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# HIV Counseling and Testing: Women's Experiences And the Perceived Role of Testing As a Prevention Strategy

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CONTEXT: It is unclear why women decide to undergo testing for HIV, and how positive and negative test results impact their sexual behavior.

METHODS: A sample of 360 family planning clinic clients in New York City were randomly assigned to receive a four- or eight-week intervention aimed at reducing sexual risk or to serve as controls. Information on their HIV testing experiences was gathered through interviews at baseline and one month, six months and one year after the intervention.

RESULTS: At baseline, 67% of women had been tested for HIV. The predominant reason for not being tested was anxiety about the result. Regardless of their testing status at baseline, more than 40% of the women believed that getting tested is a good way to prevent acquiring HIV. Women in the intervention who had been tested multiple times or had last been tested more than six months ago were more likely than women in the control group to initiate HIV testing by the one-month follow-up (relative risk, 2.9 and 6.1, respectively). Rates of mutual testing (being tested at the same time as one's partner) were significantly greater among women who participated in an intervention than among controls at the one-month and six-month interviews.

CONCLUSIONS: HIV test counseling must emphasize that testing is not a prevention strategy in and of itself. Mutual testing, although not without risks, offers the safest possible alternative for monogamous couples who choose to forgo condoms.

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HIV counseling and testing was one of the earliest prevention strategies advocated, implemented and evaluated for at-risk populations,[1] and it remains a key component of the U.S. national HIV prevention strategy for women. Federally funded HIV counseling and testing programs, including those headquartered in community health care settings, provide about 2.5 million tests each year.[2]

Heterosexual contact with an HIV-infected male is fast surpassing injection-drug use as the most common way women acquire HIV—currently accounting for 40% of the identified risk for women with AIDS and, presumably, for a large portion of the 16% of unidentified risk.[3] Particularly in areas with high HIV prevalence rates, transmission is

increasingly occurring among women whose only exposure to the virus is through a single high-risk partner. In New York City, one of the country's HIV epicenters, females at high risk of HIV infection are predominantly black and Hispanic women in their teens and 20s.[4]

Inner-city family planning clinics are an appropriate service delivery point for reaching sexually active women of reproductive age who are at risk of acquiring HIV. According to data from the National Survey of Family Growth, more than one-quarter of U.S. women of reproductive age receive family planning services from clinics; this proportion is even higher for women whose family income is below the federal poverty level (47%) and for women younger than 20 (43%).[5] With the availability of Title X funding, many family planning clinics have incorporated HIV counseling and testing into their routine services. This is true of Planned Parenthood of New York City, which has provided and encouraged HIV counseling and testing for women since 1992.[6]

To some extent, the value of HIV counseling and testing is clear: Women report decreased sexual risk behavior following an HIV-positive result,[7] and testing can help women with HIV to access medical treatment and support services earlier in the course of infection.[8] The effectiveness of HIV counseling and testing for reducing sexual risk behavior is less clear when test results are negative: A meta-analysis of HIV counseling and testing intervention studies found that individuals who tested negative were no more likely than untested individuals to modify their sexual risk behavior.[9] Although design limitations and typically small sample sizes make definitive conclusions problematic, the impact of counseling and testing on the sexual risk behavior of women with negative results appears modest at best. Similarly, Project RESPECT, a well-designed study funded by the Centers for Disease Control and Prevention (CDC), found that participation in a single session that included standard-of-care counseling and testing did not affect sexual risk behavior among clinic patients with a newly diagnosed sexually transmitted disease (STD); participation in a two-session or four-session program, however, resulted in fewer incident STDs after six months and one year.[10]

Mutual testing (when both partners in a relationship undergo HIV testing at the same time) can serve as an effective HIV prevention strategy within the context of a committed, monogamous relationship. If a couple desires to stop using condoms, the CDC's guidelines suggest that both partners get tested, the couple continue to use condoms and practice safer sex for six months, and they then undergo mutual testing again.[11] If the results come back negative for both partners at both times, it is presumably safe to engage in sex without a condom, as long as both partners remain monogamous.

