HIV Prevention Services Received at Health Care and HIV Test Providers by Young Men who Have Sex with Men: An Examination of Racial Disparities

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ABSTRACT *We investigated whether there were racial/ethnic differences among young men who have sex with men (MSM) in their use of, perceived importance of, receipt of, and satisfaction with HIV prevention services received at health care providers (HCP) and HIV test providers (HTP) that explain racial disparities in HIV prevalence. Young men, aged 23 to 29 years, were interviewed and tested for HIV at randomly sampled MSM-identified venues in six U.S. cities from 1998 through 2000. Analyses were restricted to five U.S. cities that enrolled 50 or more black or Hispanic MSM. Among the 2,424 MSM enrolled, 1,522 (63%) reported using a HCP, and 1,268 (52%) reported having had an HIV test in the year prior to our interview. No racial/ethnic differences were found in using a HCP or testing for HIV. Compared with white MSM, black and Hispanic MSM were more likely to believe that HIV prevention services are important [respectively, AOR, 95% confidence interval (CI): 3.0, 1.97 to 4.51 and AOR, 95% CI: 2.7, 1.89 to 3.79], and were more likely to receive prevention services at their HCP (AOR, 95% CI: 2.5, 1.72 to 3.71 and AOR, 95% CI: 1.7, 1.18 to 2.41) and as likely to receive counseling services at their HTP. Blacks were more likely to be satisfied with the prevention services received at their HCP (AOR, 95% CI: 1.7, 1.14 to 2.65). Compared to white MSM, black and Hispanic MSM had equal or greater use of, perceived importance of, receipt of, and satisfaction with HIV prevention services. Differential experience with HIV prevention services does not explain the higher HIV prevalence among black and Hispanic MSM.*

KEYWORDS *HIV prevention services, Racial/ethnic disparities, Young MSM*

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INTRODUCTION

Racial and ethnic minorities continue to be disproportionately affected by the HIV/AIDS epidemic.¹⁻⁷ In 2005, blacks accounted for half of the new HIV/AIDS cases reported in the United States, yet represented only 13% of the U.S. population.⁸ Racial and ethnic disparities in HIV infection are particularly evident among men who have sex with men (MSM) who account for 65% of new HIV infections.^{1,4,9-13} For cases among MSM, the HIV diagnosis rate during 2001-2004 for blacks was 69.0 per 100,000, 37.8 for Hispanics, compared with 13.9 for whites.¹² Compared with white MSM, black and Hispanic MSM experience considerably higher incidence and prevalence of HIV infection, and many are unaware of their infection.^{1,4,10,13-17}

Thus far, epidemiological investigations have supported only a few hypotheses that might help to explain dramatic racial differences in HIV prevalence that may help guide efforts to reduce these racial disparities.^{5,7,14,18,19} One hypothesis that Millett and colleagues were not able to address in their review article that might account for these racial disparities is disparities in the quantity or quality of prevention services obtained by uninfected MSM. Reports suggest that racial disparities in HIV infection could be attributed to racial/ethnic disparities in access to, use of, and quality of health care services.^{20,21} However, health disparities research has focused on cardiovascular disease, diabetes, cancer, and the treatment of HIV infection.²²⁻²⁸ Evaluations of racial/ethnic differences in the use or provision of HIV prevention services among young MSM have not been published, and it is unknown whether these potential disparities explain the large difference observed in the incidence and prevalence of HIV infection among black and Hispanic MSM compared with white MSM.

The findings of HIV prevention services research are useful for improving HIV prevention efforts.^{29,30} HIV prevention services given by health care providers (HCP) and HIV test providers (HTP) have been shown to decrease risky behaviors,^{30,31} to increase HIV testing,³²⁻³⁶ to increase condom use, and to prevent sexually transmitted infections (STI).³⁰ Patient-provider relationships have also been found to positively impact behavior change.^{32,33,36} CDC has recently begun a heightened national response to reduce racial/ethnic disparities.⁴ To better understand how HIV prevention services might be differentially impacting young black and Hispanic MSM compared to white MSM, particularly among MSM who are unaware of their HIV infection, and to ensure the proper allocation of funds for reducing racial disparities, it is necessary to assess health care utilization patterns and experiences, and attitudes towards health care and HIV prevention services.³⁷⁻³⁹

In this paper, we analyzed data from phase 2 of the Young Men's Survey (YMS) to examine whether differential use of or types of prevention services provided by a HCP or HTP might explain racial/ethnic differences in HIV prevalence among young MSM. Exploratory analysis was conducted to evaluate the following: that relative to white MSM, black MSM and Hispanic MSM would report (1) using health care and HIV testing services less frequently; (2) perceiving that HIV prevention services at their HCP and HTP were less important; (3) receiving fewer prevention services at their HCP and HTP; and (4) being less satisfied with services received and less likely to reduce behavioral risks after receiving these services. We also evaluated whether these patterns would also be found when making racial/ethnic comparisons among black and Hispanic MSM who were unaware of their HIV infection.

