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Substance Abuse Treatment as HIV Prevention for Men Who Have Sex with Men

Steven Shoptaw[1,2] **and Dominick Frosch**[1]

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Substance abuse is a prominent risk behavior associated with HIV transmission, particularly for men who have sex with men (MSM) and who engage in sex while using substances. This paper argues that substance abuse treatment has significant value as an HIV-prevention method to the extent that treatment outcome influences sexual risk behaviors for MSM, presumably toward lower risk. We review studies of treatment and HIV risk behaviors for MSM, and describe the current status of effective substance abuse treatments. Clinical issues important to MSM receiving treatment are discussed: gay-specific versus mainstream treatment, gay sexuality issues in substance abuse treatment, gay Alcoholics Anonymous, and ethnicity issues. Based on these arguments, we make the following policy recommendations: (1) develop treatment strategies that target substance use *and* high-risk sexual behavior simultaneously, (2) recognize treatment as HIV prevention in this population, and (3) educate counselors on cultural and sexual risk issues specific to substance-abusing MSM.

KEY WORDS: Substance abuse; treatment; HIV prevention; risk reduction.

INTRODUCTION

These are truly hopeful times in the AIDS epidemic. New HIV medications represent a potent response in preventing morbidity and mortality that result from HIV-disease progression. Yet, with all the optimism, effective prevention interventions that stop new seroconversions are still the best method for ensuring the health of individuals and communities at risk. Public health policies for containing HIV continue to emphasize prevention, and there exist feasible and effective prevention programs for this purpose. Moreover, evaluation science and community-based organizations have, in tandem, demonstrated dramatically that prevention and substance abuse treatment can work to protect the public health against HIV (Baker *et al.,* 1993; Malow and Ireland, 1996; Moss *et al.,* 1994; Paul *et al.,* 1996; Shoptaw *et al.,* 1997).

The present paper considers the value of treatment for alcohol and other substance abuse problems as an HIV-prevention method among MSM. Throughout the paper, MSM is used to denote both gay-identified and non-gay-identified men who have sex with men. The terms ''gay'' and ''bisexual'' are used to be consistent with authors in source material when reviewing the literature. The paper begins with a brief review of the prevalence of substance abuse among MSM and the empirical and clinical literature describing the correspondence of sexual behaviors that occur under the influence of alcohol and other substances. A discussion is presented on the current status of treatment for MSM with alcohol and other substance abuse problems, with emphasis on treatment and evaluation issues specific to MSM in treatment. The paper concludes with policy implications from the information presented.

Prevention Works

Interventions designed to change HIV-risk-related sexual behaviors, particularly among older and

[1]Los Angeles Addiction Treatment Research Center, Los Angeles, California.

[2]Correspondence should be directed to Steven Shoptaw, Ph.D., 11075 Santa Monica Blvd, Suite 225, Los Angeles, California 90025 (e-mail: shoptaw@friendsresearch.org).

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urban gay and bisexual men, have slowed the spread of HIV (Holmberg, 1996), though it is unreasonable to expect absolute maintenance of sexual behavior changes over the lifespan (McCusker *et al.,* 1989, 1992). Current prevention strategies now emphasize maintaining behavior change, and an effort is ongoing to design effective messages that reach younger gay and bisexual men, a group undergoing considerable increases in HIV seroprevalence (Gold and Skinner, 1992; Meyer and Dean, 1995). Similar conclusions can be drawn with regard to prevention efforts targeted at African Americans, Latinos, women, and youth in general since these groups also show disproportionate increases in HIV infection (Centers for Disease Control and Prevention [CDC], 1997).

Substance Abuse Treatment Also Works

The value of substance abuse treatment as a secondary prevention method is clearly demonstrated. As individuals reduce substance use subsequent to treatment, a cascade of behaviors is invoked that support healthier lifestyles. These include improved relationships, decisions about sexual behavior uninfluenced by alcohol and/or other substances, enhanced productivity at work, and improvement in other areas of functioning previously impaired by substance use. Treatment works to protect the individual not only from disease, but also from various social and economic ills. In general, individuals reengage in prosocial behavior with recovery, often by reentering the workforce and by repairing or reestablishing social networks with friends or family, both of which provide buffers against harm associated with substance use.

