

Centers for Disease Control and Prevention

MMWR

Morbidity and Mortality Weekly Report

Surveillance Summaries / Vol. 63 / No. 14

December 19, 2014

HIV Risk, Prevention, and Testing Behaviors Among Heterosexuals at Increased Risk for HIV Infection — National HIV Behavioral Surveillance System, 21 U.S. Cities, 2010



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

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The *MMWR* series of publications is published by the Center for Surveillance, Epidemiology, and Laboratory Services, Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services, Atlanta, GA 30329-4027.

Suggested citation: [Author names; first three, then et al., if more than six.] [Title]. *MMWR Surveill Summ* 2014;63(No. SS-14):[inclusive page numbers].

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HIV Risk, Prevention, and Testing Behaviors Among Heterosexuals at Increased Risk for HIV Infection — National HIV Behavioral Surveillance System, 21 U.S. Cities, 2010

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Abstract

Problem/Condition: At the end of 2010, an estimated 872,990 persons in the United States were living with a diagnosis of human immunodeficiency virus (HIV) infection. Approximately one in four of the estimated HIV infections diagnosed in 2011 were attributed to heterosexual contact. Heterosexuals with a low socioeconomic status (SES) are disproportionately likely to be infected with HIV.

Reporting Period: June–December 2010.

Description of System: The National HIV Behavioral Surveillance System (NHBS) collects HIV prevalence and risk behavior data in selected metropolitan statistical areas (MSAs) from three populations at high risk for HIV infection: men who have sex with men, injecting drug users, and heterosexuals at increased risk for HIV infection. Data for NHBS are collected in rotating cycles in these three different populations. For the 2010 NHBS cycle among heterosexuals, men and women were eligible to participate if they were aged 18–60 years, lived in a participating MSA, were able to complete a behavioral survey in English or Spanish, and reported engaging in vaginal or anal sex with one or more opposite-sex partners in the 12 months before the interview. Persons who consented to participate completed an interviewer-administered, standardized questionnaire about HIV-associated behaviors and were offered anonymous HIV testing. Participants were sampled using respondent-driven sampling, a type of chain-referral sampling. Sampling focused on persons of low SES (i.e., income at the poverty level or no more than a high school education) because results of a pilot study indicated that heterosexual adults of low SES were more likely than those of high SES to be infected with HIV. To assess risk and testing experiences among persons at risk for acquiring HIV infection through heterosexual sex, analyses excluded participants who were not low SES, those who reported ever having tested positive for HIV, and those who reported recent (i.e., in the 12 months before the interview) male-male sex or injection drug use. This report summarizes unweighted data regarding HIV-associated risk, prevention, and testing behaviors from 9,278 heterosexual men and women interviewed in 2010 (the second cycle of NHBS data collection among heterosexuals).

Results: The median age of participants was 35 years; 47% were men. The majority of participants were black or African American (hereafter referred to as black) (72%) or Hispanic/Latino (21%). Most participants (men: 88%; women: 90%) reported having vaginal sex without a condom with one or more opposite-sex partners in the past 12 months; approximately one third (men: 30%; women: 29%) reported anal sex without a condom with one or more opposite-sex partners. The majority of participants (59%) reported using noninjection drugs in the 12 months before the interview; nearly one in seven (15%) had used crack cocaine. Although most participants (men: 71%; women: 77%) had ever been tested for HIV, this percentage was lower among Hispanic/Latino participants (men: 52%; women: 62%). Approximately one third (34%) of participants reported receiving free condoms in the 12 months before the interview; 11% reported participating in a behavioral HIV prevention program.

Interpretation: A substantial proportion of heterosexuals interviewed for the 2010 NHBS heterosexual cycle reported engaging in behaviors that increase the risk for HIV infection. However, HIV testing was suboptimal among the overall sample, including among groups disproportionately affected by HIV infection (i.e., blacks and Hispanics/Latinos).

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Public Health Action: Increasing coverage of HIV testing and other HIV prevention services among heterosexuals at increased risk is important, especially among groups disproportionately affected by HIV infection, such as blacks and Hispanics/Latinos. The National HIV/AIDS Strategy for the United States delineates a coordinated national response to reduce infections and HIV-related health disparities among disproportionately affected groups. NHBS data can guide national and local planning efforts to maximize the impact of HIV prevention programs.

Introduction

In the United States, an estimated 872,990 persons were living with a diagnosis of human immunodeficiency virus (HIV) infection at the end of 2010 (1). Heterosexual sex is the second most common route of transmission of HIV in the United States and is estimated to account for approximately one out of every four (27%) infections diagnosed in adolescents and adults during 2011 (1). Heterosexual sex is the primary route of transmission of HIV for women; approximately four out of every five new HIV infections among women diagnosed in 2010 were attributed to heterosexual contact (1). In addition, blacks or African Americans (hereafter referred to as blacks) and Hispanics/Latinos are disproportionately affected by HIV. Estimated rates of diagnosed HIV infection in 2011 were 9 times as high for blacks and 3 times as high for Hispanics or Latinos compared with the rate for whites. Racial and ethnic differences among women were greater, with an estimated rate of diagnosed HIV infection among black women that was 20 times as high and among Hispanic/Latino women that was 4 times as high as the rate among white women (1). The National HIV/AIDS Strategy for the United States addresses these issues by calling for a coordinated national response for reducing HIV incidence and HIV-related health disparities (2).

One objective of the National HIV/AIDS Strategy, released in 2010 (2), is to decrease the annual number of new infections by 25% by 2016. As outlined in the National HIV/AIDS Strategy (2), this objective can be achieved by implementing three key steps to reduce HIV infections: intensifying HIV prevention efforts in communities where HIV is most heavily concentrated (such as urban areas, which have the highest prevalence) (3); expanding efforts to prevent HIV infection by using a combination of effective, evidence-based approaches; and educating the general public about the threat of HIV and how to prevent infection. State and local health departments as well as federal agencies are expected to monitor progress toward the strategy's goals.

The National HIV Behavioral Surveillance System (NHBS) was designed to help state and local health departments in areas with a high prevalence of AIDS monitor selected risk behaviors, HIV testing experiences, use of prevention programs, and HIV infection in three populations at high risk for HIV infection: gay, bisexual, and other men who have sex with men

(collectively referred to as MSM); injecting drug users (IDUs); and heterosexuals at increased risk for HIV infection (4). NHBS is an important component of CDC's comprehensive approach to reducing the spread of HIV in the United States and is the primary source of data for monitoring the behaviors of populations at risk for HIV infection. Findings from NHBS enhance the understanding of HIV risk and testing behaviors and identify gaps in prevention efforts. NHBS data are used at the state and local levels to renew and maintain efforts to prevent HIV infection as well as other bloodborne and sexually transmitted diseases (STDs). The data from this system could be used locally and nationally to monitor efforts toward reducing HIV infections and HIV-related health disparities in these populations.

The target population for the NHBS heterosexual cycle is adults in areas of high AIDS prevalence who are at risk for acquiring HIV infection through heterosexual sex (5). In the MSM and IDU data collection cycles, all persons who report engaging in the risk behavior (male-male sex and injection drug use, respectively) in the 12 months before the interview are considered at risk for HIV infection because of the higher prevalence of HIV infection among persons who engage in these behaviors (6). However, not all persons with opposite-sex partners are at equal risk for HIV. An evaluation of the first (pilot) NHBS data collection cycle among heterosexuals (2006–2007) indicated that low socioeconomic status (SES) (household income at or below the federal poverty guidelines or no more than a high school education) was an accurate marker of HIV acquisition risk among heterosexual adults in 24 U.S. cities with high AIDS prevalence (5). Therefore, the 2010 NHBS heterosexual cycle focused on heterosexuals of low SES who lived in urban communities with high AIDS prevalence. Use of low SES to identify heterosexuals at increased risk for HIV is consistent with other published studies of HIV infection among heterosexuals documenting the association between low SES and HIV infection (7–9).

This report summarizes unweighted data from the second NHBS data collection cycle among heterosexuals at increased risk for HIV, which was conducted during June–December 2010. In the 2010 NHBS heterosexual cycle, 2.3% of participants were HIV-positive (10). This report expands on the previous report (10) of HIV infection status among participants in the 2010 heterosexual NHBS cycle by

1) reporting the distribution of HIV risk, prevention, and testing behaviors by sociodemographic characteristics and metropolitan statistical area (MSA) and 2) including data from participants who reported a lifetime history but not recent history of male-male sex or injection drug use (i.e., the behavior had ever occurred but the most recent event was >12 months before the interview). Detailed data regarding HIV-related risk behaviors from the NHBS heterosexual cycle have not been reported previously. Monitoring these data is useful for 1) assessing the extent to which heterosexuals at increased risk for HIV (i.e., those of low SES living in communities with high AIDS prevalence) engage in HIV risk and preventive behaviors and 2) identifying opportunities for HIV prevention in this population.

Methods

NHBS collects HIV prevalence and risk behavior data in selected MSAs from three populations at high risk for HIV infection: MSM, IDUs, and heterosexuals at increased risk for HIV infection. Data for NHBS are collected in rotating cycles. Each of the three NHBS populations (MSM, IDUs, and heterosexuals at increased risk for HIV infection) is surveyed once every 3 years. A period of data collection with a specific population is referred to as a cycle. The survey for each cycle is anonymous. For each survey cycle, an anonymous standardized questionnaire is used to collect information about HIV-associated behaviors, specifically sexual behaviors, substance use, HIV testing, and use of HIV prevention services. The face-to-face survey is administered by a trained interviewer using a portable computer. All participants who consent to the survey are offered an anonymous HIV test, the results of which are linked to the survey data through a unique anonymous survey identifier and provided to participants in accordance with local policy. Participants may complete the survey even if they decline the HIV test. All participating state and local jurisdictions obtained human subject protections approval before initiating data collection for the 2010 NHBS heterosexual cycle. As a component of HIV/AIDS surveillance, NHBS data are protected by an Assurance of Confidentiality under Section 308(d) of the Public Health Service Act (42 U.S.C. 242 m(d)). As a part of this assurance, funded health departments applied and trained NHBS staff members to follow data security standards consistent with those for CDC guidelines for HIV/AIDS surveillance data (11).

Participating Areas

State and local health departments that were eligible to participate in NHBS were those whose jurisdictions included

an MSA or a specified MSA division with the highest AIDS prevalence in 2006 (CDC, unpublished data, 2006). The 2010 heterosexual cycle of NHBS was conducted in the following MSAs (or if a metropolitan division is indicated, the survey was conducted within that specific division of the MSA): 1) Atlanta-Sandy Springs-Marietta, Georgia; 2) Baltimore-Towson, Maryland; 3) Boston-Cambridge-Quincy, Massachusetts-New Hampshire: Boston-Quincy Division; 4) Chicago-Joliet-Naperville, Illinois-Indiana-Wisconsin: Chicago-Joliet-Naperville Division; 5) Dallas-Fort Worth-Arlington, Texas: Dallas-Plano-Irving Division; 6) Denver-Aurora-Broomfield, Colorado; 7) Detroit-Warren-Livonia, Michigan: Detroit-Livonia-Dearborn Division; 8) Houston-Sugar Land-Baytown, Texas; 9) Los Angeles-Long Beach-Santa Ana, California: Los Angeles-Long Beach-Glendale Division; 10) Miami-Ft. Lauderdale-Pompano Beach, Florida: Miami Division; 11) New Orleans-Metairie-Kenner, Louisiana; 12) New York-Northern New Jersey-Long Island, New York-New Jersey-Pennsylvania: New York-White Plains-Wayne Division; 13) New York-Northern New Jersey-Long Island, New York-New Jersey-Pennsylvania: Nassau-Suffolk Division; 14) New York-Northern New Jersey-Long Island, New York-New Jersey-Pennsylvania: Newark-Union Division; 15) Philadelphia-Camden-Wilmington, Pennsylvania, New Jersey, Delaware, Maryland: Philadelphia Division; 16) San Diego-Carlsbad-San Marcos, California; 17) San Francisco-Oakland-Fremont, California: San Francisco-San Mateo-Redwood City Division; 18) San Juan-Caguas-Guaynabo, Puerto Rico; 19) Seattle-Tacoma-Bellevue, Washington: Seattle-Bellevue-Everett Division; 20) St. Louis, Missouri-Illinois; and 21) Washington-Arlington-Alexandria, District of Columbia (DC)-Virginia-Maryland-West Virginia: Washington-Arlington-Alexandria Division. Nearly one half of all persons living with HIV in the United States and Puerto Rico as of the end of 2009 lived in one of these MSAs (12). Throughout this report, MSAs are referred to by the name of the primary principal city (Figure 1).

Eligibility

The same basic eligibility criteria are used in each NHBS cycle: age ≥ 18 years, a current resident of a participating MSA or specified MSA division, not a previous participant in NHBS during the current survey cycle, ability to complete the survey in either English or Spanish, and ability to provide informed consent. In addition to these basic eligibility criteria, participation in the NHBS heterosexual cycle is limited to men and women aged ≤ 60 years who had vaginal or anal sex with an opposite-sex partner in the 12 months before the interview. The maximum eligible age was limited to 60 years because

FIGURE 1. Participating metropolitan statistical areas — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010



the estimated rates of HIV diagnoses are relatively low among persons aged >60 years (1). Low SES was not an eligibility criterion but was used in the sampling strategy as described in the following section.

Sampling Method

Participants for the 2010 heterosexual cycle of NHBS were recruited using respondent-driven sampling (RDS), a type of chain-referral sampling. The RDS sampling strategy used in NHBS heterosexual cycles is similar to the strategy used in NHBS IDU cycles, the details of which have been described elsewhere (13). RDS starts with a limited number of persons (seeds) chosen by referrals from those who know the local target population well or through outreach to areas where the target population can be found. Eligible seeds who participate are asked to recruit other members of the target population. These persons, in turn, complete the survey and are asked to recruit others. This recruitment process continues until the sample size has been reached or the sampling period ends.

To reach the target population of heterosexuals at increased risk for HIV, in the 2010 NHBS heterosexual cycle, seeds were recruited from poverty areas within each MSA based

on estimated 2009 poverty rates for census tracts within the participating MSAs. Poverty areas are defined by the U.S. Census Bureau as census tracts in which at least 20% of residents live below the poverty threshold (14). Seeds completed the eligibility screener; those who were eligible and consented to participate were administered the survey. Seeds who completed the survey were asked to recruit three to five persons they knew personally to participate and were given coupons with information about the project, such as phone number, hours, and locations, to provide to their recruits.

Data Collection

All persons who brought a valid coupon to a field site for the 2010 NHBS heterosexual cycle were escorted to a private area for eligibility screening. Trained interviewers obtained informed consent for the survey from eligible participants and offered an anonymous HIV test to participants who consented to the survey. Interviewers administered the survey in person using a portable computer. The survey instrument included questions regarding participants' demographic characteristics, sexual and drug-use behaviors, HIV testing history, hepatitis vaccination, STD diagnoses, and use of HIV behavioral

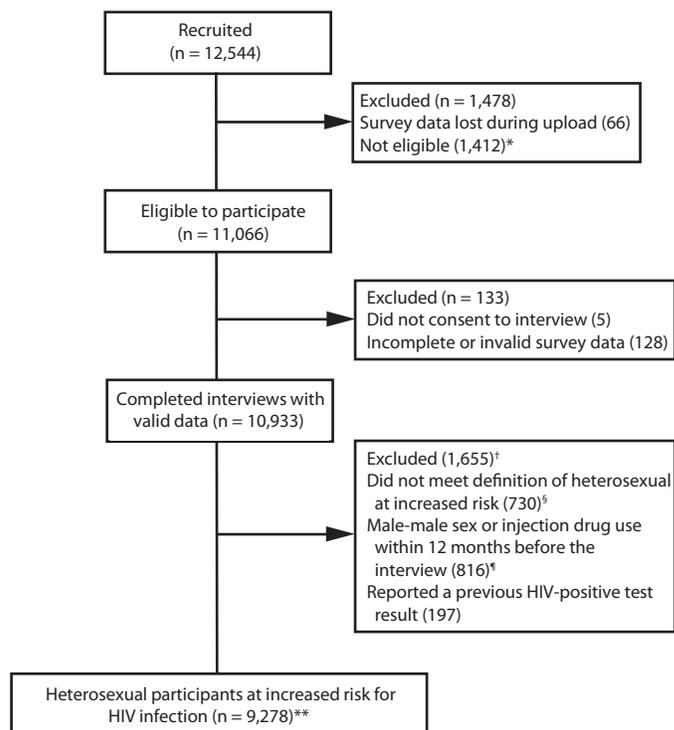
interventions. Interviews were an average of 32 minutes. In exchange for their time and effort in taking part in the survey, participants received approximately \$25 in cash or a gift certificate; participants who also agreed to the HIV test received additional compensation, typically \$25. The specific amount and form of incentives for the interview and HIV test were determined locally. Participants who agreed to recruit other participants were given one to five uniquely numbered recruitment coupons. Participants received approximately \$10 in cash or a gift certificate for each new participant recruited who completed the interview. The specific amount of the incentive was determined locally.

