

Beliefs About Who Should Be Tested for HIV Among African American Individuals Attending a Family Practice Clinic

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Dear Editor:

Despite comprising only 12% of the U.S. population, African Americans account for nearly 50% of its HIV cases.¹ Early HIV testing and antiretroviral therapy, when indicated, can prolong or prevent the onset of life-threatening AIDS, yet many African Americans go undiagnosed. Among those with HIV, compared to whites, African Americans are 23% less likely to be diagnosed.² Furthermore, when tested, African Americans are more likely to be tested and diagnosed with HIV late in the course of infection—near the onset of AIDS. While 42.6% of whites receive an AIDS diagnosis within 3 years of their HIV diagnosis, 46.1% of African Americans receive an AIDS diagnosis within 3 years of their HIV diagnosis.³ From an individual's perspective, beginning antiretroviral therapy before receiving an AIDS diagnosis can prolong life. From the community's perspective, HIV testing delays result in years of missed opportunities for antiretroviral therapy, which lowers an individual's HIV viral load to decrease infectiousness, a key step in interrupting ongoing transmission in the community. Furthermore, when people are diagnosed with HIV, they reduce their risk behaviors, which also helps prevent ongoing transmission in the community.⁴ Because HIV testing is thus a prevention intervention that may help to stem the tide of the ongoing HIV epidemic, in 2006 the Centers for Disease Control and Prevention (CDC) issued new recommendations to make HIV testing opt-out and routine for all persons ages 13–64 in health care settings.⁵ The CDC has specifically emphasized the need for improved testing in African American communities.⁶

In 2011, some 5 years after the CDC issued its new recommendations, routine HIV testing in health care settings is still far from being universal. Recent studies indicate that not only is HIV testing not being offered routinely by physicians,⁷ but when it is offered, patients are opting-out.⁸ In a 2011 national survey, 26% of African Americans reported never having been HIV tested.⁷ Of those reporting no testing, 53% indicated they were not being tested because they did not feel

they were at risk for HIV. Over 1 of 4 African Americans surveyed were “not at all concerned” about becoming infected with HIV.⁷ While it is true that some may not be at risk for HIV infection, this lack of concern may, instead, suggest a lack of awareness of the actual prevalence of HIV in the African American community, as well as conflicts in preexisting beliefs about who is and is not at risk for HIV. Such lack of awareness and conflict between beliefs and realities are certainly potential barriers to getting tested.

Given that recent research has highlighted low perception of risk as an ongoing barrier to accepting HIV testing even when it is offered routinely in health care settings,⁸ the purpose of this study, which was conducted in a family practice clinic serving predominantly African Americans, was to understand patient beliefs about who should be tested for HIV. Understanding these beliefs could help guide campaigns to educate patients about the current epidemiologic profile of the HIV epidemic and the need for routine HIV testing for all persons ages 13–64 in health care settings.

Between February and March 2010, a cross-sectional survey was conducted of adult African American individuals attending a family practice clinic in the Harris County Hospital District (HCHD), Houston, Texas. HCHD provides public health care for the nation's third most populous county; significantly, over 90% of the HIV/AIDS cases in the Houston metropolitan area are in Harris County. Mirroring national trends, African Americans account for 50% of Harris County's HIV/AIDS cases despite making up only 18% of the county's population. The HCHD family practice clinic at which this study was conducted serves a predominantly African American population (57%). Patients were recruited while they were in the waiting room waiting for their health care provider appointment. Patients were considered eligible if they were aged 18–64 years, self-identified as African American, and fluent in English. Baylor College of Medicine Institutional Review Board approval was obtained for this human subjects research; patients' completion of our study's voluntary survey was deemed an appropriate indication of

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consent to participate. One hundred-seventy six eligible participants completed the anonymous, self-administered survey. The average participant age was 37.1 years (range, 18–63; standard deviation, 11.0 years). The majority of participants was female (84.1%). Sixty-seven percent of participants had up to a high school diploma or GED; 33% had at least some college-level education.

Table 1 provides the results of the survey's question on HIV testing beliefs. Over 90% of respondents thought that men who have sex with men, people who use injection drugs, and people who have sex for money or drugs should be HIV tested. In addition, over 90% of respondents thought that people with more than one sex partner should be HIV tested. However, despite recommendations made since 1995 that women should be tested at least once in pregnancy,⁹ only 79% of respondents thought that pregnant women should be tested. Also surprising was that, despite 2006 recommendations for all persons ages 13–64 to be tested, only 74% and 73% of respondents thought healthy teenagers and healthy adults, respectively, should be tested. While 21 participants (12%) indicated that there are "other" people (i.e., not listed in the survey question) who should be HIV tested, only four respondents provided a written response to the open-ended question as to which other people should be tested. The four responses were: "children," "everyone," "health care workers and needles," and "adults 60 and up." Notably, between 3% and 7% of respondents were "not sure" if the different categories of people listed in the survey question should be tested.