Treatment can also work as a primary prevention method. Among MSM, substance abuse treatment can dramatically affect decisions about sexual behavior. For the individual with HIV, decisions about sexual behavior uninfluenced by substance (e.g., consistent condom use with anonymous/unknown partners) function both to reduce the likelihood of transmitting the virus to others and to protect against infections with other disease agents. This demonstrates the value of substance abuse treatment as primary prevention.

PREVALENCE OF ALCOHOL AND OTHER SUBSTANCE USE PROBLEMS AMONG MSM

The importance of substance abuse treatment as an HIV prevention method is directly linked to the proportion of MSM whose substance use makes them candidates for treatment. In general, there is a belief that MSM are more likely to use alcohol and/or other substances than other men (Council on Scientific Affairs, American Medical Association, 1996) and to use them at problem levels. Current research indicates that problem levels of alcohol and other substance use among MSM are lower than commonly thought (Stall and Purcell, 2000), though these same studies find that substance abuse among MSM occurs with greater frequency than among heterosexual male populations. Still, it is difficult to arrive at accurate estimates since reports on substance use (including alcohol) among gay and bisexual men typically fail to employ assessment methods that adequately differentiate use, abuse, and dependence (Cabaj, 1996).

Prevalence of Alcohol Abuse among MSM

Reflecting methodological difficulties in assessing prevalence, early studies estimated problem drinking rates among gay men at between 29%—based on alcoholism estimates among gay men in Kansas (Lohrenz *et al.,* 1978) and 32%—based on problem drinking rates among gays and lesbians in Los Angeles County (Fifield, 1975). These early studies have been criticized by numerous authors for relying on convenience samples drawn from bar-going gay men (Bux, 1996; Paul *et al.,* 1991) and are now viewed as having overestimated the scope of alcoholism in the gay community. A recent report of gay men with advanced HIV disease compared to a cohort of HIV-seronegative gay men noted lifetime alcohol dependence prevalence rates of 34% for HIV-seropositive men and 23% for seronegative men (Ferrando *et al.,* 1998). Though consistent with early prevalence reports, this study also is based on a convenience sample, which likely biases findings.

Subsequent studies found much smaller diversions from the approximately 10% of the general population thought to experience alcohol problems. Stall and Wiley (1988) compared drinking patterns of gay and heterosexual men in San Francisco and reported heavy drinking rates of 19% and 10% for gay and heterosexual men, respectively. Similarly, McKirnan and Peterson (1989) found heavy drinking rates among homosexual men and women to be virtually analogous to the rates found in a general population sample. Martin (1990) documented that reported rates of alcohol use, abuse, and dependence were

stable and did not vary significantly from rates in the general population when measured over a period of 4 years in a sample of gay men in New York City.

Several questions remain unanswered by the alcohol abuse studies. No study has assessed the prevalence of alcohol-related problems among ethnic minority gay men, nor have these studies evaluated problem drinking among MSM who do not identify as gay/bisexual men, or among rural MSM. Nonetheless, the more recent studies have made significant methodological improvements over earlier ones and the findings strongly suggest that rates of heavy drinking and alcohol abuse among gay men are consistent with those found in the general population (Bux, 1996; Stall and Wiley, 1988).

Prevalence of Substance Abuse among MSM

A more complex picture emerges when considering prevalence of illicit substance use among gay men. Few studies compare rates of substance use among gay and bisexual men to substance use rates among heterosexual men. Stall and Wiley (1988) compared a sample of gay men from San Francisco with a sample of heterosexual men also drawn from San Francisco. They reported that gay men were more likely than heterosexual men to report using marijuana, amyl nitrate (poppers), MDMA (ecstasy), psychedelics, barbiturates, ethyl chloride (an inhaled anesthetic), and amphetamines, and were more likely to admit to using a greater repertoire of substances over a 6-month period. Only minor differences were found between proportions of men who reported frequent use of specific substances when comparing gay and heterosexual men. Ferrando and colleagues (1998) reported that HIV-seropositive participants in their cohort of men with advanced HIV disease demonstrated higher rates of lifetime (42%), but not current (11.5%), substance use disorders compared to a cohort of HIV-seronegative gay men used for comparison (27% and 10%). Other studies (McKirnan and Peterson, 1989; Skinner, 1994) also document that gay men are somewhat more likely to admit to using a variety of substances, but the proportion of gay men who report frequent substance use is similar to that found among heterosexual men who use substances. More important, studies that make distinctions among use, abuse, and dependence are largely missing (Cabaj, 1996).

