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Context of Acceptability of Topical Microbicides: Sexual Relationships

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Abstract

Domains central to the effects of sexual relationships on the acceptability of a vaginal protection method were explored in 14 focus groups and 38 in-depth interviews with women and men recruited from a health department's sexually transmitted infections (STI) and family planning clinics. Findings indicate that acceptability depended on a couple's relationship type, classified as serious, casual, or "new." Potential barriers to communication about product use may be overcome through direct or indirect covert use, depending on relationship type. More men than women thought women should always tell their partners if they use microbicides, regardless of relationship type. Results indicate the importance of the relationship context in understanding the likely acceptability of using microbicides, and perhaps any method of STI/HIV protection.

The incidence of Human Immunodeficiency Virus (HIV) infection is growing faster for women than men, and the major cause of infection for women is heterosexual contact. Women now comprise half of HIV infections worldwide (Annan, 2004; Population Council, 2001); they make up the fastest growing population of new HIV infections (Malow, 2001). In the United States, Acquired Immune Deficiency Syndrome (AIDS) is the fourth leading cause of death for women ages 25 to 44 (National Institute of Allergy and Infectious Disease [NIAID], 2000), and the most frequent source of exposure is heterosexual contact across all race and ethnic groups (Centers for Disease Control and Prevention [CDC], 2003). Although condoms could protect women from HIV infection, many women cannot ensure that their male partners use the male condom nor gain their consent to use female condoms (e.g., Beadnell, Baker, Morrison, & Knox, 2000; Karim, Karim, Soldan, & Zondi, 1995; Lauby, Semaan, O'Connell, Person, & Vogel, 2001; Luke, 2003; Mill & Anarfi, 2002; Pulerwitz, Amaro, De Jong, Gortmaker, & Rudd, 2002; Tang, Wong, & Lee, 2001). Apart from an HIV vaccine, hope for the protection of many women rests on developing topical or vaginal microbicides.

Microbicides are chemical substances that, put into a carrier such as a gel, suppository, cream, or film, could be inserted into the vagina or rectum to prevent or reduce transmission of sexually transmitted infections (Alliance for Microbicide Development, 2003). Various forms being tested would work by destroying the pathogen, blocking its entry into or fusion with target cells, or inhibiting its replication once inside the target cell (Rockefeller Foundation, n.d.-b). While more than 50 products are in development, 16 are in clinical trials, including approximately 8 have been tested in Phase 1 (pharmacokinetic and safety); 4 in Phase 2 (efficacy); and 4 are expected to be in Phase 3 (expanded safety and efficacy) trials in the near future (Alliance for Microbicide Development, 2004). This is an opportune time to investigate the acceptability of vaginal microbicides to potential users: Findings could be obtained in time to help formulate the product characteristics and develop different ways to present or market the product to appeal to various high risk groups.

Topical microbicides have several features that confer significant advantages over condoms: they allow (a) skin-to-skin contact during sexual intercourse and (b) the possibility of discrete or even covert use without the partner's knowledge, consent, or cooperation, as well as (c) use with male condoms for additional protection. Because of the special needs of women who cannot obtain their partners' cooperation in using condoms, the possibility of covert use is one of the most promising features of microbicides. This article reports on findings on the role of relationship factors in men and women's perceptions of vaginal microbicides derived from the qualitative phase of a study conducted in North Carolina.

Importance of Relationship Factors

Existing theories of behavior change that seek to explain the adoption and practice of STI/HIV protection focus on individuals (e.g., Transtheoretical Model [Prochaska, Redding, Harlow, Rossi, & Velicer, 1994] and the AIDS Risk Reduction Model [Catania, Kegeles, & Coates, 1990]); they do not take into account broader issues driving risk behavior (e.g., Fisher & Fisher, 2000; Harvey, 2001; Logan, Cole, & Leukefeld, 2002; Miller & Neaigus, 2001). Chief among these issues is that sexual relationships involve two people who intimately interact with each other. The nature of these relationships may influence women's perception of the need for protection, as well as their willingness and ability to protect themselves. Even if a woman recognizes that she is at risk of infection by her partner, in some cases she may not be able to act independently of him to protect herself.

Researchers have recently called for and conducted empirical studies concerning the effects on women's HIV risk of gender roles, relationship dynamics, and various dimensions of relationship power and their basis in broader structural and cultural forces (Amaro, 1995; Blanc, 2001; Castañeda, 2000; Harvey, Beckman, Browner, & Sherman, 2002; Harvey, Bird, Galavotti, Duncan, & Greenberg, 2002; Impett & Peplau, 2003; Jenkins, 2000; Jewkes, Levin, & Penn-Kekana, 2003; Miller & Neaigus, 2001; O'Leary, 2000; Parker, 2001; Parker, Easton, & Klein, 2000; Pulerwitz, Gortmaker, & DeJong, 2000; Pulerwitz et al., 2002; Quina, Harlow, Morokoff, & Burkholder, 2000; Reid, 2000; Sherman, Gielen, & McDonnell, 2000; Simoni, Walters, & Nero, 2000; Vanwesenbeeck, van Zessen, Ingham, Jaramazovic, & Stevens, 1999; Wingood & Diclemente, 2000). As these authors point out, relationship issues such as nature or type of relationship, relative power, trust, commitment, emotional closeness, satisfaction with the relationship, the importance of sexual intercourse, communication about sexual history and behavior, decision-making about sexual matters and protection, and partner abuse influence all aspects of the decision to use a product (as well as subsequent use adherence).

