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Perspectives Related to the Potential Use of Vaginal Microbicides Among Drug-Involved Women: Focus Groups in Three Cities in the United States and Puerto Rico

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HIV transmission through heterosexual contact remains the greatest risk factor for women globally. Topical microbicides applied intravaginally may offer a female-initiated HIV prevention option for many who are unable or unwilling to use male condoms or who would want additional protection. This article presents results of focus groups in Bridgeport, Connecticut, Providence, Rhode Island, and San Juan, Puerto Rico, with women who use crack or heroin or have male partners who inject illegal drugs. Participants revealed motivation for and openness to using microbicides effective against HIV should they become available. Additional lubrication during intercourse was one of several expected positive features of microbicides; women saw lubrication as a means of enhancing pleasure and reducing condom irritation and breakage while also protecting them from infection. Conversely, some women feared that their male partners would interpret excessive lubrication as an indication of infection, improper hygiene, or evidence of sex with another man. Focus groups also provided insight into how aspects of different women's sexual lives, including partner type, might influence the issues that would concern them if and when they tried out new microbicidal products in the future.

KEY WORDS: Vaginal microbicides; HIV prevention; sexually transmitted diseases; women-controlled methods; acceptability research.

INTRODUCTION

The percentage of reported AIDS cases among women in the United States continues to increase, as does the rate of new infections (Centers for Disease Control and Prevention [CDC], 2000; CDC, 2001). In the United States and Puerto Rico, surveillance data indicate that HIV/AIDS among women remains largely associated with women's own injection drug use or heterosexual sex with injection drug users. In 2000, reported AIDS cases among women attributed to heterosexual contact exceeded cases accounted for by women's own injection drug use (38% vs. 25%, respectively) (CDC, 2000). An additional risk factor for many female drug users is their dependence on the exchange of sex for drugs or money (Astemborski

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et al., 1994; Tortu, 2000). Many women continue to find it difficult to assure that their partners practice consistent condom use, particularly in the context of primary relationships (Exner *et al.*, 1997; Gollub, 1999; Stevens *et al.*, 1998).

Efforts to encourage the development and promotion of technologies over which women can exercise greater control recognize the continuing difficulties in negotiating condom use with male partners (de Zoysa *et al.*, 1998; Elias and Coggins, 1996, 2001; Heise, 1997; Heise and Elias 1994; Sokal and Hermonat, 1995; Stein, 1993, 1994; Stone and Hitchcock, 1994). The female condom and topical vaginal microbicides are two of the most promising female-initiated methods. They are considered to be female initiated because they are inserted by the woman intravaginally and hence do not require the consent of the male (as compared to the male condom, the use of which generally depends on the male's erection as well as on his willingness to use the condom; Gollub, 1995). Experience with promotion of the female condom throughout the world indicates the importance of taking the preferences and concerns of women and their male partners into account in the development of, and education about, products so as to increase consistent and correct use of the method. For example, there is increasing evidence that the female condom can become more acceptable to women as they gain knowledge about, support for, and experience with its use (Gollub *et al.*, 1995; Pool, 1999; Pool *et al.*, 2000).

There are approximately 60 experimental microbicides in various stages of laboratory research and clinical trials. However, it is not likely that there will be microbicidal products with FDA approval available on the market for several more years (Harrison, 2002; Rosenthal *et al.*, 1998). This means that research on potential users' perspectives (Heise, 1997) can still influence the kinds of products that are developed and introduced, and how women and men are educated to use them.

The concept of "acceptability" of contraceptive and vaginal microbicidal technologies to women and their partners has been transformed by feminist and women's health advocates' critiques. Although there is no widely accepted definition, the concept has expanded from a narrow focus on product preferences to a framework that includes a range of potential users' perspectives related to whether new methods would meet women's needs and how they might be used (Heise, 1997; Elias and Coggins, 2001). This broadened framework includes recognition of the importance of educational support for women in the selection and proper use of reproductive health options from among both new and existing methods. Leading researchers, in a recent review of the field of microbicide acceptability research, argued for the value of investigating potential users' perspectives at all phases of microbicidal product development, including the period prior to availability of new products, as long as the limitations and strengths of different methodologies are considered in the interpretation of findings (Elias and Coggins, 2001).

There is a growing body of research on acceptability (i.e., user perspectives), conducted largely in developing countries, investigating the level of interest among women or men in vaginal microbicidal products for protection against HIV/STDs (Blanchard *et al.,* 1998; Coggins *et al.*, 1998; Darroch and Frost, 1999; Elias and Coggins, 1996, 2001; Elias and Heise, 1994; Heise, 1997; Moon *et al.*, 2002). These studies reveal a strong interest across socially diverse populations. Reported preferences for product features vary, as do practical concerns expressed about using such new methods, depending on personal, cultural, and other contextual factors (Blanchard *et al.*, 1998; Coggins *et al.*, 1998).

