



Published in final edited form as:

AIDS Behav. 2017 February ; 21(2): 492–500. doi:10.1007/s10461-016-1452-4.

Correlates of Never Testing for HIV among non-Hispanic Black men in the United States: National Survey of Family Growth, 2011-2013

Donaldson F. Conserve¹, Emeka Oraka², Winston E. Abara^{3,4}, Edith Wafula⁵, and Angela Turo⁶

¹Department of Health Promotion, Education, and Behavior, University of South Carolina, Columbia, SC USA

²ICF International, Atlanta, GA

³Department of Community Health and Preventive Medicine, Morehouse School of Medicine, Atlanta, GA

⁴Satcher Health Leadership Institute, Morehouse School of Medicine, Atlanta, GA

⁵Department of Biobehavioral Health, Pennsylvania State University, University Park, PA

⁶Department of Psychology, University of Pittsburgh, Pittsburgh Park, PA USA

INTRODUCTION

Non-Hispanic Blacks in the United States (US) are most affected by the human immunodeficiency virus (HIV) [1]. While they make up approximately 13% of the US population, they accounted for an estimated 44% of all new HIV infections among adults and adolescents in 2014 [1]. Among all non-Hispanic Blacks, approximately 74% of all infections in 2014 occurred in men [1]. The rate of HIV diagnoses among non-Hispanic Black men was more than seven and two times the rates of HIV diagnoses among White and Hispanic men in 2014, respectively [1]. Non-Hispanic Black men are also more likely to die from HIV than men of any other race [2]. Since 2004, HIV has consistently ranked among the top ten leading causes of death among this population [2]. Given these figures, existing literature has focused on identifying factors that contribute to the disproportionate impact of HIV on non-Hispanic Black men. Structural, social, and sexual network factors have been implicated as significant contributors to these disparities [3-6]. Lack of HIV testing has also been associated with the high rates of HIV infection among this population [7].

Corresponding Author: Donaldson F. Conserve, 915 Greene Street, Columbia, SC 29208, conserve@mailbox.sc.edu, 917-443-6124.

Conflict of Interest: Donaldson F. Conserve has received training grant support from the National Institute of Health, National Institute of Allergy and Infectious Diseases and has no conflict of interest. Emeka Oraka declares that he has no conflict of interest. Winston E. Abara declares that he has no conflict of interest. Edith Wafula declares that she has no conflict of interest. Angela Turo declares that she has no conflict of interest.

Compliance with Ethical Standards:

Ethical Approval: This article does not contain any studies with human participants or animals performed by any of the authors.

HIV testing is the cornerstone of HIV prevention and care and is essential to achieving the objectives of the National HIV/AIDS strategy of reducing new HIV infections, optimizing health outcomes among people living with HIV and reducing HIV-related health disparities [8]. Currently, the Centers for Disease Control and Prevention (CDC) recommends that persons between 15 and 64 years get tested for HIV at least once in their lifetime and persons with HIV risk factors get tested more frequently [9]. HIV testing rates are higher for non-Hispanic Blacks than other racial/ethnic groups [10, 11]. However, despite public health efforts to expand opportunities for HIV testing among this population, they are more likely to get tested and diagnosed with HIV late in the course of their infection [1]. Among men in particular, the rate of late HIV diagnosis is significantly higher for non-Hispanic Blacks than the rates among White and Hispanic men [1].

Given that there is still no cure for HIV, prevention continues to be a main component of HIV control efforts, and testing is central to these efforts [12,13]. HIV testing presents valuable opportunities to identify new infections, increase awareness of HIV status, and address the HIV disparities borne by non-Hispanic Black men. While previous studies have examined the prevalence of and factors associated with recent HIV testing among non-Hispanic Black men, [14-16] few studies have examined the correlates of never testing for HIV among this group. To inform targeted programs and policies, it is critical to understand the correlates of never testing for HIV among this population. Using a nationally representative sample of non-Hispanic Black men in the US, we examined 1) the prevalence of never testing for HIV, 2) specific reasons offered by respondents for never testing for HIV, and 3) the socio-demographic and behavioral correlates of never testing for HIV.

METHODS

Data source and sample

The National Survey for Family Growth (NSFG) is an in-person cross-sectional health survey conducted by the CDC that is representative of the civilian, non-institutionalized population of the US aged 15 to 44 years [17, 18]. Respondents of Hispanic/Latino and Black race/ethnicity and adolescents were oversampled to produce reliable estimates for these groups. One randomly-selected resident from each household was interviewed. Information on sensitive issues, including sexual identity and behavior with the same and opposite sex were collected using Audio Computer-Assisted Self-Interviewing. Minors were required to have consent from a parent or guardian and provide their own assent [17, 18]. The study sample was weighted to produce national US estimates using methods and procedures proposed by the National Center for Health Statistics to account for weighting based on selection probability, nonresponse and sampling differences between regions. The procedures of the NSFG recruitment protocol were reviewed and approved by Institutional Review Board of the National Center for Health Statistics [19]. Additional details regarding the NSFG sample design, weighting methodology, and variance estimation are described elsewhere [19]. A total of 4,815 men completed the interview in the 2011–2013 NSFG continuous cycle with a response rate of 72.1%. We restricted the analysis to non-Hispanic Black men aged 15-44 years for a final analytical sample of 933, representing a weighted national estimate of 7,787,657.

