Journal of Urban Health: Bulletin of the New York Academy of Medicine, Vol. 82, No. 4,
doi:10.1093/jurban/jti122

Advance Access publication October 12, 2005

Risky Sexual Behaviors Associated with Recreational Drug Use Among Men who have Sex with Men in an International Resort Area: Challenges and Opportunities*

William W. Darrow, Susan Biersteker, Trina Geiss, Kelly Chevalier, Jodi Clark, Yamile Marrero, Vanessa Mills, and Kenneth Obiaja

ABSTRACT *South Florida is home to a highly transient population of approximately 145,000 men who have sex with men (MSM) and annually hosts over 1.8 million gay and bisexual visitors. To develop more effective interventions for HIV/sexually transmitted infections (STI) prevention in this setting, we conducted a cross-sectional study of recreational drug use and risky sexual behaviors among MSM. A standardized, self-administered questionnaire, reviewed and approved by a university Institutional Review Board, was offered to men 18 years of age and older who reported ever having sex with a man. Men were approached on weekends in five diverse locations in Miami-Dade County and five in Broward County in winter 2004. An honorarium of $10 was offered to those who completed and returned a questionnaire. Of 407 participants, 115 men (28%) lived in Miami-Dade, 147 (36%) lived in Broward, 46 (11%) lived in another county in south Florida, and 99 (24%) lived elsewhere. Overall, 32% reported using one or more "club drugs" in the past year. Club drug use was highly associated with unprotected anal intercourse (UAI) ($P < .001$). MSM residing outside of south Florida were more likely than local residents to report using cocaine and ketamine and engaging in unprotected receptive anal intercourse (URAI) in the past month ($P = .03$). Tourists may be even more likely than residents to engage in risky sexual behaviors and use certain recreational drugs. Interventions must be developed, implemented, and evaluated that take into account the unique characteristics of international resort areas.*

KEYWORDS *HIV prevalence, International travel, Men who have sex with men, Recreational drug use, Sexual behavior, Substance abuse.*

INTRODUCTION

Recently reported research conducted with population-based samples of adult men who have sex with men (MSM) in four cities of the United States strongly suggests

*An earlier version was presented in Miami Beach on August 27, 2004, at the conference, "Opportunities, Challenges, and Successes of International Research," cosponsored by the Drug Abuse and AIDS Research Center (DAARC) of the University of Miami and the National Institute on Drug Abuse (NIDA).

Drs. Darrow, Biersteker, Geiss, Chevalier, Clark, Marrero, Mills, and Obiaja are with the Robert R. Stempel School of Public Health, Florida International University, Miami, Florida. Ana Adasme, Lenworth Anglin, Veronica Francis, Lynda Humaran, Maria Norasco-Warren, Lisa Quammie, and Nalinie Samlal also contributed to this report.

Correspondence: William W. Darrow, PhD, Professor, Robert R. Stempel School of Public Health, 3000 NE 151st Street, TR-7, North Miami, FL 33181-3600. (E-mail: darroww@fiu.edu)

that the HIV epidemic is continuing into the twenty-first century.[1] Among MSM 18 years of age and older living in New York, Chicago, Los Angeles, and San Francisco, overall HIV prevalence was estimated to be 17% [95% confidence interval (CI) = 15–19%], with significantly higher levels of HIV infection found among injection drug users (IDU), those reporting use of any recreational drug at least 5 days a week, those failing to complete 12 years of formal education, and African American respondents. In the Urban Men's Health Study, the average incidence of HIV infection in 1996–1997 was 1.2% in Los Angeles and San Francisco, 1.1% in New York, and 0.8% in Chicago.

An independent study conducted in 1996 as part of a comprehensive needs assessment in Miami, Florida, detected an even higher prevalence of HIV disease (31%) among MSM living in an area known as South Beach.[2] The incidence of HIV infection among South Beach residents in 1996 was estimated to be 10% (95% CI = 5–18%). In the South Beach Health Survey, engaging in anal sex while under the influence of alcohol and/or drugs and having difficulty keeping an erection while using a condom were significant predictors of unprotected anal intercourse (UAI) with nonprimary partners.

The Urban Men's Health Study collected data by telephone and the South Beach Health Survey collected data by personal interviews from residents only. Less is known about the prevalence of HIV infection and behavioral patterns of nonresident MSM in major metropolitan areas or in specific resort areas of the United States.[3–5] Nevertheless, interventions must appeal to both residents and nonresidents who often meet and interact in large cities and in resort areas because HIV and other sexually transmitted infections (STI) can be passed from one person to another during unprotected sexual activities.