To focus recruitment on the target population, opportunity to recruit other participants was limited to those who met the NHBS definition of a heterosexual at increased risk for HIV (low SES) and who reported no recent (i.e., in the past 12 months) injection drug use. Low SES was defined as having completed no more than a high school education or having a household income that was at or below the U.S. Department of Health and Human Services poverty guidelines (15). Each participating MSA attempted to interview 450 heterosexuals at increased risk for HIV infection (i.e., heterosexual sexually active, low SES men and women aged 18–60 years who had not injected drugs in the 12 months before the interview).

Data Analysis

This report summarizes unweighted data from 9,278 heterosexual men and women interviewed in 21 MSAs during the second cycle of NHBS data collection among heterosexuals, which was conducted in 2010. Inclusion in this report is limited to participants who 1) were eligible for and consented to the interview and 2) reported low SES (i.e., either no more than high school education or an income at or below the poverty level). In addition, to assess risk and testing experiences among persons at risk for acquiring HIV infection through heterosexual sex, all analyses excluded data from participants who reported a previous positive HIV test and those who reported recent (i.e., in the 12 months before the interview) male-male sex or injection drug use or did not provide this information (Figure 2). Data from participants who did not report a previous positive HIV test during the interview but who subsequently had a positive NHBS HIV test result are included in this report because persons who do not know their HIV status are an important focus of HIV prevention efforts. Data from participants with a previous but not recent (i.e., >12 months before the interview) history of injection drug use or male-male sex were included because the reported behaviors indicated exclusively heterosexual risk in the 12 months before the interview.

FIGURE 2. Exclusion criteria and analysis sample — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010



Abbreviations: HIV = human immunodeficiency virus; NHBS = National HIV Behavioral Surveillance System.

* Includes participants who lived outside a participating metropolitan statistical area (49), did not identify as male or female (53), were aged <18 years or >60 years (193), had previously participated (230), had not had sex with an opposite-sex partner in the 12 months before interview (830), or were unable to provide consent (184). Categories are not mutually exclusive.

† Reasons for exclusion were not mutually exclusive.

‡ Reported income greater than federal poverty guidelines and education greater than high school.

¶ Includes those who did not provide this information.

** Includes 126 participants who did not report a previous HIV-positive test result during the interview but who subsequently had a positive NHBS test result.

Four time frames for risk and testing experiences are included in this report: 1) ever (i.e., at any point in the participant's lifetime), 2) in the 12 months before the date of the interview, 3) in the 30 days before the date of the interview, and 4) the most recent time the participant engaged in the behavior. All numbers and percentages included in this report are unweighted. Weighting methods for RDS data are still under development and are limited to estimation of outcomes with sufficient local sample sizes. In addition, unweighted analysis allows reporting of outcomes by subgroups for which the number of participants is not sufficient for weighted analysis but aggregation into a single "other" category would obscure important information (e.g., American Indians/Alaska

Natives). Between-group differences of >5 percentage points are noted in the text for key outcomes deemed meaningful in the public health context, given the NHBS sample size. However, the data are descriptive; no statistical tests were conducted, and group differences should be interpreted with caution. To ensure that anonymous data reporting standards of CDC and all state and local health departments were met, numbers and percentages for numbers or numerators of fewer than six participants were suppressed.

Measures

Participant Characteristics

Data were analyzed according to the following characteristics of participants: sex, age group, race/ethnicity, marital status, education level, annual household income, health insurance status, census region, and MSA. Responses for race/ethnicity were categorized into six mutually exclusive categories: American Indian/Alaska Native, black, Hispanic/Latino, Asian/Native Hawaiian/Other Pacific Islander, white, and multiple races. Persons of Hispanic/Latino ethnicity might be of any race. Asian was combined with Native Hawaiian/Other Pacific Islander to prevent suppression of data for each of these groups in several tables. Marital status was categorized as married or cohabiting, formerly married (separated, divorced, or widowed) and not cohabiting, and never married and not cohabiting. Education level was categorized as less than high school graduate, high school diploma or equivalent (e.g., general educational development [GED] certificate), and some college or higher level education. Participants were asked to identify which range in a list of ranges included their annual household income; in this report, income ranges were combined into four categories: \$0–\$4,999; \$5,000–\$9,999; \$10,000–\$19,999; and ≥\$20,000. Participants were classified as living in poverty if the household income range reported during the interview was at or below the federal poverty guidelines for the total number of dependents, including the participant, for the reported income (15). Nearly all participants in the analysis sample were classified as living in poverty (men: 85%; women: 90%); approximately two thirds (67%) had at least one dependent in addition to the participant on their reported income, and approximately two thirds (63%) reported an income of <\$10,000, which is below the federal poverty guidelines for persons with no additional dependents. Among participants with more than one dependent, the median number of dependents was three (interquartile range [IQR]: two to four). Therefore, income is reported rather than poverty status to demonstrate the extreme poverty among the 2010 NHBS heterosexual cycle participants. Consistent with

the Stewart B. McKinney Homeless Act of 1987 (42 U.S.C. §11331 et seq.), homelessness was defined as living on the street, living in a shelter, or staying with friends or relatives. Health insurance was categorized as none; private only (i.e., health insurance obtained through a private insurance policy or employer, TRICARE, CHAMPUS, or membership in a health maintenance organization); public only (i.e., Medicare, Medicaid, or Veterans Administration coverage); or other coverage, including both public and private. Male-male sex (male participants only) was defined as oral or anal sex with another man. Injection drug use was defined as injection of drugs not prescribed for the participant. As described previously, all participants who reported male-male sex or injection drug use in the 12 months before the interview or did not provide this information were excluded from all analyses. Participants' region of residence was classified for each MSA according to the U.S. Census Bureau for each of the NHBS MSAs in the continental United States (16); an additional category (territories) was used for the San Juan, Puerto Rico, MSA.

Sexual Behaviors

Details about the number of opposite-sex partners (overall and by type) and about vaginal and anal sex with opposite-sex partners in the 12 months before the interview are presented for male and female participants. Participants were asked the number of opposite-sex partners overall and by type. Sex was defined as oral, vaginal, or anal sex. Sex partners were categorized as main or casual partners. A main partner was someone to whom the participant felt most committed (e.g., girlfriend or boyfriend, wife or husband, significant other, or life partner). A casual partner was someone to whom the participant did not feel committed, whom the participant did not know very well, or with whom the participant had sex in exchange for something such as money or drugs. Participants could report having more than one main or casual partner in the past 12 months. Within each partner type, participants were asked the number of partners with whom they had engaged in each of the following behaviors: vaginal sex, vaginal sex without a condom, anal sex, and anal sex without a condom. In this report and the accompanying tables, unless otherwise specified, sex partner refers to opposite-sex partners.

Alcohol and Drug Use

Participants were asked about their use of alcohol in the 30 days before and the 12 months before the interview and of their use, in the 12 months before the interview, of specific noninjection drugs that had not been prescribed for them. Current alcohol use was defined as drinking any alcohol, such as beer, wine, malt liquor, or hard liquor, in the 30 days before

the interview. Participants reporting current alcohol use were asked on how many days they had consumed alcohol in the past 30 days and on average how many alcoholic beverages they consumed on the days they drank. Men were asked the number of times in the past 30 days they had consumed five or more alcoholic beverages at one sitting; women were asked the number of times they had consumed four or more alcoholic beverages at one sitting. Heavy drinking was defined as drinking, on average, more than two alcoholic beverages per day for men and more than one alcoholic beverage per day for women. Binge drinking was defined as having at least once, in the past 30 days, at least five alcoholic beverages at one sitting for men and at least four alcoholic beverages at one sitting for women.

Participants were asked about their noninjection drug use in the past 12 months of multiple types of drugs that had not been prescribed for them, including marijuana, crack, cocaine, heroin, methamphetamine, downers (e.g., Valium, Ativan, or Xanax), painkillers (e.g., Oxycontin, Vicodin, or Percocet), or any other noninjection drugs. Use of any noninjection drug was defined as use of one or more of the drugs listed above.

Sexually Transmitted Disease Diagnoses

Participants were asked whether they had been diagnosed by a health-care provider with any of the following in the 12 months before the interview: chlamydia, gonorrhea, syphilis, genital herpes, genital warts, or another STD. The percentages of participants reporting any STD, chlamydia, gonorrhea, or another STD are reported by sex and participant characteristics.

Use of Prevention Services and Programs

HIV Testing

History of HIV testing (lifetime or in the 12 months before the interview) is presented for all participants. The type of facility that administered the most recent HIV test and receipt of test result by facility type are reported for all participants tested in the 12 months before the interview. Reasons for not having received an HIV test in the 12 months before the interview are presented for all participants who reported their most recent test was >12 months before the interview or reported they had never been tested for HIV. Participants were asked to select from a list of reasons for not having been tested in the past 12 months (e.g., thought they were at low risk for HIV infection, fear of finding out they had HIV infection, and lack of time, money, or transportation). Participants could select more than one reason, and those who did were asked to indicate the most important reason.

Hepatitis B Vaccination

All participants were asked whether they had ever received a diagnosis of hepatitis; those reporting a previous hepatitis diagnosis were asked to indicate the type (A, B, C, or other). All participants were asked whether they had ever been vaccinated against hepatitis; those reporting hepatitis vaccination were asked the type. Hepatitis B vaccination was defined as having ever received a hepatitis B vaccine, regardless of whether it was a single or combination vaccine (i.e., against hepatitis B virus only or against both hepatitis A virus and B virus).

Prevention Materials and Behavioral Interventions

Participants were asked whether they had received free condoms (excluding those given by a friend, relative, or sex partner) and whether they had participated in individual- or group-level HIV-related behavioral interventions in the 12 months before the interview. The definitions for both intervention types were based on those in CDC's evaluation system (17). Conversations that took place solely as a part of HIV testing (e.g., pretest or posttest counseling) were not considered HIV behavioral interventions. Participants who reported receiving free condoms or behavioral interventions were asked to report the type of organization that provided the condoms or intervention.

Results

A total of 12,544 persons were recruited to participate in the 2010 NHBS heterosexual cycle (Figure 2). Of the 12,478 participants screened for whom data were available, 11,066 (89%) were eligible for the interview. (Interview data for 66 participants were lost during electronic upload.) A total of 1,412 were not eligible for the interview: 49 lived outside the MSA; 53 did not identify as male or female; 193 were aged <18 years or >60 years; 230 had already participated; 830 did not report vaginal or anal sex with an opposite-sex partner in the 12 months before the interview; and 184 were not able to provide their consent to the survey (e.g., were too intoxicated or did not speak either English or Spanish well). Exclusion categories are not mutually exclusive. Of the 11,066 eligible persons, 11,061 agreed to participate and 10,933 completed the interview with valid data. A total of 1,655 completed interviews were excluded: 1) 730 participants did not meet the definition of a heterosexual at increased risk for HIV infection (i.e., reported income above poverty level and education greater than high school, 2) 816 participants reported engaging in male-male sex or injection drug use in the 12 months before the interview or did not provide this information, and 3) 197 participants reported a previous

HIV-positive test result; exclusion categories were not mutually exclusive. A total of 9,278 participants met all inclusion criteria for analysis, including 126 participants (1.4%) who did not report a previous positive HIV test during the interview but who subsequently had a positive NHBS HIV test result.

Participant Characteristics

Approximately half (58%) of participants were aged 40–60 years. The majority of participants reported black race (72%) or Hispanic/Latino ethnicity (21%); the sample was evenly distributed by sex (Table 1). The majority of participants (64%) had never married and were not cohabiting. Most participants reported no more than a high school education (men: 86%; women: 83%) and very low incomes. For instance, most participants (87%) reported annual incomes of <\$20,000, which is lower than the federal poverty guidelines for a family of four; approximately one in three (36%) reported annual incomes of <\$5,000. Nearly three out of four (men: 72%; women: 73%) reported both income at or below poverty and no more than a high school education (data not shown). Approximately one third (31%) of participants were currently or had been homeless in the 12 months before the interview, and nearly half (46%) were uninsured.

With the exception of homelessness and health insurance, the demographic characteristics were similar for male and female participants. Approximately one third of male (35%) and female (27%) participants had been homeless at some time in the 12 months before the interview. Approximately one half (58%) of male and one third (36%) of female participants had no health insurance. For both male and female participants, the most frequently reported insurance was a publicly funded plan. Among those with publicly funded plans, the majority of both male (75%) and female (80%) participants reported coverage by Medicaid (data not shown).

Although the analysis sample excluded data from participants who reported they had recently (within 12 months of interview) injected drugs or had male-male sex, 14% of male participants reported that they had injected drugs or had sex with another man >12 months before the interview; 5% of female participants had injected drugs >12 months before the interview (data not shown). Each participating area contributed an average of 442 interviews (range: 131–565) to this analysis.

Sexual Behaviors

Number and Types of Partners

Among the 4,323 male participants, the median number of female sex partners in the 12 months before the interview was three (IQR: one to six); a total of 3,234 (75%) reported having

more than one female sex partner in the 12 months before the interview (median: four; IQR: three to eight). A total of 3,266 (76%) reported a female main sex partner (median: one; IQR: one to two), and 3,112 (72%) reported having a female casual sex partner (median: three; IQR: two to seven). Overall, 2,055 (48%) reported having both main and casual female partners, and 801 (19%) reported having one or more female partners with whom they had exchanged money or drugs for sex in the 12 months before the interview (data not shown).

Among the 4,955 female participants, the median number of male sex partners in the 12 months before the interview was two (IQR: one to four); a total of 3,138 (63%) reported having more than one male sex partner in the 12 months before the interview (median: three; IQR: two to five). A total of 4,172 (84%) reported a male main sex partner (median: one; IQR: one to one), and 2,898 (58%) reported having a male casual sex partner (median: two; IQR: one to five). Overall, 2,115 (43%) reported having both main and casual male partners, and 910 (18%) reported having one or more male partners with whom they had exchanged money or drugs for sex in the 12 months before the interview (data not shown).

Types of Sexual Behaviors

Overall, 3,793 (88%) male participants reported having vaginal sex without a condom with a female partner in the 12 months before the interview, and 1,304 (30%) reported having anal sex without a condom with a female partner (Table 2). The percentages of men who had vaginal sex without a condom were similar among men in all categories of education and income. Anal sex without a condom was more common among male participants with lower levels of income.

A total of 4,467 (90%) female participants reported having vaginal sex without a condom with a male partner in the 12 months before the interview, and 1,420 (29%) reported having anal sex without a condom with a male partner (Table 3). The percentages of women who had vaginal sex without a condom were similar among women in all categories of education and income. Anal sex without a condom was more common among those with lower levels of income.

A total of 3,252 (75%) male participants reported having vaginal or anal sex with a female main partner, and 3,063 (71%) reported having vaginal or anal sex with a female casual partner (Table 4). Both vaginal or anal sex and vaginal or anal sex without a condom with main partners were more common among male participants who were married or cohabiting and those with higher incomes and less common among white men. Vaginal or anal sex and vaginal or anal sex without a condom with female casual partners were less common among male participants who were married or cohabiting and among

those with higher incomes and were more common among white men.

A total of 4,154 (84%) of female participants reported having vaginal or anal sex with a male main partner, and 2,837 (57%) reported having vaginal or anal sex with a male casual partner (Table 5). Both vaginal or anal sex and vaginal or anal sex without a condom with a male main partner were more common among female participants who were married or cohabiting or had a higher income. Both vaginal or anal sex and vaginal or anal sex without a condom with male casual partners were less common among female participants who were married or cohabiting and those with higher incomes.

Alcohol Use

Approximately three fourths of male and two thirds of female participants had consumed an alcoholic beverage in the 30 days before the interview (i.e., were current drinkers) (Table 6). One fourth of male (25%) and female (25%) participants were classified as heavy drinkers. Heavy drinking increased with age and was most common among participants who had annual incomes of <\$5,000 (men: 27%, women: 29%). Nearly one half of male participants (48%) and 40% of female participants reported binge drinking in the 30 days before the interview (Table 6). Among female participants, binge drinking was reported most frequently by those who were formerly married or had never been married and were not cohabiting. Among both male and female participants, binge drinking was least common among those aged 18–19 years (men: 36%, women: 28%) and most common among participants who participated in an alcohol or drug treatment program >12 months before the interview (men: 56%; women: 53%).

Noninjection Drug Use

Among the 9,278 participants, 5,440 (59%) had used noninjection drugs in the 12 months before the interview (Table 7). Most participants interviewed used marijuana (51%), followed by crack cocaine (15%), powdered cocaine (12%), painkillers (11%), and ecstasy (11%) (Table 7). For marijuana and powdered cocaine, a higher percentage of male participants reported use in the 12 months before the interview than did female participants. Compared with other racial/ethnic groups, lower percentages of Hispanics/Latinos reported using all drugs except powdered cocaine. Crack cocaine use was more commonly reported by participants who were aged ≥40 years (40–49 years: 28%; 50–60 years: 31%), were American Indian/Alaska Native (25%), were white (23%), or reported an annual income of <\$5,000 (20%).

