CHICAGO DEPARTMENT OF PUBLIC HEALTH JANUARY 2023

## HIV INFECTION RISK, PREVENTION, & TESTING BEHAVIORS

among Gay, Bisexual, and Other Men Who Have Sex with Men



SYNDEMIC INFECTIOUS Disease Bureau National HIV Behavioral Surveillance Chicago, 2014 and 2017



## **Table of Contents**

Executive Summary	3
List of Contributors	4
Purpose of Report	5
Syndemic Approach	5
Healthy Chicago 2025 and Health Equity	6
Data Highlights	7
Data Highlights: Non-Hispanic Black MSM	15
Background	20
Methods	21
Data Collection	22
Data Analysis	23
Demographics, Risk and Prevention Behaviors	
Table 1. Selected Demographic Characteristics Among Men Who Have Sex with Men	29
Table 2. Selected Behavioral Factors, Past 12 Months, Among Men Who Have Sex with Men	30
Table 3. Selected Demographic Characteristics by NHBS HIV Test Result Status Among Men Who Have Sex w Men	ith 31
Figure 1. Proportion of MSM Participants with a Negative NHBS HIV Test Result by Age Group and Year of	Cycle 32
Figure 2. Proportion of MSM Participants with a Positive NHBS HIV Test Result by Age Group and Year of C	Cycle 32
Figure 3. Proportion of MSM Participants with a Negative NHBS HIV Test Result by Race and Ethnicity and of Cycle	Year 33
Figure 4. Proportion of MSM Participants with a Positive NHBS HIV Test Result by Race and Ethnicity and Cycle	Year of 33
Table 4. Selected Demographic Characteristics Among Men Who Have Sex with Men by Race and Ethnicity	34
Table 5. Selected Social Determinants of Health (SDOH) Factors Among Men Who Have Sex with Men by Race Ethnicity	e and 34
Table 6. Health Care Access and Utilization Among Men Who Have Sex with Men by Race and Ethnicity	35
Table 7. Sexual Behavior Factors, Past 12 Months, by NHBS HIV Test Result Status Among Men Who Have Sex Men by Race and Ethnicity	; with 36
Table 8. Location Met Most Recent Male Sex Partner Among Men Who Have Sex with Men by Race and Ethni	city .37
Table 9. Sexually Transmitted Infections (STI) Testing and Diagnosis, Past 12 Months, Among Men Who Have with Men by Race and Ethnicity	Sex 37
Table 10. Non-Injection Drug Use, Past 12 Months, Among Men Who Have Sex with Men by Race and Ethnicit	y 38
Table 11. Selected Demographic Characteristics and HIV Prevention Behavioral Factors Among Men Who Hav	ve Sex

1

Table 11a. Selected Demographic Characteristics and HIV Prevention Behavioral Factors Among Self-reported HIV- negative Men Who Have Sex with Men by Race and Ethnicity41
Table 11b. Selected Demographic Characteristics and HIV Prevention Behavioral Factors Among NHBS-tested HIV- negative Men Who Have Sex with Men by Race and Ethnicity
Table 12. Selected Demographic Characteristics and HIV Care Behavioral Factors Among Self-reported Men Who Have Sex with Men with HIV and NHBS-test HIV-positive Status
Table 12a. Selected Demographic Characteristics and HIV Care Behavioral Factors Among Self-reported Men Who Have Sex with Men with HIV by Race and Ethnicity47
Table 12b. Selected Demographic Characteristics and HIV Care Behavioral Factors Among NHBS-tested HIV- positive Men Who Have Sex with Men with HIV by Race and Ethnicity
Non-Hispanic Black MSM in Chicago
Table 13. Selected Social Determinants of Health (SDOH) Factors Among Non-Hispanic Black Men Who Have Sex   with Men by Age Group
Table 14. Health Care Access and Utilization by NHBS HIV Test Result Status Among Non-Hispanic Black Men Who Have Sex with Men by Age Group
Table 15. Sexual Behavior Factors, Past 12 Months, by NHBS HIV Test Result Status Among Non-Hispanic Black Men Who Have Sex with Men by Age Group
Table 16. Location Met Most Recent Male Sex Partner Among Non-Hispanic Black Men Who Have Sex with Men by Age Group
Table 17. Sexually Transmitted Infections (STI) Testing and Diagnosis, Past 12 Months, Among Non-Hispanic Black Men Who Have Sex with Men by Age Group56
Table 18a. Selected Demographic Characteristics and HIV Prevention Behavioral Factors Among Self-reported HIV- negative Non-Hispanic Black Men Who Have Sex with Men by Age Group
Table 18b. Selected Demographic Characteristics and HIV Prevention Behavioral Factors Among NHBS-tested HIV- negative Non-Hispanic Black Men Who Have Sex with Men by Age Group
Table 19a. Selected Demographic Characteristics and HIV Care Behavioral Factors Among Self-reported Non- Hispanic Black MSM with HIV by Age Group59
Table 19b. Selected Demographic Characteristics and HIV Care Behavioral Factors Among NHBS-tested HIV- positive Non-Hispanic Black Men Who Have Sex with Men by Age Group60
Limitations
Conclusion

## **EXECUTIVE SUMMARY**

Since 1982, the Chicago Department of Public Health (CDPH) has been actively monitoring the HIV epidemic in Chicago. Today, CDPH's surveillance system collects and combines information on HIV cases, clinical indicators, bio-behaviors, and characteristics of people vulnerable to HIV. This system allows us to better integrate our efforts to help community partners and Chicagoans understand the HIV epidemic and to direct HIV services funding to where it is needed the most.







By combining surveillance and programmatic efforts, we can more effectively work towards reducing the burden of disease in Chicago and end the HIV epidemic. While we have come a long way in the prevention and treatment of HIV, there is still work to be done. Chicago is faced with the same challenges observed nationally, including racial disparities and a younger population being affected by HIV. In 2020, non-Hispanic (NH) Black individuals represented 55% of new HIV diagnoses, 57% of AIDS diagnoses, and 48% of late HIV diagnoses. Individuals aged 20-29 years old represented 44% of all new HIV diagnoses.<sup>1</sup>

This report provides a detailed picture of behaviors that increase vulnerability to HIV infection and utilization of HIV services among gay, bisexual, and other men who have sex with men (MSM) from the two most recent National HIV Behavioral Surveillance (NHBS) MSM cycles. MSM continue to be the population most affected by the HIV epidemic both locally and nationally.

Using <u>Healthy Chicago 2025</u>, Chicago's public health improvement plan, as a blueprint, CDPH is enhancing efforts to track new HIV diagnoses and develop new and innovative prevention and treatment intervention strategies, reinvigorating our existing programs and services, and stepping up our policy initiatives to make structural changes to the existing service delivery system in Chicago. CDPH's efforts also align with the U.S. Department of Health and Human Services' (HHS) <u>Ending the HIV Epidemic (EHE): A Plan for America</u> and the State of Illinois' <u>Getting to Zero Illinois</u> (<u>GTZ-IL</u>) plan. To accelerate progress toward ending the HIV epidemic, CDPH launched an enhanced HIV Services Portfolio in 2019. The Portfolio includes coordinated and comprehensive services that are status-neutral, meaning services are available to people regardless of their HIV status. The Portfolio provides thousands of residents in the Chicagoland area with medical care and essential supportive services, including housing, emergency financial assistance, and resource navigation. We believe the Portfolio creates new opportunities to reduce HIV transmission, support the health of people with HIV, and accelerate progress toward ending the epidemic in our city and state.

CDPH's mission is working with communities and partners to create an equitable, safe, resilient, and Healthy Chicago.

#### Reference:

#### List of Contributors:

**Chicago Department of Public Health** Syndemic Infectious Disease Bureau

Darlene Nolasco Magana Thomas Clyde Laxmi Modali **Leadership Team** Irina Tabidze

#### **CDPH Executive Team**

Allison Arwady David Kern Jennifer Vidis Additional Contributors Antonio D. Jimenez Nik Prachand Halley LustPhillips Patrick Stonehouse Noor Hasan Monica Kowalcyzk Wei Ning Chi

<sup>1.</sup> Chicago Department of Public Health. HIV+STI Data Report, 2020. Chicago, IL: City of Chicago; September 2022.



#### **Purpose of Report**

The Chicago Department of Public Health (CDPH) analyzed data from the National HIV Behavioral Surveillance (NHBS) system in Chicago to assess sexual behaviors, substance use behaviors, health care and HIV services utilization behaviors, and HIV prevalence among men who have sex with men (MSM). This report summarizes findings from the two most recently completed MSM cycles that took place in 2014 and 2017 and intends to describe the HIV behavioral risk factors of Chicago MSM by race and ethnicity and age.

This report was intended to be published in 2020, however publication was delayed due to the COVID-19 pandemic. There is critical need to disseminate these informative data from the two most recently completed NHBS MSM cycles to highlight trends between the two time points.

## Syndemic Approach

Recognizing the benefits of a syndemic approach, in October 2021, the CDPH HIV/STI Bureau was rebranded as the Syndemic Infectious Disease (SID) Bureau.

The term syndemic was first developed by Merrill Singer in the 1990's and is a combination of synergy and epidemic; where synergy is the interaction of two or more agents that produces a combined effect greater than the sum of their separate efforts. Thus, syndemic is a combination of two or more overlapping epidemics connected through behavior, biology, and social conditions, resulting in an enhanced health burden across a population. A syndemic may be due to a cluster of socioeconomic, demographic, or behavioral factors, and these syndemic drivers may present opportunities for interventions with broad applications.<sup>1,2</sup>

Thus, the syndemic approach is applied in this report through the inclusion of data on social determinants of health, such as education, income, and access to health care along with bio-behavior metrics.



### Healthy Chicago 2025 and Health Equity

In 2020, CDPH released the *Healthy Chicago* 2025<sup>3</sup> plan to serve as a roadmap to advance racial equity to close the 10-year life expectancy gap between Black and White Chicagoans. *Healthy Chicago* 2025 offers a focused, comprehensive approach to leading and working with partners to improve the health and ensure the wellbeing of Chicagoans. *Healthy Chicago* 2025 identifies five drivers of the life expectancy gap: chronic disease; SARS-CoV-2 and other infectious diseases, including HIV; opioid overdose; gunrelated homicide; and infant mortality.

In 2021, CDPH published the data brief, <u>The State</u> of <u>Health for Blacks in Chicago</u><sup>4</sup>, to define, measure, analyze, and discuss health and health equity for Black Chicagoans. The data brief highlights the disparity in HIV prevalence between Black and Non-Black Chicagoans; nearly half of all people with HIV in Chicago are Black, while Black Chicagoans make up less than 30 percent of the city's population. It also acknowledges the historic and current racism in Chicago's institutional and social structures as a contributor to inequities and disproportionate burden of health conditions among Blacks in Chicago, including HIV infection.

Though racial inequity in health outcomes is a historic and ongoing problem in Chicago, the

intensity of disparity in HIV rates among MSM, particularly Black MSM, calls for a sustained and intensified response from the city. CDPH's HIV Services Portfolio is actively implementing the Healthy Chicago 2025 roadmap by increasing comprehensive and culturally appropriate health care including HIV prevention, care, and treatment among populations overburdened by HIV infections, particularly Black and Latinx MSM Chicagoans. Recognizing that Black individuals, and specifically Black MSM, are overburdened by HIV infection, this report includes a section focused on core NHBS indicators among Non-Hispanic Black MSM by age to better understand trends seen between the two data collection cycles.

#### **References:**

- Singer M. Chapter 2: Trucking Between the Bailiwicks. In: Introduction to Syndemics: A Critical Systems Approach to Public and Community Health. San Francisco: Jossey-Bass; 2009:28-29.
- Mendenhall E, Newfield T, Tsai AC. Syndemic theory, methods, and data. Soc Sci Med. 2022;295:114656. doi:10.1016/j. socscimed.2021.114656
- 3. Chicago Department of Public Health. Healthy Chicago 2025: closing our life expectancy gap 2020–2025. Chicago: Chicago Department of Public Health, 2020.
- 4. CDPH Health Equity Index Committee. The State of Health for Blacks in Chicago. City of Chicago, April 2021.



# DATA HGHLGHTS



## **Race and Ethnicity Distribution of NHBS Participants**

**Participation in NHBS project among Non-Hispanic (NH) Black MSM increased** by 15 percentage-points between 2014 and 2017 while **participation among non-Hispanic White MSM decreased** by 16 percentage-points during the same time period.



Men who have sex with men (NHBS-MSM)

## **HIV Testing**



According to the CDC recommendations, all sexually active MSM should be screened for HIV at least annually if HIV status is unknown or negative and the person or their sex partner(s) have had more than one sex partner since most recent HIV test.



## 5

The percentage of MSM reporting being offered an HIV test by a health care provider **increased** by 15% from **55%** in 2014 to **63%** in 2017.





## 3

The percentage of all MSM who reported meeting CDC HIV testing guidelines remained stable between 2014 and 2017 at **64%**.



4

In 2017, among self-reported HIV-negative MSM at the time of interview, **87% of Hispanic/** Latinx MSM reported testing at least once in the past year, the highest rate of any MSM race and ethnicity group.





Among self-reported HIV-negative MSM at the time of interview, the percentage of MSM tested for HIV within the past 12 months **increased by more than 3%** between 2014 and 2017 across all race and ethnicity groups.

#### HIV Prevention Behavioral Factors, Past 12 months

## 7

The percentage of all MSM who received free condoms **decreased by 11 percentage-points** from **80%** in 2014 to **69%** in 2017.



#### 9

Specifically, in 2017, among self-reported HIVnegative participants, NH White MSM had higher rates of PrEP awareness (94%) and use (44%) compared to NH Black (81% and 24%) and Hispanic/Latinx (80% and 31%) MSM.



## 8

Between 2014 and 2017, there were dramatic increases in **pre-exposure prophylaxis (PrEP)** behaviors among self-reported HIV-negative MSM at time of interview:

- PrEP awareness increased by 19%
- PrEP usage increased by 357%

### 10

Participation in group-level interventions among self-reported HIV-negative participants was **reported highest among NH Black MSM** at 17%, almost double the rate of Hispanic/Latinx MSM (10%) and quadruple the rate of NH White MSM (4%) in 2017.



NII black wishi Hispanic/ Latinx wishi Nii winte wis

#### HIV Care Engagement and Retention Among Self-Reported MSM with HIV

#### 11

For both 2014 and 2017, NH Black MSM had a lower rate of taking antiretroviral medication (ARV) at 86% and 90% respectively, compared to Hispanic/Latinx (90% and 100%) and NH White MSM (98% and 100%).



NH Black MSM reported lower rates of engagement in HIV care within three months of diagnosis (66%) and within six months (85%) of NHBS interview compared to Hispanic/Latinx MSM (80% and 88%, respectively) and NH White MSM (79% and 96%, respectively) in 2017.

#### Engagement in HIV Care Within Three and Six Months of Diagnosis by Race and Ethnicity.



## Ever Incarcerated by Race and Ethnicity

13

There was a 2 percentage-point **increase among NH Black MSM** who reported ever being held in prison or jail between 2014 and 2017 and a 5 percentage-point **decrease among Hispanic/ Latinx MSM**.



## Sexual Behavior Factors by Race and Ethnicity and HIV Status

Percent Of MSM Reporting Condomless Anal Sex By Race and Ethnicity and NHBS Test Result Status, 2017



14

Self-reported condomless anal sex with a man in the past 12 months was highest among NH White MSM (81%), followed by Hispanic/Latinx MSM (73%), and NH Black MSM (59%) among MSM with a negative NHBS HIV test result in 2017.

