

ATTITUDES ABOUT AND HIV RISK RELATED TO THE “MOST COMMON PLACE” MSM MEET THEIR SEX PARTNERS: COMPARING MEN FROM BATHHOUSES, BARS/CLUBS, AND CRAIGSLIST.ORG

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This study examined attitudes toward the most common place where men who have sex with men (MSM) met their recent male sex partners. In 2009–2010, MSM were surveyed in bars/clubs, bathhouses, and on Craigslist.org. We found strong but differential overlap between venue of recruitment and participants' most common place: 81% of men from Craigslist indicated their most common place was the Internet, 65% of men from bathhouses indicated their most common place was bathhouses, and 47% of men from bars/clubs indicated their most common place was bars/clubs. In general, interest in seeing more information on drugs/alcohol and HIV and interacting with a health outreach worker in participants' most common place ranged from “agree” to “strongly agree.” However, men whose most common place was bars/clubs rated these items lowest on average. Rates of unprotected anal intercourse (UAI) were high (43%), thus targeted efforts in bars/clubs, bathhouses, and on the Internet may be ideal venues for reaching high-risk MSM. Although most common place was unrelated to UAI, it was related to factors that contextualize men's encounters (e.g., attitudes toward HIV status disclosure, and perceptions about barebacking, anonymous sex, and alcohol use). Outreach providers should consider these contextualizing aspects as they continue to retool their efforts.

Men who have sex with men (MSM) are 44 times more likely to contract HIV than other men (Centers for Disease Control, CDC, 2010a). In 2009, an estimated 74%

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of all diagnosed HIV infections among adult and adolescent males was attributed to male-to-male sexual contact (CDC, 2011). One study noted that the mean incidence rate of HIV among MSM in the United States is 2.39%, which, if sustained in a cohort of young MSM, would result in 40% of them being HIV-positive by age 40 (Stall et al., 2009).

Researchers have proposed that the locations where MSM meet sex partners are important outreach points for HIV prevention efforts, and that differences between these locations should be considered in the context of HIV risk (Frankis & Flowers, 2009; Mullens, Staunton, Debattista, Hamernik, & Gill, 2009; Raymond, Bingham, & McFarland, 2008; Reidy et al., 2009; Woods, Euren, Pollack, & Binson, 2010). For example, Reidy and colleagues (2009) suggested that both patron- and venue-specific characteristics may each influence the frequency of HIV risk behaviors in commercial sex venues such as bathhouses. Those studying the role of the Internet have argued that it facilitates greater frequency of sex, often with partners who might not have otherwise encountered each other (Adam, Murphy, & de Wit, 2011; Grov, 2006). As a result, the Internet may increase the opportunity for HIV and STI transmission (Chiasson et al., 2006; Menza, Kerani, Handsfield, & Golden, 2011; Mustanski, 2007). Others have had a more optimistic view of the Internet, advocating for its use to promote HIV status disclosure and sexual health information seeking (Chiasson, Hirshfield, & Rietmeijer, 2010; Mustanski, Lyons, & Garcia, 2011). A 2006 meta-analysis found that 40% of MSM seek sex partners online (Liau, Millett, & Marks, 2006), and a community-based survey of MSM found that half met partners online in the past 3 months (Grov, Parsons, & Bimbi, 2007). In all, trend data suggest more and more MSM are using the Internet to meet sex partners (Bolding, Davis, Hart, Sherr, & Elford, 2007; Zablotska, Holt, & Prestage, in press).

Much of the research on venue-associated HIV risk has focused recruitment to a single type of venue, be it a bathhouse, bar/club, or Internet website. Interestingly, studies indicate that MSM utilize a variety of venues to meet sex partners, irrespective of venue of recruitment. For example, Pollock and Halkitis (2009) studied MSM recruited in gyms, finding that 42.3% had met a recent partner in the gym (i.e., the venue in which they were recruited); however, participants also reported partners from the Internet (50.4%), bars (42.3%) and “gay neighborhoods” (41.2%). Reiser and colleagues (2009) recruited three samples of men from Gay Pride events, gay bars/clubs, and private safer sex parties. They noted several differences in where men from these venues reported male sex partners in the previous 12 months. Compared to men recruited via Gay Pride events, MSM from private safer sex parties were more likely to report having met their male sexual partners at bars/clubs, sex parties, and via the Internet. Relative to men recruited via bars/clubs, private safer sex party attendees were more likely to report having met their sexual partners at sex parties, via the Internet, and in bathhouses.

Two studies have noted that although MSM may use a variety of venues for meeting their partners, many have consistent patterns and preferences. Grov and colleagues (2007) reported on a community-based sample of MSM and operationally defined men who met greater than 50% of their recent partners in a single type of venue as having “preference” for that venue. This study noted that 34.7% of men “preferred” the Internet, 27.1% gay bars/dance clubs, and 22.4% bathhouses. Further, men who preferred to meet partners online had the greatest number of recent sex partners, and men preferring either the Internet or bathhouses averaged higher scores on temptations for unsafe sex than men who preferred bars/clubs. In a second study, Grov, Golub, and Parsons (2010) found that HIV-positive and HIV-negative/

unknown status men reported a sizable portion of their recent partners from the Internet (55% and 29%, respectively), and that HIV-negative/unknown status men also gravitated toward gay bars/clubs (22% of partners were met in bars/clubs).

In total, researchers have indicated that MSM meet partners in a variety of venues, and data suggest that sizeable numbers of MSM may have consistent patterns of venue frequenting in order to find sex partners. Pollock and Halkitis (2009) and Reisner and colleagues (2009) have both suggested there may be some overlap between where participants are recruited and the venues these participants use to meet partners. Similarly, the venues where MSM meet sex partners are valuable arenas not only for research, but also as key locations where health and community service providers conduct HIV testing, education, and other prevention efforts.