This article presents results from focus group discussions that constituted the initial phase of a study funded to explore issues related to vaginal microbicide acceptability among women with drug-related HIV risks. Major aims of the overall study were to enhance acceptability of product formulations and application methods and improve education for the introduction and support of this new method among these women in the United States and Puerto Rico. The study included three phases and methodologies to address limitations and benefit from strengths inherent in each (see Figure 1). These were as follows: (1) focus groups where women discussed past and current experiences with risk reduction for HIV and STDs and reacted to displayed samples of available over-the-counter spermicidal and lubricating vaginal products, (2) small-scale product trials where women agreed to use three available nonspermicidal lubricant products during vaginal sex with a male sex partner, and (3) a survey to validate and expand on the findings with a larger sample of women who were also shown samples of existing vaginal products. A major premise of the study was that women's experiences with and reactions to existing vaginal products similar in formulation and

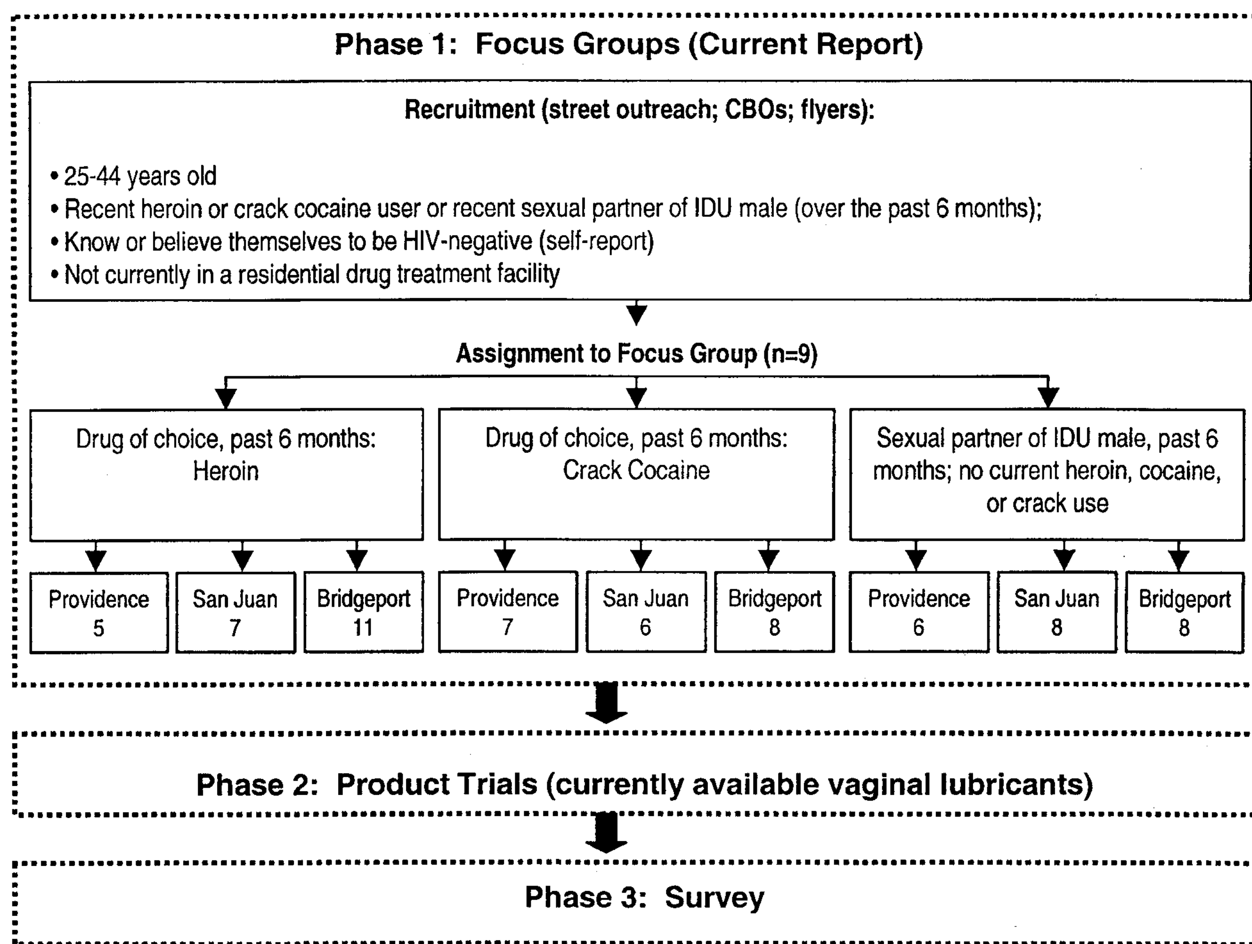

Fig. 1. Study design and recruiment criteria.

application methods to microbicides under development would provide useful information for assessing the acceptability of the latter. Focus group discussions informed the design of both subsequent phases of the study. They also provided insight into how aspects of different women's sexual lives might influence the issues that would concern them if and when they tried out new microbicidal products in the future.

