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WOMEN'S ANAL SEX PRACTICES: IMPLICATIONS FOR FORMULATION AND PROMOTION OF A RECTAL MICROBICIDE

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To gain insight into practices that may inform formulation and use of rectal microbicides, in-depth interviews were conducted with an ethnically diverse sample of 28 women who engage in anal intercourse. Microbicides are compounds under development to decrease sexually transmitted infections. Most women practiced anal sex in conjunction with vaginal intercourse. Anal sex typically was not preplanned, and few women reported preparation. Condom use was rare. Most women relied on saliva, vaginal fluids, prelubricated condoms, or used no lubrication at last intercourse. Women were uncertain about the amount of lubricant used during sex, with typical estimates of 1 to 2 teaspoons. This may prove challenging to the formulation and promotion of rectal microbicides, as substantially higher amounts may be required. Additional challenges include infrequent use of packaged lubricants, and typical male lubricant application, which may make women's control of rectal microbicides more difficult. Women overwhelmingly expressed interest in rectal microbicides.

Unprotected receptive anal intercourse (RAI) is the riskiest sexual act that may lead to HIV infection (Kingsley, Detels, Kaslow, Polk, Rinaldo, Chmiel, et al., 1987). Although condoms can prevent viral transmission, large numbers of uninfected women and men who practice unprotected RAI with a partner of serodiscordant or unknown status do so without condoms, either by choice or for reasons beyond their control. Based on a comprehensive review of heterosexual anal sex practices, Halperin (1999) estimated that in terms of absolute numbers, approximately seven times more women

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than men who have sex with men (MSM) engage in unprotected RAI in the United States. Development of a protective alternative to condoms is urgently needed and of high public health significance. Rectal microbicides, compounds currently under development that could be applied inside the rectum to eliminate or decrease the chances of sexually transmitted infections (STIs), including HIV (Mantell et al., 2005), hold promise as such an alternative.

To become a good STI prevention option, rectal microbicides need not only to be efficacious against HIV but products that people are able and willing to use correctly and consistently. This latter issue is generally referred to as "acceptability" (Severy & Newcomer, 2005). Acceptability is not a static quality of a method. It is influenced by a host of factors that accompany typical anal sex practices, including preparatory activity, lubricant preferences and use, sensory experience and partner response, and the synergy of practices and preferences with actual product formulation, delivery method and instructions for use. Microbicide acceptability also will be conditioned by the wider social and relational context in which the method, is used, encompassing prevailing norms for safer sex and its negotiation, power differentials in relationships, and partnership type.

To date, studies examining rectal microbicide acceptability have focused exclusively on MSM (Carballo-Diéguez et al., 2001; Carballo-Diéguez et al., in press; Celum, et al. 1999; Gross, Celum, Tabet, Kelly, Coletti, & Chesney, 1999; Marks, Mansergh, Crepez, Murphy, Miller, & Appleby, 2000; Mauck et al., 2004; Rader et al., 2001; Tabet et al., 2003). To effectively develop and promote rectal microbicides for heterosexually active women, it is critical to understand factors likely to influence product formulation and use—that is, whether women prepare for anal intercourse using douches or enemas; whether anal sex occurs in the context of other sexual behaviors and is planned, allowing for preparatory practices, or happens spontaneously; typical condom practices for both vaginal and anal intercourse; if lubricants are used (critical as many microbicides under development are formulated as a gel/lubricant); type of lubrication, how it is applied, by whom, in what amount and how often during sex; and knowledge of microbicides, including factors that might affect women's willingness to use them. Although prior research on the receptive anal practices of MSM indicates that both use of enemas prior to intercourse and use of lubricants during sex are common (Carballo-Diéguez et al., in press), we have little understanding of these practices among women who practice anal sex.

