been suppressed.

Table 11. Additional outcomes among men who have sex with men—BESURE, 2017

	Sexual behaviors					Total No.
	Number of male sex partners Median (Q1–Q3)	Exchange sex ^a		Condomless sex with an HIV-discordant partner at last sex ^b		
		No.	%	No.	%	
HIV-negative^c	2(1-4)	41	17.3	41	17.3	237
Age at interview (yrs)						
18–24	3(1-5)	***	***	***	***	40
25–29	2(2-4)	7	14.3	11	22.4	49
30–39	3(1-5)	12	16.2	12	16.2	74
40–49	2(1-4)	13	33.3	11	28.2	39
≥50	1(1-2)	***	***	***	***	35
Race/ethnicity^d						
Asian	3(2-3)	--	--	***	***	***
Black/African American	2(1-4)	28	19.3	27	18.6	145
Hispanic/Latino ^e	2(1-6)	***	***	***	***	17
White	2(1-5)	***	***	5	11.1	45
Multiple races	3(1-5)	6	25.0	6	25.0	24
Unknown	4(4-4)	--	--	--	--	***
HIV-positive^f	2(1-5)	26	18.8	26	18.8	138
Age at interview (yrs)						
18–24	4(3-6)	***	***	***	***	8
25–29	2(1-3)	***	***	6	17.1	35
30–39	3(1-5)	6	14.3	9	21.4	42
40–49	2(1-3)	5	19.2	5	19.2	26
≥50	2(1-5)	12	44.4	***	***	27
Race/ethnicity						
American Indian/Alaska Native	2(2-2)	--	--	--	--	***
Asian	12(4-20)	***	***	***	***	***
Black/African American	2(1-4)	20	17.7	18	15.9	113
Hispanic/Latino	2(1-3)	--	--	--	--	***
Native Hawaiian/Pacific Islander	5(5-5)	***	***	--	--	***
White	9(3-20)	***	***	5	50.0	10
Multiple races	5(2-20)	***	***	***	***	7
No valid BESURE HIV test result^g	4(1-11)	***	***	***	***	42
Total	2(1-5)	69	16.5	69	16.5	417

Abbreviations: Q, quartile.

Note. BESURE sexual behavior questions assume anatomy based on reported sex (male or female).

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 Participants with a valid negative BESURE HIV test result.

d Categories with no data have been omitted from the table.

e Hispanics/Latinos can be of any race.

f Participants with a reactive rapid BESURE HIV test result supported by supplemental laboratory-based testing.

g Participants who did not have a valid positive or negative BESURE HIV test result, including those who did not consent to the HIV test, or had an indeterminate laboratory result but had a negative BESURE HIV test result.

*** Cells containing fewer than five have been suppressed.

**Table 12. Receipt of HIV care and treatment among self-reported HIV-positive men who have sex with men—
BESURE, 2017**

	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.	%			
Age at interview (yrs)									
18-24	7	100.0	7	100.0	5	71.4	7	100.0	7
25-29	24	100.0	19	79.2	22	91.7	21	87.5	24
30-39	36	100.0	25	69.4	34	94.4	34	94.4	36
40-49	24	100.0	21	87.5	23	95.8	21	87.5	24
≥50	22	95.7	7	30.4	22	95.7	21	91.3	23
Race/ethnicity^a									
American Indian/Alaska Native	***	***	***	***	***	***	***	***	***
Asian	***	***	***	***	***	***	***	***	***
Black/African American	91	98.9	67	72.8	86	93.5	85	92.4	92
Hispanic/Latino	***	***	***	***	***	***	***	***	***
White	11	100.0	8	72.7	10	90.9	9	81.8	11
Multiple races	6	100.0	***	***	5	83.3	5	83.3	6
Total	113	99.1	79	69.3	106	93.0	104	91.2	114

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 BESURE 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 Categories with no data have been omitted from the table.

*** Cells containing fewer than five have been suppressed.

Appendix: Measurement Notes

SOCIODEMOGRAPHIC CHARACTERISTICS

- 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 one or more race categories (American Indian or Alaska Native, Asian, Black/African American, Native Hawaiian or another 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 2017. 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 2017 guidelines [1] were used for participants interviewed in 2017. 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 during the 12 months before interview.
- Incarcerated: Having been held in a detention center, jail, or prison for more than 24 hours during the 12 months before interview.
- City: Throughout this report, the Baltimore MSA is referred to as Baltimore, but is inclusive of Baltimore City, Baltimore, Anne Arundel, Carroll, Howard, Harford, and Queen Anne's counties.