It is unclear from the literature how many women who have been tested for HIV have done so with their partner. A study among a diverse urban sample of women and men found that individuals who had been tested were more likely to know their most recent sexual partner's HIV status than were those who had not been tested.[12] This suggests that testing may often be mutual or, minimally, that individuals who are tested tend to inquire about their partner's testing history.

It is important to understand how women view their decision to be tested and how they integrate HIV test results—including negative test results—into their HIV prevention

strategies. This is particularly true for women who are not members of traditional high-risk groups (i.e., injection-drug users, partners of injection-drug users, STD clinic clients and sex workers) but are at risk because they live in areas where the potential pool of HIV-infected partners is large.

This article is based on a longitudinal study called Project FIO (The Future Is Ours), which attempted to decrease unprotected vaginal and anal intercourse.[13] The project intervention sought to empower women to reduce sexual risk by presenting them with a variety of strategies, such as increased male or female condom use, refusal or avoidance of unsafe sex, engaging in "outercourse" instead of unprotected intercourse or mutual HIV testing.[14]

The goals of this article are threefold: to examine women's reasons for deciding whether to undergo HIV testing; to explore how being tested relates to sexual risk behavior and to attitudes toward testing as an HIV prevention strategy; and to examine the effectiveness of the intervention in promoting individual testing, knowledge of a partner's serostatus and mutual testing.

## METHODS

### Sample Selection

Between January 1994 and September 1996, we recruited a sample of 360 clients from the waiting room of a Planned Parenthood clinic in New York City. Women were eligible to participate if they were aged 18-30, possessed a fluent comprehension of spoken English, reported having had heterosexual activity within the prior year, had not received a blood transfusion from 1980 to 1985, reported no illicit injection-drug use in the last year and were HIV-negative or did not know their serostatus. Women who were currently pregnant or were trying to become pregnant were excluded. We randomly assigned participants into either a four-week intervention group, an eight-week intervention group or the control group.

Participants were fairly representative of the overall clinic population. There were no differences in age, ethnicity, education, work status or number of children between participants and eligible women who did not enroll. The women who enrolled also were similar in age and ethnicity, and had similar past STD rates, to a sample of 50 clinic attendees examined by blind random review of medical records. Additional details on randomization, participation rates and consent procedure have been published elsewhere.[15]

## DATA COLLECTION AND VARIABLES

We assessed women's characteristics and behavior using individual semistructured interviews at baseline and one month, six months and one year after the intervention.[16] The interviews, which included both closed- and open-ended items, were administered by bachelor-level female interviewers of diverse ethnicities who were extensively trained to follow a standard protocol;[17] each interview took approximately two hours to administer. To ensure quality control, all interviews were audiotaped. Approximately every seventh interview was reviewed in detail by the training supervisor, who provided feedback during biweekly supervisory sessions. Participants were paid $20 for the initial interview, and $30, $40 and $50 for the first,

second and third follow-up interviews, respectively. Those with child-care needs were given $12 at each interview to go toward baby-sitting. Overall, 92% of women returned for the first follow-up interview, 90% for the second and 97% for the third.

The baseline interviews asked women about their demographic characteristics (age, race and ethnicity, marital status, parenthood status, education, employment status and household income); their current (referring to the past three months) and lifetime sexual and reproductive behavior (number of sexual partners, frequency of sexual practices and use of male or female condoms for vaginal intercourse); and their and their partner's HIV risk characteristics (test status, lifetime injection-drug use, transfusion history, pregnancy and STD history, presence of current STD symptoms, and sex with other male or female partners). We also assessed the women's beliefs about HIV prevalence, using two items. One question asked women to indicate how much of a threat they think HIV is in their neighborhood, using a four-point Likert scale grounded by "not at all" and "a big threat." The second question asked how many women the participants know might have been exposed to HIV.