South Florida is home to a highly transient population of approximately 145,000 MSM[6] and annually hosts approximately 1,894,000 gay and bisexual visitors.[7,8] About 20% of the 8.5 million overnight guests in Broward County in 2003 came from countries outside the United States. Nearly half of the 10.4 million tourists in Miami-Dade County hailed from foreign countries. To help develop more effective public health interventions for HIV/STI prevention in this setting, we designed a venue-based study of self-reported HIV disease, risky sexual behaviors, and recreational drug use among resident and nonresident adult MSM.

METHODS

Following methods[9,10] that have recently been applied to a multisite, venue-based study of young MSM in the United States,[11] we conducted a cross-sectional survey of adult MSM in Broward and Miami-Dade counties, Florida. Men who were at least 18 years of age, indicated that they had at least one male sex partner in their lifetimes, and were willing to participate were eligible for participation. Anonymous, self-administered questionnaires were given to and completed by eligible respondents.

Samples

We sought diverse samples of MSM found in central locations[12] of Broward and Miami-Dade counties on three consecutive weekends in late February and early March 2004. Five venues in each county were selected after we reviewed recent advertisements published in gay-oriented magazines and consulted with local ethnographers, community members, and representatives of health departments and AIDS service organizations. Men were approached by a trained staff member, who introduced

himself (or herself) and the health survey and then asked each man if he might be interested in participating. Those who indicated an interest were screened for eligibility.

Questionnaire

The 12-page questionnaire included six sociodemographic characteristics: age, educational attainment, racial and ethnic identity, employment status, place, and length of residence in south Florida. We also collected information about HIV status, sexual partners and practices, recreational drug use, and engagement in anal intercourse while under the influence of alcohol or drugs in the past 12 months. Unprotected receptive anal intercourse (URAI) in the past 30 days was defined as receptive anal intercourse without a condom or with ejaculation into the anus. The questionnaire was translated into Spanish, back-translated into English, and subsequently approved for administration in either English or Spanish.

Data Collection Procedures

Eligible MSM who agreed to participate were given a consent and reimbursement form to check off, a questionnaire, a clipboard, and a pencil. The staff member first collected the consent/reimbursement form and then, after the respondent completed the data-collection instrument, the completed questionnaire. After checking to make sure that all pages had been filled in and the respondent had indicated he answered each question to the best of his ability, the staff member gave $10.00 to those who wished to accept it.

Protection of Human Subjects

Field team members who collected, coded, cleaned, and verified survey data before analysis were 14 graduate students at Florida International University enrolled in Public Health Course 6750, "Program Development and Evaluation for Health Promotion" for the spring 2004 semester. All received sensitivity training for interactions with stigmatized populations. They also received specialized training in the protection of human research subjects, fieldwork methods for survey research, and quantitative data-analysis procedures using the Statistical Package for the Social Sciences.[13] Each was required to provide a certificate indicating that she (or he) had completed National Institutes of Health requirements before she (or he) was allowed to enter the field. All survey procedures were presented to and reviewed and approved by the Institutional Review Board at Florida International University before implementation.

Statistical Analysis

Survey data collected in the field were coded for computer-assisted analyzes, cleaned, edited, and reviewed for internal consistency with Statistical Package for the Social Sciences computer software. Measures of central tendency and dispersion were calculated, when appropriate, to describe study participants.[14] Cross-tabulations of the major independent (residency in south Florida or elsewhere), intervening (recreational drug use), and dependent (sexual risk behavior) variables were assessed with Pearson's chi-square test for statistically significant differences.[15]

RESULTS

Data were gathered from 199 eligible MSM in Broward County and 208 eligible MSM in Miami-Dade County. Three-fourths (76%) of the 407 respondents said they were living in south Florida at the time of enrollment. Altogether, 147 men (36%) said they were currently living in Broward County, 115 (28%) in Miami-Dade

County, 62 (15%) in one of the 65 other counties in Florida (including 45 men who lived in Monroe or Palm Beach counties), and 82 (20%) outside Florida.

The median age of the 407 men who completed the baseline survey was 37 years (range, 18–73 years old). Overall, 46% indicated they were white, non-Hispanic; 33% Hispanic; 18% African American; and 1% Asian. The majority of the sample reported that they had graduated from a 4-year college or university (56%) and that they were working full time (60%). One-sixth of the sample (16%) told us that they were infected with HIV or had AIDS. Visitors were significantly more likely than residents to be white, non-Hispanic, college graduates, and fully employed (Table 1).