METHODS

Sampling Procedure

YMS methods have been described.^{5,10,14–16,18,40,41} In summary, YMS was a cross-sectional anonymous survey of men who attended MSM-identified venues between 1998 and 2000 in Baltimore, Maryland; Dallas, Texas; Los Angeles, California; Miami, Florida; New York, New York; and Seattle, Washington. Formative research was conducted to construct monthly sampling frames of the days, times, and venues attended by young MSM. Eligible venues consisted of bars, dance clubs, businesses, social organizations, parks, sex establishments, and did not include clinical settings providing HIV services. Each month, a minimum of 12 venues and their associated day/time periods were selected randomly and scheduled for sampling. Sufficient sampling events were conducted to recruit a target of 500 men from each city. During sampling events, men were approached consecutively to assess their survey eligibility. Local male residents aged 23–29 years who had never previously participated were eligible for the survey. Participants completed a 30-min interviewer-administered questionnaire, had blood drawn for testing, were given appointments to obtain test results, and were provided HIV/STD prevention counseling and referral for care when needed. Participants were compensated \$50 for their participation. The survey and HIV test were anonymous. Specimens were tested for HIV at local laboratories with assays licensed by the Food and Drug Administration. Analyses excluded records of duplicate participants who were identified using the Miragen antibody-profile assay,⁴² and of participants who reported contradictory responses or who were impaired by alcohol or drugs. The YMS protocol was approved by institutional review boards at the Centers for Disease Control and Prevention (CDC) and at state and local institutions that conducted the survey.

Measures

One standard questionnaire was used in all cities to measure socio-demographic characteristics, sex and drug-use behaviors, and use of health care and HIV prevention services. For race/ethnicity, participants were asked to choose one category that best describes their identity. Use of a HCP was assessed with the following question: “Is there a particular doctor’s office, health maintenance organization, hospital, or some other place that you usually go if you are sick or need advice about your health?” For those who reported using a HCP, we asked: (1) the type of provider they used (e.g., private doctor, hospital, health department, or other); (2) how many times they visited their provider since age 20; (3) how important it was for them to receive HIV prevention services at their HCP (prevention services were defined as HIV education, risk assessment, risk-reduction counseling, or testing); (4) if they ever received each of these individual services at their HCP; and (5) how satisfied they were overall with prevention services received.

For those who reported having tested for HIV, we asked the month, year, and results of their most recent test and the number of times they had tested previously. “HIV-infected unaware” was defined as testing HIV-positive as part of YMS and reporting never previously testing HIV-positive. Of those who reported testing HIV-negative in the year before the YMS interview, we asked: (1) the type of HIV test provider (e.g., private doctor, hospital, health department, other clinic, other); (2) how important it was for them to receive counseling from their HTP (counseling was defined as talking with the HTP about HIV/AIDS, reason for testing, risk behaviors, or ways to

reduce risks); (3) if they received each of the defined counseling services, and whether the HTP also discussed the need for retesting and informing partners of test results; (4) how satisfied they were overall with the counseling provided; and (5) whether as a result of the last HIV test or counseling experience they increased, decreased, or did not change how often they told partners about their HIV status, the number of different sex partners they had had, or how often they had had anal sex without a condom. Throughout the remainder of the manuscript, “counseling” will sometimes be considered “prevention services” depending on the context of use.

The perceived importance of receiving HIV prevention services from their HCP/HTP was measured on a seven-point scale (1 “not important” to 7 “very important”). Responses ≥ 5 were categorized as “important.” Overall satisfaction with prevention services received from their HCP/HTP was measured on a five-point scale (1 “very dissatisfied” to 5 “very satisfied”). Responses ≥ 4 were categorized as “satisfied.” Finally, we asked participants to select from a list of services how their HCP or HTP could have improved, e.g., by doing better at assessing risks, discussing ways risks could be reduced, and by providing testing services (HCP only) or referring for additional care or other services.