Research on condom acceptability also suggests the importance of these factors (DiClemente, 1991; Ford & Norris, 1995; Hingson, Strunin, & Berlin, 1990; Hingson,

Strunin, Berlin, & Heeren, 1990; Nathanson, Upchurch, Weisman, Kim, Gehret, & Hook, 1993; Overby & Kegeles, 1994). In particular, one of the most consistent findings in the literature on condoms is that they are more likely to be used with casual partners than with the main or steady partner, and in the beginning of relationships (e.g., Anderson, Wilson, Doll, Jones, & Barker, 1999; Carroll, 1991; Ellen, Cahn, Eyre, & Boyer, 1996; Ford & Norris, 1993; Macaluso, Demand, Artz, Fleenor, Robey, Kelaghan, & Cabral, Hook, 2000; Plichta, Weisman, Nathanson, Ensminger, & Robinson, 1992; Sacco, Rickman, Thompson, Levine, & Reed, 1993; Santelli, Kouzis, Hoover, Polacsek, Burwell, & Celentano, 1996; Woodsong & Koo, 1999). Furthermore, concerns about partner reactions and communication about method use have been found to influence the acceptability of female condoms (Bogart, Cecil, & Pinkerton, 2000; Choi, Gregorich, Anderson, Grinstead, & Gomez, 2003; Hirky, Kirshenbaum, Melendez, Rollet, Perkins, & Smith, 2003), which like topical microbicides, are applied by the woman. Recently, authors have called attention to other female methods, such as the diaphragm and cervical cap, as possibly offering protection against STIs/HIV (Ellertson & Burns, 2003; Harvey, Bird, & Branch, 2003). They point out that men's attitudes and reactions to the use of these methods could affect their acceptability to women as well (Harvey et al., 2003; Powell, Mears, Deber, & Ferguson, 1986).

Many authors have noted that gender roles, which are culturally prescribed and sanctioned, shape women's views of the centrality of their relationships to their identities and may place them in positions of unequal power vis-à-vis their male partners (e.g., Bowleg, Belgrave, & Reise, 2000; Christianson, Johansson, Emmelin, & Westman, 2003; Gutierrez, Oh, & Gillmore, 2000; Pulerwitz et al., 2000; Pulerwitz et al., 2002; Reid, 2000; Seage, Holte, Gross, Koblin, Marmor, Mayer, & Lenderking, 2002; Sherman et al., 2000; and Simoni et al., 2000). Evidence suggests that the higher levels of risk behavior observed among African American and Hispanic men than Caucasian men (Choi, Catania, & Dolcini, 1994) may be supported by social and cultural norms (Logan et al., 2002). Norms which tolerate or even accept male high-risk behavior among these racial and ethnic groups, coupled with some women's economic dependence on partners (particularly among low-income women) and susceptibility to intimate partner violence make issues of control and empowerment central to the acceptability of a new protection product.

Study Design

Our study, "Acceptability of Microbicides across Risk Groups and Time," investigates a wide range of product attributes and individual, relationship, and sociocultural factors that are likely to affect the adoption and continued use of microbicides. To investigate possible differences across social and cultural groups, participants included African Americans, Latinos (nearly all of whom were recent immigrants from Mexico), and Caucasians. The study includes two phases. The first phase used primarily qualitative methods, aimed at exploring domains identified primarily in the literature and developing survey instruments that include more replicable measures of acceptability and associated factors. In the second phase, we implemented a short-term longitudinal survey using these instruments.

The present article reports results based on data collected during the qualitative phase. Data were collected from mid-2001 to mid-2002, primarily from female clients seen in the STI and family planning clinics of a large public health department in North Carolina, their male partners, and other men.

We used multiple qualitative methods to obtain a deeper understanding of women's and men's perceptions and experiences that relate to acceptability of vaginal microbicides. To develop familiarity with the social and cultural environment of the research subjects, we first

conducted interviews with 23 health professionals to obtain their understanding of their clients' STI/HIV prevention attitudes, behaviors, and likely attitudes toward vaginal microbicides. We also conducted participant observations of the clinics to understand clinician-patient interactions. We used the insights obtained from the clinicians and observations to help us develop a focus group guide to supplement and elaborate on topics suggested by the literature on HIV prevention.

We conducted focus groups to explore domains of meaning and community norms and values (Krueger, 1994; Morgan, 1993) that influence "safe sex" behaviors and use of products inserted in the vagina. Since the focus group method is not suited to collecting data on personal experience of a sensitive nature (Seidman, 1991), we also conducted a number of individual, in-depth interviews with people who had not participated in the focus groups to collect personal data on many of the same issues. We used focus group data to develop the interview guides.

At the end of each focus group and in-depth interview, we collected quantitative data from participants in a short, self-administered questionnaire.

Topics of Inquiry

The focus group and interview guides included a wide range of topics, a subset of which are reported in the present article; these are listed in Table 1. Based on the literature reviewed above, we expected that many of the responses to our questions about future microbicide products would be contingent on the type and nature of relationships in which they would be used. Thus, we explored types of sexual relationships and norms for communication within those relationships, followed by more specific discussions about vaginal microbicides (explained as a future method that women could use) within the context of relationships.

The short survey asked questions about sociodemographic characteristics, perception of STI/HIV risk, and if women should tell their partners if they use vaginal protection products.

Recruitment

We recruited adult women and men and adolescents of both genders (ages 16–19). To be eligible to participate, females and males had to have engaged in heterosexual intercourse on average at least once a week. Recruitment of both men and women was conducted at STI and family planning clinics at the local urban health department. Potential participants were either approached directly by study staff, referred by clinic staff or another study participant (including female partners), or they responded to flyers posted in the health department. Participants were told that they would be reimbursed \$50 for their time. Table 2 shows the numbers of focus groups (14), and participants in interviews (38) and the short survey (133), by gender and race/ethnicity. Of the 15 males interviewed, 8 were partners of the women interviewed.

Data Collection

To ground the discussion of microbicides in actual use experience, we gave women two forms of vaginal lubricants that use the same delivery systems as those likely to be used for microbicides—a gel (Replens) and a suppository (Lubrin)—and asked them to use each at least once during sexual intercourse before participating in the focus groups or interviews. Both lubricants are over-the-counter products that offer no protection against STIs, HIV, or pregnancy.

To facilitate discussion of sensitive topics, focus groups were homogeneous in race/ethnicity, gender, and age (adult or adolescent). Focus group moderators and in-depth

interviewers were matched by sex with the participants, and, when possible, by race. We slightly modified focus group and interview guides to be sensitive to gender and age differences, and we conducted data collection with Latino participants in Spanish. Latino participants were given the choice of the language they preferred. A few chose English and were put with the English-speaking Caucasian focus groups or were interviewed in English. The health department has recently experienced a great increase in the number of Latino clients, nearly all recent immigrants, who speak little English.