Nevertheless, there has been little investigation of MSM's perceptions about the venues where they meet partners, specifically as it relates to HIV prevention and other types of outreach in such settings. Such information would be essential to informing the development and delivery of health education and prevention within venues—particularly in light of research suggesting many MSM are experiencing HIV prevention fatigue, and they are tired of being targeted with safer-sex messages (Adam, Husbands, Murray, & Maxwell, 2005; Rowniak, 2009; Stockman et al., 2004). To that end, the current study examined MSM surveyed in three types of venues (bars/clubs, bathhouses, and Craigslist.org) to analyze differences related to the place where they most commonly met recent sex partners (the most common place). We sought to answer four main research questions:

- To what extent does venue of recruitment match with participants' most common place for meeting sex partners?
- How are socio-demographic and behavioral characteristics associated with the most common place?
- How does participants' most common place relate to perceptions about (a) the purpose of a venue, (b) HIV risk, and (c) prevention/outreach?
- Finally, when adjusting for HIV status, age, and race, what is the role of participants' most common place in recent drug use and sex under the influence of alcohol or drugs?

In so doing, our goal is to inform the design and implementation of venue-based HIV prevention efforts.

METHOD

PARTICIPANTS AND PROCEDURE

Data are taken from the Sex in the City Study, a cross-sectional survey administered to sexually active MSM in NYC in 2009–2010 (Grov, in press). Using probability-based recruitment methods, the study was designed to collect anonymous data from three samples of MSM identified in bathhouses, gay bars/clubs, and on Craigslist.org. Our goal was to recruit 200 MSM from each venue. To be eligible, participants had to be biologically male, be at least 18 years of age, report having had sex with at least one male partner in the past three months who was not their main partner, and have been identified via one of the three aforementioned types of venues. All procedures were reviewed and approved by the Brooklyn College Insti-

tutional Review Board, and the study was conducted at the Center for HIV/AIDS Educational Studies and Training (CHEST).

Recruiting men in NYC bathhouses and gay bars/clubs. The research team used time-space sampling (MacKellar, Valleroy, Karon, Lemp, & Janssen, 1996; Parsons, Grov, & Kelly, 2008; Stueve, O'Donnell, Duran, Sandoval, & Blome, 2001) to recruit MSM in gay bars/clubs and bathhouses. In so doing, we first employed ethnographic mapping (Watters & Biernacki, 1989) to generate an exhaustive list of gay bars/clubs and bathhouses in NYC. Using a random-digit generator, we selected a bar/club or bathhouse to attend on a randomly selected day of the week. Recruitment teams were sent to venues and approached random patrons for participation in the project. In bars/clubs, 39% ($n = 199$ of 510) of those approached consented to complete the survey and 45% ($n = 194$ of 431) consented in bathhouses. Participants received the survey on a clipboard so that they could step away from others to privately complete the questionnaire. Participants deposited their own completed surveys into a secure box held by recruitment staff. As an incentive, participants were given two \$1 scratch-off lottery tickets. Survey data were entered into an SPSS database and checked/verified by project staff for accuracy. This procedure was used until the team approximated the targeted recruitment goal. All recruitment staff received training in the protection of human subjects—this included adhering to a recruitment script and strategies to protect participant confidentiality.

Recruiting on the NYC men-seeking-men section of Craigslist.org. The research team adapted time-space sampling (MacKellar et al., 1996; Parsons et al., 2008; Stueve et al., 2001) to recruit men from the NYC men-seeking-men section of Craigslist.org. We divided each day into 30-minute increments (1am, 1:30am, 2am, 2:30am, etc.) and used a random-digit generator to select an increment of time. At that randomly selected time, we posted an ad for the study on Craigslist. We opted to post ads on Craigslist, versus simply responding to ads already posted, in an effort to also reach those men who browse ads but may not have posted one themselves. A set of varying headlines were used (e.g., “How much sex do most men have?,” “Can we talk about sex?,” “Help us learn about gay and bisexual men’s sex lives,” “Answer some questions about your sex life”). The text of the ad further described the study and instructed men to respond via email. The ad also noted that we would be raffling off four \$50 gift certificates to amazon.com for men completing the survey. Those responding to our Craigslist posting via email were provided a link to the survey (which was hosted on a separate secure website). Craigslist has automated filters that prevented us from including the URL to the survey within our advertisement. This procedure was used until the team approximated the targeted recruitment goal, $n = 208$.

During the recruitment period, the research team posted to Craigslist 72 times. A total of 286 email responses were received. Of these, 242 consented to complete the survey. Twenty-seven of these men were not eligible (they had not had at least one recent male sex partner in the past three months who was not a primary partner) and thus skipped to the end. Of the remaining 215, seven were excluded for having completed the survey more than once. Mean time to complete the survey was 11 minutes ($SD = 6.1$).

Although there are many websites MSM use to meet sex partners, we chose Craigslist.org because it was free to the public, required no membership, and was

not moderated by a central administrator. Craigslist.org is one of the largest M4M bulletin boards in the United States. Craigslist might be an attractive option for MSM seeking immediate sexual encounters on a casual basis (Grov, 2010; Moskowitz & Seal, 2010).

MEASURES

Participant characteristics. Participants indicated their age in years, sexual identity (gay, bisexual, queer—has sex with men, or heterosexual—has sex with men), relationship status (single, partnered-boyfriend/husband, partnered-girlfriend/wife), race and ethnicity (White/European, Hispanic/Latino, African American/Black, Asian/Pacific Islander, and Mixed/ “Other”), and HIV status (positive, negative, unsure).

Sexual behavior and substance use in the past three months. Participants answered questions about their sexual behavior with casual male partners in the prior three months. They indicated if they had engaged in anal sex with a male partner (yes/no), their total numbers of partners (not including a boyfriend), whether they had engaged in unprotected anal intercourse (UAI), and whether they had sex while drunk or high on drugs (1 = yes, 0 = no). Men also indicated if they had recently used five different drugs: cocaine, methamphetamine, ecstasy/MDMA (3,4-methylenedioxymethamphetamine), GHB (*gamma*-hydroxybutyric acid), and ketamine (1 = yes, 0 = no).

Most common place men meet sex partners. Men indicated where they most commonly met male sex partners in the prior three months (most common place). They were presented with four options: bars/clubs, bathhouses, online, or “other, specify.”

Perceptions about their most common place. Participants answered 18 questions assessing perceptions about their most common place. Two questions were related to HIV: “I tend to engage in riskier sex when I meet partners via this venue” and “I find it difficult to discuss HIV with partners met via this venue.” Another three questions assessed attitudes about outreach and prevention: “I would like to see more information about HIV in this venue”; “I would be okay interacting with a health outreach worker in this venue”; and “I would like more information on drugs/alcohol to be available at this venue.” Response choices were on a six-point Likert-type scale (1 = strongly disagree, 6 = strongly agree).