FOCUS GROUP DESIGN AND METHODS

The study was conducted in three cities among drug-involved women of contrasting racial/ethnic composition (predominately African American in Bridgeport, Connecticut; White in Providence, Rhode Island; and Puerto Rican in San Juan, Puerto Rico) to explore potential differences in acceptability issues. The research took place during 1997 and 1998 and results from the product trial and survey phase have been reported elsewhere (Hammett *et al.,* 2000a, 2000b). Nine focus groups were conducted with a total of 66 adult women in one of three general risk situations: (1) active crack cocaine users, (2) active heroin users, or (3) not active drug users themselves but with male sexual partners who inject drugs. In all three cities, groups were separated by risk situations in order to compare the influence of their situations on potential users' perspectives. Discussion guides were designed so that women talked first about their personal risk perceptions and related circumstances, their experiences attempting to protect themselves against HIV and pregnancy, and their views about the options

available to them. During the last third of the groups, cofacilitators focused the discussion on women's reactions to specific physical properties of products. Researchers hoped to minimize the pitfalls of interpreting discussions about hypothetical microbicidal products by (1) focusing the discussion on women's actual risk reduction experiences and perceived needs and (2) providing women with concrete examples of similar products to which they could react.

Cofacilitators displayed samples of available over-the-counter vaginal spermicides and lubricants. The same products were displayed in each of the nine focus groups. The products included suppositories, film, foam, creams, and gels, the latter three with prefilled disposable or reusable applicators. To broaden the discussion of criteria important to women, female condoms were also distributed. Women were invited to smell and touch each product and to ask questions about and react to them. At the end of this discussion, facilitators asked women to informally rank those products they would be most interested in trying.

Recruitment and Sampling

In each city, a convenience sample was recruited through face-to-face street outreach and through community-based agencies in neighborhoods with a high prevalence of illegal drug use and sales. These methods were supplemented in Providence with flyers posted in hospitals and sites used to recruit participants for other studies enrolling similar populations.

To be eligible, women had to be 25–44 years old, heterosexually active, HIV negative (self-report), and not currently in residential drug treatment. In addition, women were required to be *either* currently (past 6 months) a primary heroin user, *or* a current primary crack cocaine user, *or* to not currently use either drug and have a current male sex partner who injects drugs.

Procedures

Focus groups ranged in size from 5 to 11 (average = 8 participants). Assistance with transportation and child care was provided, food was served, and participants were compensated $25 for their time (cash or food voucher). Groups lasted 1–2 hr. Each group was cofacilitated by a trained qualitative researcher and an experienced facilitator from the local community who was ethnically and, in the case of Puerto Rico, linguistically matched with participants. A recorder responsible for audiotaping, observing, and taking handwritten notes was also present during each group. The cofacilitators and recorders were women. In Puerto Rico, all groups were conducted in Spanish. With the participants' permission, all groups were audiotaped and transcribed, and those in Spanish were translated into English.

The same focus group protocols and discussion guides were used at each site and piloted prior to conducting these groups.

Data Analysis

There were two sources of data based on focus group discussions: (1) an analytical report summarizing salient issues and themes identified by the cofacilitators and recorder for each group, and (2) transcripts of each group. Immediately after each group, the cofacilitators and recorder compared observations about group dynamics and interpretations of respondents' comments. These discussions were audiotaped. Together with handwritten notes and a review of the focus group tape, they formed the basis of an analytical report providing information about the dynamics of reactions to the products that would have been difficult to abstract from the transcripts alone. Additionally, a qualitative analysis team hand coded the transcripts from each group according to topics of interest, including topics that emerged during initial reviews. Key points and issues raised by women, as well as themes that linked different topic areas, for example, "cleanliness," which appeared in talk about risk situations, reproductive health practices, and in reactions to products, were recorded in notes from each transcript review. Women also commented about vaginal spermicides and moisturizing products in discussions about HIV and pregnancy prevention experiences as well as in direct response to displayed products. Summary sheets of themes and issues were prepared for each focus group as well as matrices comparing themes and issues across sites and risk groups. This method of constant comparison of patterns of responses across distinct cases or observations is a technique intrinsic to a "grounded theory approach" (Strauss and Corbin, 1990). The small sample sizes of focus groups in each city and the complicating factors of individual and risk situation differences among women made it difficult to ascertain

contrasting perspectives attributable to racial/ethnic differences and to generalize them to broader at-risk populations. In order to avoid overgeneralization from comments that could represent idiosyncratic perspectives, themes and points have been included only if they recurred across several groups.

RESULTS

Participant Characteristics

Sixty-six women were recruited: 27 in Bridgeport, 21 in San Juan, and 18 in Providence. Basic demographics among the women at all three sites were similar, except, by design, for ethnic/racial background (see Table I). The majority at each site were 31–40 years of age, had some high school education or a high school diploma, and were currently unemployed.