Among participants with a positive NHBS HIV test result in 2017, condomless anal sex with a man in the past 12 months was highest among Hispanic/ Latinx MSM (90%), followed by NH White MSM (80%), and NH Black MSM (60%) in 2017.

Among both positive and negative HIV status participants, **NH Black MSM reported higher rates of engaging in exchanged sex** (gave or received drugs or money for sex) than Hispanic/Latinx and NH White MSM for both 2014 and 2017.

## Location Met Most Recent Casual Sex Partner

In 2017, the most frequently reported **location for meeting their most recent sex partners** was bars/ clubs for both Hispanic/Latinx (35%) and NH White (37%) MSM.

The most frequently reported **location where NH Black MSM met their most recent casual sex partner** was not any one of the surveyed locations, with nearly 27% (2014) and 33% (2017) of participants expressing that they met their most recent sex partner "somewhere else" other than the venue options included in the survey.



15



#### Sexually Transmitted Infections (STI) by Race and Ethnicity

16

From 2014 to 2017, the percentage of MSM who reported being diagnosed with **gonorrhea in the past 12 months increased across all race and ethnicities:** NH Black MSM (5% to 13%), Hispanic/

Latinx MSM (8% to 10%), and NH

White MSM (7% to 15%).

17

From 2014 to 2017, the percentage of MSM who reported being diagnosed with **chlamydia increased for NH Black MSM** (4% to 10%) and **NH White MSM** (3% to 13%) and **decreased for Hispanic/Latinx MSM** (6% to 3%). From 2014 to 2017, the percentage of MSM who reported being diagnosed with **syphilis decreased for NH Black MSM** (10% to 8%), **remained the same for Hispanic/Latinx MSM** (5%) and **increased slightly for NH White MSM** (5% to 6%).

(18)

#### Between 2014 and 2017



## In 2017:

21



NH Black participants had a 2.6 times greater outcome of a NHBS HIV positive test result than Hispanic/Latinx participants, and 3.9 times more than NH White participants.

23

000

000

• 0 •

## 22

NH Black and Hispanic/Latinx MSM reported being held in prison or jail in the past 12 months at a rate five times greater than NH White MSM.



#### 24

Percentage of MSM reporting having some college education was:



#### 25

Percentage of MSM reporting being unhoused in the past 12 months was highest among NH Black MSM.

Percentage of participants reporting an annual

• 0 •

000

000

000

**39%** among NH Black MSM

**38%** among Hispu Latinx MSM

000

68% among NH White MSM

among Hispanic/

000

income of \$50,000 or more:

• O •

• 0 •

• 0 •

• () •

• 0 •

• () •



## 26

NH White MSM were the most likely to have health insurance:



Most MSM reported having health insurance however Hispanic/Latinx MSM were the least likely to have any health care access compared to NH Black and NH White MSM.



## DATA HIGHLIGHTS NON-HISPANIC BLACK MSN



## Social Determinants of Health

## 1

3

4

For each year (2014 and 2017) **young NH Black MSM** (18-29 years of age) reported being unhoused in the past 12 months at a rate more than 3 times that of older NH Black MSM (30 years of age and older).



Among HIV-negative<sup>a</sup> NH Black MSM, individuals **18-to-29 years of age** reported 9 percentage-point **increase** in current health insurance coverage between 2014 and 2017 while those aged **30 years and older** reported a 17 percentage-point **decrease**.

NH Black MSM among both age groups with **HIV-negative**<sup>a</sup> **status** reported a **decrease in visiting a health care provider** by 10 percentage-points within the past 12 months while those with **HIV**<sup>b</sup> **reported an increase** (12% for those 18-29 years old and 6% for those 30+ years of age) between 2014 and 2017.



#### 2

Among both age groups, the rates of being held in prison or jail in the past 12 months and not graduating from high school **increased** between 2014 and 2017.







5

NH Black MSM 30 years and older reported a **decrease in unemployment by 29%** between the two years with a rate of 8.7% reported for 2017.

17

<sup>a</sup>Participants with valid negative NHBS HIV test result.

#### **Sexual Behavior Factors**



**HIV-Negative Status**<sup>a</sup>

Those between 18-29 years of age reported the highest median number of male sex partners at 6 (IQR 7.0) in 2017.

Between 2014 and 2017, condomless anal sex increased among HIV-negative participants of both age categories, with a 5% increase among those 18-29 years of age and an 18% increase among those 30+ years of age.



those 30 years and older.

increase in condomless anal sex between 2014 and 2017



Those 30+ years of age reported the largest increase in median number of male sex partners (from 2 partners in 2014 to 4 partners in 2017).

While the rate of condomless anal sex increased by 20% among 30+ year old participants with HIV, the rate decreased by 25% among 18-29-year-old participants with HIV.



In 2017, MSM aged 30 years and older with HIV reported the highest rate of exchanged sex at 18%, up from 0% in 2014.

#### Location Met Most Recent Sex Partner

8 The percent of NH Black MSM who reported meeting their most recent sex partner on the internet increased for both age groups, increasing from 29% (2014) to 37% (2017) for those 18-29 years old and increasing from 18% (2014) to 24% (2017) for

#### Percent Reporting Meeting Most Recent Sex Partner on the Internet by Age Group



<sup>b</sup>Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing. The terms HIV-positive and with HIV will be used interchangeably.

## **Sexually Transmitted Infections (STIs)**

### 9

Between 2014 and 2017, STI testing in the past 12 months:

- Decreased by 8% from 74% to 66% among NH Black MSM 18-29 years of age.
- Increased by 12% from 47% to 59% among NH Black MSM 30 years of age and older.

#### 10

Between 2014 and 2017:

- Percent of NH Black MSM 18-29 years old who reported being diagnosed with an STI increased for gonorrhea (6% to 27%), chlamydia (9% to 12%), and syphilis (14% to 20%).
- Percent of NH Black MSM 30 years and older who reported being diagnosed with an STI increased for gonorrhea (5% to 9%) and chlamydia (2% to 9%) and decreased for syphilis (7% to 5%).

### **HIV Testing and Prevention**

11

From 2014 to 2017, the percentage of NH Black MSM with an HIV-negative NHBS test result and who tested according to the CDC testing recommendations (at least one HIV test in the past year) increased across both age groups: 86% to 91% among those aged 18-29 years and 62% to 84% among those aged 30 years and older.



#### 12

**Use of PrEP increased significantly** across both age groups: 5% to 48% among those aged 18-29 years and 0% to 21% among those aged 30 years and older between 2014 and 2017.



## HIV Care Behaviors among NH Black MSM with Self-Reported HIV

**90%** of both age groups reported currently taking antiretroviral therapy (ART) in 2017.





Between 2014 and 2017, NH Black MSM ages 30 years and older showed **declining rates** for being in HIV care within three months of diagnosis (**78% to 65%**) and having a recent HIV care visit within six months (**94% to 83%**) of NHBS interview.

#### 19

13



## Background

The National HIV Behavioral Surveillance (NHBS) system was designed to help CDPH and 20 other state and local health departments in areas with high HIV prevalence monitor selected risk behaviors, HIV testing experiences, use of prevention programs, and prevalence in three populations at increased risk for HIV infection: gay, bisexual, and other men who have sex with men (MSM), persons who inject drugs (PWID), and heterosexually active persons at increased risk for HIV infection (HET).<sup>1</sup> NHBS is the primary source of data for monitoring behaviors among populations at risk for HIV infection in Chicago. The behavioral data collected through NHBS along with seroprevalence data help characterize the epidemic among these populations. Findings from NHBS enhance the understanding of HIV risk and testing behaviors and identify gaps in

prevention efforts. NHBS data are used by CDPH to enhance efforts to prevent HIV infection. Thus, NHBS serves as a key component of CDPH's comprehensive and data-driven approach to reducing transmission of HIV in Chicago.

This report summarizes results and trends from the fourth and fifth NHBS data collection cycles among MSM, which were conducted July-December 2014 and July-December 2017, respectively. This report provides descriptive data from these data collection cycles that can be used to track rates of specific risk behaviors, HIV testing, HIV prevalence, unrecognized HIV infection, and participation in prevention programs. Monitoring these data is useful for assessing the proportion of MSM who engage in identified risk behaviors and for recognizing HIV prevention opportunities in this population.

## Methods

NHBS data are collected in annual surveying cycles with one identified vulnerability group per year so that each group is surveyed once every three years. NHBS collection is anonymous as surveyors do not collect participant names or any other personal health identifying information other than birth date and zip code of residence. Eligibility criteria of each of the MSM cycles remained the same: age  $\geq 18$  years, current residence in the metropolitan statistical area, no previous participation or enrollment in the current NHBS cycle, ability to complete the survey in either English or Spanish, and ability to provide informed consent. If participants were unable to coherently respond to questions (i.e., being under the influence of drugs or alcohol at the time of the survey), they were not enrolled. In addition to these basic eligibility criteria, inclusion in the MSM cycle sample for data analysis required persons who reported assignment of male sex at birth and selfidentified as male, regardless of sexual behavior, and had oral or anal sex with at least one male partner in the past 12 months.<sup>2</sup>

For each survey cycle, a standardized questionnaire was used to collect information about behavioral risks for HIV infection, HIV testing, and participant's use of HIV prevention services. The face-to-face survey was administered by a trained interviewer using a handheld computer. A minimum of 500 eligible males were interviewed in each cycle. All participants were offered an anonymous HIV test, which was linked to the survey data though a unique survey identifier. When this surveillance project began, the OraSure® HIV test was used to screen saliva specimens for HIV antibodies. Specimens were tested by EIA and confirmed using Western blot at the Illinois Department of Public Health laboratories. In 2017, the OraQuick rapid HIV test was used to screen saliva specimens for HIV antibodies. Initially reactive specimens were tested by Western blot for confirmation (via OraSure saliva specimen) at the Illinois Department of Public Health laboratories.



#### **Sampling Method**

For both cycles, participants were recruited through time-location sampling methods.<sup>2</sup> The primary steps included identifying venues that were frequented by MSM, determining the best time for sampling at each venue, determining the number of sampling events to be conducted each month, and establishing a protocol for selection and recruitment of men at these venues.

## Identification of Venues Frequented by MSM

In Chicago, project team members familiar with the local community conducted formative research to establish a list of venues frequented by MSM.<sup>3</sup> The team consulted local publications, online media, members of the local MSM community, business owners, staff at community-based organizations, key health department staff, and persons providing medical and social services to MSM to identify possible venues for inclusion in the venue list. Venue based sampling (VBS) is a method for reaching attendees of these identified venues within local communities that has proven successful in obtaining large and diverse samples of MSM. Survey methods of formative assessment are categorized into four primary activities. In the first activity, staff conducts formative assessments to prepare for sampling and recruitment by reviewing scientific, prevention, and commercial literature and interviewing persons knowledgeable about MSM and HIV prevention services. The objectives of these investigations are to identify potential sampling and recruitment barriers and to help construct prevention service measures for the survey. In the second activity, staff assesses each venue to determine which venues are eligible MSM venues ( $\geq$ 50% of attending men are MSM). In the third activity, staff assesses the venues and time periods to determine which have a sufficient number of eligible MSM for conducting NHBS-MSM recruitment and are accessible to NHBS operations. These venues and time periods are then included on the monthly sampling frames used to randomly select venues and day-time periods for recruiting participants. In the fourth activity, men are recruited to participate in NHBS-MSM at randomly selected venues during randomly selected day-time periods. At these recruitment events, staff counts venue attendees, approaches men to ask them to participate in the survey, interviews eligible men, and offers HIV tests.<sup>2</sup>

## **Data Collection**

The men who were selected for recruitment were escorted to a private area in order to begin the full survey and interview. A brief interview was conducted to determine eligibility for NHBS; men who were deemed eligible were invited to participate. Men who accepted the invitation to participate were asked to provide informed consent for the interview. Men who consented to the interview were offered an anonymous HIV test as part of the survey. Trained interviewers conducted in person interviews using handheld computers. Interviews took 45 to 60 minutes to complete and involved questions about demographic characteristics, HIV testing history, sexual and drug use behaviors, hepatitis B testing and vaccination, hepatitis C testing, STI testing and diagnosis, and participant's use of HIV prevention services and programs. For

participation in the sole survey, participants received \$25 in cash. For participants who also consented to the anonymous HIV testing, in which standard CDPH HIV testing and counseling procedures were followed, an additional \$25 in cash was provided to the participant.

#### **Participants**

In 2014, a total of 727 men were approached for participation at 41 venues in Chicago. Of the 727 who were screened for participation in NHBS, 595 (81.8%) were eligible for the survey interview. Of the 595 eligible men, 519 (87.2%) met all required criteria, agreed to participate, and completed the survey interview; 438 of those completing the survey consented to additional testing (84.4%). There were 38 men who declined to complete the study for various reasons, including not having enough time to complete the survey and not wanting to openly talk about survey topics, and 38 men who did not meet all required criteria to be included in study. A total of 519 MSM from the 2014 cycle were included in this analysis.

In 2017, a total of 686 men were approached for participation at 27 venues in Chicago. Of the 686 who were screened for participation in NHBS, 591 (86.2%) were eligible for the survey interview. Of the eligible men, 539 (91.2%) met all required criteria, agreed to participate, and completed the survey interview; 397 of those completing the survey consented to additional testing (73.7%).

#### Venues

Participants were recruited at venues where MSM comprised at least 50% of the attendees. In 2014, the 41 venues that were sampled included: 23 bars

## **Data Analysis**

This report provides an overview of the analysis and surveillance of behavioral indicators for MSM in Chicago. Most of the data collected were analyzed according to age group and race and ethnicity. Non-Hispanic White, Non-Hispanic Black, and Hispanic/Latinx MSM were the main race and ethnicity groups analyzed. Men that reported being a part of other race and ethnicity groups, including American Indian or Alaska Native; Asian, Native Hawaiian or Other Pacific Islander; or Other were also included in the beginning of the analysis but were excluded from the final report due to small sample sizes. All race and ethnicity categories were mutually exclusive to eliminate the potential for participant data of individuals being captured in multiple race and ethnicity categories. The age categories were grouped into two sets: 18 to 29 years old and 30 years and older. Men between 18 and 29 years old at the time of the survey were considered "young" or "youth" for this report.

#### Self-reported HIV status

During the interview, MSM participants were asked if they had ever tested for HIV, if they received the results of their most recent HIV test, (56%), 8 dance clubs (19%), 2 social organizations (5%), 1 street location (2%), 4 sex environments (10%), and 3 other locations (7%).

In 2017, there were 47 venues that were identified for possible sample collection: 26 bars (55%), 7 dance clubs (15%), 4 street locations (9%), 4 sex environments (9%), 3 social organizations (6%), 1 gay pride event (2 %), and 2 other locations (4%).

#### **Data Collection Periods**

Formative research was conducted from January through June of both years in order to gain community support and to identify venues and days and times when MSM frequented these venues. Data collection took place from July through December of each respective year, 2014 and 2017.

and the result of their most recent HIV test. From these questions, the calculated variable of "HIV self-reported test result" was created and used in the data. Self-reported HIV-negative status was used to capture and report HIV preventative behaviors, including awareness and use of pre-exposure prophylaxis (PrEP) among MSM participants who might not have consented to the NHBS HIV test. Additionally, self-reported HIVpositive status was used to capture and report HIV care behaviors among MSM participants who already knew their status at the time of interview and might not have consented to the NHBS HIV test.