Finally, men rated their agreement with statements about the purpose of a venue. They were presented with a single stem—“This venue is a place to . . .”—followed by thirteen brief statements (e.g., find drugs, bareback, be anonymous, make friends). Barebacking is a colloquial term used to refer to intentionally condomless anal sex. Items were rated on a six-point Likert-type scale (1 = definitely not, 6 = definitely is). The full list of items can be found in Table 3. These items were developed in consultation with a community advisory group comprised of MSM who are diverse in age, race and ethnicity, and HIV status. Members also included providers who work in HIV prevention/outreach and treatment.

ANALYSIS PLAN

We conducted analyses in four steps. First, we used cross-tabs and chi-square to assess for differential levels of overlap between venue of recruitment and partici-

participant's most common place. Next, we compared the most common place by socio-demographic and behavioral characteristics (e.g., recent drug use, sex while under the influence of alcohol or drugs, and unprotected sex with a casual male partner). Depending on level of measurement, we used chi-square or ANOVA. Third, we used ANOVA to examine differences in the 18 venue perception items across the most common place. We used Bonferroni post hoc tests when variances were equal and Games-Howell post-hoc test when variances were unequal (Field, 2009). Finally, we used multivariate logistic regression to examine the role of the most common place, HIV status, age, and race on recent drug use (1 = yes, 0 = no) and recent sex while under the influence of alcohol or drugs (1 = yes, 0 = no). As will be shown, the most common place was not bivariately related to unprotected anal sex and thus was not investigated further in multivariate analyses.

RESULTS

VENUE OF RECRUITMENT AND THE MOST COMMON PLACE FOR MEETING SEX PARTNERS

A total of 592 men (99%) provided a valid response for their most common place. Of these, 46% indicated their most common place was online, 23% bathhouses, and 20% bars or clubs. The remaining 11% ($n = 66$) indicated that they most commonly met partners elsewhere. Of these 66 men, the three most common responses were public cruising ($n = 15$), video stores/peep shows ($n = 11$), and meeting partners through friends ($n = 10$).

Overall, 64.7% of men reported that their most common place for meeting sex partners matched the venue where they were recruited. Nevertheless, this level of “match” significantly differed across recruitment sites, $\chi^2(6) = 431.5, p < .001$. For example, 81% of men recruited on Craigslist “matched” with their most common place being the Internet. In contrast, 65% of men recruited in bathhouses said their most common place was bathhouses, and 47% of men surveyed in bars/clubs said their most common place was bars/clubs. Interestingly, 34% of men surveyed in bars/clubs and 20% of those surveyed in bathhouses indicated the Internet was their most common place. See Table 1.

Due to the low frequency of responses, the 66 men who said their most common place was “other” were dropped from further analyses, $N_{\text{final}} = 526$.

DEMOGRAPHIC AND BEHAVIORAL CHARACTERISTICS

Table 2 presents demographic and behavioral characteristics by participants' most common place. Most men were White, single, and HIV-negative. Mean age was 39 (range, 18 to 74). Men whose most common place was bathhouses were older on average than men whose most common place was the Internet or bars/clubs. Men whose most common place was the Internet were the least likely to identify as gay. Men whose most common place was bars/clubs were the most likely to be single and were younger on average than men whose most common place was the Internet or bathhouses. HIV status was not significantly related to the most common place. Men whose most common place was bars/clubs reported the greatest incidence of recent drug use (22%), and this association seems to be driven specifically by cocaine use—16% of participants whose most common place was bars/clubs had

TABLE 1. Differential Overlap Between Venue of Recruitment and Participant's Most Common Place for Meeting Partners

	Venue where participants were recruited					
	Bathhouses		Bars and Clubs		Craigslit	
	N = 190		N = 195		N = 207	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
The most common place you meet male sex partners						
Online, N = 271	37	20	66	34	168	81
Bars/Clubs, N = 121	19	10	92	47	10	5
Bathhouses, N = 134	123	65	0	0	11	5
Other, N = 66	11	6	37	19	18	9

Note. $\chi^2(6) = 431.5, p < .001$, Cramer's $V = .60$.

used cocaine recently. The most common place was neither related to whether men had engaged in recent anal sex nor to UAI with a casual male partner. Among men reporting anal sex, 43% reported recent UAI with a casual partner. Men whose most common place was bathhouses averaged significantly more recent casual male sex partners than men whose most common place was bars/clubs.

PERCEPTIONS OF THE MOST COMMON PLACE

Table 3 reports differential perceptions of the most common places men meet sex partners. The most common place was not related to ratings on whether participants "tend to engage in riskier sex when [they] meet partners via this venue." The most common place was, however, related to "discussing HIV with partners met via this venue": participants whose most common place was the Internet found it easier. Most common place was unrelated to participants' ratings on wanting to see more information about HIV or drugs/alcohol in their respective most common place. However, men whose most common place was bars/clubs scored significantly lower than men whose most common place was the Internet on comfort "interacting with a health outreach worker in this venue."

The most common place was significantly related to 11 of the 13 venue-specific "purpose" questions. Men whose most common place was the Internet or bars/clubs rated these venues higher than men whose most common place was bathhouses as places to "find love," "find companionship," "make friends," and "be myself." Men whose most common place was the Internet or bathhouses rated these venues higher than whose most common place was bars/clubs as places to "be anonymous." Bathhouses were perceived similarly to the Internet as being places to bareback, both of which were significantly higher than bars/clubs.

MULTIVARIABLE LOGISTIC REGRESSION

Table 4 reports the results of logistic regressions investigating the role of the most common place, HIV status, age, and race on recent drug use (1 = yes, 0 = no) and recent sex while under the influence of alcohol or drugs (1 = yes, 0 = no). We used contrast coding for the most common place to provide venue comparisons (online versus bars/clubs, online versus bathhouses, bars/clubs versus bathhouses).