Analyses

We first evaluated recruitment outcomes and the distribution of participant socio-demographic characteristics within the five cities in which ≥ 50 black or Hispanic MSM were enrolled (Baltimore, Dallas, Los Angeles, Miami, and New York). All subsequent analyses that evaluated differences between black and Hispanic MSM with white MSM were restricted to the four cities that recruited ≥ 50 MSM of each group [blacks vs. whites ($n=1,364$ MSM): Baltimore, Dallas, Los Angeles, and New York; Hispanic vs. whites ($n=1,416$ MSM): Dallas, Los Angeles, Miami, and New York]. We next evaluated potential confounders for disparities in health care and prevention services by using the Chi-square test to evaluate racial/ethnic differences on socio-demographic characteristics, risk behaviors, having had an STI, and current HIV status based on the YMS test result. Using the Breslow-Day test for homogeneity at alpha level 0.10, we found no effect modifiers for race/ethnicity and each of the prevention services outcomes. We then constructed separate logistic regression models comparing blacks with whites, and Hispanics with whites using as outcome variables each of the above measures on use of health care and HIV testing services, and on the perceived importance of, receipt of, and satisfaction with prevention services. All models were adjusted for the following potential confounders: age, city, income, ever having unprotected anal sex, ≥ 20 lifetime male sex partners, ever having an STI, and HIV status. For models of HCP prevention services, we also included type of HCP and openness to others about sexual orientation. For models of HTP prevention services, we also included type of HTP, number of previous HIV tests, and risk behavior as reason for last HIV test. The above variables were chosen as potential confounders because either they were found to be significantly associated with race/ethnicity or the outcome variable for that model, or in the absence of significant association, were considered as potentially important confounders based on previous research.^{5,7,14,43} Analyses were restricted to the appropriate groups (1) MSM who reported using an HCP or (2) MSM who reported testing HIV-negative in the past year. Finally, to assess whether differences might have occurred only among those who unknowingly acquired HIV, we evaluated the above prevention-services outcomes restricted to MSM who were not aware they were infected (HIV-infected unaware).

RESULTS

Recruitment Outcomes and Sociodemographic Characteristics

At 157 venues in the five cities, staff enrolled 58% ($n=2,631$) of the 4,502 eligible men. Participation rates did not vary by race/ethnicity. Of the 2,631 participant records, 207 were excluded from analyses: 51 (2%) duplicates; 13 (<1%) with low validity ratings; 96 (4%) from men who reported never having sex with a man; 44 (2%) from men whose blood specimens were not tested for HIV; and three (<1%) from men who did not report their race/ethnicity. Of the 2,424 remaining MSM, 20% were black, 27% were Hispanic, and 44% were white, 50% were 23–25 years, 88% were employed, and 87% reported having health insurance (Table 1).

Factors Associated with Race/Ethnicity

In our bivariate analysis of racial/ethnic differences, compared with whites, both blacks and Hispanics were less likely to report having an annual income greater than \$15,000 (blacks vs. whites: 60% vs. 83%, $p<0.0001$; Hispanics vs. whites: 65% vs. 81%, $p<0.0001$); being open about their sexual orientation to everyone (33% vs. 62%, $p<0.0001$; 46% vs. 63%, $p<0.0001$); and having greater than the median number ($n=20$) of male sex partners in their lifetime (29% vs. 49%, $p<0.0001$; 41% vs. 56%, $p<0.0001$). Compared with whites, blacks were also less likely to report ever having unprotected anal intercourse (UAI) (71% vs. 77%, $p=0.0137$) or in the last 6 months (38% vs. 49%, $p=0.0002$), but more likely to report ever having an STI (32% vs. 26%, $p=0.0148$). Compared with whites, similar proportions of Hispanics reported ever having UAI (80%) and UAI in the last 6 months (47%). Blacks had four times the prevalence of HIV infection versus whites (33% vs. 7%, $p<0.0001$) and were more likely to be HIV-infected unaware (23% vs. 3%, $p<0.0001$). Compared with whites, Hispanics were less likely to report ever having an STI (25% vs. 30%, $p=0.0250$), had higher prevalence of HIV infection (14% vs. 9%, $p=0.0113$), and were just as likely to be HIV-infected unaware (8% vs. 4%, $p=0.0640$). No racial/ethnic differences were observed in participant age or having health insurance. Bivariate analyses of racial/ethnic differences for each of the outcomes of interest are reported in Tables 2, 3, 4.