Sexually Transmitted Disease Diagnoses

Six percent of male and 14% of female participants reported receiving an STD diagnosis in the 12 months before the interview (Table 8). Among male participants, the percentages reporting an STD diagnosis were highest among those aged 20–29 years (8%–10%). Among female participants, percentages reporting an STD diagnosis decreased with increasing age and were highest among participants who were Asian/Native Hawaiian/Other Pacific Islander (16%), were black (16%), reported multiple racial identities (18%), reported public or other insurance (16%), or were sampled in one of the MSAs in the Midwest (22%). Chlamydia was the most commonly reported STD (men: 3%; women: 7%).

Use of Prevention Services and Programs

HIV Testing

Approximately three fourths of participants (men: 71%; women: 77%) had been tested for HIV infection during their lifetime, and approximately one third (men: 30%; women: 35%) had been tested in the 12 months before the interview (Table 9). Among both male and female participants, the percentages reporting that they had ever been tested for HIV were lowest among Asian/Native Hawaiian/Other Pacific Islander and Hispanic/Latino participants (men: 30% and 52%; women: 58% and 62%, respectively). Among male participants, the percentage ever tested was lowest among the two youngest age groups (18–19 years: 46%; 20–24 years: 63%); among female participants, the percentage ever tested was lowest among the youngest and oldest age groups (18–19 years: 61%; 50–60 years: 70%). Among participants who had visited a health-care provider in the 12 months before the interview, approximately three fourths (men: 76%; women: 81%) had ever been tested for HIV. Therefore, among participants who had visited a health-care provider in the 12 months before the interview, approximately one in four male participants and nearly one in five female participants had never been tested for HIV. Among both male and female participants, fewer than half of participants who reported being diagnosed with an STD in the 12 months before the interview reported receiving an HIV test during that same time frame (men: 44%; women: 42%).

Participants who had been tested in the 12 months before the interview were asked the location of their most recent HIV test and whether they received their HIV test result (Table 10). Among both male and female participants, the most commonly reported location for testing was public health clinics or community health centers (men: 23%; women: 27%). Most

participants (men: 93%; women: 94%) had received the results of their most recent HIV test.

A total of 2,989 (69%) male and 3,212 (65%) female participants had not been tested for HIV in the 12 months before the interview. Among these participants, the most frequently reported main reason for not having an HIV test was low perceived risk for HIV infection (men: 31%; women: 23%) and fear of testing positive (men: 21%; women: 26%) (Table 11).

Hepatitis B Vaccination

Two percent of female participants and 1% of male participants reported ever having received a diagnosis of hepatitis B. Among the 4,260 male and 4,878 female participants who did not report a previous hepatitis B diagnosis, 21% and 30%, respectively, reported they had ever received a hepatitis B vaccine (Table 12); similar percentages were reported among male and female participants who reported that in the 12 months before the interview they had having received an STD diagnosis (men: 24%; women: 35%) or had two or more sex partners (men: 22%; women: 30%).

Prevention Materials and Behavioral Interventions

Approximately one third of participants (34%) reported having received free condoms in the 12 months before the interview, the majority of whom (66%) reported use of these condoms (Table 13). Among participants who received them, the percentage reporting use of free condoms was highest among male participants (71%), participants aged <30 years (18–19 years: 74%; 20–24 years: 71%; 25–29 years: 71%) and those who had never been married and were not cohabiting (69%); the percentage was lowest among white participants (58%). Overall, 995 (11%) participants interviewed had participated in an individual-level (7%) or group-level (5%) behavioral intervention in the 12 months before the interview (Table 13). The percentage of those participating in either an individual-level or group-level HIV behavioral intervention was lowest among participants who had not visited a health-care provider in the 12 months before the interview (6%) and was highest among participants aged 18–19 years (18%).

The most commonly reported sources of free condoms were health-care providers (men: 53%; women: 63%) and HIV/AIDS organizations (men: 35%; women: 31%) (Table 14). Among the 460 male and 535 female participants who participated in an HIV behavioral intervention in the 12 months before the interview, the most commonly reported sources of the intervention were health-care providers (men: 52%; women: 56%) and HIV/AIDS organizations (men: 46%; women: 41%).

Discussion

The 2010 NHBS heterosexual data-collection cycle focused on low SES as a marker of increased HIV acquisition risk among heterosexual adults who lived in 21 MSAs with a high percentage of AIDS. The majority of participants reported very low income levels, and many reported other social and economic vulnerabilities, including homelessness and lack of health insurance. A study conducted in 2014 (6) using nationally representative data collected during 1999–2010 reported lower HIV prevalence among low SES heterosexuals than was reported for participants in the 2010 NHBS heterosexual cycle (10). In addition, the percentage of the 2010 NHBS heterosexual participants reporting incomes of <\$20,000 and the percentage uninsured were higher than among low SES men and women in a study conducted in 2014 using nationally representative data collected during 1999–2010 (6). Therefore, the NHBS heterosexual cycle RDS might reach a subgroup of low SES heterosexuals at particularly high risk for HIV relative to other low SES heterosexuals.

Sexual Behaviors

Having multiple sex partners has been found to be associated with HIV risk among heterosexuals (18). The number of partners reported by participants in the NHBS 2010 heterosexual cycle was substantially higher than in the general population. In the 2010 NHBS heterosexual cycle, 75% of men and 63% of women reported having more than one opposite-sex partner in the 12 months before the interview. Data from the National Survey of Family Growth indicate that 19% of males aged 15–44 years and 13% of females aged 15–44 years had more than one opposite-sex partner in the 12 months before the interview (19). However, having more than one sex partner in a 12-month period is more common among persons who are neither married nor cohabiting (19), and the percentage of NHBS participants who were neither married nor cohabiting was higher than the percentage that has been reported for men and women of reproductive age in the general population (20).

Exchange of sex for money or drugs has been associated with HIV infection in both male (21) and female (22) heterosexuals in the United States. Approximately one in five participants in the 2010 NHBS heterosexual sample reported having one or more exchange sex partners in the 12 months before the interview, a percentage that is substantially higher than has been reported for men and women in the general population (1%) (23) but that is similar to percentages in studies of low SES heterosexually active women that used similar sampling

strategies as those used for the 2010 NHBS heterosexual sample (9,24).

Both vaginal and anal sex without the use of condoms poses a risk for HIV transmission. Nearly all male and female participants interviewed reported vaginal sex, and almost all reported vaginal sex without a condom with one or more partners. The high percentages of participants who reported vaginal sex without a condom is consistent with reports of other studies indicating that among heterosexually active adults in the United States, vaginal sex without a condom is common. For instance, a nationally representative study of black and Hispanic/Latino men and women found that 70%–80% did not use a condom during the last act of vaginal sex with a main partner, and 60%–90% did not use a condom during the last act vaginal sex with a casual partner (25). Among both men and women, nearly one out of three participants interviewed reported engaging in anal sex without a condom in the 12 months before the interview. Unprotected anal sex presents an even greater risk for HIV transmission than unprotected vaginal sex (26) and even if practiced relatively infrequently, unprotected anal sex might substantially increase the epidemic potential of HIV in heterosexual populations (27). Given the high percentages of participants reporting vaginal and anal sex without a condom, HIV transmission might be most effectively reduced by implementing prevention programs that are comprehensive with respect to various routes of transmission.

Alcohol

Alcohol use affects the transmission of HIV by increasing risky sexual behaviors (28–30) and has been shown to decrease adherence to HIV treatment (31,32). The proportion of participants in this survey who reported alcohol use and binge drinking was more than double the proportion observed in the general population (33–35). In the general population, binge drinking decreases with age and increases with income (33–35). Among participants in the 2010 NHBS heterosexual cycle, the majority of whom earned <\$20,000 annually, at least 40% of participants in nearly all age and income categories reported binge drinking. Alcohol treatment can be effective at reducing problematic alcohol use (36); however, binge drinking was reported by approximately 50% of participants who had participated in a drug or alcohol treatment program >12 months before the interview. These results highlight opportunities for alcohol prevention efforts among low-income urban populations. Prevention strategies demonstrated to reduce alcohol misuse include those that focus on persons who are at risk, such as screening and brief intervention in clinical settings, as recommended by the U.S. Preventive Services Task Force (USPSTF) (37), and evidence-based structural

interventions, such as regulation of alcohol outlet density and increasing alcohol excise taxes, as recommended by the Community Preventive Services Task Force (38).

Noninjection Drug Use

Drug use, including use of noninjection drugs, is associated with multiple negative health outcomes, including increased risk for HIV/AIDS (39). An estimated 64% of persons with HIV infection have never injected drugs but have used a noninjection drug at some point in their lifetime (40). The percentage of participants in the NHBS 2010 heterosexual cycle reporting noninjection drug use (59%) was higher than the overall percentage of adults in the United States general population that reported illicit (injection or noninjection) drug use (15%) and notably higher than adults across all categories of race, ethnicity, and education (range: 9%–22%) (41). Moreover, the percentage of participants in the NHBS 2010 heterosexual cycle who reported use of crack cocaine in the 12 months before the interview (15%) was substantially higher than the percentage reported for the general U.S. population (<1%) (23). Use of crack cocaine has been associated with HIV infection among heterosexuals in the United States (7,10,42). These results highlight opportunities for drug use prevention efforts among low-income urban populations. Strategies with demonstrated efficacy include screening, brief intervention, referral, and treatment (SBIRT) in general health-care settings (39).

Sexually Transmitted Disease Diagnoses

STDs are more common among low-income populations, including black and Hispanic/Latino heterosexuals (43,44), and might increase the likelihood of both transmission and acquisition of HIV (45–48). The percentage of NHBS participants reporting a recent STD diagnosis was higher than the percentage observed for men and women in the general U.S. household population with characteristics similar to the 2010 NHBS heterosexual cycle participants (e.g., low education or income, black race, or residence in a metropolitan central city) (23). Monitoring STD diagnoses among heterosexuals at increased risk for HIV might help in the development of HIV prevention planning through identification of subgroups that might benefit most from focused prevention efforts.

Use of Prevention Services and Programs

In 2010, the National HIV/AIDS Strategy for the United States (2) identified three primary goals to address HIV/AIDS in the United States (1): reduce the number of persons who become infected with HIV (2), increase access to care and optimize health outcomes for person living with HIV,

and (3) reduce HIV-related health disparities. To accomplish these goals, a coordinated national response of HIV programs among federal, state, territorial, tribal, and local governments and agencies is required, as is the development of improved mechanisms to monitor and report on each goal's progress. Guided by the national strategy and evidence-based findings, CDC has adopted a high-impact HIV prevention approach toward reducing the number of new HIV infections in the United States (49). For persons at high risk for HIV infection, prevention interventions with evidence of effectiveness include such strategies as HIV testing, condom distribution, and selected behavioral interventions.

HIV Testing

Although HIV testing is considered the cornerstone of HIV prevention efforts (50), an estimated 18% of persons infected with HIV in the United States are unaware of their HIV status (51) and contribute disproportionately to the number of new infections (52). HIV-infected persons must know they are infected so that they can seek and receive treatment and prevention services, which are designed to improve health and reduce the likelihood that they will transmit HIV to others. In 2006, CDC revised the recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. The CDC HIV testing recommendations include 1) routine HIV testing in health-care settings with a prevalence of $\geq 0.1\%$ for undiagnosed infections, 2) at least annual testing for persons at high risk for HIV infection, and 3) routine testing for pregnant women (53). Persons likely to be at high risk include persons seeking treatment for an STD; persons who exchange sex for money or drugs; IDUs; MSM; sex partners of IDUs, MSM, and HIV-infected persons; and persons who have had a new sex partner since their last HIV test (53). USPSTF recently released recommendations that are consistent with the 2006 CDC HIV testing recommendations (54). These recommendations were written with the goal of increasing HIV status awareness, detecting HIV infection earlier, and linking persons with previously unrecognized HIV infection to medical care and prevention services (54,55).

The percentage of participants ever tested and tested in the 12 months before the interview was higher than has been reported from samples of the general U.S. population (56); however, they are comparable to those reported for men and women in the general population with characteristics similar to those in the sample in this report (e.g., low education or income, black race or Hispanic/Latino ethnicity, and residence in a metropolitan central city) (57).

Nevertheless, the data in this report suggest that increasing the percentage of heterosexuals at increased risk for HIV infection who are tested at least once might contribute to HIV

prevention efforts in this group. In 2010, HIV was a leading cause of death for reproductive-age black and Hispanic/Latino women in the United States (58). However, nearly one third of Hispanic/Latino female participants and nearly one fifth of black female participants had never been tested for HIV. In addition, although HIV testing is recommended for persons who are seeking treatment for or have a diagnosis of another STD (53), less than one half of participants who reported that they received an STD diagnosis in the 12 months before the interview had received an HIV test in that time. Routine HIV testing, as recommended by CDC and USPSTF, can be used to identify persons infected with HIV who have yet to receive the diagnosis and link them with primary and secondary prevention services (59).

Hepatitis B Vaccination

In the United States, the most common source of hepatitis B infection is sexual contact, and heterosexual contact accounts for more than one third (39%) of infections among adults (60). Hepatitis B vaccination is recommended for all unvaccinated persons at increased risk for infection, including sexually active heterosexual males and females with more than one partner and persons seeking STD evaluation or treatment (60). However, less than half of participants with hepatitis B risk factors (e.g., an STD diagnosis or multiple sex partners) reported having ever been vaccinated for hepatitis B. A strategy that might facilitate hepatitis B vaccination includes informing all adult patients of the benefits of hepatitis B vaccination during visits with health-care professionals (60).

Behavioral Interventions

Behavioral interventions can substantially reduce sexual risk behaviors and therefore the likelihood of acquiring HIV (61). Interventions found to be most effective in changing behavior are those that include skill training and negotiation practice (61). Individual-level and group-level structural and behavioral interventions with demonstrated effectiveness have been a focus of CDC prevention efforts (62). Such interventions have been shown to reduce HIV-associated behaviors among black and Hispanic/Latino populations (63–65). However, the percentage of participants in the 2010 heterosexual cycle who reported participating in such an intervention was very low.

CDC's high-impact prevention strategy prioritizes interventions that are most cost-effective in reducing new HIV infections, can be implemented on a large scale, and reach large numbers of the groups most affected by HIV. Condom distribution and HIV testing have been demonstrated to be cost-effective (66–68). HIV behavioral surveillance among heterosexuals at increased risk for HIV infection can help in the development of prevention planning by helping state and

local health departments and federal agencies identify groups that might benefit from more resource-intensive efforts, such as individual-level or group-level behavioral interventions. As HIV prevention activities for heterosexuals at increased risk continue to be developed and implemented, NHBS will provide updated data on the delivery of these services and programs to the populations who most need them.

Limitations

The findings in this report are subject to at least three limitations. First, the data in this report were obtained from heterosexuals at increased risk for HIV infection (i.e., low SES residents of select MSAs with high AIDS prevalence), and the data were not weighted to account for variations in recruitment pattern or network size or the likelihood of being selected to participate in the survey. Therefore, the results might not be generalizable to other heterosexuals outside of or within the participating MSAs. Second, data on risk and protective behaviors and HIV status were obtained through participant self-report. Social desirability bias might have led to overreporting of socially valued behaviors, such as HIV testing, and underreporting of socially stigmatized behaviors or conditions, such as sex without a condom or an HIV diagnosis. In addition, recall error and lack of information might have affected participants' reports of whether certain behaviors and experiences occurred within the reporting period or at all. Finally, no statistical tests were conducted; differences between groups should be interpreted with caution.

Conclusion

The National HIV/AIDS Strategy for the United States delineates a coordinated national response to reduce infections and HIV-related health disparities among disproportionately affected groups. State and local health departments as well as federal agencies are expected to monitor progress toward the strategy's goals. A nationally united effort and strategy will help reduce the prevalence and sequelae of HIV in groups at risk for infection and help reduce the disproportionate effects of HIV among groups such as blacks, Hispanics/Latinos, and persons of low SES. NHBS data can be used to guide national and local planning efforts to maximize the impact of HIV prevention programs.

NHBS is a key component of the comprehensive CDC approach to reducing the spread of HIV infection in the United States and will continue to be the primary source of data for monitoring the behaviors of populations at high risk for HIV, including heterosexuals at increased risk for infection. Data

from NHBS can be used to monitor specific risk behaviors, HIV testing experiences, and use of HIV prevention activities; identify demographic and behavioral correlates of HIV risk-related behaviors; and develop future prevention activities to reduce HIV transmission.