#### HIV Prevalence and Unrecognized HIV Infection

All MSM participants that consented to the survey were offered an anonymous HIV test. The NHBS Project sites offered rapid and laboratory-based HIV testing to all participants. A nonreactive rapid test or a negative EIA was considered a definitive negative result. Reactive (preliminary positive) rapid test results or positive EIA were considered definitive positive only when confirmed by Western Blot through additional blood collection.

23

#### **NHBS Test Result**

MSM participants who consented to and took the NHBS HIV test described above were informed of their result. Their result was recorded as the variable "NHBS test result" and used in the data analysis of this report. As the CDC publishes its NHBS reports using the NHBS test result variable, all data stratified by HIV status uses this variable unless otherwise described as "self-reported HIVnegative" or "self-reported HIV-positive."

#### **Social Determinants**

The social determinants of health (SDOH) are the non-medical factors that influence health outcomes. They are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies and political systems.<sup>4</sup> Structural and cultural factors, such as the social and physical environments of the participant, as well as access to health services, create pathways or barriers to one's lifetime attainment of health and well-being. Social determinants, including housing conditions, employment status, education level, income, and other social barriers, can increase vulnerability

for transmission of HIV and other STI. This report examines the rates of homelessness in the past 12 months, any incarceration for more than 24 hours in the participant's lifetime, current employment status, educational attainment, and personal income.

#### Health Care Access and Utilization

Health care access and utilization, another key social determinant, remains an important structural factor to create barriers or pathways to good health.2 MSM participants were asked if they currently have health insurance, a regular source of medical care where they usually go when they are sick or need advice regarding their health, and if they have visited a health care provider in the past 12 months. Participants were also asked whether they had been offered an HIV test by their health care provider during the last 12 months and if they have notified their health care provider of their MSM status. Many lesbian, gay, bisexual, transgender, queer/questioning, and others (LGBTQ+) adults in the U.S. avoid seeking health care due to anticipated or experienced discrimination in health care encounters.<sup>5</sup> Discrimination in health care settings is a preventable health inequity that jeopardizes the health and quality of life LGBTQ+ people.<sup>6</sup>



#### **Sexual Behavior**

MSM that engage in condomless receptive anal sex have the greatest vulnerability for HIV transmission in their demographic.<sup>2,3,7</sup> The NHBS surveyed on anal sex as a combined variable with both insertive and receptive anal sex being included. MSM participants were surveyed on the HIV status of their most recent sex partner, drug and alcohol use before and during most recent sexual encounter, the race and ethnicity of their most recent partner, and their average number of male sex partners in the previous 12 months. MSM participants were also surveyed on the location of where they met their most recent male sex partner. Sexual partner meeting locations included the internet, a chat line, bars and clubs, circuit parties and raves, cruising areas, adult bookstores, bath houses, private sex parties, and other locations.

#### **STI Testing and Diagnosis**

MSM are at increased risk for STIs, which can increase the likelihood of acquiring or transmitting HIV. Current CDC public health recommendations for sexually active MSM include testing at least annually for common STIs, including gonorrhea, chlamydia, and syphilis. The NHBS survey cycles include questions regarding the frequency of testing for gonorrhea, chlamydia, and syphilis. Participants were asked whether they had been tested for each of the three STIs during the 12 months prior to the interview and whether they had been told during the past 12 months by a nurse, physician, or other health care provider that they had an STI.

#### Non-Injection Drug Use

MSM participants were asked about their use of non-injection drugs during the past 12 months. Non-injection drugs included: ecstasy (MDMA), marijuana, poppers (amyl nitrate), and painkillers (including any opioid pain medication such as oxycontin or morphine) taken without a prescription.<sup>2</sup>

#### **HIV Testing and Behavioral Interventions**

The CDC recommends that sexually active MSM be tested for HIV infection at least once annually.<sup>2</sup> Data in this surveillance summary is presented on whether MSM participants had met the CDC guidelines for HIV testing over the past 12 months prior to the survey. Questions around pre-exposure prophylaxis (PrEP) were worded slightly different between 2014 and 2017. In 2014, MSM participants were asked whether they had "ever heard of people who do not have HIV taking anti-HIV medicines, to keep from getting HIV" and whether, in the past 12 months, they had "taken anti-HIV medicines before sex because you thought it would keep you from getting HIV." In 2017, participants were informed that PrEP is an antiretroviral medicine taken for months or years by a person who is HIV-negative to reduce the risk for getting HIV and then asked whether they had ever heard of PrEP and whether, in the past 12 months, they had taken PrEP to reduce the risk of getting HIV.<sup>8</sup> MSM participants were asked about receiving one-on-one discussion about ways to prevent HIV infection with an outreach worker, counselor, or prevention program worker outside of an HIV testing setting in the past 12 months. This was categorized as an individual-level HIV prevention intervention while discussions on ways to prevent HIV through small groups in the past 12 months was categorized as a group-level intervention. Conversations that took place solely as a part of obtaining HIV testing (e.g., pretest or posttest counseling) were not considered HIV behavioral interventions.<sup>1,2</sup>

#### **HIV Care**

MSM participants who self-reported being HIVpositive at the time of interview were asked about their engagement in HIV care. Questions included if participants with HIV (self-reported) were currently taking antiretroviral medication to treat HIV infection, had seen a health care provider for care related to HIV infection within the first three (3) months from their first HIV-positive test result, and if their most recent HIV care visit was within six (6) months of interview.

#### **References:**

- Centers for Disease Control and Prevention. National HIV Behavioral Surveillance System Round 4: Model Surveillance Protocol. December 11, 2015. https://www.cdc.gov/hiv/pdf/ statistics/systems/nhbs/nhbs\_round4modelsurveillanceprotocol. pdf
- Centers for Disease Control and Prevention. National HIV Behavioral Surveillance System Round 5: Model Surveillance Protocol. December 15, 2017. https://www.cdc.gov/hiv/pdf/ statistics/systems/nhbs/NHBS\_Model\_Protocol\_Round5.pdf
- Centers for Disease Control and Prevention. National HIV Behavioral Surveillance System in Men Who Have Sex with Men-Round 4: Formative Research Manual. December 20, 2013. https:// www.cdc.gov/hiv/pdf/statistics/systems/nhbs/nhbs-msm4formativeresearchmanual.pdf
- World Health Organization. (2022, November 8). Social determinants of health. https://www.who.int/health-topics/ social-determinants-of-health#tab=tab\_1

- Casey, Reisner, S. L., Findling, M. G., Blendon, R. J., Benson, J. M., Sayde, J. M., & Miller, C. (2019). Discrimination in the United States: Experiences of lesbian, gay, bisexual, transgender, and queer Americans. Health Services Research, 54(S2), 1454–1466. https://doi. org/10.1111/1475-6773.13229
- Mirza, S.A., Rooney, C. Center for American Progress: Discrimination Prevents LGBTQ People from Accessing Health Care. (2018, January 18). https://www.americanprogress.org/ article/discrimination-prevents-lgbtq-people-accessing-healthcare/
- Chicago Department of Public Health. HIV Risk and prevention Behaviors among Men Who Have Sex with Men, Chicago, 2008 and 2011. Chicago, IL: City of Chicago; December 2012.
- Finlayson T, Cha S, Xia M, et al. Changes in HIV Preexposure Prophylaxis Awareness and Use Among Men Who Have Sex with Men – 20 Urban Areas, 2014 and 2017. MMWR Morb Mortal Wkly Rep 2019;68:597–603. DOI: http://dx.doi.org/10.15585/mmwr. mm6827a1



## DEMOGRAPHICS, RISK, AND PREVENTION BEHAVIORS

HIV INFECTION RISK, PREVENTION, & TESTING BEHAVIORS



#### TABLE 1

## Selected Demographic Characteristics Among Men Who Have Sex with Men-Chicago HIV Behavioral Surveillance, 2014 and 2017.

	2	014	2017			
Demographic Characteristics	N	(%)	N	(%)		
AGE GROUP <sup>†</sup>						
18-24	73	14.1	47	8.7		
25-29	110	21.2	111	20.6		
30-39	162	31.2	169	31.4		
40-49	92	17.7	109	20.2		
50+	82	15.8	103	19.1		
RACE/ETHNICITY^						
NH American Indian/Alaska Native	<5	<1.0	<5	<1.0		
NH Asian/Pacific Islander	11	2.1	16	3.0		
NH Black	92	17.7	179	33.2		
Hispanic/Latinx	110	21.2	121	22.5		
NH White	277	53.4	204	37.9		
Other/Multiple races	25	4.8	15	2.8		
Missing	<5	<1.0	<5	<1.0		
EDUCATION						
Did not graduate high school	8	1.5	10	1.9		
High school graduate	63	12.1	67	12.4		
Some college or greater	448	86.3	462	85.7		
ANNUAL INCOME (\$)						
≤ \$19,99 <b>9</b>	97	18.7	113	21.0		
\$20,000-\$49,999	159	30.6	151	28.0		
≥\$50,000	262	50.5	271	50.3		
Missing	<5	<1.0	<5	<1.0		
TOTAL	519	100.0	539	100.0		

<sup>†</sup>Age at time of interview, in years.

^NH=Non-Hispanic. Other/multiple races indicates more than one race and ethnicity identified.

#### Age Group

Most MSM participants were between 30-39 years of age, representing 31% for both 2014 and 2017. In 2014, the next largest age group was 25-29 years of age at 21%. In 2017, age groups 25-29 years of age and 40-49 years of age both made up around 20%.

#### **Race and Ethnicity**

The race and ethnicity distribution of the surveyed MSM population in 2017 differs from 2014 as NH Black MSM participation nearly doubled and NH White participation decreased by 29% (15.5 percentage-points). NH American Indian/Alaska Native MSM comprised the lowest percentage of participants in both years of data collection, representing less than 1% of participants. NH Black MSM saw the greatest increase in the race and ethnicity distribution of participants, increasing from 18% in 2014 to 33% in 2017. This was due to enhanced prioritization of venues frequented by NH Black MSM. Between 2014 and 2017, the distribution of Hispanic/Latinx participants slightly increased by two (2) percentage-points. NH White MSM comprised the largest percentage of participants in both 2014 and 2017, though this rate decreased by 29% between survey cycles.

#### **Education and Annual Income**

In both 2014 and 2017, 86% of MSM participants reported having an education level of some college or greater, and around 50% reported having an annual income level of \$50,000 or greater.

#### TABLE 2 Selected Behavioral Factors, Past 12 Months, Among Men Who Have Sex with Men—Chicago HIV Behavioral Surveillance, 2014 and 2017.

	21 (N=	014 519)	2 (N=	017 =539)
Behavioral Factors	N	%	N	%
Condomless male-male anal sex	338	65.1	364	67.5
More than 1 male sex partner	433	83.4	438	81.3
Used non-injection drug(s)	321	61.9	249	46.2
Health care provider offered HIV test	284	54.7	338	62.7
Tested for HIV infection	334	64.4	344	63.8
Received result of most recent test	329	63.4	334	62.0
Tested for STI by doctor or other health care provider	296	57.0	330	61.2
Received free condoms	417	80.4	372	69.0
Participated in individual HIV behavioral intervention	127	24.5	154	28.6
Participated in group HIV behavioral intervention	51	9.8	60	11.1

#### **Behavioral Factors in the Past 12 Months**

Between 2014 and 2017, there was a slight increase in the rate of condomless male-male anal sex, reported between 2014 (65%) and 2017 (68%). During 2017, slightly more than 81% reported having more than one male sex partner, less than the recorded data in 2014. Non-injection drug use decreased by nearly 25% (16 percentagepoints) between 2014 and 2017. The proportion of participants who had tested for HIV remained similar at 64%. Between 2014 and 2017, the utilization of STI testing increased by four (4) percentage-points. Fewer MSM reported receiving free condoms in 2017 compared to 2014, a decrease of 14% (11 percentage-points) over three years. Participation in both individual and group HIV behavioral interventions increased slightly between 2014 and 2017. Specifically, there was a four (4) percentage-point (14%) increase in MSM who participated in individual HIV behavioral interventions and a one percentage-point increase in MSM who participated in group behavioral interventions.

#### TABLE 3

Selected Demographic Characteristics by NHBS HIV Test Result Status Among Men Who Have Sex with Men—Chicago HIV Behavioral Surveillance, 2014 and 2017.

	2( (N=	014 ÷519)	2017 (N=539)			
	N	%	N	%		
HIV-negative <sup>a</sup> Total	343	66.1	295	54.7		
AGE GROUP <sup>†</sup>						
18-24	60	11.6	35	6.5		
25-29	79	15.2	74	13.7		
30-39	112	21.6	95	17.3		
40-49	50	9.6	54	10.0		
50+	42	8.1	37	6.9		
RACE/ETHNICITY^						
NH American Indian/Alaska Native	<5	<1.0	<5	<1.0		
NH Asian/Pacific Islander	7	1.4	10	1.9		
NH Black/African American	48	9.3	59	10.9		
Hispanic/Latinx	74	14.3	74	13.7		
NH White	195	37.6	138	25.6		
Other/Multiple races	15	2.9	11	2.0		
HIV-positive <sup>b</sup> Total	86	16.6	98	18.2		
AGE GROUP <sup>†</sup>						
18-24	8	1.5	5	<1.0		
25-29	14	2.7	14	2.6		
30-39	24	4.6	32	5.9		
40-49	22	4.2	21	3.9		
50+	18	3.5	26	4.8		
RACE/ETHNICITY^						
NH American Indian/Alaska Native	-	-	-	-		
NH Asian/Pacific Islander	-	-	<5	<1.0		
NH Black/African American	26	5.0	58	10.8		
Hispanic/Latinx	20	3.9	22	4.1		
NH White	33	6.4	15	2.8		
Other/Multiple Races	7	1.4	<5	<1.0		
Did not consent to HIV testing	81	15.6	142	26.4		
No valid NHBS HIV test result	9	1.7	4	<1.0		

\*Note: for all dash (-) responses, data reported was 0.

<sup>a</sup>Participants with a valid negative NHBS HIV test result.

<sup>b</sup>Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing. The terms HIV-positive and with HIV will be used interchangeably.

 $^{\dagger}\!Age$  at time of interview, in years.

 $\mathbb{N}H=Non-Hispanic.$  Other/multiple races indicates more than one race and ethnicity identified.

#### Demographic Characteristics by NHBS HIV Test Result

The age distribution of HIV-negative participants differed slightly between 2014 and 2017 with the proportion decreasing in almost all age categories in 2017. MSM with positive HIV test results remained relatively similar between the 2014 and 2017 data collection cycles. Percentages of the total sample collection represented through two age groups are presented on the following page.

#### FIGURE 1 Proportion of MSM Participants with a Negative NHBS HIV Test Result by Age Group and Year of Cycle.



FIGURE 2

#### Proportion of MSM Participants with a Positive NHBS HIV Test Result by Age Group and Year of Cycle.



The race and ethnicity distribution of HIV-negative MSM remained relatively similar between the two data collection cycles, though there was a 12 percentage-point decrease in the proportion of NH White MSM receiving a negative result from the NHBS HIV test. Among MSM with a positive NHBS HIV test result, NH Black MSM increased by almost six (6) percentage-points while the proportion of NH White MSM decreased between 2014 and 2017 and the proportion of Hispanic/Latinx MSM remained stable. Of note, in 2017 NH Black participants had more than two (2) times greater outcome of a NHBS HIV positive test result than Hispanic/Latinx participants and more than three (3) times more than NH White participants. Percentages of the four largest race and ethnicity groups are presented on the next page.