HIV STATUS

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

- HIV-negative: Participants with a valid negative BESURE HIV test result.
- HIV-positive: Participants with a reactive rapid BESURE HIV test result supported by supplemental laboratory-based testing.
- No valid BESURE HIV test result: Participants who did not have a valid positive or negative BESURE HIV test result, including those who did not consent to the HIV test, had an indeterminate laboratory result, or reported a previous HIV-positive test result but had a negative BESURE HIV test result.

HIV TESTING

- Ever tested: Having had an HIV test during one's lifetime.
- Tested in past 12 months: Having had an HIV test during the 12 months before interview.
- Clinical setting: Participants reported the location of their most recent HIV test—private doctor's office (including health maintenance organization), emergency department, hospital (inpatient), public health clinic or community health center, family planning or obstetrics clinic, correctional facility (jail or prison), or 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, needle exchange program, 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: Penis inserted into a partner's mouth, or mouth on a partner's penis.
- Insertive anal sex: Participant's penis inserted into a partner's anus.
- Receptive anal sex: Partner's penis inserted into the participant's anus.
- Condomless sex: Vaginal or anal sex during which a condom either is not used or is not used throughout the sex act.
- Main partner: Person with whom the participant

has sex and to whom he feels most committed (e.g., boyfriend, husband, significant other, or life partner).

- Casual partner: Person with whom the participant has sex, but to whom he does not feel committed or whom he does not know very well.
- Both insertive and receptive anal sex, condomless: participant reported both receptive and insertive anal sex with the most recent sex partner during the 3 months before interview (during the same or different sexual encounters) and reported not using a condom during one or more of those anal sex acts.

RECEIPT OF HIV PREVENTION

- Free condoms: Having received free condoms during 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 during the 12 months before interview to reduce the risk of getting HIV.

SEXUALLY TRANSMITTED INFECTIONS

- Chlamydia: Having received a diagnosis of chlamydia during the 12 months before interview.
- Gonorrhea: Having received a diagnosis of gonorrhea during the 12 months before interview.
- Syphilis: Having received a diagnosis of syphilis during the 12 months before interview.
- Any bacterial STI: Having received a diagnosis of chlamydia, gonorrhea, or syphilis during the 12 months before interview.
- Genital warts: Having received a diagnosis of genital warts during one's lifetime.
- Genital herpes: Having received a diagnosis of

genital herpes during one's lifetime.

SUBSTANCE USE

Participants were asked about their use of drugs (excluding those prescribed for them) during the 12 months before interview and their use of alcohol during the 30 days before interview. Participants were not limited in the number of substances 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 five or more drinks at one sitting during the 30 days before interview.
- Any injection drug: Used any injection drug (excluding those prescribed for him) during the 12 months before interview.
- Any non-injection drug: Used any non-injection drug, excluding alcohol, during the 12 months before interview.
- Cocaine: Used powder cocaine during the 12 months before interview.
- Crack: Used crack cocaine during the 12 months before interview.
- Downer: Used downers (benzodiazepines), such as Klonopin, Valium, Ativan, or Xanax, during the 12 months before interview.
- Ecstasy: Used X or ecstasy during the 12 months before interview.
- Heroin: Used heroin (smoked or snorted) during the 12 months before interview.
- Marijuana: Used marijuana during the 12 months before interview.
- Methamphetamine: Used methamphetamines, including meth, crystal meth, speed, or crank, during the 12 months before interview.
- Prescription opioids: Used pain killers, such as OxyContin, Vicodin, morphine, or Percocet, during the 12 months before interview.

ADDITIONAL OUTCOMES

- Table 11 includes outcomes that were of particular interest at the time of publication but that were not included in other tables.
- Number of male sex partners: Median number of male sex partners in the 12 months before interview; first and third quartiles (25th and 75th percentiles) are also reported.
- Exchange sex: Refers to giving or receiving money or drugs, during the 12 months before interview, in

exchange for sex with a male casual partner.

- 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 most recent sex partner (positive, negative, or unknown), and whether the participant reported engaging in vaginal or anal sex without a condom during his most recent sexual encounter. A partner was considered to be of discordant 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 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.

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

REFERENCE

1. U.S. Department of Health and Human Services. 2017 poverty guidelines. <http://aspe.hhs.gov/2017-poverty-guidelines>. Published 2017. Accessed January 28, 2019.