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TABLE 1. Number* and percentage† of participants, by selected characteristics and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Male		Female		Total	
	No.	(%)	No.	(%)	No.	(%)
Age group (yrs)						
18–19	377	(9)	452	(9)	829	(9)
20–24	732	(17)	916	(18)	1,648	(18)
25–29	484	(11)	699	(14)	1,183	(13)
30–39	757	(18)	943	(19)	1,700	(18)
40–49	1,128	(26)	1,197	(24)	2,325	(25)
50–60	845	(20)	748	(15)	1,593	(17)
Race/Ethnicity						
American Indian/Alaska Native	24	(1)	32	(1)	56	(1)
Asian/Native Hawaiian/Other Pacific Islander	44	(1)	64	(1)	108	(1)
Black	3,105	(72)	3,530	(71)	6,635	(72)
Hispanic/Latino [§]	887	(21)	1,034	(21)	1,921	(21)
White	134	(3)	132	(3)	266	(3)
Multiple races	125	(3)	157	(3)	282	(3)
Current marital status						
Married or cohabiting	687	(16)	846	(17)	1,533	(17)
Formerly married, not cohabiting	857	(20)	922	(19)	1,779	(19)
Never married, not cohabiting	2,779	(64)	3,187	(64)	5,966	(64)
Highest level of education completed						
Less than high school graduate	1,596	(37)	1,776	(36)	3,372	(36)
High school diploma or equivalent	2,125	(49)	2,338	(47)	4,463	(48)
Some college or more	602	(14)	840	(17)	1,442	(16)
Annual income						
\$0–\$4,999	1,568	(36)	1,783	(36)	3,351	(36)
\$5,000–\$9,999	1,067	(25)	1,434	(29)	2,501	(27)
\$10,000–\$19,999	1,024	(24)	1,169	(24)	2,193	(24)
≥\$20,000	611	(14)	511	(10)	1,122	(12)
Homeless[¶]						
Currently homeless	827	(19)	660	(13)	1,487	(16)
Homeless in the past 12 months, but not currently	685	(16)	718	(14)	1,403	(15)
Not homeless in the past 12 months	2,809	(65)	3,576	(72)	6,385	(69)
Health insurance						
None	2,489	(58)	1,776	(36)	4,265	(46)
Private only ^{**}	294	(7)	353	(7)	647	(7)
Public only ^{††}	1,465	(34)	2,699	(54)	4,164	(45)
Other	56	(1)	120	(2)	176	(2)
Visited health-care provider^{§§}						
Yes	2,663	(62)	3,724	(75)	6,387	(69)
No	1,657	(38)	1,230	(25)	2,887	(31)

See table footnotes on next page.

TABLE 1. (continued) Number* and percentage† of participants, by selected characteristics and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Male		Female		Total	
	No.	(%)	No.	(%)	No.	(%)
Region¶¶						
Northeast	889	(21)	904	(18)	1,793	(19)
South	1,359	(31)	1,590	(32)	2,949	(32)
Midwest	760	(18)	800	(16)	1,560	(17)
West	1,147	(27)	1,354	(27)	2,501	(27)
Territories	168	(4)	307	(6)	475	(5)
Metropolitan statistical area						
Atlanta, Georgia	112	(3)	139	(3)	251	(3)
Baltimore, Maryland	144	(3)	167	(3)	311	(3)
Boston, Massachusetts	77	(2)	133	(3)	210	(2)
Chicago, Illinois	275	(6)	178	(4)	453	(5)
Dallas, Texas	199	(5)	269	(5)	468	(5)
Denver, Colorado	210	(5)	309	(6)	519	(6)
Detroit, Michigan	227	(5)	324	(7)	551	(6)
Houston, Texas	242	(6)	274	(6)	516	(6)
Los Angeles, California	272	(6)	251	(5)	523	(6)
Miami, Florida	242	(6)	215	(4)	457	(5)
Nassau-Suffolk, New York	92	(2)	39	(1)	131	(1)
New Orleans, Louisiana	209	(5)	286	(6)	495	(5)
New York City, New York	244	(6)	191	(4)	435	(5)
Newark, New Jersey	266	(6)	247	(5)	513	(6)
Philadelphia, Pennsylvania	210	(5)	294	(6)	504	(5)
San Diego, California	250	(6)	315	(6)	565	(6)
San Francisco, California	174	(4)	246	(5)	420	(5)
San Juan, Puerto Rico	168	(4)	307	(6)	475	(5)
Seattle, Washington	241	(6)	233	(5)	474	(5)
St. Louis, Missouri	258	(6)	298	(6)	556	(6)
Washington, DC	211	(5)	240	(5)	451	(5)
Total	4,323	(47)	4,955	(53)	9,278	(100)

Abbreviation: HIV = human immunodeficiency virus.

* Numbers might not add to total because of missing data.

† Percentages might not add to 100 because of rounding. All percentages are column percentages.

‡ Persons of Hispanic/Latino ethnicity might be of any race.

¶ Living on the street, in a shelter, or in a single room occupancy hotel; temporarily staying with friends or family; or living in a car.

** Coverage through private insurance policies or employer, TRICARE, CHAMPUS, or membership in a health maintenance organization.

†† Coverage through Medicare, Medicaid, plans funded by state or local governments, or the Veterans Administration.

§§ Visited a physician, nurse, or other health-care provider in the past 12 months.

¶¶ *Northeast:* Boston, Massachusetts; Nassau-Suffolk, New York; New York City, New York; Newark, New Jersey; Philadelphia, Pennsylvania. *South:* Atlanta, Georgia; Baltimore, Maryland; Dallas, Texas; Houston, Texas; Miami, Florida; New Orleans, Louisiana; Washington, DC. *Midwest:* Chicago, Illinois; Detroit, Michigan; St. Louis, Missouri. *West:* Denver, Colorado; Los Angeles, California; San Diego, California; San Francisco, California; Seattle, Washington. *Territories:* San Juan, Puerto Rico.

TABLE 2. Number* and percentage† of male participants who reported engaging in specified sexual behaviors with one or more female partners in the 12 months before the interview, by selected characteristics and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Male participants with female sex partners								Total
	Vaginal sex		Vaginal sex without a condom [§]		Anal sex		Anal sex without a condom [§]		
	No.	(%) [¶]	No.	(%) [¶]	No.	(%) [¶]	No.	(%) [¶]	
Age group (yrs)									
18–19	376	(100)	304	(81)	126	(33)	83	(22)	377
20–24	731	(100)	655	(89)	239	(33)	171	(23)	732
25–29	483	(100)	445	(92)	195	(40)	153	(32)	484
30–39	753	(99)	672	(89)	313	(41)	260	(34)	757
40–49	1,126	(100)	993	(88)	478	(42)	380	(34)	1,128
50–60	839	(99)	724	(86)	306	(36)	257	(30)	845
Race/Ethnicity									
American Indian/Alaska Native	24	(100)	20	(83)	12	(50)	8	(33)	24
Asian/Native Hawaiian/Other Pacific Islander	44	(100)	37	(84)	8	(18)	7	(16)	44
Black	3,093	(100)	2,727	(88)	1,116	(36)	867	(28)	3,105
Hispanic/Latino**	885	(100)	779	(88)	417	(47)	344	(39)	887
White	133	(99)	117	(87)	56	(42)	42	(31)	134
Multiple races	125	(100)	109	(87)	45	(36)	34	(27)	125
Current marital status									
Married or cohabiting	686	(100)	626	(91)	268	(39)	224	(33)	687
Formerly married, not cohabiting	853	(100)	762	(89)	359	(42)	292	(34)	857
Never married, not cohabiting	2,769	(100)	2,405	(87)	1,030	(37)	788	(28)	2,779
Highest level of education completed									
Less than high school graduate	1,590	(100)	1,407	(88)	657	(41)	516	(32)	1,596
High school diploma or equivalent	2,119	(100)	1,850	(87)	776	(37)	612	(29)	2,125
Some college or more	599	(100)	536	(89)	224	(37)	176	(29)	602
Annual income									
\$0–\$4,999	1,560	(99)	1,363	(87)	622	(40)	506	(32)	1,568
\$5,000–\$9,999	1,062	(100)	949	(89)	425	(40)	331	(31)	1,067
\$10,000–\$19,999	1,022	(100)	903	(88)	379	(37)	303	(30)	1,024
≥\$20,000	611	(100)	534	(87)	216	(35)	155	(25)	611
Region^{††}									
Northeast	886	(100)	750	(84)	329	(37)	242	(27)	889
South	1,353	(100)	1,201	(88)	497	(37)	406	(30)	1,359
Midwest	759	(100)	672	(88)	295	(39)	221	(29)	760
West	1,143	(100)	1,012	(88)	410	(36)	324	(28)	1,147
Territories	167	(99)	158	(94)	126	(75)	111	(66)	168
Metropolitan statistical area									
Atlanta, Georgia	112	(100)	97	(87)	33	(29)	24	(21)	112
Baltimore, Maryland	143	(99)	135	(94)	73	(51)	60	(42)	144

See table footnotes on next page.

TABLE 2. (continued) Number* and percentage† of male participants who reported engaging in specified sexual behaviors with one or more female partners in the 12 months before the interview, by selected characteristics and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Male participants with female sex partners								Total
	Vaginal sex		Vaginal sex without a condom [§]		Anal sex		Anal sex without a condom [§]		
	No.	(%) [¶]	No.	(%) [¶]	No.	(%) [¶]	No.	(%) [¶]	
Boston, Massachusetts	76	(99)	65	(84)	31	(40)	25	(32)	77
Chicago, Illinois	275	(100)	252	(92)	137	(50)	115	(42)	275
Dallas, Texas	199	(100)	182	(91)	69	(35)	55	(28)	199
Denver, Colorado	209	(100)	193	(92)	66	(31)	57	(27)	210
Detroit, Michigan	226	(100)	191	(84)	91	(40)	60	(26)	227
Houston, Texas	242	(100)	216	(89)	80	(33)	61	(25)	242
Los Angeles, California	270	(99)	250	(92)	118	(43)	100	(37)	272
Miami, Florida	240	(99)	211	(87)	94	(39)	83	(34)	242
Nassau-Suffolk, New York	92	(100)	79	(86)	35	(38)	22	(24)	92
New Orleans, Louisiana	207	(99)	182	(87)	69	(33)	60	(29)	209
New York City, New York	244	(100)	205	(84)	110	(45)	80	(33)	244
Newark, New Jersey	265	(100)	228	(86)	107	(40)	79	(30)	266
Philadelphia, Pennsylvania	209	(100)	173	(82)	46	(22)	36	(17)	210
San Diego, California	250	(100)	221	(88)	95	(38)	79	(32)	250
San Francisco, California	173	(99)	138	(79)	59	(34)	37	(21)	174
San Juan, Puerto Rico	167	(99)	158	(94)	126	(75)	111	(66)	168
Seattle, Washington	241	(100)	210	(87)	72	(30)	51	(21)	241
St. Louis, Missouri	258	(100)	229	(89)	67	(26)	46	(18)	258
Washington, DC	210	(100)	178	(84)	79	(37)	63	(30)	211
Total	4,308	(100)	3,793	(88)	1,657	(38)	1,304	(30)	4,323

Abbreviation: HIV = human immunodeficiency virus.

* Numbers might not add to total because of missing data.

† Percentages might not add to 100 because of rounding.

§ Neither participant nor his partner used a condom.

¶ Percentages are of all participants in row category.

** Persons of Hispanic/Latino ethnicity might be of any race.

†† *Northeast:* Boston, Massachusetts; Nassau-Suffolk, New York; New York City, New York; Newark, New Jersey; Philadelphia, Pennsylvania. *South:* Atlanta, Georgia; Baltimore, Maryland; Dallas, Texas; Houston, Texas; Miami, Florida; New Orleans, Louisiana; Washington, DC. *Midwest:* Chicago, Illinois; Detroit, Michigan; St. Louis, Missouri. *West:* Denver, Colorado; Los Angeles, California; San Diego, California; San Francisco, California; Seattle, Washington. *Territories:* San Juan, Puerto Rico.

TABLE 3. Number* and percentage† of female participants who reported engaging in specified sexual behaviors with one or more male partners in the 12 months before the interview, by selected characteristics and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Female participants with male sex partners								Total
	Vaginal sex		Vaginal sex without a condom [§]		Anal sex		Anal sex without a condom [§]		
	No.	(%) [¶]	No.	(%) [¶]	No.	(%) [¶]	No.	(%) [¶]	
Age group (yrs)									
18–19	450	(100)	389	(86)	116	(26)	89	(20)	452
20–24	915	(100)	816	(89)	304	(33)	252	(28)	916
25–29	698	(100)	641	(92)	240	(34)	208	(30)	699
30–39	941	(100)	874	(93)	349	(37)	294	(31)	943
40–49	1,196	(100)	1,086	(91)	447	(37)	376	(31)	1,197
50–60	741	(99)	661	(88)	231	(31)	201	(27)	748
Race/Ethnicity									
American Indian/Alaska Native	32	(100)	30	(94)	—**	—	—	—	32
Asian/Native Hawaiian/Other Pacific Islander	64	(100)	55	(86)	28	(44)	24	(38)	64
Black	3,518	(100)	3,196	(91)	1,152	(33)	968	(27)	3,530
Hispanic/Latino ^{††}	1,033	(100)	927	(90)	397	(38)	334	(32)	1,034
White	132	(100)	117	(89)	53	(40)	47	(36)	132
Multiple races	156	(99)	137	(87)	49	(31)	40	(25)	157
Current marital status									
Married or cohabiting	846	(100)	784	(93)	284	(34)	242	(29)	846
Formerly married, not cohabiting	919	(100)	840	(91)	347	(38)	302	(33)	922
Never married, not cohabiting	3,176	(100)	2,843	(89)	1,056	(33)	876	(27)	3,187
Highest level of education completed									
Less than high school graduate	1,770	(100)	1,604	(90)	631	(36)	542	(31)	1,776
High school diploma or equivalent	2,332	(100)	2,102	(90)	773	(33)	647	(28)	2,338
Some college or more	838	(100)	760	(90)	282	(34)	230	(27)	840
Annual income									
\$0–\$4,999	1,772	(99)	1,605	(90)	684	(38)	582	(33)	1,783
\$5,000–\$9,999	1,433	(100)	1,294	(90)	477	(33)	399	(28)	1,434
\$10,000–\$19,999	1,169	(100)	1,057	(90)	374	(32)	316	(27)	1,169
≥\$20,000	509	(100)	465	(91)	135	(26)	110	(22)	511
Region^{§§}									
Northeast	897	(99)	796	(88)	318	(35)	265	(29)	904
South	1,585	(100)	1,450	(91)	506	(32)	437	(27)	1,590
Midwest	799	(100)	717	(90)	276	(35)	224	(28)	800
West	1,354	(100)	1,226	(91)	392	(29)	328	(24)	1,354
Territories	306	(100)	278	(91)	195	(64)	166	(54)	307
Metropolitan statistical area									
Atlanta, Georgia	139	(100)	130	(94)	52	(37)	43	(31)	139
Baltimore, Maryland	167	(100)	160	(96)	74	(44)	64	(38)	167

See table footnotes on next page.

TABLE 3. (continued) Number* and percentage† of female participants who reported engaging in specified sexual behaviors with one or more male partners in the 12 months before the interview, by selected characteristics and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Female participants with male sex partners								Total
	Vaginal sex		Vaginal sex without a condom [§]		Anal sex		Anal sex without a condom [§]		
	No.	(%) [¶]	No.	(%) [¶]	No.	(%) [¶]	No.	(%) [¶]	
Boston, Massachusetts	132	(99)	117	(88)	52	(39)	44	(33)	133
Chicago, Illinois	178	(100)	166	(93)	80	(45)	73	(41)	178
Dallas, Texas	269	(100)	250	(93)	87	(32)	79	(29)	269
Denver, Colorado	309	(100)	285	(92)	65	(21)	57	(18)	309
Detroit, Michigan	323	(100)	276	(85)	119	(37)	86	(27)	324
Houston, Texas	274	(100)	253	(92)	76	(28)	68	(25)	274
Los Angeles, California	251	(100)	221	(88)	84	(33)	68	(27)	251
Miami, Florida	215	(100)	191	(89)	79	(37)	69	(32)	215
Nassau-Suffolk, New York	39	(100)	34	(87)	6	(15)	—	—	39
New Orleans, Louisiana	282	(99)	247	(86)	57	(20)	51	(18)	286
New York City, New York	191	(100)	179	(94)	102	(53)	89	(47)	191
Newark, New Jersey	244	(99)	212	(86)	81	(33)	66	(27)	247
Philadelphia, Pennsylvania	291	(99)	254	(86)	77	(26)	62	(21)	294
San Diego, California	315	(100)	285	(90)	94	(30)	83	(26)	315
San Francisco, California	246	(100)	222	(90)	82	(33)	64	(26)	246
San Juan, Puerto Rico	306	(100)	278	(91)	195	(64)	166	(54)	307
Seattle, Washington	233	(100)	213	(91)	67	(29)	56	(24)	233
St. Louis, Missouri	298	(100)	275	(92)	77	(26)	65	(22)	298
Washington, DC	239	(100)	219	(91)	81	(34)	63	(26)	240
Total	4,941	(100)	4,467	(90)	1,687	(34)	1,420	(29)	4,955

Abbreviation: HIV = human immunodeficiency virus.