#### FIGURE 3

Proportion of MSM Participants with a Negative NHBS HIV Test Result by Race and Ethnicity and Year of Cycle.



FIGURE 4

Proportion of MSM Participants with a Positive NHBS HIV Test Result by Race and Ethnicity and Year of Cycle.



\*Other category includes MSM identifying as other or multiple race and ethnicities. Because Non-Hispanic American Indian/Alaskan Native and Non-Hispanic Asian/ Pacific Islander MSM accounted for less than 5% of all MSM participants for both years, they were excluded from data stratified by race and ethnicity.

As Non-Hispanic Black MSM, Hispanic/Latinx MSM, and Non-Hispanic White MSM made up most participants for both 2014 and 2017, the subsequent data focuses on these three groups.

#### TABLE 4

#### Selected Demographic Characteristics Among Men Who Have Sex with Men by Race and Ethnicity—Chicago HIV Behavioral Surveillance, 2014 and 2017.

		NH B	lack			Hispanic	c/Latinx		NH White			
	21 (N⊧	014 =92)	2 (N=	2017 (N=179)		2014 (N=110)		2017 (N=121)		2014 (N=277)		017 :204)
Demographic Characteristics	N	%	N	%	N	%	N	%	N	%	N	%
AGE GROUP <sup>†</sup>												
18-29	35	38.0	41	22.9	48	43.6	56	46.3	85	30.7	47	23.0
30-39	21	22.8	55	30.7	40	36.4	38	31.4	84	30.2	67	32.8
40-49	18	19.6	38	21.2	16	14.6	20	16.5	54	19.5	41	20.1
50+	18	19.6	45	25.1	6	5.5	7	5.8	54	19.5	49	24.0
EDUCATION												
High school graduate or less	22	23.9	34	19.0	22	20.0	24	19.8	21	7.6	16	7.8
Some college or more	70	76.1	145	81.0	88	80.0	97	80.2	256	92.4	188	92.2
ANNUAL INCOME (\$)												
≤ \$19,99 <b>9</b>	34	37.0	55	30.7	31	28.2	28	23.1	24	8.7	18	8.8
\$20,000-\$49,999	29	31.5	52	29.1	40	36.4	45	37.2	75	27.1	47	23.0
≥\$50,000	29	31.5	70	39.1	38	34.6	46	38.0	178	64.3	139	68.1

†Age at time of interview, in years.

#### **Demographics by Race and Ethnicity**

While MSM 18-29 years old represented the largest age group of participants in 2014 across all race and ethnicity groups, the age distribution of participants shifted in 2017. While 18-29 years old MSM remained the largest participating group among Hispanic/Latinx MSM in 2017, the 30-39 age group comprised the largest percentage of NH Black and NH White MSM. The number of participating NH White MSM also decreased significantly between 2014 and 2017, due to intentional efforts to increase the sample size among NH Black MSM. The highest rates of some college or more in 2017 were among NH White MSM, followed by NH Black, and Hispanic/Latinx MSM. The highest proportion of participants reporting annual incomes under \$20,000 was seen among NH Black MSM in both 2014 (37%) and 2017 (30.7%). In both 2014 and 2017, the highest proportion of participants reporting annual incomes of \$50,000 or more was seen in NH White MSM (64.3% and 68.1%, respectively).

#### TABLE 5

#### Selected Social Determinants of Health (SDOH) Factors Among Men Who Have Sex with Men by Race and Ethnicity—Chicago HIV Behavioral Surveillance, 2014 and 2017.

		NH Black				Hispani	c/Latin	Х	NH White			
	2 (N	2014 (N=92)		2017 (N=179)		2014 (N=110)		2017 (N=121)		2014 (N=277)		017 204)
SDOH Factors	N	%	N	%	N	%	N	%	N	%	N	%
Homeless in the past 12 months	7	7.6	16	8.9	7	6.4	<5	3.3	<5	<1.0	6	2.9
Ever held in prison or jail	23	25.0	49	27.4	20	18.2	16	13.2	28	10.1	23	11.3
Held in prison or jail in the past 12 months	<5	4.4	9	5.0	9	8.2	6	5.0	<5	1.1	<5	<1.0
Did not graduate high school	<5	2.2	9	5.0	<5	3.6	<5	<1.0	<5	<1.0	0	0.0
Living in poverty (according to household size)	28	30.4	42	23.5	23	20.9	23	19.0	9	3.3	11	5.4

#### Social Determinant of Health Factors by Race and Ethnicity

Recent homelessness was more common among NH Black MSM than their Hispanic/Latinx or NH White counterparts in both 2014 and 2017. Between 2014 and 2017, this rate increased by 1.3 percentage-points (17%) among NH Black MSM. The rates of lifetime experience in prison or jail increased 2.4 percentage-points for NH Black MSM and 1.2 percentage-points for NH White MSM while decreasing five percentage-points among Hispanic/ Latinx MSM between 2014 and 2017. With regards to being held in prison or jail within the past 12 month at the time of interviewing, Hispanic/Latinx MSM reported the highest rate in 2014 with a 3.2 percentage-point decrease reported in 2017. NH White MSM reported the lowest rates across all race and ethnicity groups for both 2014 and 2017. While Hispanic/Latinx MSM had the highest rate of participants who did not graduate high school in 2014, NH Black MSM had the highest rate in this category in 2017. NH White MSM reported the lowest rates of having not graduated high school in both 2014 and 2017. Poverty most affected the NH Black MSM population in both 2014 and 2017 but decreased from approximately 30% in 2014 to nearly 24% in 2017.

#### TABLE 6

#### Health Care Access and Utilization Among Men Who Have Sex with Men by Race and Ethnicity—Chicago HIV Behavioral Surveillance, 2014 and 2017.

		NH	Black			Hispani	c/Latiı	пх	NH White			
	2 (N	2014 (N=92)		2017 (N=179)		2014 (N=110)		2017 (N=121)		2014 (N=277)		017 :204)
Characteristics	N	%	N	%	N	%	N	%	N	%	N	%
Currently have health insurance	81	88.0	156	87.2	81	73.6	95	78.5	245	88.5	189	92.7
Have a regular source of medical care	74	80.4	166	92.7	82	74.6	96	79.3	230	83.0	180	88.2
Visited health care provider in last 12 months	80	87.0	158	88.3	91	82.7	102	84.3	245	88.5	185	90.7
Health care provider offered HIV test§	59	64.1	114	63.7	59	53.6	76	62.8	146	52.7	130	63.7
"Out" to health care provider	76	82.6	151	84.4	85	77.3	99	81.8	247	89.2	189	92.7

<sup>§</sup>Among those who had visited a health care provider in the last 12 months.

## Health Care Access and Utilization by Race and Ethnicity

In both 2014 and 2017, more than three-quarters of NH Black, Hispanic/Latinx, and NH White MSM had a regular source of medical care, had visited a health care provider in the last 12 months, and were "out" to their health care provider. More than 87% of NH Black and NH White MSM had health insurance in 2014 and 2017, while slightly fewer Hispanic/Latinx MSM had health insurance (74% in 2014 and 79% in 2017). Between 2014 and 2017, the percentage of MSM reporting having a regular source of medical care increased across all race and ethnicity categories. In 2017, NH Black MSM were most likely to have a regular source of medical care, with a 12 percentage-point (15.3%) increase from 2014 to 2017. In 2014 NH Black MSM were most likely to be offered HIV testing by their health care provider than any other group (64%). By 2017 all race and ethnicity groups had a similar rate of being offered an HIV test by a provider, at around 64%. For NH Black MSM, this rate was maintained between 2014 and 2017, but increased nine percentage-points for Hispanic/Latinx MSM and 11 percentage-points for NH White MSM.

#### TABLE 7

Sexual Behavior Factors, Past 12 Months, by NHBS HIV Test Result Status Among Men Who Have Sex with Men by Race and Ethnicity—Chicago HIV Behavioral Surveillance, 2014 and 2017.

		NH B	llack			Hispani	c/Lati	nx	NH White			
	2 (N	014 =92)	2 (N:	017 =179)	2 (N	014 =110)	2 (N	:017 =121)	2 (N=	014 =277)	2 (N=	017 :204)
Sexual Behavior Factors	N	%	N	%	N	%	N	%	N	%	N	%
HIV-negative <sup>a</sup> Total	48	52.2	59	33.0	74	67.3	74	61.2	195	70.4	138	67.7
Number of male partners (median, IQR)	4.5	, 8.0	4.0	), 7.0	4.0	, 6.0	4.0	, 10.0	5.0	, 8.0	6.0	, 15.0
TYPE OF MALE SEX PARTNERS												
Main only	7	14.6	14	23.7	8	10.8	18	24.3	39	20.0	18	13.0
Main and casual	21	43.8	26	44.1	45	60.8	38	51.4	85	43.6	81	58.7
Casual only	20	41.7	19	32.2	21	28.4	18	24.3	71	36.4	39	28.3
Condomless anal sex with male partner	27	56.3	35	59.3	48	64.9	54	73.0	124	63.6	112	81.2
Exchanged sex (gave or received something)	7	14.6	9	15.3	10	13.5	<5	2.7	9	4.6	<5	1.5
HIV status of most recent sex partner unknown	18	37.5	17	28.8	26	35.1	19	25.7	58	29.7	39	28.3
HIV-positive <sup>b</sup> Total	26	28.3	58	32.4	20	18.2	21	17.5	33	11.9	15	7.4
Number of male partners (median, IQR)	2.0	), 1.0	3.0	, 6.0	4.0	, 20.0	8.0	), 8.0	10.0	, 22.0	5.0	, 17.0
TYPE OF MALE SEX PARTNERS												
Main only	12	46.2	12	20.7	<5	10.0	<5	13.6	<5	9.1	-	-
Main and casual	5	19.2	21	36.2	10	50.0	12	54.6	21	63.6	8	53.3
Casual only	9	34.6	25	43.1	8	40.0	7	31.8	9	27.3	7	46.7
Condomless anal sex with male partner	15	57.7	35	60.3	14	70.0	20	90.1	28	84.9	12	80.0
Exchanged sex (gave or received something)	<5	3.9	10	17.2	<5	5.0	<5	4.6	<5	6.1	<5	6.7
HIV status of most recent sex partner unknown	8	30.8	22	37.9	4	21.1	6	28.6	5	15.2	<5	26.7

\*Note: for all dash (-) responses, data reported was zero (0).

<sup>a</sup>Participants with a valid negative NHBS HIV test result.

<sup>b</sup>Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing. The terms HIV-positive and with HIV will be used interchangeably.

#### Sexual Behavior Factors by HIV Status and Race and Ethnicity

NH White MSM, regardless of HIV status, reported the greatest number of sexual partners in 2014 and 2017. Among HIV-negative MSM, participants across all race and ethnicity groups reported having both main and casual male sex partners in both 2014 and 2017, and decreases in casual-only partners were observed for all HIV-negative MSM between the two time periods. Among MSM with HIV in 2017, NH Black and NH White MSM reported higher rates of casual-only sex partners than reported in 2014.

Condomless anal sex with any type of male sex partner, casual and/or main, increased for all MSM regardless of HIV status between 2014 and 2017, with the exception of NH White MSM with HIV, which declined slightly from 85% to 80%. The highest percentage-point increases in condomless anal sex between 2014 and 2017 were among HIVnegative NH White MSM with an 18-point increase and Hispanic/Latinx MSM with HIV with a 20-point increase.

NH Black MSM, regardless of HIV status, reported the highest rates of exchanged sex in 2017. Among all MSM, the greatest increase in reported exchanged sex between 2014 and 2017 was observed among NH Black MSM with HIV (13 percentagepoints), and the greatest decrease was observed among HIV-negative Hispanic/Latinx MSM (11 percentage-points).

More than one-quarter of MSM, regardless of HIV status, did not know the status of their most recent sexual partner in 2017, with rates decreasing for all HIV-negative MSM and increasing for all MSM with HIV between 2014 and 2017.

#### TABLE 8

#### Location Met Most Recent Male Sex Partner Among Men Who Have Sex with Men by Race and Ethnicity—Chicago HIV Behavioral Surveillance, 2014 and 2017.

	lack			Hispanio	c/Latinx		NH White					
	2014 (N=92)		2017 (N=179)		2014 (N=110)		2017 (N=121)		2014 (N=277)		2017 (N=204)	
Location	N	%	N	%	N	%	N	%	N	%	N	%
Internet	20	21.7	48	26.8	39	35.5	37	30.6	95	34.3	73	35.8
Chat line	<5	2.7	5	2.8	<5	<1.0	<5	3.3	<5	1.4	<5	<1.0
Bar/Club	22	23.9	52	29.1	30	27.3	42	34.7	67	24.2	76	37.3
Circuit party or rave	-	-	<5	1.1	<5	1.8	-	-	<5	<1.0	<5	<1.0
Cruising area	<5	1.1	8	4.5	<5	2.7	-	-	<5	<1.0	<5	<1.0
Adult bookstore	-	-	<5	<1.0	-	-	<5	1.7	-	-	-	-
Bath house, sex club, or sex resort	<5	2.2	<5	2.2	<5	1.8	5	4.1	10	3.6	9	4.4
Private sex party	-	-	-	-	-	-	<5	<1.0	-	-	<5	<1.0
Somewhere else	25	27.2	59	33.0	21	19.1	30	24.8	48	17.3	40	19.6

\*Note: for all dash (-) responses, data reported was zero (0).

#### Location Where MSM Met Most Recent Male Sex Partners by Race and Ethnicity

Of all surveyed locations for meeting recent sex partners, bars and clubs were the most frequently reported location for Hispanic/Latinx and NH White MSM in 2017, followed by the Internet. Among NH Black MSM, the method of meeting sex partners with the most frequently reported usage was not any one of the surveyed locations, with nearly 27% (2014) and 33% (2017) of participants expressing that they met their most recent sex partner "somewhere else," followed by bars and clubs. Less than 5% of participants reported meeting their most recent sex partners through chat lines; circuit parties or raves; cruising areas; adult bookstores; bath houses, sex clubs, or sex resorts; or private sex parties.

#### TABLE 9

#### Sexually Transmitted Infections (STI) Testing and Diagnosis, Past 12 Months, Among Men Who Have Sex with Men by Race and Ethnicity— Chicago HIV Behavioral Surveillance, 2014 and 2017.