Drug use. Adjusting for other variables, men whose most common place was bathhouses had 53% (AOR = 0.47) reduced odds of having recently done drugs than men whose most common place was the Internet, and 60% (AOR = 0.40) reduced

TABLE 2. Demographic and Behavioral Characteristics by the Most Common Place Men Met Sex Partners, *N* = 526

	Most common place for meeting male sex partners								χ^2	<i>df</i>	<i>p</i>
	Overall		Bathhouses		Bars and Clubs		Online				
	<i>N</i> = 526		<i>N</i> = 134		<i>N</i> = 121		<i>N</i> = 271				
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%			
HIV Status											
Positive	68	13%	22	17%	11	9%	35	13%	8.1	4	0.09
Negative	407	78%	95	72%	102	86%	210	78%			
Unsure	44	9%	15	11%	5	4%	24	9%			
HIV Positive											
Yes	68	13%	35	13%	11	9%	22	17%	3.0	2	0.23
No	451	87%	110	83%	107	91%	234	87%			
Race and Ethnicity											
African American/Black	58	11%	23	17%	19	16%	16	6%	27.5	8	< .001
European/White	302	58%	61	46%	63	53%	178	66%			
Asian, Pacific Islander, Hawaiian	29	6%	7	5%	7	6%	15	6%			
Hispanic/Latino	96	18%	34	26%	23	19%	39	14%			
Multiracial/ethnic or “other”	37	2%	8	6%	7	6%	22	8%			
Race and Ethnicity (dichotomous)											
White	302	58%	61	46%	63	53%	178	66%	16.2	2	< .001
Non-White	220	42%	72	54%	56	47%	92	34%			
Sexual Identity											
Gay	416	80%	108	83%	103	85%	205	77%	15.3	6	< .05
Bisexual	71	14%	20	15%	15	12%	36	13%			
Queer - has sex with men	14	3%	0	0%	1	1%	13	5%			
Heterosexual - has sex with men	17	3%	2	2%	2	2%	13	5%			
Relationship Status											
Single	347	67%	83	62%	99	83%	165	62%	20.1	4	< .001
Partnered: Boyfriend, Husband	140	27%	41	31%	19	16%	80	30%			
Partnered: Girlfriend, Wife	31	6%	9	7%	1	1%	21	8%			
Any drug use, < 3 months	84	16%	12	9%	26	22%	46	17%	7.9	2	< .05
Specific drugs, < 3 months											
Cocaine	57	11%	6	5%	19	16%	32	12%	8.9	2	< .05
Methamphetamine	22	4%	6	5%	3	3%	13	5%	1.2	2	0.56
Ecstasy/MDMA	34	7%	5	4%	11	9%	18	7%	3.1	2	0.22
GHB	12	2%	1	1%	4	3%	7	3%	2.1 ^a	2	0.36
Ketamine	10	2%	1	1%	5	4%	4	2%	4.3 ^a	2	0.12
Sex while drunk or high on drugs, < 3 months	147	35%	23	20%	50	53%	74	35%	23.6	2	< .001
Anal sex with a casual male partner, < 3 months	424	83%	114	88%	95	82%	215	81%	3.4	2	0.18
Unprotected anal sex with a casual male partner, < 3 months (among those reporting anal sex, <i>n</i> = 424)	180	43%	44	39%	35	37%	101	47%	3.6	2	0.16
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>df</i>	<i>p</i>
Age (range 18 to 74)	39.3	11.0	43.6	10.3	35.3	9.8	38.9	11.1	12.4	3, 585	< .001 ^b
Number of casual male sex partners, < 3 months	10.9	17.7	13.9	18.6	7.9	16.1	10.8	17.8	3.5	2, 513	< .05 ^c

Note. ^aExpected counts fall below 5 in one or more cells, Chi-square should be interpreted with caution. Differences are non-significant using Fishers exact *p* 2x2 comparisons. ^bAll three groups were significantly different from each other, Bonferroni *p* < .05. ^cBathhouses and bars/clubs differed significantly, Bonferroni *p* < .05. Percentages are nested among those with valid data.

odds than men whose most common place was bars/clubs. Men whose most common place was the Internet had similar odds of recent drug use as men whose most common place was bars/clubs. The odds of recent drug use were 3.4 times higher in HIV-positive men, and the odds of recent drug use decreased with age (AOR = 0.96). Race (White vs. non-White) was not significant.

TABLE 3. Perceptions of the most common places men meet sex partners, N = 526

	Most common place for meeting male sex partners						F	df	p	Post hoc Group differences
	Bathhouses		Bars and Clubs		Online					
	(Group A)	(Group B)	(Group B)	(Group C)	(Group C)	(Group C)				
	M	SD	M	SD	M	SD				
	n = 134		n = 121		n = 271					
I tend to engage in RISKIER sex when I meet partners via this venue (1-Strongly disagree, 6-Strongly agree)	2.4	1.8	2.2	1.6	2.1	1.5	2.1	2, 521	0.13	
I find it difficult to discuss HIV with partners met via this venue (1-Strongly disagree, 6-Strongly agree)	3.1	1.8	2.7	1.8	2.2	1.5	12.0	2, 518	<.001	A, B ≠ C
I would like to see more information about HIV in this venue (1-Strongly disagree, 6-Strongly agree) *	3.9	1.7	3.7	1.7	4.1	1.7	2.5	2, 513	0.09	
I would like more information on drugs/alcohol to be available at this venue (1-Strongly disagree, 6-Strongly agree)*	3.4	1.9	3.3	1.8	3.6	1.7	2.0	2, 515	0.14	
I would be okay interacting with a health outreach worker in this venue (1-Strongly disagree, 6-Strongly agree)	3.9	1.8	3.8	1.9	4.3	1.7	3.9	2, 514	<.05	B ≠ C
This venue is a place to... (1-Definitely not, 6-Definitely is)										
Find drugs	1.7	1.3	1.9	1.5	2.0	1.6	2.1	2, 509	0.13	
Drink	1.5	1.2	4.8	1.9	1.9	1.6	174.3	2, 511	<.001	A ≠ B, C; B ≠ C
Bareback	2.9	2.0	1.9	1.4	2.9	2.1	12.4	2, 508	<.001	A ≠ B; B ≠ C
Make Friends*	2.7	1.6	4.1	1.7	4.0	1.6	29.9	2, 511	<.001	A ≠ B, C
Keep in touch with friends, or the community	2.3	1.6	4.3	1.7	4.5	1.7	82.4	2, 515	<.001	A ≠ B, C
Be myself	3.8	1.9	4.5	1.7	4.5	1.5	9.0	2, 514	<.001	A ≠ B, C
Be someone else*	3.1	1.9	2.8	1.8	3.8	1.9	13.4	2, 509	<.001	A, B ≠ C
Be anonymous	4.2	1.9	3.4	1.9	4.6	1.6	17.4	2, 513	<.001	A ≠ B; B ≠ C
Forget my worries	3.7	1.9	4.0	1.8	3.8	1.7	1.2	2, 516	0.31	
Find companionship	2.8	1.8	3.8	1.6	3.8	1.6	19.3	2, 509	<.001	A ≠ B, C
Find love	1.8	1.3	2.9	1.7	2.8	1.7	19.8	2, 516	<.001	A ≠ B, C
Find group sex	3.1	1.9	2.6	1.7	4.1	1.8	36.8	2, 509	<.001	A, B ≠ C
Find anonymous sex	4.7	1.7	3.5	1.9	5.0	1.4	40.1	2, 515	<.001	A ≠ B; B ≠ C

Note. The Games-Howell post-hoc test was performed on most variables since the variances were unequal. For variables with homogeneous variances (indicated with an asterisk*), the Bonferroni post-hoc test was performed.