SUBSTANCE-RELATED HIV RISKS AMONG MSM SUBSTANCE USERS

Directly related to issues of the prevalence of substance abuse among MSM is the growing acknowledgment that HIV-related sexual risk behaviors often cooccur in conjunction with substance use (Gorman *et al.,* 1995; Molitor *et al.,* 1998; Ostrow and McKirnan, 1997; Paul *et al.,* 1993; Reback, 1997; Stall and Purcell, 2000). Early work on HIV-related risk behaviors among substance users focused primarily upon injection drug behavior. Although injection drug behavior may be the highest/primary HIV-related risk behavior in the eastern United States, where upward of 50% of AIDS cases are attributable to injection drug behaviors, less than 10% of IDUs in Los Angeles County, an area that represents the second highest concentration of AIDS cases, became seropositive due to this risk behavior (Longshore and Anglin, 1994). These East/West differences in HIV-related risk behaviors among AIDS cases may relate to differences in cultural geography (the sprawl of our western cities may serve as a natural protective factor for limiting HIV transmission among IDUs). Yet, these numbers dramatically demonstrate that the greatest number of individuals at risk for HIV exposure, especially in the western United States, are MSM (WONDER, 1997; see Table I).

Substance Use and Risk Behaviors for HIV

A body of research is developing to document that when MSM integrate substance use with sexual behaviors, a high percentage will report engaging in high-risk sexual behaviors (Kalichman *et al.,* 1998; Molitor *et al.,* 1998; Paul *et al.,* 1996; Reback, 1997). Many MSM admit that these high-risk sexual behaviors are not representative of their sexual behavior when not under the influence (Reback, 1997). Reback speculates that sex–drug links may be especially important to gay and bisexual men because some drugs, especially stimulants such as methamphetamine, can enhance and prolong sexual sessions, which in turn facilitates behaviors that increase opportunities for the exchange of blood or semen.

Yet risks for HIV exposure can increase in proportion to the extent that individuals engage in differing types of risk behaviors. Injection drug users (IDUs) primarily encounter HIV through sharing contaminated injection equipment. Recent reports note that noninjection drug users also engage in sig-

Table I. Distribution of HIV infection behaviors by selected cities in the United States

Region	Municipal area	Reported risk behaviors %			
		MSM	IDU	MSM & IDU	Other
West	Seattle, WA	78.3	4.6	11.0	6.1
	Portland, OR	76.0	5.4	9.5	9.1
	San Francisco, CA	81.6	6.2	9.0	3.2
	Los Angeles, CA	75.8	5.6	6.9	11.7
	San Diego, CA	78.5	6.1	7.4	8.0
	Phoenix, AZ	66.9	9.2	11.2	12.7
	Las Vegas, NV	64.5	19.3	8.3	7.8
	Denver, CO	75.0	6.0	10.2	8.7
	Salt Lake City, UT	68.2	15.5	7.0	9.3
Central	Oklahoma City, OK	70.3	6.9	14.5	8.3
	Houston, TX	69.6	8.6	9.3	12.5
	New Orleans, LA	65.7	10.0	8.6	15.7
	Chicago, IL	63.1	19.6	4.6	12.6
	Kansas City, MO	76.5	5.5	8.4	9.6
	Cleveland, OH	66.2	12.6	6.9	14.3
	Cincinnati, OH	74.0	5.1	6.2	14.7
	Memphis, TN	60.5	12.1	11.1	16.3
East	Boston, MA	48.6	27.6	3.7	20.0
	New York City, NY	38.4	42.8	3.2	15.7
	Newark, NJ	19.1	55.1	3.2	22.5
	Philadelphia, PA	56.7	23.2	7.0	13.1
	Washington, D.C.	65.4	15.9	5.1	13.5
	Atlanta, GA	64.7	15.8	6.3	13.2
	Miami, FL	44.0	22.0	4.2	29.8
United States		54.6	23.3	6.2	15.9