The Context for Assessing Women's Interest in and Motivation to Try New HIV-Protective Methods Such as Vaginal Microbicides

Awareness and Concern Regarding Sexual Risk

Among the most consistent and emotionally intense patterns of response in the nine focus groups was the participants' high degree of awareness of and concern about HIV.[9] Most had family, friends, or acquaintances who had HIV disease or had died from it, including, in some cases, partners or husbands. In all groups, most women agreed that they think about their own risk of HIV constantly, even daily. Words like "fear" were common in these discussions, recurring as a theme linking different topics.

Women in all three cities and all risk categories felt highly vulnerable to sexual infection with HIV. Individual women's worries about the source of their risks did not contrast as neatly as the sampling criteria imply, because drug use and sexual risks are interrelated in their lives in complex ways. Women in the partners' focus groups (who by definition did not currently use heroin or crack cocaine) talked most about risk from their primary male partners, although many of these women also worried they may have been infected through behavior related to their own previous drug use.[10] Numerous women in the six focus groups of current drug users discussed risk from sexual exchanges for drugs or money, and, in some cases, from their own injection practices. However, some of these women also worried about risk from steady male partners, who were commonly drug users as well. The dilemmas women described in coping with their risk situations appeared different according to the type of sexual partner to whom they referred, for example, primary or steady versus casual or commercial partners.

Table I. Demographic Characteristics of Female Focus Group Participants in Three Cities ($N = 66$)

	Providence ($N = 18$)		San Juan ($N = 21$)		Bridgeport ($N = 27$)	
Characteristic	*n*	(%)	*n*	(%)	*n*	(%)
Age (years)						
18–30	6	(33)	4	(19)	3	(11)
31–40	9	(50)	11	(52)	17	(63)
40+	3	(17)	6	(29)	7	(26)
Ethnicity						
African American	3	(17)	0		26	(96)
White	15	(83)	0		0	
Latino (Puerto Rican)	0	(0)	21	(100)	1	(4)
Education (years completed)						
Up to 8	1	(6)	2	(10)	0	
8–12	11	(61)	12	(57)	24	(89)
12+	4	(22)	7	(33)	3	(11)
GED	2	(11)	0		0	
Employment status						
Employed	3	(17)	4	(19)	7	(26)
Unemployed	15	(83)	17	(81)	20	(74)

Women's Sexual Risk Reduction Dilemmas with Steady Male Partners

A strong theme of distrust of male partners characterized women's talk about steady partners regardless of whether the women themselves used drugs or which drug they most often used. The women who asserted unqualified trust in their drug-using partners' protection of them were in the minority. Most were explicit about their anxiety concerning the risk male partners posed to their health. A few were inconsistent, suggesting ambivalence. For example, one woman who did not currently use drugs insisted that

[9] Recruitment was not random and the sample sizes in each city are small; hence the predominance of women highly concerned about their own personal risk for HIV may be an artifact of the sampling and recruitment strategy to target women at high risk.

[10] In Bridgeport and Providence, but not in San Juan, most of the current non-drug-using women reported some history of drug use in the past.

she trusted her partner and they never use condoms; in the next breath she described having burnt her hand badly on the stove during a distracted reverie of anxiety about HIV. Another said,

> And now I'm remarried and I found out that my husband has been using again.... I found a needle and syringe and I almost died, I didn't know what I was going to do! And he swears that he hasn't shared with anyone or anything, but I'm still afraid. I'm still afraid.... I don't know whether to believe him or not. He's been on a methadone program, but he did coke the other night, he said he snorted it, but how do I know that? I don't. I can't be checking his arms all the time, ya' know. (Woman in Sex Partner's Group, Providence)

In response to their worry, women described strategies such as tracking their steady partner's behavior by talking to his acquaintances, insisting that he get HIV tests, getting tested regularly themselves, and/or withholding sex. One woman who had lived in fear with a prior HIV-infected partner described being "petrified" with her current drug-using steady partner. After many fights and break-ups, she described her anxiety: "He's gonna have to get tested again, I mean he was just tested, he was just tested, but I don't think I want to have sex with him again until he's tested again, unless there is something I can use that will prevent HIV. And I don't know about condoms, I don't really trust them" (Woman in Sex Partner's Group, Providence).

Some reported choosing to forget to protect themselves but constantly worried about it later, sometimes douching after sex to feel safer. Some insisted that the man use a condom only when she suspected he had engaged in risky behavior. It was common for women to worry about men's sexual behavior connected to their drug use as putting them at risk as well. Some women described male partners' efforts to avoid condom use as manipulative, for example, accusing their female partner of infidelity when she urged condom use.

