A NEGLECTED POPULATION: DRUG-USING WOMEN AND WOMEN’S METHODS OF HIV/STI PREVENTION

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Women drug users are at extremely high risk of HIV and sexually transmitted infections (STIs) from sexual transmission, but remain seriously neglected in intervention research promoting women-initiated methods of HIV/STI prevention. Sparse available data indicate a high interest and enthusiasm for women-initiated methods among these women. Moreover, drug-using women may be in a position to capitalize most on the myriad advantages of women-initiated methods and be the least hindered by their disadvantages, as compared with other populations of at-risk women. These advantages include, for example, the potential for prior placement and use of a female condom without being noticed by a drunk or “high” partner, long-term and/or clandestine use of cervical barriers, and the “contraceptive justification” to partners or clients initially unwilling to accede to use of a female barrier. Targeted, community-based outreach and educational efforts to this extremely hard-to-reach group as well as expanded public funding for women’s methods are urgent priorities.

Women drug users are at high risk of HIV and sexually transmitted infections (STIs) owing to both drug-related and sexual transmission. For women who inject drugs, numerous studies using varied designs have documented that sexual behavior is an independent risk factor for HIV seroconversion. Drug use is linked to inconsistent condom use, and women using drugs report very high levels of sexual risk taking and frequent reports of recent STI (Doherty et al., 2000; Evans et al., 2003; Gollub, Rey, Obadia, & Moatti, 1998; Riehman, Kral, Anderson, Flynn, & Bluthenthal, 2004; Spittal et al., 2002). In some studies of injection drug users, including those measuring HIV seroconversion, HIV risk attributed to sexual behavior has exceeded that attributed to injection behavior (Kral et al., 2001; Strathdee et al., 2001). For women whose drug of choice is crack cocaine, high-risk sexual activities, often coercive, are a centerpiece of women’s lives and have been widely documented (Ross, Hwang, Zack, Bull, & Williams, 2002; Sharpe, 2005; Sterk, Theall, & Elifson, 2003).

Women who use drugs or who have drug-using partners—referred to as “drug-involved women” in the literature—also play a central role, along with their sex partners, in creating a “bridge” linking smaller, more marginalized...
high-HIV/STI-prevalence populations worldwide to the larger, non-drug-dependent population, via heterosexual sex and especially, commercial sex (Aral & St. Lawrence, 2002; Liu, Grusky, Li, & Ma, 2006; Platt et al., 2005; Yang et al., 2005). Female drug users thus play a central role in the dynamics of the worldwide HIV/AIDS epidemic. Effective prevention efforts launched now and targeted at this population can clearly diminish the global toll of HIV/AIDS.

Interventions aiming to reduce the risk of HIV among women drug users have been more successful in reducing drug–related behaviors, such as needle sharing, than unsafe sexual behaviors (Latka, 2003; Semaan, Des Jarlais, & Malow, 2006). Prominent among the challenges to devising effective sexual risk reduction strategies in this population is the exceedingly high level of economic, social and emotional dependence on male partners who themselves are at high risk of having and transmitting HIV/STIs, as well as frequent partner–related violence and nonconsensual sex. These gender–based power imbalances, often extreme in drug–using populations, render male condom negotiation impossible, and demand other solutions, in particular, woman–initiated methods, that reduce HIV/STI risk.

The following elements of women–initiated methods may aid in their adaptation to drug–using women’s context of sexual risk: discreet use, ability to insert a method long in advance of need, long–term (such as continuous) wear with no loss in efficacy, placement without need for arousal of the woman or her partner(s), easy carriage and storage, method reuse with simple cleaning procedures, enhanced comfort for the woman during sex, and simultaneous contraceptive efficacy, to name just a few. Drug–using women may be in a position to capitalize on the advantages of women–initiated prevention methods, and be hindered the least by the disadvantages, as compared with other groups of at–risk women. Because HIV sexual risk reduction behavior is highly context– and relationship–specific (Latka, 2003; McMahon, Tortu, Pouget, Hamid, & Nealgus, 2006; Thomsen et al., 2006), the multiple risk contexts and partnerships of drug–using women may augment the possibility that one or more methods might be used in at least some of these risk situations or with at least some partner(s). Furthermore, whereas in many developing country contexts, the desire for continued childbearing may be at odds with the contraceptive properties of current women–initiated methods (Stein & Mantell, 2007), drug–using women tend to view added contraceptive efficacy as a clear benefit.