We do now know that the desirable characteristics required for rectal microbicides will not be the same as those required for vaginal microbicides. Nonoxynol-9 (N-9) turned out to be somewhat harmful for vaginal use (Van Damme, 2005), but much more harmful with rectal use. We also know that vaginal products should not be used in the rectum unless tested for rectal use (D'Cruz & Uckun, 2004). It is unclear what impact the negative findings from prior vaginal microbicide trials of N-9 (Stephenson, 2000) and most recently cellulose sulfate (World Health Organization, 2007) may have on women's willingness to use a microbicide.

Given the scant scientific knowledge available on this topic, exploratory qualitative research is urgently needed to understand the anal sex practices of heterosexually active women. This article focuses on a qualitative study of women's anal sex practices that was grounded in a broad framework that attempted to capture the more nuanced attitudes, experiences, and contexts that likely will affect use of the eventual

product (see Severy, Tolley, Woodsong & Guest, 2005, for a discussion of pertinent theory).

METHODS

The data on which this analysis is based were collected as part of a study of rectal microbicide acceptability conducted at Fenway Community Health (FCH) in Boston, MA. FCH was founded in 1971 and has developed into the largest provider of medical, mental health, and community education for gay men, lesbians, bisexuals, and transgendered individuals in New England and services the broader community as well. FCH includes a research department with a full time staff of 38 and is a lead site for the National Institute of Allergy and Infectious Diseases' HIV Prevention Trials Network (HPTN), coordinating multiple HIV prevention studies at sites in Boston. The design and procedures used in this study were approved by the institutional review boards of both the New York State Psychiatric Institute and FCH, where participants were seen.

INCLUSION/EXCLUSION

Investigators sought to recruit 28 women distributed in approximately equal numbers of African American; Latina; European American; and Asian/Pacific Islander, or other or mixed-ethnicity women in the study. Women were required to identify as female, be 18 years of age or older, be HIV-negative, report having had unprotected anal intercourse in the prior year with a man of unknown or serodiscordant HIV status, and report at least three episodes of anal sex in the past year. Potential participants also were required to feel comfortable with spoken English.

RECRUITMENT

Women were recruited through flyers; palm cards; outreach at community based organizations, colleges, and at community-events; Internet and print media advertising; referrals through other studies or staff FCH; and word of mouth.

SCREENING

Women were initially screened for eligibility over the phone. After being informed of the study objectives and procedures, they were asked where they heard about the study; age and date of birth; comfort level with speaking, reading, and writing in English; and racial/ethnic identity. Respondents were then asked how many times they had had anal sex in the last year, whether or not any of those episodes were without a condom, the HIV status of the partner(s), how these partners disclosed their status, whether the respondents had any reason to doubt their partners' self-reported status, the respondents' own HIV status, if she had participated in another study involving an investigational drug within the past year and if she and others had always considered her to be female. If respondents were deemed eligible for this study they were then invited to schedule an appointment for study enrollment and completion.

STUDY PROCEDURES

Eligible and interested participants reported to FCH for a one time, face-to-face meeting with a female interviewer. At this visit, participants were assigned unique identifier codes, given a brief overview of the study procedures, rescreened to ensure study eligibility, and asked to review and sign the study informed consent. Participants were asked to fill out a demographic questionnaire that asked about their age,

education level, racial/ethnic identity, gender identity, sexual orientation, work/student status and personal income. The interviewer began the assessment by informing study participants of her credentials as a sex interviewer and normalized the experience and conversation about anal sex. She then asked participants about their most recent, first, and general experiences with anal sex; their rectal hygiene practices; their lubricant and condom use; their feelings and attitudes about anal sex; their perception of others' views about anal sex; their personal concerns about HIV/STIs; and their knowledge, expectancies, and any marketing ideas regarding microbicides. In line with incentives provided in other studies at FCH, upon completion of the study procedures, participants were given a \$50 incentive.

DATA ANALYSIS

Qualitative interviews were tape recorded and transcribed. Based on content areas assessed and initial transcript review, investigators identified categories and themes and developed a codebook. Using the software NVivo, all transcripts were coded independently by staff members who then compared the codes, compared discrepancies, and discussed them until consensus was reached. Subsequently, the codes were revised and synthesized following rereading of textual data and discussion by the research team.