Outcome variables

The outcome for this analysis was never tested for HIV and was measured by the question, “Excluding blood donations, have you ever been tested for HIV? (yes/no).” Respondents who answered “no” were classified as having never tested for HIV. Those who answered “no” were then asked “Which one of these would you say is the MAIN reason why you have not been tested for HIV?” We classified these reasons into three categories: unlikely exposed, fear or HIV-related stigma, and access-related or other reasons. Respondents categorized as mainly never testing because “they were unlikely exposed” responded that they were unlikely exposed to HIV; reported spouse or partner tested negative; or never had sexual intercourse. Respondents categorized as mainly never testing due to “fear or HIV-related stigma” responded that they were worried about what other people would think if they got tested for HIV; afraid to find out if they were HIV positive; or did not like needles. Respondents categorized as mainly never testing for “access-related or other reasons” stated they were never offered an HIV test; did not have health insurance and could not afford an HIV test; or some other reason.

Independent variables

Additional socio-demographic, healthcare access-related, and behavioral variables (correlates) were included in the analysis based upon availability in the NSFG and association with HIV testing. Demographic variables included: age in years (15–17, 18–24, 25–34, 35–44); income classified according to the Federal Poverty Guidelines (below poverty level, or above poverty level); and relationship status (married/cohabitating, unmarried/not cohabitating). Healthcare access-related variables included: health insurance coverage in the past 12 months (yes, no); visited the doctor or healthcare provider in past 12 months (yes, no); and usual place of health care (yes, no). Sexual risk behaviors that confer a high risk for HIV infection, indicating the need for annual HIV testing, were selected and include [20]: sexual orientation (heterosexual, homosexual/bisexual); and HIV-related sexual risk behaviors in the past 12 months (i.e. 4 or more opposite sex partners, sex with an injection drug user, sex with an HIV-positive person, exchanged sex for money or drugs, any anal or oral sex with a male, or sex with a partner who had sex with other partners).

Data Analysis

All analyses were performed on weighted data using SUDAAN version 10.0.1 (Research Triangle Institute), a software package that accounts for the complex sampling design of the NSFG. Chi-square statistics were calculated to determine statistically significant differences ($p < .05$) in the distribution of the study variables. Logistic regression analyses were used to calculate prevalence ratios (PRs) and 95% confidence intervals (95% CIs) for each independent variable to assess the association with never testing for HIV. Adjusted prevalence ratios (APRs) were calculated by controlling for specific demographic, healthcare access-related, and behavioral covariates significant in the bivariate analyses at $p < 0.05$.

RESULTS

A sample distribution of study variables is presented in Table 1. Over half (58.5%) of the sample of non-Hispanic Black men reported being unmarried or not cohabitating. Approximately one-third of the sample reported living below the poverty level (29.4%), having health insurance coverage in the past 12 months (35.6%), visited a doctor or healthcare provider in the past 12 months (38.5%), and did not have a usual place of healthcare (31.3%). Only 2.8% reported being either homosexual or bisexual and 23.6% reported any sexual risk behaviors in the past 12 months. Nearly a third (31.2%) of non-Hispanic Black men aged 15 – 44 years have never tested for HIV.

Testing history varied significantly ($p < 0.05$) by age, income, relationship status, health insurance coverage in the past 12 months, doctor or healthcare provider visit in the past 12 months, and HIV-related sexual risk behaviors (Table 2). The proportion of never testing was highest among non-Hispanic Black men who were 15-24 years of age (66.3%), living above the poverty level (63.7%), unmarried/not cohabitating (76%), did not have health insurance coverage or visit a doctor or healthcare provider in past 12 months (71.1% and 73.8%, respectively), and did not report any HIV-related risk behaviors (85.1%). Table 3 presents weighted estimates of specific reasons for never testing for HIV. Among non-Hispanic Black men who reported never testing for HIV, the most common reason for never testing was unlikely exposure (63.4%) followed by healthcare access-related or other reasons (31.7%) and fear or HIV-related stigma (4.9%).