Although not constituting a formal literature review, this discussion draws material from the small published literature on the feasibility and acceptability of existing or emerging women–initiated methods among drug–using women, including the female condom, cervical barriers (diaphragms and cervical caps), and microbicides. Supplementary information from studies of women at high risk of STIs/HIV, such as sex workers (FSWs), will also be included where relevant. There is often a significant overlap between female drug–using and FSW populations (Semaan et al., 2006; Witte, Wada, El–Bassel, Gilbert, & Wallace, 2000; Yang et al., 2005), and the health risks—and need for effective prevention strategies—increase synergistically for women reporting a combination of these activities (Aral et al., 2002; Platt et al., 2005; Stratthdee & Sherman, 2003).

Available studies providing data for this discussion target feasibility and user preferences associated with both actual product use, as well as with hypothetical products or surrogate products (as in the case of microbicides), mainly in the context of potential use for HIV/STI prevention. Both drug users in treatment and those out–of–treatment will be considered together, as will multiple drug use contexts (e.g.,
This article addresses the following questions: How can female-initiated HIV/STI methods be employed to respond to the particular context of drug-using women and their multiple risks? In what ways might female-initiated methods be particularly relevant for this group, compared to other populations of women? What are some of the key challenges associated with effective use of these methods for this population, as defined empirically by studies to date, or hypothetically, considering the literature on drug-using women’s risk context for HIV/STIs? What are some important areas for continuing research that are particularly relevant to drug-using women? What recommendations might be made to improve outreach, education and promotion of these methods to maximize their access and use by this highly marginalized population?

CHALLENGES FOR RESEARCH AND PROGRAMMING WITH WOMEN-INITIATED PREVENTION METHODS FOR DRUG-USING WOMEN

Research aimed at preventing HIV and STIs among drug-using women, particularly those out of treatment, poses a number of special challenges. These include the chaotic and unpredictable daily schedules and erratic patterns of “residence” of many drug-using women. Also, the tight control often exerted by sexual partners over women’s activities and contacts means that drug-using women enjoy little or no privacy. Women drug users use medical facilities irregularly at best (Metsch et al., 1999; Sterk, Theall & Elifson, 2002), and women are less likely than men to enter drug treatment (Greenfield et al., 2007). Finally, sexual abstinence policies in place at many drug treatment facilities raise further barriers to conducting effective safer-sex interventions at these sites. In cases of direct street recruitment, even if an initial contact is made, many drug-using women often are unable to adhere to the requirements of research studies (scheduled study visits, updating of locator information, etc.), or even to speak frankly with a street outreach worker if they are in the presence of a sexual partner.

Though for drug-using women, as for other women at high risk of HIV/STIs, these chemical or physical barriers presently embody the best prevention hope we have in the form of technological approaches targeting the individual, increasing access to and use of these methods and sustaining use over the long term will require work beyond the individual level—to the dyadic or partner level, the community level, as well as the structural level. The need for multiple level approaches in intervening with drug-using populations has been addressed by numerous researchers (Campbell, 2003; Latka, 2003; Latkin, Curry, Hua, & Davey, 2007; Semaan et al., 2006). Some suggested multiple-level approaches to improve access to and sustained use of women-initiated methods will be discussed further at the end of this article.

WOMEN’S METHODS AND DRUG-USING WOMEN: CONSIDERING THE EVIDENCE

FEMALE CONDOM

The female condom is detectable by partners under most circumstances. This changes the dynamics of use from active participation, as with a male condom (the partner must be in favor of its use for use to occur), to cooperation (a partner must ac-
cept its use for protection to occur). This is an important distinction—enough of one to allow many women who, prior to the approval of this device, were unable to practice safer sex. Nevertheless, male refusal of protection is still a clear possibility (Jivasak–Apimas et al., 2001; Ray & Maposhere, 1997).

Some studies conducted among women at high risk of HIV have raised the issue of the potential for male partner violent reactions to the female condom, and female–initiated methods in general (El–Bassel, Gilbert, Rajah, Folena, & Frye, 2000). Others have found that women reporting a history of intimate partner violence are less likely to attempt female condom use (Witte et al., 2000). Still other studies have documented women’s concerns about use of methods that might be perceived as an affront to male prerogative in sexual encounters with potentially violent partners (Van der Straten et al., 2005; see Diaphragms and Other Cervical Barriers section below). These findings remind us that although greater method choice and method placement by the woman may increase protection levels, new technologies alone will not deliver at–risk women from their multiple layers of risk (Mantell et al., 2006).