RESULTS

DEMOGRAPHICS

Twenty-eight women participated in the study. Nine women were African American, seven Latina, seven European American, two Asian/Pacific Islander and three other. Mean age of women was 29.5 ($SD = 6.62$; range = 18–55 years old), median education was “some college,” and median annual income was \$30,000.

PREPARATION FOR ANAL SEX

When asked about use of douches or enemas to prepare for anal sex, 24 of the 28 women indicated that they had never rectally douched, although four women had experience with vaginal douching, and one woman reported that she typically douched after anal intercourse. Two women had never heard of enemas or douches.

Only three women reported using a douche or enema to prepare for anal sex. A 41-year-old Latina described additional, more elaborate preparatory rituals:

There's a lot of care and upkeep to maintain, you know, that area. And you don't want it to be where like (the anus) gets loose, and that can happen. So you have to do things to, you know, keep it tight and . . . then you like to be attractive. So sometimes, you have to, take care of the hairs—which is painful—and bleach the area to lighten it up, you know, keeping it attractive . . . I know for a fact that people that do not have anal sex aren't even aware—You know, like I don't think a lot of people have heard of anal bleaching . . . So there really is a lot that goes into it to . . . maintain a good-looking booty.

When probed about other activities they might engage in to prepare for anal intercourse, one 24-year-old Asian woman indicated, “I try to go to the bathroom before.” Another woman mentioned that she makes sure she has a lubricant on hand, and three women described the importance of adequate physical and mental stimulation. For example, a 34 year-old Caucasian woman explained that in addition to foreplay, “Then there's relaxation, really learning to relax and find a comfortable position.”

ANAL SEX IN THE CONTEXT OF OTHER SEXUAL PRACTICES

The preponderance of respondents said they practice anal sex in conjunction with vaginal intercourse, invariably with vaginal preceding anal, although almost half ($N = 12$) indicated that, on at least one occasion, anal sex was the only sexual activity that occurred during a sexual encounter. Among those who ever had sex occasions when only anal sex was practiced, one woman (34-year-old Caucasian) described practicing anal sex with her first partner in order to preserve virginity, another (18-year-old African American) indicated that anal sex occurred on one occasion because her partner "ended up in the wrong hole," one woman (40-year-old African American) typically engages in anal sex during her period, another (20-year-old African American) mentioned engaging only in anal sex late in her first pregnancy, and two women (21- and 27-year-old Caucasians) reported that anal sex was used for birth control. Only a few women indicated that anal sex was practiced as the sole sexual activity at least sometimes versus once or rarely.

CONDOM USE AND ANAL SEX

Condom use for anal activity was rare, with 23 women reporting no condom use by their partners at last anal intercourse. Of these, most reported that condoms were used neither for vaginal nor anal sex, although three women reported their partners used condoms for vaginal intercourse, in two cases removing the condom prior to anal sex, while in the other case the condom broke during vaginal intercourse, prior to anal sex. Reasons volunteered for nonuse included not having a condom on hand, never using condoms with a primary partner because anal sex felt painful when condoms were used, and in the case of a woman who was paid for sex, because she was paid more for condomless sex.

Among the five women who reported condom use for anal intercourse at last sex occasion, only one (29-year-old Caucasian) indicated that separate condoms were used for vaginal and anal sex: "He actually changed it right before us having anal sex because he ripped the condom."

LUBRICANT USE WITH ANAL SEX

Whether Lubricant Was Used. Somewhat less than half of the women used a packaged lubricant product at last anal sex occasion. The rest relied on saliva and vaginal fluids, and a few women used no lubrication at all. A few women relied on a prelubricated condom and used secretions from oral and/or vaginal intercourse to provide additional lubrication.