Sexual Practices

Research participants reported having a variety of sexual relationships in the past year: 32% said they had sexual relations only with their boyfriends, 31% had sexual relations with their boyfriends and other partners, 23% had sexual intercourse without a boyfriend, 8% had intercourse with both men and women, and 4% (16 men) said that they did not have a sexual partner in the past year. Regardless of relationship status, the majority (77%) reported that they had experienced at least one episode of anal intercourse (insertive, receptive, or both) in the past year; 62% indicated that they had at least one episode of anal intercourse in the past 30 days. Almost two-thirds of the sample (62%) indicated that they had engaged in UAI at least once in the past year. Over one-third (37%) of the men indicated that they engaged in URAI at least once in the past month.

Anal intercourse sometimes occurred while men were under the influence of alcohol or recreational drugs. In the entire sample of 407 men, 40% said they had anal intercourse at least once in the past year while they were under the influence of alcohol or drugs. Men who reported having anal intercourse while under the influence were significantly more likely to report UAI in the past year (85%) than men who reported having anal intercourse but never under the influence (76%). They were

TABLE 1. Characteristics of 308 residents and 99 nonresidents of south Florida

Characteristic	Residents [n (%)]	Nonresidents [n (%)]	Total sample [n (%)]
Age (years)			
18–36	153 (50.3)	44 (45.8)	197 (49.3)
37 and older	151 (49.7)	52 (54.2)	203 (50.8)
Race/ethnicity			
White, non-Hispanic	128 (41.8)	58 (58.6)	186 (45.9)
Other	178 (58.2)	41 (41.4)	219 (54.1)
	$\chi^2_1 = 8.46$, $P = .004$		
Education			
No college degree	147 (48.5)	31 (31.3)	178 (44.3)
College graduate	156 (51.5)	68 (68.7)	224 (55.7)
	$\chi^2_1 = 8.95$, $P = .003$		
Employment status			
Employed full-time	174 (56.7)	71 (73.2)	245 (60.6)
Not fully employed	133 (43.3)	26 (26.8)	159 (39.4)
	$\chi^2_1 = 8.43$, $P = .004$		
HIV-antibody status			
Infected	54 (17.6)	12 (12.2)	66 (16.3)
Uninfected/unknown	252 (82.4)	86 (87.8)	338 (83.7)

also more likely to report URAI in the past 30 days (58%) than other men who had anal intercourse (37%). Furthermore, URAI in the past month was significantly associated with UAI in the past year ($P < .001$), younger age (under 35 years; $P = .02$), and being HIV positive or having AIDS ($P = .01$).

Men who lived outside south Florida were significantly more likely than local residents to report anal intercourse while under the influence of alcohol or drugs, UAI in the past year, and URAI in the last 30 days (Table 2). Almost half (47%) of the visitors reported engaging in URAI in the past 30 days, compared to 37% of Miami-Dade, 35% of Broward, and 24% of other south Florida residents. In addition, visitors (60%) were more likely than residents (48%) to report insertive anal intercourse with one or more partners in the past month ($P < .05$).

Internet Access

One hundred sixty-three men (41%) reported that they had logged on to a gay-oriented Internet Website in the past 12 months. Of these 163 men, 105 (64%) indicated that they had a sexual encounter with someone they had met through the Internet. The median number of partners met through the Internet was 4.5 (range, 1–100). Having sex with a partner met through the Internet was unrelated to age group, race or ethnicity, educational attainment, or employment status ($P > .05$) but was highly associated with having anal intercourse while under the influence of alcohol or drugs ($P < .001$), UAI in the past year ($P < .001$), and URAI in the past month ($P = .008$). Tourists (37%) were more likely than south Florida residents (25%) to have had a sexual encounter with one or more partners met through the Internet ($P = .02$).