Table 4 shows unadjusted and adjusted prevalence ratios for never testing for HIV among non-Hispanic Black men. In the unadjusted model, non-Hispanic Black men aged 15 – 17 years and 18 – 24 years were 5.88 (95% CI: 3.61 – 9.58) and 2.53 (95% CI: 1.45 – 4.40) times more likely to never test for HIV as compared to those aged 35 – 44 years (Table 4). Likewise, non-Hispanic Black men who were below the poverty level (1.37; 95% CI: 1.08 – 1.74), were not married or cohabitating (2.26; 95% CI: 1.43 – 3.55), did not visit a doctor or healthcare provider (1.77; 95% CI: 1.26 – 2.48), did not report any HIV-related risk behaviors (1.74; 95% CI: 1.12 – 2.70) were more likely to never test for HIV compared to non-Hispanic Black men living above the poverty level, married/cohabitating, visited a doctor or healthcare provider, or reported at least one HIV-related risk behavior respectively.

In the adjusted model, after controlling for all study variables, non-Hispanic Black men aged 15 – 17 years (4.45; 95% CI: 2.88 – 6.87) or 18 – 24 years (1.94; 95% CI: 1.21 – 3.13), who did not visit a doctor or healthcare provider in the past 12 months (1.43; 95% CI: 1.10 – 1.86), or did not report any HIV-related risk behaviors (1.83; 95% CI: 1.34 – 2.51) were still more likely to never test for HIV compared to those between 35-44 years, who visited a doctor or healthcare provider in the past 12 months, and who reported any HIV-related risk behaviors in the past 12 months.

DISCUSSION

Although non-Hispanic Blacks are more likely to report a history of HIV testing than other ethnic groups, the findings of this study suggest that a significant proportion of non-Hispanic

Black men do not adhere to the CDC recommendation of getting tested for HIV at least once in their lifetime [9]. Of concern, approximately 31.2% of non-Hispanic Black men between 15 and 44 years in this study have never been tested for HIV despite the fact that non-Hispanic Black men in this age group have higher rates of HIV infection than men of any other race/ethnicity [1]. The prevalence of respondents who have never been tested for HIV has public health implications for the prevention, transmission, and control of HIV among non-Hispanic Black men, especially among younger study respondents as younger persons are more likely to be sexually active than older respondents. About 30% of new HIV infections can be attributed to persons who do not know that they have HIV [13]. Additionally, people who are not aware of their HIV infection/status are not able to access medications that can delay disease progression and reduce transmission risk [13].

The high prevalence of never testing for HIV among young men in this study could be attributed to a number of factors. Many young men do not seek any form of preventative healthcare [21] except for mandatory college or sports physical examinations. Majority of HIV testing in the US is done in clinical settings, [22,23] however clinic-based HIV testing presents challenges to younger persons [23]. Young non-Hispanic Black men may not have health care coverage that can cover the costs of obtaining an HIV test. Furthermore, many younger persons may still be covered by their parents' health insurance coverage and may be less inclined to get tested for HIV out of fear that their parents may become aware of the test itself or the results. Fear and stigma surrounding HIV and HIV testing in healthcare facilities in the non-Hispanic Black community may also preclude young people from getting tested for HIV in these locations [15,16]. Young non-Hispanic Black men are more influenced by normative attitudes of their peers and are more susceptible to social marginalization than older men [24]. Healthcare providers have shown that HIV-related stigma and the fear of social marginalization plays a role in the reluctance of young non-Hispanic Black men to get tested at healthcare centers and become aware of their HIV status [24]. Prior research has also shown that complacency and beliefs about HIV and HIV risk are factors that can affect HIV testing among young non-Hispanic Black men [25,26]. Young persons are less likely than older persons to perceive HIV as a severe medical condition and this can affect the healthcare behaviors, such as HIV testing, that they take to prevent and mitigate HIV risk and transmission [25,26].

HIV testing has also been associated with frequency of clinical encounters [26]. Persons who report routine out-patient visits are more likely to report HIV test than those who do not. Non-Hispanic Blacks, especially young non-Hispanic Blacks are less likely to report routine clinical encounters and outpatient visits than older and White men, [27] and may be more likely to report never testing for HIV. In the multivariable analysis, persons with no sexual risk behaviors were more likely to have never tested for HIV. The lack of testing among persons with no sexual risk behaviors may be a due to the fact that HIV prevention programs and interventions primarily target persons with risk factors for HIV which includes persons who report risky sexual behavior. Alternatively, persons who report risky sexual behavior may also be more cognizant of their risk of HIV than persons who do not engage in risky sexual behavior, and thus may be more likely to get tested for HIV. However, there are other non-sexual risks factors for HIV acquisition, hence the importance of getting tested for

HIV at least once even if a person is not engaging in risky sexual behaviors cannot be overstated.