HIV Prevention Services at Health Care Provider

Use of Health Care Of the 2,424 MSM, 1,522 (63%) MSM reported using a regular source of health care (Table 1). Of the 345 HIV-positive MSM, 225 (65%) reported having a HCP [107 out of 142 (75%) were HIV-infected aware and 118 out of 203 (58%) were HIV-infected unaware]. Compared with whites, blacks and Hispanics were less likely to use a private medical doctor (51% vs. 77%, $p<0.0001$; 70% vs. 76%, $p=0.0506$) and were more likely to use a hospital (24% vs. 7%, $p<0.0001$; 14% vs. 8%, $p=0.0036$). Adjusting for confounders, blacks and Hispanics were just as likely as whites to use a HCP and to visit their provider greater than or equal to five times since turning 20 years of age (Table 2).

Importance of, Receipt of, and Satisfaction with HIV Prevention Services Adjusting for confounders, blacks and Hispanics were more likely than whites to report that receiving HIV prevention services at their HCP was important, were more likely to receive prevention services at their HCP, and blacks were more likely to be satisfied with the services they received (Table 3). MSM who used a HCP reported that their

TABLE 1 Recruitment outcomes and socio-demographic characteristics of men who have sex with men, 23–29 years of age, by city, 1998–2000

Characteristic	Baltimore	Dallas	Los Angeles	Miami	New York	All
Recruitment						
Venues (no.)	19	26	40	32	38	155
Participation rate (%)	58	61	56	58	60	58
Enrolled (no.)	486	491	458	458	531	2,424
Race/ethnicity (%)						
Asian	3	2	12	2	9	6
Black	29	19	11	4	32	20
Hispanic	4	26	23	54	30	27
White	60	52	52	36	23	44
Mixed/other	3	1	2	4	6	3
Age (%)						
23–25	53	48	46	48	54	50
26–29	47	52	54	52	46	50
Education (%)						
≤High School	30	28	23	23	30	27
At least some college	70	72	77	77	70	73
Employment (%)						
Unemployed	10	6	17	12	16	12
Part-time	13	10	21	20	24	18
Full time	77	85	62	68	59	70
Have health insurance (%)						
No	11	8	19	12	14	87
Yes	89	92	81	88	86	13
Use health care provider (%)						
No	36	34	43	44	31	37
Yes	64	66	57	56	69	63
Source of health care ^a						
Private MD or HMO	45	44	43	45	39	43
Hospital	6	11	3	3	15	8
Health department	1	1	<1	1	2	1
Clinic ^b	5	5	4	1	10	5
Other ^c	6	5	7	5	4	5
None	36	34	43	45	30	37
Tested for HIV in past year						
No	48	49	40	46	54	48
Yes	52	51	60	54	46	52
Source of last HIV test ^d						
Private MD	25	25	17	32	36	26
Hospital	10	9	2	7	15	9
Health department	21	9	9	21	19	16
Clinic ^e	25	42	49	22	19	32
Other ^f	19	15	23	18	11	17

MD Medical doctor, HMO Health Maintenance Organization.

^aOf those who use a health care provider. All percentages do not sum to 100 due to rounding error.

^bClinic includes: community, neighborhood, or migrant health center and urgent-care clinic

^cOther providers include: school clinic, company clinic, military clinic, and other

^dOf those who tested in the past year.

^eClinic includes: anonymous test sites, community-based organizations, HIV/AIDS organizations, and other local clinics.

^fOther testing locations include: school clinics, drug treatment centers, correctional facilities, tuberculosis clinics, blood banks, home test kits, research studies, and other.

TABLE 2 Racial and ethnic comparison of use of health care and HIV testing services, 23- to 29-year-old men who have sex with men, four US cities^a, 1998–2000

	BMSM (<i>n</i> =458)	WMSM (<i>n</i> =906)		HMSM (<i>n</i> =637)	WMSM (<i>n</i> =779)	
	%	%	AOR ^b (95% CI)	%	%	AOR ^b (95% CI)
Use health care provider (HCP)	68	64	–	57	62	–
Visited HCP ≥5 times ^c	53	57	–	52	57	–
Previously tested for HIV	88	89	–	89	89	–
Tested ≥5 times	27*	37	0.94 (0.70–1.26)	31*	38	0.91 (0.71–1.16)
Tested within 12 months of interview	52	53	–	51	54	–

BMSM Black men who have sex with men, WMSM white men who have sex with men, HMSM Hispanic men who have sex with men, AOR adjusted odds ratio, CI confidence interval, HCP health care provider

*Bivariate comparison to whites, *P*<0.05 (chi-square).