A minority of the women in all groups said they demand that their high-risk steady partners use male condoms regularly to protect themselves against HIV. However, even this did not fully alleviate their fear because many doubted the efficacy of male condoms. One woman married 24 years to a man who has struggled with addiction in recent years said she fights with her husband each time they have intercourse, insisting that he wear a condom or she will withold sex. Still, she worries: "I'm at risk every time I let him have sex, so I pray, 'Lord, God, protect me from his fluids, don't let it get through.' I don't deserve this, this life that I am living. I married my husband and I didn't know he was an addict, but I don't believe I deserve to die of AIDS" (Woman in Sex Partners Group, San Juan).

Some women explicitly connected their risk situation to the idea of a new prevention method in addition to, or instead of, male condoms. In another exchange from the Providence partners' group, a participant has just said that she distrusts her only steady partner:

> P1 (Participant): Well we do have it [sex] once in a while, not—it's ruining our sex life, definitely, it's just, I'm not interested and I don't consciously think of it either.
>
> F (Facilitator): When you do have sex do you use a condom together, or do you?
>
> P1: No. See, that's why I know—when they said something about this [study] 'cause I could use something like sometimes you put it in a couple of hours before, I think something like that would be really good. (Woman in Sex Partners Group, Providence)

Sexual Risk Reduction with Non-Steady Male Partners, Including Sex-for-Drugs Exchanges and Commercial Partners.

A common concern among women who use drugs was risk from sexual exchanges with men for drugs or money. Many expressed intense feelings of vulnerability related to the stigma of drug use and the related financial pressures. A few traded sex for basic sustenance. There were no consistent differences in discussions between primarily heroin-using groups and crack-using groups. One reason may be that many had used both drugs, a common pattern in these sites. Women described numerous factors that led them to have unprotected sex, including physical effects of drug highs and withdrawal and the more immediate need for money over protection when a man refuses to wear a condom. Still, they had devised a variety of ways to avoid these circumstances, including holding jobs and pursuing illegal activities such as "boosting" (shoplifting) and periodic abstinence. Additionally, women's talk indicated that often when they have vaginal sex in less emotionally intimate or in strictly commercial kinds of sexual exchanges, it is easier for them to require partners to wear male condoms.

A very common strategy women reported to protect themselves in exchanges was to avoid vaginal sex altogether in favor of oral sex. Women tended to feel this was less likely to lead to HIV infection, although they worried this might not be true. Some women's fear of exposure was so great that they assure their partners wear male condoms by insisting or by doing it themselves surreptitiously. Still others disliked the taste of latex and one woman felt it made her job harder because it took the men longer to have an orgasm while wearing a condom.

An additional concern for women was the general "cleanliness" of their less known male partners. This did not appear limited to concerns about infection by HIV or other STDs, but also included a need to protect their own hygiene. When asked what made them decide to insist on male condom use when they did, two women replied as follows: "I don't like to feel like I'm the garbage collector, because we're getting all the garbage. And I don't like to feel like I'm the one that's collecting all the yuk" (P1, Woman in Heroin Users Group, Bridgeport). The second commented that condom use is "clean" (P2, Woman in Heroin Users Group, Bridgeport).

Perceptions About Limitations of Current HIV Protection Methods

Male condoms were virtually the only barrier method women used to protect themselves against HIV and other STDs when they had sex. Most women had neither heard of, nor seen, a female condom, but were very intrigued when they were displayed during the discussion along with lubricants and spermicidal products.

Few women in any of the focus groups had heard of spermicidal uses for protection against HIV, such as Nonoxynol-9, and those who had were distrustful of its effectiveness. Some women in each group reported having used spermicidal products to protect themselves from pregnancy, but again, the trust factor was not high, and such use was not a regular, nor a primary, method. Having "tubes tied" (i.e., tubal ligations), birth control pills, and male condoms were the most common contraceptive technologies women used.

Despite their dependence on them, as several of the quotes above illustrate, women commonly said they did not fully trust male condoms. There were several women across groups who said they required partners to wear more than one condom at a time. All groups included frequent and spontaneous expressions of concern about condoms, including breakage, slippage, and vaginal irritations:

> In the heat of the moment and in the heat of passion, then sometimes they [condoms] come off. Well, are you going to stop and say anything? And then, after the fact, after that moment, the next day you're like, "Oh shh!" You know? I mean "I wonder if he was OK," or whatever. You never know. And it's scary. That's why, I mean, all of this has taken the joy out of sexual pleasure! It has taken the joy out of it. (Woman in Crack Users Group, Bridgeport)

Perspectives Related to Product Formulations and Potential for Proper Use

Advantages and Meanings Associated with Vaginal Lubrication and Related Opinions About Informing Male Partners of Product Use

Interest in the products displayed and in the prospect of similar new products that could be effective against HIV and other STDs was high in all groups. As with their commentary about experiences with condoms, many questions and comments about the displayed products as well as speculations about future microbicides in similar formulations reflected participants' concern about how effective they would be protecting against HIV as well as about their safety or side effects. Participants speculated about how well products would cover them internally and how the protection would work. In addition, women's initial thoughts concerned qualities of products that men would notice and how they might interpret them. They also focused on products' potential effects on sensation (pleasure), sexual aesthetics (eroticism), and hygiene.