* Numbers might not add to total because of missing data.

† Percentages might not add to 100 because of rounding.

§ Neither participant nor her partner used a condom.

¶ Percentages are of all participants in row category.

** Suppressed because the number or numerator was five or fewer persons.

†† Persons of Hispanic/Latino ethnicity might be of any race.

§§ *Northeast:* Boston, Massachusetts; Nassau-Suffolk, New York; New York City, New York; Newark, New Jersey; Philadelphia, Pennsylvania. *South:* Atlanta, Georgia; Baltimore, Maryland; Dallas, Texas; Houston, Texas; Miami, Florida; New Orleans, Louisiana; Washington, DC. *Midwest:* Chicago, Illinois; Detroit, Michigan; St. Louis, Missouri. *West:* Denver, Colorado; Los Angeles, California; San Diego, California; San Francisco, California; Seattle, Washington. *Territories:* San Juan, Puerto Rico.

TABLE 4. Number* and percentage† of male participants who reported engaging in specified sexual behaviors with one or more female partners in the 12 months before the interview, by partner type,§ selected characteristics, and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Female main partner				Female casual partner				Total
	Vaginal or anal sex		Vaginal or anal sex without a condom¶		Vaginal or anal sex		Vaginal or anal sex without a condom¶		
	No.	(%)**	No.	(%)**	No.	(%)**	No.	(%)**	
Age group (yrs)									
18–19	304	(81)	242	(64)	296	(79)	190	(50)	377
20–24	600	(82)	541	(74)	544	(74)	356	(49)	732
25–29	384	(79)	353	(73)	366	(76)	259	(54)	484
30–39	599	(79)	538	(71)	520	(69)	397	(52)	757
40–49	820	(73)	718	(64)	746	(66)	600	(53)	1,128
50–60	545	(64)	477	(56)	591	(70)	477	(56)	845
Race/Ethnicity									
American Indian/Alaska Native	16	(67)	15	(63)	16	(67)	11	(46)	24
Asian/Native Hawaiian/Other Pacific Islander	39	(89)	30	(68)	26	(59)	17	(39)	44
Black	2,378	(77)	2,092	(67)	2,209	(71)	1,616	(52)	3,105
Hispanic/Latino††	651	(73)	582	(66)	612	(69)	479	(54)	887
White	74	(55)	66	(49)	106	(79)	86	(64)	134
Multiple races	92	(74)	80	(64)	91	(73)	67	(54)	125
Current marital status									
Married or cohabiting	656	(95)	595	(87)	321	(47)	241	(35)	687
Formerly married, not cohabiting	579	(68)	520	(61)	625	(73)	509	(59)	857
Never married, not cohabiting	2,017	(73)	1,754	(63)	2,117	(76)	1,529	(55)	2,779
Highest level of education completed									
Less than high school graduate	1,175	(74)	1,048	(66)	1,118	(70)	874	(55)	1,596
High school diploma or equivalent	1,640	(77)	1,427	(67)	1,514	(71)	1,074	(51)	2,125
Some college or more	437	(73)	394	(65)	431	(72)	331	(55)	602
Annual income									
\$0–\$4,999	1,060	(68)	916	(58)	1,177	(75)	903	(58)	1,568
\$5,000–\$9,999	833	(78)	742	(70)	743	(70)	565	(53)	1,067
\$10,000–\$19,999	808	(79)	727	(71)	711	(69)	518	(51)	1,024
≥\$20,000	509	(83)	451	(74)	395	(65)	265	(43)	611
Region§§									
Northeast	662	(74)	569	(64)	646	(73)	449	(51)	889
South	1,004	(74)	906	(67)	935	(69)	701	(52)	1,359
Midwest	602	(79)	507	(67)	544	(72)	410	(54)	760
West	870	(76)	791	(69)	784	(68)	579	(50)	1,147
Territories	114	(68)	96	(57)	154	(92)	140	(83)	168
Metropolitan statistical area									
Atlanta, Georgia	88	(79)	76	(68)	84	(75)	60	(54)	112
Baltimore, Maryland	114	(79)	110	(76)	103	(72)	76	(53)	144

See table footnotes on next page.

TABLE 4. (continued) Number* and percentage† of male participants who reported engaging in specified sexual behaviors with one or more female partners in the 12 months before the interview, by partner type,[§] selected characteristics, and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Female main partner				Female casual partner				Total
	Vaginal or anal sex		Vaginal or anal sex without a condom [¶]		Vaginal or anal sex		Vaginal or anal sex without a condom [¶]		
	No.	(%)**	No.	(%)**	No.	(%)**	No.	(%)**	
Boston, Massachusetts	61	(79)	53	(69)	56	(73)	34	(44)	77
Chicago, Illinois	202	(73)	178	(65)	218	(79)	178	(65)	275
Dallas, Texas	163	(82)	151	(76)	131	(66)	101	(51)	199
Denver, Colorado	162	(77)	152	(72)	130	(62)	107	(51)	210
Detroit, Michigan	176	(78)	129	(57)	172	(76)	133	(59)	227
Houston, Texas	186	(77)	168	(69)	177	(73)	141	(58)	242
Los Angeles, California	195	(72)	186	(68)	213	(78)	176	(65)	272
Miami, Florida	167	(69)	150	(62)	156	(64)	113	(47)	242
Nassau-Suffolk, New York	65	(71)	59	(64)	71	(77)	52	(57)	92
New Orleans, Louisiana	135	(65)	119	(57)	144	(69)	115	(55)	209
New York City, New York	191	(78)	169	(69)	189	(77)	118	(48)	244
Newark, New Jersey	174	(65)	147	(55)	201	(76)	149	(56)	266
Philadelphia, Pennsylvania	171	(81)	141	(67)	129	(61)	96	(46)	210
San Diego, California	199	(80)	179	(72)	138	(55)	104	(42)	250
San Francisco, California	137	(79)	113	(65)	125	(72)	73	(42)	174
San Juan, Puerto Rico	114	(68)	96	(57)	154	(92)	140	(83)	168
Seattle, Washington	177	(73)	161	(67)	178	(74)	119	(49)	241
St. Louis, Missouri	224	(87)	200	(78)	154	(60)	99	(38)	258
Washington, DC	151	(72)	132	(63)	140	(66)	95	(45)	211
Total	3,252	(75)	2,869	(66)	3,063	(71)	2,279	(53)	4,323

Abbreviation: HIV = human immunodeficiency virus.

* Numbers might not add to total because of missing data.

† Percentages might not add to 100 because of rounding.

§ A main partner was someone to whom the participant felt most committed (e.g., girlfriend, wife, significant other, or life partner). A casual partner was someone to whom the participant did not feel committed, whom the participant did not know very well, or with whom the participant had sex in exchange for something such as money or drugs.

¶ Neither the participant nor his partner used a condom.

** Percentages are of all participants in row category.

†† Persons of Hispanic/Latino ethnicity might be of any race.

§§ *Northeast:* Boston, Massachusetts; Nassau-Suffolk, New York; New York City, New York; Newark, New Jersey; Philadelphia, Pennsylvania. *South:* Atlanta, Georgia; Baltimore, Maryland; Dallas, Texas; Houston, Texas; Miami, Florida; New Orleans, Louisiana; Washington, DC. *Midwest:* Chicago, Illinois; Detroit, Michigan; St. Louis, Missouri. *West:* Denver, Colorado; Los Angeles, California; San Diego, California; San Francisco, California; Seattle, Washington. *Territories:* San Juan, Puerto Rico.

TABLE 5. Number* and percentage[†] of female participants who reported engaging in specified sexual behaviors with one or more male partners in the 12 months before the interview, by partner type,[§] selected characteristics, and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Male main partner				Male casual partner				Total
	Vaginal or anal sex		Vaginal or anal sex without a condom [¶]		Vaginal or anal sex		Vaginal or anal sex without a condom [¶]		
	No.	(%)**	No.	(%)**	No.	(%)**	No.	(%)**	
Age group (yrs)									
18–19	418	(92)	348	(77)	244	(54)	167	(37)	452
20–24	800	(87)	712	(78)	533	(58)	366	(40)	916
25–29	612	(88)	561	(80)	413	(59)	288	(41)	699
30–39	797	(85)	729	(77)	540	(57)	428	(45)	943
40–49	967	(81)	868	(73)	679	(57)	563	(47)	1,197
50–60	560	(75)	492	(66)	428	(57)	349	(47)	748
Race/Ethnicity									
American Indian/Alaska Native	29	(91)	27	(84)	13	(41)	10	(31)	32
Asian/Native Hawaiian/Other Pacific Islander	57	(89)	50	(78)	30	(47)	21	(33)	64
Black	2,960	(84)	2,665	(75)	2,072	(59)	1,561	(44)	3,530
Hispanic/Latino ^{††}	870	(84)	755	(73)	560	(54)	449	(43)	1,034
White	109	(83)	95	(72)	67	(51)	54	(41)	132
Multiple races	125	(80)	115	(73)	92	(59)	64	(41)	157
Current marital status									
Married or cohabiting	805	(95)	741	(88)	327	(39)	262	(31)	846
Formerly married, not cohabiting	720	(78)	651	(71)	577	(63)	471	(51)	922
Never married, not cohabiting	2,629	(82)	2,318	(73)	1,933	(61)	1,428	(45)	3,187
Highest level of education completed									
Less than high school graduate	1,454	(82)	1,308	(74)	1,024	(58)	800	(45)	1,776
High school diploma or equivalent	1,983	(85)	1,759	(75)	1,314	(56)	1,005	(43)	2,338
Some college or more	717	(85)	643	(77)	498	(59)	355	(42)	840
Annual income									
\$0–\$4,999	1,436	(81)	1,267	(71)	1,126	(63)	890	(50)	1,783
\$5,000–\$9,999	1,194	(83)	1,072	(75)	845	(59)	640	(45)	1,434
\$10,000–\$19,999	1,021	(87)	922	(79)	601	(51)	448	(38)	1,169
≥\$20,000	451	(88)	412	(81)	231	(45)	157	(31)	511
Region^{§§}									
Northeast	754	(83)	666	(74)	538	(60)	389	(43)	904
South	1,363	(86)	1,241	(78)	842	(53)	628	(39)	1,590
Midwest	641	(80)	558	(70)	516	(65)	408	(51)	800
West	1,161	(86)	1,061	(78)	709	(52)	528	(39)	1,354
Territories	235	(77)	184	(60)	232	(76)	208	(68)	307
Metropolitan statistical area									
Atlanta, Georgia	119	(86)	105	(76)	84	(60)	69	(50)	139
Baltimore, Maryland	135	(81)	129	(77)	110	(66)	84	(50)	167
Boston, Massachusetts	103	(77)	95	(71)	93	(70)	62	(47)	133

See table footnotes on next page.

TABLE 5. (continued) Number* and percentage† of female participants who reported engaging in specified sexual behaviors with one or more male partners in the 12 months before the interview, by partner type,[§] selected characteristics, and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Male main partner				Male casual partner				Total
	Vaginal or anal sex		Vaginal or anal sex without a condom [¶]		Vaginal or anal sex		Vaginal or anal sex without a condom [¶]		
	No.	(%)**	No.	(%)**	No.	(%)**	No.	(%)**	
Chicago, Illinois	141	(79)	129	(72)	129	(72)	101	(57)	178
Dallas, Texas	247	(92)	227	(84)	137	(51)	95	(35)	269
Denver, Colorado	262	(85)	248	(80)	155	(50)	120	(39)	309
Detroit, Michigan	242	(75)	189	(58)	231	(71)	193	(60)	324
Houston, Texas	226	(82)	209	(76)	177	(65)	138	(50)	274
Los Angeles, California	212	(84)	184	(73)	149	(59)	121	(48)	251
Miami, Florida	176	(82)	159	(74)	119	(55)	79	(37)	215
Nassau-Suffolk, New York	37	(95)	32	(82)	14	(36)	10	(26)	39
New Orleans, Louisiana	251	(88)	221	(77)	92	(32)	72	(25)	286
New York City, New York	159	(83)	148	(77)	139	(73)	100	(52)	191
Newark, New Jersey	202	(82)	168	(68)	161	(65)	125	(51)	247
Philadelphia, Pennsylvania	253	(86)	223	(76)	131	(45)	92	(31)	294
San Diego, California	288	(91)	261	(83)	109	(35)	83	(26)	315
San Francisco, California	205	(83)	189	(77)	154	(63)	111	(45)	246
San Juan, Puerto Rico	235	(77)	184	(60)	232	(76)	208	(68)	307
Seattle, Washington	194	(83)	179	(77)	142	(61)	93	(40)	233
St. Louis, Missouri	258	(87)	240	(81)	156	(52)	114	(38)	298
Washington, DC	209	(87)	191	(80)	123	(51)	91	(38)	240
Total	4,154	(84)	3,710	(75)	2,837	(57)	2,161	(44)	4,955

Abbreviation: HIV = human immunodeficiency virus.

* Numbers might not add to total because of missing data.

† Percentages might not add to 100 because of rounding.

§ A main partner was someone to whom the participant felt most committed (e.g., boyfriend, husband, significant other, or life partner). A casual partner was someone to whom the participant did not feel committed, whom the participant did not know very well, or with whom the participant had sex in exchange for something such as money or drugs.

¶ Neither the participant nor her partner used a condom.

** Percentages are of all participants in row category.

†† Persons of Hispanic/Latino ethnicity might be of any race.

§§ *Northeast:* Boston, Massachusetts; Nassau-Suffolk, New York; New York City, New York; Newark, New Jersey; Philadelphia, Pennsylvania. *South:* Atlanta, Georgia; Baltimore, Maryland; Dallas, Texas; Houston, Texas; Miami, Florida; New Orleans, Louisiana; Washington, DC. *Midwest:* Chicago, Illinois; Detroit, Michigan; St. Louis, Missouri. *West:* Denver, Colorado; Los Angeles, California; San Diego, California; San Francisco, California; Seattle, Washington. *Territories:* San Juan, Puerto Rico.

TABLE 6. Number* and percentage† of participants who reported current, heavy, and binge drinking, by sex, selected characteristics, and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Current [§]			Heavy [¶]			Binge ^{**}			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
	No. (%) ^{††}	No. (%) ^{††}	No.	No. (%) ^{††}	No. (%) ^{††}	No.	No. (%) ^{††}	No. (%) ^{††}	No.	No.	No.	Total
Age group (yrs)												
18–19	253 (67)	250 (55)	503	45 (12)	65 (14)	110	135 (36)	128 (28)	263	377	452	829
20–24	575 (79)	614 (67)	1,189	114 (16)	193 (21)	307	315 (43)	370 (40)	685	732	916	1,648
25–29	412 (85)	491 (70)	903	128 (26)	155 (22)	283	260 (54)	284 (41)	544	484	699	1,183
30–39	592 (78)	633 (67)	1,225	197 (26)	238 (25)	435	395 (52)	377 (40)	772	757	943	1,700
40–49	828 (73)	790 (66)	1,618	335 (30)	384 (32)	719	550 (49)	542 (45)	1,092	1,128	1,197	2,325
50–60	613 (73)	491 (66)	1,104	249 (29)	214 (29)	463	399 (47)	301 (40)	700	845	748	1,593
Race/Ethnicity												
American Indian/Alaska Native	20 (83)	22 (69)	42	9 (38)	8 (25)	17	14 (58)	20 (63)	34	24	32	56
Asian/Native Hawaiian/ Other Pacific Islander	31 (70)	50 (78)	81	— ^{§§}	24 (38)	29	25 (57)	37 (58)	62	44	64	108
Black	2,355 (76)	2,371 (67)	4,726	745 (24)	885 (25)	1,630	1,391 (45)	1,392 (39)	2,783	3,105	3,530	6,635
Hispanic/Latino ^{¶¶}	654 (74)	640 (62)	1,294	231 (26)	260 (25)	491	480 (54)	441 (43)	921	887	1,034	1,921
White	99 (74)	68 (52)	167	37 (28)	26 (20)	63	71 (53)	43 (33)	114	134	132	266
Multiple races	110 (88)	114 (73)	244	40 (32)	45 (29)	85	70 (56)	66 (42)	136	125	157	282
Current marital status												
Married or cohabiting	496 (72)	500 (59)	996	173 (25)	189 (22)	362	322 (47)	299 (35)	621	687	846	1,533
Formerly married, not cohabiting	639 (75)	641 (70)	1,280	233 (27)	285 (31)	518	419 (49)	395 (43)	814	857	922	1,779
Never married, not cohabiting	2,138 (77)	2,128 (67)	4,266	662 (24)	775 (24)	1,437	1,313 (47)	1,308 (41)	2,621	2,779	3,187	5,966
Highest level of education completed												
Less than high school graduate	1,215 (76)	1,133 (64)	2,348	442 (28)	487 (27)	929	788 (49)	750 (42)	1,538	1,596	1,776	3,372
High school diploma or equivalent	1,623 (76)	1,545 (66)	3,168	484 (23)	558 (24)	1,042	986 (46)	912 (39)	1,898	2,125	2,338	4,463
Some college or more	435 (72)	591 (70)	1,026	142 (24)	204 (24)	346	280 (47)	340 (40)	620	602	840	1,442
Annual income												
\$0–\$4,999	1,167 (74)	1,172 (66)	2,339	421 (27)	520 (29)	941	749 (48)	758 (43)	1,507	1,568	1,783	3,351
\$5,000–\$9,999	801 (75)	949 (66)	1,750	245 (23)	334 (23)	579	497 (47)	587 (41)	1,084	1,067	1,434	2,501
\$10,000–\$19,999	786 (77)	788 (67)	1,574	256 (25)	288 (25)	544	482 (47)	452 (39)	934	1,024	1,169	2,193
≥\$20,000	482 (79)	330 (65)	812	136 (22)	99 (19)	235	304 (50)	189 (37)	493	611	511	1,122
Alcohol and drug treatment												
Never	1,931 (76)	2,400 (65)	4,331	544 (21)	802 (22)	1,346	1,144 (45)	1,400 (38)	2,544	2,533	3,674	6,207
>12 months before interview	897 (81)	622 (76)	1,519	361 (33)	333 (41)	694	618 (56)	433 (53)	1,051	1,110	822	1,932
≤12 months before interview	444 (65)	247 (54)	691	162 (24)	114 (25)	276	291 (43)	169 (37)	460	679	459	1,138
Region^{***}												
Northeast	657 (74)	564 (62)	1,221	206 (23)	221 (24)	427	422 (47)	361 (40)	783	889	904	1,793
South	1,043 (77)	1,036 (65)	2,079	347 (26)	369 (23)	716	628 (46)	583 (37)	1,211	1,359	1,590	2,949
Midwest	619 (81)	567 (71)	1,186	222 (29)	236 (30)	458	366 (48)	344 (43)	710	760	800	1,560
West	831 (72)	916 (68)	1,747	231 (20)	322 (24)	553	544 (47)	579 (43)	1,123	1,147	1,354	2,501
Territories	123 (73)	186 (61)	309	62 (37)	101 (33)	163	94 (56)	135 (44)	229	168	307	475
Metropolitan statistical area												
Atlanta, Georgia	95 (85)	90 (65)	185	27 (24)	35 (25)	62	54 (48)	55 (40)	109	112	139	251
Baltimore, Maryland	121 (84)	117 (70)	238	33 (23)	49 (29)	82	71 (49)	74 (44)	145	144	167	311
Boston, Massachusetts	60 (78)	101 (76)	161	13 (17)	42 (32)	55	32 (42)	65 (49)	97	77	133	210
Chicago, Illinois	224 (81)	136 (76)	360	88 (32)	74 (42)	162	147 (53)	95 (53)	242	275	178	453