The interview also obtained information on whether the woman and her current main sexual partner had ever been tested for HIV and, if so, when and how many times. Women were asked specifically whether they and their current main partner had been tested together. Women also were asked other questions, such as if they were aware of the HIV status of their other current partners and, if so, what that status was.

Using an open-ended format, we asked all women to describe their reasons for being or not being tested. Women who had been tested were then asked to answer yes or no to a set of standardized questions—e.g., "Did you get tested because you were concerned about a partner's risk?" and "Was testing offered as part of other services (such as prenatal care or blood donation)?"—that were derived from individual interviews conducted during an extensive prestudy pilot phase. An "other" category also was provided to allow for additions if the participant's original response did not fall into one of the standard categories. Women who had not been tested were asked questions using a set of standardized categories.

To assess women's attitudes regarding testing, we asked whether they agree or disagree that "getting frequent HIV tests is a good way to prevent getting infected with HIV." We also asked how strongly they agree that "couples in a committed relationship don't need to get tested for HIV" (five possible responses ranged from "strongly agree" to "strongly disagree").

The follow-up interviews included the same questions as the baseline interview, except those related to lifetime behaviors. At each follow-up, questions about individual, partner and mutual HIV testing covered the period since the previous interview.

A one-week test-retest study (conducted with 12 women who were eligible for Project FIO but did not participate) indicates acceptable reliability for key variables—e.g., number of male partners in the last three months ($r=1.00$); lifetime number of male partners ($r=0.81$); and the percentage of the time condoms were used for vaginal intercourse in the last three months ($r=0.80$).

## Intervention

The four-session and eight-session interventions were designed to decrease women's unsafe sexual practices.[18] To guide the development of the interventions, we used the AIDS Risk Reduction Model,[19] which we modified by using focus-group data to enhance gender-specificity. (For example, we increased the emphasis on issues concerning women's relationships with men, on the multiple demands women face in their lives and on the motivators of change that are important for adult women.) The intervention also drew upon social learning theory to provide the conceptual framework for how to effect behavioral and attitudinal change.[20] The key elements of social learning theory—skills acquisition, structured practice with feedback, development of helpful beliefs, reduction of hindering attitudes, provision of incentives and encouragement of social support—were the central components of the intervention.

College-level or graduate-level women with experience in counseling or group facilitation led the interventions; two facilitators of differing ethnicities were assigned to each group. Both the four-session and the eight-session intervention formats included two-hour, small-group sessions that utilized such interactive techniques as role-playing, problem-solving, letter-writing, attitude confrontation, storytelling and modeling. Facilitators followed a structured, detailed manual, and each participant had a workbook containing exercises and reference materials. The sessions encouraged and empowered women to make decisions about their sexual life and their selection of a sexual partner, to refuse unwanted sex, and to negotiate condom use and other forms of safer sex.

Both interventions covered the same content areas in the same sequence, although the eight-session intervention included more role-playing and interactive activities. The following topics were covered: why women should care about getting STDs; how to avoid partners who do not care; the best way to protect oneself against STDs; how to find out one's own or one's partner's infection status; how to ask a partner to use protection; how to influence a partner to use protection; how to refuse sex or unprotected sex; and how to continue protecting oneself and others. One topic was covered per session in the eight-session format, two topics were covered per session in the four-session format.

Although the main emphasis of the intervention was on decreasing unprotected vaginal and anal sex, mutual HIV testing was also discussed as a protection strategy for some women. The intervention did not promote individual HIV testing as a prevention strategy, but it emphasized that women should carefully examine their own and their partner's risk. Following the CDC HIV counseling guidelines,[21] the intervention described repeated mutual testing as a prerequisite to ending condom use in monogamous couples. Since having children was a salient issue for many women, serial mutual testing was presented as a way to remain safe while trying to become pregnant. In addition to discussing the benefits of mutual testing, women explored the barriers and liabilities. Problem-solving was employed to deal with difficult situations concerning testing. To personalize the testing issue, women wrote letters in which they described having learned of different results for themselves and their partners.