TABLE 2. Selected sexual behaviors and recreational drug use stratified by residency

Characteristic	Residents [n (%)]	Nonresidents [n (%)]	Total sample [n (%)]
Anal intercourse (past year)			
Under the influence	110 (37.0)	51 (52.0)	161 (40.8)
Not under the influence	111 (37.4)	31 (31.6)	142 (35.9)
No anal intercourse	76 (25.6)	16 (16.3)	92 (23.3)
	$\chi^2_2 = 7.46$, $P = .02$		
Unprotected anal intercourse (past year)			
Yes	183 (59.4)	70 (70.7)	253 (62.2)
No	125 (40.6)	29 (29.3)	154 (37.8)
	$\chi^2_1 = 4.06$, $P = .04$		
Unprotected receptive anal intercourse (last 30 days)			
Yes	106 (34.4)	46 (46.5)	152 (37.3)
No	202 (65.6)	53 (53.5)	255 (62.7)
	$\chi^2_1 = 4.65$, $P = .04$		
Ketamine (past year)			
Yes	11 (3.9)	11 (11.5)	22 (5.8)
No	271 (96.1)	85 (88.5)	356 (94.2)
	$\chi^2_1 = 7.46$, $P = .006$		
Cocaine (past year)			
Yes	42 (14.6)	24 (24.7)	66 (17.1)
No	246 (85.4)	73 (75.3)	319 (82.9)
	$\chi^2_1 = 5.27$, $P = .02$		

Recreational Drug Use

Overall, 89% of study participants reported drinking alcoholic beverages, 41% reported smoking cigarettes, and 33% reported smoking marijuana in the past year. Club drug use [nitrite inhalant, methylenedioxymethamphetamine (ecstasy), crystal methamphetamine, ketamine hydrochloride ("Special K"), or gamma hydroxyl butyrate] was reported by 32% of respondents, with nitrite inhalants ("poppers") being the most common of the club drugs used in the past year (24%). In addition, 17% of respondents said they had used cocaine in the past year. Tourists were more likely than south Florida residents to report using ketamine and cocaine in the past year (Table 2).

URAI in the past month was strongly associated with the use of alcohol ($P = .03$), marijuana ($P = .004$), cocaine ($P = .01$), and each of the five club drugs ($P < .001$). Among residents and nonresidents of south Florida, club drug use was associated with URAI.

Sex Clubs, Circuit Parties, and Barebacking

Residents (38%) were significantly more likely than visitors (17%) to have read three or more gay-oriented local publications in the past year ($P < .001$) and to have read two or more mainstream newspapers published in south Florida (40% vs. 13%; $P < .001$). They were also more likely to have patronized a local bar or club (47%) than visitors (23%) and more likely (39%) than out-of-towners (14%) to have visited a local bathhouse or sex club ($P < .001$).

Residents (13%) were more likely than visitors (4%) to have attended the White Party in November 2003, but they were not more likely to have attended the Winter Party (12% vs. 7%; $P = .23$). Residents (12%) and visitors (14%) were equally as likely to report one or more sexual encounters in a XXX bookstore in the past year ($P = .63$) and were equally as likely to report one or more sexual encounters at a "barebacking" party (4% vs. 5%, $P = .56$).

DISCUSSION

Even before HIV was acknowledged to be the cause of AIDS, international travel was hypothesized to be a critical factor in its spread.[16] Evidence available in the early 1980s suggested that the emergence and growth of commercial jet aircraft traffic in the 1950s facilitated the rapid movement of increasing numbers of people—passengers and flight crew members—around the globe.[17] With the civil rights movement in the 1960s and the women's and gay liberation movements in the 1970s came changes in the social structure that opened up opportunities for women to become commercial airline pilots and men—homosexual as well as heterosexual—to become flight attendants. These and related social processes helped propel the retrovirus that causes AIDS from the remote jungles and villages of equatorial Africa to the densely populated urban areas of the United States as well as other destinations.

In spite of evidence implicating international travel as a necessary condition for "connecting the dots" in the AIDS pandemic, surprisingly little systematic research has been conducted on international travel and its role in facilitating the transmission of HIV. Even less has been done to design and implement interventions to deter infections. Since 1987, the United States has banned noncitizens infected with HIV from entering the country without a special waiver[18] but has done very little to prevent visitors from acquiring HIV while here and bringing it back to their homelands. We found that almost one-fourth of the 407 men enrolled in our cross-sectional study conducted in winter 2004 were visitors to our area; visitors were less likely to be infected with HIV (12%) than south Florida residents (18%), and visitors

could be at high risk of being exposed to HIV because of their risky sexual practices and patterns of recreational drug use.