^aFour cities for blacks vs. whites include: Baltimore, Dallas, Los Angeles, and New York; Four cities for Hispanics vs. whites include: Dallas, Los Angeles, Miami, and New York

^bAdjusted for age, city, income, ever having unprotected sex, ≥ 20 male partners, ever having a sexually transmitted infection, and HIV serostatus

^cAmong those who reported using a health care provider since age 20

provider could improve their HIV prevention services by giving more information about HIV/AIDS (41%), asking about risk behaviors (39%), demonstrating proper condom usage (24%), and providing HIV testing (33%) and referrals for other services (26%). Compared to white MSM, black MSM were less likely to report that their provider could offer more HIV testing (27% vs. 34%, *p*=0.04), and Hispanic MSM were more likely to report their provider could offer referrals to social services, drug treatment, or HIV care (31% vs. 24%, *p*=0.05).

Health Care Use and Prevention Services among HIV-infected Unaware Compared with HIV-infected unaware white MSM (*n*=31), HIV-infected unaware black MSM (*n*=104) were as likely to use a HCP (62% vs. 61%, *p*=0.9033). Among HIV-infected unaware MSM with a HCP, blacks were just as likely as whites to report that receiving prevention services at their provider was important (86% vs. 68%, *p*=0.0776) and that their risks were assessed at their HCP (74% vs. 53%, *p*=0.0803). HIV-infected unaware black MSM were more likely than HIV-infected unaware white MSM to report that their provider discussed ways to reduce their risks (77% vs. 47%, *p*=0.0137) and discussed the need for HIV testing (86% vs. 58%, *p*=0.0073), and were satisfied with prevention services they received (83% vs. 56%, *p*=0.0218). HIV-infected unaware Hispanic MSM (*n*=43) were as likely as HIV-infected unaware white MSM to report using a HCP (49% vs. 60%, *p*=0.3284), and among HIV-infected unaware MSM with a HCP, Hispanics were just as likely as whites to report receiving any prevention services (86% vs. 81%, *p*=0.6825), and report being satisfied with services they received (53% vs. 61%, *p*=0.6077).

TABLE 3 Racial and ethnic comparison of HIV prevention services received at health care providers (HCP), 23- to 29-year-old men who have sex with men, four US cities^a, 1998–2000

	BMSM (<i>n</i> = 311)	WMSM (<i>n</i> = 578)		HMSM (<i>n</i> = 363)	WMSM (<i>n</i> = 482)	
	%	%	AOR ^b (95% CI)	%	%	AOR ^b (95% CI)
Perceived that receiving HIV prevention services is important	84*	61	3.0 (1.97–4.51)	81*	61	2.7 (1.89–3.79)
Provider						
Explained HIV/AIDS and how HIV is transmitted	66*	42	2.2 (1.56–3.17)	54*	40	1.7 (1.23–2.27)
Assessed sexual and drug-use risk(s)	58*	38	2.1 (1.47–2.98)	48*	36	1.8 (1.30–2.44)
Asked about condom use	67*	43	2.3 (1.59–3.23)	55*	41	1.8 (1.33–2.47)
Discussed ways to reduce risk(s)	64*	39	2.6 (1.83–3.73)	53*	38	1.9 (1.41–2.62)
Discussed need for HIV testing	68*	49	2.5 (1.75–3.62)	59*	49	1.5 (1.13–2.08)
Received all 5 of the above prevention services	42*	22	2.5 (1.72–3.71)	30*	20	1.7 (1.18–2.41)
Received any of the 5 prevention services	82*	68	2.2 (1.42–3.26)	78*	66	1.8 (1.34–2.68)
Satisfied with services received	75*	60	1.7 (1.14–2.65)	67	60	–

BMSM Black men who have sex with men, WMSM white men who have sex with men, HMSM Hispanic men who have sex with men, AOR adjusted odds ratio, CI confidence interval, HCP health care provider

*Bivariate comparison to whites, $P < 0.05$ (chi-square).