TABLE 4. The Role of the Most Common Place Men Meet Sex Partners, HIV Status, Age, and Race on Recent Drug Use and Recent Sex While Under the Influence of Alcohol or Drugs

	Drug use ¹ , < 3 months (1 = Yes, 0 = No)			
	Coeff.	AOR [95% CI]	Coeff.	AOR [95% CI]
Most common place men meet sex partners				
Online	Ref.	1.00	-0.17	0.84 [0.47 - 1.50]
Bars/clubs	0.17	1.19 [0.67 - 2.12]	Ref.	1.00
Bathhouses	-0.75	0.47 [0.22 - 1.00]*	-0.93	0.40 [0.17 - 0.91]*
HIV Positive				
No	Ref.	1.00	Ref.	1.00
Yes	1.24	3.44 [1.79 - 6.63]***	1.24	3.44 [1.79 - 6.63]***
Age (in years)	-0.04	0.96 [0.93 - 0.98]**	-0.04	0.96 [0.93 - 0.98]**
Race				
Non-White	Ref.	1.00	Ref.	1.00
White	0.14	1.15 [0.68 - 1.94]	0.14	1.15 [0.68 - 1.94]
	Sex under the influence of alcohol or drugs, < 3 months (1 = Yes, 0 = No)			
	Coeff.	AOR [95% CI]	Coeff.	AOR [95% CI]
Most common place men meet sex partners				
Online	Ref.	1.00	-0.64	0.53 [0.31 - 0.89]*
Bars/clubs	0.64	1.89 [1.12 - 3.18]*	Ref.	1.00
Bathhouses	-0.66	0.52 [0.29 - 0.92]*	-1.30	0.27 [0.14 - 0.53]***
HIV Positive				
No	Ref.	1.00	Ref.	1.00
Yes	0.79	2.21 [1.19 - 4.09]*	0.79	2.21 [1.19 - 4.09]*
Age (in years)	-0.03	0.97 [0.95 - 0.99]**	-0.03	0.97 [0.95 - 0.99]**
Race				
Non-White	Ref.	1.00	Ref.	1.00
White	0.07	1.08 [0.69 - 1.69]	0.07	1.08 [0.69 - 1.69]

Note. ¹ Cocaine, methamphetamine, ecstasy/MDMA, GHB, ketamine. Coeff. = Unstandardized coefficient (B). Ref. = Reference group. AOR = Adjusted Odds Ratio (Exp (B)). * $p < .05$, ** $p < .01$, *** $p < .001$.

Sex under the influence of alcohol or drugs. Men whose most common place was bathhouses had 54% (AOR = 0.46) reduced odds of having had sex under the influence of drugs or alcohol than men whose most common place was the Internet, and 73% (AOR = 0.27) reduced odds than men whose most common place was bars/clubs. Men whose most common place was bars/clubs had 1.89 higher odds of having had sex under the influence than men whose most common place was the Internet. The odds of recent sex under the influence were 2.21 higher in HIV-positive men, and they decreased with age (AOR = 0.97). Race (White vs. non-White) was not significant.

DISCUSSION

We adapted time-space sampling to survey MSM in bars/clubs, bathhouses, and on Craigslist.org. We found that venue of recruitment was strongly associated with the most common place, and it was strongest among men recruited online. Nevertheless, more than a third of men from bathhouses and more than half of men from bars/clubs indicated their most common place was a different venue from the one in which they were surveyed—sizeable proportions of these men said the Internet was their most common place, and this is consistent with studies highlighting the growing use of the Internet as a venue for meeting sex partners (Chiasson et al., 2006; Grov et al., 2007, 2010; Liao et al., 2006; Mustanski et al., 2007, 2011). For

providers working in bars/clubs and in bathhouses, these findings suggest the need to incorporate online sex seeking as part of their comprehensive outreach efforts.

Next, we observed a multitude of differences in how the most common places were perceived. Although participants perceived their levels of risky sex similarly in each venue (and behavioral data seemed to confirm this), men whose most common place was bathhouses found it much more difficult to discuss HIV with their partners. This is consistent with research noting that non-verbal communication is normative in bathhouses (Elwood, Green, & Carter, 2003). These findings suggest that rather than focusing on HIV status disclosure, providers working in bathhouses should continue to focus on correct and consistent condom use.

In general, participants ranged from neutral to positive with regard to their interest in seeing more information on drugs/alcohol and HIV, and to interacting with a health outreach worker in their most common place. Studies have noted that MSM may be experiencing HIV prevention fatigue, and that they are tired of being targeted with safer-sex messages (Adam et al., 2005; Rowniak, 2009; Stockman et al., 2004). Our findings suggest that MSM are still interested in seeing HIV and drug/alcohol information; thus, perhaps the challenge for providers is to develop new approaches and new messages to maintain MSM's attention.

Although responses were generally neutral to positive, men whose most common place was bars/clubs scored lowest on acceptability to interacting with health outreach workers. Compared to the Internet and bathhouses, sex seeking is not the overt/intended purpose of bars and clubs, and this is consistent with how participants rated bars/clubs (e.g., bars/clubs scored high as places to drink and make friends, and low as places to be anonymous and bareback). Perhaps this explains why these men were less accepting of interacting with health outreach workers (i.e., "I am not here to have sex, so what's the need?"). However, this is in contrast with the same data from men surveyed in bars/clubs, where nearly half indicated that bars and clubs were the most common places they met sex partners. Thus, although bars/clubs may not have the manifest purpose of facilitating sexual encounters, our data suggest it is a function. In addition, in multivariate modeling, we found men whose most common place was bars/clubs reported the highest incidence of recent drug use and were the most likely to report recent sex under the influence of alcohol and drugs. Taken together, these findings suggest that any preventative information targeted in bars and clubs should focus on illustrating the connection between substances and sexual behavior.