MSM who lived outside south Florida (71%) were more likely than local residents (59%) to have engaged in UAI in the past year, URAI in the past month (47%), and URAI with one or more nonprimary sexual partners in the past 30 days (31%). The Urban Men's Health Study defined "unsafe sex" in the previous year as "insertive or receptive anal or vaginal intercourse without a condom with a partner of unknown or discordant HIV status" and showed results ranging from 8% for San Francisco "Gay Ghetto" residents to 14% for "nonghetto" residents of Chicago and two other places.[19] Tourists visiting south Florida reported higher frequencies of URAI with nonprimary partners *in the past 30 days* than MSM living in four northern cities reported having unsafe sex *in the past year*. Although we did not inquire about all the places where respondents engaged in sexual activities or the HIV-infection status of their sex partners, we discovered significant indications of potential exposure to HIV and other STIs among MSM who were visitors.

Unprotected anal intercourse among both residents and visitors enrolled in our study was highly associated with alcohol consumption, club drug use, and, especially, engaging in anal intercourse while under the influence of alcohol or drugs. Other studies with purposive samples have made similar linkages. For example, a study of 1,169 MSM who were attending circuit parties in three North American cities in 1998–1999 showed that unsafe sexual behavior was significantly associated with frequent use of ecstasy, special K, and poppers at the party.[20] A cross-sectional survey of 295 gay and bisexual men recruited in the San Francisco Bay area in 1999 who had attended a circuit party in the previous year revealed that "sexual activity, including unprotected anal sex, was prevalent during circuit party weekends" and "as the number of drugs used during the circuit party weekend increased, the likelihood of unprotected anal sex during that weekend increased as well."[21] And another study of 237 men attending the Winter Party in Miami in March 2003 reported that "crystal users tended to have more anal partners" and "were almost twice as likely to have been diagnosed with an STI during the previous 12 months."[22] The connections between substance abuse, unprotected anal intercourse, HIV disease, and psychosocial problems may have additive effects and have been referred to as "syndemics."[23]

Although gay men have been recognized as a "high-risk group" since the earliest days of the AIDS epidemic, few well designed HIV-prevention programs for MSM have been adequately supported and fully implemented after being rigorously evaluated in prospective efficacy trials.[24] Even less is known about the effectiveness of interventions for MSM when carried out routinely by health departments, community based organizations, or other entities.[25–27] In the absence of an adequate research base and sufficient resources to assure proper implementation, it is extremely difficult to formulate recommendations for dealing with the patterns of risky sexual behavior and recreational drug use revealed in our study.

Our survey was limited by the kinds of information we were able to collect regarding with whom each respondent had sexual intercourse, where, when, how, and why. In the absence of informative data about sexual mixing, we could not assess risks for the transmission of HIV and other pathogens from residents to visitors or from visitors to residents. Furthermore, south Florida is recognized as one of the most racially and ethnically diverse areas in the United States and may attract different visitors and promote different behavioral patterns among vacationers than other popular destinations such as Fire Island, New York; Provincetown, Massachusetts; or Palm Springs, California. Our findings regarding the greater use of the Internet by visitors to meet sexual partners may

have implications for the transmission of HIV and other biological agents and also for the development and implementation of Internet-based interventions, such as Smart Sex Quest.[28] These and related issues need to be explored further in subsequent research.

The challenge of responding appropriately to this public health problem might best be met through a series of pilot studies that address social, environmental, and cultural issues and take into account the unique characteristics of international resort areas. There is an opportunity here to curtail levels of disease transmission while maintaining a thriving tourist industry. It is in the best interests of public health and those who want the tourists to keep coming to take up this challenge.

