

## Differences in Sexual Identity, Risk Practices, and Sex Partners between Bisexual Men and Other Men among a Low-Income Drug-Using Sample

Chyvette T. Williams, Mary E. Mackesy-Amiti, David J. McKirnan, and Lawrence J. Ouellet

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**ABSTRACT** *Men who have sex with men and women (MSMW) represent an important target population for understanding the spread of HIV because of the inherent bridging aspect of their sexual behavior. Despite their potential to spread HIV between gender groups, relatively little recent data have been reported about this population as a subgroup distinct from men who have sex with men only. This paper analyzes data from the Chicago site of Sexual Acquisition and Transmission of HIV Cooperative Agreement Program to characterize 343 MSMW in terms of their demographics, drug use, sexual risk behavior, sexual identity, and sex partners. Results show the MSMW sample to be extremely disadvantaged; to have high rates of drug use, including injection and crack use; to report more female than male sex partners; to not differ from gay and heterosexual men in rates of condom use; and, for the most part, to report sexual identities that are consistent with their sex behavior. MSMW represent an important subpopulation in the HIV epidemic and should be targeted for risk reduction interventions.*

**KEYWORDS** *Men who have sex with men, HIV, Drug use, Risky sex, Anal sex, Sexual identity*

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### INTRODUCTION

Men who have sex with men and women (MSMW) represent an important target population for understanding the spread of HIV because of the inherent bridging aspect of their sexual behavior. Despite their potentially central role in the HIV epidemic,<sup>1,2</sup> much of what is known about MSMW is anecdotal, coming from the popular media, and has been discussed as the “down low” phenomenon among black men.<sup>3–6</sup> The considerable research on male same-sex behavior typically focuses on men who have sex with men only (MSM) and does not treat MSMW as a distinct subpopulation.<sup>7</sup>

A survey of about 10,000 men who have sex with men conducted in 2003–2005 by the Centers for Disease Control and Prevention in 17 US metropolitan areas found that 14% also reported having sex with women in the previous 12 months.<sup>8</sup> While this study did not report on racial/ethnic differences in male bisexuality, a review of 26 studies by Millet and colleagues<sup>5</sup> concluded that among MSM in the USA, bisexual behavior is more prevalent among blacks than whites and Latinos.

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Williams, Mackesy-Amiti, and Ouellet are with the School of Public Health, University of Illinois at Chicago, Chicago, IL, USA; McKirnan is with the Department of Psychology, University of Illinois at Chicago, Chicago, IL, USA.

Correspondence: Chyvette T. Williams, School of Public Health, University of Illinois at Chicago, 1603 W Taylor St MC923, Chicago, IL 60612, USA. (E-mail: chevyl@uic.edu)

For example, a 12-state study of HIV-positive MSM found that 34% of blacks, 26% of Hispanics, and 13% of whites reported having sex with women.<sup>9</sup>

Although widely speculated, evidence to support the notion that the sexual practices of MSMW account for much of the HIV prevalence among heterosexual women is lacking. For example, Adimora and Fullilove report that only about 5% of men report ever engaging in sex with another man, and less than 1% of sexually active men report bisexual behavior in the past year.<sup>10</sup> Of black men, it is estimated that 2% are bisexually active.<sup>5</sup> Further, limited HIV prevalence data exist for the MSMW subpopulation, and data about bisexual men as a transmission source for women are inconclusive. Nonetheless, Adimora and Fullilove<sup>10</sup> compellingly argue that MSMW may have a “substantial impact on population transmission” that goes well beyond the actual number of women they directly infect with HIV. As evidence, they cite a study by Hightow and colleagues<sup>2</sup> of HIV seropositive college students on North Carolina campuses that found MSMW bridged six separate sexual networks into one interconnected component spanning 26 schools. Thus, while the sheer numbers and proportions of bisexually active males may be low, their positioning between otherwise disconnected populations and geographies makes them an important target for HIV prevention.

How and to whom MSMW are networked have important implications for understanding HIV transmission. Recent epidemiological evidence suggests that a risk partner’s characteristics may be as or more important than behaviors with that partner.<sup>11,12</sup> In this paper, a series of “who” and “with whom” questions are addressed regarding MSMW—who they constitute, with whom they identify, and with whom they have sex and use drugs. A central interest is the potential role of MSMW in the sexual transmission of HIV between men and women<sup>1,5,13–17</sup> as well as other potential bridge relationships, for example between drug-using MSMW and nondrug users.