nificant amounts of behavior that place them at high risk for HIV transmission (Edlin *et al.,* 1994; Molitor *et al.,* 1998). To illustrate, in an ethnographic report of 63 non-treatment-seeking gay and bisexual Los Angeles men, Reback (1997) described methamphetamine as a drug that facilitates sexual behavior at the ''extremes'' (extreme risk, extreme pleasure, extreme consequence). Frequent pairing of methamphetamine use and sexual risk behaviors creates strong, conditioned associations between the two. Individuals change their risk perceptions about sexual behaviors when under the immediate influence of the drug, which may explain reported frequent, high-risk sexual behaviors for gay and bisexual methamphetamine abusers seeking treatment (Frosch *et al.,* 1996). The exact mechanism by which substance and/or alcohol use contributes to sexual risk behaviors among MSM has been and continues to be a fruitful area of investigation (Kalichman *et al.,* 1998). However, it is likely that MSM who combine substance use with sexual behavior have multiple routes for HIV exposure and transmission. Interventions that simply reduce the number of occasions for substances to facilitate risk behaviors have obvious value as prevention methods.

THE ISSUE OF CAUSALITY: DOES SUBSTANCE AND/OR ALCOHOL USE LEAD TO HIGH-RISK SEX AMONG MSM?

Many authors have attempted to elucidate the correspondence between high-risk sexual behavior and alcohol or illicit substance use. Leigh and Stall (1993) reviewed and organized the literature on the effects of alcohol and/or illicit substances on the sexual behaviors of gay and bisexual men. The overall picture that emerges from this literature is that MSM combine alcohol and illicit substance use with high-risk sexual behaviors at high, though unspecified rates. Still, these researchers caution that it may never be possible to determine the chain of causality clearly between high-risk sexual behavior and drug and alcohol use since both substance use and sexual behaviors are sensitive, private events.

Complicating measurement problems are suggestions made by numerous authors that intervening contextual variables (such as situations in which high-risk sex is more likely, e.g., bathhouses and sex clubs, than less likely, e.g., at home with a primary partner) or personal factors (such as risk-taking personality,

low self-efficacy, social isolation, avoidance or withdrawal from difficult situations, and limited cognitive coping) contribute toward a propensity for some MSM to use alcohol and other substances and to engage in high-risk sexual behaviors (Bolton *et al.* 1992; Leigh and Stall, 1993; Meyer and Dean, 1995; Mulry *et al.,* 1994; Ostrow and McKirnan, 1997; Paul *et al.,* 1994; Perry *et al.,* 1994; Stall and Leigh, 1994). Though there is conflicting evidence on causal relationships between substance use and sexual risk behaviors, it is apparent that MSM who use substances are more likely to seroconvert than those who do not use substances (Molitor *et al.,* 1998). Understanding the nexus of these risk behaviors and the psychological, social, contextual, and cultural influences that support them would seem a necessary first step to developing appropriate interventions with this high-risk population.

At present, the most conservative conclusion regarding associations between substance use and high-risk sexual behavior among MSM is that these men change their HIV-related sexual risk-behavior protocols when under the influence of alcohol and other substances, presumably toward behaviors that carry high risk for HIV transmission. Behaviors that carry high risk for HIV transmission, whether drug injection or sexual in nature, are often committed under the influence of very powerful mind-altering substances. As such, the effects of alcohol and other substances, due either to withdrawal or intoxication, are operating when individuals make decisions regarding drug injection or sexual behaviors. Modification of the effects of these substances on decision making, which is efficiently accomplished via substance abuse treatment, can have profound effects on subsequent behavior.