Participants were paid $10 for each session attended. Among the 128 women assigned to the four-session intervention, 55% attended 3-4 sessions, 23% attended 1-2 sessions

and 22% attended none; among the 112 women assigned to the eight-session intervention, 47% attended 7-8 sessions, 17% attended 5-6 sessions, 23% attended 1-4 sessions and 13% attended none.

### Analyses

We used frequency distributions to describe the demographic profile of the sample and to characterize women's testing patterns, reasons for testing and risk behavior. To identify differences between women who at baseline had undergone testing and those who had not, we used chi-square tests for categorical variables, Fisher's exact t-test for continuous variables that were normally distributed and the Mann-Whitney U test for nonnormally distributed continuous variables.

For each follow-up round, we calculated relative risks and 95% confidence intervals to compare the proportions of women in the intervention and control groups who had been tested for HIV, had undergone mutual testing or had learned of their partner's serostatus. In these analyses, women in the four-session and eight-session interventions were combined and compared with those in the control group because of the relatively small number of women who had initiated testing between the baseline and follow-up interviews. Where intervention effects were significant, we conducted subgroup analyses to identify categories of women who were more or less responsive to the intervention.

We conducted additional analyses using generalized estimating equation methodology to account for within- subject correlation across the four assessments;[22] an overdispersion parameter was included to account for heterogeneity between subjects. In this model, the regression coefficient for the interaction between each intervention condition and time (baseline vs. follow-up) represents the logarithm of the ratio of two odds ratios (i.e., for the intervention condition and the control condition). Since there were no discrepancies between significant findings from generalized estimating equation methodology and bivariate analyses, we report the relative risks and confidence intervals from the latter analyses, as these are the more readily interpretable.

## RESULTS

### Demographic and Risk Characteristics

On average, study participants were 22 years old; three-quarters were black (73%), 17% were Hispanic, 10% were white, and fewer than 1% were Asian. The women's per capita income ranged from $1,500 to $84,000 per year, with a median of $6,057; 26% of participants were living below the poverty line. Most women (90%) had never been married, 18% were currently living with a partner and 42% had at least one biological or adopted child. Eighteen percent had not completed high school, 35% had a high school or general equivalency degree, 38% had some college education and 9% had a college degree; on average, they had 13 years of education. Forty-one percent of women were currently working, and 48% were in school.

Fifty-eight percent of the women reported ever having had an STD; 17% had received an STD diagnosis within the past three months. Among all women, 22% had had more than one male sexual partner in the past three months. Forty-one percent of the

women knew or suspected that their main or other partner had had other partners since the beginning of their relationship; 18% reported that their main or other partner currently had STD symptoms. Condom use was low: Although more than 90% of women at baseline had been sexually active in the prior three months, 25% of women who were sexually active during that time reported no male or female condom use, 50% reported sporadic use and 25% reported consistent use.

## Baseline History and Reasons for Testing

Overall, two-thirds (67%) of women had been tested for HIV (not shown). Approximately one out of five women in the sample (22%) reported that neither they nor their main partner had ever been tested for HIV before entering the study (Table 1). Twenty-three percent of women reported that they had been tested but their partner had not; 10%, the opposite. About a third of women (32%) reported that both they and their main partner had been tested for HIV, but not at the same time; only 12% had ever been concurrently tested with their partner.

Of the women who had been tested for HIV, approximately half (49%) had been tested only once; 23% had had three or more HIV tests (not shown). Among women who had been tested, the mean time since their last test was 12.2 months, and the median was 6.4 months; the interval ranged from less than one week to more than 10 years. Twenty-eight women were awaiting results from a recent HIV test, 16 had failed to return for their results after being tested and three were uncertain as to whether they had ever been tested. All women who had received results were reportedly HIV-negative. Of the women who had not been tested, 24% had received pretest counseling.

Among women who at baseline had engaged in heterosexual activity during the prior three months, 54% knew that their main partner was HIV-negative. Three percent knew that their partner had been tested but did not know his result, 24% reported that their partner had never been tested and 19% were unsure.