^aFour cities for blacks vs. whites include: Baltimore, Dallas, Los Angeles, and New York; Four cities for Hispanics vs. whites include: Dallas, Los Angeles, Miami, and New York

^bAdjusted for age, city, income, ever having unprotected sex, ≥ 20 male partners, ever having a sexually transmitted infection, HIV serostatus, provider type, and disclosing sexual orientation

HIV Prevention Services at HIV Test Provider

Use of HIV Testing Services Of the 2,424 MSM, 1,958 (89%) had previously tested for HIV, 33% had tested 5 or more times in their life, and half had tested in the twelve months prior to their interview. Among the 1,777 MSM who tested HIV-negative in the past year, blacks and Hispanics were more likely than whites to report testing at health departments (19% vs. 13%, $p = 0.0419$; 18% vs. 12%, $p = 0.0228$) and hospitals (15% vs. 5%, $p < 0.0001$; 8% vs. 4%, $p = 0.0487$), and were equally as likely to report testing at a private MD (26% vs. 27%, $p = 0.8535$; 28% vs. 27%, $p = 0.8591$) compared to all other testing facilities. Compared with white MSM, black and Hispanic MSM were equally as likely to report testing 5 or more times after adjusting for potential confounders (Table 2).

TABLE 4 Racial and ethnic comparison of HIV counseling services received at last HIV negative test from HIV test providers, 23- to 29-year-old men who have sex with men, four US cities^a, 1998–2000

	BMSM (n=213)	WMSM (n=457)		HMSM (n=294)	WMSM (n=393)	
	%	%	AOR ^b (95% CI)	%	%	AOR ^b (95% CI)
Perceived that receiving HIV counseling is important	79*	53	2.6 (1.65–4.00)	75*	51	2.5 (1.76–3.67)
Counselor:						
Explained HIV/AIDS and how HIV is transmitted	53	47	–	50	43	–
Assessed sexual and drug-use risk(s)	50	45	–	48	44	–
Asked about condom use	53	50	–	53	49	–
Discussed ways to reduce risk(s)	53	48	–	50	45	–
Discussed need to retest for HIV	53	49	–	50	45	–
Discussed telling test results to sex partners	40*	28	1.3 (0.88–2.04)	32	27	–
Received all 6 counseling services above	34*	21	1.6 (1.00–2.43)	26	21	–
Received any 6 of the above counseling services	58	59	–	58	54	–
Satisfied with services received	88	84	–	88	82	–

BMSM Black men who have sex with men, WMSM white men who have sex with men, HMSM Hispanic men who have sex with men, AOR adjusted odds ratio, CI confidence interval, HCP health care provider.

*Bivariate comparison to whites, *P*<0.05 (chi-square).

^aFour cities for blacks vs. whites include: Baltimore, Dallas, Los Angeles, and New York; Four cities for Hispanics vs. whites include: Dallas, Los Angeles, Miami, and New York

^bAdjusted for age, city, income, ever having unprotected sex, ≥ 20 male partners, ever having a sexually transmitted infection, HIV serostatus, test site, number of previous tests, and reported specific risk as reason for testing

Importance of, Receipt of, and Satisfaction with Counseling & Testing Services Among MSM who tested HIV-negative in the year before their YMS interview, 752 (65%) reported that receiving HIV counseling at that test was important, and 670 (57%) reported having received at least some counseling. Both black and Hispanic MSM were significantly more likely than white MSM to report that HIV counseling was important to them (Table 4). Both black and Hispanic MSM were as likely as white MSM to receive one or more of six potential counseling services and to be satisfied with services received (Table 4). MSM who had tested HIV-negative in the past year

reported that their HTP could improve their counseling services by providing more information about HIV/AIDS (14%), discussing how to disclose test results to partners (11%), conducting more in-depth risk assessments (10%), demonstrating proper condom usage (9%), and providing referrals for other services (8%). No racial differences were found for improving services provided by HTPs.

Impact of HIV Counseling and Testing Among MSM who tested HIV-negative in the past year, 44% reported no change in the frequency with which they asked their partners' HIV status, in the number of different sex partners they had, and in having unprotected anal sex as a result of their last HIV counseling and testing experience. Compared with white MSM, black and Hispanic MSM were more likely to increase the frequency of asking their partners' HIV status (34% vs. 19%, $p<0.0001$; 32% vs. 20%, $p=0.0003$); and blacks were more likely to report decreasing their number of different sex partners (37% vs. 19%, $p<0.0001$). There were no racial differences in having less unprotected anal sex.