Treatment-related prevention effects in changing risk behaviors would operate most powerfully during the decision-making process regarding substance use or sexual behaviors. For IDUs, successful treatment eliminates or greatly reduces the frequency of drug injection behaviors in the short term and thereby reduces HIV-related injection risks over the long term (Moss *et al.,* 1994). For many, successful treatment for alcohol and/or other substances changes decisions on sexual risk-taking behavior simply by removing the inhibition-lowering effects of the substances. Even more importantly, for those whose treatment episodes are not entirely successful, the treatment clinic can still provide a powerful leverage point for delivering interventions that can guide sexual decisions when individuals relapse to substance use. In the moments individuals are about to experience these events, decisions are made (consciously or without conscious thought) about subsequent behaviors that either mitigate or promote risk. An important task for behavioral science is to develop interventions that can be delivered in treatment settings designed to alter decisions regarding HIV-related sexual behaviors when individuals are under the influence during relapse.

INNOVATIONS IN ALCOHOL AND SUBSTANCE ABUSE TREATMENTS

In order to appreciate the value of substance abuse treatment as HIV prevention, it is useful to understand the elements that comprise alcohol and substance abuse treatment for MSM. Substance abuse treatment modalities can be characterized as either pharmacological or psychosocial/behavioral in nature. New addiction medicines are available and include ReVia® (naltrexone) for alcohol dependence, ORLAAM® (Levomethadyl Acetate) for opioid dependence, and Zyban® (bupropion) and Habitrol® (a nicotine inhaler delivery format) both for nicotine dependence. New medications in late stages of development include acamprosate for the treatment of alcohol dependence and buprenorphine/naloxone tablets for opiate dependence. It promises to be a longer period before an effective medicine is approved for cocaine or methamphetamine dependence.

Among effective behavioral and psychosocial strategies for alcohol and other substance dependence, Alcoholics Anonymous (AA) and other traditional 12-step approaches have dominated treatment delivery (Emrick, 1991), though new treatment strategies are emerging. These include contingency management (providing incentives for consecutive biological samples documenting substance abstinence) as an adjunct to a ''community reinforcement approach'' for cocaine dependence (Higgins *et al.,* 1993, 1994; Silverman *et al.,* 1996). Cognitive-behavioral strategies, including relapse prevention, have been demonstrated as feasible and effective for a variety of substance dependence problems, including cocaine dependence (Carroll *et al.,* 1993, 1994; Rawson *et al.,* 1995). Motivational interventions have been evaluated, particularly for problems of alcohol dependence (Miller and Rollnick, 1991).

EVALUATIONS OF SUBSTANCE ABUSE TREATMENT SPECIFICALLY FOR MSM

When looking to the clinical and empirical literature, one notes that new treatment strategies either are rarely adapted or even more rarely evaluated for use in gay-specific treatment settings. There are no published reports from gay-specific settings on the use of pharmacotherapy in treatment protocols for substance-using MSM. Instead, it appears that substance abuse treatment programs targeted specifically to MSM (such as Pride Institute in Minnesota) often integrate general recovery strategies with interventions that address issues specific to the concerns of MSM in recovery. Still, when such services exist, they typically feature a 12-step or recovery model, implying needs for integration of these new pharmacotherapy and behavioral therapy options in settings specific to treating MSM.

A review of the literature revealed only two peer-refereed papers that evaluated substance abuse treatment outcomes. In the largest study, Paul and colleagues (1996) reported on treatment outcomes for a sample of 321 predominately white, gay men treated for polysubstance abuse at a gay-specific agency in San Francisco that used a 12-step approach. Overall, the authors found that at 12-month follow-up assessment, 37% of the sample reported not having used any alcohol or substances during the previous 6 months, with the greatest reductions in use during the first 90 days of study participation. Injection drug users evidenced the least change in substance use, with the majority of these being methamphetamine users.

Results showed that differing client factors were predictive of treatment success for different drugs. White men had less success in stopping alcohol use and older men were less likely to stop stimulant use. Use of alcohol or substances as a coping mechanism for nervousness was associated with increased likelihood of stopping alcohol use, but decreased likelihood of stopping stimulant or inhalant ''poppers'' use. Subjects reporting sex under the influence at baseline had decreased success in abstaining from stimulant use. The ''bar orientation'' frequently reported to be a prominent component of gay culture led to lower likelihood of stopping alcohol use among those subjects reporting such an orientation at baseline. These findings highlight the individual and social factors that interfere with the ability for some MSM to achieve abstinence from substances. In turn, these data also demonstrate the need for prevention messages designed to help reduce substance-related sexual risks for MSM when treatment fails.