Staff experienced in qualitative data collection conducted the focus groups and interviews. The study's senior qualitative research staff member conducted two training workshops for all data collection staff—one on conducting focus groups and one on in-depth interviews—using the instruments designed for the study and methods standards adopted for the study. In the focus group training, all staff practiced moderating a mock focus group discussion with other staff members. In the interview training, all staff were required to conduct a full tape-recorded interview with another member of the parent research institution (RTI), or a personal friend or acquaintance. The senior qualitative staff member then reviewed these interviews for quality, and her observations were reviewed at a final team meeting before data collection began.

We held focus groups in the health department conference rooms and conducted in-depth interviews primarily in the women's homes. If we also interviewed their male partners, female and male interviewers either conducted the interviews concurrently in separate locations of the home, or the male interviews were scheduled separately at a location convenient for the male participant.

We followed standardized procedures accepted for qualitative data to capture and analyze the data (Bernard, 2000; Denzin & Lincoln, 2000; Miles & Huberman, 2000; Ulin, Robinson, Tolley, & McNeill, 2004). We audiotaped focus group discussions, transcribed them, and checked transcriptions for accuracy. Spanish transcripts were translated into English and reviewed by the moderator to ensure accurate capture of data. We also audiotaped the individual interviews but did not transcribe them. Instead, the interviewer took detailed notes during the interviews and later expanded his or her notes by listening to the audiotapes. Staff who conducted Spanish interviews translated their notes into English and wrote the interview report in English.

All study procedures, including the informed consent forms and process, were approved by the Institutional Review Boards (IRBs) of RTI and the University of North Carolina at Chapel Hill. (The health department had an agreement with the University to use the latter's IRBs.) Women were administered a written informed consent, during which they had to be able to say in their own words that (a) the vaginal lubricants offered no protection against STIs, HIV, or pregnancy, (b) they understood the need to use the condoms provided to protect against STIs/HIV, and (c) they should continue to use their usual birth control methods if they did not wish to become pregnant. They then initialed written statements to this effect and signed the consent form. Because they were not given any products to use, men were administered a less elaborate, verbal informed consent.

Data Analysis

We used a grounded theory approach (Glaser & Strauss, 1967; Strauss & Corbin, 1990), with inductive and deductive coding to identify and explore themes that were identified in an iterative fashion throughout the initial qualitative research period (Bernard, 2000; Miles & Huberman, 2000; Spradley, 1979). This approach allowed us to examine responses to direct queries as well as emergent concepts and response categories. The coded data from multiple types of data sources (e.g., focus groups, in-depth interviews) could then be

examined together, to provide additional depth of meaning. Our article reports findings derived from this analysis approach. Since not all participants responded to questions about the emergent issues, it is inappropriate to attempt to quantify the qualitative results reported here. Rather, throughout the article we use “exemplar quotes” (Bernard, 2000, p. 444), to better illustrate aspects of a particular finding and the perspectives of our participants.

We imported all focus group transcripts and interview notes into QSR NVIVO software (Richards, 2002), a qualitative analysis software package used for coding and analysis.

A team of five analysts coded all documents. An experienced qualitative analyst served as coding supervisor and was responsible for training and overseeing the work of four additional analysts. As noted above, the team conducted the qualitative coding using a mixed deductively and inductively-oriented approach to the application of codes to lines of text data. The coding enabled efficient grouping and comparison of data. The full analysis study team participated in the development of a project codebook (MacQueen, McLellan, Kay, & Milstein, 1998), which reflected both a priori codes created in response to specific research questions and additional codes created in response to themes that emerged from the data. The codebook provided a description for each code, an example of its correct use, and inclusion and exclusion criteria for use.

To achieve a high degree of internal validity of data coding, we conducted intercoder reliability checks among the coders as well as with the coding supervisor to achieve an internal reliability of 85%, a standard accepted in qualitative research (Carey, Morgan, & Oxtoby, 1996; MacQueen et al., 1998). For the first few coding assignments, all interviewers separately coded the same documents, and the coding was compared line by line to ascertain coding agreement. We considered that coding agreement had been reached when analysts coded the same text under the same code. Discrepancies between the coders were discussed and consensus was reached through team meetings. At the beginning of the coding process, we made intercoder reliability checks more frequently to improve the coding as well as identify emergent codes that did not appear to fit the initial coding scheme. We continued making intercoder reliability checks throughout the coding process until approximately a third of the data was subject to such measures and we were satisfied that a high degree of intercoder reliability (85%) had been established.

The qualitative results presented in this article are based on summaries of the coded data.

Results from Short Survey Data

We first profile the participants of the focus groups and interviews, based on their responses to the short survey, to provide a context for the qualitative results to be discussed in the next section of the article.

Responses to the short survey showed the female participants had a median age of 25 and the male participants, 25.5. As expected, African American and Caucasian participants had attained significantly higher levels of education than the Latinos, most of whom were recent immigrants. Whereas 79% had a high school education or more among the former two groups, among Latinos, only 48% had a high school education or more ($p < .01$, chi-square test).

Participants were asked if they currently had each of the following types of relationship: (a) “steady” relationship (“a husband/wife, steady boyfriend/girlfriend, or other serious relationship”); (b) “casual” relationship (“casual boyfriend/girlfriend, less than serious relationship, or one-night stands”); or (c) a “new” partner (“someone you have recently started having a relationship with, but you don’t yet know if it will be serious or casual”).

Participants could mark more than one answer. The majority of both male and female participants (70% of men and 77% of women) had a steady relationship, about one-fifth reported casual relationships (22% of men and 15% of women), and 10% reported that they had a new partner (13% of men and 7% of women). None of these differences between men and women was statistically significant.

Significantly more African Americans and Caucasians reported casual partners compared with Latinos (21% African Americans, 27% Caucasians, and 3% Latinos; $p < .05$). In addition, the majority of Latinos reported that they live with a partner (85%) compared with fewer than one half of African Americans and Caucasians (37% and 41%, respectively; $p < .01$).