Type of Lubricant Used. Women who reported the use of a packaged lubricant at last anal sex occasion ($N = 12$) used a range of products—water-based lubricant, petroleum jelly, or, in one case, massage oil. Use of baby oil and Crisco® (vegetable shortening) also were reported as lubricants that some women had used in the past. Most women who had prior experience with different lubricant products preferred water-based lubricants, citing texture and feel during sex. For example, one 24-year-old Caucasian woman stated, "I love the texture of [K-Y jelly] . . . I just feel like it's like my natural juices." Some women also preferred oil-based lubricants, with one 55-year-old African American woman stating, "It's more thicker and it doesn't hurt as bad. But the K-Y jelly is kind of thin, so it doesn't work as good as the Vaseline [petroleum jelly]."

Who Supplies Lubricant. Among women who used a packaged lubricant at last anal sex occasion, half indicated that their partner provided the lubricant: "He had [petroleum jelly] at his house" (46-year-old Caucasian); "When it comes to sex stuff, I don't spend on it. I have other people spend their money" (20-year-old Hispanic).

Among women who had ever used a packaged lubricant product, most indicated that they had purchased it at a pharmacy, drug store, or sex shop, paying between U.S. \$3 and \$10 for the product. Several who had used such a product stated that they'd obtained it free from a clinic or sex shop. One 40-year-old Caucasian woman, with past experience using petroleum jelly, indicated that she would not specifically purchase a lubricant: "Occasionally I may have used Vaseline, but I wouldn't go buy anything off the shelf."

Partner Influence on Type of Lubricant. Most women did not feel that partner preferences regarding lubrication guided the lubricant used during sex. Three women had no idea about their partners' attitudes toward different products, with one 27-year-old Latina gel user stating "[We] never really talked about it, actually." Nine women indicated that they felt their partners had no preference, with three of these suggesting that partners might prefer *no* lubricant: "He doesn't care. If it was for him, he said, he would use nothing" (27-year-old Latina). Only two women specifically indicated that their use of lubricant was determined by their partner's preference.

Application of Lubricant. Partners usually applied the lubricant—whether saliva, vaginal fluids, or a packaged product—to their penis and the woman's anus. Of the 25 women who reported that some type of informal (vaginal fluids, saliva) or packaged lubricant was used at last anal intercourse, 6 stated that they relied on vaginal fluids only, 13 stated that the lubrication was applied by the partner, 5 women indicated that they applied the lubricant, and 1 stated that both she and her partner applied lubricant, in that case a formal "lube."

Reapplication. Some women were unclear about whether reapplication occurred, particularly those whose partner applied the lubricant. For example, when asked about reapplication at last intercourse, one 20-year-old Middle Eastern woman who relied on partner's saliva for lubrication responded: "I don't know. Um, this past most recent time, yes. No. Because we didn't. I'm trying to think. Honestly, I don't really know, because I'm usually facing the wrong way—he kind of just keeps control of that situation." Of the 12 women who used packaged lubricants at last intercourse, 3 reported no reapplication, one woman indicated that lube was re-applied once, 5 women reported lube was reapplied twice, and 2 women reported frequent reapplication: "He did it a lot" (32-year-old African American).

Amount of Lubricant. Many women had difficulty estimating the amount of lubricant used. Comments from the women below illustrate the challenges faced in estimating an amount:

He used to put it abundantly the first time and then it would never be reapplied. Because there was no visual control, I was already lying and he was behind me, I could not identify visually, but I know he put a lot on his penis and he would put in my rear. Probably, according to the sensations, it would be like that (20-year-old Caucasian)

He applied it on himself. I don't know. I'm not really sure what he did. I wasn't paying attention. But that was enough. I don't think he really kind of covered it up with all this lube . . . but I guess a palm-sized amount. (27-year-old Caucasian)

Although women often were unclear about the amount, all but one of 12 women who used a packaged lubricant at last anal intercourse tried to provide an estimate. Women's estimated amount used included "a teaspoon," "dime-sized," "two to three squirts," a pre-packaged "pillow packet," "lots," and "abundant."