Research on MSMW has focused primarily on sexual behavior, but scant literature exists on their drug use behaviors independent of MSM. Attention has been given to the association between sexual risk and the use of methamphetamine, club drugs, and “poppers”, but these drugs tend to be favored more by whites than by African Americans and, to some extent, Latinos.<sup>18–20</sup> Research by the National Institute on Drug Abuse Cooperative Agreement Program,<sup>21</sup> which enrolled about 28,000 mostly lower-income persons who injected drugs or smoked crack cocaine, found that bisexual compared to heterosexual men were more likely to use crack, have a sex partner who injects drugs, and to share injection equipment.<sup>22</sup> The types of drugs used and modes of administration almost certainly impact the likelihood of HIV transmission among MSMW and to other subpopulations. For example, crack use has been associated with a higher prevalence of sexually transmitted infections and hepatitis C virus, involvement in sex work or exchanging sex for drugs, multiple sex partners, sex with injection drug users, depression, anxiety, and social isolation.<sup>23–28</sup> Further, several studies from the 1990s examining black MSMW found that 25% reported injecting drugs in the past 6 months.<sup>13,29,30</sup> To the extent that injection drug use is prevalent among MSMW, a considerable proportion of HIV acquisition and transmission could be blood-borne through the sharing of injection equipment.

The drug use status of MSMW sex partners—that is, whether they use drugs or not, or different drugs from MSMW—also may indicate potential bridging across drug groups. Drug use discordance between MSMW and their sex partners could increase HIV risk for the more “square” partner (i.e., the nondrug user or nonintravenous drug user of the pair) due both to the user’s drug-related risk

practices and to the milieu in which these behaviors take place. With regard to diffusion of HIV between MSMW and other groups, drug bridging represents a source of concern in addition to the more widely acknowledged gender bridging.

In addition to examining who constitutes bisexual men's sexual and drug partners, it is important to understand how MSMW self-identify. Behaviorally, MSMW are not a monolithic group, as some have sex more often with women, others with men, and others equally with women and men.<sup>7,31</sup> Some studies suggest that bisexual men who experience greater dissonance between their behavior and orientation or who are more secretive about their male sexual relationships engage in greater risk, including having more sex partners and unprotected sex and using condoms less consistently<sup>32</sup> while other studies report less risk.<sup>33</sup> Sexual self-identification is also important for accessing MSMW for interventions.<sup>33</sup> Research suggests that, compared to white men, black and Hispanic men who have sex with men self-identify less often as gay and more often as bisexual.<sup>5,6,9,30,33</sup> Black and Latino MSMW are likely, therefore, to be more difficult to reach through gay-identified organizations and social venues such as bars, or gay-oriented advertisements.

Using data from the Chicago site of Sexual Acquisition and Transmission of HIV Cooperative Agreement Program (SATHCAP), this analysis of a sample of MSMW focuses on their demographic characteristics, HIV status, drug use and sexual behavior, sexual orientation, and sex partner characteristics in comparison to MSM and MSW. The paper also comments on the association between men's bisexual behavior and their self-identified sexual orientation. Finally, some suggestions are offered for future directions with this subpopulation.

## METHODS

The SATHCAP study used respondent-driven sampling (RDS)<sup>34,35</sup> to recruit users of "hard" illicit drugs, MSM regardless of drug use, the sex partners of both groups, and sex partners of the sex partners. Details of the sampling strategy are presented by Iguchi and colleagues elsewhere in this issue.<sup>36</sup> For study eligibility, drug use was defined as the use of heroin, cocaine, or methamphetamine, or any illicit injection drug use in the past 6 months.

All participants completed computerized self-administered interviews followed by pretest HIV counseling and a blood draw for HIV and syphilis testing. The RDS questionnaire solicited demographic data regarding the participant's risk networks and asked questions about the person who recruited the participant. The main questionnaire asked participants about drug using and sex risk behaviors, sexual partnerships and the nature of these partnerships, and structural, environmental, geographic, and network factors related to their risk behaviors. Sexual risk behavior questions were asked at the participant level (i.e., whether participants had ever or recently engaged in a certain activity) and at the event level (i.e., whether they engaged in certain practices with specific recent sex partners whose initials they provided at the start of the sexual risk section of the questionnaire). Recent event-level sex partners included the last three partners. In addition, a drug injecting partner, a main partner, and a female partner of an MSM were included if these partners were not among the most recent three.