Interestingly, men whose most common place was bathhouses reported the lowest incidence of recent drug use. This is in contrast to earlier work suggesting a strong connection between substances and bathhouses (Elwood & Williams, 1998; Halkitis & Parsons, 2002; Haubrich, Myers, Calzavara, Ryder, & Medved, 2004; Jacobs, 2004). Perhaps the differences between earlier work and the present findings are a reflection of the anti-methamphetamine social marketing campaigns that blanketed NYC between 2003 and 2007, particularly in public sex environments like bathhouses (Grov, Parsons, & Bimbi, 2008; Nanín, Parsons, Bimbi, Grov, & Brown, 2006).

Finally, we identified notable demographic differences in participants' most common place. Epidemiological data has highlighted the disproportionate burden that Black and Hispanic men bear with regard to HIV incidence (CDC, 2010b), and we found that men of color were the most likely to indicate the bathhouse as the most common place they met their partners. Similarly, we found that non-gay identified men were the most likely to indicate that the Internet was their most com-

mon place; therefore, providers seeking to reach these men might benefit by targeting sexual networking websites. Finally, there has been a growing interest in doing HIV prevention with MSM who are in non-monogamous relationships (Koblin et al., 2003; Parsons, Starks, Du Bois, Grov, & Golub, in press; Sullivan, Salazar, Buchbinder, & Sanchez, 2009), and we found that partnered individuals were the most likely to indicate their most common place was the bathhouse or the Internet—so researchers may consider investigating the role that these venues play in how partnered men navigate non-monogamy.

LIMITATIONS

In an effort to rapidly engage men within venues, we utilized a brief survey with close-ended responses. We chose to study men in bars/clubs, bathhouses, and on Craigslist based on previous research highlighting the amount of sex-seeking MSM engage in within these venues (Grov et al., 2007); however, gay and bisexual men congregate in a large array of places, including social networking sites (e.g., gay community events, Facebook), public sex environments (e.g., public parks, public toilets, adult bookstores), other websites (e.g., Manhunt, Adam4Adam, DList), and private spaces (e.g., private sex parties, house parties) (Pollock & Halkitis, 2009; Solomon et al., 2011). In addition, smartphones with GPS-based applications like Grindr (grindr.com) are emerging as popular mobile means of geo-locating potential sex partners. Much as we noted differences in the three venues in which we recruited men, those found in other spaces may also vary with regard to the behaviors and attitudes we examined in this study. Although we found several differences among the men sampled in the three venues we studied, we recognize that MSM are not constrained to a single venue, neither for social nor for sexual purposes. Further, we recognize that our focus on the “most common place” excludes other venues MSM may also utilize, but with less frequency. We also recognize that participants’ interpretation of what the “most common place” means may vary.

Among MSM, HIV is transmitted predominately via anal sex with male partners (CDC, 2008, 2010c). As such, our focus was on behaviors with male partners; we did not collect data on female partners. We also recognize that the wording of some questions may have been less than ideal. For example, we asked participants about interacting with a “health outreach worker,” but perhaps if we had asked about a “peer educator,” responses would have been different. Participants in this study were recruited using adapted methods of time-space sampling. An advantage of time-space sampling is its systematic approach for capturing location-based populations; however, it has the potential to oversample patrons who frequently attend the venues being studied (Jenness et al., 2011). In addition, these data are limited to the specific socio-geographic region of New York City, impacting the generalizability of our results.

Last, these data are restricted to the MSM who chose to participate. We do not know how many men “viewed” our advertisement on Craigslist.org but never took the initiative to respond. In bars/clubs and bathhouses, staff actively approached participants, whereas on Craigslist, a more passive approach (i.e., posting ads for the study) was taken for reasons already stated. Future research should investigate if active versus passive approaches online result in different sample characteristics. Further, although our response rate in bars/clubs and in bathhouses was on par with similar research having used venue-based time-space sampling (Jenness et al., 2011; Parsons et al., 2008), we do not have data on those who declined participation. Finally, all limitations of self-report and recall bias apply.

CONCLUSION

Despite such limitations, our findings could be useful for providers who conduct venue-based outreach. We found high rates of unprotected sex with casual partners, indicating that many of the men we surveyed are at considerable risk for transmitting HIV and other STIs. Targeted efforts in bars/clubs, bathhouses, and on the Internet may be ideal for reaching at-risk MSM.

Researchers have questioned whether meeting partners on the Internet results in more unprotected sex than meeting partners off-line (Chiasson et al., 2007; Mustanski, 2007; Rosser et al., 2009); however, with few exceptions (cf., Horvath, Bowen, & Williams, 2006; Reisner et al., 2009), there has been little examination of off-line venues (e.g., bars/clubs, bathhouses) separately from each other. Although the most common place was unrelated to UAI, it was related to factors that contextualize men's encounters (e.g., attitudes toward HIV status disclosure, and perceptions about barebacking, anonymous sex, and alcohol use). Outreach providers should consider these contextualizing aspects as they continue to retool their efforts. Finally, a strength of our approach was the use of identical measures across three samples. Several studies have investigated the role of venues in HIV transmission risks, typically focusing efforts within a single venue (be it online, in bars/clubs, or in bathhouses). Future research should consider a broader array of venues and perhaps in a wider array of settings (e.g., rural vs. urban).