KNOWLEDGE OF MICROBICIDES

Seventeen women had never heard of microbicides prior to coming for their interviews. Among the 11 who had heard about them, most were uncertain of where they'd gotten their information, although 1 woman recalled hearing about microbicides from a friend, 1 heard about them through participation in a previous research study conducted at Fenway, and another heard about them during a women's rights march in Washington. Among those who knew of microbicides, degree of knowledge varied. Eight women were aware that microbicides could possibly prevent HIV infection, seven knew that these substances are currently under investigation, and six women had heard that microbicides were gels that could be used during sex. While most knowledge was cursory, three women offered more extensive comments. One 41-year-old Latina understood that microbicides "are lubricants that are spermicides as well as a lubricant." Another woman (18-year-old Latina) had not only heard about microbicides' potential rectal use but also described their possible use as an alternative to condoms:

I've just heard that now they're coming up with that lubricant to prevent any kind of disease or HIV through anal sex and I was like, oh, it's even better than regular lubricant. It's even better for people who do not like having condoms and you know, it will prevent them from getting HIV or other kinds of disease.

Another woman (36-year-old African American) was aware that microbicides were being developed using different formulations, and mentioned the possibility of covert use:

Well, so far I've heard that it's a new product that's going to be tested to help prevent HIV, or at least minimize the risk of it, and it's either going to be a suppository or like a gel or a lotion. And women can use it without their partners' knowing that they're using it. Or integrate it while they're having sex.

KNOWLEDGE OF N-9 AND ITS IMPACT ON POSSIBLE MICROBICIDE USE

Seventeen women had no knowledge about N-9. Five women correctly indicated that N-9 is a spermicide, one woman described it as a product "That it can give you a yeast infection" (41-year-old African American), two mentioned that condoms may be lubricated with N-9, and three incorrectly described N-9 as being effective against HIV. Only two women were aware of the negative trial findings, one of whom, a 38-year-old Caucasian, reported that those findings would affect the way she viewed future microbicides:

Respondent: I've heard that I think that a while ago they said that it would help prevent HIV and things. And then they found out that it didn't or something.

Interviewer: How do you think that knowing that it turned out not to be effective in preventing HIV will affect your interest in a new product that scientists say will work?"

Respondent: Maybe a little—you know, I'd, I'd be a little skeptical.

Interviewer: Are there things that would sort of help your skepticism?"

Respondent: I guess, maybe, um, I don't know. Maybe just having like more of like scientific proof or something.

FACTORS AFFECTING WILLINGNESS TO USE A MICROBICIDE

Participants uninformed about microbicides were told that microbicides are products currently under development in the form of gels, foam, or suppositories that could be used during sex as a lubricant and could help to prevent HIV. The interviewer asked all women, "What kinds of things would make you want to try a microbicide?"

Combined Lubricant and Preventive Method. Many women were enthusiastic about the idea of a lubricant that would prevent HIV. One 21-year-old Caucasian woman remarked:

Well it's just logical if you are using lubricant anyways and there could be some kind of substitute for lubricant that would give you both the pleasure and the protection. So, it doesn't really become a choice. A person would choose the second one. Why just the lubricant when you can also get the protection?

Use Without Condoms. Half of the women who were in favor of the idea of a lubricant that could help to prevent HIV provisioned their possible use of a product on being able to use it without condoms: "If you don't have to wear no rubbers, like, probably" (20-year-old African American). Three of those women linked their objections to combined condom and microbicide use to issues of product effectiveness. One 22-year-old Asian woman stated: "It has to be at least 99.999% effective. Otherwise, why?" Another observed:

Safety. Percentage. You know, if you're telling me it's 80, or even if it's 85% of the time, I don't want to try it. I don't want to waste my time and my money on something I need to use a condom with it. (46-year-old Caucasian)

Partial Product Effectiveness. Only three of the seven women who spontaneously mentioned concerns with product effectiveness indicated that they would be willing to use a microbicide should it prove partially effective. One of them also mentioned that a product should be FDA approved and have few side effects, adding:

I would still use it along with condoms because like I said condoms can break and there could be an extra protective layer in case that were to happen. You can never be too sure. (19-year-old African American).