The participants did not perceive themselves to be at high risk of being infected with an STI or HIV. The survey question for focus group participants did not specify a time frame for considering their risk. However, the in-depth interview participants were asked the question in the context of the next 2 years. Some 47% of the women and 62% of the men answered that they had “not much chance” of getting an STI, and 55% of women and 62% of men said they had “not much chance” of getting HIV. Only 11% to 16% of men and women thought they had a “strong chance” of getting an STI or HIV. The remainder responded they had “some chance.” The differences between men and women in their perceptions of risk were not statistically significant.

In the short questionnaire, we also asked focus group and in-depth interview participants in separate questions about each relationship type whether “a woman should always tell her [partner type] if she is using a vaginal product [like a microbicide] for protection against STDs and HIV.” Although the majority of both women and men thought a woman should always tell her partner, regardless of the type of relationship, more men than women thought so (Table 3). Moreover, whereas the percentage of women responding “strongly agree” or “agree” declined steadily from serious to casual to new relationships, the same percentage of men (84.4%, 84.6%) agreed for both steady and casual relationships. Even for new relationships, three-quarters of the men thought women should always tell their partners (whereas half the women felt this way; $p < .05$). As we shall discuss later, the in-depth interviews revealed reasons why men feel so strongly about this issue.

Results from Focus Group and Interview Data

We discuss, below, our findings on relationship issues that will likely influence use of a future topical microbicide. We, first, discuss emergent values about risk-reduction behavior according to relationship type and how normative perceptions of risk in different types of relationships create a paradox for communication about the need for adopting prevention behavior. We then consider a number of scenarios that participants presented as potential opportunities to talk about microbicide use with their partners and next discuss women’s and men’s views about covert use. We observe that the paradox for communication illustrates a potential barrier to acceptability of future microbicides in serious, committed relationships and, thus, engenders a need for covert use within such relationships. We also note that norms accepting risk-reduction behavior in casual relationships may lead to microbicide use strategies that are less problematic, although no less covert. We conclude by comparing women and men’s views on whose responsibility it would be to ensure that microbicides were used.

Variation in Risk Perception and Behavior Among Relationship Types

Similar to other research on condom use at different stages of relationships (Frank, Poindexter, Cox, & Bateman, 1995; Woodsong & Koo, 1999), participants said that people

are more likely to introduce a new STI protection method at the beginning of a sexual relationship. Most people in sexual encounters with new partners do not know the partners' sexual histories, nor do they have expectations of monogamy. They acknowledge some risk of exposure to an STI and, thus, some need for protection.

Yes, I'm more likely to use with new relationships for a while until I feel like I could really trust them. (African American adult woman, interview)

For me in a new relationship I'm going to use all precautions because I don't know where it's going.... (African American adult woman, interview)

Although respondents reported that even in new relationships it can be awkward to introduce condoms, fearing being embarrassed or appearing to be promiscuous, the general consensus was that using some form of protection was more likely in new relationships and one-night stands.

Both female and male participants in focus groups and interviews expressed an apparently emergent social value endorsing a woman's right to protect herself from STIs, particularly in a new and/or casual relationship. Although participants expressed this as a normative value, in their personal behaviors they may not act upon such norms. The reason may be that it is difficult to carry out the norm (as with many norms) and, perhaps, because the value is not yet well established. As indicated in both individual interview data and personal experiences reported in the focus group setting, people have a difficult time taking what they believe to be the best course of action for risk reduction. However, respondents reported that use of a protection product (condoms) in new and/or casual relationships has become an accepted norm. It is seen as a demonstration of personal responsibility for protecting one's self, and in some cases, for protecting partners.

"The first time he and I had sex, we used a condom because, well, we didn't know each other's histories." (Latina adult, interview).

Another woman said, "If you are a single young woman today, it is your responsibility to protect yourself. If you don't want to get pregnant, you can buy a box of condoms just like a man can." (Caucasian adult woman, interview).

Once a couple has been together for a while or the relationship becomes more serious, participants considered it commonplace to discontinue condom use. The timeframe for this "cautionary" period can vary greatly, from a few days to a few months. Some respondents admitted that perceptions of a "safe partner" might be a fantasy, acknowledging that although monogamy agreements generally cover both partners, one partner might be faithful, whereas the other is not. Many male and female participants discussed experience of infidelities in their own monogamous relationships, highlighting their understanding that even those in serious relationships should not consider themselves free of risk for acquiring an STI.

A woman who had been married and got HIV from her husband said, "That doesn't mean everybody is like that but I have lost my, I have lost trust in men for their credibility of being a one-woman man." (African American adult woman, focus group).

"I got hos and I got my wifey. That's how it is. Every brotha think like this. You got your main chick. You treat her different than anybody else.... I don't give a damn about them other girls." (African American teen male, interview)

A Paradox for Communication About Risk

Our data indicated that emergent acceptance of the need to discuss risk and risk-reduction strategies, and norms for meaningful sexual relationships present a paradox for individuals in serious relationships. These individuals are supposed to talk about the wide range of issues that potentially affect their relationship, including pregnancy intentions, sexual fidelity, and the possible need to take precautions against STI/HIV transmission. Both male and female participants generally agreed that women in more serious relationships have a greater responsibility to discuss pregnancy and the need for STI/HIV prevention than those with shorter-term, less serious, and non-monogamous partners.

However, almost all of the male (particularly African American) participants stated that discussions of STIs and HIV/AIDS rarely occur with steady partners. When queried about potential microbicide use, participants considered that a woman in a serious relationship should not need to use such a product, since a serious relationship implies a level of agreement, trust, and faithfulness. Participants felt that such trust is a cornerstone for serious relationships, and it should, ideally, eliminate the need for protection. They noted that talking about the need for protection could harm this trust and raise suspicions. Thus, we observe that the types of relationships in which people are considered to have more responsibility to talk openly about such topics as a need for protection are the very ones where such need should not exist.