One hundred seventy-four participants responded to a survey question asking if they had ever been tested for HIV. Overall, 80% of respondents self-reported having had an HIV test before. While not statistically significant, a higher percentage of females (83%, 121/146) compared to males (68%, 19/28) responded that they had had an HIV test. There was no statistically significant difference in self-report of prior HIV testing among females of childbearing age (age \leq 45; 84%, 90/107) compared to older women (82%, 27/33).

When comparing responses between those that thought people should or should not be tested (yes versus no or not sure), except for in one case, there were no statistically significant differences in beliefs about who should be tested for HIV between (1) female versus male respondents, (2) respondents who had completed at least some high school education versus those who had completed at least some college, and (3) respondents who self-reported having previously had HIV testing vs. those who had not had been

tested or were not sure if they had been tested for HIV. In that one case, beliefs about testing for "people who have more than one sex partner" differed significantly between respondents who self-reported having previously had HIV testing versus those who had not been tested or were not sure if they had been tested for HIV (Fisher's exact test, $p=0.041$). Whereas nearly all (95.7%) of those who reported they had previously been tested believed persons with more than one sex partner should be tested, a lesser percentage (85.3%) of those who did not report having had an HIV test believed that persons with more than one sex partner should be tested.

All comparative associations were tested using Fisher's exact test; results were considered significant at the 0.05 level. All analyses were conducted using Stata (StataCorp 2007. Stata Statistical Software: Release 10, StataCorpLP, College Station, TX).

To our knowledge, this is the first study conducted in a family practice clinic serving predominantly African American patients that asks participants to elucidate who they think is at risk for HIV infection and therefore should be tested.

Understanding patients' current beliefs about HIV at-risk populations may help explain why so many patients perceive themselves as not at risk and why they continue to opt-out of HIV testing, even when it is offered routinely in health care settings. On the one hand, over 90% of respondents felt that historical higher risk populations should be tested, i.e., men who have sex with men, injection drug users, and those who trade sex for money or drugs. Current data suggest these historic populations remain at high risk. In 2010, 53% of new HIV infections in the United States were among men who have sex with men and 12% were among those who use injection drugs.¹ The CDC continues to highlight the pressing need to target these populations for HIV testing. On the other hand, however, despite long-standing recommendations that women should be tested at least once in pregnancy, only 79% of respondents in our study thought pregnant women should be tested. Other studies support this finding, having found similar beliefs about HIV testing during pregnancy.¹⁰ Given that missed HIV testing and antiretroviral therapy during pregnancy are factors responsible for ongoing perinatal HIV transmission in the United States,⁵ it is disconcerting that there is not 100% agreement that pregnant women should be HIV tested. Even more disconcerting is the fact that our study participants were themselves predominantly African American women—the group most affected by perinatal

TABLE 1. RESPONSES TO "I THINK THE FOLLOWING PEOPLE SHOULD BE TESTED FOR HIV," SORTED DESCENDING ON "YES" ($n = 176$)

	Yes	(%)	No	(%)	<i>I'm not sure</i>	(%)
Men who have sex with men	169	(96)	1	(<1)	6	(3)
People who use injection drugs	167	(95)	1	(<1)	8	(4)
People who have sex for money or drugs	168	(95)	1	(<1)	7	(4)
People who have more than one sex partner	165	(94)	5	(3)	6	(3)
Women who are pregnant	139	(79)	25	(14)	12	(7)
Healthy teenagers	130	(74)	35	(20)	11	(6)
Healthy adults	129	(73)	34	(20)	13	(7)
Other	21	(12)	124	(70)	31	(18)

transmission of HIV in the United States.¹¹ Similarly troubling, when asked if healthy teenagers and adults—with no clarification on the sexual or drug use practices of these groups—should be tested, only 74% and 73% of participants, respectively, agreed that they should. This finding may highlight a lack of awareness that approximately 30% of people living with HIV in the United States are neither men who have sex with men nor injection drug users.¹ It is also possible that participants believe that only non-healthy teenagers and adults need to be tested, highlighting a misperception that people with HIV will look or feel sick. These findings starkly reflect either an unawareness of or a disagreement with the 2006 CDC recommendations that all persons ages 13–64 should be tested.