Driscoll (1982) reported on treatment outcomes for gay men receiving alcohol treatment at a gay-specific treatment agency in Boston. Contacted by mail following completion of their treatment episodes, participants were asked to complete a questionnaire indicating their current drinking habits. The response rate was low, with only 43 of 109 contracted responding. Though no data were collected regarding sexual behaviors relative to alcohol use, the author notes that using a conservative interpretation of nonresponders as ''relapses,'' 26% reported continual alcohol abstinence, which is comparable to outcomes in mainstream treatment.

The issue of how substance abuse treatment might mediate sexual risk behaviors has been evaluated in two studies of heterosexual cocaine abusers. In one, an intensive psychoeducational HIV-prevention program instituted in the context of stimulant abuse treatment was associated with significant reductions in reported substance use and sexual risk behaviors compared with a standard information-only approach (Malow *et al.,* 1994). Shoptaw and colleagues (1997) also found that cocaine abuse counseling significantly reduced HIV-related risk behaviors among heterosexual cocaine abusers. Specifically, participants significantly reduced the number of sexual partners, the frequency of sex under the influence of substances or alcohol, and the frequency of trading substances or cash for sex over the course of the study. Cocaine abuse counseling seemed to initiate behavioral changes that spanned a number of domains, including sexual behavior, a finding consistent with work of Remien and colleagues (1995), who documented remission of substance use problems in a cohort of gay men in New York City over the course of 4 years. Most of the remission of substance use problems was achieved without formal treatment, and behavioral changes also involved reductions in reported unsafe sexual practices. Many participants in this study remarked that they were ''cleaning up their act.'' These studies demonstrate that behavior change that occurs in the context of substance abuse treatment can be due to formal HIV-prevention interventions. These studies also imply that individuals make profoundly different decisions about risk behavior when decision-making effects due to substances are limited via treatment.

SUBSTANCE ABUSE TREATMENT FOR GAY MEN: SPECIALIZED TREATMENT OR MAINSTREAMING?

Though substance abuse treatments delivered at gay-specific agencies may capitalize on culturally competent staff and specialized information, there are no controlled studies to evaluate whether MSM seeking treatment would draw greater benefit from treatment at specialized treatment settings or at mainstream settings. In their survey of alcoholism treatment facilities in New York City, Hellman *et al.* (1989) noted strong recognition of the importance of sexual orientation in treatment and also reported that among clinical staff, supervisors, and administrators, there existed low levels of knowledge on how to "treat" homosexual alcoholics and few opportunities for staff to gain clinical supervision on the topic. Though not a controlled study, Pride Institute commissioned an analysis of outcomes of patients treated at their Minnesota facility dedicated to treating gay, lesbian, bisexual, and transgender substance users. Outcomes for Pride Institute patients were compared at long-term follow-up evaluation (more than 1 year) to those of patients at five inpatient treatment programs in three eastern U.S. cities. Suggesting gay-specific treatments are feasible, Pride patients (n = 102) showed similar improvements in alcohol and drug problems at long-term follow-up evaluation, as well as favorable reductions in medical and psychiatric problems (McLellan, 1991).

There are compelling clinical reasons why MSM should receive specialized substance abuse treatment. Driscoll (1982) reported that many gay men found that heterosexual therapists had a "hidden agenda" to "treat" the client's homosexuality rather than focus on the substance abuse problem, and were therefore reluctant to enter mainstream treatment. Morales and Graves (1983) found that 60% of their sample of homosexual men and women would prefer to have a homosexual counselor over a heterosexual one, and also found that at least 25% of a sample of counselors scored in the homophobic range in their attitudes toward gays and lesbians. These clinical reports and the experience of clinicians who specialize in working with MSM have prompted the conclusion that it may well require gay-oriented treatment programs to attract gay men to substance abuse treatment (Paul *et al.,* 1991) and to retain them once in treatment. The specialized treatment setting will likely be familiar with the substance-related HIV-risk behaviors common to substance-using MSM. Staff in such settings are also likely perceived as credible sources for delivering culturally appropriate HIV-prevention messages, whether the client is successful in treatment or not.