If you in a relationship, OK, relationships all spring back to love, honesty, compatibility, and communication OK, this my girl now, why I got to tell or ask her if she using something for, for STD. Where the hell she doing to catch it from? If we got a relationship, that means that's me and you. (African American adult male, focus group)

Specifically, participants felt that both men and women in established relationships would be concerned that talking about a protection product would imply infidelity and/or suspected infection of either partner. Several female participants stated that men would believe a woman was unfaithful if she introduced a microbicide product into a serious relationship, and almost all male participants held the same opinion.

Yeah, like if this your boyfriend and you tell him I'm using this and y'all been to the doctor with each other and you know each other's status, then you know he gonna feel like oh, she must be seeing other dudes, you know what I'm saying? (African American teen female, focus group)

I feel like you should be able to talk but the thing of it is, it's like in some marriages, me talking to my wife about condoms, then I'm telling her that I'm in the street. (African American adult male, focus group)

Even for less serious relationships, communication about the need to use a protection product is quite problematic, as the literature on condom use indicates (Woodsong & Koo, 1999; Hirsch, Higgins, Bentley, & Nathanson, 2002). Although participants reported that use of protection in new or casual relationships was the accepted norm, acknowledging a risk of acquiring an STI, some nevertheless felt that they would put a new or non-serious relationship in jeopardy if they suggested using a topical microbicide.

[Product use] would probably end a casual relationship because of trust issues; the lack of trust and your opinion of him is less. (African American adult woman, interview)

When a man and a woman get into a relationship right...you hope she ain't got nothing, but there are some thing you just don't come out and discuss like a business arrangement. (African American adult male, focus group).

Discussions of STIs could surface uncomfortable issues associated with past relationships, and this discussion in itself could potentially put the relationship at risk.

“That just might open doors to other things. She might want to know about your past relationships.” (African American male teen, focus group)

Some couples may choose to forego discussions regarding sexual history and opt to visit the clinic periodically for STI screening. As one teen respondent said, “We never talk about nothing like that. We don't have to worry about it. We go to the clinic like every two months.” (African American male teen, interview). In addition, participants reported that in any case it is still common to believe that a potential partner's STI status can be surmised by their outward appearance or lifestyle.

In most of the focus groups and in-depth interviews, when asked about a future vaginal protection product, participants said they believe that a woman in a steady relationship should openly discuss her reasons for wanting to use a product for STI prevention with her partner. At the same time, they acknowledge that women in such relationships should not need protection. With respect to new and casual partners, most men agreed that they would respect a woman who would initiate use of a female protection method. As a Caucasian male teen said in a focus group, “More power to her!” Again, this may be an emergent value that is not yet widely acted upon.

Participants believed that more couples do discuss the need to use methods for pregnancy prevention in comparison to STI prevention. Talking about the need for pregnancy prevention is less problematic than talking about STIs, as childbearing is long-term, whereas most STIs are considered to be treatable. “STDs are curable but a child is long-lasting. Guys are less interested in STDs than birth control because there's less risk.” (African American female teen, interview)

Furthermore, pregnancy prevention may not be stigmatizing. When asked if there is a difference between talking to their partners about preventing pregnancy versus STIs, most participants said talking about pregnancies was easier and “normal.” Talking about pregnancy prevention is potentially much more pleasant than talking about diseases and sexual history. We surmise that such discussions about birth control may provide some couples an opportunity to talk about the relationship and how children may fit into the relationship.

Yes it's a big difference man. I mean because usually, when talking to people about birth control, it's normal. It's like, okay, that's like something that you're not afraid to talk about. Something that people are more open to talk about. Child birth, pregnancy and all that good stuff.... That's more so, the natural consequence of having sex. But when you start to discuss STD's and the problem that can come from having sex, it becomes an issue. (African American adult male, interview)

Nevertheless, pregnancy prevention may not be something that men want to talk about either, particularly in casual or new relationships. Many men felt that they would leave it to the woman to bring up the need to use protection and if she did not, they would assume that she was protecting herself from pregnancy. Similarly, most men felt that women had the responsibility for using birth control, and if a woman was using it, the man would be less likely to wear condoms because the threat of pregnancy was reduced, and STIs were not as worrisome.

Timing of Communication: When to Tell Partner About Microbicide Use

As noted above, our participants acknowledged the difficulty in having discussions about their risk for STIs/HIV, regardless of relationship type. They also pointed out that the circumstances and timing of informing a partner about one's intention to use a vaginal microbicide would likely influence its acceptability and use. Although opinions differed with respect to different relationship types, many respondents felt that a male partner should be told what a vaginal microbicide product is for and why a woman would feel she needs to use it. Most respondents agreed that a person who has decided to use a microbicide should tell her partner soon after her decision, using a straightforward approach. In most situations, men and women thought that saying that the doctor had given it to them, or had told them about the product, would add credibility to the introduction of the product. However, some participants also thought that rather than presenting a microbicide as a straightforward protection product, they could circumvent the negative implications of introducing protection by presenting the new product as a sex enhancer, which had the added side benefit of providing protection. (We discuss this again when we consider covert use.) In general, however, participants acknowledged that people are reluctant to take actions—including talking about protection—that could interfere with sexual arousal and intercourse, as well as the aura of romance that surrounds it. Thus, the timing of telling is important.

When asked about the best time for a woman to tell her partner about her use of a vaginal microbicide, participants suggested a wide range of possible scenarios, including the following:

- Inform early—Many said they would prefer to discuss a microbicide soon after the woman has decided to use it, or during a regular conversation time (e.g., over dinner), giving them both an opportunity to discuss concerns.
- Intimate/private moment—Some respondents indicated that bringing up prevention concerns would best be received when the two were sharing some intimate moments together, talking about their sex lives. Many men said they would be open to any discussion as long as it did not ruin the heat of the moment. “I don't want it to be, you know, like brought up right...right before you're about to get something [sex] 'cause I don't want to...wonder if that shit [is] working.” (Caucasian adult male, focus group)
- Immediately before sex—Some men and women thought that right before sex would be the best time to inform a partner about intended microbicide use. They reasoned that this was a natural time to think about risk-reduction behavior but also that a man might be less likely to object after he is aroused. Some thought they could frame microbicides as a sex enhancer and, thus, bring it up “in the moment” as something new to add spice to the encounter.
- After sex—Some men and women felt that a man should be told after sex, so he would not make comments based on preconceived notions. If he noticed the product, and said something about sex feeling better or different, then they could talk about it. Although some men as well as women felt it is wrong to wait until afterwards to tell a partner, women were more likely to say it is the best time.