Married/cohabitating respondents were less likely to have never been tested for HIV than unmarried/not cohabitating respondents. Married/co-habiting relationships are presumably more serious and of a longer duration than other types of relationships and these characteristics may provide greater opportunities for communication and comfort about HIV testing. The greater prevalence of HIV testing among married/co-habiting respondents may also be indicative of their intention to discontinue condom use [28]. However, the finding that unmarried/not co-habiting were more likely to have never tested for HIV is worrisome as these persons are unaware of their HIV status and at risk for HIV [29]. The most common reason for never testing for HIV was “unlikely exposure to HIV”. Findings from a recent study showed that many individuals are likely to underestimate their personal risk for HIV acquisition [30]. In this study, two-thirds of newly-diagnosed respondents assessed their HIV risk as low or none [30]. Furthermore, due to the higher prevalence of HIV among non-Hispanic Blacks, the risk of HIV acquisition with each HIV risk behavior is high, hence the need to get tested for HIV. Programs that promote HIV testing among black men must address perception of risk.

HIV testing in this population has significant public health benefits as it facilitates the identification and linkage of HIV infected persons into care which in turn reduces the risk of HIV transmission among non-Hispanic Blacks. The continued expansion of HIV testing programs and social media campaigns, especially those that target young non-Hispanic Black men, are required. Expanding free HIV testing programs to include non-traditional locations like AIDS-service organizations and pharmacies as well as partnering with community centers and faith-based organizations can be beneficial as it reaches persons that may be missed during regular healthcare visits, facilitates normative HIV testing, and mitigates fear and stigma associated with HIV testing [31,32]. These programs can also eliminate some of the structural barriers to HIV testing in this population and increase the accessibility and availability of HIV testing services. Providing resources about the availability of home-based testing kits has also shown promise in increasing the frequency of HIV tests and addressed concerns about anonymity, confidentiality, and stigma [33]. HIV testing social media campaigns that target non-Hispanic Black men can also increase awareness about the importance of HIV testing, emphasize the benefits of HIV testing, address HIV testing misconceptions and stigma, provide information on HIV testing locations, and facilitate normative HIV testing in this population. Cultural competence is also important in increasing HIV testing as it can serve to allay the fears of HIV testing stigma among non-Hispanic black men [26].

Healthcare providers, especially those that serve predominantly non-Hispanic Black men, have a role to play in increasing HIV testing in this population as research has shown that people are more likely to get tested for HIV when a healthcare provider recommends it [26]. Current prevention guidelines call for routine HIV testing as part of medical care for all adolescents and adults in the US [34]. The United States Preventive Services Task Force also assigned a “grade A” designation for routine HIV testing for all adolescents and adults aged 15 to 65 years, indicating with a high certainty that the net benefits of HIV testing are

substantial [34]. Increased awareness of this recommendation and its acceptance by healthcare providers may increase HIV testing rates among non-Hispanic Black men and aid in the prompt identification of HIV-infected persons.

HIV testing also offers opportunities to provide sexual education and comprehensive sexual education. This can be particularly beneficial to young persons, whether they are sexually active or not, as it can create an environment that facilitates HIV risk education, disclosure of their risk behaviors, and behavioral risk counseling. Finally, the Affordable Care Act (ACA) is another opportunity to expand HIV testing among non-Hispanic Black men [35]. Under the ACA, HIV testing is considered an essential health benefit, meaning that all persons can obtain an HIV test without cost-sharing, therefore eliminating cost as a limitation to HIV testing [35].

This study is not without limitations. First, the NSFG is not administered to homeless persons or institutionalized persons, therefore excluding those who are hospitalized and incarcerated. Second, no causal associations can be inferred given the cross-sectional design of the NSFG survey. Third, measures used in the analysis like HIV testing and reasons for HIV testing are self-reported by the participants, and are therefore subject to recall and social desirability bias. Fourth, we did not include variables such as alcohol and cigarette use. Future research should explore whether cigarette and alcohol use influence HIV testing behaviors among non-Hispanic Black men as previous findings have shown that African American adults who use these two substances are more likely to perceive themselves to be at risk for HIV and test for HIV [36].

CONCLUSIONS

To achieve the goals of the National HIV/AIDS strategy, HIV testing must continue to be a core component of HIV prevention and care efforts among non-Hispanic Black men. Continued expansion of HIV testing initiatives and prevention programs that focus on non-Hispanic Black men is critical to addressing health disparities and the public health burden of HIV in this population.

Acknowledgments

This study was supported by a training grant from the National Institute of Health, National Institute of Allergy and Infectious Diseases (T32 AI007001).