		NH B	llack			Hispanio	:/Latinx		NH White			
	20 (N=	14 92)	2017 (N=179)		2014 (N=110)		2017 (N=121)		2014 (N=277)		20 (N=)	)17 204)
Testing and Diagnosis	N	%	N	%	N	%	N	%	N	%	N	%
Lifetime genital herpes	<5	2.2	13	7.3	<5	2.7	<5	2.5	17	6.1	20	9.8
Tested for STI	53	57.6	108	60.3	65	59.1	64	52.9	159	57.4	136	66.7
Diagnosed gonorrhea	5	5.4	24	13.4	9	8.2	12	9.9	19	6.9	30	14.7
Diagnosed chlamydia	<5	4.4	17	9.5	7	6.4	4	3.3	7	2.5	26	12.8
Diagnosed syphilis	9	9.8	15	8.4	5	4.6	6	5.0	15	5.4	13	6.4

## Sexually Transmitted Infections by Race and Ethnicity

NH White MSM reported the highest rate of lifetime genital herpes among all race and ethnicity groups, increasing from 6% in 2014 to 10% in 2017. In comparison, Hispanic/Latinx MSM had the lowest rate of lifetime genital herpes, with the same rate of less than 3% in both 2014 and 2017. In 2017, NH White MSM reported the highest rates of recent STI testing in the last 12 months followed by NH Black MSM and Hispanic/Latinx MSM. Among NH Black MSM participants in 2017, 13.4% reported being diagnosed with gonorrhea in the last 12 months, 9.5% with chlamydia in the last 12 months, and 8.4% with syphilis in the last 12 months. Among Hispanic/Latinx MSM participants in 2017, 10% reported being diagnosed with gonorrhea in the last 12 months, 3.3% with chlamydia in the last 12 months, and 5% with syphilis in the last 12 months. Among NH White MSM participants in 2017, 14.7% reported being diagnosed with gonorrhea in the last 12 months, 12.8% with chlamydia in the last 12 months, and 6.4% with syphilis in the last 12 months. Gonorrhea diagnoses increased for all groups between 2014 and 2017.

#### TABLE 10

Non-Injection Drug Use, Past 12 Months, Among Men Who Have Sex with Men by Race and Ethnicity—Chicago HIV Behavioral Surveillance, 2014 and 2017.

		NH B	lack			Hispanic	/Latinx		NH White			
	20 (N=	114 92)	2 (N=	2017 (N=179)		2014 (N=110)		017 =121)	2014 (N=277)		2017 (N=204)	
Non-Injection Drug	N	%	N	%	N	%	N	%	N	%	N	%
Any non-injection drug use	53	57.6	71	39.7	69	62.7	46	38.0	172	62.1	111	54.4
Ecstasy	7	7.6	13	7.3	17	15.5	6	5.0	46	16.6	23	11.3
Methamphetamine	<5	2.2	6	3.4	6	5.5	<5	<1.0	27	9.8	9	4.4
Painkillers	<5	4.4	7	3.9	6	5.5	<5	1.7	29	10.4	10	4.9
Powdered cocaine	9	9.8	20	11.2	22	20.0	18	14.8	52	18.8	35	17.2
Poppers	23	25.0	25	14.0	40	36.4	32	26.5	124	44.8	62	30.4
Crack cocaine	<5	3.3	<5	2.2	<5	3.6	<5	3.3	10	3.6	12	5.9
Marijuana	44	47.8	69	38.6	59	53.6	43	35.5	136	49.1	96	47.1
Heroin, smoked or snorted	<5	2.2	<5	1.1	<5	2.7	-	-	<5	<1.0	<5	<1.0
Downers (benzos)	<5	3.3	9	5.0	10	9.1	<5	3.3	31	11.2	16	7.8

\*Note: for all dash (-) responses, data reported was zero (0).

#### Non-Injection Drug Use by Race and Ethnicity

Overall, non-injection drug use among the surveyed MSM population decreased between 2014 and 2017. NH White MSM reported the highest rate of non-injection drug use in 2017, but the rate decreased in this group from 62% in 2014 to 54% in 2017. Marijuana use was reported highest of all surveyed drugs across all race and ethnicity groups of MSM. NH White MSM reported the highest rate of marijuana use at 47% in 2017. Poppers, stimulating and liquid inhalants, were the second most used non-injection drug across all race and ethnicity groups, with NH White MSM reporting the highest use at 30% in 2017. Among NH Black MSM, data show low usage but slight increases in use of methamphetamine, powdered cocaine, and downers (benzos), such as Valium, Ativan, and Xanax between 2014 and 2017. Among NH White MSM, data show low usage but a slight increase in use of crack cocaine between 2014 and 2017. Hispanic/Latinx MSM reported decreases in use of all non-injection drugs.

#### TABLE 11

Selected Demographic Characteristics and HIV Prevention Behavioral Factors Among Men Who Have Sex with Men by Self-reported HIVnegative and NHBS-tested HIV-negative<sup>a</sup> Status—Chicago HIV Behavioral Surveillance, 2014 and 2017.

	Self-reported HIV-negative					NHBS-tested HIV-Negative <sup>a</sup>				
	2( (N=	)14 403)	2( (N=	D17 397)	20 (N=	)14 343)	2( (N=	D17 295)		
Characteristics	N	%	N	%	N	%	N	%		
AGE GROUP <sup>†</sup>										
18-24	57	14.1	41	10.3	60	17.5	35	11.9		
25-29	94	23.3	87	21.9	79	23.0	74	25.1		
30-39	131	32.5	133	33.5	112	32.7	95	32.2		
40-49	67	16.6	73	18.4	50	14.6	54	18.3		
50+	54	13.4	63	15.9	42	12.2	37	12.5		
RACE/ETHNICITY^										
NH American Indian/Alaska Native	<5	<1.0	<5	<1.0	<5	<1.0	<5	<1.0		
NH Asian/Pacific Islander	11	2.7	13	3.3	7	2.0	10	3.4		
NH Black	63	15.6	115	29.0	48	14.0	59	20.0		
Hispanic/Latinx	82	20.4	84	21.2	74	21.6	74	25.1		
NH White	225	55.8	170	42.8	195	56.9	138	46.8		
Other/Multiple races	18	4.5	12	3.0	15	4.4	11	3.7		
ANNUAL INCOME (\$)										
≤ \$19,999	63	15.6	73	18.4	61	17.8	51	17.3		
\$20,000-\$49,999	118	29.3	109	27.5	107	31.2	83	28.1		
≥ \$50,000	221	54.8	212	53.4	174	50.7	158	53.6		
EDUCATION		÷	2		÷		2			
Did not graduate high school	<5	<1.0	8	2.0	<5	<1.0	4	1.4		
High school graduate	42	10.4	39	9.8	39	11.4	28	9.5		
Some college or greater	359	89.1	350	88.2	302	88.1	263	89.2		
Currently have health insurance	339	84.1	345	86.9	282	82.2	248	84.1		
Health care visit, past 12 months	344	85.4	343	86.4	286	83.4	251	85.1		
Received free condoms, past 12 months	331	82.1	263	66.3	282	82.2	204	69.2		
HIV tested in the past 12 months	322	79.9	329	82.9	260	75.8	237	80.3		
Aware of PrEP <sup>v</sup>	292	72.5	342	86.2	248	72.3	255	86.4		
Used PrEP, past 12 months	30	7.4	134	33.8	25	7.3	104	35.3		
PrEP SOURCE										
Doctor or health care provider	39	9.7	131	33.0	34	9.9	101	34.2		
Sex partner or friend	<5	<1.0	8	2.0	<5	<1.0	7	2.4		
Other source	-	-	<5	<1.0	-	-	<5	<1.0		
Participated in individual HIV behavioral intervention	96	23.8	106	26.7	75	21.9	76	25.8		
Participated in group HIV behavioral intervention	30	7.4	36	9.1	32	9.3	24	8.1		

\*Note: for all dash (-) responses, data reported was zero (0).

<sup>a</sup>Participants with a valid negative NHBS HIV test result.

 $^{\dagger}\!Age$  at time of interview, in years.

^NH=Non-Hispanic. Other/multiple races indicates more than one race and ethnicity identified.

<sup>v</sup>PrEP= Pre-exposure prophylaxis.

#### HIV Prevention Behavioral Factors by Self-reported and NHBStested HIV-negative Status

Table 11 displays both self-reported HIVnegative status at the time of interview and NHBS test result of HIV-negative obtained after the interview. This was done to capture behavioral data around HIV prevention among those who self-reported an HIV-negative status during the interview but obtained a NHBS HIV test result of positive status through HIV testing immediately following the interview.

The rates for currently having health insurance and having a health care visit within the past 12 months was similar between self-reported and NHBS-tested HIV-negative participants for both years. HIV-negative participants reported a considerable decrease in receiving free condoms between 2014 and 2017, with self-reported HIVnegative participants reporting a 16 percentagepoint decrease during this time frame. In 2017, those who self-reported HIV-negative status and those who tested negative during the NHBS study both reported increases in HIV testing in the last 12 months. The proportion of participants who were aware of pre-exposure prophylaxis (PrEP) were the same across self-reported and NHBS-tested HIV-negative participants for each respective year. However, between the two years and among both groups, the proportion of participants who were aware of PrEP increased an average of 14 percentage-points. The proportion of HIV-negative participants who used PrEP was similar between the two groups for each year. However, PrEP use substantially increased (~4.6 times) between 2014 and 2017. In both 2014 and 2017, participants' source of PrEP was overwhelmingly from a doctor or other health care provider. Participation in individual HIV behavioral interventions increased slightly between 2014 and 2017 for both selfreported and NHBS-tested HIV-negative MSM, and participation in group HIV behavioral interventions increased slightly for self-reported HIV-negative participants an decreased slightly for NHBS-tested HIV-negative participants.



#### TABLE 11A

#### Selected Demographic Characteristics and HIV Prevention Behavioral Factors Among Self-reported HIV-negative Men Who Have Sex with Men by Race and Ethnicity—Chicago HIV Behavioral Surveillance, 2014 and 2017.

	NH Black			Hispanic/Latinx				NH White				
	2 (N:	014 =63)	2 (N:	017 =115)	2) (N=	014 =82)	2( (N=	D17 =84)	2) (N=	014 225)	2( (N=	017 :170)
Characteristics	N	%	N	%	N	%	N	%	N	%	N	%
AGE GROUP <sup>†</sup>												
18-24	11	17.5	11	9.6	21	25.6	17	20.2	18	8.0	10	5.9
25-29	14	22.2	18	15.7	20	24.4	25	29.8	53	23.6	34	20.0
30-39	16	25.4	38	33.0	31	37.8	27	32.1	71	31.6	62	36.5
40-49	11	17.5	22	19.1	8	9.8	12	14.3	44	19.6	31	18.2
50+	11	17.5	26	22.6	2	2.4	3	3.6	39	17.3	33	19.4
ANNUAL INCOME (\$)												
≤ \$19,999	19	30.2	32	27.8	19	23.2	18	21.4	20	8.9	13	7.7
\$20,000-\$49,999	17	27.0	31	27.0	31	37.8	33	39.3	57	25.3	39	22.9
≥ \$50,000	27	42.9	50	43.5	31	37.8	32	38.1	148	65.8	118	69.4
EDUCATION												
Did not graduate high school	< 5	1.6	8	7.0	< 5	1.2	-	-	-	-	-	-
High school graduate	11	17.5	14	12.2	14	17.1	14	16.7	13	5.8	9	5.3
Some college or greater	51	81.0	93	80.9	67	81.7	70	83.3	212	94.2	161	94.7
Currently have health insurance	56	88.9	98	85.2	58	70.7	70	83.3	198	88.0	158	92.9
Health care visit, past 12 months	54	85.7	94	81.7	66	80.5	70	83.3	196	87.1	155	91.2
Received free condoms, past 12 months	52	82.5	76	66.1	71	86.6	57	67.9	181	80.4	109	64.1
HIV tested in the past 12 months	47	74.6	93	80.9	64	78.1	73	86.9	184	81.8	144	84.7
Aware of $PrEP^{v}$	35	55.6	93	80.9	52	63.4	67	79.8	179	79.6	160	94.1
Used PrEP, past 12 months	< 5	1.6	28	24.4	6	7.3	26	31.0	19	8.4	74	43.5
PrEP SOURCE												
Doctor or health care provider	< 5	4.8	28	24.4	6	7.3	25	29.8	25	11.1	72	42.4
Sex partner or friend	-	-	< 5	1.7	< 5	1.2	-	-	< 5	< 1.0	6	3.5
Other source	-	-	-	-	-	-	< 5	1.2	-	-	< 5	< 1.0
Participated in individual HIV behavioral intervention	19	30.2	38	33.0	26	31.7	21	25.0	44	19.6	38	22.4
Participated in group HIV behavioral intervention	8	12.7	19	16.5	8	9.8	8	9.5	12	5.3	7	4.1

\*Note: for all dash (-) responses, data reported was zero (0). †Age at time of interview, in years.

<sup>v</sup>PrEP= Pre-exposure prophylaxis.

#### HIV Prevention Behavioral Factors Among Self-reported HIV-negative MSM by Race and Ethnicity

In 2017, more than 83% of all MSM participants who self-reported an HIV-negative status at the time of interview had health insurance, and more than 81% had a health care visit in the last 12 months. Health insurance coverage increased dramatically among Hispanic/Latinx MSM between 2014 and 2017 (13 percentage-points). NH White MSM had the highest rate for currently having health insurance (93%) and having a health care visit within the past 12 months (91%).

Receipt of free condoms decreased for all race and ethnicity groups between 2014 and 2017 with the largest decrease among Hispanic/Latinx MSM (19 percentage-points) followed by NH Black and NH White MSM (16 percentage-points). In 2017, Hispanic/Latinx MSM reported the highest rate for HIV testing in the past 12 months at 87% followed by NH White (85%) and NH Black (81%) MSM.

PrEP awareness and usage increased dramatically between 2014 and 2017 for all race and ethnicity groups with NH Black MSM having the most dramatic increases. In 2017, NH Black MSM reported a 15-fold increase in PrEP usage when compared to 2014. NH White MSM reported the highest rates of PrEP awareness and usage in both 2014 and 2017. PrEP was obtained predominately through a doctor or health care provider for all race and ethnicity groups. NH Black MSM reported higher rates of participating in individual and group HIV behavioral interventions in 2017.



#### TABLE 11B

#### Selected Demographic Characteristics and HIV Prevention Behavioral Factors Among NHBS-tested HIV-negative<sup>a</sup> Men Who Have Sex with Men by Race and Ethnicity—Chicago HIV Behavioral Surveillance, 2014 and 2017.

	NH Black			Hispanic/Latinx				NH White				
	2 (N:	014 =48)	2 (N=	017 =59)	2) (N:	014 =74)	2) (N:	017 =74)	2014 (N=195)		2017 (N=138)	
Characteristics	N	%	N	%	N	%	N	%	N	%	N	%
AGE GROUP <sup>†</sup>												
18-24	10	20.8	8	13.6	23	31.1	15	20.3	20	10.3	9	6.5
25-29	12	25.0	13	22.0	14	18.9	25	33.8	46	23.6	29	21.0
30-39	9	18.8	17	28.8	29	39.2	19	25.7	64	32.8	52	37.7
40-49	10	20.8	14	23.7	6	8.1	12	16.2	33	16.9	21	15.2
50+	7	14.6	7	11.9	<5	2.7	<5	4.1	32	16.4	27	19.6
ANNUAL INCOME (\$)												
≤ \$19,999	17	35.4	16	27.1	21	28.4	14	18.9	18	9.2	13	9.4
\$20,000-\$49,999	13	27.1	15	25.4	29	39.2	32	43.2	53	27.2	32	23.2
≥ \$50,000	18	37.5	27	45.8	23	31.1	26	35.1	124	63.6	93	67.4
EDUCATION												
Did not graduate high school	<5	2.1	<5	6.8	<5	1.4	-	-	-	-	-	-
High school graduate	7	14.6	6	10.2	14	18.9	10	13.5	15	7.7	11	8.0
Some college or greater	40	83.3	49	83.1	59	79.7	64	86.5	180	92.3	127	92.0
Currently have health insurance	42	87.5	48	81.4	50	67.6	58	78.4	170	87.2	125	90.6
Health care visit, past 12 months	41	85.4	45	76.3	57	77	61	82.4	167	85.6	125	90.6
Received free condoms, past 12 months	40	83.3	42	71.2	65	87.8	52	70.3	155	79.5	92	66.7
HIV tested in the past 12 months	35	72.9	51	86.4	51	68.9	59	79.7	153	78.5	111	80.4
Aware of $PrEP^{v}$	26	54.2	47	79.7	47	63.5	61	82.4	154	79.0	129	93.5
Used PrEP, past 12 months	<5	2.1	18	30.5	<5	4.1	22	29.7	17	8.7	59	42.8
PrEP SOURCE												
Doctor or health care provider	<5	6.3	18	30.5	<5	4.1	21	28.4	23	11.8	57	41.3
Sex partner or friend	-	-	<5	1.7	<5	1.4	-	-	<5	<1.0	6	4.4
Other source	-	-	-	-	-	-	<5	1.4	-	-	<5	0.0
Participated in individual HIV behavioral intervention	12	25.0	20	33.9	22	29.7	18	24.3	35	18.0	30	21.7
Participated in group HIV behavioral intervention	6	12.5	9	15.3	10	13.5	8	10.8	14	7.2	6	4.4

\*Note: for all dash (-) responses, data reported was zero (0).