In general, men said they would agree to a woman's request to use a microbicide rather than turn down an opportunity to have sex, and further stated that in general, men should respect a woman's decision to protect herself. However, there was an expectation that a woman in an established relationship should not need to protect herself.

Covert Use

As mentioned earlier, much of the global interest in microbicides is based on the possibility that women could use them without the active participation of the partner and perhaps even without his knowledge. Thus, we explored this issue in some detail. Recall that women participating in this study were provided vaginal lubricants in the form of gels and suppositories (as proxies for microbicides) to use during intercourse before their interviews or focus groups. They were not advised whether or not to inform their partners before use, and in subsequent discussions or interviews, they were asked about their experiences in introducing the lubricants as well as their views on the potential for covert use. Some of the men in the focus groups and interviews were partners of the female participants, but others were not and therefore had not experienced intercourse using the lubricants. In both the focus groups and the in-depth interviews, men were shown a sample of the lubricant proxies and then asked similar questions about them.

In the focus groups and in-depth interviews, we asked participants under what circumstances and in what types of relationships people would likely use microbicides without informing their partner. Both men and women stated that, in principle, it should be acceptable to talk with partners about the use of an STI/HIV prevention product. Furthermore, most women felt that a woman should be able to use a product without being obliged to tell her partner. Participants acknowledged that a woman's decision to tell her partner about her prevention concerns was closely related to the type of relationship, the personality of the man, her relative power in the relationship, and her own level of trust with that partner. Taking these factors into account, many felt that covert use of a vaginal microbicide would be easier than having to cope with suspicions and accusations that would arise from raising the issue of protection.

Women's Views on Covert Use

The paradox involved in communicating about product use within serious relationships plays into perceptions about the appropriateness of using a vaginal microbicide without informing one's partner. As noted above, women in serious relationships are supposed to have less need for a protection product, and suggesting use of a microbicide within a committed relationship is expected to be problematic. This expectation will likely contribute to the need for covert use by women in this dilemma. Maintaining covert use over the long run in a serious relationship, however, may not be practical. It may be easier to resort to indirect covert use, as explained in a later section.

The apparent emergent norm endorsing women's right to protect themselves in casual relationships should eliminate the need to tell the casual partner:

I think it all depends on what type of partner you have 'cause if you have just a sex partner, then, no, it ain't none of his business, but if it's like your boy friend then, now I'm saying y'all can talk to each other like that. (African American teen female, focus group).

However, adult female participants reported a variety of reasons why they would tell a casual partner about using a product. These include concerns that he may be at risk of, or actually experience, a side effect like a "rash or irritation," that they would feel bad "holding something back from [their partner]," particularly because he may find out anyway (seeing the product wrapper in the trash can, feeling a difference in the vagina, etc.). However, women gave a greater range of reasons why a woman in a casual relationship would not tell her partner. These include (in decreasing order of frequency) the following:

- fear that bringing up the topic of STI/HIV prevention would suggest to the partner that the woman had an STI (and conversely, covert use might keep a partner from wondering if she already had an STI);
- fear that bringing up the subject of prevention would arouse trust issues as mentioned above;
- fear of abuse or violence;
- fear that the product would not be 100% effective but the partner would not use a condom because she was using a microbicide;
- belief that the partner would not care whether or not the woman was using a product (especially among African American women); and
- belief that if she asked her partner, the partner would say “no” and then she wouldn’t be able to use the product at all (particularly Latinas).

Indirect Covert Use

A number of women suggested that they would be more likely to use microbicides if they could tell their partner that the product was providing contraceptive protection, perhaps as a back-up method to their regular birth control method. They also saw a potential for introducing a vaginal product as something to enhance the sexual encounter, which had the added side benefit of providing protection. They could thus circumvent the negative implications of introducing protection. (“The people you wouldn’t want to tell I’m going to use this [vaginal protection product]—you can just say well we are going to use this cool thing [fun, flavorful lubricant]”; Caucasian teen female, focus group). These examples of indirect covert use point to the potential importance of being able to obscure the purpose of product use, rather than attempting to hide it altogether. (It also points to the need to determine the contraceptive effectiveness of microbicides, a topic not discussed in this article.) For example, the two women below talked about the advantages of using microbicides as sex enhancers.

“... [I]f they had different scents and flavors, it would attract a younger crowd.” (African American teen woman, interview).

“For married people, the flavor and the sensation, when you’ve been married 22 years, you have to spice things up.” (Caucasian adult woman, interview).

Men’s Views on Covert Use

When asked about potential covert use of a vaginal microbicides, men were generally opposed to it (consonant with Table 3). They were opposed particularly for serious relationships, in which they felt women needed to tell their partners to maintain trust.

Yes, if it’s a serious relationship, she should tell before and explain the reason why. If you’re supposed to be with just that one person, you need to explain why. If it’s a casual relationship, you don’t have to explain nothing—not obligated if not committed to the relationship. (Caucasian adult male, interview).

If I found out, then I couldn’t trust her anymore. (African American adult male, interview)

Other reasons for opposition to covert use, regardless of type of relationship, were related to product characteristics—for example, concerns about the product’s potential side effects for the male partner, its presence during oral sex, the confusion caused by finding the

substances unexpectedly, or simply awkward moments during sex if they noticed the product on their penis:

...[Y]eah she should be straight up and tell you well, I'm using protection but it may have a side effect." (African American adult male, focus group)

Yes, it would be fine for her to tell me.... if I were to notice something out of the ordinary in the fluid or the moisture, one would know it was because of the product and one wouldn't worry or be wondering if "what is it, is she sick, or not sick or what," you avoid that. (Latina adult, interview)

...I don't want surprises on my penis. (African American adult male, focus group)

Some also felt that a microbicide product should not be used covertly because it should protect both partners, and both partners need to know they were being protected. Women agreed that protection of the men as well as the women would increase acceptability and use. One male participant took a larger view and observed that a microbicide protecting only women could have the effect of reducing overall transmission of STIs (since fewer women would be infected).