References

1. Centers for Disease Control and Prevention. Diagnoses of HIV infection in the United States and Dependent Areas. 2014; 26 [2/10/2016] Available at <http://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-report-us.pdf>.
2. Centers for Disease Control and Prevention. [6/24/2015] Leading causes of death in Males, United States. Available at <http://www.cdc.gov/men/lcod/>
3. Maulsby C, Millett G, Lindsey K, et al. HIV among black men who have sex with men (MSM) in the United States: a review of the literature. *AIDS and Behavior*. 2014; 18(1):10–25. [PubMed: 23620241]

4. Bowleg L, Raj A. Shared communities, structural contexts, and HIV risk: Prioritizing the HIV risk and prevention needs of Black heterosexual men. *American Journal of Public Health*. 2012; 102(S2):S173–S177. [PubMed: 22401513]
5. Bowleg L, Burkholder GJ, Massie JS, et al. Racial discrimination, social support, and sexual HIV risk among Black heterosexual men. *AIDS and Behavior*. 2013; 17(1):407–418. [PubMed: 22437347]
6. Reed E, Santana MC, Bowleg L, et al. Experiences of racial discrimination and relation to sexual risk for HIV among a sample of urban black and African American men. *Journal of Urban Health*. 2013; 90(2):314–322. [PubMed: 22674464]
7. Wejnert C, Le B, Rose CE, et al. HIV infection and awareness among men who have sex with men 20 cities, United States, 2008 and 2011. *PLoS ONE*. 2013; 8(10):e76878. [PubMed: 24194848]
8. [May 10, 2015] National HIV/AIDS Strategy. Jul. 2010 Available at <https://www.whitehouse.gov/sites/default/files/uploads/NHAS.pdf>
9. Centers for Disease Control and Prevention. [6/24/2015] HIV testing in clinical settings. Available at <http://www.cdc.gov/hiv/testing/clinical/>
10. Ebrahim SH, Anderson JE, Weidle P, et al. Race/ethnic disparities in HIV testing and knowledge about treatment for HIV/AIDS: United States, 2001. *AIDS Patient Care and STDs*. 2004; 18(1): 27–33. [PubMed: 15006192]
11. Murray K, Oraka E. Racial and ethnic disparities in future testing intentions for HIV: United States 2007–2010: results from the National Health Interview Survey. *AIDS and Behavior*. 2014; 18(7): 1247–1255. [PubMed: 24136452]
12. Gardner EM, McLees MP, Steiner JF, et al. The spectrum of engagement in HIV care and its relevance to test-and-treat strategies for prevention of HIV infection. *Clinical Infectious Diseases*. 2011; 52(6):793–800. [PubMed: 21367734]
13. Skarbinski J, Rosenberg E, Paz-Bailey G, et al. Human immunodeficiency virus transmission at each step of the care continuum in the United States. *JAMA internal medicine*. 2015; 175(4):588–596. [PubMed: 25706928]
14. Ojikutu B, Nnaji C, Sithole J, et al. All Black People Are Not Alike: Differences in HIV Testing Patterns, Knowledge, and Experience of Stigma Between US-Born and Non US-Born Blacks in Massachusetts. *AIDS Patient Care and STDs*. 2013; 27(1):45–54. [PubMed: 23259482]
15. Bogart LM, Deroose KP, Kanouse DE, et al. Correlates of HIV Testing among African American and Latino Church Congregants: The Role of HIV Stigmatizing Attitudes and Discussions about HIV. *Journal of Urban Health*. 2015; 92(1):93–107. [PubMed: 25537729]
16. Doshi RK, Malebranche D, Bowleg L, et al. Health care and HIV testing experiences among Black men in the South: implications for “Seek, Test, Treat, and Retain” HIV prevention strategies. *AIDS Patient Care and STDs*. 2013; 27(2):123–133. [PubMed: 23268586]
17. Lepkowski JM, Mosher WD, Davis KE, et al. National Survey of Family Growth, Cycle 6: sample design, weighting, imputation, and variance estimation. *Vital Health Stat*. 2006; 2(142):1–82.
18. National Center for Health Statistics (U.S.). Responsive design, weighting, and variance estimation in the 2006-2010 National Survey of Family Growth. Hyattsville, Md: U.S. Dept. of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics; 2013.
19. Lepkowski, JM., Mosher, WD., Groves, RM., et al. *Vital Health Statistics*. Vol. 2. National Center for Health Statistics; 2013. Responsive design, weighting, and variance estimation in the 2006-2010 National Survey of Family Growth.
20. Branson BM, Handsfield HH, Lampe MA, et al. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. *Journal of the National Medical Association*. 2008; 100(1):131–147.
21. Lau JS, Adams SH, Irwin CE, Ozer EM. Receipt of preventive health services in young adults. *Journal of Adolescent Health*. 2013; 52(1):42–49. [PubMed: 23260833]
22. Robinson KT, Sanders SA, Boyd JL. High-risk HIV minorities in the United States: Who gets tested and where? *American Journal of Health Behavior*. 2012; 36(3):348–359. [PubMed: 22370436]