<sup>a</sup>Participants with a valid negative NHBS HIV test result.

 $^{\dagger}Age$  at time of interview, in years.  $^{\nu}PrEP=$  Pre-exposure prophylaxis.

43

#### HIV Prevention Behavioral Factors Among NHBS-tested HIV-negative MSM by Race and Ethnicity

Table 11b displays data among participants who obtained a negative result from the NHBS HIV test conducted immediately after the interview.

The rate patterns for NHBS-tested HIV-negative MSM follow similar patterns observed among selfreported HIV negative MSM for currently having health insurance and having a health care visit within the past 12 months, with more than 78% of these participants having health care coverage and more than 76% having had a health care visit in the last 12 months.

Receipt of free condoms decreased for all race and ethnicity groups among NHBS-tested HIVnegative MSM between 2014 and 2017 with the largest decrease among Hispanic/Latinx MSM at 17.5 percentage-points, followed by NH White (12.8 percentage-point decrease) and NH Black MSM (12.1 percentage-point decrease). Among those who had an HIV-negative NHBS test result, NH Black MSM reported the highest rate for HIV testing within the past 12 months at 86% in 2017, a 13.5 percentage-point increase from 2014, followed by NH White (80%) and Hispanic/Latinx MSM (80%). PrEP awareness and usage increased dramatically for all race and ethnicity groups with NH Black MSM having the most dramatic increase. In 2017, NH Black MSM reported a 14.5fold increase in PrEP usage when compared to 2014. NH White MSM reported the highest rates of PrEP awareness and usage in both 2014 and 2017. PrEP was obtained predominately through a doctor or health care provider for all race and ethnicity groups. NH Black MSM reported higher rates in participating in individual and group HIV behavioral interventions in 2017.



#### TABLE 12

Selected Demographic Characteristics and HIV Care Behavioral Factors Among Self-reported Men Who Have Sex with Men with HIV and NHBStest HIV-positive<sup>a</sup> Status—Chicago HIV Behavioral Surveillance, 2014 and 2017.

	8	Self-report	ed with H	IV	NHBS-tested HIV-positive <sup>a</sup>				
	2 (N:	014 =93)	2( (N=	017 =114)	2014 (N=86)		2 (N	017 =98)	
Characteristics	N	%	N	%	N	%	N	%	
AGE GROUP <sup>†</sup>									
18-24	7	7.5	<5	2.6	8	9.3	5	5.1	
25-29	15	16.1	16	14.0	14	16.3	14	14.3	
30-39	27	29.0	32	28.1	24	27.9	32	32.7	
40-49	22	23.7	30	26.3	22	25.6	21	21.4	
50+	22	23.7	33	29.0	18	20.9	26	26.5	
RACE/ETHNICITY^									
NH American Indian/Alaska Native	-	-	-	-	-	-	-	-	
NH Asian/Pacific Islander	-	-	<5	2.6	-	-	<5	2.0	
NH Black	28	30.1	59	51.8	26	30.2	58	59.2	
Hispanic/Latinx	19	20.4	25	21.9	20	23.3	22	22.5	
NH White	40	43.0	24	21.1	33	38.4	15	15.3	
Other/Multiple races	6	6.5	<5	1.8	7	8.1	<5	1.0	
ANNUAL INCOME (\$)									
≤ \$19,999	26	28.0	35	30.7	26	30.2	36	36.7	
\$20,000-\$49,999	32	34.4	33	29.0	28	32.6	25	25.5	
≥ \$50,000	35	37.6	46	40.4	32	37.2	36	36.7	
EDUCATION									
Did not graduate high school	6	6.5	<5	1.8	6	7.0	<5	4.1	
High school graduate	13	14.0	23	20.2	14	16.3	19	19.4	
Some college or greater	74	79.6	89	78.1	66	76.7	75	76.5	
Currently have health insurance	83	89.3	100	87.7	77	89.5	88	89.8	
Health care visit, past 12 months	89	95.7	110	96.5	82	95.4	96	98.0	
Received free condoms, past 12 months	69	74.2	91	79.8	66	76.7	78	79.6	
HIV TESTED IN THE PAST 12 MONTHS									
Tested in past year, includes HIV+ Dx in past year	7	7.5	5	4.4	9	10.5	14	14.3	
Not tested in past year, because HIV+ Dx over a year	85	91.4	108	94.7	72	83.7	76	77.6	
Tested for STI‡ past 12 months	66	71.0	80	70.2	60	69.8	69	70.4	
Currently on ARV**	85	91.4	108	94.7	72	83.7	77	78.6	
In HIV care within 3 months of diagnosis	73	78.5	83	72.8	62	72.1	59	60.2	
Recent HIV care visit within 6 months of interview	85	91.4	101	88.6	74	86.1	72	73.5	

\*Note: for all dash (-) responses, data reported was zero (0).

<sup>a</sup>Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing. The terms HIV-positive and with HIV will be used interchangeably.

<sup>†</sup>Age at time of interview, in years.

NH=Non-Hispanic. Other/multiple races indicates more than one race and ethnicity identified.

<sup>‡</sup>STI=Sexually Transmitted Infection.

\*\*ARV= Antiretroviral medication

#### HIV Care Behavioral Factors by Self-reported with HIV and NHBStested HIV-positive Status

Table 12 displays both self-reported MSM with HIV status at the time of interview and NHBS test result of HIV-positive obtained after the interview. This was done to capture behavioral data around HIV care among those who were aware of their HIV-positive status and were engaged in care before time of interview.

Among self-reported MSM with HIV at time of interview, there was a 1.6 percentage-point decrease in currently having health insurance and a 1 percentage-point increase in having a health care visit within the past 12 months between 2014 and 2017. MSM with an NHBS test result of positive maintained a similar rate for current health insurance status and a 2.6 percentagepoint increase in health care visitation in the past 12 months. Unlike other sub-samples of MSM between these two cycles, there was an increase in receipt of free condoms for both self-reported positive (5.6 percentage-point increase) and NHBS test result positive (2.9 percentage-point increase) MSM between 2014 and 2017. Testing for sexually transmitted infections, including gonorrhea, chlamydia, and syphilis, among both groups with HIV remained similar at a rate of 70% for both 2014 and 2017. Self-reported MSM with HIV reported higher rates of being on antiretroviral medication to treat HIV infection for both 2014 (91%) and 2017 (95%) compared to NHBS test result of HIV-positive (84% and 79%, respectively). Self-reported MSM with HIV reported higher rates of being in HIV care within three months of diagnosis and having a recent HIV care visit within six months of interview compared to those who obtained a positive result from the NHBS HIV test immediately after interview.



#### TABLE 12A

#### Selected Demographic Characteristics and HIV Care Behavioral Factors Among Self-reported Men Who Have Sex with Men with HIV by Race and Ethnicity-Chicago HIV Behavioral Surveillance, 2014 and 2017.

	NH Black				Hispanic	/Latinx		NH White				
	2 (N:	014 =28)	2 (N	017 =59)	2 (N	1014 I=19)	2 (N	017 =25)	2014 (N=40)		2017 (N=24)	
Characteristics	N	%	N	%	N	%	N	%	N	%	N	%
AGE GROUP <sup>†</sup>												
18-24	<5	14.3	<5	3.4	<5	10.5	<5	4.0	<5	2.5	-	-
25-29	6	21.4	9	15.3	<5	5.3	6	24.0	7	17.5	-	-
30-39	5	17.9	17	28.8	7	36.8	9	36.0	12	30.0	<5	16.7
40-49	6	21.4	14	23.7	6	31.6	6	24.0	10	25.0	8	33.3
50+	7	25.0	17	28.8	<5	15.8	<5	12.0	10	25.0	12	50.0
ANNUAL INCOME (\$)												
≤ \$19,99 <b>9</b>	14	50.0	23	39.0	8	42.1	7	28.0	<5	5.0	<5	12.5
\$20,000-\$49,999	12	42.9	19	32.2	7	36.8	7	28.0	11	27.5	6	25.0
≥ \$50,000	<5	7.1	17	28.8	<5	21.1	11	44.0	27	67.5	15	62.5
EDUCATION												
Did not graduate high school	<5	3.6	<5	1.7	<5	15.8	<5	4.0	<5	5.0	-	-
High school graduate	8	28.6	11	18.6	<5	10.5	6	24.0	<5	5.0	5	20.8
Some college or greater	19	67.9	47	79.7	14	73.7	18	72.0	36	90.0	19	79.2
Currently have health insurance	24	85.7	54	91.5	14	73.7	20	80.0	39	97.5	15	100.0
Health care visit, past 12 months	25	89.3	59	100.0	19	100.0	25	100.0	39	97.5	21	87.5
Received free condoms, past 12 months	23	82.1	46	78.0	17	89.5	23	92.0	26	65.0	17	70.8
HIV TESTED IN THE PAST 12 MONT	гнѕ											
Tested in past year, includes HIV+ Dx in past year	<5	7.1	<5	3.4	<5	5.3	<5	8.0	<5	7.5	<5	4.2
Not tested in past year, because HIV+ Dx over a year	25	89.3	56	94.9	18	94.7	23	92.0	37	92.5	23	95.8
Tested for STI‡ past 12 months	18	64.3	38	64.4	17	89.5	19	76.0	27	67.5	18	75.0
Currently on ARV**	24	85.7	53	89.8	17	89.5	25	100.0	39	97.5	24	100.0
In HIV care 3 months of diagnosis	21	75.0	39	66.1	14	73.7	20	80.0	32	80.0	19	79.2
Recent HIV care visit within 6 months of interview	26	92.9	50	84.8	17	89.5	22	88.0	37	92.5	23	95.8

\*Note: for all dash (-) responses, data reported was zero (0).

<sup>†</sup>Age at time of interview, in years.

<sup>‡</sup>STI=Sexually Transmitted Infection.

\*\*ARV= Antiretroviral medication

#### HIV Care Behavioral Factors Among Self-reported MSM with HIV by Race and Ethnicity

Among self-reported MSM with HIV, NH White MSM reported the highest rate of currently having health insurance for both 2014 and 2017, followed by NH Black and then Hispanic/Latinx MSM. Hispanic/Latinx MSM reported a rate of 100% for having a health care visit within the past 12 months for both 2014 and 2017 and NH Black MSM reported a rate of 100% for 2017. Both Hispanic/ Latinx and NH White MSM reported an increase in receipt of free condoms between the two cycles while NH Black MSM reported a decrease of 4 percentage-points. Between 2014 and 2017, the percentage of those tested for HIV in the past month decreased among NH Black MSM and NH White MSM, however increased among Hispanic/ Latinx MSM. NH Black MSM reported a rate of

64% for being tested by a health care provider in the past 12 months for both 2014 and 2017 while Hispanic/Latinx MSM reported a 13.5 percentagepoint decrease (89.5% to 76%) and NH White MSM reported a 7.5 percentage-point increase (67.5% to 75%) between the two years. The percentage of self-reported MSM with HIV taking antiretroviral medication at the time of interview increased across all race and ethnicity groups between 2014 and 2017, with both Hispanic/Latinx and NH White MSM reporting a rate of 100% followed by NH Black MSM with a rate of 90% in 2017. There was a decrease in the percentage of NH Black and NH White MSM reporting being in HIV care within three months of diagnosis, while Hispanic/Latinx MSM saw an increase between the two cycles. In 2017, NH White MSM reported the highest rate of having a recent HIV care visit within six months of the interview at 96%, followed by Hispanic/Latinx MSM at 88%, and then NH Black MSM at 85%.



#### TABLE 12B

#### Selected Demographic Characteristics and HIV Care Behavioral Factors Among NHBS-tested HIV-positive<sup>a</sup> Men Who Have Sex with Men by Race and Ethnicity—Chicago HIV Behavioral Surveillance, 2014 and 2017.

	NH Black		Hispanic/Latinx				NH White					
	2( (N=	014 =26)	2 (N	017 =58)	2 (N	014 =20)	2 (N	017 =22)	2014 (N=33)		2 (N	017 =15)
Characteristics	N	%	N	%	N	%	N	%	N	%	N	%
AGE GROUP <sup>†</sup>												
18-24	5	19.2	5	8.6	<5	10.0	-	-	<5	3.0	-	-
25-29	<5	15.4	9	15.5	<5	10.0	<5	18.2	7	21.2	-	-
30-39	5	19.2	18	31.0	6	30.0	9	40.9	9	27.3	<5	26.7
40-49	6	23.1	11	19.0	7	35.0	6	27.3	9	27.3	<5	26.7
50+	6	23.1	15	25.9	<5	15.0	<5	13.6	7	21.2	7	46.7
ANNUAL INCOME (\$)												
≤ \$19,999	13	50.0	26	44.8	7	35.0	6	27.3	<5	9.1	<5	13.3
\$20,000-\$49,999	10	38.5	17	29.3	7	35.0	5	22.7	9	27.3	<5	20.0
≥ \$50,000	<5	11.5	14	24.1	6	30.0	11	50.0	21	63.6	10	66.7
EDUCATION												
Did not graduate high school	<5	3.9	<5	5.2	<5	15.0	<5	4.6	<5	6.1	-	-
High school graduate	10	38.5	12	20.7	<5	5.0	<5	22.7	<5	3.0	<5	6.7
Some college or greater	15	57.7	43	74.1	16	80.0	16	72.7	30	90.9	14	93.3
Currently have health insurance	24	92.3	54	93.1	16	80.0	17	77.3	31	93.9	15	100.0
Health care visit, past 12 months	24	92.3	58	100.0	19	95.0	22	100.0	33	100.0	14	93.3
Received free condoms, past 12 months	21	80.8	44	75.9	19	95.0	21	95.5	22	66.7	11	73.3
HIV TESTED IN THE PAST 12 MONT	гнѕ											
Tested in past year, includes HIV+ Dx in past year	<5	7.7	8	13.8	<5	10.0	<5	18.2	<5	12.1	<5	13.3
Not tested in past year, because HIV+ Dx over a year	21	80.8	42	72.4	17	85.0	18	81.8	29	87.9	13	86.7
Tested for STI‡ past 12 months	17	65.4	38	65.5	17	85.0	17	77.3	22	66.7	11	73.3
Currently on ARV**	20	76.9	40	69.0	16	80.0	20	90.9	31	93.9	14	93.3
In HIV care 3 months of diagnosis	17	65.4	28	48.3	13	65.0	17	77.3	26	78.8	12	80.0
Recent HIV care visit within 6 months of interview	22	84.6	38	65.5	17	85.0	17	77.3	30	90.9	14	93.3

\*Note: for all dash (-) responses, data reported was zero (0).