In the baseline interview, we asked women who had been tested for HIV to name all of the reasons they had last done so. Eighty-three percent reported that they had been tested to reduce their anxiety; 64%, to assess their own or their partner's HIV risk. Thirty-nine percent had undergone testing as part of other health care services; 26% because of involvement with a new partner; 15% because they wished to stop using condoms in an ongoing relationship; 22% because they were planning a pregnancy; and 10% because it was a required part of their evaluation for insurance, the military or the Job Corps.

Two-thirds (66%) of the women who had not been tested had felt that it was too emotionally stressful; 52% reported that they did not want to know if they were HIV-positive, and 39% did not think that they were at risk for HIV. Other reasons for not having been tested were concerns about confidentiality (27%), reluctance to have blood drawn and concerns about their partner's reaction (both 18%).

## Risk Characteristics and Attitudes Toward Testing

Women who at baseline had been tested for HIV differed from those who had not been tested in several sexual risk behaviors (Table 2). Compared with those who had not been tested, women who had been tested reported significantly more lifetime partners

(six vs. four) and higher lifetime rates of STD (64% vs. 49%). Those who had been tested were also more likely to have one or more children (48% vs. 30%); this finding may reflect that 22% of women who had been tested were last tested during a pregnancy. Furthermore, women who had been tested were more likely than those who had not to know if their main partner had been tested and, if so, his test results (66% vs. 28%).

Tested and untested women had differences in their beliefs about the prevalence of HIV in their social networks and in their attitudes toward testing. On average, women who had been tested knew significantly more women who might have been exposed to HIV (1.7 vs. 1.2) and were more likely to endorse HIV testing in committed relationships (4.7 vs. 4.3 on a scale of 1-5). However, there was no significant difference in the proportions who erroneously believed that getting frequent HIV tests is a useful prevention technique (42-49%).

We found only one significant difference between the sexual risk behaviors, social networks and testing attitudes of women who had been tested once and women who had been tested more than once: Repeat testers were more likely than those tested once to have children (not shown). This result may reflect that pregnant women are routinely offered HIV testing in New York State.

## Effects of the Intervention

• Individual HIV testing. We hypothesized that women exposed to the intervention would be more likely than others to seek HIV testing at follow-up. Of the 331 women who attended the one-month follow-up, 26% had been tested for HIV since the initial interview; all results were reportedly negative. Women assigned to either intervention group were significantly more likely than those in the control group to report having been tested at the one-month postintervention follow-up (relative risk, 2.1—Table 3). This trend, however, was not sustained at the six-month or the one-year follow-up (not shown).

To assess how the intervention affected women with different HIV testing experiences, we conducted analyses according to women's baseline testing history. Among women who had been tested multiple times, those who took part in an intervention were more likely than those in the control group to have been tested again by the one-month follow-up (relative risk, 2.9—Table 3). We did not observe a significant intervention effect among women who had never been tested or had only been tested once at baseline.

Since women may base their decision to get retested at least in part on how much time has passed since their last test, we examined whether the intervention was differentially effective for those who had been tested within six months and those who had been tested more than six months ago. There was a significant intervention effect at the one-month follow-up among women who had been tested more than six months ago (relative risk, 6.1).

• Knowledge of partner's status. At the first follow-up, 44 of the 114 women who had not known their main partner's HIV status at baseline and who had partner data at both rounds had learned of his status (all partners were HIV-negative). Twenty-eight percent of women in the control group and 45% of women who participated in the

intervention had found out their partner's status (not shown). This difference was not statistically significant (p=.07) possibly because the number of women who had discovered their partner's status at follow-up was small. Women in the intervention did not significantly differ on this variable from controls at the six-month and one-year follow-up interviews.