Across all sites and groups women expressed positive feelings about extra lubrication during sex. Participants discussed this in the context of their problems with male condoms, their past experiences with lubricants and spermicides, and their reactions to sample products. Some spoke of extra lubrication as easing their own tightness, helping them to relax, and reducing friction and irritation of male condoms. Women in different groups and sites also commonly agreed that men like, or at least do not object to, "wetness" during sex. Still, women also talked about the limits in this regard, some noting that too much wetness would lessen the friction men felt and hence

their sexual pleasure. Two separate exchanges illustrate this:

> P1: Like—you know, both of mine men, they like it wet.
>
> P2: Yeah.
>
> P: They don't like it dry.
>
> P1: They don't like it dry, it hurts [laughter].
>
> (Women in Sex Partners Group, Bridgeport)
>
> P3 [touching the vaginal foam sample]: Look still, and it still stays slippery and you—really, the man—
>
> P4: He will take longer.
>
> P3: He wants some friction, he doesn't want something so slippery.
>
> (Women in Heroin Users Group, San Juan)

Women also asserted across all groups and sites that excessive lubrication or preparations with noticeable (variable) tactile or visual qualities would be aesthetically or otherwise offensive. Messiness, including dripping before and after sex, was consistently judged by respondents to be the most problematic aspect of product formulations. Among product samples, foam was most often perceived as likely to be too messy. Some women in each group expressed concerns about what excessive or "unnatural" lubrication or discharge from products might signify to partners. The most common possible negative interpretations mentioned were the presence of infection and the assumption that a woman had had sex with another man or that she was not practicing proper hygiene. Comments from women imagining product leakage during a commercial sex exchange illustrate this:

> P1: Imagine if I was with my date and I took off my clothes and all this white stuff came falling out—gross. Running down my legs?! [Other Participants agree with the grossness of this scenario]... Yeah, it would affect my business for sure, you know he ain't gonna come knocking back on my door after he sees this.
>
> P2: Yeah, because he probably wouldn't think you are clean from the one before. You know.
>
> (Women in Crack Users Group, Providence)

Women had mixed opinions about using vaginal products without informing their partner, particularly a primary partner. Most considered the potential for covert use to be an advantage. However, they speculated about how realistic this would be if one were using products similar to those displayed. Additionally, some women felt it was important to tell their partners about products they were using for purposes of openness and for consciousness raising about the need for protection.

Speculations About Microbicide Use in Sexual Exchanges

As they touched and smelled displayed products, women engaged in commercial sex or sexual exchanges for drugs had distinct concerns speculating about future anti-HIV microbicide use in those contexts. Some wondered about the effects of reapplying a topical vaginal product before each successive episode of vaginal intercourse. They were concerned that this might exacerbate the problem of excessive lubrication possible with vaginal microbicides in general. One woman, reacting to a contraceptive gel sample, commented,

> "You're going to have a mess. Imagine women who have clients in the street—if you use it at one moment, then you have to use it again, and again, and again—it's like you're going to have a swimming pool [in the vagina]. That's not for me" (Woman in Crack Users Group, San Juan).

An additional concern was whether the vaginal formulations they were examining would keep them clean when they have sex with men who are unhygienic.

> P1: I was wondering, if someone would use that if they only have one partner. They're not going to use it when you're out there tricking.
>
> F: Why?
>
> P1: Because they're talking about "dirty dicks." That's not going to keep it clean. (Woman in Crack Users Group, Bridgeport)

Women who exchanged sex "in the streets" or away from their homes also raised a variety of logistical issues about the ease of carrying and cleaning microbicide applicators. The requirement that reusable applicators be cleaned was judged impractical for use in some settings. These women were more likely to emphasize the advantages of condoms over gels, creams, foams, and similar formulations as a physical barrier in these situations. Condoms, in their thinking, assure that semen can be removed from their vaginas quickly, for purposes of protection against disease, for a woman's sense of "cleanliness," and to remove evidence of prior sexual encounters. Some women who engage in commercial or exchange sex expressed concern that products that require a waiting period between insertion and intercourse would

be inappropriate for certain kinds of commercial sex:

> P1: If you're with your boyfriend, you take your time, foreplay or whatever, but if you're with a stranger and just doing it for money, for drugs, you don't care about that.
>
> F [reading directions on film]: "Insert [product] not less than 15 minutes and not more than one hour before intercourse." So you've got to wait for fifteen minutes before you can have sex with this.
>
> P: Ohhhhhhh.
>
> P: That's like, you got to plan things.
>
> P: For anybody working on the streets, forget it.
>
> (Women in Crack Users Group, Providence)