Other evidence offers a more hopeful perspective on the issue of violence in reaction to women–initiated methods. In a recent study of FSWs and drug–using women in Brazil who had been using the female condom for at least 4 months, participants rated the female condom highly, precisely because it allowed them to avoid conflict and violence by providing an additional choice and thereby an increased opportunity for negotiation (Telles–Dias, Souto, & Page–Shafer, 2006).

Like other at–risk populations of women, drug–using women have liked the female condom because of its strength and durability and its coverage of the vagina and vulva, which allows confidence and “tranquillity” during sex (Klein, Eber, Crosby, Welka, & Hoffman, 1999; Sala, 2001; Telles–Dias, et al., 2006). This is often one of the first, visceral reactions of drug–using women to seeing and manipulating the device for the first time. This feeling of confidence applies not only to the risk of being infected—or transmitting the HIV virus where a woman is HIV-positive (Malow, Ziskind, & Jones, 2000)—but also to the risk of unintended pregnancy, because the contraceptive properties of the female condom are typically viewed as a “plus” (Hammett, Norton, 2000). Numerous studies have reported drug users’ and FSWs’ lack of faith in male condoms because of tearing, or because male partners remove them midway through the sex act or lie about having placed them (Hammett, Mason, et al., 2000; Klein, Eber, Crosby, et al., 1999; Mason et al., 2003; Ray et al., 1997). Furthermore, for women engaged in sex trade, the lubrication on the female condom has been reported to alleviate the pain of penetration, a problem sometimes reported with male condoms (Hindustan Latex Family Planning Promotion Trust & the Family Health Company, 2004). The increased lubrication may also reduce risk of infection from abrasions in the vaginal epithelium (Beksinska, Rees, Kleinschmidt, & McIntyre, 1999; however, whether there is a causal association between vaginal abrasion and risk of STIs is still not clear [Myer, Kuhn, Stein, et al., 2005]).

Drug–using women, including those who sell sex, also like the idea of women’s control of protection—it feels liberating to them as to other groups of women (Gollub et al., 2004; Weeks et al., 2004). Finally, a salient issue for women involved in sex trade is the ease of postcoital semen removal with a device or other method—the ability to feel “clean” (Mason et al., 2003). In particular, the ability to immediately remove the female condom for vaginal cleaning—unlike the case of microbicides or cervical barriers —corresponds well to the practices of drug–using women who sell
sex (Sharma et al., 2006), some of whom may have high rates of change in sexual partnerships.

Prior insertion of the female condom is reported regularly by drug–using study participants although with rapid changes of partners in sex for exchanges, advance placement may be less practical (Klein et al., 1999; Ashery et al., 1995; Telles–Dias et al., 2006; Witte et al., 2000). The ability to insert the female condom several hours before sex has helped not only to erode partner resistance but also ensure that the woman is “covered” during a period when she may be too “high” either to negotiate or initiate use of protection (Klein et al., 1999).

In a number of studies from diverse geographic locations, the female condom has also been used by some percentage of women without a partner’s knowledge – especially in the case of a drunk or “high” partner or client (Hindustan Latex Family Planning Promotion Trust, 2004; Klein et al., 1999; Ray & Maposhere, 1997; Sala, 2001; Telles–Dias et al., 2006). This advantage is notable, since such partners are also more likely to be “high risk” for spreading infection and account for a relatively large proportion of sex acts (Elifson, Klein, & Sterk, 2004). The natural feel and lubricated nature of the device aids its discreet use, as partners are less likely to perceive that there is a protective layer along the vaginal wall.

That the female condom is a contraceptive has allowed many drug–using women to negotiate its use more effectively with partners (Telles Dias et al., 2006). The contraceptive justification is more acceptable to men as it avoids the more complex issues of trust and being “dirty.”

Finally, although the discussion here revolves around factors that aid in negotiation of protection with unwilling partners, some reliable proportion of drug–using women’s partners respond in similar ways to those in other populations where the female condom has been introduced: they like the device (Klein et al., 1999; Telles Dias et al., 2006). Its positive features include added warmth and natural feel, and enhancement of sexual pleasure.