REFERENCES

- Adam, B. D., Husbands, W., Murray, J., & Maxwell, J. (2005). AIDS optimism, condom fatigue, or self-esteem? Explaining unsafe sex among gay and bisexual men. *Journal of Sex Research, 42*, 238-248.
- Adam, P. C., Murphy, D. A., & de Wit, J. B. (2011). When do online sexual fantasies become reality? The contribution of erotic chatting via the Internet to sexual risk-taking in gay and other men who have sex with men. *Health Education Research, 26*, 506-515. doi: cyq085 [pii] 10.1093/her/cyq085
- Bolding, G., Davis, M., Hart, G., Sherr, L., & Elford, J. (2007). Where young MSM meet their first sexual partner: The role of the Internet. *AIDS and Behavior, 11*, 522-526. doi: 10.1007/s10461-007-9224-9
- Centers for Disease Control. (2008). Trends in HIV/AIDS diagnoses among men who have sex with men—33 states, 2001–2006. *Morbidity and Mortality Weekly Report, 57*, 681-686.
- Centers for Disease Control. (2010a). CDC analysis provides new look at disproportionate impact of HIV and syphilis among U.S. gay and bisexual men. Retrieved March 15, 2010, from <http://www.cdc.gov/nchhstp/Newsroom/msmpressrelease.html>
- Centers for Disease Control. (2010b). Diagnoses of HIV infection and AIDS in the United States and dependent areas. 2009 *HIV Surveillance Report*. Atlanta: U.S. Department of Health and Human Services.
- Centers for Disease Control. (2010c). HIV among gay, bisexual and other men who have sex with men (MSM). Retrieved September 30, 2010, from <http://www.cdc.gov/hiv/topics/msm/pdf/msm.pdf>
- Centers for Disease Control. (2011). HIV surveillance in men who have sex with men (MSM). Retrieved December 20, 2011, from <http://www.cdc.gov/hiv/topics/surveillance/resources/slides/msm/slides/msm.pdf>
- Chiasson, M. A., Hirshfield, S., Remien, R. H., Humberstone, M., Wong, T., & Wolitski, R. J. (2007). A comparison of on-line and off-line sexual risk in men who have sex with men: An event-based on-line survey. *Journal of Acquired Immune Deficiency Syndromes, 44*, 235-243.
- Chiasson, M. A., Hirshfield, S., & Rietmeijer, C. (2010). HIV prevention and care in the digital age. *Journal of Acquired Immune Deficiency Syndromes, 55*, s94-s97.
- Chiasson, M. A., Parsons, J. T., Tesoriero, J. M., Carballo-Diequez, A., Hirshfield, S., & Remien, R. H. (2006). HIV behavioral research online. *Journal of Urban Health, 83*, 73-85.
- Elwood, W. N., Green, K., & Carter, K. K. (2003). Gentlemen don't speak: Communication norms and condom use in bathhouses. *Jour-*

- nal of Applied Communication Research*, 31, 277-298.
- Elwood, W. N., & Williams, M. L. (1998). Sex, drugs, and situation: Attitudes, drug use, and sexual risk behaviors among men who frequent bathhouses. *Journal of Psychology and Human Sexuality*, 10, 23-44.
- Field, A. (2009). *Discovering statistics using SPSS*. London: Sage.
- Frankis, J. S., & Flowers, P. (2009). Public sexual cultures: A systematic review of qualitative research investigating men's sexual behaviors with men in public spaces. *Journal of Homosexuality*, 56, 861-893.
- Grov, C. (2006). Barebacking websites: Electronic environments for reducing or inducing HIV risk. *AIDS Care*, 18, 990-997.
- Grov, C. (2010). Risky sex- and drug-seeking in a probability sample of men-for-men on-line bulletin board postings. *AIDS and Behavior*, 14, 1387-1392. doi: 10.1007/s10461-009-9661-8
- Grov, C. (in press). HIV risk and substance use in men who have sex with men surveyed in bathhouses, bars/clubs, and on Craigslist.org: Venue of recruitment matters. *AIDS and Behavior*. doi: 10.1007/s10461-011-9999-6
- Grov, C., Golub, S. A., & Parsons, J. T. (2010). HIV status differences in venues where highly sexually active gay and bisexual men meet sex partners: Results from a pilot study. *AIDS Education and Prevention*, 22, 496-508.
- Grov, C., Parsons, J. T., & Bimbi, D. S. (2007). Sexual risk behavior and venues for meeting sex partners: An intercept survey of gay and bisexual men in LA and NYC. *AIDS and Behavior*, 11, 915-926.
- Grov, C., Parsons, J. T., & Bimbi, D. S. (2008). In the shadows of a prevention campaign: Sexual risk in the absence of crystal methamphetamine. *AIDS Education and Prevention*, 20, 42-55.
- Halkitis, P. N., & Parsons, J. T. (2002). Recreational drug use and HIV-risk sexual behavior among men frequenting gay social venues. *Journal of Gay and Lesbian Social Services*, 14, 19-38.
- Haubrich, D. J., Myers, T., Calzavara, L., Ryder, K., & Medved, W. (2004). Gay and bisexual men's experiences of bathhouse culture and sex: "Looking for love in all the wrong places." *Culture Health and Sexuality*, 6, 19-29.
- Horvath, K. J., Bowen, A. M., & Williams, M. L. (2006). Virtual and physical venues as contexts for HIV risk among rural men who have sex with men. *Health Psychology*, 25, 237-242.
- Jacobs, A. (2004, January 12). The beast in the bathhouse: Crystal meth use by gay men threatens to reignite an epidemic. *New York Times*. Retrieved from <http://www.nytimes.com/2004/01/12/nyregion/beast-bathhouse-crystal-meth-use-gay-men-threatens-reignite-epidemic.html?pagewanted=all&src=pm>
- Jenness, S. M., Neaigus, A., Murrill, C. S., Gelpi-Acosta, C., Wendel, T., & Hagan, H. (2011). Recruitment-adjusted estimates of HIV prevalence and risk among men who have sex with men: Effects of weighting venue-based sampling data. *Public Health Reports*, 126, 635-642.
- Koblin, B. A., Chesney, M. A., Husnik, M. J., Bozeman, S., Celum, C. L., Buchbinder, S., . . . EXPLORE Study Team. (2003). High-risk behaviors among men who have sex with men in 6 US cities: Baseline data from the EXPLORE Study. *American Journal of Public Health*, 93, 926-932.
- Liau, A., Millett, G., & Marks, G. (2006). Meta-analytic examination of online sex-seeking and sexual risk behavior among men who have sex with men. *Sexually Transmitted Diseases*, 33, 576-584. doi: 10.1097/01.olq.0000204710.35332.c500007435-900000000-00007 [pii]
- MacKellar, D., Valleroy, L., Karon, J., Lemp, G., & Janssen, R. (1996). The Young Men's Survey: Methods for estimating HIV seroprevalence and risk factors among young men who have sex with men. *Public Health Reports*, 11, 138-144.
- Menza, T. W., Kerani, R. P., Handsfield, H. H., & Golden, M. R. (2011). Stable sexual risk behavior in a rapidly changing risk environment: Findings from population-based surveys of men who have sex with men in Seattle, Washington, 2003-2006. *AIDS and Behavior*, 15, 319-329. doi: 10.1007/s10461-009-9626-y
- Moskowitz, D. A., & Seal, D. W. (2010). "GWM looking for sex—SERIOUS ONLY": The interplay of sexual ad placement frequency and success on the sexual health of "men seeking men" on Craigslist. *Journal of Gay and Lesbian Social Services*, 22, 399-412.
- Mullens, A. B., Staunton, S., Debattista, J., Hamernik, E., & Gill, D. (2009). Sex on premises venue (SOPV) health promotion project in response to sustained increases in HIV notifications. *Sexual Health*, 6, 41-44. doi: SH07087 [pii]
- Mustanski, B., Lyons, T., & Garcia, S. C. (2011). Internet use and sexual health of young men who have sex with men: A mixed-methods study. *Archives of Sexual Behavior*, 40, 289-300.
- Mustanski, B. S. (2007). Are sexual partners met online associated with HIV/STI risk behaviours? Retrospective and daily diary data in conflict. *AIDS Care*, 19, 822-827.