It is notable that 80% of our population self-reported having had an HIV test before. National data from the CDC indicate that 45% of U.S. adults report having had an HIV test, with nearly 62% of African Americans reporting ever been tested.¹² Given that this study took place in a high HIV prevalence city, it is possible that this high HIV testing prevalence finding is accurate. Additionally, the study population consisted of patients attending a health care setting; this is a selected population who attends to their health and may be more likely to undergo screening for a variety of conditions, including HIV. Furthermore, our study population was predominantly female, a group more likely to access health care than men. Notably, there was no difference in self-report of HIV testing between women of childbearing age versus older women, suggesting that the high HIV testing prevalence may not be related to HIV testing conducted during pregnancy. Alternatively, the high self-report rate of HIV testing may reflect response bias. Finally, a national survey found that 25% of African Americans assumed HIV testing was done as part of routine examinations⁷; our study population also may have made this assumption.

The CDC has highlighted the need for campaigns to target African American communities with promotional HIV testing messages.⁶ Health campaigns can increase knowledge about HIV testing, show the benefits of testing, refute myths or misconceptions about who should be tested, and prompt action. Media campaigns are a cost-effective strategy to promote HIV prevention messages¹³ and have been shown to be effective in promoting HIV testing.¹⁴ Media are a prominent source of HIV information for African Americans.⁷ In a 2011 national survey, 63% of African Americans wanted to know who should get tested for HIV.⁷ In our study of predominantly African Americans, participants were often unsure of who should be tested and did not feel that all people considered appropriate for testing by the CDC should be tested. A recent study found that higher HIV knowledge was associated with (1) agreement with the 2006 CDC recommendations for routine HIV testing of adults and (2) self-reported HIV testing acceptance.¹⁵ Thus, media could be used to increase African Americans' knowledge about routine opt-out HIV testing for all teenagers and adults.

There is a paucity of literature to guide the design of campaigns in today's context of the new testing recommendations

for HIV opt-out testing in health care settings. Our research highlights the need for campaigns promoting awareness about and the benefits of HIV testing for all persons ages 13–64. This strategy may improve the HIV testing opt-out rates we are currently seeing and help mitigate the HIV epidemic's disproportionate impact on African Americans.

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References

- Centers for Disease Control and Prevention. HIV in the United States. July 2010. www.cdc.gov/hiv/resources/factsheets/PDF/us.pdf (Last accessed February 2, 2011).
- Campsmith ML, Rhodes PH, Hall HI, Green TA. Undiagnosed HIV prevalence among adults and adolescents in the United States at the end of 2006. *J Acquir Immune Defic Syndr* 2010;53:619–624.
- Late HIV testing—34 states, 1996–2005. *MMWR* 2009;58:661–665.
- Marks G, Crepaz N, Senterfitt JW, Janssen RS. 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. *J Acquir Immune Defic Syndr* 2005;39:446–453.
- Centers for Disease Control and Prevention. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. *MMWR* 2006; 55:1–17.
- Centers for Disease Control and Prevention. A heightened national response to HIV/AIDS crisis among African-Americans. www.cdc.gov/hiv/topics/aa/resources/reports/pdf/heightenedresponse.pdf (Last accessed February 7, 2011).
- Kaiser Family Foundation. 2011 Survey of Americans on HIV/AIDS. www.kff.org/kaiserpolls/upload/8186-T.pdf (Last accessed June 29, 2011).
- Cunningham CO, Doran B, DeLuca J, Dyksterhouse R, Asgary R, Sacajiu G. Routine opt-out HIV testing in an urban community health center. *AIDS Patient Care STDs* 2009; 23:619–623.
- U.S. Public Health Service recommendations for human immunodeficiency virus counseling and voluntary testing for pregnant women. *MMWR Recomm Rep* 1995;44:1–15.
- Podhurst LS, Storm DS, Dolgonos S. Women's opinions about routine HIV testing during pregnancy: Implications for the opt-out approach. *AIDS Patient Care STDs* 2009; 23:331–337.
- Centers for Disease Control and Prevention. HIV/AIDS topics: Pregnancy and Childbirth. 2007. www.cdc.gov/hiv/

- topics/perinatal/index.htm (Last accessed February 7, 2011).
12. Vital signs: HIV testing and diagnosis among adults—United States, 2001–2009. *MMWR* 2010;59:1550–1555.
 13. Cohen DA, Wu SY, Farley TA. Comparing the cost-effectiveness of HIV prevention interventions. *J Acquir Immune Defic Syndr* 2004;37:1404–1414.
 14. Vidanapathirana J, Abramson MJ, Forbes A, Fairley C. Mass media interventions for promoting HIV testing. *Cochrane Database Syst Rev*. 2005(3):CD004775.
 15. Stefan MS, Blackwell JM, Crawford KM, et al. Patients' attitudes toward and factors predictive of HIV testing of academic medical clinics. *Am J Med Sci* (in press).

LETTER TO THE EDITOR

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