23. Talib HJ, Silver EJ, Coupey SM, et al. The influence of individual, partner, and relationship factors on HIV testing in adolescents. *AIDS Patient Care and STDs*. 2013; 27(11):637–645. [PubMed: 24134644]
24. Arnold EA, Rebhook GM, Kegeles SM. ‘Triply cursed’: racism, homophobia and HIV-related stigma are barriers to regular HIV testing, treatment adherence and disclosure among young Black gay men. *Culture, health & sexuality*. 2014; 16(6):710–722.
25. Valdiserri RO. Mapping the roots of HIV/AIDS complacency: implications for program and policy development. *AIDS Education and Prevention*. 2004; 16(5):426–439. [PubMed: 15491954]
26. Petroll AE, DiFranceisco W, McAuliffe TL, et al. HIV testing rates, testing locations, and healthcare utilization among urban African-American men. *Journal of Urban health*. 2009; 86(1): 119–131. [PubMed: 19067176]
27. Swenson RR, Rizzo CJ, Brown LK, et al. Prevalence and correlates of HIV testing among sexually active African American adolescents in four US cities. *Sexually Transmitted Diseases*. 2009; 36(9):584. [PubMed: 19661840]
28. Carter MW, Kraft JM, Hatfield-Timajchy K, et al. STD and HIV testing behaviors among black and Puerto Rican young adults. *Perspectives on sexual and reproductive health*. 2011; 43(4):238–246. [PubMed: 22151511]
29. Marks G, Crepaz N, Senterfitt JW, et al. Meta-analysis of high-risk sexual behavior in persons aware and unaware they are infected with HIV in the United States: implications for HIV prevention programs. *JAIDS Journal of Acquired Immune Deficiency Syndromes*. 2005; 39(4): 446–453. [PubMed: 16010168]
30. Nunn A, Zaller N, Cornwall A, et al. Low perceived risk and high HIV prevalence among a predominantly African American population participating in Philadelphia’s Rapid HIV testing program. *AIDS patient care and STDs*. 2011; 25(4):229–235. [PubMed: 21406004]
31. Nyblade L, Stangl A, Weiss E, Ashburn K. Combating HIV stigma in health care settings: what works? *Journal of the international AIDS Society*. 2009; 12(1):15. [PubMed: 19660113]
32. Abara W, Coleman JD, Fairchild A, et al. A faith-based community partnership to address HIV/AIDS in the southern United States: Implementation, challenges, and lessons learned. *Journal of religion and health*. 2015; 54(1):122–133. [PubMed: 24173601]
33. Obermeyer CM, Osborn M. The utilization of testing and counseling for HIV: a review of the social and behavioral evidence. *American journal of public health*. 2007; 97(10):1762. [PubMed: 17761565]
34. United States Preventive Services Task Force. [February 21 2016] Human Immunodeficiency Virus (HIV) Infection: Screening. Available at <http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/human-immunodeficiency-virus-hiv-infection-screening?ds=1&s=HIV>
35. Abara W, Heiman HJ. The Affordable Care Act and Low-Income People Living With HIV: Looking Forward in 2014 and Beyond. *Journal of the Association of Nurses in AIDS Care*. 2014; 25(6):476–482. [PubMed: 24996850]
36. Conserve D, King G, Turo A, Wafula E. Cigarette smoking and alcohol use as predictors of HIV testing in the United States: Results from the 2010 National Health Interview Survey. *AIDS Care*. 2014; 26(7):842–849. [PubMed: 24283204]

Table 1

Weighted estimates of selected demographic characteristics of non-Hispanic Black men aged 15-44 years:
National Survey of Family Growth, 2011-2013