Participants were asked to report each recent sex partner's demographic characteristics, the frequency and location of sexual activity, whether it involved the exchange of money or goods for sex, specific sexual activities engaged in during the encounter, and the use of drugs during sex with this partner.

## Sample

Between August 2005 and August 2008, 2,355 men were recruited to the SATHCAP study in Chicago; and 2,072 (88%) reported at least one sex partner in the previous 6 months. Of these sexually active men, 6.7% (138) reported sex with men only, 76.8% (1,591) reported sex with women only, and 16.6% (343) reported sex with both men and women. The term MSMW will be used to refer to those men who reported having sex with both men and women in the past 6 months, MSM will refer to men who reported sex with men only, and MSW to men who reported sex with women only.

## Measures

*Illicit Drug Use* Participants completed a checklist on the substances they had ever used, including marijuana, amphetamines/methamphetamine, heroin and cocaine mixed together (speedball), crack, powder cocaine, heroin by itself, other opiates, and sedatives. For each drug used, participants reported the number of days they used it within the past 30 days. For each substance, a binary measure of past month use was constructed, with use indicated if the respondent reported one or more days of use during the past 30 days.

*Recent Sexual Activity* Sexually active persons were those who reported vaginal, anal, or oral sex during the past 6 months. Measures of recent sexual activity and condom use were based on participants' answers to questions about sexual activities the last time they had sex with each identified partner ("The last time you had sex with \_\_\_\_\_ what did you do?"). Participants were asked to check all applicable responses on a list of specific sexual activities.

*Sexual Orientation* Respondents were asked to identify their sexuality as follows: Now I would like to ask you a few questions about how you identify yourself sexually. Do you think of yourself as (1) gay or homosexual, (2) bisexual, (3) straight or heterosexual, (4) down low, (5) same-gender loving, (6) just messing around on the other team, (7) transgender, or (8) no label or term. Slang terms were derived from the research literature and local usage. Our goal was to present a variety of identity terms known to be used by MSM—particularly those of color—to men who may not feel comfortable identifying as gay, homosexual, or bisexual. We impute no particular differences in meaning to these slang terms. Respondents were able to select one term only. In a separate question, respondents were presented with five types of sexual partnerships and asked which best described their sexual behavior: "I have sex (1) only with men, (2) mostly with men, but occasionally with women, (3) with about equal numbers of men and women, (4) with women, but occasionally with men, (5) only with women."

*Sex Partner Characteristics* Respondents were queried about their most recent sex partners (maximum of six). For each partner, they were referred to a list and asked to choose the term that would *best describe* that partner. MSW were asked to classify each partner as a primary partner, friend, casual partner, stranger, or trade partner, while MSM and MSMW were asked to classify each partner as a main partner, regular partner, friend, acquaintance, one-time partner, unknown person, or trade partner. For the present analyses, these categories were collapsed into (1) main or primary partner, (2) friend, acquaintance, regular, or casual partner, (3) stranger, one-

time partner, or unknown person, and (4) trade partner. Respondents were asked about each partner's demographic characteristics (sex, age, race), sexual orientation, HIV status, drug use (ever used heroin, methamphetamine, or cocaine; ever injected drugs), and whether they had given or received drugs, money, or other goods in exchange for sex with this partner in the past 6 months. Respondents were also asked a series of questions pertaining to when and where they had first met, first had sex, and last had sex, including whether they first met the partner in their own neighborhood and whether they last had sex with that partner in their own neighborhood.

### Analysis

We conducted a series of univariate and bivariate analyses to describe the MSMW sample in comparison to MSM and MSW and to identify associations. Cross-tabulations were conducted using SAS; chi-square test statistics were calculated to test bivariate level differences on subject-level variables between groups. For the analysis of sexual behavior, each sex partner was treated as a repeated observation in unadjusted logistic regression analyses using Stata's *xtlogit* procedure. This approach adjusts the standard errors for within-person clustering of observations, since individuals reported on multiple sex partners. Comparisons on sexual activity were restricted to behavior that occurred within the previous 30 days.