Issues related to gays in general psychotherapy also can arise during substance abuse counseling. Garnets and colleagues (1991) published results of a survey undertaken in 1986 in which they found considerable bias among psychologists working with gay clients. The survey found many psychologists to be insensitive to problems that are exclusive to gay clients, such as coping with discrimination and homophobia, as well as coming to terms with one's own internalized homophobia. Frequently, being gay is seen as the source of the alcohol and/or other substance problem, leading the psychologist to ignore the problem for which the client is seeking help and instead focus on the client's homosexuality as a target for treatment. Many psychologists were also found to belittle the degree to which the clients' sexuality was an integral part of their identity, and also made light of relationship issues between gay clients and their lovers (Garnets *et al.,* 1991).

GAY SEXUALITY ISSUES IN SUBSTANCE ABUSE TREATMENT

An important theme in specialized treatment for MSM and in the topic of treatment as HIV prevention is the acknowledgment of gay sexuality as integral to self-identity in recovery from substance abuse. Ratner (1988) reports that many clients at Pride Institute in Minnesota have never been able to discuss issues pertaining to their sexual orientation in prior treatment episodes. It has been suggested that gay men who enter recovery from substance abuse problems go through a process of redefining and rediscovering their sexuality (Colcher, 1982) and for many gay men, substance use and sexuality are closely intertwined in ways not experienced by heterosexual men (Kus, 1987). For example, some MSM report never having had sex without substances (Paul *et al.,* 1993). Survey data demonstrating this point were collected at a gay AA event (n = 126) in which three questions on alcoholism and gay sexuality accounted for 48% of the variance in participants' self-perceptions of acceptance and social isolation (Milliger and Young, 1990).

Based upon her ethnographic work, Reback

(1997) bluntly states that methamphetamine use dramatically enhances sexual experiences, and for some MSM, facilitates sexual activity with men without inhibition. When using methamphetamine, sexual arousal is heightened and prolonged; sex becomes more experimental and ''kinky;'' orgasm is intensified. Recovery from methamphetamine abuse or dependence raises significant issues related to addressing sexuality during the process. Repeated, intensely pleasurable associations between methamphetamine use and sexual behavior may cause sex to become a marker for relapse for MSM. As MSM enter treatment, it is likely essential (for treatment success and for HIV prevention) that the agency staff create a policy on developing an active, fulfilling sexual life without chemical assistance. HIV-prevention efforts should also recognize the powerful conditioned associations between sex/drug linkages for MSM, the likelihood of relapse for MSM who experience these associations, and the importance of messages that reinforce partial success in behavior change.

GAY ALCOHOLICS ANONYMOUS?

There have also been reports of difficulties for gay men in attending traditional Alcoholics Anonymous (AA) meetings (Bittle, 1982; Kus, 1987). Many gay men do not feel welcome at traditional AA meetings. The focus on not being unique that is inherent to AA and is intended to draw attention to the shared problem of alcoholism is difficult to accept for the gay man who has spent a lot of time feeling ''different'' because of his sexuality (Kus, 1987). Thus, AA's philosophy of minimizing differences can have an alienating effect on gay men. Gay men further frequently experience unease about their sexuality from other AA members, leaving them unable to discuss their addiction problems that relate to their sexuality. For many members of AA, sex is a subject that is not discussed in great depth, leaving a potentially important topic related to maintenance of sobriety untouched for many gay men. Members of AA may also treat the fellow member's homosexuality as something that is pathogenic and must be dealt with in the same way as the addiction. Lastly, many gay men report difficulties with the spiritual components of AA, as being gay often puts a person in conflict with organized religion that largely condemns homosexuality (Bittle, 1982; Kus, 1987). There are gay AA groups that can resolve many of these issues, though these groups may not be found in smaller cities or areas that do not have large gay communities (Bittle, 1982). Gay AA meetings may be unfeasible in smaller cities or rural areas in which it is simply impossible to remain ''anonymous'' because many gay residents feel unsafe or unable to live as an openly gay man. Confidentiality concerns, such as being ''outed'' from attending such meetings, with consequent risks for homophobic attacks, also interfere with the spread of this support resource in many rural areas.