See table footnotes on next page.

TABLE 6. (continued) Number* and percentage† of participants who reported current, heavy, and binge drinking, by sex, selected characteristics, and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Current [§]			Heavy [¶]			Binge ^{**}			Total		Total
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
	No. (%) ^{††}	No. (%) ^{††}	No.	No. (%) ^{††}	No. (%) ^{††}	No.	No. (%) ^{††}	No. (%) ^{††}	No.	No.	No.	
Dallas, Texas	151 (76)	156 (58)	307	45 (23)	60 (22)	105	85 (43)	94 (35)	179	199	269	468
Denver, Colorado	182 (87)	217 (70)	399	62 (30)	90 (29)	152	124 (59)	159 (51)	283	210	309	519
Detroit, Michigan	177 (78)	224 (69)	401	68 (30)	99 (31)	167	112 (49)	146 (45)	258	227	324	551
Houston, Texas	189 (78)	193 (70)	382	56 (23)	64 (23)	120	111 (46)	100 (36)	211	242	274	516
Los Angeles, California	170 (63)	181 (72)	351	54 (20)	60 (24)	114	119 (44)	105 (42)	224	272	251	523
Miami, Florida	171 (71)	135 (63)	306	56 (23)	59 (27)	115	92 (38)	68 (32)	160	242	215	457
Nassau-Suffolk, New York	72 (78)	22 (56)	94	27 (29)	11 (28)	38	60 (65)	19 (49)	79	92	39	131
New Orleans, Louisiana	143 (68)	171 (60)	314	57 (27)	41 (14)	98	100 (48)	83 (29)	183	209	286	495
New York City, New York	197 (81)	136 (71)	333	41 (17)	50 (26)	91	109 (45)	86 (45)	195	244	191	435
Newark, New Jersey	186 (70)	134 (54)	320	75 (28)	63 (26)	138	125 (47)	96 (39)	221	266	247	513
Philadelphia, Pennsylvania	142 (68)	171 (58)	313	50 (24)	55 (19)	105	96 (46)	95 (32)	191	210	294	504
San Diego, California	168 (67)	168 (53)	336	37 (15)	43 (14)	80	103 (41)	98 (31)	201	250	315	565
San Francisco, California	129 (74)	183 (74)	312	36 (21)	76 (31)	112	83 (48)	120 (49)	203	174	246	420
San Juan, Puerto Rico	123 (73)	186 (61)	309	62 (37)	101 (33)	163	94 (56)	135 (44)	229	168	307	475
Seattle, Washington	182 (76)	167 (72)	349	42 (17)	53 (23)	95	115 (48)	97 (42)	212	241	233	474
St. Louis, Missouri	218 (84)	207 (69)	425	66 (26)	63 (21)	129	107 (41)	103 (35)	210	258	298	556
Washington, DC	173 (82)	174 (73)	347	73 (35)	61 (25)	134	115 (55)	109 (45)	224	211	240	451
Total	3,273 (76)	3,269 (66)	6,542	1,068 (25)	1,249 (25)	2,317	2,054 (48)	2,002 (40)	4,056	4,323	4,955	9,278

Abbreviation: HIV = human immunodeficiency virus.

* Numbers might not add to total because of missing data.

† Percentages might not add to 100 because of rounding.

§ Participants who drank at least one alcoholic beverage in the 30 days before the interview. Alcoholic beverage was defined as a 12-oz beer, 5-oz glass of wine, or 1.5 shot of liquor.

¶ Participants who drank on average more than two (men) or more than one (women) alcoholic beverages per day in the 30 days before the interview.

** Participants who drank more than five (men) or four (women) alcoholic beverages at one sitting in the 30 days before the interview.

†† Within each sex, percentages are of all participants in row category.

§§ Suppressed because the number or numerator was five or fewer persons.

¶¶ Persons of Hispanic/Latino ethnicity might be of any race.

*** *Northeast:* Boston, Massachusetts; Nassau-Suffolk, New York; New York City, New York; Newark, New Jersey; Philadelphia, Pennsylvania. *South:* Atlanta, Georgia; Baltimore, Maryland; Dallas, Texas; Houston, Texas; Miami, Florida; New Orleans, Louisiana; Washington, DC. *Midwest:* Chicago, Illinois; Detroit, Michigan; St. Louis, Missouri. *West:* Denver, Colorado; Los Angeles, California; San Diego, California; San Francisco, California; Seattle, Washington. *Territories:* San Juan, Puerto Rico.

TABLE 7. Number* and percentage† of participants reporting noninjection drug use in the 12 months before the interview, by type of drug,[§] selected characteristics, and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Any drug		Marijuana		Crack cocaine		Powdered cocaine		Painkillers		Ecstasy		Other¶		Total
	No.	(%)**	No.	(%)**	No.	(%)**	No.	(%)**	No.	(%)**	No.	(%)**	No.	(%)**	
Sex															
Male	2,787	(64)	2,405	(56)	701	(16)	664	(15)	474	(11)	505	(12)	747	(17)	4,323
Female	2,653	(54)	2,297	(46)	661	(13)	486	(10)	563	(11)	477	(10)	665	(13)	4,955
Age group (yrs)															
18–19	521	(63)	513	(62)	7	(1)	31	(4)	77	(9)	116	(14)	78	(9)	829
20–24	1,040	(63)	1,006	(61)	31	(2)	129	(8)	191	(12)	316	(19)	183	(11)	1,648
25–29	731	(62)	704	(60)	33	(3)	108	(9)	156	(13)	227	(19)	139	(12)	1,183
30–39	986	(58)	872	(51)	159	(9)	238	(14)	183	(11)	209	(12)	261	(15)	1,700
40–49	1,308	(56)	985	(42)	646	(28)	384	(17)	261	(11)	93	(4)	472	(20)	2,325
50–60	854	(54)	622	(39)	486	(31)	260	(16)	169	(11)	21	(1)	279	(18)	1,593
Race/Ethnicity															
American Indian/Alaska Native	34	(61)	28	(50)	13	(25)	10	(18)	10	(18)	— ^{††}	—	11	(20)	56
Asian/Native Hawaiian/Other Pacific Islander	66	(61)	66	(61)	—	—	8	(7)	13	(12)	17	(16)	12	(11)	108
Black	4,101	(62)	3,569	(54)	1,072	(16)	757	(11)	735	(11)	753	(11)	1,021	(15)	6,635
Hispanic/Latino ^{§§}	859	(45)	717	(37)	161	(8)	288	(15)	176	(9)	127	(7)	224	(12)	1,921
White	174	(65)	139	(52)	62	(23)	47	(18)	58	(22)	26	(10)	89	(33)	266
Multiple races	201	(71)	179	(63)	47	(17)	40	(14)	45	(16)	54	(19)	53	(19)	282
Current marital status															
Married or cohabiting	726	(47)	627	(41)	182	(12)	174	(11)	129	(8)	89	(6)	178	(12)	1,533
Formerly married, not cohabiting	1,033	(58)	807	(45)	466	(26)	294	(17)	226	(13)	105	(6)	350	(20)	1,779
Never married, not cohabiting	3,681	(62)	3,268	(55)	714	(12)	682	(11)	682	(11)	788	(13)	884	(15)	5,966
Highest level of education completed															
Less than high school graduate	2,010	(60)	1,690	(50)	553	(16)	471	(14)	409	(12)	372	(11)	562	(17)	3,372
High school diploma or equivalent	2,590	(58)	2,287	(51)	572	(13)	494	(11)	443	(10)	482	(11)	640	(14)	4,463
Some college or more	840	(58)	725	(50)	237	(16)	185	(13)	185	(13)	128	(9)	210	(15)	1,442
Annual income															
\$0–\$4,999	2,010	(60)	1,689	(50)	661	(20)	497	(15)	415	(12)	358	(11)	588	(18)	3,351
\$5,000–\$9,999	1,460	(58)	1,264	(51)	350	(14)	286	(11)	268	(11)	252	(10)	385	(15)	2,501
\$10,000–\$19,999	1,288	(59)	1,139	(52)	261	(12)	249	(11)	241	(11)	247	(11)	297	(14)	2,193
≥\$20,000	619	(55)	548	(49)	87	(8)	117	(10)	99	(9)	115	(10)	133	(12)	1,122
Alcohol and drug treatment															
Never	3,275	(53)	3,010	(48)	379	(6)	507	(8)	571	(9)	624	(10)	615	(10)	6,207
>12 months before interview	1,378	(71)	1,133	(59)	579	(30)	385	(20)	294	(15)	233	(12)	445	(23)	1,932
≤12 months before interview	787	(69)	559	(49)	404	(36)	258	(23)	172	(15)	125	(11)	352	(31)	1,138
Region¶¶															
Northeast	1,045	(58)	825	(46)	273	(15)	251	(14)	133	(7)	134	(7)	283	(16)	1,793
South	1,691	(57)	1,483	(50)	405	(14)	354	(12)	349	(12)	364	(12)	456	(15)	2,949
Midwest	1,047	(67)	934	(60)	263	(17)	142	(9)	199	(13)	170	(11)	256	(16)	1,560

See table footnotes on next page.

TABLE 7. (continued) Number* and percentage† of participants reporting noninjection drug use in the 12 months before the interview, by type of drug,‡ selected characteristics, and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Any drug		Marijuana		Crack cocaine		Powdered cocaine		Painkillers		Ecstasy		Other¶		Total
	No.	(%)**	No.	(%)**	No.	(%)**	No.	(%)**	No.	(%)**	No.	(%)**	No.	(%)**	
West	1,509	(60)	1,344	(54)	398	(16)	356	(14)	312	(12)	311	(12)	380	(15)	2,501
Territories	148	(31)	116	(24)	23	(5)	47	(10)	44	(9)	—	—	37	(8)	475
Metropolitan statistical area															
Atlanta, Georgia	166	(66)	157	(63)	28	(11)	26	(10)	24	(10)	33	(13)	23	(9)	251
Baltimore, Maryland	210	(68)	183	(59)	34	(11)	21	(7)	77	(25)	61	(20)	69	(22)	311
Boston, Massachusetts	143	(68)	132	(63)	20	(10)	33	(16)	32	(15)	25	(12)	23	(11)	210
Chicago, Illinois	330	(73)	267	(59)	113	(25)	52	(11)	51	(11)	60	(13)	130	(29)	453
Dallas, Texas	258	(55)	230	(49)	61	(13)	55	(12)	43	(9)	51	(11)	82	(18)	468
Denver, Colorado	325	(63)	289	(56)	115	(22)	82	(16)	74	(14)	38	(7)	61	(12)	519
Detroit, Michigan	354	(64)	323	(59)	71	(13)	43	(8)	74	(13)	50	(9)	58	(11)	551
Houston, Texas	338	(66)	304	(59)	76	(15)	58	(11)	80	(16)	85	(16)	121	(23)	516
Los Angeles, California	330	(63)	295	(56)	89	(17)	73	(14)	71	(14)	81	(15)	102	(20)	523
Miami, Florida	260	(57)	220	(48)	67	(15)	119	(26)	16	(4)	34	(7)	41	(9)	457
Nassau-Suffolk, New York	64	(49)	58	(44)	—	—	19	(15)	—	—	10	(8)	8	(6)	131
New Orleans, Louisiana	174	(35)	141	(28)	72	(15)	40	(8)	58	(12)	19	(4)	52	(11)	495
New York City, New York	328	(75)	270	(62)	80	(18)	81	(19)	27	(6)	46	(11)	88	(20)	435
Newark, New Jersey	310	(60)	202	(39)	119	(23)	84	(16)	58	(11)	49	(10)	134	(26)	513
Philadelphia, Pennsylvania	200	(40)	163	(32)	49	(10)	34	(7)	15	(3)	—	—	30	(6)	504
San Diego, California	191	(34)	161	(28)	19	(3)	50	(9)	33	(6)	28	(5)	47	(8)	565
San Francisco, California	322	(77)	299	(71)	51	(12)	63	(15)	61	(15)	100	(24)	84	(20)	420
San Juan, Puerto Rico	148	(31)	116	(24)	23	(5)	47	(10)	44	(9)	—	—	37	(8)	475
Seattle, Washington	341	(72)	300	(63)	124	(26)	88	(19)	73	(15)	64	(14)	86	(18)	474
St. Louis, Missouri	363	(65)	344	(62)	79	(14)	47	(8)	74	(13)	60	(11)	68	(12)	556
Washington, DC	285	(63)	248	(55)	203	(45)	35	(8)	51	(11)	81	(18)	68	(15)	451
Total	5,440	(59)	4,702	(51)	1,362	(15)	1,150	(12)	1,037	(11)	982	(11)	1,412	(15)	9,278

Abbreviation: HIV = human immunodeficiency virus.

* Numbers might not add to total because of missing data.

† Percentages might not add to 100 because of rounding.

‡ Types of drugs used are not mutually exclusive.

¶ Includes downers (7.5%), heroin (6.3%), crystal methamphetamine (2.8%), hallucinogens (1.3%), poppers (0.5%), ketamine (0.2%), gamma hydroxybutyrate ([GHB], 0.1%), and other drugs (1.2%).

** Percentages are of all participants in row category.

†† Suppressed because the number or numerator was five or fewer persons.

§§ Persons of Hispanic/Latino ethnicity might be of any race.

¶¶ *Northeast:* Boston, Massachusetts; Nassau-Suffolk, New York; New York City, New York; Newark, New Jersey; Philadelphia, Pennsylvania. *South:* Atlanta, Georgia; Baltimore, Maryland; Dallas, Texas; Houston, Texas; Miami, Florida; New Orleans, Louisiana; Washington, DC. *Midwest:* Chicago, Illinois; Detroit, Michigan; St. Louis, Missouri. *West:* Denver, Colorado; Los Angeles, California; San Diego, California; San Francisco, California; Seattle, Washington. *Territories:* San Juan, Puerto Rico.