Characteristic	Unweighted N	Weighted N	% (95% CI)
Age (yrs.)			
15-17	135	890,226	11.4 (9.4 – 13.8)
18-24	264	2,226,294	28.6 (24.4 – 33.2)
25-34	300	2,437,937	31.3 (26.4 – 36.7)
35-44	234	2,233,200	28.7 (25.8 – 31.8)
Income as % of Poverty Level			
Below poverty level	318	2,290,590	29.4 (24.8 – 34.5)
Above poverty level	615	5,497,067	70.6 (65.5 – 75.2)
Relationship Status			
Married/Cohabiting	253	3,233,885	41.5 (36.3 – 46.9)
Unmarried/Not Cohabiting	680	4,553,772	58.5 (53.1 – 63.7)
Health insurance Coverage, past 12 months			
Yes	308	2,728,376	35.6 (29.2 – 42.4)
No	610	4,945,579	64.5 (57.6 – 70.8)
Visited a Doctor or Healthcare Provider, past 12 months			
Yes	351	2,997,571	38.5 (33.9 – 43.3)
No	582	4,790,086	61.5 (56.7 – 66.1)
Usual Place of Healthcare			
Yes	650	5,347,603	68.7 (62.9 – 73.9)
No	283	2,440,054	31.3 (26.1 – 37.1)
Sexual Orientation			
Heterosexual	892	7,535,269	97.2 (95.3 – 98.4)
Homosexual/Bisexual	31	214,077	2.8 (1.6 – 4.6)
Sexual Risk Behaviors, past 12 months			
Any*	262	1,834,809	23.6 (19.7 – 28.1)
None	668	5,941,407	72.7 (65.7 – 78.8)
Ever tested for HIV			
Yes	621	5,346,636	68.8 (64.2 – 73.10)
No	310	2,422,484	31.2 (26.9 – 35.8)
TOTAL	933	7,787,657	100%

CI, confidence interval

* HIV-related sexual risk behaviors include a 'Yes' response to any of the following: 1) At least one same sex partner in the last 12 months; 2) Sex with a female/male IDU in the last 12 months; 3) Sex with an HIV-positive female/male in the last 12 months; 4) Exchanged sex for money or

drugs in the last 12 months; 5) More than 4 opposite sex partners in the last 12 months 6) Sex with a female/male partner who had sex with other partners concurrently

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Table 2
 Weighted estimates of selected demographic characteristics of non-Hispanic Black men aged 15-44 by HIV testing history: National Survey of Family Growth, 2011-2013

Characteristic	Ever Tested for HIV/AIDS				Never tested		p-value
	Unweighted N	Weighted N	% (95% CI)	Unweighted N	Weighted N	% (95% CI)	
Age (yrs.)							<0.001
15-17	18	111,985	2.1 (1.2 – 3.8)	116	769,068	31.8 (26.1 – 38.0)	
18-24	160	1,390,962	26.0 (21.4 – 31.3)	104	835,331	34.5 (26.1 – 43.9)	
25-34	242	1,949,843	36.5 (31.5 – 41.8)	58	488,094	20.2 (12.8 – 30.3)	
35-44	201	1,893,845	35.4 (31.0 – 40.2)	32	329,992	13.6 (8.6 – 21.0)	
Income as % of Poverty Level							0.010
Below poverty level	195	1,402,768	26.2 (21.0 – 32.3)	122	878,649	36.3 (29.8 – 43.3)	
Above poverty level	426	3,943,868	73.8 (67.7 – 79.0)	188	1,543,836	63.7 (56.7 – 70.2)	
Relationship Status							<0.001
Married/Cohabitating	209	2,651,952	49.6 (43.6 – 55.6)	44	581,932	24.0 (15.7 – 35.0)	
Unmarried/Not Cohabitating	412	2,694,683	50.4 (44.4 – 56.4)	266	1,840,552	76.0 (65.0 – 84.4)	
Health Insurance Coverage, past 12 months							0.044
Yes	233	2,035,498	38.5 (31.7 – 45.7)	74	683,514	28.9 (20.2 – 39.7)	
No	383	3,258,207	61.6 (54.3 – 68.3)	226	1,678,200	71.1 (60.3 – 79.8)	
Visited a Doctor or Healthcare Provider, past 12 months							0.004
Yes	260	2,362,111	44.2 (38.1 – 50.4)	91	635,459	26.2 (19.5 – 34.3)	
No	361	2,984,524	55.8 (49.6 – 61.9)	219	1,787,025	73.8 (65.7 – 80.5)	
Usual Place of Healthcare							0.694
Yes	437	3,709,060	69.4 (62.4 – 75.6)	212	1,629,370	67.3 (57.9 – 75.4)	
No	184	1,637,576	30.6 (24.4 – 37.7)	98	793,115	32.7 (24.6 – 42.1)	
Sexual Orientation							0.484
Heterosexual	591	5,155,475	97.0 (94.5 – 98.4)	299	2,361,257	97.8 (95.1 – 99.1)	
Homosexual/Bisexual	23	161,926	3.0 (1.7 – 5.6)	8	52,151	2.2 (0.9 – 4.9)	

Characteristic	Ever Tested for HIV/AIDS				Never tested				p-value
	Unweighted N	Weighted N	% (95% CI)	Unweighted N	Weighted N	% (95% CI)			
Sexual Risk Behaviors, past 12 months									0.009
Any*	198	1,455,465	27.3 (21.2 – 34.3)	62	360,807	14.9 (10.9 – 20.1)			
None	421	3,883,829	72.7 (65.7 – 78.8)	247	2,057,579	85.1 (79.9 – 89.1)			
TOTAL	621	5,346,636	100%	310	2,422,484	100%			

CI, confidence interval

* HIV-related sexual risk behaviors include a 'Yes' response to any of the following: 1) At least one same sex partner in the last 12 months; 2) Sex with a female/male IDU in the last 12 months; 3) Sex with an HIV-positive female/male in the last 12 months; 4) Exchanged sex for money or drugs in the last 12 months; 5) More than 4 opposite sex partners in the last 12 months 6) Sex with a female/male partner who had sex with other partners concurrently.