However, there was also some support among men for covert use because it would avoid the embarrassing conversation about sexual history and STI/HIV risk and might even flatter him into thinking his partner was not concerned that he could be infected.

It would be great to have this product the woman could use without the man knowing. If the woman is concerned that her partner has something, she can use it and he probably won't even know. That way he won't get offended 'cause he won't know there's anything there, it'd be all natural.... I might think she wasn't concerned about me having something... and I'm gonna feel good about myself. (Caucasian adult male, interview).

In fact, if the microbicide also protected against pregnancy, then there would be no need to talk about using it for STI protection, thus saving both partners from the hurt feelings that could arise from suggesting that one or both of them needed protection. In this way, some men would support the indirect covert use strategy, both partners taking the attitude that the microbicide was being used for pregnancy protection.

All of it [protection against pregnancy, STIs and HIV] you don't want to get to the moment and then have to use too many things. You could lose the moment by then. It would save time and embarrassment. If it's for all of it, you don't really have to talk about what it's for. No one's feelings get hurt, but you get protected at the same time. (Caucasian adult male, interview)

Men's support of covert use also depended on the relationship type. Almost all of the men approved of the concept of vaginal microbicides and felt that women should be able to use them without disclosure but only in risky situations (e.g., partner being unfaithful, woman being unfaithful) and risky relationship types (e.g., one-night stands, casual sex, commercial sex).

Whose Responsibility?

Opinions varied about whether the woman or the man should take responsibility for using vaginal microbicides. Many women and men agreed that if a microbicide protected only one sex, then whomever it protected should be the one responsible for using it. Men were more emphatic about this than women, however. Some women and men felt that, if it protected both partners, both should share the responsibility, especially in a serious relationship. They

thought that the decision should not be up to either one of the partners but should be a joint decision.

Others (both male and female) saw it as empowering for women to take responsibility for protecting themselves regardless of whether the partner was protecting himself.

“The woman [is responsible.] She needs to get it; that way if she doesn’t feel right talking about it, she can protect herself whether he’s protecting himself or not.” (Caucasian adult male, interview).

Many women, particularly African Americans, who thought that it was the woman’s responsibility, believed that was the case because women are more dependable, more responsible, will think ahead, and cannot expect the man to be thinking of the woman. A Caucasian female teenager echoed this sentiment in an interview: “It’s more the woman who would make sure it gets used. When men are in the heat of the moment, they don’t think about it.”

However, others (especially Latinas) expressed resentment that women already had the responsibility for childbearing and preventing pregnancy, and vaginal microbicides could make STI/HIV protection also their responsibility. “My husband [should be responsible.] He should do it all. They don’t know the pain of child birth, they should do this one” (Latina adult, interview).

On the other hand, a number of men were very distrustful of women and considered that even if a woman was using a microbicide, they would not be willing to leave it up to her and take her word that she was using the product. This was true particularly vis-à-vis promiscuous women. These men would continue to use condoms for risky sex, or they would make sure they saw her insert the microbicide. “She got to put the cream in, he should watch her do it.... Just to make sure she did it...because she might say she did it but didn’t do it (African American adult male, interview).

Discussion and Conclusion

Female-initiated topical microbicides have the potential to save millions of lives from HIV/AIDS (Rockefeller Foundation n.d.-a) and their introduction can only be anticipated with great hope. However, concerns also exist about the future introduction of this method, including the likely level of efficacy of the early versions of microbicides, the varying numbers of lives that would be saved at various efficacy levels, the possible abandonment of more efficacious condoms in favor of the early microbicides (Foss, Vickerman, Heise, & Watts, 2003; Karmon, Potts, & Getz, 2003; Rockefeller Foundation, n.d.-a)—and, additionally, the need to ensure that the public accurately understands not only the benefits, but the limitations in protection offered by early microbicides and that popular knowledge of people becoming infected with HIV while using early microbicides will not lead to the rejection of later, more efficacious, generations of microbicides (Koo et al., 2002). We suggest that it is also advisable to consider that the advent of female-initiated topical microbicides is likely to introduce many layers of complexities into relationships between women and men.

Overall, male and female participants agreed that the possibility of covert use of microbicides would be beneficial, and the most important advantage of covert use in all relationship types would be that it could avoid the embarrassment and other difficulties that often keep people from discussing STIs and their sexual history. Overwhelmingly, people thought women should be able to use a microbicide to protect themselves. The observed paradox for women in committed relationships could lead to very carefully maintained

covert use, since women in such relationships are not supposed to need an STI protection product, nor are they likely to be willing to risk the trust that is so important for such relationships. The observed emergent norm for acknowledging risk in casual relationships could lead to covert use of a different sort—women automatically using a microbicide without any discussion, yet somewhat secure in an assumption that use will be accepted by the casual partner, should he find out. Thus, variations in the type of sexual relationship will likely influence norms for acceptability and use.

Most participants perceived communicating with the partner about needing STI protection to be so difficult that to avoid it, some espoused subterfuge—not by using protection secretly but by introducing microbicides as a sex enhancer or as a pregnancy prevention method. Even for more casual relationships, such indirect covert use seemed appealing. Several participants suggested that the most effective way to get people to use microbicides would be, in effect, to coach people in indirect covert use: advertising microbicides primarily as sex enhancers or as vaginal lubricants with the added advantage of offering protection. The implications of such a strategy need to be explored, weighing its life-saving potential against its support of deception (albeit potentially agreeable to both partners) within the most intimate of relationships and the perpetuation of silence about sexual risk. Furthermore, another issue arises from the opposition of some men to covert or indirect covert use on the grounds of their need and right to know that these substances may cause side effects for them and are protecting them from STIs/HIV (if in fact, microbicides are developed to confer protection on both partners).