Use of HIV-Testing Services and Counseling Among HIV-Infected Unaware HIV-infected unaware black MSM ($n=104$) were as likely as white MSM ($n=31$) to report having tested HIV-negative in the past year (55% vs. 55%, $p=0.9976$), and among those who had tested, were more likely than whites to report that their counselor explained HIV/AIDS (54% vs. 24%, $p=0.03$), asked about condom use (54% vs. 24%, $p=.03$), talked about risk reduction (50% vs. 18%, $p=0.02$), talked about retesting (50% vs. 18%, $p=0.02$), and discussed talking to their partner about test results (46% vs. 18%, $p=0.04$). HIV-infected unaware Hispanic MSM ($n=43$) were as likely as HIV-infected unaware white MSM ($n=35$) to report having tested HIV-negative in the past year (42% vs. 51%, $p=0.4022$) and to report receiving any counseling services at their last HIV test (67% vs. 44%, $p=0.1859$).

DISCUSSION

Despite considerably higher prevalence and incidence of HIV infection among black and Hispanic MSM, our findings indicate that compared with young white MSM, young black and Hispanic MSM report (1) similar use of health care and HIV testing services; (2) greater perceived importance of receiving HIV prevention services from their health care or HIV test provider; (3) a greater frequency of receiving HIV prevention services from their HCP; and (4) greater satisfaction with services received from a health care provider (black MSM only). Most of our findings did not change when adjusting for important confounders and when analyses were restricted to young MSM who were unaware of their HIV infection. Moreover, black and Hispanic MSM were more likely to report reducing one or more risk behaviors as a consequence of their last HIV counseling and testing experience. Overall, our findings do not indicate that racial disparities in health care utilization patterns and experiences and attitudes towards receipt of HIV prevention services at a health care or HIV test provider explain the racial disparities in HIV incidence and prevalence among young MSM.

Clearly, many racial health disparities in the U.S. result from lack of access to care and preventive services,^{25,26,44,45} attributed in part to lower income and lack of health insurance.^{22,46} In our survey, we found that minority MSM were more likely to report an income under \$15,000 and just as likely to have health insurance. However, we also found, as others, that black and Hispanic MSM were equally as likely to use a regular source of health care but were more likely to use a hospital and community clinic as

their regular source of health care than white MSM.¹⁹ This finding suggests that lower income and lack of insurance is offset by using services provided by public providers.

Our data support other studies that found having a HCP is associated with receiving preventive services (e.g., blood pressure and cholesterol screening).^{23,28,45–48} Adjusting for provider type and other confounders, we found that black and Hispanic MSM compared with white MSM were more likely to report receiving one or more prevention services, including testing and counseling to reduce HIV risk behaviors. The higher delivery of prevention services to black and Hispanic MSM from their regular HCP might be attributed, in part, to the greater importance placed on receiving these services by black and Hispanic MSM or to greater provider awareness. Over the past decade, racial disparities in HIV infection have been well documented.^{2,4,8,10,13} Increased awareness and funding of programmatic initiatives have increased the number of providers that perform risk assessments and offer HIV testing to minority MSM.^{1,49}

Given the public-health expenditure and focus on HIV prevention among MSM since the late 1980s and on reducing disparities through the MAI since 1998,⁴⁹ we were not surprised to find that the uptake of HIV testing was at least similar between young black, Hispanic, and white MSM. Many studies since the late 1990s suggest that nearly all MSM have been tested for HIV, and most have tested repeatedly.^{2,13,17,19,40,50} Similarly, given the considerable national investment on policy development and dissemination, training, and prevention programs to ensure that counseling routinely accompanies HIV testing,^{51,52} we were not surprised to find similar provision of counseling services for black, Hispanic, and white MSM who had tested in the past year. Our finding that black and Hispanic MSM placed greater importance on receiving counseling services at the time of testing support those of Spielberg and colleagues' (2001) suggesting that many white MSM do not want counseling or perceive that counseling is a barrier to HIV testing.⁵³ It is likely that the MAI had not been enacted long enough to impact the rates of HIV infection among this sample of minority MSM. However, more recent reports indicate that HIV prevalence and incidence among minority MSM are still high,¹³ which may result from the general decline in CDC's prevention budget as well as the MAI budget since 2002.^{54,55}

In 1989, the U.S. Preventive Task Force recommended that health care providers take a complete sexual and drug-use history from all adolescents and adults as a means of identifying behaviors associated with HIV infection.^{56,57} Furthermore, new recommendations suggest routine testing for all adults in health care settings.⁵¹ However, several studies, including ours, have found that providers of health care and HIV testing services miss opportunities to provide services that might help MSM avoid infection.^{31,58–63} Of those who reported using a regular source of health care, depending on race/ethnicity, one third to one half of participants reported that no one at their source of care had ever discussed whether they should test for HIV. Of those who had tested HIV-negative in the past year, nearly half reported that they did not receive any counseling with their test, including half of those who subsequently acquired HIV and could have benefited from counseling.