Finally, among challenges that arise in thinking about adapting this method to the lives of drug users are carriage, storage, disposal, and price (Klein et al., 1999). Both the second–generation, nitrile female condom (FC2) (Dowdy, Sweat, & Holtgrave, 2006) and newer models in development, such as the PATH Woman’s Condom (Coffey, Kilbourne–Brook, Austin, Seamans, & Cohen, 2006), may prove less expensive than the original polyurethane female condom that received FDA approval in 1993. Areas for further research that would enhance the protective impact of the female condom for drug–using women include its acceptability and safety for anal sex (studied in men, see Gross et al., 1999; and recommended in “safety tips” for FSWs, see Rekart, 2005).

**MICROBICIDES**

The limited information about drug–using women’s reactions to future microbicides is drawn from microbicide simulation trials where women were asked to use vaginal lubricants and report on their experiences and preferences (Hammett, Mason, et al., 2000; Hammett, Norton et al., 2000; Mason et al., 2003), as well as a small number of studies employing “hierarchical” approaches to HIV/STI risk reduction counseling which used spermicides (Gollub et al., 2004; Malow et al., 2000; Mason & Gollub, 2004).

Most participants in microbicide simulation trials, whether high risk or not, report either wanting to tell or telling their primary partners about microbicide use, pos-
sibly because of fear of being “discovered” owing to higher-than-normal vaginal lubrication levels (Ramjee et al., 2006; Woodsong, 2004). Nevertheless, additional lubrication has been cited by large numbers of drug–using women both as a reason for strongly liking as well as for strongly disliking placebo microbical products (Hammett, Mason, et al., 2000). Women who sell sex report a desire to douche immediately after having sex with a (placebo) microbicide, which has important implications for efficacy. The authors also found evidence that women might reduce the dosage of microbical products to reduce “messiness.” On the other hand, it appears that if women felt confident that paying partners would not suspect or discover that a microbicide had been applied, then substantial numbers would favor clandestine use with these partners (Hammett et al., 2000). In fact, as Mason et al. (2003) have underscored, the added vaginal wetness anticipated with microbical products may be a real advantage to drug–using women in terms of added pleasure and improved sexual health. For perimenopausal or postmenopausal women, whether involved in commercial sex or not, this added lubrication seems to have positive appeal (Mason et al., 2003). Finally, Weeks et al. (2004) found that concerns about efficacy were lower priority relative to other concerns, such as having an additional disease prevention option, self-reliance for prevention, and having a surreptitious method.

Storage, portability, and disposability, especially with applicator–based products, have been raised as concerns in studies conducted with drug users (Hammett, Mason, et al., 2000; Mason et al., 2003). One report suggested that products likely to be most popular will be those that can be inserted long in advance of intercourse, without having to be carried, and whose efficacy is of long duration (Mason et al., 2003).

**DIAPHRAGMS AND OTHER CERVICAL BARRIERS**

Cervical barriers have been used as contraceptives for centuries (Chalker, 1987), and the diaphragm has been found to be a feasible contraceptive method in a number of studies conducted among developing country populations (Bulut et al., 2001; Ravindran & Rao, 1997). Numerous observational studies have demonstrated some level of protection against STIs and their sequelae, including cervical cancer, with use of the diaphragm (Rosenberg & Gollub, 1992). Because the cervix has been demonstrated as the likely site of the vast majority of HIV receptors in the female genital tract, and is considered the “hot spot” for male–female sexual transmission of HIV (Moench, Chipato, & Padian, 2001), cervical barriers have a potentially important role to play in HIV prevention. A recently published, large trial conducted among women recruited from primary health clinics or community organizations in southern Africa, however, did not demonstrate any reduced incidence of HIV infection when fitted diaphragms and lubricant gel were advised in addition to male condoms, as compared with when condoms alone were advised (Padian et al., 2007). Nevertheless, numerous study problems, including insufficient statistical power, precluded full analyses on specific subgroups of interest (Stein & Glymour, 2007).