Note: Chi square tests were used to determine statistical significance at $p < 0.05$

Table 3

Weighted estimates of reasons never tested for HIV among non-Hispanic Black men aged 15-44: National Survey of Family Growth, 2011-2013

Main Reason for Never Testing for HIV	Unweighted N	Weighted N	% (95% CI)
Unlikely Exposed	184	1,531,000	63.4 (53.1 – 72.6)
<i>It's unlikely you've been exposed to HIV</i>	177	1,500,508	98.0 (95.7 – 99.1)
<i>Spouse or partner tested negative</i>	2	---	---
<i>Never had sexual intercourse</i>	5	19,956	1.3 (0.5 – 3.3)
Fear or HIV-related Stigma	15	118,739	4.9 (2.6 – 9.2)
<i>You are worried about what other people would think if you got tested for HIV</i>	1	---	---
<i>You were afraid to find out if you were HIV positive (that you had HIV)</i>	2	---	---
<i>You don't like needles</i>	12	103,175	86.9 (64.3 – 96.1)
Access-related or Other	109	765,259	31.7 (22.8 – 42.1)
<i>You have never been offered an HIV test</i>	89	656,152	85.7 (76.6 – 91.7)
<i>No health insurance or coverage, or couldn't afford an HIV test</i>	1	---	---
<i>Some other reason</i>	19	104,395	13.6 (7.8 – 22.8)
TOTAL	308	2,414,998	100%

CI, confidence interval

Note: Estimates with Unweighted sample sizes less than 4 were statistically unreliable and not presented

Table 4

Prevalence and prevalence ratios for never testing for HIV among non-Hispanic Black men aged 15 – 44 by selected characteristics: National Survey of Family Growth, 2011-2013

Characteristic	Prevalence (%)	Prevalence Ratio (95%CI)	Adjusted Prevalence ^A (%)	Adjusted Prevalence Ratio ^A (95%CI)
Age (yrs.)				
15-17	87.3	5.88 (3.61 – 9.58)	82.6	4.45 (2.88 – 6.87)
18-24	37.5	2.53 (1.45 – 4.40)	36.0	1.94 (1.21 – 3.13)
25-34	20.0	1.35 (0.75 – 2.44)	19.6	1.06 (0.63 – 1.77)
35-44	14.8	Reference	18.6	Reference
Income as % of Poverty Level				
Below poverty level	38.5	1.37 (1.08 – 1.74)	31.2	1.00 (0.80 – 1.26)
Above poverty level	28.1	Reference	31.2	Reference
Relationship Status				
Married/Cohabiting	18.0	Reference	26.6	Reference
Unmarried/Not Cohabiting	40.6	2.26 (1.43 – 3.55)	34.5	1.30 (0.94 – 1.80)
Health Insurance Coverage, past 12 months				
Yes	25.1	Reference		
No	34.0	1.35 (0.97 – 1.88)		
Visited a Doctor or Healthcare Provider, past 12 months				
Yes	21.2	Reference	24.6	Reference
No	37.5	1.77 (1.26 – 2.48)	35.1	1.43 (1.10 – 1.86)
Usual Place of Healthcare				
Yes	30.5	Reference		
No	32.6	1.07 (0.77 – 1.49)		
Sexual Orientation				
Heterosexual	31.4	1.29 (0.60 – 2.78)		
Homosexual/Bisexual	24.4	Reference		
Sexual Risk Behaviors, past 12 months				
Any [*]	19.9	Reference	19.4	Reference
None	34.6	1.74 (1.12 – 2.70)	35.6	1.83 (1.34 – 2.51)

CI, confidence interval

^{*} HIV-related sexual risk behaviors include a 'Yes' response to any of the following: 1) At least one same sex partner in the last 12 months; 2) Sex with a female/male IDU in the last 12 months; 3) Sex with an HIV-positive female/male in the last 12 months; 4) Exchanged sex for money or drugs in the last 12 months; 5) More than 4 opposite sex partners in the last 12 months 6) Sex with a female/male partner who had sex with other partners concurrently

^A Models adjusted for covariates significant in bivariate analyses at $P < 0.05$ which includes age, income, relationship status, visited a doctor or healthcare provider in past 12 months, and any sexual risk behaviors in the past 12 months.