Health care providers can motivate their patients to change behaviors.^{32,33,36} Most black and Hispanic MSM felt it important and were satisfied with the prevention services they received, and some reported reducing their risks as a result of their last HIV counseling and testing experience. Combined with our findings on missed opportunities, these findings indicate that health care providers should routinely recommend HIV testing for all patients in health care settings where clients are at increased risk for acquiring HIV and thus support new national guidelines for at least annual screening of MSM at risk for HIV infection.⁵¹

We remain concerned about the overall quality and effectiveness of HIV prevention services for MSM, especially minority MSM. While minority MSM were more likely than white MSM to report reducing their risk behaviors, many MSM reported no change in risk behaviors. Many MSM reported that they wanted their HCP and HTP to give more information about HIV/AIDS and to improve their prevention services by doing a better job of assessing risks and discussing risk reduction and the need for testing. Given the high incidence and prevalence of HIV infection among MSM and the high proportion who are unaware they are HIV-infected, particularly among black and Hispanic MSM, providers of health care and HIV testing services should consider developing prevention messages that underscore the importance of consistently using condoms with all partners who are not mutually monogamous and have not recently tested HIV-negative.^{13,15}

Limitations and Potential Biases

Our findings are subject to several limitations and potential biases. First, our findings may not generalize to black, Hispanic, and white MSM who do not attend the sampled venues or who do not reside in the five cities we surveyed. Second, our findings may reflect considerable investments in community-based minority MSM prevention efforts as a result of CDC's *Healthy People 2010* and Minority AIDS Initiative which focus on eliminating racial disparities. Third, because prevention services were self-reported, they may not correspond with services that were actually received.^{28,64,65} Given our long recall periods, findings may be subject to reporting inaccuracies. To minimize inaccuracies, we restricted our measures to use of a health care provider since age 20 and a HIV test provider within the past year. Fourth, some studies have documented systematic differences in the way members of various racial/ethnic groups respond to a variety of scale types,⁶⁶⁻⁶⁸ which could account in part for the findings that blacks and Hispanics were more likely than whites to report that prevention services were important or being satisfied with those services. Since responses to these measures are subjective and the recall periods are long, we are unable to say conclusively whether our findings are subject to a response bias based on the systematic differences in the way various racial/ethnic group members respond to scale types. Fifth, our findings may be subject to nonparticipation bias because approximately 42% of eligible men declined to participate. We do not know whether the opinions of respondents differed from those of nonrespondents. However, since participation rates did not vary by race/ethnicity, we do not expect a nonresponse bias to impact the differences found by race/ethnicity. Finally, because YMS is a cross-sectional survey, the efficacy of measured prevention services on reducing HIV transmission cannot be evaluated. Similarly, the questions we used to measure the importance of and satisfaction with HIV prevention services were not based on a theoretical framework. Therefore, satisfaction with services is not necessarily related to the quality of services or behavior change. Although some MSM participants apparently acquired HIV after receiving prevention services, it may also be true that some may have avoided becoming infected as a result of these services.

CONCLUSIONS

Factors contributing to the disproportionate number of HIV infections among young minority MSM are still not known. We found that black and Hispanic MSM who frequent gay identified venues were at least as likely as white MSM to utilize, receive, and value HIV prevention services offered by health care and HIV test

providers. We also found that, overall, there were many missed opportunities for prevention. Prevention efforts should focus on (1) eliminating missed opportunities in health care settings and expanding HIV prevention services for all MSM in nonmedical settings and (2) developing more effective services that help all MSM, especially black and Hispanic MSM, avoid infection. Minorities have long suffered from poorer quality of health care services. Our findings suggest that this may not be the case for HIV prevention services which might be attributed to public investments in MAI and greater use of public providers that might be more likely to provide these services because many are funded to do so. Additional research is urgently needed to evaluate why prevention services sometimes fail to help many MSM avoid HIV infection. In the absence of such data, it will be difficult to guide future prevention strategies aimed at eliminating racial disparities in HIV infection.

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