No negotiation. Four women mentioned that they found the idea of a product women could use without having to negotiate with a partner important: "I think microbicides would be a huge step forward for women, um, you know, because that puts it in your control" (20-year-old Caucasian). Two women felt that it was important that a product could be inserted prior to sex. Another elaborated:

The thing, the thing that I like about the idea of it is getting, is giving, is taking condom negotiation out of the factor. And giving the female the power to take care of herself. Because I do think people are responsible for their own health, and I do take responsibility for times when I've had unprotected sex, but I also think that the power relationship is really hard. And I can't put a condom on myself. That's not a possibility—I mean, you know, that doesn't work. So the idea of having something that you can do. And especially if it's something that can be done with, they, the other person, doesn't even have to know. I think that's really phenomenal (27-year-old Caucasian)

Sensation During Sex. A few women mentioned the importance of how the product might affect sensation during sex, with one 21-year-old Caucasian women expressing interest in a product that "would give you both the pleasure and the protection."

Ease of Use. Two women mentioned that ease of product use was an important consideration. One 22-year-old Asian woman remarked that "it's got to be fairly easy and accessible, in order for me to consider using it. If it's too much of a hassle, you know, forget it."

Use for Both Vaginal and Anal Intercourse. Several women stressed that it was important that a microbicide be useful during anal as well as vaginal intercourse. One 40-year-old African American woman stated:

I'm not sure if you're aware with anal sex that if you have vaginal sex and then you have anal sex that you're not supposed to go back to having vaginal sex and the reason why that is is because you can catch a UTI, urinary tract infection, and I have had that happen to me. So it would be helpful if that microbicide helped with that as well because that is one of the downfalls if people don't know that.

Two women felt that it was important that microbicides prevent pregnancy as well as anal and vaginal STI. As one 24-year-old Asian woman stated: "If you pitch it to me . . . that this can be contraceptive as well . . . I will use it. Because I am very obsessed with not getting pregnant right now."

Two women specifically mentioned the challenges of marketing a rectal microbicide, in both cases arguing that an exclusively rectal product would be a hard sell for women. In the words of one 27-year-old Caucasian woman:

And that's, you know, that's the thing with a microbicide or whatever you're talking about that you have to figure out a way to take that moralistic spin out of it. And I guess my question would be, the difference between anal and vaginal, and would there be a difference or would this be, you know, a product that had to be marketed, like where people go to the pharmacy and everybody's like, "Oh, you have anal sex." Or is it, you know, something that could be marketed in the form of a lube that would go either place that would just be kind of, you know, you pick up your condoms, you can pick up your lube.

Cost. Cost was an issue for six women, with all recommending that either the product should be available very cheaply, free, or through insurance. One 33-year-old Latina indicated that if the product were not fully effective, she and others would be more likely to use the product only if it were provided at no cost.

DISCUSSION

This study highlights several behavioral and contextual aspects of women's heterosexual anal intercourse experiences that have important implications for formulation and promotion of a rectal microbicide.

Most women in this sample reported practicing both vaginal and anal intercourse during the same sex occasion, with vaginal sex typically preceding anal intercourse. Although condom use for vaginal intercourse was low, condom use for anal sex was even lower. Even among the few condom users, women did not follow best safer sex practices: Only one woman reported using separate condoms for anal and vaginal in-

tercourse, and four women reported that the same condom was used for both anal and vaginal sex, with vaginal insertion following anal intercourse. These data underscore the need for additional protective options beyond male condoms.