ETHNICITY, SUBSTANCE ABUSE TREATMENT, AND MSM

Ethnic minority gay men who require substance abuse treatment have received very little attention in the literature. As pointed out by Icard and Traunstein (1987), gay men who are also members of an ethnic minority are ''double minorities.'' Ethnic minority gay men have to cope with stigma from the larger society, and, in addition, often have to contend with additional stigma from each of the minority groups to which they belong. For example, Black gay men may find that the African-American community is not accepting of homosexuality and at the same time the gay community may be racist (Icard and Traunstein, 1987). A recent report of female sex workers, gay-identified men, and heterosexually identified MSM of African descent and who use crack cocaine in Los Angeles (Scott and Shoptaw, 1999) notes that HIV risks, though significant for each, vary distinctly among the subgroups. Among non-gay-identified MSM, substance-related sexual risk behaviors may not be noticed since they occur under altered states (Goldblum *et al.,* 1996), which further complicates treatment and prevention efforts. These preliminary reports illustrate unique differences among MSM within shared ethnic/racial backgrounds, and provides a compelling call for more development and research of prevention and treatment approaches directed to members of minority communities.

POLICY IMPLICATIONS

The literature we reviewed suggests that MSM can benefit from specialized treatment delivered in settings that employ counselors who are sensitive to the unique needs experienced by this population, both as substance users and as gay and bisexual men. One caveat of this conclusion is that the studies re-

viewed based their findings on self-report of drug use, while well-controlled studies of substance abuse treatments base conclusions on urine toxicology results (with the notable exception of alcohol treatment studies). Clearly, further research is needed to extend these findings using carefully controlled methods, as well as to address the question of whether gay-specific treatment is more effective than mainstream treatment for gay clients. Research remains to be conducted, especially among MSM, as to whether HIV-prevention programs delivered in substance abuse treatments show dose–response associations such that more intensive interventions demonstrate more risk-behavior change than less intensive ones, over and above effects due to substance abuse treatment. Still, it is our hope that our argument is sufficient to stimulate development and evaluation of prevention interventions designed for treatment programs for substance-abusing MSM.

However, MSM who need substance abuse treatment are not a homogenous group. As programmatic initiatives are developed, evaluation and outcome plans should include methods for assessing the systematic effects that may result from the following subgroups of MSM: (1) MSM who openly identify as gay/bisexual, (2) MSM who do not openly identify as gay/bisexual, (3) MSM from rural areas and/or ethnic minority groups who may either be open or ''closeted'' about their sexual identification, and (4) MSM who have undergone substance abuse treatment and need continued intervention. As these initiatives are developed, it also seems important to emphasize diversity in treatment modalities, especially those that incorporate effective general substance abuse strategies, including pharmacotherapies.

Most alcohol and substance abuse counseling treatment occurs in general substance clinic settings. Due to the strong relationship between the AIDS epidemic and substance abuse, it is thus inevitable that substance abuse counselors will count among their clients many persons who have HIV. Many of these clients will be MSM. Yet clients may be unwilling or unable to discuss their sexual behavior in general settings. Therefore, we argue for (at minimum) the development and implementation of training for substance abuse/HIV counselors that directly addresses sexuality issues that correspond to substance use in the population of MSM, and perhaps development of graduate/social work programs that incorporate a specialization in substance abuse counseling for MSM.

The state of our knowledge about alcohol and substance abuse treatment for MSM is still exploratory. Yet informed policy is urgently needed to direct the next set of treatment initiatives for this extremely high-risk population. We suggest that policy should strongly encourage initiatives that combine treatment with research as a way to contribute to knowledge about the relationships of substance abuse treatment and HIV prevention in communities of MSM (Lamb *et al.,* 1998). Such linkage enables prospective evaluation of questions relevant to understanding alcohol and substance abuse treatment as an HIV-prevention method among MSM and maximizes ecological validity.

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