Addendum: National HIV Prevention Progress Indicators

Table A1 presents data for indicators used to monitor progress toward HIV prevention goals outlined in the [CDC Division of HIV/AIDS Prevention \(DHAP\) Strategic Plan](https://www.cdc.gov/hiv/pdf/dhap/cdc-hiv-dhap-external-strategic-plan.pdf) [https://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](https://www.cdc.gov/hiv/pdf/policies/progressreports/cdc-hiv-nationalprogressreport.pdf), 2015 [https://www.cdc.gov/hiv/pdf/policies/progressreports/cdc-hiv-nationalprogressreport.pdf]. For consistency with National HIV Prevention Progress Reports, data reported in Table A1 are reported for men who had oral or anal sex with another man during the 12 months before interview and did not report a previous HIV-positive test result. Numbers and percentages may differ from those for similar outcomes included in this and other reports of NHBS or BESURE data due to differences in indicator definition, analysis sample, or strata.

Table A1. High-risk sexual behavior among men who have sex with men at risk for HIV infection—Baltimore HIV Behavioral Surveillance, 2011, 2014, and 2017

	2011 ^a			2014 ^b			2017 ^c		
	High-risk sexual behavior ^d		Total No.	High-risk sexual behavior ^d		Total No.	High-risk sexual behavior ^d		Total No.
	No.	%		No.	%		No.	%	
Age at interview (yr)									
18–24	16	11.3	142	11	11.1	99	***	***	47
25–34	***	***	99	19	13.6	140	16	12.8	133
35–44	16	23.2	69	12	20.3	59	5	8.5	59
45–54	17	25.0	68	***	***	56	10	23.8	42
≥55	***	***	22	***	***	20	***	***	23
Race/ethnicity									
American Indian/Alaska Native	0	0.0	2	0	--	3	0	--	0
Asian	***	***	3	0	--	7	***	***	6
Black/African American	51	16.7	305	32	14.4	222	27	14.21	190
Hispanic/Latino ^e	***	***	8	***	***	20	0	--	22
Native Hawaiian/Other Pacific Islander	0	0.0	1	0	--	0	0	--	1
White	6	9.8	61	15	15.5	97	***	***	54
Multiple races	***	***	20	***	***	2	***	***	31
Total	60	15.0	400	51	13.6	374	34	11.8	304

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

Note. Data include men who had oral or anal sex with another man during the 12 months before interview and did not report a previous HIV-positive test result.

a,b Details of the 2012 and 2015 sample, conducted using respondent-driven sampling, are available upon request from the investigators and on the MDH website

(<https://phpa.health.maryland.gov/OIDEOR/CHSE/pages/behavioral-surveillance.aspx>)

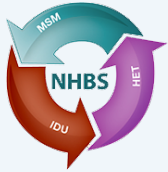
c In 2017, BESURE was conducted using venue-based, time-spaced sampling. Details of the 2017 sample are reported in Technical Notes.

d During the 12 months before interview, did not take PrEP and at the most recent sexual encounter had vaginal or anal sex without a condom with a partner who was HIV-positive or of unknown status.

e Hispanics/Latinos can be of any race.

HIV Infection Risk, Prevention, and Testing Behaviors Among Men Who Have Sex with Men

Baltimore • MD



National HIV Behavioral Surveillance • 2017

In **Baltimore**, 417 sexually active gay, bisexual, and other men who have sex with men (MSM) were interviewed

Overall, about **1 in 3** were **HIV-positive**

Among HIV-negative MSM, PrEP awareness was high, but usage was low

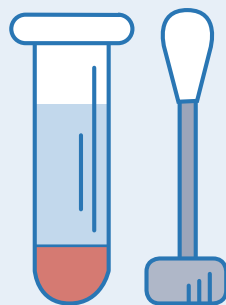
Overall **PrEP Awareness** was **71%** | Overall **PrEP Use** was **12%**

Pre-exposure prophylaxis (or PrEP) is a pill that, taken daily, **can protect someone from getting HIV.**



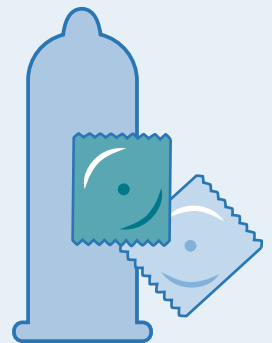
73%

of **MSM** were tested for HIV in the past 12 months



6 in 10

MSM had anal sex **without a condom** with another man in the past 12 months



National HIV Behavioral Surveillance (NHBS) data are used to provide a behavioral context for trends seen in HIV surveillance data and are critical for monitoring the impact of HIV prevention efforts. The work of NHBS is essential for informing HIV prevention efforts at local and national levels by characterizing and monitoring HIV risk behaviors and use of testing and other prevention services.

Read full report: <https://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-special-report-number-22.pdf>