REFERENCES

1. Catania JA, Osmond D, Stall RD, et al. The continuing HIV epidemic among men who have sex with men. *Am J Public Health*. 2001;91:907–914.
2. Webster RD, Darrow WW, Paul JP, Roark RA, Taylor RA, Stempel RR. Community planning, HIV prevention, and a needs assessment for men who have sex with men: the South Beach health survey. *Sex Transm Dis*. 2005;32:321–327.
3. Carter S, Horn K, Hart G, Dunbar M, Scoular A, MacIntyre S. The sexual behaviour of international travelers at two Glasgow GUM clinics. *Int J STD AIDS*. 1997;8:336–338.
4. Clift SM, Forrest SP. Factors associated with gay men's sexual behaviours and risk on holiday. *AIDS Care*. 1999;11:281–295.
5. Crosby R, DiClemente RJ, Mettey A. Correlates of recent unprotected anal sex among men having sex with men attending a large sex resort in the South. *Sex Transm Dis*. 2003;12:909–913.
6. Lieb S, Friedman SR, Zeni MB, et al. An HIV prevalence-based model for estimating urban risk populations of injection drug users and men who have sex with men. *J Urban Health*. 2004;81:401–415.
7. Diaz J. For gay vacationers, south Florida is "in". *The Miami Herald*. March 8, 1998;sect A:1, 18.
8. Hanks D III. Channeling how world plays series of storms. *The Miami Herald*. September 12, 2004;sect E:1, 3.
9. Babbie E. *Survey Research Methods*. 2nd ed. Belmont, CA: Wadsworth; 1990.
10. Aday LA. *Designing and Conducting Health Surveys*. 2nd ed. San Francisco, CA: Jossey-Bass; 1996.
11. Valleroy LA., MacKellar DA., Karon JM, et al. HIV prevalence and associated risks in young men who have sex with men. *JAMA*. 2000;282:198–204.
12. Windsor R, Clark N, Boyd NR, Goodman RM. *Evaluation of Health Promotion, Health Education, and Disease Prevention Programs*. 3rd ed. New York, NY: McGraw-Hill; 2003.
13. Babbie E, Halley F, Zaino J. *Adventures in Social Research*. 5th ed. Thousand Oaks, CA: Sage; 2003.
14. Blalock HM Jr. *Social Statistics*. Rev 2nd ed. New York, NY: McGraw-Hill; 1979.
15. Kleinbaum DG, Kupper LL, Morgenstern H. *Epidemiologic Research: Principles and Quantitative Methods*. New York, NY: Wiley; 1982.
16. Darrow WW. AIDS: socioepidemiologic responses to an epidemic. In: Ulack R, Skinner WF, eds. *AIDS and the Social Sciences: Common Threads*. Lexington, Kentucky: University Press of Kentucky; 1991:82–99.
17. Darrow WW, Gorman EM, Glick B. The social origins of AIDS: social change, sexual behavior, and disease trends. In: Feldman DA, Johnson TM, eds. *The Social Dimensions of AIDS: Method and Theory*. New York, NY: Praeger; 1986:95–107.
18. Goldberg SB. Immigration issues and travel restrictions. In: Smith RA, ed. *Encyclopedia of AIDS: A Social, Political, Cultural, and Scientific Record of the HIV Epidemic*. Chicago, IL: Fitzroy Dearborn; 1998:279–281.

19. Mills TC, Stall R, Pollack L, et al. Health-related characteristics of men who have sex with men: a comparison of those living in "gay ghettos" with those living elsewhere. *Am J Public Health*. 2001;91:980–983.
20. Mattison AM, Ross MW, Wolfson T, Franklin D. Circuit party attendance, club drug use, and unsafe sex in gay men. *J Subst Abuse*. 2001;13:119–126.
21. Mansergh G, Colfax GN, Marks G, Rader M, Guzman R, Buchbinder S. The circuit party men's health survey: findings and implications for gay and bisexual men. *Am J Public Health*. 2001;91:953–958.
22. Kurtz SP, Inciardi JA. Crystal meth, gay men, and circuit parties. *Law Enforcement Executive Forum*. 2003;3:97–111.
23. Stall R, Purcell D. Intertwining epidemics: a review of research on substance use among men who have sex with men and its connection to the AIDS epidemic. *AIDS Behav*. 2000;4:181–192.
24. Centers for Disease Control and Prevention, HIV/AIDS prevention research synthesis project. *Compendium of HIV Prevention Interventions with Evidence of Effectiveness*. Atlanta, GA: Centers for Disease Control and Prevention; 1999.
25. Darrow WW, Webster RD, Kurtz SP, Buckley AK, Patel KI, Stempel RR. Impact of HIV counseling and testing on HIV-infected men who have sex with men: the South Beach Health Survey. *AIDS Behav*. 1998;2:115–126.
26. Wolitski RJ, Doll LS. The role of HIV counseling and testing in CDC's HIV prevention efforts. *AIDS Behav*. 1999;3:251–252.
27. Darrow WW, Webster RD, Kurtz SP, Buckley AK, Stempel RR. Limitations of counseling and testing in CDC's HIV prevention efforts. *AIDS Behav*. 1999;3:253–255.
28. Bull SS, McFarlane M, Lloyd L, Reitmeijer C. The process of seeking sex partners online and implications for STD/HIV prevention. *AIDS Care*. 2004;16:1012–1022.