## RESULTS

*Sample Characteristics* Table 1 provides the demographic characteristics of the sample of men. Consistent with the composition of the overall sample, the majority (87%) of the MSMW were African American. The mean age was 44 years and ranged from 18 to 70 years. There were high rates of extreme poverty, homelessness, and joblessness among all men, and slightly more MSMW reported these conditions. More than three quarters of MSMW reported a monthly income of \$500 or less, over half (55.4%) reported homelessness during the past year, and 85.4% reported being unemployed or disabled and unable to work. HIV prevalence among the MSMW was 11.4%, in contrast to 53.6% for MSM and 4.7% for MSW.

*Illicit Drug Use among MSMW, MSM, and MSW* Table 2 shows the prevalence of past month use of selected substances among MSMW, MSM, and MSW. With few exceptions, more MSMW reported past month drug use as compared with MSM and MSW. Very small percentages of all men reported using amphetamines or methamphetamine. Instead, crack cocaine was the most widely used drug among all groups, with prevalence ranging from 52.3% among MSW to 66.8% among MSMW ( $\chi^2=25.0, p<0.05$ ). MSMW were more likely to report injecting in the past 6 months ( $\chi^2=22.5, p<0.01$ ), although more heterosexuals reported heroin use ( $\chi^2=36.7, p<0.01$ ). Eighty-eight percent of bisexual men reported any use of heroin, cocaine, or amphetamines in the past 30 days compared with 83.6% of MSW and 69.6% of MSM ( $\chi^2=24.5, p<0.05$ ).

*Sexual Behavior* While MSMW, MSM, and MSW were characterized by the gender of their sex partners during the 6 months preceding baseline, they reported similar levels of recent (past 30 days) sex with at least one partner. However, MSMW were less likely in the past 30 days to have had sex with a female partner than were MSW

**TABLE 1** Demographic characteristics of men who reported at least one sex partner in the 6 months before being interviewed, SATHCAP-Chicago (N=2,072)

	MSM (N=138)		MSW (N=1,591)		MSMW (N=343)	
	N	%	N	%	N	%
Race/ethnicity						
Non-Hispanic white	9	6.5	96	6.0	19	5.5
Non-Hispanic black	118	85.5	1,243	78.1	298	86.9
Hispanic	8	5.8	231	14.5	22	6.4
Other	3	2.2	21	1.3	4	1.2
Age						
18–29	13	9.8	116	7.3	24	7
30–39	28	20.3	272	17.2	64	18.7
40–49	66	47.8	679	42.7	163	47.5
50+	31	22.5	524	32.9	92	26.8
Past month income						
\$0–\$500	87	63.5	1,123	71.2	261	76.5
\$501–\$1,000	30	21.9	290	18.4	64	18.8
\$1,001 or greater	20	14.6	165	10.4	16	4.7
Ever homeless in past year						
Yes	65	47.1	556	35.0	190	55.4
No	73	52.9	1,034	65.0	153	44.6
Work status						
Employed	22	16.0	269	16.9	45	13.1
Unemployed	57	41.3	887	55.8	202	58.9
Disabled	57	41.3	393	24.7	91	26.5
Other	2	1.4	34	2.1	5	1.5
HIV serostatus						
Negative	64	46.4	1,511	95.0	303	88.3
Positive	74	53.6	75	4.7	39	11.4

and less likely than MSM to have had sex with a male partner. Among those who were sexually active with women in the past 30 days, MSMW were more likely to have had anal sex with female partners than were MSW (odds ratio (OR)=0.27, confidence interval (CI) 0.17, 0.43 (MSW is the reference group)) and less likely than MSW to have had vaginal sex (OR=2.96, CI 1.88, 4.65 (MSM is the reference group); Table 3). Among those who were sexually active with men in the past 30 days, MSMW were less likely than MSM to have had receptive anal sex (OR=