TABLE 8. Number* and percentage† of participants diagnosed with a sexually transmitted disease‡ in the 12 months before the interview, by sex, selected characteristics and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Any STD¶				Chlamydia				Gonorrhea				Other STD**				Total	
	Male		Female		Male		Female		Male		Female		Male		Female		Male	Female
	No.	(%)††	No.	(%)††	No.	(%)††	No.	(%)††	No.	(%)††	No.	(%)††	No.	(%)††	No.	(%)††	No.	No.
Age group (yrs)																		
18–19	26	(7)	86	(19)	14	(4)	59	(13)	9	(2)	26	(6)	8	(2)	22	(5)	377	452
20–24	62	(8)	178	(19)	42	(6)	119	(13)	22	(3)	39	(4)	8	(1)	69	(8)	732	916
25–29	47	(10)	105	(15)	19	(4)	60	(9)	22	(5)	27	(4)	19	(4)	49	(7)	484	699
30–39	41	(5)	130	(14)	16	(2)	54	(6)	6	(1)	33	(3)	25	(3)	75	(8)	757	943
40–49	42	(4)	125	(10)	9	(1)	50	(4)	19	(2)	20	(2)	23	(2)	87	(7)	1,128	1,197
50–60	38	(4)	56	(7)	12	(1)	22	(3)	12	(1)	6	(1)	19	(2)	34	(5)	845	748
Race/Ethnicity																		
American Indian/Alaska Native	— ^{§§}	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24	32
Asian/Native Hawaiian/Other Pacific Islander	—	—	10	(16)	—	—	7	(11)	—	—	—	—	—	—	—	—	44	64
Black	202	(7)	548	(16)	97	(3)	287	(8)	77	(2)	127	(4)	70	(2)	275	(8)	3,105	3,530
Hispanic/Latino¶¶	36	(4)	77	(7)	10	(1)	46	(4)	9	(1)	15	(1)	22	(2)	31	(3)	887	1,034
White	6	(4)	14	(11)	—	—	7	(5)	—	—	—	—	—	—	9	(7)	134	132
Multiple races	10	(8)	29	(18)	—	—	17	(11)	—	—	—	—	—	—	16	(10)	125	157
Current marital status																		
Married or cohabiting	36	(5)	65	(8)	14	(2)	31	(4)	10	(1)	9	(1)	17	(2)	34	(4)	687	846
Formerly married, not cohabiting	43	(5)	107	(12)	10	(1)	46	(5)	11	(1)	18	(2)	25	(3)	65	(7)	857	922
Never married, not cohabiting	177	(6)	508	(16)	88	(3)	287	(9)	69	(2)	124	(4)	60	(2)	237	(7)	2,779	3,187
Highest level of education completed																		
Less than high school graduate	106	(7)	254	(14)	43	(3)	132	(7)	46	(3)	67	(4)	45	(3)	131	(7)	1,596	1,776
High school diploma or equivalent	125	(6)	322	(14)	58	(3)	186	(8)	34	(2)	64	(3)	45	(2)	143	(6)	2,125	2,338
Some college or more	25	(4)	104	(12)	11	(2)	46	(5)	10	(2)	20	(2)	12	(2)	62	(7)	602	840
Annual income																		
\$0–\$4,999	104	(7)	253	(14)	41	(3)	131	(7)	39	(2)	70	(4)	44	(3)	131	(7)	1,568	1,783
\$5,000–\$9,999	65	(6)	203	(14)	30	(3)	114	(8)	20	(2)	41	(3)	29	(3)	100	(7)	1,067	1,434
\$10,000–\$19,999	53	(5)	153	(13)	27	(3)	85	(7)	20	(2)	29	(2)	18	(2)	72	(6)	1,024	1,169
≥\$20,000	29	(5)	60	(12)	12	(2)	27	(5)	9	(1)	8	(2)	10	(2)	31	(6)	611	511
Health insurance																		
None	145	(6)	204	(11)	69	(3)	97	(5)	49	(2)	45	(3)	53	(2)	110	(6)	2,489	1,776
Private only***	10	(3)	32	(9)	—	—	13	(4)	—	—	7	(2)	—	—	16	(5)	294	353
Public only†††	96	(7)	424	(16)	38	(3)	245	(9)	34	(2)	94	(3)	45	(3)	201	(7)	1,465	2,699
Other	—	—	19	(16)	—	—	9	(8)	—	—	—	—	—	—	8	(7)	56	120
Visited health-care provider¶¶¶																		
Yes	175	(7)	536	(14)	72	(3)	286	(8)	55	(2)	112	(3)	80	(3)	270	(7)	2,663	3,724
No	81	(5)	144	(12)	40	(2)	78	(6)	35	(2)	39	(3)	22	(1)	66	(5)	1,657	1,230
Region****																		
Northeast	49	(6)	101	(11)	17	(2)	61	(7)	11	(1)	20	(2)	27	(3)	46	(5)	889	904
South	91	(7)	215	(14)	45	(3)	105	(7)	43	(3)	50	(3)	24	(2)	103	(6)	1,359	1,590
Midwest	57	(8)	174	(22)	30	(4)	96	(12)	19	(3)	56	(7)	21	(3)	92	(12)	760	800
West	52	(5)	176	(13)	18	(2)	94	(7)	15	(1)	23	(2)	26	(2)	90	(7)	1,147	1,354
Territories	7	(4)	14	(5)	—	—	8	(3)	—	—	—	—	—	—	—	—	168	307

See table footnotes on next page.

TABLE 8. (continued) Number* and percentage† of participants diagnosed with a sexually transmitted disease§ in the 12 months before the interview, by sex, selected characteristics and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Any STD¶				Chlamydia				Gonorrhea				Other STD**				Total	
	Male		Female		Male		Female		Male		Female		Male		Female		Male	Female
	No.	(%)††	No.	(%)††	No.	(%)††	No.	(%)††	No.	(%)††	No.	(%)††	No.	(%)††	No.	(%)††	No.	No.
Metropolitan statistical area																		
Atlanta, Georgia	9	(8)	28	(20)	—	—	12	(9)	—	—	8	(6)	—	—	13	(9)	112	139
Baltimore, Maryland	15	(10)	35	(21)	—	—	18	(11)	9	(6)	8	(5)	—	—	17	(10)	144	167
Boston, Massachusetts	—	—	28	(21)	—	—	19	(14)	—	—	7	(5)	—	—	12	(9)	77	133
Chicago, Illinois	20	(7)	37	(21)	10	(4)	23	(13)	7	(3)	15	(8)	—	—	13	(7)	275	178
Dallas, Texas	15	(8)	34	(13)	11	(6)	17	(6)	—	—	8	(3)	—	—	16	(6)	199	269
Denver, Colorado	11	(5)	33	(11)	—	—	16	(5)	—	—	7	(2)	—	—	18	(6)	210	309
Detroit, Michigan	19	(8)	80	(25)	9	(4)	39	(12)	9	(4)	25	(8)	8	(4)	49	(15)	227	324
Houston, Texas	18	(7)	41	(15)	10	(4)	19	(7)	7	(3)	9	(3)	6	(2)	23	(8)	242	274
Los Angeles, California	14	(5)	30	(12)	—	—	14	(6)	—	—	—	—	10	(4)	18	(7)	272	251
Miami, Florida	12	(5)	24	(11)	—	—	13	(6)	7	(3)	—	—	—	—	9	(4)	242	215
Nassau-Suffolk, New York	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	92	39
New Orleans, Louisiana	—	—	24	(8)	—	—	10	(3)	—	—	7	(2)	—	—	11	(4)	209	286
New York City, New York	13	(5)	26	(14)	—	—	20	(10)	—	—	—	—	8	(3)	9	(5)	244	191
Newark, New Jersey	22	(8)	27	(11)	6	(2)	12	(5)	—	—	6	(2)	13	(5)	14	(6)	266	247
Philadelphia, Pennsylvania	8	(4)	18	(6)	6	(3)	10	(3)	—	—	—	—	—	—	9	(3)	210	294
San Diego, California	6	(2)	21	(7)	—	—	16	(5)	—	—	—	—	—	—	—	—	250	315
San Francisco, California	10	(6)	53	(22)	—	—	35	(14)	—	—	8	(3)	—	—	19	(8)	174	246
San Juan, Puerto Rico	7	(4)	14	(5)	—	—	8	(3)	—	—	—	—	—	—	—	—	168	307
Seattle, Washington	11	(5)	39	(17)	—	—	13	(6)	—	—	—	—	—	—	30	(13)	241	233
St. Louis, Missouri	18	(7)	57	(19)	11	(4)	34	(11)	—	—	16	(5)	8	(3)	30	(10)	258	298
Washington, DC	18	(9)	29	(12)	10	(5)	16	(7)	11	(5)	8	(3)	—	—	14	(6)	211	240
Total	256	(6)	680	(14)	112	(3)	364	(7)	90	(2)	151	(3)	102	(2)	336	(7)	4,323	4,955

Abbreviations: HIV = human immunodeficiency virus; STD = sexually transmitted disease.

* Numbers might not add to total because of missing data.

† Percentages might not add to 100 because of rounding.

§ Self-report of diagnosis by a health-care provider.

¶ Diagnosis of one or more of the following: chlamydia, gonorrhea, syphilis, genital herpes, genital warts, or other STD.

** Includes syphilis, genital herpes, genital warts, or other STD.

†† Within each sex, percentages are of all participants in row category.

§§ Suppressed because the number or numerator was five or fewer persons.

¶¶ Persons of Hispanic/Latino ethnicity might be of any race.

*** Coverage through private insurance policies or employer, TRICARE, CHAMPUS, or membership in a health maintenance organization.

††† Coverage through Medicare, Medicaid, plans funded by state or local governments, or Veterans Administration.

¶¶¶ Visited a physician, nurse, or other health-care provider in the 12 months before the interview.

**** *Northeast:* Boston, Massachusetts; Nassau-Suffolk, New York; New York City, New York; Newark, New Jersey; Philadelphia, Pennsylvania. *South:* Atlanta, Georgia; Baltimore, Maryland; Dallas, Texas; Houston, Texas; Miami, Florida; New Orleans, Louisiana; Washington, DC. *Midwest:* Chicago, Illinois; Detroit, Michigan; St. Louis, Missouri. *West:* Denver, Colorado; Los Angeles, California; San Diego, California; San Francisco, California; Seattle, Washington. *Territories:* San Juan, Puerto Rico.

TABLE 9. Number* and percentage† of participants who reported HIV testing in their lifetime and in the 12 months before the interview, by sex, selected characteristics, and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Male					Female					Total
	Ever tested		Tested in past 12 months		Total	Ever tested		Tested in past 12 months		Total	
	No.	(%) [§]	No.	(%) [§]		No.	(%) [§]	No.	(%) [§]		
Age group (yrs)											
18–19	172	(46)	89	(24)	377	276	(61)	181	(40)	452	829
20–24	459	(63)	211	(29)	732	711	(78)	385	(42)	916	1,648
25–29	364	(75)	152	(31)	484	597	(85)	286	(41)	699	1,183
30–39	557	(74)	234	(31)	757	796	(84)	331	(35)	943	1,700
40–49	878	(78)	363	(32)	1,128	935	(78)	361	(30)	1,197	2,325
50–60	627	(74)	263	(31)	845	525	(70)	183	(24)	748	1,593
Race/Ethnicity											
American Indian/Alaska Native	16	(67)	6	(25)	24	26	(81)	8	(25)	32	56
Asian/Native Hawaiian/Other Pacific Islander	13	(30)	— [¶]	—	44	37	(58)	11	(17)	64	108
Black	2,378	(77)	1,077	(35)	3,105	2,906	(82)	1,415	(40)	3,530	6,635
Hispanic/Latino**	459	(52)	151	(17)	887	639	(62)	193	(19)	1,034	1,921
White	97	(72)	31	(23)	134	100	(76)	39	(30)	132	266
Multiple races	91	(73)	42	(34)	125	127	(81)	61	(39)	157	282
Current marital status											
Married or cohabiting	467	(68)	181	(26)	687	616	(73)	208	(25)	846	1,533
Formerly married, not cohabiting	653	(76)	276	(32)	857	710	(77)	297	(32)	922	1,779
Never married, not cohabiting	1,937	(70)	855	(31)	2,779	2,514	(79)	1,222	(38)	3,187	5,966
Highest level of education completed											
Less than high school graduate	1,084	(68)	445	(28)	1,596	1,335	(75)	577	(32)	1,776	3,372
High school diploma or equivalent	1,505	(71)	662	(31)	2,125	1,833	(78)	857	(37)	2,338	4,463
Some college or more	468	(78)	205	(34)	602	671	(80)	293	(35)	840	1,442
Annual income											
\$0–\$4,999	1,121	(71)	497	(32)	1,568	1,401	(79)	622	(35)	1,783	3,351
\$5,000–\$9,999	748	(70)	298	(28)	1,067	1,104	(77)	510	(36)	1,434	2,501
\$10,000–\$19,999	714	(70)	328	(32)	1,024	902	(77)	399	(34)	1,169	2,193
≥\$20,000	443	(73)	176	(29)	611	402	(79)	175	(34)	511	1,122
Health insurance											
None	1,696	(68)	659	(26)	2,489	1,279	(72)	488	(27)	1,776	4,265
Private only ^{††}	191	(65)	68	(23)	294	253	(72)	100	(28)	353	647
Public only ^{§§}	1,121	(77)	569	(39)	1,465	2,204	(82)	1,093	(40)	2,699	4,164
Other	35	(63)	12	(21)	56	97	(81)	45	(38)	120	176
Visited health-care provider^{¶¶}											
Yes	2,027	(76)	1,042	(39)	2,663	3,020	(81)	1,554	(42)	3,724	6,387
No	1,028	(62)	270	(16)	1,657	819	(67)	173	(14)	1,230	2,887

See table footnotes on page 35.

TABLE 9. (continued) Number* and percentage† of participants who reported HIV testing in their lifetime and in the 12 months before the interview, by sex, selected characteristics, and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Male					Female					Total
	Ever tested		Tested in past 12 months		Total	Ever tested		Tested in past 12 months		Total	
	No.	(%) [§]	No.	(%) [§]		No.	(%) [§]	No.	(%) [§]		
STD diagnosis***											
Yes	203	(79)	113	(44)	256	547	(80)	288	(42)	680	936
No	2,850	(70)	1,198	(29)	4,063	3,291	(77)	1,438	(34)	4,272	8,335
Region†††											
Northeast	684	(77)	356	(40)	889	764	(85)	398	(44)	904	1,793
South	1,049	(77)	497	(37)	1,359	1,330	(84)	673	(42)	1,590	2,949
Midwest	544	(72)	201	(26)	760	609	(76)	271	(34)	800	1,560
West	693	(60)	243	(21)	1,147	937	(69)	363	(27)	1,354	2,501
Territories	87	(52)	15	(9)	168	200	(65)	22	(7)	307	475
Metropolitan statistical area											
Atlanta, Georgia	80	(71)	32	(29)	112	113	(81)	51	(37)	139	251
Baltimore, Maryland	123	(85)	61	(42)	144	153	(92)	79	(47)	167	311
Boston, Massachusetts	57	(74)	26	(34)	77	124	(93)	56	(42)	133	210
Chicago, Illinois	208	(76)	88	(32)	275	148	(83)	69	(39)	178	453
Dallas, Texas	124	(62)	38	(19)	199	194	(72)	72	(27)	269	468
Denver, Colorado	138	(66)	43	(20)	210	231	(75)	93	(30)	309	519
Detroit, Michigan	147	(65)	36	(16)	227	229	(71)	99	(31)	324	551
Houston, Texas	186	(77)	78	(32)	242	233	(85)	105	(38)	274	516
Los Angeles, California	166	(61)	61	(22)	272	162	(65)	59	(24)	251	523
Miami, Florida	186	(77)	86	(36)	242	193	(90)	109	(51)	215	457
Nassau-Suffolk, New York	47	(51)	14	(15)	92	26	(67)	16	(41)	39	131
New Orleans, Louisiana	155	(74)	81	(39)	209	225	(79)	104	(36)	286	495
New York City, New York	200	(82)	108	(44)	244	170	(89)	98	(51)	191	435
Newark, New Jersey	226	(85)	141	(53)	266	213	(86)	119	(48)	247	513
Philadelphia, Pennsylvania	154	(73)	67	(32)	210	231	(79)	109	(37)	294	504
San Diego, California	93	(37)	30	(12)	250	164	(52)	58	(18)	315	565
San Francisco, California	112	(64)	42	(24)	174	191	(78)	79	(32)	246	420
San Juan, Puerto Rico	87	(52)	15	(9)	168	200	(65)	22	(7)	307	475
Seattle, Washington	184	(76)	67	(28)	241	189	(81)	74	(32)	233	474
St. Louis, Missouri	189	(73)	77	(30)	258	232	(78)	103	(35)	298	556
Washington, DC	195	(92)	121	(57)	211	219	(91)	153	(64)	240	451
Total	3,057	(71)	1,312	(30)	4,323	3,840	(77)	1,727	(35)	4,955	9,278

See table footnotes on next page.

TABLE 9. (continued) Number* and percentage† of participants who reported HIV testing in their lifetime and in the 12 months before the interview, by sex, selected characteristics, and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010**Abbreviations:** HIV = human immunodeficiency virus; STD = sexually transmitted disease.

* Numbers might not add to total because of missing data.

† Percentages might not add to 100 because of rounding.