• Mutual testing. Compared with women in the control group, women in either intervention group were significantly more likely to report mutual testing at the one-month follow-up (relative risk, 4.8—Table 3). Nineteen of the 21 women who had sought HIV testing with their main partner between baseline and the first follow-up participated in the intervention. We conducted subgroup analyses to investigate whether intervention effectiveness varied depending on whether women had undergone mutual testing at baseline. Among the 240 women who had not had mutual testing at baseline, 14, all from the intervention group, reported having done so between baseline and first follow-up; thus, the intervention clearly had a significant effect. Three of the 40 women who had had mutual testing at baseline reported having undergone mutual testing again at the one-month follow-up; the effect of the intervention on these women was not significant.

The effect of the intervention on mutual testing was present at the next follow-up as well. Women in the intervention groups were significantly more likely than those in the control group to report mutual testing at the six-month follow-up (relative risk, 3.5; p=.03—not shown). At the one-year follow-up, the effect was no longer significant.

### Testing and Safer-Sex at Follow-Up

There were no significant differences in sexual risk behavior between women who had been tested for HIV between baseline and the first follow-up and those who had not. About two-thirds of each group had reduced the proportion of times they had unprotected vaginal or anal sex, or reported no occasions of unprotected sex at either baseline or follow-up. At the one-month follow-up, there was no significant difference between women who had been tested and those who had not with regard to the median proportion of occasions on which condoms were used (65% and 75%, respectively), partner risk characteristics or lifetime STD history. Results were similar in subanalyses comparing intervention and control women.

At the one-month follow-up, women who had undergone mutual testing and those who had not were equally likely to say that they had decreased their proportion of unprotected sexual occasions or had no unprotected intercourse (70% and 66%, respectively). Results were similar at the six-month and one-year follow-up interviews.

## DISCUSSION

This study provides important information to enhance HIV testing programs and to link HIV testing with traditional family planning services. Of our sample of clinic clients, 67% had been tested for HIV at baseline, which demonstrates that women who use clinic services are willing to undergo HIV testing. More than one-third of women who decided to get tested had done so as part of other health care services, suggesting that ease of access to testing was a factor in their decision. For these women, it appears that family planning clinics are an appropriate and efficient site for HIV testing and counseling, and that offering HIV testing as part of routine services can increase

testing rates.

Some caution is needed in generalizing these results to all clients of family planning clinics, or even to all clients in urban settings. This sample was self-selected for a longitudinal HIV and STD prevention study, and thus cannot be considered representative of the general population of at-risk women living in regions of high HIV seroprevalence. In addition, we were unable to examine confidential HIV testing data in our random chart review of clinic clients; thus, we cannot infer that our testing rates are typical of the Planned Parenthood client population. Our sample, however, was similar in demographic characteristics and STD rates to this population. Therefore, it seems reasonable to conclude that our findings are generalizable to this particular clinic population.

In addition to accessibility, we identified other facilitators of testing: The vast majority of women who had been tested had done so because they felt at risk of acquiring HIV as a result of their own or their partner's sexual behavior. These women felt that being tested was a way to decrease their anxiety about HIV. As compared with those who had not been tested, women who had been tested had a larger lifetime number of partners and were more likely to have a history of STD infection. Therefore, the decision to be tested for HIV appears to be motivated in part by an accurate assessment of some lifetime risk factors.

The predominant reason for avoiding HIV testing, cited by more than half of the women who had not been tested, was anxiety about a possible positive result. Nearly 20% also reported concerns about how their partner would react as a reason for not being tested. These findings highlight the importance of using pretest counseling to directly address anxiety about testing and concerns about partner reaction. Furthermore, more than one-fourth of women reported that concerns about confidentiality were a reason why they chose not to be tested; this finding supports results of previous studies.[23] Facilities providing confidential testing may be able to address this issue by offering information on anonymous testing sites.

In spite of the high rates of individual testing, only about half of these women reported that their main partner had been tested for HIV. Nearly half did not know their partner's HIV status, suggesting that many women had not explicitly discussed HIV with their partner. More important, only 12% of women had been tested with their partner.