Other modalities of diaphragm use have not been studied for anti–HIV/STI effectiveness, including a continuously-worn diaphragm, a small, nonfitted diaphragm, a diaphragm with microbicide, and combinations of these. In addition, other cervical barriers, such as cervical caps and cups (Cervical Barrier Advancement Society [CBAS], 2007a,b; Matthews, 2006), have not been studied for anti–HIV/STI effectiveness. Of particular interest for women seeking both contraception and disease prevention, the fitted diaphragm, used with candidate microbicide BufferGel, has recently been shown to be equivalent in contraceptive effectiveness to a diaphragm.
used with a traditional spermicide (nonoxynol–9, or N9) in a large clinical trial among U.S. family planning clients (Barnhart et al., 2007). Further work to determine the effectiveness of this combination in preventing infection is an urgent priority.

No published studies are available on cervical barriers and drug–using women per se. This gap represents an area of urgent need. There are, however, published papers and conference presentations from four recent diaphragm trials conducted in African settings, which followed women for between 1 and 24 months, and included FSWs (Behets et al., 2005; Behets et al., 2007; Luchters et al., 2007; Padian et al., 2007; Van der Straten et al., 2005).

In these studies, both continuous wear and coitally-dependent use were found to be feasible and acceptable by the vast majority of women studied. Consistent use of the diaphragm appeared to be higher in the trials where it was worn continuously (Behets et al., 2005; Behets et al., 2007). There is ample evidence from these trials that discreet diaphragm use is achievable, and this was an important feature to the women in these trials, especially among FSWs and women with multiple partners, where up to half of the women in one trial (Luchters et al., 2007) did not disclose method use to their partners. Among FSWs with primary partners in Mombasa, many women reported wanting to talk to their primary partners about the method over the course of the 6–month study but feared their reaction (Luchters et al., 2007). The majority of these women (81%) reported partner assent following a discussion about the method. The rate of disclosure was considerably higher in a Zimbabwean study of women with stable partners and a high reported level of domestic violence (Van der Straten et al., 2005). Over the course of the 6–month study, only 10–13% of women reported that their partners never knew about their diaphragm use and 14–17% reported never telling the partner (Van der Straten et al., 2005). The authors found an inverse relationship between use of the diaphragm and history of domestic violence, agreeing with other evidence suggesting that some women fear use of this method—or protection in general—with violent partners.

Supplementary material is available from two trials of the “hierarchical” counseling approach among street–recruited, drug–using women and STI clinic patients, which provided diaphragms or cervical caps either on site or via referral, along with a menu of other methods. Among these women, for whom interest in cervical barriers was not a criterion of enrollment, approximately 10% of women requested to be fitted with a cervical cap or diaphragm (Gollub et al., 2004; Gollub, French, Latka, Rogers, & Stein, 2001).

Finally, in a Kenyan FSW population (Sharma et al., 2006), the issue of desired, immediate, postcoital cleaning was raised as a serious potential impediment to effective diaphragm use, similar to concerns raised in some of the microbicide studies noted above (Sharma et al., 2006). One third of women in this qualitative study (n = 36) who learned about the diaphragm without actually using one considered the post-coital wait time of 6 hours before removal to be incompatible with their sex exchange practices. The authors called for further efficacy research to determine whether the currently-advised, minimal wear time could be shortened with no loss in anti-disease (and, ideally, contraceptive) efficacy.

Cervical barriers may have an important and unique role to play in protection with both paying partners and primary partners. Some of these devices may turn out to be compatible with the cleaning or douching practices of women exchanging sex, thereby increasing their relevance to this population.
LESSONS LEARNED
There are a number of conclusions to be drawn from the above discussion. First, both the substantial potential public health impact to be gained by increasing drug–using women’s protection options during sex, as well as the positive reception women’s protection methods have received in the scant research to date, provide a compelling argument for considerably greater emphasis on research and programming with women–initiated methods in this population. Drug–using women appear poised to integrate women’s protection methods into their complex and dangerous daily lives if they were easily accessible. The greater the number of methods that are available to them, the higher the chance of effecting meaningful protection levels through “mix–and–match” and “revolving method use” strategies. The appropriate outcome here is not consistent use of any particular method but use of some method in the available method menu of potential risk–reduction compounds or devices (Gollub et al., 2001; Malow et al., 2000). In the absence of additional prevention tools, drug–using women are likely to remain at extremely high risk of HIV/STIs.

Carrying through on the promise of HIV/STI prevention with women–initiated methods, for both drug–using women and others, involves responding effectively to two distinct, and interrelated challenges: (a) increasing access to the women who urgently need these methods and (b) providing widespread training to a range of personnel, from health professionals to peer counselors to community–based organization staff and others who are likely to be responsible for disseminating information and otherwise enabling use of women–initiated technologies. In the case of drug–using women, their severe isolation and disenfranchisement, and stigmatized social status, render these challenges even more sobering.