<sup>a</sup>Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing. The terms HIV-positive and with HIV will be used interchangeably.

<sup>†</sup>Age at time of interview, in years.

<sup>‡</sup>STI=Sexually Transmitted Infection.

\*\*ARV= Antiretroviral medication

#### HIV Care Behavioral Factors Among NHBS-tested HIV-positive MSM by Race and Ethnicity

Table 12b displays data among participants who received an HIV-positive result from the NHBS HIV test conducted immediately after the interview and includes participants newly diagnosed as HIVpositive at time of interview.

In 2017, NH White MSM diagnosed through NHBS testing reported the highest rate of having health insurance at 100% followed by NH Black MSM (93%) and Hispanic/Latinx MSM (77%). That same year, 100% of both NH Black and Hispanic/Latinx MSM reported having had a health care visit in the past 12 months. NH Black MSM reported a rate of around 65% for being tested by a health care provider in the past 12 months for both 2014 and 2017, while Hispanic/Latinx MSM reported an 8 percentage-point decrease (85% to 77%) and NH White MSM reported a 6 percentagepoint increase (67% to 73%) between 2014 and 2017. For HIV care behaviors, including taking antiretroviral medication (ARV) at the time of interview, receiving HIV care within three months of diagnosis, and having a recent HIV care visit within six months of interview, NH Black MSM reported the lowest rates in 2017. Between 2014 and 2017, NH Black MSM reported sharp declines of rates for these HIV care behaviors: an 8 percentage-point decrease for taking ARV, a 17 percentage-point decrease in receiving HIV care within three months of diagnosis, and a 19 percentage-point decrease in having a recent HIV care visit within six months of NHBS interview.



# NON-HISPANIC BLACK MISM IN CHICAGO



#### TABLE 13

Selected Social Determinants of Health (SDOH) Factors Among Non-Hispanic Black Men Who Have Sex with Men by Age Group—Chicago HIV Behavioral Surveillance, 2014 and 2017.

		18-29 yı	ears old			30+ ye	ars old	
	2 (N	2014 (N=35)		2017 (N=41)		014 =57)	2017 (N=138)	
SDOH Factors	N	%	N	%	N	%	N	%
Homeless in the past 12 months	5	14.3	8	19.5	<5	3.5	8	5.8
Ever held in prison or jail	9	25.7	13	31.7	14	24.6	36	26.1
Held in prison or jail in the past 12 months	<5	5.7	<5	7.3	<5	3.5	6	4.4
Currently unemployed	8	22.9	9	22.0	7	12.3	12	8.7
Did not graduate high school	<5	2.9	<5	9.8	<5	1.8	5	3.6
Living in poverty (according to household size)	16	45.7	14	34.2	12	21.1	28	20.3

#### Social Determinant of Health Factors by Age Group

The social determinants of health captured for the NH Black MSM population in Chicago through the NHBS survey include recent homelessness, experience in prison or jail, being held in prison or jail in the past 12 months, unemployment, completion of high school, and poverty status. Compared to NH Black MSM between 18-29 years old, those who were 30+ years old reported lower rates of experience in prison or jail ever and in the past 12 months, and unemployment at the time of the survey in 2017, as well as lower rates of high school incompletion. NH Black MSM between 18-29 years old reported higher rates of recent homelessness, poverty status, and incomplete high school education than those older than 30 years old. Between 2014 and 2017, the rate of NH Black MSM between 18-29 years old living in poverty decreased from 46% to 34%.

#### TABLE 14

#### Health Care Access and Utilization by NHBS HIV Test Result Status Among Non-Hispanic Black Men Who Have Sex with Men by Age Group—Chicago HIV Behavioral Surveillance, 2014 and 2017.

		18-29 ye	ears old		30+ years old				
	2014 (N=35)			2017 (N=41)		2014 (N=57)		017 =138)	
Characteristics		%	N	%	N	%	N	%	
HIV-negative <sup>a</sup> Total	22	62.9	21	51.2	26	45.6	38	27.5	
Have health insurance	17	77.3	18	85.7	25	96.2	30	79.0	
Have a regular source of medical care	15	68.2	16	76.2	21	80.8	33	86.8	
Visited health care provider in last 12 months	18	81.8	15	71.4	23	88.5	30	79.0	
Health care provider offered HIV test	17	77.3	13	61.9	12	46.2	20	52.6	
"Out" to health care provider	17	77.3	15	71.4	18	69.2	30	79.0	
HIV-positive <sup>b</sup> Total	9	25.7	14	34.1	17	29.8	44	31.9	
Have health insurance	9	100.0	13	92.9	15	88.2	41	93.2	
Have a regular source of medical care	6	66.7	13	92.9	15	88.2	44	100.0	
Visited health care provider in last 12 months	8	88.9	14	100.0	16	94.1	44	100.0	
"Out" to health care provider	9	100.0	12	85.7	15	88.2	44	100.0	

aParticipants with a valid negative NHBS HIV test result.

<sup>b</sup>Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing. The terms HIV-positive and with HIV will be used interchangeably.

#### Health Care Access and Utilization by HIV Status and Age Group

For NH Black MSM with an HIV-negative status in Chicago, those who were 30 years old or older were 19% more likely to have health insurance than those between 18-29 years old in 2014. However, in 2017 those between 18 and 29 years of age reported a higher rate of currently having health insurance compared to those 30 years or older. Between 2014 and 2017, both age groups reported about a 10 percentage-point decline in visiting a health care provider in the last 12 months. This decrease in insured individuals and in individuals with routine medical care in the HIV-negative 30+ years age group is notable because it may lead to reduced engagement in HIV-prevention behaviors and an increase in undiagnosed health issues that are more prevalent in this older age group. Among 18-to 29-year-olds with an HIV-negative status, there was a decline in rates for having a health care provider offer an

HIV test and disclosing of their sexual orientation with their health care provider between the two years. Those aged 30 years and older with an HIVnegative status reported an increase in being "out" to their health care provider and being offered an HIV test, though only about 50% of participants reported being offered a test in both 2014 and 2017.

Among NH Black MSM with an HIV-positive status, both age groups reported the same rates for currently having health insurance (93%) and having visited a health care provider in the past 12 months (100%) in 2017. Between 2014 and 2017, both age groups reported an increase in having a regular source of medical care however, with those between 18 and 29 reporting a dramatic 26 percentage-point increase between 2014 and 2017. One-hundred percent of MSM with HIV 30+ years of age reported being "out" to their health care provider in 2017, while 86% of MSM with HIV ages 18-to-29 years reported being "out" to their health care provider, a 14 percentage-point decrease from 2014.



#### TABLE 15

Sexual Behavior Factors, Past 12 Months, by NHBS HIV Test Result Status Among Non-Hispanic Black Men Who Have Sex with Men by Age Group— Chicago HIV Behavioral Surveillance, 2014 and 2017.

		18-29 y	ears old		30+ years old					
	2 (N:	014 =35)	2 (N	017 =41)	2 (N	014 =57)	2017 (N=138)			
Sexual Behavior Factors	N	%	N	%	N	%	N	%		
HIV-negative <sup>a</sup> Total	22	62.9	21	51.2	26	45.6	38	27.5		
Number of male partners (median, IQR)	6.0	0, 7.0	6.0	0, 8.0	4.0	, 6.0	3.5	, 6.0		
TYPE OF MALE SEX PARTNERS										
Main only	<5	9.1	5	23.8	5	19.2	9	23.7		
Main and casual	12	54.6	12	57.1	9	34.6	14	36.8		
Casual only	8	36.4	<5	19.1	12	46.2	15	39.5		
Condomless anal sex with male partner	16	72.7	16	76.2	11	42.3	19	50.0		
Exchanged sex (gave or received something)	<5	18.2	<5	14.3	<5	11.5	6	15.8		
HIV status of most recent sex partner unknown	6	27.3	<5	14.3	12	46.2	14	36.8		
HIV-positive <sup>b</sup> Total	9	25.7	14	34.1	17	29.8	44	31.9		
Number of male partners (median, IQR)	2.0	, 3.0	2.0	0, 2.0	2.0	0, 1.0	4.0	, 8.0		
TYPE OF MALE SEX PARTNERS										
Main only	5	55.6	7	50.0	7	41.2	5	11.4		
Main and casual	<5	33.3	<5	14.3	<5	11.8	19	43.2		
Casual only	<5	11.1	5	35.7	8	47.1	20	45.5		
Condomless anal sex with male partner	6	66.7	7	50.0	9	52.9	28	63.4		
Exchanged sex (gave or received something)	<5	11.1	<5	14.3	-	-	8	18.2		
HIV status of most recent sex partner unknown	<5	22.2	6	42.9	6	35.3	16	36.4		

\*Note: for all dash (-) responses, data reported was zero (0).

<sup>a</sup>Participants with a valid negative NHBS HIV test result.

<sup>b</sup>Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing. The terms HIV-positive and with HIV will be used interchangeably.

#### Sexual Behavior Factors by HIV Status and Age Group

Sexual behaviors among NH Black MSM with an HIV-negative status varied between the two age groups. Those aged 18-to-29 years old more frequently reported having both main and casual male sex partners while those aged 30 years and older more frequently reported having only casual male sex partners. Notably, those aged 18-29 years reported much higher rates of having condomless anal sex with a male partner compared to those aged 30 years and older. Conversely, those 30+ years of age reported higher rates of not knowing the HIV status of their most recent sex partner compared to those 18-to-29 years of age.

Among NH Black MSM with an HIV-positive status, the median number of male sex partners increased from two to four between 2014 and 2017 among

those aged 30 years and older. For both years, at least half of the participants ages 18-to-29 years reported having a main male sex partner while those 30+ years of age reported higher rates for having casual male sex partners. This represents a 30 percentage-point decrease between 2014 and 2017 in sex with main partners only among HIVnegative Black MSM 30 years and older. Between 2014 and 2017, the 18-29-year age group reported a 17 percentage-point decrease in condomless anal sex with their male partner, while the 30+ years old age group reported a 11 percentage-point increase during this time frame. NH-Black MSM ages 30+ years of age with an HIV-positive status reported the highest rate of exchanged sex at 18% in 2017. In this same year, 18-to-29-year-old NH Black MSM with HIV-positive status reported the highest rate of not knowing the HIV status of their most recent sex partner at 43%.

#### TABLE 16

Location Met Most Recent Male Sex Partner Among Non-Hispanic Black Men Who Have Sex with Men by Age Group—Chicago HIV Behavioral Surveillance, 2014 and 2017.

		18-29 y	ears old		30+ years old				
	2 (N	2014 (N=35)		2017  =41)	2 (N	014 =57)	2017 (N=138)		
Location	N	%	N	%	N	%	N	%	
Internet	10	28.6	15	36.6	10	17.5	33	23.9	
Chat line	<5	2.9	<5	4.9	<5	1.8	<5	2.2	
Bar/Club	9	25.7	8	19.5	13	22.8	44	31.9	
Circuit party or rave	-	-	-	-	-	-	<5	1.5	
Cruising area	<5	2.9	<5	4.9	-	-	6	4.4	
Adult bookstore	-	-	-	-	-	-	<5	<1.0	
Bath house, sex club, or sex resort	-	-	-	-	<5	3.5	<5	2.9	
Private sex party	-	-	-	-	-	-	-	-	
Somewhere else	8	22.9	14	34.2	17	29.8	45	32.6	

\*Note: for all dash (-) responses, data reported was zero (0).

#### Location Where Met Most Recent Male Sex Partners by Age Group

In 2014, NH Black MSM 18-to-29 years of age reported the Internet as the most common place to meet male sex partners, followed closely by bars/clubs, and "somewhere else." This shifted in 2017; the internet remained the most common location, but the rate of "somewhere else" increased by 11 percentage-points while the rate for bars/clubs decreased by 6 percentage-points. This contrasts with NH Black MSM aged 30 years and older where the most common location for meeting male sex partners was "somewhere else" followed by bars/clubs in both 2014 and 2017.

#### TABLE 17

#### Sexually Transmitted Infections (STI) Testing and Diagnosis, Past 12 Months, Among Non-Hispanic Black Men Who Have Sex with Men by Age Group—Chicago HIV Behavioral Surveillance, 2014 and 2017.

		18-29 y	ears old		30+ years old					
	2 (N:	2014 (N=35)		2017 (N=41)		2014 (N=57)		017 :138)		
Testing and Diagnosis	N	%	N	%	N	%	N	%		
Ever diagnosed with Genital Herpes	<5	2.9	<5	2.4	<5	1.8	12	8.7		
Tested for STI in past 12 months	26	74.3	27	65.9	27	47.4	81	58.7		
Diagnosed gonorrhea in past 12 months	<5	5.7	11	26.8	<5	5.3	13	9.4		
Diagnosed chlamydia in past 12 months	<5	8.6	5	12.2	<5	1.8	12	8.7		
Diagnosed syphilis in past 12 months	5	14.3	8	19.5	<5	7.0	7	5.1		

\*Note: for all dash (-) responses, data reported was zero (0).

#### Sexually Transmitted Infections by Age Group

Between 2014 and 2017, NH Black MSM ages 30 years and older reported an 11 percentage-point increase in having been tested for a sexually transmitted infection (STI) in the past year, while NH Black MSM ages 18-to-29 reported an 8 percentage-point decrease. This is notable due to the fact that in 2017, 18-to-29-year-old NH Black MSM reported higher rates of being diagnosed with gonorrhea, chlamydia, and syphilis in the past 12 months when compared to their 30 years and older counterparts.

#### TABLE 18A

Selected Demographic Characteristics and HIV Prevention Behavioral Factors Among Self-Reported HIV-negative Non-Hispanic Black Men Who Have Sex with Men by Age Group—Chicago HIV Behavioral Surveillance, 2014 and 2017.

		18-29 ye		30+ years old					
	2 (N	014 =25)	2 (N=	017 =29)	2014 (N=38)		2017 (N=86)		
Characteristics	N	%	N	%	N	%	N	%	
ANNUAL INCOME (\$)									
≤ \$19,999	14	56.0	12	41.4	5	13.2	20	23.3	
\$20,000-\$49,999	6	24.0	6	20.7	11	29.0	25	29.1	
≥ \$50,000	5	20.0	10	34.5	22	57.9	40	46.5	
EDUCATION									
Did not graduate high school	<5	4.0	<5	13.8	-	-	<5	4.7	
High school graduate	6	24.0	6	20.7	5	13.2	8	9.3	
Some college or greater	18	72.0	19	65.5	33	86.8	74	86.1	
Currently have health insurance	19	76.0	25	86.2	37	97.4	73	84.9	
Health care visit, past 12 months	21	84.0	23	79.3	33	86.8	71	82.6	
Received free condoms, past 12 months	20	80.0	23	79.3	32	84.2	53	61.6	
HIV tested in the past 12 months	21	84.0	25	86.2	26	68.4	68	79.1	
Aware of PrEP <sup>v</sup>	17	68.0	24	82.8	18	47.4	69	80.2	
Used PrEP, past 12 months	<5	4.0	11	37.9	-	-	17	19.8	
PrEP SOURCE									
Doctor or health care provider	<5	12.0	11	37.9	-	-	17	19.8	
Sex partner or friend	-	-	<5	3.5	-	-	<5	1.2	
Other source	-	-	-	-	-	-	-	-	
Participated in individual HIV behavioral intervention	10	40.0	11	37.9	9	23.7	27	31.4	
Participated in group HIV behavioral intervention	6	24.0	5	17.2	<5	5.3	14	16.3	

\*Note: for all dash (-) responses, data reported was zero (0). \*PrEP= Pre-exposure prophylaxis.