This group-based, cognitive-behavioral intervention affected women's attitudes toward HIV testing in several ways. Although individual testing was not explicitly promoted as a prevention strategy, women exposed to the intervention were more likely than those who were not to have undergone testing by the one-month follow-up. This result, however, was restricted to women who had already been tested more than once or who had not been tested for more than six months. The intervention had no effect among women who had never been tested, possibly because it did not emphasize overcoming impediments to testing.

Exposure to the intervention substantially increased rates of mutual testing at the one-month and six-month follow-up interviews. In light of the increase in individual testing, knowledge of partner's HIV status and rates of mutual testing shown in this

study, we conclude, as we have elsewhere,[24] that a gender-specific intervention that offers women a variety of strategies to decrease their risk of HIV and other STDs can increase their protective behaviors.

Although the intervention's results are encouraging overall, our data raise an important concern about the widespread promotion of HIV testing. Several findings suggest that HIV testing is being used as a prevention strategy, although it is not clear that testing enhances protective behavior. Many of those who had been tested multiple times before baseline were motivated by the intervention to get retested. However, since HIV testing does not eliminate current or future risk, but merely rules out prior infection, it is disturbing that nearly half of women believed that being tested for HIV is a good way to protect against AIDS. Furthermore, receiving a negative test result did not appear to influence safer-sex behavior. Essentially, knowledge of their negative status seemed to offer emotional reassurance, but had no effect on their future choices. These findings are consistent with the results of other studies.[25]

The confusion about the role of testing as a prevention strategy is additionally supported by qualitative data from our study. A separate portion of the FIO interview asked open-ended questions about why women feel at risk for HIV and other STDs or feel safe from the threat of infection.[26] Four percent of women spontaneously attributed a lack of susceptibility to getting frequent or regular HIV tests, and many more cited their own or their partner's negative test status as a reason for feeling safe from the risk of HIV. Furthermore, women who had once felt at risk commonly said that testing had helped them resolve these concerns. Testing was frequently cited as a reason for feeling safe without any mention of whether their current partner was engaging in risky behavior, or whether they and their partner had been tested concurrently.

Similar findings have been reported elsewhere, albeit in a very different population. In a qualitative investigation of Australian adults who had been tested for HIV, researchers found that some reported undergoing HIV testing as a way to protect their health.[27] Testing was also seen as a means to screen new partners, to decide about condom use in ongoing relationships and to plan for a pregnancy. For these individuals, the researchers concluded that the test becomes a ritual to reduce anxiety and "masquerades as an intervention."

These findings suggest a need to rethink policies that promote HIV testing as a positive intervention, without full consideration of the context of testing or the motivations and beliefs of those being tested. Counseling about HIV testing must directly address the various meanings given to testing and emphasize that it is not a prevention strategy in and of itself. Counselors need to explain that a negative test result can only rule out past risk and is not the end point of HIV prevention. Although there is no guarantee that this message will be integrated into clients' prevention strategies, at the very least counselors themselves need to be clear about these distinctions and about the understandings that clients may bring to the counseling session.

Mutual HIV testing—optimally, following the CDC's guidelines—could prove to be a viable prevention strategy that would allow adult monogamous heterosexual couples to discontinue condom use. Even the CDC's recommended strategy is not without its risks, however, because many individuals falsely believe that their main partner is

faithful.

Although the intervention had an effect on increasing rates of mutual testing, our data show that mutual testing is not commonly viewed as a prevention strategy: At baseline, one in three women relied only on their own or their partner's individual HIV test result, and another one-third reported that both they and their partner had been tested. Because of the small number of women who underwent mutual testing with the same partner between baseline and follow-up points, we were unable to evaluate definitively the impact of mutual testing on safer-sex behavior.

Additional research is needed to more fully delineate how women and their partners can integrate negative HIV test results into their STD and HIV prevention decisions. One-on-one counseling that is tailored to individual concerns and that emphasizes cognitive-behavioral skills can facilitate the reduction of sexual risk beahvior.[28] Our results suggest specific content areas to be covered during HIV test counseling sessions: the implications of a negative test result for a woman's future HIV and STD prevention plans, and how mutual testing can be part of an effective HIV prevention strategy.

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