Addressing access issues means making a serious commitment to public funding and widespread availability of, for example, female condoms at venues that drug–using women are likely to access, such as public health clinics and needle–exchange programs. Pollack et al. (2002) have shown that the availability of needle–exchange–based health services can reduce utilization of emergency room services. Programs such as these could provide reproductive and sexual health services aimed not only at treatment but also at prevention. Drug treatment programs, especially those with an HIV counseling component (Grella, Etheridge, Joshi, & Anglin, 2000) and certainly women–oriented programs (Grella, Polinsky, Hser, & Perry, 1999), where these exist, represent additional sites where women might access these tools readily. Infiltration of sexual health services into communities where drug users live and “hang out” can also be achieved with such techniques as mobile health vans and direct street outreach (Klein, 1999). Numerous venues for awareness–raising activities have been suggested by drug–using women themselves and include billboards, radio and television public service announcements, and parole/probation officers (Weeks et al., 2004).

Improving access also means mounting a campaign locally, nationally, and internationally to fundamentally transform the view of female barriers as contraceptives, still considered the “poor relation” in the family planning field and thus not widely promoted or even easily available at many family planning centers. International models of successful promotion are available (Barbosa, Kalckmann, Berquó et al., 2007; Mantell, Scheepers, & Abdool Karim, 2000; Warren & Philpott, 2003). Furthermore, drug–using women are often not considered suitable “candidates” for these methods, owing to widespread skepticism concerning whether these women will use the methods reliably. For example, in a trial of a multi-session empowerment inter-
vention among substance–using women (Gollub et al., 2004) who were provided a facilitated referral and “patient advocate” services, none of the 10 women who attempted to obtain a cervical barrier through a well–known, local family planning center were successful at the end of their year-long trial participation; this was due to an apparent lack of trained personnel for these appointments, health personnel absenteeism, office organizational problems and lost patient files, as well as clear biases against the drug users.

A pro–female barrier campaign could point out that female condoms and cervical barriers are not only likely to reduce risk of HIV/STIs but also (and together with spermicides when used no more than once daily), as contraceptives, can prevent poor pregnancy outcomes associated with drug use during pregnancy, maternal morbidity owing to high–risk pregnancies, as well as vertical transmission of HIV among HIV–positive women not desiring pregnancy. Increasing choices in contraception among HIV–positive women has the further ramifications for the global toll of HIV in settings where antiretroviral treatment is unavailable or scarce.

In addition, these methods serve as a springboard for education and discussion regarding women’s reproductive anatomy and physiology, women’s reproductive history, and numerous related topics, ranging from gender roles and women’s autonomy; to women’s experience as mothers and partners; to violence and sexual aggression, pleasure, and many others (Gollub et al., 2001; Mason et al., 2004; Rivers, Aggleton, & Elizondo, 1998). This opportunity for group learning and social support among women is rarely afforded in typical interactions at health care facilities and even less so for drug–using women. Finally, women–initiated methods are also excellent tools to protect genital health, a point made repeatedly in the research literature but which has yet to be diffused widely in a public health campaign. For drug–using women who experience multiple STIs with complications, promotion of female barriers as a strategy to improve reproductive health might carry additional appeal.

Another important avenue for action to improve access to women–initiated protection methods to drug–using women concerns policies and practices regarding cost, reimbursement, and prescription status of these methods. In the U.S., for example, public subsidy of widespread female condom availability, such as free supplies at public clinics, would reduce dramatically the cost burden to poor populations. Funding female condoms through Medicaid via a prescription is an underutilized mechanism that is possible in numerous states. On the other hand, most cervical barrier devices in the U.S. have prescription–only approval status, which unduly complicates the process of obtaining and replacing one. These policies must be changed in favor of over–the–counter status, which is already the case elsewhere, such as in Europe. Wide–spread concurrent training activities could ensure access to trained counselors and a range of medical and paramedical professionals for fitting and user instruction. Additional research on “one size fits most” devices should provide for even greater ease of access; there is currently a move in this direction for cervical devices under development.