**TABLE 2** Prevalence of past month drug use among MSMW, MSM, and MSW: SATHCAP-Chicago (N=2,070)

Sexual behavior	Total N	Amphetamines/ methamphetamines <sup>a</sup> (%)	Crack cocaine <sup>a</sup> (%)	Powder cocaine (%)	Speedball <sup>a</sup> (%)	Heroin <sup>a</sup> (%)	Injected <sup>a,b</sup> (%)
MSMW	343	5.5	66.8	20.4	28.0	44.3	33.2
MSM only	138	3.6	59.4	18.1	12.3	25.4	12.3
MSW only	1,589	1.8	52.3	15.9	21.6	51.2	30.1

<sup>a</sup> $\chi^2$ ,  $P < 0.05$ <sup>b</sup>Past 6 months

**TABLE 3 Unadjusted logistic regression comparing sex behaviors in past 30 days for MSMW, MSM, and MSW: SATHCAP-Chicago**

	MSMW (N=321)	MSM only (N=124)	MSW only (N=1,392)	OR (CI)
	%	%	%	
Receptive anal sex with male	15.3	34.2		3.79 (1.36, 10.08)
Unprotected receptive anal sex with male	63.6	65.8		ns
Insertive anal sex with male	45.8	43.2		ns
Unprotected insertive anal sex with male	56.1	52.1		ns
Anal sex with female	28.8		16.4	0.27 (0.17, 0.43)
Unprotected anal sex with female	71.6		68.7	ns
Vaginal sex	76.2		89.2	2.96 (1.88, 4.65)
Unprotected vaginal sex	68.2		71.6	ns

Values for unprotected sex are conditional on the occurrence of that type of sex. MSMW is the nonreferent group

ns not significant

3.70, CI 1.36, 10.08 (MSM is the reference group)). There was no significant difference in likelihood of insertive anal sex between MSM and MSMW. Unprotected sex did not differ between groups after accounting for differences in the rates of sexual activity. MSMW were not more or less likely to use condoms than MSM or MSW.

*Demographics, Sex, and Drug Behavior of MSMW Sex Partners Together*, 341 MSMW reported a total of 890 sex partners, representing an average of approximately two to three sex partners per person in the past 6 months (Table 4). Sixty-five percent of MSMW provided information on at least one male sex partner, while 99% provided information on at least one female sex partner. Whereas 87% of the MSMW sample was black, 78% of sex partners were black. Over half (57.5%) of sex partners were classified as a regular partner, friend, or acquaintance, slightly over one quarter were main partners, 10.4% were one-time partners or strangers, and 5.6% were trade partners. Women were more than twice as likely as men to be classified as main partners (OR=2.43, 95% CI 1.72–3.44) and were about half as likely to be classified as one-time/stranger partners (OR=0.55, 95% CI 0.35–0.88; data not shown). Five percent of sex partners were known to the respondent to be HIV positive and 60% were of unknown status. In nearly two thirds of cases, MSMW met their most recent male sex partners within their own neighborhoods.

MSMW reported that just over half of both male and female partners self-identify as bisexual, or something other than gay or straight. Forty percent of male partners were said to self-identify as gay or homosexual, while 42% of female partners were reported to self-identify as straight or heterosexual. While few sex partners (6%) were classified as “trade” partners, MSMW reported exchanging drugs, money, or other goods for sex with half of their sex partners. MSMW gave drugs or money for sex to more female (56.1%) than male (40.9%) sex partners (OR=2.50, 95% CI 1.63–3.84)

**TABLE 4** Characteristics of 890 sex partners of MSMW, as reported by the MSMW: SATHCAP-Chicago

Variable	Percent
Gender	
Male	35.5
Female	64.5
Race	
Non-Hispanic white	10.0
Non-Hispanic black	78.4
Hispanic	5.5
Other or missing	6.0
Partner type	
Main/primary	26.3
Regular/casual	57.5
One-time/stranger	10.4
Trade	5.6
Perceived sexual behavior of male sex partners	
Men only	48.3
Women only	7.5
Men and women	43.1
Transgender	1.1
Met male sex partner in own neighborhood	65.1
Perceived HIV status of sex partners	
Known negative	31.2
Known positive	4.8
Unaware or missing	63.9

and received drugs or money for sex from more male (59.4%) than female (52.8%) sex partners (OR=0.50, 95% CI 0.33–0.75; data not shown).