Despite these kinds of concerns and speculations about difficulties using topical vaginal products, when moderators followed these discussions with the hypothetical question, "What if this product were to kill the HIV virus?" most women said they would use them. One exchange illustrates the response to this question:

> P1: You're telling me that it will kill the virus but with all the discomfort that we said?
>
> P2: Independently what I want is to save my life.
>
> P1: I would use it, like that, with all the discomfort.
>
> (Women in Heroin Users Group, San Juan)

Vaginal Hygiene and Douching

Women in general seemed very concerned about vaginal hygiene, both for their own sense of well-being and for the aesthetic, erotic appeal to their partners during vaginal as well as oral sex. The consensus was that taste and scent will be highly salient features of any future topical vaginal product. In Bridgeport and in San Juan, regular vaginal douching with a variety of homemade (commonly vinegar and water) or specialized commercial products was almost universal among participants.[11] Women said that douching made them feel "good" or "clean." Most often women practiced douching after their menstrual periods, but many did so twice a month or more. Some, especially women engaging in exchange sex, described douching after sex to be "clean" or to reduce the risk of pregnancy or infection.

[11] Vaginal douching appeared less common but was still practiced by some women in the Providence focus groups.

DISCUSSION

For reasons noted earlier, clear, contrasting response patterns attributable to racial/ethnic differences were not discernible among the focus groups. Additionally, no clear contrasts in concerns between primarily crack and primarily heroin users' perspectives emerged in focus groups. This may be due to the fact that most had used both drugs at some point, making the distinctions among their stories less clear. The most significant differences in sexual risk circumstances were between women who were not currently using drugs and those who were, primarily because of the common dependence of drug users on sex for drugs or commercial sex to support their habits.

These focus group discussions provide evidence of the interest and motivation among women in the United States and Puerto Rico with varied drug-related sexual risks to use new vaginal microbicidal products in the future. Most agreed they would use products with similar formulations and application methods to those displayed during the focus groups if they were effective against HIV, although foam, in particular, was perceived as potentially too messy and reuseable applicators appeared unhygienic for "street" sex workers. Additionally, women's need for and potential motivation to try such products in the future can be inferred from their consistent anxiety related to their own sexual risks and expressed worry about the limitations of current protective methods they had used, primarily the male condom. This finding is consistent with the high proportion (over 75%) of drug-involved women in this study's subsequent survey (total $n = 743$) who said they would be very likely to use microbicides if they were effective against HIV (Hammett *et al.,* 2000b).

The strength of the focus group discussions lies in the insights they provide concerning the connections between women's perceived sexual risk and their reactions to specific physical properties of displayed vaginal product formulations and application methods. Their reactions suggest salient features of products to consider in formulating and introducing microbicides as an HIV prevention method. The finding that women in all three sites and different risk situations generally felt that extra lubrication was acceptable, and even desirable to them and their partners as a means of enhancing comfort and pleasure during intercourse, is useful, given the cultural variability in reactions to "wet" versus "dry" sex (Abdool Karim and Zuma, 1993; Baleta, 1998; Brown et al., 1993; Civic and Wilson, 1996). This finding was corroborated in

the study's subsequent product trial, as women of all ethnic/racial backgrounds commonly cited the added sexual pleasure with lubrication as a reason for both their own and their partner's positive responses to use of moisturizing suppositories and gels. Nonetheless, in the same product trial ($n = 84$), where women in the three cities were asked to use three available vaginal lubricants in suppository and gel forms during intercourse, more women in the San Juan sample reported their partners were negative rather than neutral about the products than women at the other two sites, although the proportions of women and partners strongly liking all three products was roughly similar across ethnic/racial groups (Hammett *et al.,* 2000a). This product trial evidence suggests possible cultural differences in preferences for degree of wetness during intercourse and is consistent with findings in the survey sub study, where Latinas in San Juan and Bridgeport were significantly less likely to prefer wetter products for use with their primary partners than other women (Hammett *et al.*, 2000a).

At the same time, most women in focus groups stressed that *excessive* lubrication, including leakage before and after sex, and "messiness" would be aesthetically offensive and could possibly reduce pleasure. This finding is also supported by the study product trial and consistent with reports from numerous studies with other populations (Bentley *et al.*, 2000; Elias and Coggins, 2001; Hira *et al.*, 1995; Morrow *et al.*, 2002, 2003; Pool *et al.*, 2000; Steiner *et al.*, 1995). Still, the study's product trial findings indicated that women's judgments of which product was messy varied, supporting the focus group evidence of individual variability of preferences, possibly related to variations in women's natural lubrication (Hammett *et al.*, 2000b).