Data also indicate that a rectal microbicide in the form of a douche or enema is unlikely to appeal to women who practice anal intercourse, both owing to women's limited experience with rectal enemas and because anal sex often is not an anticipated activity. Because many women use lubricants for anal sex, a microbicide that could serve as a lubricant could be very appealing to women who practice anal intercourse. Indeed, many women were enthusiastic about a lubricant that could prevent HIV and felt that this was a critical marketing message. A microbicide formulated as a water-based lubricant could have the additional advantage of replacing the use of oil-based products, which have the potential to break down condoms.

However, even though a gel with lubricant properties seems a promising delivery vehicle for a rectal microbicide, challenges remain. Prepackaged lubricants were not necessarily on hand, although most women had experience with such products. Marketing messages to encourage and normalize the use of water-based lubricants, perhaps emphasizing their pleasure-enhancing feature, appear to be warranted. Women's "guesstimated" quantity of lubricant tended to be low, with the average amount reported at 1 to 2 teaspoons. The limited amount of lubrication used may prove challenging to the formulation and promotion of rectal microbicides, as volumes as high as 50 ml may be required for efficacious action (Carballo-Díez et al., 2007).

Although rectal microbicides enjoy wide advocacy support as a potential method to circumvent challenges posed by uncooperative partners and unbalanced power dynamics that could impede successful safer sex negotiation (Global Campaign for Microbicides, 2007; Mantell, Dworkin, Exner, Hoffman, Smit, & Susser, 2006), data in this report suggest that the issue is not so simple. Most women stated that their own preference—not their partner's—guided choice of lubricants used during anal sex, which suggests that women who practice RAI have a critical say in which lubricant product is acceptable. Yet partners play a critical role in applying lubricant, which may make women's initiation and control of rectal microbicides more difficult. Thus, although rectal microbicides indeed may facilitate female initiation of protection, male cooperation will be needed for use. This suggests that the design and marketing of rectal microbicides must address both insertive and receptive partners and that instructions for product use during RAI must be clearly targeted to both partners as well.

The general low awareness about microbicides suggests that a carefully crafted public awareness campaign will be needed when such products ever become available. Nonetheless, when informed about microbicides, women overwhelmingly expressed interest in a rectal product, and most were attracted to the idea of a lubricant that would offer protection from STIs. Some felt it was important that a microbicial product offer pregnancy protection as well, and even women who did not mention pregnancy protection as important indicated that a product intended for rectal use would have a more receptive audience if it could be used during vaginal intercourse as well.

Women were divided in terms of their willingness to use a rectal microbicide that required use of a condom as well. Although some women were clear that they would continue to use condoms with a product that was not highly efficacious, others stated that they would not use a product at all unless they could do so without con-

doms—which is ironic and somewhat perplexing, given the low rates of condom use at last anal intercourse in this sample. It is probable that a first generation vaginal microbicide will be significantly less effective than condoms in preventing infection, with two reports supporting the potential of a microbicide at even 50% condom efficacy to have positive population-level impact, conditioned on specific risk and usage assumptions (Foss, Vickerman, Heise, & Watts, 2003; Smith, Bodine, Wilson, & Blower, 2005). Given this, it is critical that additional research more thoroughly explore how diminished preventive efficacy will be understood by women, and how product acceptability will be provisioned by product effectiveness, under what circumstances, and for which women.

Several women were attracted to the potential of rectal microbicides for decreasing the challenges of negotiation, circumventing negotiation through surreptitious use, or by empowering women to negotiate a method that may not be (as) male dependent. Ease of use, a product that would enhance sensation during intercourse, and reasonable cost also were mentioned as potentially compelling product attributes.

The data presented here are from women who volunteered for a study focused on anal sex practices, and they constitute a unique group at least to the extent that they were willing to discuss in detail a subject that is socially stigmatized. Nevertheless, this study targeted precisely those women who may benefit the most from the availability of a rectal microbicide—women practicing anal intercourse with partners of unknown serostatus. These findings should contribute to improved development and positioning of a rectal product acceptable to this population.

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