§ Within each sex, percentages are of all participants in row category.

¶ Suppressed because the number or numerator was five or fewer persons.

** Persons of Hispanic/Latino ethnicity might be of any race.

†† Coverage through private insurance policies or employer, TRICARE, CHAMPUS, or membership in a health maintenance organization.

§§ Coverage through Medicare, Medicaid, plans funded by state or local governments, or Veterans Administration.

¶¶ Visited a physician, nurse, or other health-care provider in the 12 months before the interview.

*** Self-report of diagnosis by a health-care provider with any STD in the 12 months before the interview.

††† *Northeast:* Boston, Massachusetts; Nassau-Suffolk, New York; New York City, New York; Newark, New Jersey; Philadelphia, Pennsylvania. *South:* Atlanta, Georgia; Baltimore, Maryland; Dallas, Texas; Houston, Texas; Miami, Florida; New Orleans, Louisiana; Washington, DC. *Midwest:* Chicago, Illinois; Detroit, Michigan; St. Louis, Missouri. *West:* Denver, Colorado; Los Angeles, California; San Diego, California; San Francisco, California; Seattle, Washington. *Territories:* San Juan, Puerto Rico.**TABLE 10. Number* and percentage† of participants§ who received the results of their most recent HIV test, by test location and sex — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010**

Facility type for most recent HIV test	Male				Female			
	Received result		Total		Received result		Total	
	No.	(%)¶	No.	(%)**	No.	(%)¶	No.	(%)**
Correctional facility (jail or prison)	161	(89)	181	(14)	31	(84)	37	(2)
Emergency room	60	(90)	67	(5)	93	(92)	101	(6)
Family planning or prenatal or obstetric clinic	16	(84)	19	(1)	199	(94)	212	(12)
HIV counseling and testing site	136	(97)	140	(11)	125	(95)	131	(8)
HIV/AIDS street outreach program or mobile unit	137	(99)	139	(11)	159	(94)	169	(10)
Hospital (inpatient)	65	(96)	68	(5)	137	(87)	157	(9)
Private doctor office (including HMO)	108	(93)	116	(9)	217	(95)	228	(13)
Public health clinic or community health center	289	(94)	308	(23)	441	(95)	464	(27)
STD clinic	65	(94)	69	(5)	67	(96)	70	(4)
Other††	162	(88)	185	(14)	134	(95)	141	(8)
Total	1,217	(93)	1,312	(100)	1,618	(94)	1,727	(100)

Abbreviations: AIDS = acquired immunodeficiency virus; HIV = human immunodeficiency virus; HMO = health maintenance organization; STD = sexually transmitted disease.

* Numbers might not add to total because of missing data.

† Percentages might not add to 100 because of rounding.

§ Among participants tested for HIV in the 12 months before the interview (n = 1,312 men; n=1,727 women).

¶ Within each sex, percentages are of all participants in row category who were tested in the 12 months before the interview.

** Within each sex, percentages are of all participants tested in the 12 months before the interview.

†† Includes drug treatment programs, needle-exchange programs, at-home testing, and other.

TABLE 11. Number and percentage of participants* reporting specific reasons they had not been tested for HIV in the 12 months before the interview, by sex — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Reason	Male				Female			
	A reason [†]		Main reason [§]		A reason [†]		Main reason [§]	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Thought risk for HIV infection was low	1,337	(45)	921	(31)	1,207	(38)	751	(23)
Afraid of finding out infected with HIV	914	(31)	633	(21)	1,151	(36)	837	(26)
Did not have time	903	(30)	341	(11)	927	(29)	315	(10)
Did not know where to get tested	684	(23)	200	(7)	676	(21)	165	(5)
Did not have money or insurance	657	(22)	185	(6)	753	(23)	265	(8)
Did not like needles	600	(20)	165	(6)	786	(24)	233	(7)
Worried someone would find out about test result	525	(18)	95	(3)	719	(22)	111	(3)
Could not get transportation	332	(11)	33	(1)	422	(13)	48	(1)
Worried name would be reported to government	262	(9)	20	(1)	360	(11)	17	(1)
Afraid of losing job, insurance, family, housing, or friends	199	(7)	8	(0)	249	(8)	17	(1)
Other reasons [¶]	379	(13)	379	(13)	443	(14)	443	(14)
Total	2,989	(100)	2,989	(100)	3,212	(100)	3,212	(100)

Abbreviation: HIV = human immunodeficiency virus.

* Among participants who reported that they had never been tested for HIV or who reported that they had not been tested for HIV in the 12 months before the interview (n = 2,989 men; n = 3,212 women).

[†] Participants were asked to indicate whether each reason had contributed to not getting an HIV test; answers are not mutually exclusive.

[§] Participants were asked to indicate which reason was the most important; answers are mutually exclusive but might not add to total because of missing data.

[¶] Participant did not endorse any of the reasons listed.

TABLE 12. Number* and percentage[†] of participants who reported receipt of hepatitis B vaccination,[§] by sex and selected risk factors for hepatitis B — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Risk factor	Male		Female				
	Hepatitis B vaccination		Hepatitis B vaccination		Total		
	No.	(%) [¶]	No.	No.	(%) [¶]	Total	
STD diagnosis**							
No	838	(21)	4,006	1,208	(29)	4,207	8,213
Yes	61	(24)	250	233	(35)	668	918
Multiple sex partners^{††}							
No	208	(19)	1,068	512	(29)	1,795	2,863
Yes	691	(22)	3,192	930	(30)	3,083	6,275
Total	899	(21)	4,260	1,442	(30)	4,878	9,138

Abbreviations: HIV = human immunodeficiency virus; STD = sexually transmitted disease.

* Numbers might not add to total because of missing data. Includes only participants who did not report previous hepatitis B diagnosis.

[†] Percentages might not add to 100 because of rounding.

[§] Self-reported ever had at least one dose of hepatitis B vaccine or combination hepatitis A and hepatitis B vaccine.

[¶] Within sex, percentages are of all participants in row category.

** Self-report of diagnosis by a health-care provider with any STD in the 12 months before the interview.

^{††} Reported vaginal or anal sex with more than one opposite-sex partner in the 12 months before the interview.

TABLE 13. Number* and percentage† of participants reporting receipt of HIV prevention materials or services in the 12 months before the interview, by selected characteristics and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Free condoms				Behavioral interventions						Total
	Received		Used		Individual [§]		Group [¶]		Either		
	No.	(%)**	No.	(%)††	No.	(%)**	No.	(%)**	No.	(%)**	
Sex											
Male	1,487	(34)	1,055	(71)	329	(8)	205	(5)	460	(11)	4,323
Female	1,650	(33)	1,020	(62)	364	(7)	281	(6)	535	(11)	4,955
Age group (yrs)											
18–19	355	(43)	263	(74)	102	(12)	72	(9)	147	(18)	829
20–24	599	(36)	428	(71)	132	(8)	77	(5)	179	(11)	1,648
25–29	385	(33)	274	(71)	64	(5)	49	(4)	101	(9)	1,183
30–39	507	(30)	328	(65)	98	(6)	76	(4)	147	(9)	1,700
40–49	764	(33)	449	(59)	177	(8)	126	(5)	252	(11)	2,325
50–60	527	(33)	333	(63)	120	(8)	86	(5)	169	(11)	1,593
Race/Ethnicity											
American Indian/Alaska Native	13	(23)	8	(62)	— ^{§§}	—	—	—	6	(11)	56
Asian/Native Hawaiian/Other Pacific Islander	43	(40)	31	(72)	12	(11)	—	—	15	(14)	108
Black	2,347	(35)	1,569	(67)	539	(8)	360	(5)	753	(11)	6,635
Hispanic/Latino ^{¶¶}	516	(27)	323	(63)	89	(5)	84	(4)	152	(8)	1,921
White	85	(32)	49	(58)	17	(6)	15	(6)	26	(10)	266
Multiple races	127	(45)	90	(71)	30	(11)	20	(7)	42	(15)	282
Current marital status											
Married or cohabiting	379	(25)	198	(52)	77	(5)	62	(4)	118	(8)	1,533
Formerly married, not cohabiting	617	(35)	393	(64)	128	(7)	101	(6)	188	(11)	1,779
Never married, not cohabiting	2,141	(36)	1,484	(69)	488	(8)	323	(5)	689	(12)	5,966
Highest level of education completed											
Less than high school graduate	1,106	(33)	724	(65)	211	(6)	163	(5)	309	(9)	3,372
High school diploma or equivalent	1,510	(34)	1,004	(66)	350	(8)	235	(5)	499	(11)	4,463
Some college or more	521	(36)	347	(67)	132	(9)	88	(6)	187	(13)	1,442
Annual income											
\$0–\$4,999	1,111	(33)	712	(64)	269	(8)	189	(6)	389	(12)	3,351
\$5,000–\$9,999	898	(36)	578	(64)	179	(7)	112	(4)	241	(10)	2,501
\$10,000–\$19,999	736	(34)	520	(71)	147	(7)	112	(5)	227	(10)	2,193
≥\$20,000	348	(31)	236	(68)	83	(7)	64	(6)	117	(10)	1,122
Health insurance											
None	1,266	(30)	850	(67)	261	(6)	164	(4)	367	(9)	4,265
Private only ^{***}	187	(29)	132	(71)	42	(6)	28	(4)	62	(10)	647
Public only ^{†††}	1,611	(39)	1,044	(65)	365	(9)	281	(7)	533	(13)	4,164
Other	64	(36)	41	(64)	24	(14)	11	(6)	30	(17)	176
Visited health-care provider^{§§§}											
Yes	2,460	(39)	1,619	(66)	584	(9)	419	(7)	835	(13)	6,387
No	677	(23)	456	(67)	109	(4)	67	(2)	160	(6)	2,887

See table footnotes on page 39.

TABLE 13. (continued) Number* and percentage† of participants reporting receipt of HIV prevention materials or services in the 12 months before the interview, by selected characteristics and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Characteristic	Free condoms				Behavioral interventions						Total
	Received		Used		Individual [§]		Group [¶]		Either		
	No.	(%)**	No.	(%)††	No.	(%)**	No.	(%)**	No.	(%)**	
STD diagnosis¶¶¶											
Yes	389	(42)	267	(69)	112	(12)	60	(6)	147	(16)	936
No	2,746	(33)	1,806	(66)	581	(7)	426	(5)	848	(10)	8,335
Region****											
Northeast	618	(34)	417	(67)	165	(9)	74	(4)	209	(12)	1,793
South	1,080	(37)	703	(65)	206	(7)	139	(5)	288	(10)	2,949
Midwest	419	(27)	274	(65)	120	(8)	98	(6)	176	(11)	1,560
West	937	(37)	636	(68)	175	(7)	144	(6)	268	(11)	2,501
Territories	83	(17)	45	(54)	27	(6)	31	(7)	54	(11)	475
Metropolitan statistical area											
Atlanta, Georgia	68	(27)	48	(71)	23	(9)	16	(6)	33	(13)	251
Baltimore, Maryland	138	(44)	93	(67)	32	(10)	27	(9)	49	(16)	311
Boston, Massachusetts	101	(48)	73	(72)	26	(12)	18	(9)	39	(19)	210
Chicago, Illinois	189	(42)	125	(66)	39	(9)	38	(8)	64	(14)	453
Dallas, Texas	62	(13)	33	(53)	27	(6)	16	(3)	34	(7)	468
Denver, Colorado	159	(31)	100	(63)	28	(5)	30	(6)	47	(9)	519
Detroit, Michigan	93	(17)	60	(65)	39	(7)	32	(6)	57	(10)	551
Houston, Texas	195	(38)	137	(70)	43	(8)	19	(4)	54	(10)	516
Los Angeles, California	142	(27)	90	(63)	33	(6)	25	(5)	48	(9)	523
Miami, Florida	133	(29)	81	(61)	6	(1)	7	(2)	11	(2)	457
Nassau-Suffolk, New York	34	(26)	28	(82)	— ^{§§}	—	—	—	9	(7)	131
New Orleans, Louisiana	176	(36)	118	(67)	25	(5)	15	(3)	37	(7)	495
New York City, New York	256	(59)	175	(68)	35	(8)	18	(4)	43	(10)	435
Newark, New Jersey	142	(28)	88	(62)	79	(15)	23	(4)	91	(18)	513
Philadelphia, Pennsylvania	85	(17)	53	(62)	20	(4)	11	(2)	27	(5)	504
San Diego, California	147	(26)	93	(63)	16	(3)	9	(2)	24	(4)	565
San Francisco, California	238	(57)	158	(66)	51	(12)	43	(10)	81	(19)	420
San Juan, Puerto Rico	83	(17)	45	(54)	27	(6)	31	(7)	54	(11)	475
Seattle, Washington	251	(53)	195	(78)	47	(10)	37	(8)	68	(14)	474
St. Louis, Missouri	137	(25)	89	(65)	42	(8)	28	(5)	55	(10)	556
Washington, DC	308	(68)	193	(63)	50	(11)	39	(9)	70	(16)	451
Total	3,137	(34)	2,075	(66)	693	(7)	486	(5)	995	(11)	9,278

See table footnotes on next page.

TABLE 13. (continued) Number* and percentage† of participants reporting receipt of HIV prevention materials or services in the 12 months before the interview, by selected characteristics and metropolitan statistical area — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Abbreviations: HIV = human immunodeficiency virus; STD = sexually transmitted disease.
 * Numbers might not add to total because of missing data.
 † Percentages might not add to 100 because of rounding.
 § 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.
 ¶ Small-group discussion of ways to prevent HIV infection that was part of an organized session and excludes discussions with friends.
 ** Percentages are of all participants in row category.
 †† Percentages are of participants in row category who received free condoms.
 §§ Suppressed because the number or numerator was five or fewer persons.
 ¶¶ Persons of Hispanic/Latino ethnicity might be of any race.
 *** Coverage through private insurance policies or employer, TRICARE, CHAMPUS, or membership in a health maintenance organization.
 ††† Coverage through Medicare, Medicaid, plans funded by state or local governments, or Veterans Administration.
 §§§ Visited a physician, nurse, or other health-care provider in the 12 months before the interview.
 ¶¶¶ Self-report of diagnosis by a health-care provider with any STD in the 12 months before the interview.
 **** *Northeast:* Boston, Massachusetts; Nassau-Suffolk, New York; New York City, New York; Newark, New Jersey; Philadelphia, Pennsylvania. *South:* Atlanta, Georgia; Baltimore, Maryland; Dallas, Texas; Houston, Texas; Miami, Florida; New Orleans, Louisiana; Washington, DC. *Midwest:* Chicago, Illinois; Detroit, Michigan; St. Louis, Missouri. *West:* Denver, Colorado; Los Angeles, California; San Diego, California; San Francisco, California; Seattle, Washington. *Territories:* San Juan, Puerto Rico.

TABLE 14. Number* and percentage† of participants receiving HIV prevention materials or services in the 12 months before the interview, by sex and prevention source — National HIV Behavioral Surveillance System: heterosexuals at increased risk for HIV infection, 21 U.S. cities, 2010

Prevention source**	Male						Female						Total	
	Free condoms		Behavioral intervention [§]		Any resources [¶]		Free condoms		Behavioral intervention [§]		Any resources [¶]		Any resources [¶]	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Health-care provider ^{††}	793	(53)	241	(52)	853	(20)	1,039	(63)	300	(56)	1,113	(22)	1,966	(21)
HIV/AIDS organization	520	(35)	210	(46)	574	(13)	509	(31)	220	(41)	566	(11)	1,140	(12)
Service provider or organization for injecting drug users ^{§§}	206	(14)	132	(29)	249	(6)	196	(12)	127	(24)	232	(5)	481	(5)
Other community organization ^{¶¶}	206	(14)	84	(18)	223	(5)	256	(16)	112	(21)	287	(6)	510	(5)
Educational institution or organization	151	(10)	71	(15)	170	(4)	150	(9)	92	(17)	180	(4)	350	(4)
Business	144	(10)	38	(8)	152	(4)	154	(9)	44	(8)	159	(3)	311	(3)
Other ^{***}	101	(7)	38	(8)	115	(3)	91	(6)	34	(6)	96	(2)	211	(2)
Total	1,487	(100)	460	(100)	4,323	(100)	1,650	(100)	535	(100)	4,955	(100)	9,278	(100)

Abbreviation: HIV = human immunodeficiency virus.
 * Numbers might not add to totals because responses were not mutually exclusive.
 † Percentages might not add to 100 because of rounding.
 § One-on-one conversation or organized small-group discussion of ways to prevent HIV infection that was part of an organized session, excluding discussions with friends.
 ¶ Received condoms, interventions, or both.
 ** Participants could select more than one source for each type of prevention activity.
 †† Includes public, private, and community health providers and services.
 §§ Includes needle-exchange and outreach programs.
 ¶¶ Includes nongovernmental organizations and social services, outreach activities, and faith-based organizations.
 *** Includes other, "don't know," and government programs (e.g., government assistance programs, correctional facilities, and services).

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ISSN: 1546-0738