#### HIV Prevention Behavioral Factors Among Self-reported HIV-negative NH Black MSM by Age Group

Access to effective HIV prevention programs and interventions is crucial to addressing HIV among the NH Black MSM community. For both data collection cycles, NH Black MSM between 18-29 years old reported greater uptake of HIV testing than those 30 years and older, though the rate of HIV testing increased by 11 percentage-points for the 30+ years age group between 2014 and 2017. The same trend is observed for PrEP awareness: 18-to-29 year olds reported higher rates of being aware of PrEP, compared to 30+ year olds for both years but the latter age group reported a 33 percentage-point increase in PrEP awareness in 2017. In 2017, 18-to-29 year old NH Black MSM with a self-reported HIV-negative status reported a rate of 38% in having used PrEP in the past 12 months, about two-times the rate reported by those aged 30 years and older. With regards to both individual and group level HIV behavioral intervention, those aged between 18 and 29 years reported higher rates of participation compared to their 30 year and older counterparts in 2017, however the latter group saw an increase in reported rates for both individual (7 percentage-point increase) and group (11 percentage-point increase) HIV behavioral interventions.

#### TABLE 18B

Selected Demographic Characteristics and HIV Prevention Behavioral Factors Among NHBS-tested HIV-negative<sup>a</sup> Non-Hispanic Black Men Who Have Sex with Men by Age Group—Chicago HIV Behavioral Surveillance, 2014 and 2017.

		18-29 ye	ears old		30+ years old					
		2014 (N=22)		2017 (N=21)		2014 (N=26)		2017 (N=38)		
Characteristics	N	%	N	%	N	%	N	%		
ANNUAL INCOME (\$)										
≤ \$19,999	12	54.6	9	42.9	5	19.2	7	18.4		
\$20,000-\$49,999	5	22.7	<5	19.1	8	30.8	11	29.0		
≥ \$50,000	5	22.7	8	38.1	13	50.0	19	50.0		
EDUCATION										
Did not graduate high school	<5	14.3	<5	13.8	-	-	<5	2.6		
High school graduate	<5	19.1	6	20.7	<5	11.5	<5	5.3		
Some college or greater	14	66.7	19	65.5	23	88.5	35	92.1		
Currently have health insurance	17	77.3	18	85.7	25	96.2	30	79.0		
Health care visit, past 12 months	18	81.8	15	71.4	23	88.5	30	79.0		
Received free condoms, past 12 months	18	81.8	17	81.0	22	84.6	25	65.8		
HIV tested in the past 12 months	19	86.4	19	90.5	16	61.5	32	84.2		
Aware of PrEP <sup>y</sup>	15	68.2	18	85.7	11	42.3	29	76.3		
Used PrEP, past 12 months	<5	4.6	10	47.6	-	-	8	21.1		
PrEP SOURCE										
Doctor or health care provider	<5	13.6	10	47.6	-	-	8	21.1		
Sex partner or friend	-	-	<5	4.8	-	-	-	-		
Other source	-	-	-	-	-	-	-	-		
Participated in individual HIV behavioral intervention	8	36.4	9	42.9	<5	15.4	11	29.0		
Participated in group HIV behavioral intervention	5	22.7	5	23.8	<5	3.9	<5	10.5		

\*Note: for all dash (-) responses, data reported was zero (0). Participants with a valid negative NHBS HIV test result. YPrEP= Pre-exposure prophylaxis.

#### HIV Prevention Behavioral Factors Among NHBS-tested HIV-negative NH Black MSM by Age Group

Table 18b displays the frequency and percentages of HIV prevention behaviors among NH Black MSM who obtained a valid negative NHBS HIV test result conducted immediately after the interview. This table does not include participants newly diagnosed as HIV-positive at time of interview.

Receipt of free condoms remained the same for NH Black MSM ages 18-29 between 2014 and 2017 at a rate of 81% while the rate decreased by 22% (85% to 66%) for NH Black MSM ages 30 years and older. HIV testing within the past 12 months increased for both age groups between the two time points.

There was a substantial increase in PrEP awareness and utilization among both age groups between 2014 and 2017. For NH Black MSM ages 18-to-29 years, PrEP awareness increased by 25% and increased by 80% among those aged 30 years and older. PrEP use followed a similar trend with an increase of 43 percentage-points among NH Black MSM ages 18-to-19 years and also increased from 0% to 21% among NH Black MSM ages 30 years and older.

#### TABLE 19A

Selected Demographic Characteristics and HIV Care Behavioral Factors Among Self-reported Non-Hispanic Black Men Who Have Sex with Men with HIV by Age Group—Chicago HIV Behavioral Surveillance, 2014 and 2017.

	18-29 years old				30+ years old				
		2014 (N=10)		2017 (N=11)		2014 (N=18)		2017 (N=48)	
Characteristics	N	%	N	%	N	%	N	%	
ANNUAL INCOME (\$)									
≤ \$19,999	6	60.0	6	54.6	8	44.4	17	35.4	
\$20,000-\$49,999	<5	40.0	<5	27.3	8	44.4	16	33.3	
≥ \$50,000	-	-	<5	18.2	<5	11.1	15	31.3	
EDUCATION									
Did not graduate high school	-	-	-	-	<5	5.6	<5	2.1	
High school graduate	<5	20.0	<5	36.4	6	33.3	7	14.6	
Some college or greater	8	80.0	7	63.6	11	61.1	40	83.3	
Currently have health insurance	9	90.0	10	90.9	15	83.3	44	91.7	
Health care visit, past 12 months	9	90.0	11	100.0	16	88.9	48	100.0	
Received free condoms, past 12 months	8	80.0	7	63.6	15	83.3	39	81.3	
HIV TESTED IN THE PAST 12 MONTHS									
Tested in past year, includes HIV+ Dx in past year	<5	10.0	<5	9.1	<5	5.6	<5	2.1	
Not tested in past year, because HIV+ Dx over a year	8	80.0	10	90.9	17	94.4	46	95.8	
Tested for STI; past 12 months	8	80.0	7	63.6	10	55.6	31	64.6	
Currently on ARV**	8	80.0	10	90.9	16	88.9	43	89.6	
In HIV care 3 months of diagnosis	7	70.0	8	72.7	14	77.8	31	64.6	
Recent HIV care visit within 6 months of interview	9	90.0	10	90.9	17	94.4	40	83.3	

\*Note: for all dash (-) responses, data reported was zero (0). <sup>†</sup>STI=Sexually Transmitted Infection. \*\*ARV= Antiretroviral medication

#### HIV Care Behavioral Factors Among Self-reported NH Black MSM with HIV by Age Group

Among NH Black MSM with a self-reported HIVpositive status, both age groups reported a rate of >90% of current health insurance coverage and 100% for having a health care visit within the past 12 months in 2017. That same year, those aged 18-to-29 years reported a lower rate of 64% in receiving free condoms compared to those aged 30 years and older with a reported rate of 81%. Both age groups reported similar rates for testing for STIs in 2017, but those 18 to 29 reported a 16 percentage-point decrease between 2014 and 2017. Both groups reported similar rates of current use of antiretroviral (ARV) medication with a reported rate of around 90% in 2017. Those aged 18-to-29 years were more likely to have received HIV care within three months of diagnosis (73%) and have had a recent HIV care visit within six months of interview (91%) compared to those aged 30 years and older in 2017. The latter group saw a decline in rates for these two metrics between 2014 and 2017.

#### TABLE 19B

Selected Demographic Characteristics and HIV Care Behavioral Factors Among NHBS-tested HIV-positive<sup>a</sup> Non-Hispanic Black Men Who Have Sex with Men by Age Group—Chicago HIV Behavioral Surveillance, 2014 and 2017.

Characteristics		18-29 yı		30+ years old				
	2014 (N=9)		2017 (N=14)		2014 (N=17)		2017 (N=44)	
	N	%	N	%	N	%	N	%
ANNUAL INCOME (\$)								
≤ \$19,999	5	55.6	8	57.1	8	47.1	18	40.9
\$20,000-\$49,999	<5	44.4	<5	14.3	6	35.3	15	34.1
≥ \$50,000	-	-	<5	21.4	<5	17.7	11	25.0
EDUCATION								
Did not graduate high school	-	-	-	-	<5	5.9	<5	6.8
High school graduate	<5	33.3	<5	28.6	7	41.2	8	18.2
Some college or greater	6	66.7	10	71.4	9	52.9	33	75.0
Currently have health insurance	9	100.0	13	92.9	15	88.2	41	93.2
Health care visit, past 12 months	8	88.9	14	100.0	16	94.1	14	100.0
Received free condoms, past 12 months	7	77.8	9	64.3	14	82.4	35	79.6
HIV TESTED IN THE PAST 12 MONTHS								
Tested in past year, includes HIV+ Dx in past year	-	-	<5	28.6	<5	11.8	<5	9.1
Not tested in past year, because HIV+ Dx over a year	7	77.8	8	57.1	14	82.4	34	77.3
Tested for STI <sup>‡</sup> past 12 months	7	77.8	9	64.3	10	58.8	29	65.9
Currently on ARV**	6	66.7	8	57.1	14	82.4	32	72.7
In HIV care 3 months of diagnosis	5	55.6	6	42.9	12	70.6	22	50.0
Recent HIV care visit within 6 months of interview	7	77.8	8	57.1	15	88.2	30	68.2

\*Note: for all dash (-) responses, data reported was zero (0).

<sup>a</sup>Participants with a reactive rapid NHBS HIV test result supported by a second rapid test or supplemental laboratory-based testing. The terms HIV-positive and with HIV will be used interchangeably.

\*STI=Sexually Transmitted Infection. \*\*ARV= Antiretroviral medication

\*\*ARV= Antiretroviral medication

#### HIV Care Behavioral Factors Among NHBS-tested HIV-positive NH Black MSM by Age Group

Table 19b displays data among NH Black participants who received an HIV-positive result from the NHBS HIV test conducted immediately after the interview and includes participants newly diagnosed as HIV-positive at time of interview.

In 2017, among NH Black MSM who obtained an HIV-positive NHBS test result, those 18-to-29 years of age reported a rate for having been tested for HIV in the past year (including new HIV diagnoses) that was more than three times greater than that of their 30 years and older counterparts. Those aged 30 years and older reported higher rates for currently taking ARV medications and having a recent HIV care visit within six months of NHBS interview compared to 18-to-29 years for both 2014 and 2017. Only 50% of those 30 years and older and 43% of those 18-to-29 received HIV care within three months of diagnosis, with rates decreasing dramatically for both age groups between 2014 and 2017 (>20 percentage-points).

## Limitations

The surveillance summaries presented in this report are subject to several limitations. Similar to the 2012 NHBS MSM Chicago Report findings, a single standard for obtaining a representative sample of the MSM population in Chicago has yet to be established. The venue-based, time-location sampling methods are used to produce estimates for this hard to survey MSM population when sampling frames of the individual members of those populations do not exist or are difficult to construct. Another limitation is that these data may not be representative of all MSM in Chicago because it does not account for all MSM that did not attend these venues during the time of sample collection. Certain venues could have been attended by MSM engaging in higher or lower risk behaviors than others, allowing for other behaviors of risk MSM to be underreported.

Surveys were administered by trained interviewers. However, every interviewer is

different resulting in the potential for interviewer biases. Interviewers perceive behaviors differently leading to certain behaviors being underrepresented or overrepresented. Recall bias may have led to participants underreporting socially undesirable behaviors (e.g., drug and alcohol use) or overreporting socially desirable behaviors (e.g., using condoms during anal sex or being tested recently).<sup>1</sup> In some cases, stratification by demographic characteristics might have produced numbers that were too small for reliable interpretation (e.g., sample sizes less than 5 were labeled as <5 rather than their true number). Lastly, comparing two cycles of NHBS MSM data (2014 and 2017) should be done cautiously. The percentages reported in this report could have been influenced by differences in survey venue types and differences in time frames of data collection.



## Conclusion

- The National HIV Behavioral Surveillance system is essential in revealing trends in HIV prevention, testing, care, and risk behaviors as well as important social determinants of health over time.
- Chicago specific NHBS data showed there was a dramatic shift in HIV prevention behavior with the introduction and uptake of pre-exposure prophylaxis (PrEP) among HIV-negative MSM.
- When analyzed by race and ethnicity, the data showed clear disparities among NH Black MSM with regards to PrEP awareness and usage, higher rates of engagement in exchanged sex, and lower rates of taking antiretroviral medication compared to their NH White counterparts.
- Data also revealed decreased access to free condoms, and an increase in condomless anal sex among MSM in general.
- In comparison to NH White MSM, NH Black and Hispanic/Latinx MSM reported higher rates of incarceration, living in poverty, and being unhoused (particularly NH Black MSM) highlighting social and structural inequities.
- These data show that while there have been successful public health and medical interventions around HIV prevention, care, and treatment, there is still a great deal of work that needs to be conducted to ensure equity in these efforts among MSM, specifically NH Black MSM.
- CDPH participated in the MSM 2021 cycle, the follow up data collection period from the abruptly terminated cycle in 2020 due to the COVID-19 pandemic. Because of the logistics around collecting data during the COVID-19 pandemic, the sample size for MSM 2021 was less than the usual 500+ participants and the methodology was revised by the CDC. A data brief highlighting data from the MSM 2021 cycle is forthcoming.

- CDPH is dedicated to effectively, efficiently, and equitably ending the HIV epidemic across the City of Chicago and the State of Illinois, with a specific focus on populations overburdened by HIV infection, such as gay, bisexual, and other men who have sex with men.
- This effort will require continued strengthening of Chicago comprehensive, coordinated HIV Services Portfolio, including efforts expand services that reach priority communities and continued partnership with communities and service providers. It is critical for CDPH to advance collective understanding of the NHBS-Chicago MSM data and widely disseminate results to various community members and partners, and to actively solicit and support analysis and dissemination of communityspecific commentary and context for these data. Toward that end, in partnership with agencies, individuals, and community groups, CDPH has and will continue to conduct educational and solution-focused forums on this topic.

While there are proven and effective community and clinical interventions around HIV prevention, care, and treatment, there is still a great deal of work that needs to be done to ensure equity in these efforts among men who have sex with men, particularly NH Black and Hispanic/Latinx MSM. With the development of the Syndemic Infectious Disease Bureau's HIV Services Portfolio, the City's Healthy Chicago 2025 initiative, the Illinois Getting to Zero Plan, and the National Ending the HIV Epidemic Initiative, public health practitioners must use all tools available to diagnose, prevent, treat, and respond to HIV in order to accelerate progress toward the end of the epidemic.

**Reference:** 

<sup>1.</sup> Centers for Disease Control and Prevention. National HIV Behavioral Surveillance System Round 5: Model Surveillance Protocol. December 15, 2017. https://www.cdc.gov/hiv/pdf/ statistics/systems/nhbs/NHBS\_Model\_Protocol\_Round5.pdf

#### HIV + STI RESOURCES

Chicago.gov/sti-hiv

#### SUGGESTED CITATION

Chicago Department of Public Health. HIV Infection Risk, Prevention, and Testing Behaviors among Men Who Have Sex with Men, Chicago, 2014 and 2017. Chicago, IL: City of Chicago; January 2023