The introduction of female-initiated microbicides may add other complexities into relationship dynamics—complexities that revolve around women's and men's responsibilities for protection against pregnancy and STIs. Men often felt they had some responsibility for STI protection, but many men felt that using contraceptives to prevent pregnancy was the woman's charge. Some women expressed the concern that if microbicides protected against pregnancy as well as STIs and HIV, then some men may feel that they had no responsibility at all for either pregnancy or STI/HIV prevention. The result would be that this female method that was intended to empower women would place the entire burden of protection on them.

There was mistrust among men and women of one another. Men's experience with being deceived about women's use of birth control (being "trapped" by pregnancy) may explain the views of distrust expressed by some men about women using microbicides; they needed to see the women insert them before enjoying the benefit of "condomless" intercourse. Women voiced distrust of their partners, believing that their supposedly committed partners would be unfaithful and thus put them at risk but not take steps to protect them.

On the other hand, both women and men expressed concern and support of one another. Some men stated that if they were being promiscuous, they would not want their partners to get an STI because of their actions, and some expressed concern about the possible side effects of microbicides for their partners as well as themselves. Finally, some men (especially Latinos) were pleased that the lubricating effects of microbicides could make sex more pleasant for their partners. On the other side, some women expressed deep concern that the microbicides also protect their partners and not just themselves, and they valued the increase in sexual pleasure that microbicides offered over condoms for their partners as well as for themselves.

The advent of vaginal microbicides stands to bring both benefits and problems into the sexual relationships of women and men. Understanding these dynamics could help pave the way for a smooth introduction of this new and promising female method of STI/HIV

protection. Research is needed to provide this understanding. Both challenges and opportunities abound. The dynamics are both complex and apparently changing, as norms about STI/HIV protection for casual and new relationships seem to be evolving. Research needs to be conducted to determine whether such norms and values are indeed emerging, and to investigate how such changing norms may affect the adoption of a new female-initiated method of protection, and how the introduction of such a method may shape the norms.

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Biographies

HELEN P. KOO, is a Senior Research Demographer at RTI International. She obtained her DrPH in Population Planning from the University of Michigan in 1973. Since then, Dr. Koo has conducted research and evaluation in a variety of subjects, including most recently unintended pregnancy and contraceptive behavior, adolescent pregnancy prevention, and acceptability of long-acting contraceptives. She is the principal investigator of the study reported in this article, and also of the methodologically related study of unintended pregnancy, which, like the reported study, integrated qualitative and quantitative methods. She has also directed research grants focusing on fertility timing patterns, infant mortality, marital disruption and remarriage, and family and household structure.

CYNTHIA WOODSONG earned a PhD in Anthropology from the State University of New York in 1992 and completed a postdoctoral training program at the Carolina Population Center, University of North Carolina in 1994. Dr. Woodsong is a Senior Scientist at Family Health International (FHI) in Durham, North Carolina. At FHI, she is working on aspects of use-adherence and acceptability of microbicides in clinical trial settings, including work with the HIV Prevention Trials Network (HPTN). She is an active member of the Ethics Workgroup of HPTN, having developed an expanded model of the informed consent process, and currently chairs an HPTN sub-committee that is identifying and developing ethics training resources for HIV prevention research. She is also currently principal investigator on a study of the validity of self-report behavior, being conducted in Zimbabwe among a population expected to participate in microbicides clinical trials. Working with Dr. Koo, she co-directed the qualitative phase of a study of unintended pregnancy in the United States and directed the qualitative phase of the study that is reported on in this issue.

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ASHLEY SIMONS-RUDOLPH is a Health Analyst at RTI International and a doctoral candidate at The George Washington University. She holds a Master’s degree in Public Policy from The George Washington University and a BA in Psychology from North Carolina State University. Her previous publications have focused on the dissemination of

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Table 1

Topics of Inquiry

Relationship types and related perceptions about STI/HIV transmission risks
Relationship types and communication about contraceptive use
Relationship types and communication about and need for STI/HIV prevention
Relationship types and likely reaction to the woman's request to use a vaginal microbicide
General reactions to the concept of covert use of vaginal microbicides
Views on whether people should and would talk about use of a vaginal microbicide
Views on how and when a woman should inform her partner about microbicide use
Reasons why women would not want to tell a partner about microbicide use
Perceived male reaction to woman's decision to use a microbicide
Perceived male reaction to discovery of covert microbicide use
Perceived responsibility for microbicide use

Table 2

Type and Number of Data Collection Units

Data Collection Type	Female Groups or Individuals ^f			Male Groups or Individuals ^f		
	African American	Caucasian	Latina	African American	Caucasian	Latino
Focus Groups						
Adults	2	2	2	2	1	1
Teens	1	1	0	1	1	0
Interviews						
Adults	7	3	6	5	4	3
Teens	4	3	0	3	0	0
Short Survey						
Adults	23	11	19	24	13	15
Teens	9	7	0	7	5	0

^f For focus groups, the numbers refer to the number of groups; for interviews and short survey, the numbers refer to the number of individuals.

Table 3

Percentage of Participants Who Agree that a Woman Should Always Tell Partner She Is Using Vaginal Product to Protect Against STIs and HIV, by Gender

Relationship Type	Women	Men
Total Number of Respondents	68	64
Steady		
Strongly Agree	41.2	50.0
Agree	38.2	34.4
Disagree	16.2	10.9
Strongly Disagree	4.4	4.7
Total	100%	100%
Casual		
Strongly Agree	27.9	40.0
Agree	41.2	44.6
Disagree	25.0	12.3
Strongly Disagree	5.9	3.1
Total	100%	100%
New*		
Strongly Agree	27.9	43.1
Agree	23.5	32.3
Disagree	42.7	18.5
Strongly Disagree	5.9	6.1
Total	100%	100%

Note.

* $p < .05$.

Relationship type categories are steady, casual, and new. Steady refers to a husband/wife, steady boyfriend/girlfriend, or other serious relationship. Casual refers to a casual boyfriend/girlfriend, other less than serious relationship, or one-night stands. New refers to someone you have recently started having a relationship with, but you don't yet know if it will be serious or casual.