While 88% of MSMW reported any use of heroin, cocaine, or amphetamines in the past 30 days, fewer (71%) of their sex partners were reported to ever have used these drugs. Twenty-three percent of MSMW sex partners were reported to have ever injected drugs.

*Sexual Identification and Behavior of MSMW* Table 5 shows sexual orientation self-identification of MSMW and distributions for their self-reported typical choice of sex partners (not necessarily the sex of partners reported for the past 6 months). Twenty percent of MSMW self-identified as heterosexual and only 3% self-identified as homosexual or gay. Of MSMW reporting to be heterosexual, 85% reported that they sometimes had sex with men and 70% of gay-identified men reported that they at least occasionally had sex with women (30% reported sex with men only). With the exception of three MSMW who self-identified as transgender, most of the men who were behaviorally bisexual self-identified with a label that implied sex with both males and females. These labels include bisexual (40%), “down low” (14%), and “just mess around on other team” (8%). Of MSMW categorizing themselves under one of these labels, over half characterized their behavior as mostly having sex with women. Almost all of the 26 men self-identifying as “just mess around on other team” said they mostly had sex with women, while approximately 20% of both “bisexual” and “down low” men characterized their sex behaviors as mostly with men. Finally, 14% of MSMW chose to identify as “No label” and most of these reported typically having sex with men and women.

**TABLE 5 Self-identification of sexual orientation and self-reported description of typical distribution of sex partners by gender as reported by men who had sex with both men and women in the past 6 months: SATHCAP-Chicago (N=339)**

Self-identification	Total		Men only		Women only		Mostly men, occasionally women		Mostly women, occasionally men		Equal numbers of men and women	
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Gay/homosexual	10 (3.0)	3 (30.0)						1 (10.0)	3 (30)			3 (30)
Straight/heterosexual	66 (19.5)	1 (0.7)			10 (15.2)		1 (1.5)	1 (1.5)	52 (78.8)			3 (4.6)
Bisexual	136 (40.1)				2 (1.5)		28 (20.6)	9 (19.2)	73 (53.7)			31 (22.8)
“Down low”	47 (13.9)				1 (2.1)		1 (33.3)	1 (33.3)	33 (70.2)			4 (8.5)
“Same gender loving”	3 (0.9)								2 (66.7)			
“Just mess around on other team”	26 (7.7)				1 (3.8)				25 (96.2)			
Transgender	3 (0.9)				1 (33.3)		1 (33.3)		1 (33.3)			
No label	48 (14.2)				2 (4.2)		12 (25.0)		30 (62.5)			2 (4.2)
Total	339 (100)		4 (1.2)		17 (5.0)		53 (15.6)		219 (64.6)			43 (12.7)

## DISCUSSION

One of the unexpected findings in this study was that over 70% of the men who had sex with men also reported recently having sex with women. When the study began, estimates of MSMW in the MSM population were far lower, which makes it even more necessary now to characterize this sizeable male subgroup, their behaviors, and sex partners.

In general, more MSMW than MSM and MSW reported any use of “hard” drugs. While crack use was reported in large proportions by all groups, use was the highest among MSMW. Other studies have shown high rates of crack use among African American bisexual men<sup>22,37–40</sup> and the SATHCAP findings suggest this continues to be the case in Chicago, at least among low-income middle-aged men. The findings also suggest an entrenchment of crack in Chicago neighborhoods, with endemic crack use throughout low-income African American neighborhoods. While amphetamines and, particularly, methamphetamine may fuel HIV risk among white MSM, the largely forgotten crack epidemic persists as a central public health problem among blacks living in high HIV prevalence communities regardless of sexual orientation or self-identity, especially given the intertwined links among crack use, unsafe sex, and HIV.

MSMW in this sample were more likely than MSW to report anal sex with female partners, as likely as MSM to report insertive anal sex with male partners, and less likely than MSM to report receptive anal sex. Although no differences in overall rates of unprotected sex (noncondom use) were observed between groups, MSMW were found to have considerable bridging potential for HIV transmission across populations. Among MSMW, well over half of anal sex with other men and about 70% of anal and vaginal sex with women was unprotected. Further, it has been reported that MSMW engage in more sex trading than other groups,<sup>31</sup> and our results support this, with over half of our sample reporting such behavior even though only a small percent of sex partners were explicitly categorized as trade partners.