Salient concerns related to vaginal product formulations for focus group women included the potential meanings that unusual forms and amounts of vaginal lubrication (e.g., infidelity, poor hygiene, and infections) might convey to male partners, particularly primary or regular partners, if they noticed. In the survey, significantly more women of all ethnicities/races preferred to tell their primary partners than to tell paying partners of their use of microbicides (Hammett *et al.,* 2000b), a finding consistent with other acceptability studies (Bentley *et al.*, 2000, Elias and Coggins, 2001; Hammett *et al.*, 2000a). Together, these findings suggest that, for many women, the use of new topical vaginal products without informing partners may be a more complex topic than the early literature suggested.

Nonetheless, most focus group participants saw a covert method as advantageous, but wondered whether topical vaginal methods would actually remain unnoticed by partners. On the positive side, some women saw discussing the new method with their primary partners as a way to increase intimacy or shared responsibility for protection, an observation that lends credence to the hypothesis that female-initiated methods can improve communication between partners (Gollub, 2000; Steiner *et al.,* 1998).

The nature of the relationship with male sex partners emerged as a potentially important factor influencing women's perceptions about advantages and disadvantages of product formulations and application methods. For commercial sex or exchanges in settings outside the home, women expressed practical concerns about how hygienic reusable applicators, and how feasible waiting periods after product insertion and before sex, would be. In the focus groups, women noted that male condoms have a number of advantages in commercial or casual encounters. They expressed clearer motivation and greater ease insisting on male condom use in such situations as compared to sexual relations with primary or steady partners, including partners with recognized drug-related HIV risks, a pattern widely reported in the HIV prevention literature (CDC, 1996; Wood *et al.,* 1998). Other advantages of condoms concerned their perceived greater protectiveness against HIV and other STDs as well as the ease of postcoital semen removal condoms offer. The notion that condoms are "cleaner" than other types of barrier methods had particular importance to women who engage in commercial sex or exchanges. These perceived advantages suggest that microbicide use alone might offer a less compelling primary protective option for women in these contexts. In contrast, the greater challenge for women of achieving regular condom use in primary relationships with men, coupled with their reported anxiety about this, suggests that vaginal microbicides could offer women in these contexts a much needed option as a main or adjunct HIV/STD protective method.

These findings are congruent with increasing research evidence that female-initiated methods like microbicides and the female condom are likely to be integrated over time into a woman's "menu" of protective methods, including the male condom, rather than being seen as the only or primary method for HIV protection (Elias and Coggins, 2001; Latka, 2001).

The theme of "cleanliness" recurred throughout women's talk in the focus groups. The practice with most obvious relevance to microbicide use is the regularity with which many of the focus group participants douche, including after intercourse. Numerous microbicidal products must remain in the vagina for some period of time after intercourse to be most protective. This seemed problematic to some women, particularly for commercial sex. In the survey substudy, inability to douche for several hours after engaging in sex with paying partners was one of the most negatively perceived characteristics of microbicides (Hammett *et al.*, 2000b). Women and their partners' notions about vaginal hygiene appear significant enough to attend to in research and education related to HIV/STD protection in general, and specifically regarding effective use of microbicides.

A limitation of both the focus group and survey phases of the study is that women were weighing current risk circumstances against hypothetical product features with minimal education specific to the use of microbicides. The limitations of "pre-use" or "hypothetical" research for predicting whether or in what circumstance women will use a protective method are well established (Bentley *et al.*, 2000; Chesney *et al.*, 1998; Heise, 1997; Keller, 1979). Research on acceptability of female condoms and, to a more limited extent, vaginal microbicides increasingly reveals the important roles of attitudes of health care providers and education about protective options in determining whether new, as well as existing, technologies are used (Jones *et al.*, 2001; Mantell *et al.*, 2001).

The focus group discussions reveal the great need for enhanced options and educational support for their use on the part of women in the United States and Puerto Rico at risk through their own or their partner's drug use. Women's exposure to education about the advantages and disadvantages of contraceptive and other reproductive health methods—including the female condom—appeared limited. The female condoms displayed in focus groups were of great interest to many participants who had never seen them. One of the most common issues raised in all focus groups—distrust of male condoms due to breakage and slippage—has been reported in other studies (Gollub, 1995; Gross *et al.*, 1998). This problem, too, indicates a need for ongoing education about use of protective methods. The extreme economic and, in some cases, psychological vulnerability described by women in the focus groups, in particular those with drug habits, suggests the need for education addressing negotiation skills and other supportive services to strengthen their ability to incorporate new as well as more consistent HIV protection into their relationships. Given these women's circumstance, the financial cost of new microbicidal products is likely to be an additional important factor influencing their ability to use them with regularity.

Together with the survey and product trial phases of the study, focus groups also revealed the potential for vaginal microbicides to supplement condom use or to provide protection where none is currently used. Regardless of the questions, worries, and speculations about the aesthetics, logistics, and partner interpretations of particular features of vaginal products, women indicated that if a product were proven to be effective against HIV, they would use it. Just how effective it would have to be and how effectiveness would be weighed by women against other features of a product or against other methods of protection remains an important question for further study.

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