But the issue of widespread training to increase uptake and sustained use of women–initiated methods goes beyond the need for technical training of medical or paramedical personnel, as alluded to above. The adoption of a woman–centered paradigm for HIV/STI prevention, especially one that can respond to drug–using women and other women at high risk of HIV, implies widespread educational and consciousness–raising activities to bring about a high level of access to gender–sensitive programs and staff, at all of the above–mentioned sites frequented by women at high HIV
risk. Only by uprooting the harsh, judgmental attitudes often found at sexually transmitted disease clinics, drug treatment sites, and other venues where poor women go for treatment, will drug–using women and sex workers feel welcome to access services there, and speak freely of their needs and concerns (Salmon, Joseph, Saylor, & Mann, 2000). Proactive efforts will need to be made to design user–friendly approaches to provide ongoing support, for method initiation and maintenance, with staff sensitized to the needs of high–risk populations. Expanding the use of reliance on trained peers (Latkin, Hua & Davey, 2004; Semaan et al., 2006) for outreach, counseling, and referral could ideally provide additional momentum to this evolution via modeling of appropriate, sensitive counseling behaviors. Nevertheless, it must be recognized that the wide–scale diffusion of these methods challenge longstanding traditions in society’s view of women—including those of providers, policy makers, and researchers. In particular, disparaging views on drug–using women’s capabilities and entitlements are deeply entrenched, and sustained efforts will be needed to transform them.

Finally, an additional key research area not yet mentioned, concerns the testing of effective counseling approaches to the “scheduling” issues associated with most of these methods. For example, some microbicides will need to be inserted no longer than 1–2 hours before coitus. Cervical barriers and microbicides will need to remain in place in the vagina for a minimum of 6 hours postcoitus, according to our present level of evidence. Strategies to help drug–using women manage these time constraints in their chaotic daily schedules, and conveying that information in a comprehensible, usable fashion to this high–risk population, must be tested and refined.

CONCLUSION

Drug–using women share with other groups of at–risk women many of the same factors mitigating against effective use of protection during sex—grinding poverty and lack of access to economic resources, extreme levels of dependency on men, and violent reprisals where women dare to take a decision–making role in matters of sexuality. The additional layer of physiologic and psychological drug dependence sharply escalates the level of dependency on men for survival so as to effectively crush any hopes for escaping risk of STI so long as male condoms are the only available prevention tool.

Drug–using women’s multiple deviant status (Rosenbaum, 1981), and consequent isolation and low self–esteem—magnified by the illegal nature of drug use whose pursuit and use occupies considerable amounts of their daily life—all contribute to create a formidable challenge to effective health education and intervention activities. Society’s harsh, judgmental attitude toward this group further complicates intervention efforts and public support for structural change. Creative, adaptive approaches for sustained, community–based outreach to educate women about women–initiated HIV/STIs prevention methods, and provide these technologies along with quality counseling, clinical care, and referral, by personnel sensitized to the needs of drug–using women, will be of the utmost importance.

The limited published and anecdotal experience available concerning women–initiated technologies and drug–using women demonstrates that when sought out, this population has proven to be eager to participate in research, and unqualifiedly positive about gaining access to these methods. Whether owing to women’s self–identification as “high risk” for STIs/HIV, or owing to the role of hope that women–initiated methods can inspire (choice itself representing powerful medicine), or some combination of these factors, a great untapped disease prevention po-
tential exists for drug–using women worldwide, having implications for the global HIV epidemic. These positive responses represent good news and mean that our quest to substantially raise levels of protection against STIs/HIV in drug–using women should never be cast as hopeless, unlikely, or unworthy of funding. Rather, our success in lowering STI/HIV incidence in these women will be a function of our ability to work on multiple levels. On the one hand, we will need to advocate for structural change to reduce stigma attached to drug–using women, through, for example, reform of national drug use policies toward decriminalization (O'Leary & Martins, 2000; Semaan et al., 2006), and to increase the chances of their drug recovery through an expansion of gender–sensitive programming at drug treatment centers or women–only drug treatment centers (Grella et al., 1999; O'Leary & Martins, 2000). At the same time, we must urgently mount local campaigns to diffuse information on and access to existing women–initiated methods via some of the strategies suggested here.

Although drug–using women cannot be expected to go out of their way to seek out HIV prevention (Klein et al., 1999), nevertheless, if we meet them “in the street,” armed with women’s prevention technologies and quality counseling, there is every reason to expect a gratifying reception.

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