Despite these risk behaviors, HIV prevalence among MSMW (11%) was well below that of MSM (54%) in this sample. The lower level of receptive anal sex by MSMW is an obvious contributor to this difference, but other factors need to be examined, including sex partner characteristics, venues for sex, and community-level characteristics. In contrast, the prevalence of HIV for MSMW was over twice that of MSW (5%), making them considerably more risky than MSW as sex partners for women. This elevated risk is compounded by the greater likelihood of MSMW having anal sex with women.

Data on the sex partners of MSMW suggest additional risks for their female partners that are of concern, as well as possibilities for bridging HIV. First, 86% of MSMW who reported sexual activity with both men and women in the past 6 months reported a female sex partner during the past 30 days, and 46% reported a recent male partner. These results suggest a notable degree of partner concurrency. In addition, female sex partners were more likely to be considered main partners by MSMW, and studies have shown that condom use is lower with main partners than other partner types.<sup>41,42</sup> Also, condom use with male partners, insertive or receptive, occurred less than half the time. Thus, MSMW are having unsafe sex with concurrent partners, a practice that has the potential to amplify the spread of HIV or other sexually transmitted diseases if infection is present.<sup>43</sup> While knowledge of condoms and condom use is pervasive, the public health community still faces challenges in increasing their consistent use. Additionally, the 15% discordance observed in hard drug use between MSMW and their sex partners likely affects female sex partners. This suggests potential bridging from drug-using populations likely to have a higher

background prevalence of HIV to nondrug-using populations—an avenue worth exploring. In Chicago, for example, HIV prevalence among mostly nondrug-using (other than alcohol and marijuana) heterosexuals from low-income neighborhoods with high HIV prevalence sampled for the National HIV Behavioral Surveillance survey was less than half that of the “hard” drug-using heterosexuals in the Chicago SATHCAP sample (Nik Prachand, Chicago Department of Public Health 2008, personal communication).

Findings on identity and behavior indicate that MSMW in this sample have sex with women more often than with men and most self-identified as bisexual, suggesting that they consider themselves as distinct from both MSM and MSW. This has important implications for outreach and intervention, particularly considering approximately 70% of them responded that they had not disclosed their bisexual behavior to their female sex partners. The finding that MSMW often meet and have sex with men in their own neighborhoods rather than other “gay” neighborhoods (which tend to be majority white) is noteworthy and may indicate that racial identity trumps sexual identity for these men.

This study has limitations that should be considered when interpreting results. First, study participants were recruited through respondent-driven sampling, and debate exists regarding the extent to which RDS minimizes biases in sampling hidden populations.<sup>44,45</sup> Recruiting for studies is affected by study location, and in this case, the sample most reflects the low-income communities of color around the study sites. While the generalizability of the findings reported here are, therefore, limited, over three quarters of Chicago’s 77 community areas were represented in the sample, including those with the highest HIV prevalence levels in Chicago.<sup>46</sup> Second, data were self-reported and thus subject to biases associated with the accuracy or completeness of reporting. To minimize recall bias, most behavioral questions concerned the most recent event, the past 30 days, or, to a lesser extent, the past 6 months. To minimize socially desirable reporting of illegal or embarrassing behaviors, we used audio-computer self-administered interviews administered in settings staffed by persons indigenous to the sampled populations.<sup>47–50</sup> Third, the accuracy of participants’ reports on the “hard” drug use of sex partners is unknown. While participants had the option of answering “don’t know” regarding these questions, a tendency to underreport or overreport partners’ drug use would lead to erroneous estimations of linkages between drug-using and nondrug-using populations. The same problem exists for other potentially hidden characteristics, including a partner’s HIV status and the presence and gender of other sex partners.

With these limitations in mind, findings in this paper suggest the need to increase outreach to MSMW of color to reduce fears of stigma and shame and promote strategies for safer sex with their various partners. Concerted efforts are needed that target the interplay of crack use, unsafe sex, and multiple partners to reduce the transmission of HIV and other sexually transmitted infections among MSMW and to their sex partners in low-income communities of color with high rates of drug use and HIV. The good news is that the study found MSMW in these communities to be accessible and, in many instances, eager and interested, in participating in research and programs intended to serve them.

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