- Nanin, J. E., Parsons, J. T., Bimbi, D. S., Grov, C., & Brown, J. (2006). Community reactions to campaigns addressing crystal methamphetamine use among gay and bisexual men in New York City. *Journal of Drug Education, 36*, 285-303.
- Parsons, J. T., Grov, C., & Kelly, B. C. (2008). Comparing the effectiveness of two forms of time-space sampling to identify club drug-using young adults. *Journal of Drug Issues, 38*, 1063-1084.
- Parsons, J. T., Starks, T. J., Du Bois, S. N., Grov, C., & Golub, S. A. (in press). Alternatives to monogamy among gay male couples in a community survey: Implications for mental health and sexual risk. *Archives of Sexual Behavior*.
- Pollock, J. A., & Halkitis, P. N. (2009). Environmental factors in relation to unprotected sexual behavior among gay, bisexual, and other MSM. *AIDS Education and Prevention, 21*, 340-355. doi: 10.1521/aeap.2009.21.4.340
- Raymond, H. F., Bingham, T., & McFarland, W. (2008). Locating unrecognized HIV infections among men who have sex with men: San Francisco and Los Angeles. *AIDS Education and Prevention, 20*, 408-419. doi: 10.1521/aeap.2008.20.5.408 10.1521/aeap.2008.20.5.408 [pii]
- Reidy, W. J., Spielberg, F., Wood, R., Binson, D., Woods, W. J., & Goldbaum, G. M. (2009). HIV risk associated with gay bathhouses and sex clubs: Findings from 2 Seattle surveys of factors related to HIV and sexually transmitted infections. *American Journal of Public Health, 99*(Suppl. 1), S165-S172. doi: AJPH.2007.130773 [pii] 10.2105/AJPH.2007.130773
- Reisner, S. L., Mimiaga, M. J., Skeer, M., Vanderwarker, R., Gaucher, M. J., O'Connor, C. A., . . . Safren, S. A. (2009). Differential HIV risk behavior among men who have sex with men seeking health-related mobile van services at diverse gay-specific venues. *AIDS and Behavior, 13*, 822-831. doi: 10.1007/s10461-008-9430-0
- Rosser, B. R., Oakes, J. M., Horvath, K. J., Konstan, J. A., Danilenko, G. P., & Peterson, J. L. (2009). HIV sexual risk behavior by men who use the Internet to seek sex with men: Results of the Men's INternet Sex Study-II (MINTS-II). *AIDS and Behavior, 13*, 488-498. doi: 10.1007/s10461-009-9524-3
- Rowniak, S. (2009). Safe sex fatigue, treatment optimism, and serosorting: New challenges to HIV prevention among men who have sex with men. *Journal of the Association of Nurses in AIDS Care, 20*, 31-38. doi: S1055-3290(08)00206-9 [pii] 10.1016/j.jana.2008.09.006
- Solomon, T. M., Halkitis, P. N., Moeller, R. M., Siconolfi, D. E., Kiang, M. V., & Barton, S. C. (2011). Sex parties among young gay, bisexual, and other men who have sex with men in New York City: Attendance and behavior. *Journal of Urban Health, 88*, 1063-1075. doi: 10.1007/s11524-011-9590-5
- Stall, R., Duran, L., Wisniewski, S. R., Friedman, M. S., Marshal, M. P., McFarland, W., . . . Mills, T. C. (2009). Running in place: Implications of HIV incidence estimates among urban men who have sex with men in the United States and other industrialized countries. *AIDS and Behavior, 13*, 615-629. doi: 10.1007/s10461-008-9509-7
- Stockman, J. K., Schwarcz, S. K., Butler, L. M., de Jong, B., Chen, S. Y., Delgado, V., & McFarland, W. (2004). HIV prevention fatigue among high-risk populations in San Francisco. *Journal of Acquired Immune Deficiency Syndromes, 35*, 432-434. doi: 00126334-200404010-00016 [pii]
- Stueve, A., O'Donnell, L., Duran, R., Sandoval, A., & Blome, J. (2001). Time-space sampling in minority communities: Results with young Latino men who have sex with men. *American Journal of Public Health, 91*, 922-926.
- Sullivan, P. S., Salazar, L., Buchbinder, S., & Sanchez, T. H. (2009). Estimating the proportion of HIV transmissions from main sex partners among men who have sex with men in five US cities. *AIDS, 23*, 1153-1162. doi: 10.1097/QAD.0b013e32832832baa34
- Watters, J. K., & Biernacki, P. (1989). Targeted sampling: Options for the study of hidden populations. *Social Problems, 36*, 416-430.
- Woods, W. J., Euren, J., Pollack, L. M., & Binson, D. (2010). HIV prevention in gay bathhouses and sex clubs across the United States. *Journal of Acquired Immune Deficiency Syndromes, 55*, s88-s90.
- Zablotska, I. B., Holt, M., & Prestage, G. (in press). Changes in gay men's participation in gay community life: Implications for HIV surveillance and research. *AIDS and Behavior*. doi: 10.1007/s10461-011-9919-9

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